Project Dissertation Report

FINANCIAL MODELLING OF THE COMPANY "HAPPIEST MINDS"

Submitted By:

Jaskaran Juneja

2K21/DMBA/55

Under the Guidance of

Mr. Mohit Beniwal

Assistant Professor

Delhi School of Management

DELHI SCHOOL OF MANAGEMENT

DELHI TECHNOLOGICAL UNIVERSITY

BAWANA ROAD DELHI 110042

CERTIFICATE FROM THE INSTITUTE

This is to certify that **Mr. Jaskaran Juneja**, roll no. **2K21/DMBA/55** has submitted the project dissertation report titled "**Financial Modelling of the company "Happiest Minds"** in partial fulfilment of Master of Business Administration (MBA) program from Delhi School of Management, Delhi Technological University, New Delhi during the academic year 2021-23.

Signature of the Guide

Mr. Mohit Beniwal

Signature of Head of Department

Dr. Archana Singh

DECLARATION

I, Jaskaran Juneja, student of MBA 2021-23 of Delhi School of Management, Delhi Technological University, hereby declare that Project Dissertation report on "**Financial Modelling of the company "Happiest Minds"** submitted in partial fulfilment of Degree of Master of Business Administration is the original work conducted by me. I also confirm that neither I nor any other person has submitted this project report to any other institution or university for any other degree or diploma. I further declare that the information collected from various sources has been duly acknowledged in this project.

Name: Jaskaran Juneja

Roll No: 2K21/DMBA/55

ACKNOWLEDGEMENT

I would like to gratefully acknowledge the contribution of all the people who took an active part and provided valuable support to me during the course of this study. Without their guidance, support and valuable suggestions during the research, the outcomes and results would not have been accomplished.

I sincerely thank Mr. Mohit Beniwal, my faculty mentor at Delhi School of Management who provided valuable suggestions, shared his rich academic experience, and helped me script the exact requisites.

Last but not the least, I would like to thank all my colleagues whose valuable inputs helped me complete this research.

Name: Jaskaran Juneja

Roll No: 2K21/DMBA/55

EXECUTIVE SUMMARY

The process of company valuation entails a comprehensive analysis of all facets of a business, including its various divisions or components, intending to determine their respective worth. Determining a business's true market worth through company valuation is commonly employed for various purposes, such as transaction value, ownership establishment, taxation, and legal proceedings related to divorce. Business owners often seek the expertise of professional evaluators to obtain an impartial evaluation of their company's value. The practice of determining the monetary worth of a business is frequently carried out in scenarios where a corporation plans to sell off a portion or all of its activities or when it aims to participate in a consolidation or takeover with another organization. Thus, this paper aims at evaluating the intrinsic value for the company named Happiest Minds (NSE: HAPPSTMNDS), using one of the most popular methods of company valuation known as Discounted Cash Flow (DCF) model. Founded in 2011, Happiest Minds is an IT Service Company that helps enterprises across industries in their digital transformation journey. It strongly focuses on new-age technologies such as AI, Cloud, Security Solutions, SaaS, IoT, etc. This study aims to identify the approximate value of the company using the information which has been made available by the company in the public domain like the annual reports which include the basic financial statements like the Balance sheet, Income Statement and Cash Flow statement. Apart from that it also includes management discussion and analysis part which helps the reader to get an idea about the company's future direction or expansion strategy. The future data has been forecasted for a period of 5 years, and then after that, the terminal value has been calculated for the company. We have taken a forecasting period of 5 years as it is considered to be an appropriate time period to make conclusions about the future growth, direction, and stability of the company. Various helper forecasts like the capital expenditure schedule, working capital schedule, and debt schedule have been formed, aiding in the overall forecasting process. Since it is just a forecast, so several things will be as per the knowledge of the reader and what he expects from the company, and the entire industry or sector to perform in the coming years, which is one of the limitations of this study.

TABLE OF CONTENTS

1. INTRODUCTION 1

1.1 Valuation 1

1.2 Financial Modelling 2

1.3 Objectives of Study 13

1.4 Scope of Study 14

1.5 About the Company 14

2. LITERATURE REVIEW 17

3. RESEARCH METHODOLOGY 23

4. FINDINGS AND ANALYSIS 25

4.1 IT Industry Outlook 25

4.2 Revenue Driver of Happiest Minds 28

4.3 Forecasting 32

5. CONCLUSION 41

6. LIMITATIONS 43

7. REFERENCES 44

TABLE OF FIGURES

Figure 1.1 Relationship between Enterprise value and Equity Value 5
Figure 1.2 Valuation of a Multi-business Company..... 5
Figure 1.3 A brief timeline of Happiest Minds since its inception..... 15
Figure 2.1 Benefits Of Financial Modelling..... 21
Figure 4.1 Global Enterprise Tech Intensity..... 26
Figure 4.2 Cloud Penetration in Various Business Verticals 27
Figure 4.3 Digital Services contribution to total IT spending 28
Figure 4.4 Digital Revenue Mix Comparison with Peers..... 29
Figure 4.5 Revenue Per Active Customer 30
Figure 4.6 Employee Utilization Rate..... 31
Figure 4.7 Revenue Per Employee..... 31
Figure 4.8 Revenue Model 32
Figure 4.9 Capex Schedule and Depreciation Schedule..... 33
Figure 4.10 Working Capital Schedule..... 35
Figure 4.11 Profit and Loss Statement 35
Figure 4.12 Revenue and Other P&L assumptions 36
Figure 4.13 Cash Flow Statement..... 36
Figure 4.14 Balance Sheet..... 37
Figure 4.15 WACC ,Terminal Growth Rate and Beta Calculation 38
Figure 4.16 FCFF & Value Per Share Calculation..... 38
Figure 4.17 Competitive Landscape Happiest Minds 39
Figure 4.18 Relative Valuation..... 40

CHAPTER-1
INTRODUCTION

1.1 Valuation

Valuation, also known as corporate valuation, can be defined as the process of ascertaining the financial value of a company. The valuation process entails a comprehensive analysis of all facets of a business, including its various divisions or components, intending to determine their respective worth. Determining a business's true market worth through company valuation is commonly employed for various purposes, such as transaction value, ownership establishment, taxation, and legal proceedings related to divorce. Business owners often seek the expertise of professional evaluators to obtain an impartial evaluation of their company's value. The practice of determining the monetary worth of a business is frequently carried out in scenarios where a corporation plans to sell off a portion or all of its activities or when it aims to participate in a consolidation or takeover with another organization. Business valuation determines a company's current worth by evaluating all the aspects of an organization. A thorough assessment of a business's value may involve an analysis of its management strategies, financial structure, prospective profitability, and the present market value of its assets. The valuation tools utilized by evaluation experts, organizations, and industries have a degree of variability. The process of valuation is commonly carried out by employing diverse approaches, including scrutinizing financial records, employing discounted cash flow models, and drawing comparisons with analogous entities. The importance of valuation also pertains to tax reporting.

The topic of company valuation encompasses various aspects, including but not limited to the enterprise value pertains to assessing a company's productive activities. Equity valuation can be defined as the process of determining the worth of an organization’s shares, whether it is for trading a single share or for assessing the overall equity value in the context of a corporate acquisition. Valuation of debt is contingent upon the valuation of the issuing company when debt carries a certain level of risk. It may be prudent to assign worth to additional securities associated with the organization, such as the company's warrants or options and employee stock options. Enterprise value is a crucial concept in the field of corporate valuation. Determining a firm's enterprise value (EV) is a fundamental aspect of numerous corporate valuation

models, representing the monetary worth of the firm's primary business operations. The accounting methodology for Enterprise Value (EV) involves the repositioning of items on the balance sheet (BS), such that all operating line items are situated on the LHS. In contrast, all financial line items are located on the RHS.

The efficient markets paradigm for an enterprise value (EV) revaluation involves valuing the items on the accounting Enterprise Value BS at their respective market values (MV) to the maximum extent feasible. One potential course of action would be to substitute the equity book value of the firm with its corresponding MV. Insofar as the MV of liabilities of other firms, such as debt and pension obligations, is known, it will supplant the corresponding book values. The EV valuation is conducted by implementing the discounted cash flow (DCF) methodology. This approach entails determining the present value of the firm's future free cash flows (FCFs), which are subsequently discounted at the WACC. FCFs are the cash flows generated by the company's productive assets, including fixed assets, working capital (WC), goodwill, and other similar items. This current project will prioritize the implementation of the DCF model to evaluate a company amidst various valuation techniques.

1.2 Financial Modelling

Using an integrated financial statement model involves interlinking the IS, BS, and CFS by applying accounting logic via Excel formulas to facilitate financial disclosure. This model's fundamental purpose is to exhibit an organization’s monetary status. By analyzing historical data, it is plausible to gain insights into the organization’s past performance and assess the strengths or weaknesses of its business. Utilizing the identical modelling framework, it is possible to make projections regarding forthcoming performance with greater importance. Adopting this approach makes it possible to gain insight into potential future risk areas within the company's financial condition. The presentation format is consistent with historical financial statements, allowing for comparability and facilitating the identification of trends. The aforementioned financial model applies to enterprises of varying sizes, including small startups, family-owned businesses, and large corporations, with a scale of billions of dollars. The financial model is not a definitive tool for predicting the future, and its results need to hold power to determine what is to come. The statement suggests that the tool in question approximates a company's anticipated financial outlook based on specific assumptions regarding its forthcoming performance. The primary function of

this tool is to facilitate the evaluation of the necessary steps required to achieve one or more performance objectives.

In this context, the function of a testing tool pertains to the optimal performance of a financial model, whereby the ability to modify inputs expediently is crucial for conducting a range of sensitivity tests. This inquiry pertains to the potential impact on cash flow from operations resulting from a 3% increase or decrease in revenue from a baseline of 5% under three distinct scenarios: (a) constant margins, (b) improved margins, and (c) deteriorated margins. The potential permutations of sensitivities can be infinite based on the accounts in a given model. A financial model can facilitate the evaluation of various company performance metrics.(Benninga, 2014)

Most financial statement models are oriented towards sales, whereby the key financial variables are presumed to depend on the firm's sales level. Accounts receivables are frequently calculated as a direct proportion of the firm's sales. A more complex scenario suggests that the fixed assets or another account exhibit a step function concerning the sales level.

$$Fixed\ assets = \begin{cases} a & if\ sales < A \\ b & if\ A \le sales < B \\ etc. & \end{cases}$$

It is commonly assumed in the field that the balance sheet's asset side relies solely on functional relationships. Long-term debt and equity composition may be considered a policy decision, as current liabilities may exclusively pertain to functional relationships.

DCF is a financial model that assesses the feasibility of an investment by analyzing the FCF's it is anticipated to generate. The concept underlying a DCF model is that the valuation of a firm is contingent upon its ability to generate FCF's that are beneficial to its stakeholders.

$$DCF = \frac{CF_1}{(1+r)^1} + \frac{CF_2}{(1+r)^2} + \frac{CF_n}{(1+r)^n}$$

where:

CF_1 = The cash flow for year one

CF_2 = The cash flow for year two

CF_n = The cash flow for additional years

r = The discount rate

The principal aim of performing a DCF analysis is to estimate the current value of FCF's that an investor could receive from an investment while factoring in the influence of the time value of money (TVM). TVM theory asserts that due to the possibility of investment, the current worth of a dollar surpasses its future value. Discounted Cash Flow (DCF) analysis is a beneficial technique when an individual is engaging in a present financial investment with the expectation of obtaining future economic benefits. Given an annual interest rate of 6.2%, a deposit of $1 in a savings account will experience an appreciation of $1.062 after 1 year. If the clearance of $1 is set back by 1 year, its PV will decrease to 93.8 cents as it cannot be transferred to a savings account and earn interest. DCF analysis methodology entails computing the PV of projected future CFs through a discount rate. Implementing the present value of money can assist investors in assessing whether the anticipated cash inflows of an investment or project surpass the initial investment value. The DCF model utilized in enterprises involves the reduction of FCF, which pertains to the CF accessible to all investors, including shareholders, bond holders, and other investors, at the WACC. This cost refers to the combined cost of capital (COC) for all investor capital. Enterprise value is calculated by deducting the organization's debt and other non-equity claims on CF from the total value of the company in order to ascertain its equity value.

In contrast to other models, equity valuation models directly assess the cash flows of equity holders. The discounted cash flow (DCF) approach is particularly advantageous when evaluating a conglomerate with multiple business units. Discounted Cash Flow (DCF) is explicated using formulae and examples, as per an anonymous source.

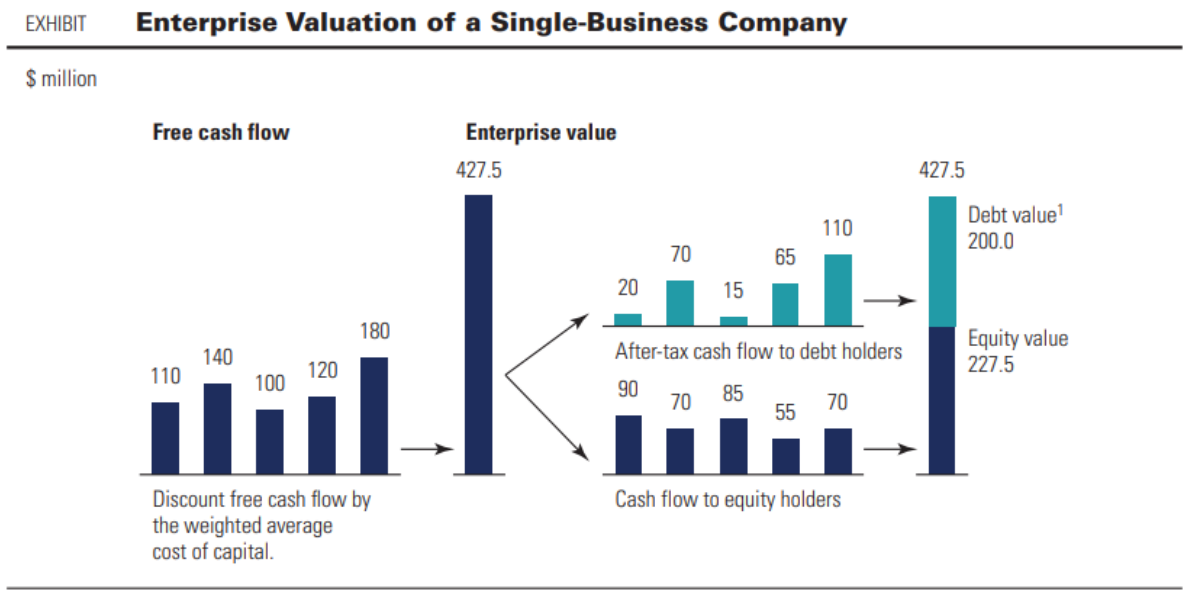


Figure 1.1 Relationship between Enterprise value and Equity Value

Source: https://www.mckinsey.com/

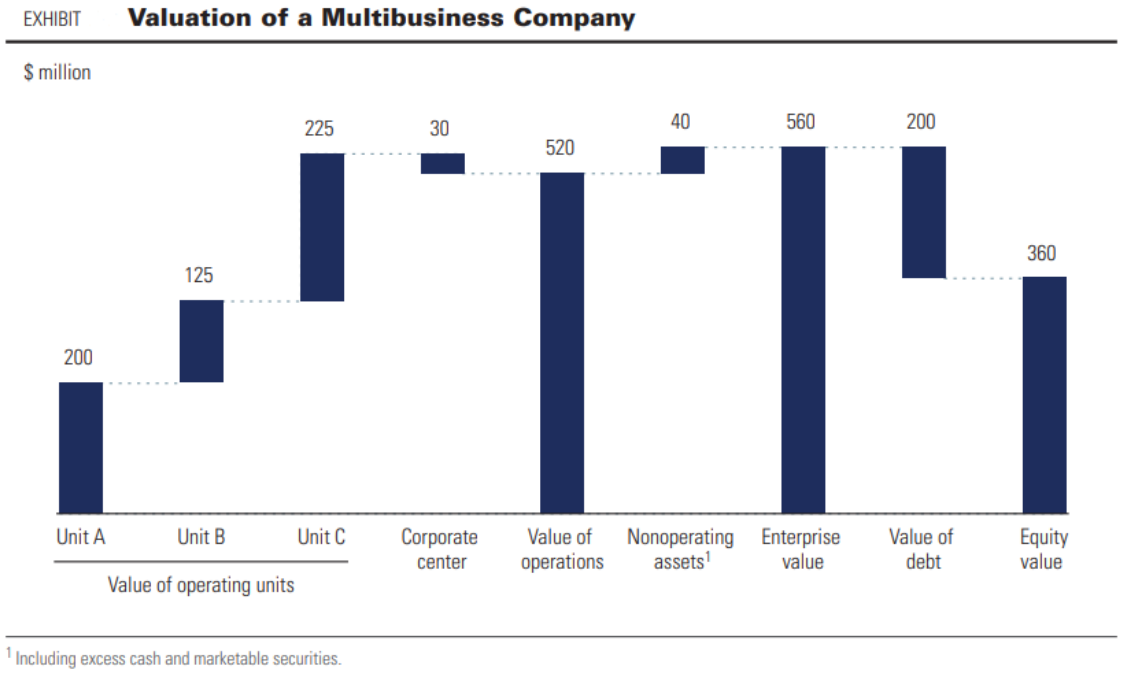


Figure 1.2 Valuation of a Multi-business Company

Source: https://www.mckinsey.com/

Investment bankers commonly define EV as the addition of debt and the market value of equity, subtracting the amount of cash the company holds. On the other hand, an alternative approach to delineating enterprise value entails summating the value of non-operating assets and operations. As defined by investment bankers, the concept of EV resembles our understanding of the value of operations, albeit with certain caveats. Specifically, this definition applies solely to companies that lack non-operating assets (such as non-consolidated subsidiary companies) or debt (such as unfunded employee pension). Using the financial services version of enterprise value may result in analytical distortions for firms possessing substantial nonoperating assets or debt equivalents.(Steiger, 2010)

The process of equity valuation through the utilisation of enterprise DCF involves four distinct steps.

The recommended approach for evaluating the worth of a organisation's operations is to apply a discount to the FCF, using the WACC as the discount rate.

The task at hand involves identifying and assessing nonoperating assets, which may include surplus cash and convertible securities, non-consolidated subsidiaries, and other nonoperating assets not included in the computation of FCF. The determination of EV involves the summation of the worth of both operating and nonoperating assets.

The task is to recognise and assess all liabilities and non-equity obligations concerning the overall EV. The debt and other non-equity claims category encompass various financial instruments, such as floating-rate debt or fixed-rate, debt equivalents reorganising provisions, employee stock options, & preferred equity.

For the process of equity valuation, one must deduct the worth of debt and other non-equity claims from the EV. To estimate the value of one share, we can divide the total market value of equity by the current no. of outstanding shares.

The key-value driver formula is utilised to evaluate cash flows generated beyond the third year, which are subsequently presented as continuing value. Subsequently, it is recommended to apply a discount to the estimated FCF for each fiscal year and the continuing value based on the organisation's WACC. To ascertain the present value of operations, adding the PV of the yearly CF’s and the discounted continuing value is necessary. To simplify the calculation of projected cash flow, a discount is applied to

the first year's CF by one full year, the second year's CF by two full years, and so forth. We assume that cash flows transpire in discrete amounts to ensure lucid presentation. Cash flows are distributed throughout the year rather than consolidated into a single lump sum. Thus, modifying the discount rate to align it more accurately with the cash flow timing is advisable. Incorporate non-operating assets, such as surplus cash and non-controlling interests in other firms, into the valuation of operations.

The primary step in the process of finding out the value of a company is to gather the past financial statements of the organisation. Gathering data from multiple years to evaluate a company's long-term performance and potential for future growth is advisable. The valuation process heavily relies on assessing ROIC and free cash flow (FCF). However, computing these two measures from a company's financial statements is complex. Hence, to derive the ROIC and FCF metrics, it is imperative to initially restructure the organisation's financial statements by creating novel statements that distinctly classify the operating and nonoperating items, along with the financing sources. The restructuring process results in the emergence of two novel concepts, namely invested capital & net operating profit after taxes (NOPAT). Invested capital denotes the amount of capital invested by investors to finance operations without differentiating the mode of financing employed.

NOPAT is the comprehensive income generated by an organisation's invested capital after accounting for taxes, accessible to all stakeholders. To derive an approximation of NOPAT, it is recommended to exclusively subtract operating expenses and depreciation from the total revenue. It is recommended to refrain from subtracting interest expense or including nonoperating income in the analysis, as these elements will be evaluated and assessed independently as components of nonoperating debt and assets, respectively. The computation of operating taxes is based on a firm's operating profit. It reflects the amount of taxes that would have been incurred if the company was solely financed by equity and possessed solely operating assets. A comprehensive valuation methodology will effectively align the net income. Utilising the findings derived from your historical analysis and projections of economic and industry patterns, we generate a comprehensive set of financial statements for the future. It is imperative to integrate the three statements to facilitate the smooth flow of net income through the statement of equity. This integration should ensure that the statement of equity aligns with the corresponding account in the BS. Utilise surplus funds,

liabilities, payouts to shareholders, or a blend of these options to maintain equilibrium in the financial statement.

ROIC & FCF are both derived from NOPAT & invested capital. ROIC is defined as :

$$\text{ROIC} = \frac{\text{NOPAT}}{\text{Invested Capital}}$$

By incorporating non-cash expenses, such as depreciation, with investment in invested capital, FCF can be defined as

FCF = NOPAT - Increase in Invested Capital

When applying the Discounted FCF method, it is customary to utilize the WACC. FCF's are accessible to all investors in the enterprise valuation process. Thus, it is imperative that the discount factor utilized for FCF' accurately reflects the level of risk encountered by all investors. WACC is a financial metric that combines the expected rates of return demanded by both debt and equity holders, represented by kd and ke, respectively. In the context of a corporation that is funded exclusively through debt and equity, the WACC can be described as follows:

$$\text{WACC} = \frac{D}{D+E} k_d (1 - T_m) + \frac{E}{D+E} k_e$$

The market values of debt (D) & equity (E) are utilised in the analysis, with particular attention given to the reduction of the cost of debt through the application of the marginal tax rate (Tm). This action has been taken due to excluding the tax shield associated with interest from the FCF. Given that the interest tax shield holds value for shareholders, including it in the valuation process is imperative. The valuation methodology employed by Enterprise DCF involves factoring in the tax shield employing a reduction in the WACC.

In the case of enterprises that possess other securities, especially preferred stock, it is necessary to incorporate supplementary provisions into the cost of capital. These provisions should reflect the anticipated rate of return and the proportion of the overall enterprise value associated with each security. The cost of capital excludes anticipated returns from operational obligations, including accounts payable. The remuneration

necessary for the capital furnished by customers, suppliers, & employees is inherent in operating expenditures, which have already been integrated into the FCF. Determining the cost of equity (COE) involves estimating the anticipated return on the market portfolio, which is then modified to account for the risk associated with the valuation of the company. The estimation of risk has been conducted through the utilisation of the Capital Asset Pricing Model (CAPM). CAPM incorporates the impact of company-specific risk by utilising beta, a metric that gauges the responsiveness of an organisation's market price of stock to fluctuations in the broader market. It is commonly observed that stocks with high betas are associated with anticipated returns that surpass the market return, while low-beta stocks are expected to yield lower returns. The pricing of only beta risk is observed. The residual risk, known as an idiosyncratic risk in academic circles, can be eliminated through diversification by investing in multiple securities.

In order to estimate the post-tax expense of debt for a firm with a high credit rating, the after-tax YTM on the firm's long-term debt was utilised. In cases where a company's debt is infrequently traded or nontraded, it is advisable to employ the company's debt rating to approximate the YTM. The incorporation of interest tax shield into the WACC can be achieved by utilising the after-tax cost of debt, given that FCF is measured without interest tax shields. Ultimately, it is necessary to anticipate the prospective capital structure and employ the projected levels to determine the proportional impact of the after-tax debt and equity cost. In the case of established firms, the optimal capital structure is frequently estimated by referencing the current debt-to-equity ratio, which is calculated based on the market values of equity and debt.

Determining the COE is a fundamental component in calculating the COC. Regrettably, quantifying it is also challenging. Scholars and professionals have suggested various models approximate the cost of equity. However, their dependability, particularly at the firm level, still needs to be investigated. Despite the possibility of reaching a consensus on a particular model, the precise determination of the necessary inputs has remained challenging. Hence, determining equity cost is considerably more challenging than what several fundamental finance literatures suggests. Given these obstacles, we will proceed to calculate the equity cost in a two-step process:

1. One possible task is to estimate the market return. Initially, an estimation is made regarding the stock market's anticipated return. While a company's COC may not align with the market's cost, the market return serves as a crucial point of reference for evaluating the plausibility of cost of equity approximations for specific companies.

2. Mitigate risk. Subsequently, we account for company risk by utilising a widely recognised model, namely CAPM. The present model assesses the risk of a company by quantifying the correlation between its stock price and market fluctuations, commonly referred to as beta. Due to the imprecise nature of beta estimates, peer group betas are relied upon instead of individual company betas.

The CAPM states that the expected rate of return of any company equals the risk-free rate plus the company's beta times the market risk premium:

$$E(R_i) = r_f + \beta_i[E(R_m) - r_f]$$

where

$E(R_i)$ = expected return of security i
r_f = risk-free rate
β_i = security i's sensitivity to the market portfolio
$E(R_m)$ = expected return of the market portfolio

The Capital Asset Pricing Model (CAPM) posits that the market risk premium, which is the difference between the expected return of the market (E(Rm)) and the risk-free rate (Rf), as well as the risk-free rate itself, are universal variables applicable to all companies. The sole variable that differs across companies is beta. Beta measures a stock's incremental risk to a diversified investor. In this context, the risk is defined as the degree to which the stock's movements are correlated with those of the overall stock market.

In order to project FCF, it is necessary to conduct an estimation of the IS, and BS, as well as the statement of changes in equity. The financial statements that are predicted in advance offer the requisite data for the computation of NOPAT, invested capital, ROIC, &, in the end, FCF.

Before commencing the prediction of specific line items on the financial statements, it is imperative to determine the duration of the forecast period and the level of granularity required for the forecast. A common approach involves creating a comprehensive yearly projection for a specified duration and subsequently assessing the residual years through the utilization of a perpetuity formula, such as the critical

value driver formula. All the approaches for the perpetuity formula assume consistent performance, regardless of the method chosen for determining the continuing value. Hence, the duration of the projected timeframe must be sufficiently extended to enable the organization to attain a state of equilibrium, as delineated by the following attributes: The organization experiences steady growth by consistently reinvesting a fixed percentage of its operational earnings into the enterprise on an annual basis. Additionally, the company generates a uniform rate of profit on both its current and newly invested capital.(Tjia, n.d.)

The growth perpetuity method can be utilized to determine the value of the free cash flow of a stable company, which is expected to increase at a consistent rate. It is recommended that the duration of the forecast period be sufficient to ensure that the company's growth rate is either equivalent to or lower than that of the overall economy. The potential for companies to achieve higher growth rates could result in their disproportionate expansion relative to the overall economy. It is recommended to employ a clearly defined projection horizon ranging from 10 to 15 years and extending beyond for businesses that are cyclical or undergoing significant expansion. Employing a concise and unambiguous projection horizon, such as five years, commonly leads to a considerable underestimation of a firm or necessitates ambitious extended-term expansion suppositions in the residual value. However, an extended forecast horizon presents challenges, primarily the arduousness of predicting specific line items a decade or more in advance. In order to enhance the accuracy of the forecast and prevent the occurrence of false precision, it is common practice to divide the explicit forecast into two distinct periods.

The proposed approach involves generating a comprehensive financial projection spanning a period of five to seven years. This projection will encompass detailed balance sheets and income statements, with a focus on establishing strong correlations with actual variables such as unit volumes & cost per unit.

A concise projection for the upcoming years, with emphasis on key factors, including revenue expansion, profitability, and capital efficiency.

The discounted cash flow (DCF) valuation model utilized in enterprises depends on a projection of free cash flow (FCF). As previously mentioned, generating FCF projections through an indirect approach is advisable, which involves forecasting the

IS, BS, & statement of retained earnings. The methodology for forecasting free cash flow should be consistent with the approach used for analyzing past performance. The process of forecasting can be deconstructed into six distinct steps.

One should engage in the process of compiling and evaluating financial statements from past periods. Prior to making predictions about forthcoming financial outcomes, it is necessary to construct and evaluate past financial records. A comprehensive analysis will contextualize your predictions effectively.

Develop a revenue projection. Virtually every item in the list will depend directly or indirectly on generated revenues. One can project forthcoming sales by employing either a top-down (market-oriented) or a bottom-up (client-oriented) methodology. The alignment of forecasts with empirical evidence on growth is imperative.

Please provide a projection of the income statement. Utilize the relevant economic factors to predict the costs of operations, decrease in value of assets, income not related to operations, expenses incurred due to borrowing, and taxes reported in financial statements.

Please provide additional context or information for me to accurately rewrite the user's text to be academic. The balance sheet should include a projection of the operating working capital, net property, plant, & equipment, goodwill, and non-operating assets.

The process of aligning the balance sheet with the funds invested by stakeholders must be carried out. Compute the retained earnings and make projections for other equity accounts to finalize the balance sheet. Utilize surplus funds and new liabilities to achieve balance in the financial statement.

Compute the ROIC and FCF. Computing the ROIC on forthcoming financial statements is advisable to maintain coherence with economic principles, industry dynamics, and the company's competitive capacity. In order to finalize the projection, it is necessary to compute the FCF as the fundamental metric for the purpose of the appraisal. The methodology for computing future free cash flows (FCF) should be consistent with that employed for determining historical FCF.

1.3 Objectives of Study

In contemporary society, investments are deemed indispensable as relying solely on one's main source of income is insufficient. Individuals expend considerable effort in pursuit of financial gain, yet this may prove insufficient to attain a satisfactory standard of living and achieve long-term aspirations. In order to achieve one's aspirations, it is imperative to ensure that one's financial resources are utilized effectively. This is the main reason why one should consider making an investment. The failure to utilize funds that are held in a bank account represents a missed opportunity. It is advisable to make intelligent investment decisions in order to generate profitable returns.

A significant proportion of individuals do not engage in retirement savings, and even among those who do, the amount saved may be insufficient to sustain their financial needs during retirement. According to a study conducted by the Federal Reserve in 2020, approximately one-quarter of individuals who have not yet retired were found to be not actively saving for their retirement. Nonetheless, it is imperative for individuals to engage in investment activities in order to generate wealth, surpass the effects of inflation, and accumulate funds for their retirement and other monetary objectives. Investment refers to the process of acquiring assets or commodities with the aim of generating returns in the form of income and appreciation. Investments, defined as assets or commodities acquired with the intention of generating future wealth, serve as a means of securing financial growth. Frequently, the aforementioned commodities manifest in the shape of equities or fixed-income securities, albeit they may also encompass tangible property or non-traditional assets like virtual currency or precious metals.

Investment of funds holds significant importance due to several reasons. The desire to accumulate wealth is driven by the need to provide financial security during unforeseen circumstances such as job displacement, emergencies or to achieve long-term objectives. It is advisable to leverage the benefits of compounding while factoring in the impact of inflation to prevent the erosion of the value of your funds over time. Moreover, if an individual intends to cease employment at a particular juncture and enter retirement, engaging in investment activities to realise such objectives is imperative. *Inflation* can be defined as the general rise in the cost of goods and services over some time. In the event of a gradual increase in prices, the purchasing power of one's currency diminishes over time. In the event of inflation spanning 30 to 40 years,

the value of one's currency will experience a significant decline, while the expenses associated with maintaining a basic standard of living will have escalated. Investing money is a potential strategy for mitigating the effects of inflation. If the rate of return on your investment exceeds the rate of inflation, it implies that the purchasing power of your funds will increase over time.

Hence the objective of study in this case is,

- Forecast the Balance Sheet, Income Statement, Cash Flow statement for the next 5 years and create a financial model for the firm.
- Estimate the approximate value of the firm which will help in the decision-making process for investors.

1.4 Scope of Study

This study aims to identify the approximate value of the company using the information which has been made available by the company in the public domain like the annual reports which include the basic financial statements like the BS, IS and cash flow statement. Apart from that it also includes management discussion and analysis part which helps the reader to get an idea about the company's future direction or expansion strategy. Since it is just a forecast, so several things will be as per the knowledge of the reader and what he expects from the company, and the entire industry or sector to perform in the coming years, which is one of the limitations of this study.

1.5 About the Company

Happiest Minds Technologies is a company that provides services in infrastructure, digital transformation, security, and product engineering. In 2011, Ashok Soota established the company as mentioned above. The corporation is headquartered in Bangalore, India, and operates in the United States, Canada, Singapore, and Australia. Happiest Minds Technologies Limited, listed on the National Stock Exchange of India under the ticker symbol HAPPSTMNDS, specialises in providing IT solutions that promote mindfulness. Its services cater to both enterprises and technology providers, focusing on facilitating digital transformation by delivering superior customer experiences, enhanced business efficiency, and valuable insights that can be acted upon.

This is achieved by utilising innovative technologies that are considered disruptive, including but not limited to artificial intelligence, blockchain, cloud computing, digital process automation, the Internet of Things, robotics and drones, security measures, and virtual and augmented reality. The company is positioned as being "Born Digital." The company 'Born Agile' possesses diverse competencies encompassing digital solutions, infrastructure, product engineering, and security. The services mentioned above are provided across various industry sectors, including but not limited to automotive, BFSI, consumer packaged goods, e-commerce, Edutech, engineering R&D, hi-tech, manufacturing, retail, and travel/transportation/hospitality.

Exhibit A brief Timeline of Happiest Minds since inception

Year	Events
2011	Founded by Ashok Soota (previously cofounded Mindtree)
May 2017	Strengthened its Leadership Position in IoT With Acquisition of Cupola Technology
June 2017	Acquired OSSCube, a US-based digital transformation company which modernizes legacy systems
Sep 2020	Got listed on BSE and NSE
Oct 2020	Partnered with Veridify to address security problems in IoT
Nov 2020	Partnered with AutonomIQ for autonomous testing capabilities
Jan 2021	Acquired Houston based software solutions provider Pimcore Global Services (PGS) for $8.25 million, to strengthen its presence in digital commerce
Mar 2021	Collaborated with Ilantus Technologies for IAM capabilities
Apr 2021	Partnered with BeatRoute to offer solutions for CPG industry
May 2021	Entered into partnership with Yotta to deliver Co-location and managed IT services
Oct 2022	Happiest Minds Technologies board approves raising of Rs 14bn through combination of equity and debt

Figure 1.2 A brief timeline of Happiest Minds since its inception

Source: https://www.google.com/

Happiest Minds is present in 3 business segments. 1) Product Engineering Services (PES); 2) Digital Business Services (DBS); 3) Infrastructure Management and Security Services (IMSS). Since its launch in 2011, the Product engineering platform has been a key focus area for Happiest Minds, and gradually it has expanded into other segments. PES is the biggest business segment (47% of revenue) for Happiest Minds and provides access to clients. On the other hand, DBS and IMSS segments provide scalability and an annuity revenue stream. The presence in these three segments provides cross-sell opportunities for the company. It strongly focuses on 1) Cloud, led by its long-standing relationships with large, hyper scalers like Microsoft Azure and Amazon AWS. 2) Enterprise SaaS, led by the strength in implementation/integration

of large software vendors such as Salesforce alongside capabilities in certain niche software products. It has been expanding its offerings in the digital and infra-service segments, which are annuity and long-term. DBS and IMSS combined contributed >50% of revenue and are expected to lead growth in the medium term.

CHAPTER -2

LITERATURE REVIEW

Over the last ten years, there has been significant interest in the residual income approach (RI) & the discounted cash flow approach (DCF). Although the RI and DCF approaches are theoretically equivalent, the finance literature has advocated for the DCF approach in firm valuation due to its independence from accounting methods (Copeland, Koller, & Murrin, 1990). Ohlson's (1995) demonstration shows that the RI approach exhibits insensitivity towards distinct accounting methods, provided that the forecasted financial statements are subjected to clean surplus accounting. Penman & Sougiannis (1998) & Francis, Olsson, & Oswald (2000) conducted empirical research to evaluate the precision of the RI and DCF methodologies. Both studies have concluded that the Relative Importance (RI) approach provides more precise estimations of firm value compared to the Discounted Cash Flow (DCF) approach. Given that both valuation methodologies are grounded in the same theoretical framework, a correct execution of these methods would result in comparative estimations of a firm's value.(Plenborg, 2002)

According to Olsson's (1998) assertion, using various valuation methods in practical applications frequently involves the incorporation of simplifying assumptions. Simplifying assumptions is known to introduce bias in estimating firm value. As a result, it is expected that the impact of such assumptions on the estimation of firm value through the Residual Income (RI) and Discounted Cash Flow (DCF) approaches will differ. According to Levin and Olsson's (2000) findings, the RI approach provides more precise estimations of firm value compared to the DCF approach in cases where the steady state condition is not achieved during the terminal value calculation. According to Penman and Sougiannis (1998), an effective valuation methodology should possess user-friendly features that facilitate comprehension and enable the user to generate more accurate estimates of firm value. Valuation methodologies that rely on metrics demonstrating value creation instead of value distribution are more comprehensible and hold an analytical appeal (Penman, 1992).(Levin & Olsson, n.d.; Penman & Sougiannis, 1998; Rojo-Ramírez et al., 2018)

The Relative Income (RI) approach and the Discounted Cash Flow (DCF) approach may yield varying degrees of accuracy in estimating firm value, depending on the

specific case. The research findings indicate that the impact of each of the scrutinized assumptions on the estimates of firm value can be anticipated. When the growth term utilized in the terminal value calculation differs from the growth term employed in the projected financial statements, the residual income (RI) approach provides more precise estimations of a firm's value compared to the discounted cash flow (DCF) approach. The outcomes of Penman and Sougiannis' (1998) and Francis et al.'s (2000) research can be foreseen, as both investigations incorporate reductionist suppositions.

According to Miller and Modigliani's (1961) research, the dividend discount model (DDM) is the fundamental framework for firm valuation. Investors anticipate two forms of cash flow when purchasing stocks: a dividend payment while holding the stock and the projected sales price after the investment period. In an extreme scenario, the investor retains possession of the stock until the company undergoes liquidation. In this situation, the liquidating dividend serves as the sales price. When considering an infinite time horizon, the Discounted Dividend Model (DDM) can be formulated as follows(Miller & Modigliani, 1961):

$$P_0 = \sum_{t=1}^{\infty} \frac{div_t}{(1 + k_e)^t}$$

The formula for determining firm value (P) involves the variables of dividends (div) and the cost of capital for equity-holders (ke). It is imperative to ensure conceptual equivalence of valuation approaches, as the estimated market value of a firm's equity should remain unaffected by the approach employed. Despite the DDM model's theoretical correctness, significant resources and efforts are dedicated to developing alternative valuation methodologies. The Disposition of Dividends Model (DDM) considers dividends as a form of distribution rather than a means of generating wealth, which is one of its rationales. According to Penman (1992, p. 467), the issue of dividends is a conundrum in which future dividends determine the price of a stock. However, the dividends that have already been observed do not provide any insight into the stock's price. Ideally, the selected valuation approach should encompass variables demonstrating wealth generation instead of allocating wealth. The facilitation of the comprehension of firm value approximations for financial analysts

and investors alike will be achieved through this. Edwards and Bell (1961) initially introduced the RI approach, which was later refined by Peasnell (1982) and Ohlson (1995). The origin of this can be traced back to the DDM. The concept of Residual Income (RI) is a derivative of the widely recognized Economic Value Added (EVA) methodology introduced by Stewart (1991). Unlike the EVA approach, which assesses the value of a firm from the standpoint of both lenders and equity holders, the RI approach solely focuses on evaluating the value of a firm from an equity holder's perspective. The approach of Relational Inquiry (RI) can be formulated as follows :

$$P_0 = BV_0 + \sum_{t=1}^{\infty} \frac{NI_t - k_e \cdot BV_{t-1}}{(1 + k_e)^t}$$

The RI approach can also be expressed in terms of financial ratios:

$$P_0 = BV_0 + \sum_{t=1}^{\infty} \frac{(ROE_t - k_e)BV_{t-1}}{(1 + k_e)^t}$$

where NI is the net income, BV the book value of equity, and ROE the return on equity.

The DCF approach can be found in most financial textbooks (Rappaport, 1986; Copeland et al., 1990) . Penman (1997) demonstrates that the DCF and the RI approach are theoretically equivalent. Based on DCF, it is possible to estimate firm value from an equity-holder's perspective (DCFE):

$$P_0 = \sum_{t=1}^{\infty} \frac{FCFE_t}{(1 + k_e)^t} + \text{cash assets}$$

where FCFE is the free cash flow to equity-holders. The DCF approach can also be stated in a form that reflects the overall value of the firm, including the interests of both debt and equity-holders (DCFF):

$$EV_0 = \sum_{t=1}^{\infty} \frac{FCFF_t}{(1 + WACC)^t}$$

The formula provided relates to calculating a firm's value, considering both interest-bearing debt and equity. It involves using the free cash flow to the firm, which encompasses both equity-holders and lenders, as well as the weighted average cost of capital (WACC). If uniform assumptions are applied to the growth in the two cash flow

methods and interest-bearing debt is accurately valued, both equations produce equivalent estimates of equity value.

One common method employed by investors and executives to assess the value of companies is to compare them with other companies, similar to the approach used by real estate agents when evaluating a property by analysing the sale prices of comparable homes.(Kaplan & Ruback, 1996) Initially, it is imperative to compute the degree of similarity in the valuation of companies as a multiple of a pertinent metric, such as earnings, invested capital, or an operational metric, for instance, barrels of oil reserves. One may subsequently employ the multiplier as mentioned above to the enterprise under consideration for valuation purposes. Suppose that the NOPAT of the organisation mentioned above amounts to $100 million. Additionally, assume that the industry norm for the enterprise-value-to-NOPAT ratio for companies with comparable growth and ROIC potential is 13 times. The estimated value of $1.3 billion can be obtained by multiplying the numerical value of 13 by $100 million. When executed accurately, multiples can serve as a valuable means of validating your discounted cash flow (DCF) assessment. Assuming that the estimated multiple is $1.3 billion, the discounted cash flow (DCF) valuation is $2.7 billion. This observation could indicate a flaw in your DCF valuation methodology. The anticipated performance of the company you hold in high regard is projected to deviate from that of similar companies. Investors hold a distinct perspective regarding the industry, which may result in the multiples of comparable companies needing to be more consistent with their discounted cash flow (DCF) value(Francis et al., 2000).

The asset-based approach estimates continuing value through replacement cost or liquidation value, in contrast to previous methods that depend on future cash flow or earnings. It is advisable to employ these methods solely in situations where the continuity of current operations is at risk, as they need to consider the organisation's future growth. The liquidation value approach entails equating the continuing value with the projected proceeds expected to be generated from the sale of assets after the discharge of liabilities at the culmination of the explicit forecast period. It is worth noting that the liquidation value frequently deviates significantly from the company's value as a going concern. In a burgeoning and lucrative sector, the liquidation worth of a corporation is likely to be significantly lower than its going-concern value. In an industry experiencing decline, the value of liquidation may surpass the value of a

business as a going concern. This approach should only be employed in cases where the probability of liquidation is high upon the conclusion of the projected timeframe. The replacement cost approach establishes the constant value as equivalent to the anticipated expense of substituting the organisation's assets. This methodology exhibits a minimum of two limitations.

It should be noted that not all tangible assets can be replaced. The valuation of a company's organisational capital is contingent solely upon the cash flow the company can generate. The valuation of a company based solely on the replacement cost of its tangible assets may underestimate its overall worth. Furthermore, it is important to note that some of the organisation's assets may still need to be replaced. The present study concerns a device utilised by a specific organisation. The continued positive cash flow generated by the asset is crucial to the company's ongoing operations and overall business success. However, the asset's replacement cost may be prohibitively expensive, rendering its replacement financially unviable. In this scenario, the replacement cost could surpass the business's worth as a continuing entity.

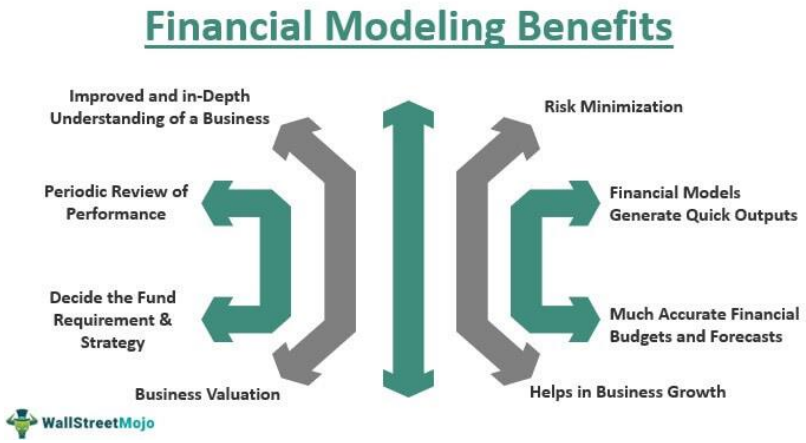


Figure 2.1 Benefits of Financial Modelling

According to Brealey, Myers, and Allen (2006), free cash flow refers to cash not necessary for operations or reinvestment. The adjusted present value (APV) is an alternative approach for evaluating a company's worth through discounted cash flows. The valuation metric known as the APV pertains to the discounted sum of a firm's unrestricted cash flows under the assumption of exclusive equity financing while incorporating the present value of any ancillary financial effects, such as tax benefits.

According to Brealey, Myers, and Allen (2006), on page 993. The APV is founded on the principle of value additivity, as stated by Luehrmann (1997, p. 135). Nevertheless, both the APV and NPV methods yield identical outcomes. The DCF method, being a valuation technique that relies on forecasting, typically involves performing a scenario analysis to evaluate the impact of alterations in the fundamental assumptions. Typically, a scenario analysis comprises three scenarios: the "base case" or "management scenario," which relies on management's estimations for relevant metrics; the "bull case," which incorporates highly optimistic assumptions; and the "bear case," which calculates the company's value in the event of poor performance.

CHAPTER - 3

RESEARCH METHODOLOGY

We need to gather historical data for the company to build a financial model. This data is typically based on the company's historical financial performance and can be publicly available. We can either manually enter this data from the company's annual reports or press releases or use an Excel plugin such as Factset or Capital IQ to drop historical data directly into Excel, here in this case I have taken the data manually from the annual reports of the company.

Once we have collected the historical data, we can construct ratios and statistics predicated on this historical data. For example, historical data on sales can be used to calculate revenue growth, costs as % of revenues, inventories as % of costs, and long-term debt change. Some of the different items in financial data that have to be considered include income statements, balance sheets, statements of retained earnings and cash flows. These financial statements provide an overview of a company's financial performance and activities.

In addition to these financial statements, one can use trend and ratio analysis to track changes occurring in each line of a financial statement. Trend analysis often looks for percentage changes as well. Some of the different line items in the balance sheet include assets such as cash, accounts receivable, inventory, property, plant and equipment, and liabilities such as accounts payable, short-term debt, long-term debt and equity. The different line items in the income statement include revenue/sales, cost of goods sold (COGS), gross profit margin, operating expenses, operating income/loss, and net income/loss. Some of the different line items in the cash flow statement include cash inflows from operating activities, such as sales revenue and cash outflows from operating activities, such as salaries and wages paid to employees. Apart from financial statements, other sources that have been consulted include annual reports (management analysis and discussion), press releases, news articles, industry reports and analyst reports.

Press releases are official statements issued by companies to provide information about newsworthy events or disseminate material information to the public about a company. News articles are written by journalists and reporters who cover companies and industries. Industry analysts write reports covering specific industries and provide

insights into trends, market size, growth rates, and other vital metrics. Financial analysts write reports covering particular companies and provide insights into financial performance, valuation, and other critical metrics.

Moreover, conference calls and investor presentations have been consulted as well. Financial analysts' forecasts are of value to investors and may be obtained by analysing earnings calls—quarterly live conference calls in which company executives present prepared remarks (the presentation section) and then selected financial analysts to ask questions (the question-and-answer section)

CHAPTER -4

FINDINGS AND ANALYSIS

4.1 IT Industry Outlook

Globally, the Information technology industry continues to be on strong footing led by accelerated adoption of Cloud technologies, Artificial Intelligence and Machine Learning across industries. We are still in the early phase of this digital transformation, signifying the quantum of business opportunities lying ahead in this multiyear technology upcycle.

Most of the equity research analysts continue to be positive on the IT services sector despite near term challenges due to macroeconomic concerns in the US and Europe (key markets of IT companies). This has led to more time in decision making on the part of clients and it can lead to near term moderation in deal booking/revenue growth. The clients have become cautious especially in sectors like Retail, Hitech, and Mortgages etc. regarding evolving macroeconomic situation and many of them are trying to optimize their cost structure and consequently, we expect an increase in work volume related to cost optimization projects for Indian IT companies. However, the current valuation of IT companies (down 30-40% from peak valuation) captures most of near-term headwinds. The medium to long term demand environment remains strong led by accelerated adoption of technologies such as cloud computing, artificial Intelligence, machine learning, etc. by enterprises.

We can expect employee hiring to moderate for most IT companies in near term as they focus on training/utilization of recently hired employees. Moreover, one can expect EBIT margin to improve in near term, led by improving employee pyramid (amid increased fresher hiring), lower subcon cost and positive operating leverage. The costs related to travel and admin have started coming back to an extent but IT companies should be able to manage these margin headwinds through operational efficiency measures.

Deal booking momentum has slightly slowed down over last few months due to concerns in the US and Europe as clients have become watchful regarding new deals. It has led to increase in deal conversion cycle. The expected near-term weakness in deal booking would adversely impact revenue growth for FY24, which is expected to be lower than that of FY23. We may witness more divergence in the performance of

IT companies (especially for tier 2) in FY24 versus last two years that saw broad-based growth across the sector. Also, IT companies have reduced the headcount addition in recent months to manage the near-term uncertainty. The focus currently is on improving utilization and overall productivity.

Employee attrition has started moderating for most IT companies as seen in Q3FY23 result, with most IT companies reporting reduction in LTM employee attrition by 100-200bps QoQ and will support operating margin. Subcontracting cost is expected to come down as supply side constraints ease. It is expected that wage hikes/retention bonus would normalize going ahead. Also, as freshers become billable after their training, the employee pyramid will improve resulting in better operational efficiency. Most IT companies have been able to get some price increase especially for niche skills. Other expenses have started rising, but they are not expected to reach precovid level as percentage of revenue.

The intensity of tech spending is expected to increase going ahead. As per McKinsey, global spending on technology as a percentage of enterprise revenue is expected to go from 3% in 2020 to up to 5% by 2030.

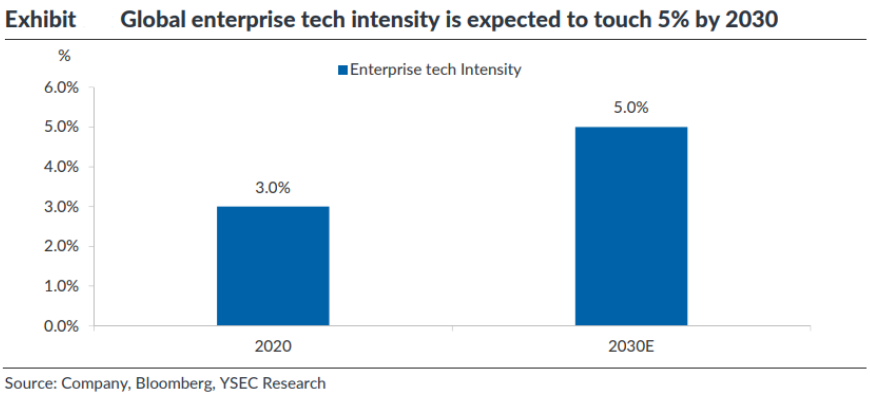


Figure 3 Global Enterprise Tech Intensity

It is estimated that only 30% IT workload has been transitioned to cloud, thus signifying the potential demand. Also, Artificial Intelligence/Machine Learning based tools would find adoption across industries as world has recently seen the emergence of several advance AI applications such as ChatGPT, DALL-E by Open AI etc. Globally, enterprises are still in the early stages of cloud adoption and we expect the cloud adoption cycle to last another 4-5 years; as till now, only 30% of IT related workload has got migrated to cloud.

It is estimated that around 51% of IT spending is expected to shift from traditional solutions to the public cloud by CY25 compared to 41% in CY22, driven by significant improvement in the operational efficiency of enterprises due to the adoption of cloud-based business models. Amazon Web Services (AWS), Azure, and Google Cloud (GCP) – hold more than 60% market share among public cloud providers. Indian IT services companies have strengthened their relationship with global public cloud providers. There has been some recent slowdown in cloud-related deals for Hyperscale due to current macroeconomic concerns in developed economies. But, overall, the demand for cloud-related deals remains strong compared to the precovid level, as seen in recent deal bookings.

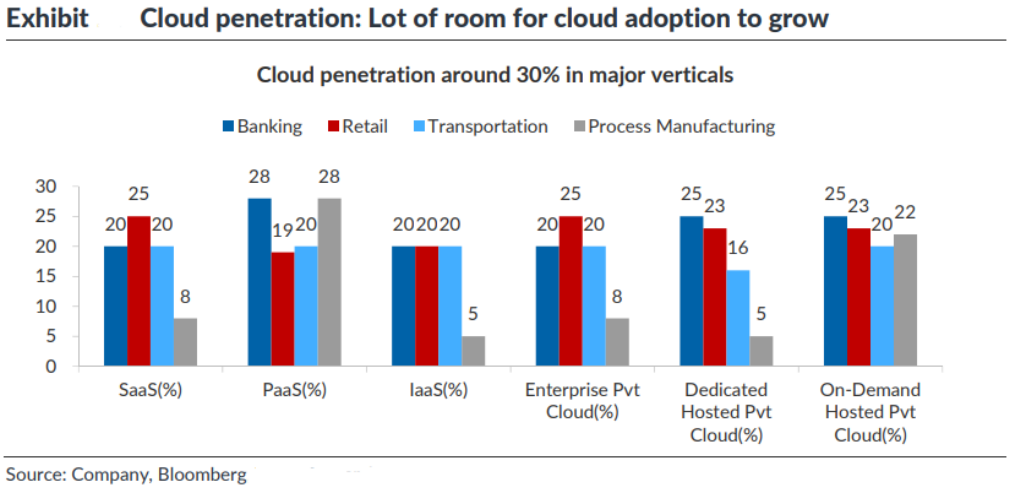


Figure 4 Cloud Penetration in Various Business Verticals

Rapid technology adoption over the last decade and especially the uptick in tech adoption during the covid19 years has increased the role of technology in the life of a common man and hence companies across industries have increased their technology spending to augment their online channels to improve customer service and we expect this trend to continue. According to Gartner, digital spending is projected to grow at a CAGR of 11% over CY20-24. The share of digital revenue to total IT services revenue is expected to grow from 31% in CY22 to 34% by CY24.

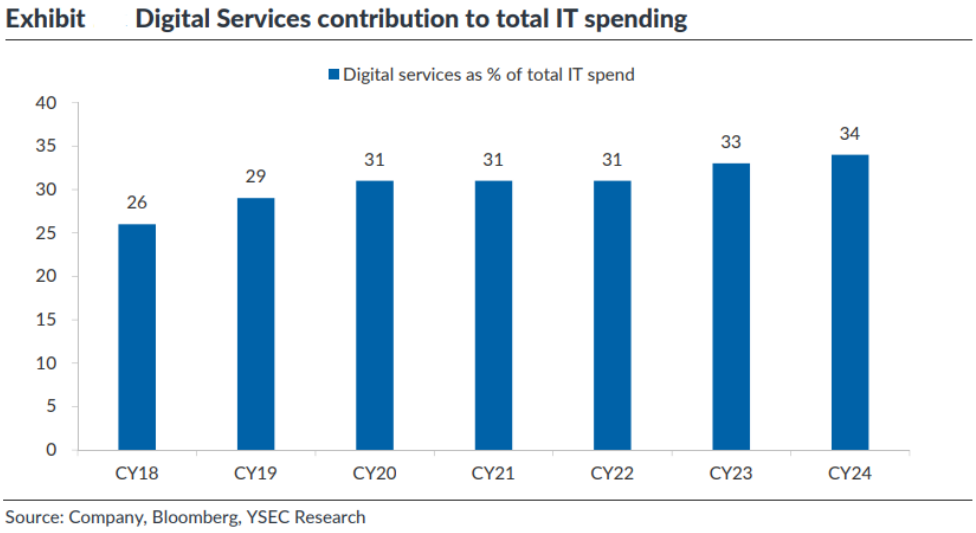


Figure 5 Digital Services contribution to total IT spending

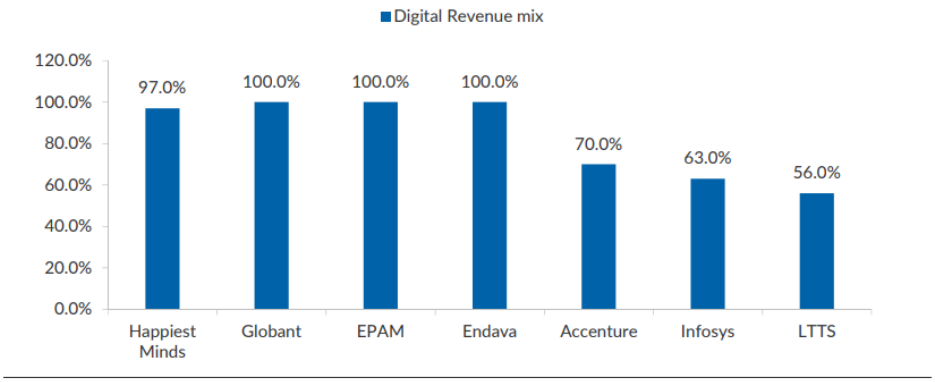
According to Gartner, during CY21-CY26E, it is projected that Global IT services would grow at a CAGR of 8.7% , implying strong demand environment. Globally, CY22 IT spending has been impacted in value terms due to cross currency headwinds as USD appreciated against other currencies, but volume growth has been broadly as per trend. Historically, global IT services spending grew at an average of 5% pa over the last 2 decades and it is projected that IT spending is expected to grow at higher rate than the historical trend over next 4-5 years. Industry experts have alluded to recent moderation in deal booking but remain bullish about medium to long term demand potential driving the sector. According to joint study by NASSCOM and McKinsey, Indian IT industry is projected to grow at CAGR of 15% to reach US$ 350 bn in FY26 against US$ 224 bn in FY22.

4.2 Revenue Driver of Happiest Minds

Digital technologies account for bulk (97%) of Happiest Minds' revenue. It includes digital infrastructure/cloud (45.4% of revenues), SaaS (~20.1% of revenue), security solutions (~13.4% of revenue), and analytics, AI (12.5% of revenue) & IoT (~5.4% of revenues). Comparatively, the proportion of revenue from Digital technologies for Happiest Minds is similar to global peers such as EPAM, Globant and Endava (they derive ~100% of their revenues from new technologies). Most Indian IT services companies generate ~50-60% of revenue from digital technologies, while Accenture gets ~65-70% of revenue from digital services. The high proportion of digital revenue enables Happiest Minds to grow faster than most Indian peers at more than 20%

CAGR. The market for digital technologies is growing at 15-20% CAGR and is expected to reach $900bn by FY25E from $490bn in FY21, as per Gartner.

Exhibit Digital Revenue Mix Comparison with Peers



Source: Company, Bloomberg

Figure 6 Digital Revenue Mix Comparison with Peers

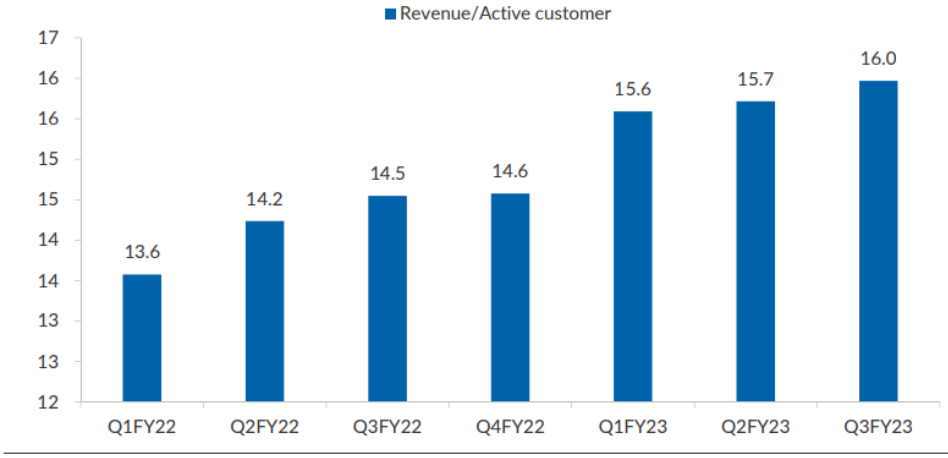
Happiest Minds is present in 3 business segments. 1) Product Engineering Services (PES); 2) Digital Business Services (DBS); 3) Infrastructure Management and Security Services (IMSS). Since its launch in 2011, Product engineering platform was key focus area for Happiest Minds and gradually it expanded into other segments.

PES is the largest unit (47.7% of revenue as of Q3FY23) and has grown at CAGR of 21.7% over FY20-22 led by strength across verticals in the ER&D space. Happiest Minds has strong positioning in Enterprise software, Automotive, Aerospace, Telecommunication and Consumer software. It helps clients develop products/platforms on emerging technologies including cloud, IoT, analytics, etc. The offshore delivery of software products is on the rise as the global PES market is expected to grow steadily at a CAGR of 11.3% between 2019 and 2025. The typical projects are smaller and not annuity type, but it provides access and stickiness to clients. It has wide presence across verticals in ER&D space due to its focus on ISV partnerships which provides access to clients across multiple domains. DBS is the second largest unit and contributes 30.7% to revenue (as of Q3FY23) and has grown at CAGR of 28.0% over FY20-22. Key offerings include a) app development & modernization and migration of on-premises applications to cloud, b) ERP implementations including Salesforce, Appian, MuleSoft, etc. and c) customized solutions in areas of customer experience, IoT and data & analytics. IMSS contributes 21.7% of revenues and grown at CAGR of by 25.6% over FY20- 22 led by the strength

in cloud and security practice. The offerings include a) managing hybrid cloud infrastructure, b) workplace transformation and service desk automation services, c) cyber- security and governance, risk & compliance services, and d) identity & access management and threat & vulnerability management services.

It places special emphasis on client mining and that is reflected in its Land and Expand strategy and this has resulted in increase in average revenue per active customer from Rs13.6mn in Q1FY22 to Rs16.0mn in Q3FY23 and there is further potential to grow this metric, as seen for other Indian peers. Since FY18, the company has placed higher emphasis on mining accounts by up-selling into other businesses of the enterprise or leveraging cross-selling opportunities by selling digital and infra services and exiting non-scalable accounts. Between FY18-20, its active client base fell from 173 in FY18 to 157 in FY20, as the focus remained on increasing wallet share among key clients; It currently derives ~90% of its revenues from repeat business, indicating robust client-mining ability.

Exhibit Revenue per Active Customer maintains growth trend



Source: Company, Bloomberg

Figure 7 Revenue Per Active Customer

It derives ~76% of its revenues from the US and Europe; with remaining 24% coming from India and Rest of the World. Its revenue is well diversified across industry verticals. As of Q3FY23, EdTech contributed 23.2% to revenue; Hi-Tech contributed ~15.7% of revenues; Travel, Media & Entertainment (TME) contributed 13.1% of revenue; BFSI contributed ~10.3% of revenue; Retail contributed 10.4% of revenue;

Manufacturing contributed 10.0% of revenue; and Other contributed 8.2% of revenue. Revenue growth in the past two years has been largely led by Retail, Industrial and Manufacturing verticals. It needs to deepen its domain expertise in key areas to strengthen relationships with T1 clients. Employee base has grown by ~60% over last 2 years led by strong demand environment especially for digital related deals. Current utilization levels remain robust at ~80%. Revenue per employee has grown from Rs 691k in Q1FY22 to Rs 796k in Q3FY23. It has dominant offshore effort mix as 96% of its employees are based out of India, thus supporting its operating margin.

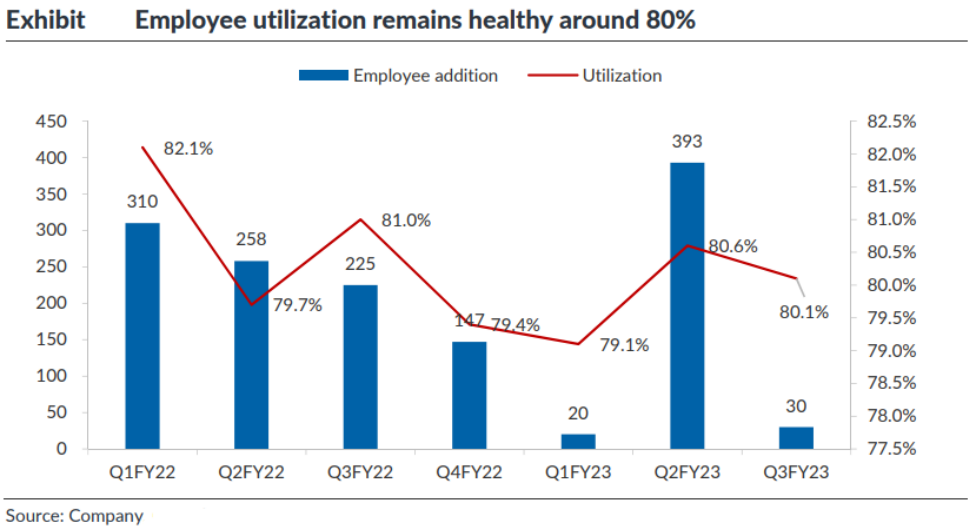


Figure 8 Employee Utilization Rate

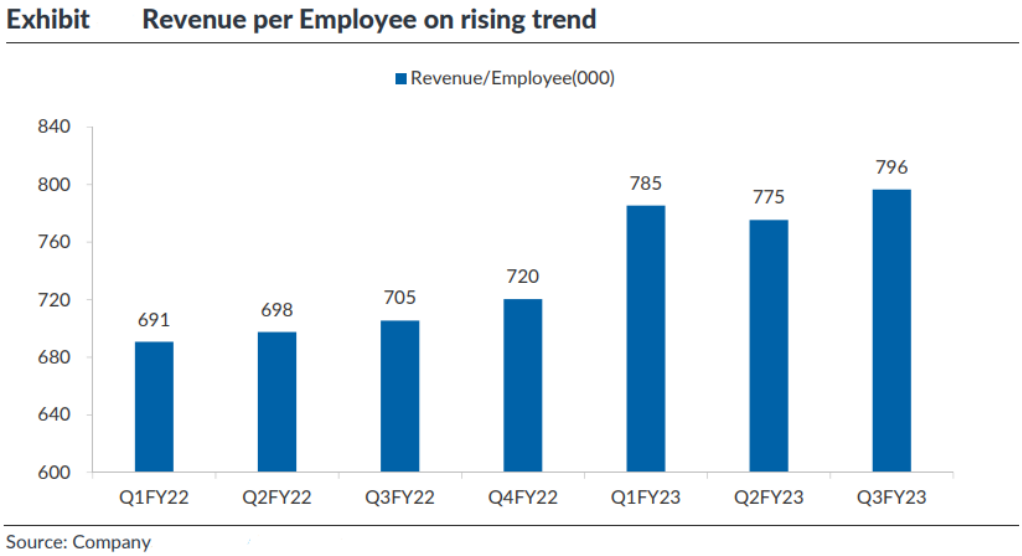


Figure 9 Revenue Per Employee

4.3 Forecasting

While forecasting almost all the possible line items, a certain approach has been followed, which includes initially looking at the historical trend, if there is any. If any trend is found, then certain approaches can be used for forecasting future values, including simple average, moving average, geometric average, regression, multiple regression, exponential smoothing, etc.

If any historical trend is not available, then we have used our intuitive understanding of the company, other companies in a similar sector, and the domestic/global outlook of the economy as a whole to make certain assumptions concerning certain line items. Moreover, certain historical equity research reports from the leading investment banks in India, like Axis, Kotak, ICICI, etc., have been referred to better understand the whole forecasting process.

Revenue Model	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E	FY25E	FY26E	FY27E
Revenue from contracts	₹ 46,761	₹ 59,036	₹ 69,821	₹ 77,341	₹ 1,09,365	₹ 1,41,035	₹ 1,72,206	₹ 2,05,265	₹ 2,39,766	₹ 2,73,168
Onshore Revenue	₹ 10,007	₹ 12,988	₹ 15,710	₹ 14,695	₹ 16,952	₹ 24,600	₹ 30,082	₹ 35,367	₹ 41,348	₹ 46,628
As a percentage	21.4%	22.0%	22.5%	19.0%	15.5%					
Offshore Revenue	₹ 36,754	₹ 46,048	₹ 54,111	₹ 62,646	₹ 92,413	₹ 1,16,435	₹ 1,42,124	₹ 1,69,898	₹ 1,98,419	₹ 2,26,540
As a percentage	78.6%	78.0%	77.5%	81.0%	84.5%					
Employee Count	**FY18**	**FY19**	**FY20**	**FY21**	**FY22**	**FY23E**	**FY24E**	**FY25E**	**FY26E**	**FY27E**
Onsite	105	132	123	166	172	236	272	300	327	343
Offsite	2148	2330	2543	3062	3996	4765	5480	6142	6694	7100
Total	2253	2462	2666	3228	4168	5002	5752	6442	7022	7443
Growth in Employees Count		9%	8%	21%	29%	20%	15%	12%	9%	6%
Calculations	**FY18**	**FY19**	**FY20**	**FY21**	**FY22**	**FY23E**	**FY24E**	**FY25E**	**FY26E**	**FY27E**
Utilization	68.4%	77.3%	76.9%	79.5%	80.5%	81%	82%	82%	83%	83%
Billed Employees	1541	1903	2050	2566	3355					
Billing Rate/Hour(Onshore)	₹ 6,967	₹ 6,364	₹ 8,304	₹ 5,567	₹ 6,121	₹ 6,428	₹ 6,781	₹ 7,188	₹ 7,655	₹ 8,191
Billing Rate/Hour (Offshore	₹ 1,251	₹ 1,278	₹ 1,384	₹ 1,287	₹ 1,436	₹ 1,508	₹ 1,591	₹ 1,687	₹ 1,796	₹ 1,922
Working Hours	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Growth in Billing rate		-8.64%	30.48%	-32.96%	9.95%	5.0%	5.5%	6.0%	6.5%	7.0%
Growth in Billing rate		2.20%	8.23%	-6.99%	11.63%	5.0%	5.5%	6.0%	6.5%	7.0%

Figure 10 Revenue Model

Figure 12 shows the revenue model, which is based on certain commonly used business metrics in the IT industry, which includes revenue from onshore, and offshore employees, utilization percentage with respect to employees, and billing rate of active employees.

Capex Schedule		FY18		FY19		FY20		FY21		FY22		FY23E		FY24E		FY25E		FY26E		FY27E
Property, Plant & Equipment	₹	264	₹	214	₹	93	₹	69	₹	78	₹	99	₹	167	₹	272	₹	411	₹	583
Intangible Assets	₹	793	₹	196	₹	72	₹	2,966	₹	2,396	₹	2,628	₹	2,787	₹	3,067	₹	3,453	₹	3,929
Right-of-use Assets	₹	5,484	₹	3,965	₹	3,006	₹	2,150	₹	5,390	₹	6,060	₹	6,445	₹	7,106	₹	8,000	₹	9,073
Property, Plant & Equipment																				
Gross Long Term Assets:	₹	264	₹	357	₹	403	₹	452	₹	505	₹	626	₹	826	₹	1,108	₹	1,486	₹	1,973
Accumulated Depreciation:			₹	143	₹	310	₹	383	₹	427	₹	527	₹	659	₹	837	₹	1,074	₹	1,390
Net PPE	₹	264	₹	214	₹	93	₹	69	₹	78	₹	99	₹	167	₹	272	₹	411	₹	583
Intangible Assets																				
Gross Long Term Assets:	₹	793	₹	838	₹	905	₹	3,619	₹	4,041	₹	5,211	₹	6,549	₹	8,328	₹	10,627	₹	13,540
Accumulated Depreciation:			₹	642	₹	833	₹	653	₹	1,645	₹	2,583	₹	3,762	₹	5,261	₹	7,174	₹	9,611
Net Intangible Assets	₹	793	₹	196	₹	72	₹	2,966	₹	2,396	₹	2,628	₹	2,787	₹	3,067	₹	3,453	₹	3,929
Right-of-use Assets																				
Gross Long Term Assets:	₹	5,484	₹	5,668	₹	4,671	₹	4,081	₹	7,637	₹	10,384	₹	13,461	₹	17,653	₹	23,184	₹	30,320
Accumulated Depreciation:	₹	-	₹	1,703	₹	1,665	₹	1,931	₹	2,247	₹	4,324	₹	7,016	₹	10,547	₹	15,183	₹	21,247
Net Right of use assets	₹	5,484	₹	3,965	₹	3,006	₹	2,150	₹	5,390	₹	6,060	₹	6,445	₹	7,106	₹	8,000	₹	9,073
Depreciation on PPE			₹	143	₹	167	₹	88	₹	71	₹	100	₹	132	₹	177	₹	238	₹	316
As a % of GLTA				40%		41%		19%		14%		16%		16%		16%		16%		16%
Amortization on Intangible Asset			₹	632	₹	191	₹	255	₹	970	₹	938	₹	1,179	₹	1,499	₹	1,913	₹	2,437
As a % of GLTA				75%		21%		7%		24%		18%		18%		18%		18%		18%
Depreciation on Right of use Assets			₹	1,703	₹	1,665	₹	1,931	₹	2,247	₹	2,077	₹	2,692	₹	3,531	₹	4,637	₹	6,064
As a % of GLTA				30%		36%		47%		29%		20%		20%		20%		20%		20%
Total Depreciation	₹	-	₹	2,478	₹	2,023	₹	2,274	₹	3,288	₹	3,115	₹	4,003	₹	5,207	₹	6,787	₹	8,817
Maintenance Capex on PPE											₹	71	₹	100	₹	132	₹	177	₹	238
Growth Capex On PPE											₹	50	₹	100	₹	150	₹	200	₹	250
Total Capex On PPE											₹	121	₹	200	₹	282	₹	377	₹	488
Maintenance Capex on Intangible Assets											₹	970	₹	938	₹	1,179	₹	1,499	₹	1,913
Growth Capex On Intangible Assets											₹	200	₹	400	₹	600	₹	800	₹	1,000
Total Capex On Intangible Assets											₹	1,170	₹	1,338	₹	1,779	₹	2,299	₹	2,913
Maintenance Capex on Right of Use of Assets											₹	2,247	₹	2,077	₹	2,692	₹	3,531	₹	4,637
Growth Capex On Right of Use of Assets											₹	500	₹	1,000	₹	1,500	₹	2,000	₹	2,500
Total Capex On Right of use of Assets											₹	2,747	₹	3,077	₹	4,192	₹	5,531	₹	7,137
Total Capex											₹	4,038	₹	4,615	₹	6,253	₹	8,207	₹	10,537

Figure 11 Capex Schedule and Depreciation Schedule

Where

GLTA = Gross Long-Term Asset

Capex = Capital Expenditure

$(GLTA)_t = (GLTA)_{t-1} + Capex$

$(Accumulated\ Depreciation)_t = (Accumulated\ Depreciation)_{t-1} + (D\ \&\ A\ Expense)_t$

$(GLTA)_t - (Accumulated\ Depreciation)_t = (Net\ Assets)_t$

Capex = Maintenance Capex + Growth Capex

Capital expenditures can be categorized into two classifications: -

1. Maintenance capital expenditures refer to the necessary and recurring expenses that a company incurs to sustain its current operations. These expenses may include repairing damaged equipment and conducting regular system updates. The concept of maintenance capital expenditures pertains to obligatory expenditures that are necessary to maintain operational continuity. These expenditures are typically associated with sustaining current levels of revenue and profit. In the absence of replenishment, the continuity of ongoing

operations would be compromised, resulting in a detrimental effect on performance.

2. In contrast, growth capital expenditures refer to the voluntary expenses incurred by a firm in pursuit of novel expansion strategies aimed at augmenting its customer base and broadening its geographical footprint. Growth capital expenditures refer to the voluntary investments made by a company with the aim of surpassing its historical levels of revenue and profits. Such investments typically involve expanding market share, exploring new geographies, and introducing novel product lines.

For the sake of simplicity and due to lack of data, we have taken maintenance capex to be equivalent to the depreciation and amortization expense. The depreciation rate has been considered to follow the same trend it has been doing historically. Since it is an IT services-based firm, not much capex has been done with respect to the Plant Property and Equipment(PPE) and as per investor presentation, the company is not expecting massive expansion in terms of opening new premises/ offices; hence not much capex has been forecasted in case of PPE, whereas historical trend with some growth has been in case of capital expenditures with respect to intangible assets and right to use of assets.

Moving on to the working capital schedule, we have majorly used the concept of DIO (Days Inventory Outstanding), DSO (Days Sales Outstanding) & DPO (Days Payable Outstanding).

$$\text{Days Sales Outstanding} = \frac{\text{Average Accounts Receivable}}{\text{Revenue}} \times 365 \text{ Days}$$

$$\text{Days Inventory Outstanding} = \frac{\text{Average Inventory}}{\text{Cost of Goods Sold}} \times 365 \text{ Days}$$

$$\text{Days Payable Outstanding} = \frac{\text{Average Accounts Payable}}{\text{Cost of Goods Sold}} \times 365 \text{ Days}$$

Working Capital Schedule		FY18	FY19	FY20	FY21	FY22	FY23E	FY24E	FY25E	FY26E	FY27E
Current assets (except cash & equivalents)											
Financial assets											
i. Investments	₹	13,862	9,815	8,337	39,148	46,400	55,033	69,620	83,779	97,131	1,10,674
ii. Trade receivables	₹	9,437	12,927	11,487	12,192	16,738	22,487	27,124	32,314	37,771	43,049
v. Loans	₹	273	77	100	812	4	171	271	391	418	472
vi. Other financial assets	₹	1,141	7,091	19,177	12,385	19,476	25,991	31,569	37,290	43,728	49,826
Other assets	₹	1,424	862	1,060	1,333	3,392	3,340	4,218	5,104	5,966	6,764
Total Current Assets (except cash & equivalents)	₹	**26,137**	**30,772**	**40,161**	**65,870**	**86,010**	**1,07,023**	**1,32,801**	**1,58,878**	**1,85,014**	**2,10,784**
Current Liabilities											
Contract Liabilities	₹	547	1,067	818	1,072	1,346	1,830	2,212	2,638	3,079	3,511
Financial Liabilities											
i. Borrowings	₹	6,855	6,012	6,916	10,972	17,340	18,022	19,328	20,083	20,232	20,479
ii. Lease Liabilities	₹	1,456	1,582	1,816	1,422	1,792	2,340	2,665	2,787	2,681	2,515
iii. Trade payables	₹	2,498	2,878	3,442	4,101	6,072	7,545	9,269	11,072	12,928	14,721
iv. Other Financial liabilities	₹	30,008	29,930	6,397	6,874	5,788	9,531	11,638	13,639	15,892	18,190
Provisions	₹	820	998	1,246	1,508	1,698	2,417	2,935	3,482	4,062	4,637
Other current liabilities	₹	671	736	531	1,930	2,665	3,023	3,815	4,600	5,343	6,080
Total Current Liabilities	₹	**42,855**	**43,203**	**21,166**	**27,879**	**36,701**	**44,708**	**51,860**	**58,302**	**64,216**	**70,133**
Net Working Capital (excluding cash)	₹	**-16,718**	**-12,431**	**18,995**	**37,991**	**49,309**	**62,315**	**80,941**	**1,00,576**	**1,20,798**	**1,40,652**
Changes in Net Working Capital			**4,287**	**31,426**	**18,996**	**11,318**	**13,006**	**18,626**	**19,635**	**20,222**	**19,854**

Current Asset	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E	FY25E	FY26E	FY27E
Financial assets										
i. Investments	108	61	44	185	155	142	148	149	148	148
ii. Trade receivables	74	80	60	58	56	58	57	57	57	58
v. Loans	2.1	0.5	0.5	3.8	0.0	0	1	1	1	1
vi. Other financial assets	9	44	100	58	65	67	67	66	67	67
Other assets	11	5	6	6	11	9	9	9	9	9
Current Liabilities	**FY18**	**FY19**	**FY20**	**FY21**	**FY22**	**FY23E**	**FY24E**	**FY25E**	**FY26E**	**FY27E**
Contract Liabilities	4	7	4	5	4	5	5	5	5	5
Financial Liabilities										
i. Borrowings	54	37	36	52	58	52	53	53	53	53
ii. Lease Liabilities	11	10	9	7	6	7	7	7	7	7
iii. Trade payables	19	18	18	19	20	20	20	20	20	20
iv. Other Financial liabilities	234	185	33	32	19	25	25	24	24	24
Provisions	6	6	7	7	6	6	6	6	6	6
Other current liabilities	5	5	3	9	9	8	8	8	8	8

Figure 12 Working Capital Schedule

After getting the historical DSO, DIO and DPO numbers, we forecasted the future values for the same using the weighted average method, where we focussed more on the recent data points. In some cases, for example, in those of Loans (Financial Assets) & other financial liabilities, this method was not working well because of abrupt changes in these items in recent years, as a result of which, in order to normalize the effect of these sudden movements, we changed the weights a bit in order to focus more on the past data to capture a normal looking forecast.

Profit & Loss Statement (All Amount in ₹ Lakhs, unless otherwise stated)

P&L Statement		FY18	FY19	FY20	FY21	FY22	FY23E	FY24E	FY25E	FY26E	FY27E
Income											
Revenue from contracts with customers	₹	46,761	59,036	69,821	77,341	1,09,365	1,41,035	1,72,206	2,05,265	2,39,766	2,73,168
Other Income	₹	1,672	1,145	1,602	2,424	3,710	4,756	6,806	9,796	13,916	19,389
Total Income	₹	**48,433**	**60,181**	**71,423**	**79,765**	**1,13,075**	**1,45,791**	**1,79,013**	**2,15,060**	**2,53,683**	**2,92,557**
Expense											
Employee benefits expense	₹	35,254	38,505	44,123	45,238	62,000	79,608	97,958	1,17,392	1,36,915	1,55,289
Depreciation and amortisation	₹	687	2,478	2,023	2,274	3,288	3,115	4,003	5,207	6,787	8,817
Finance cost	₹	606	1,594	802	697	995	1,758	1,860	1,920	1,937	1,911
Other expense	₹	13,862	15,048	15,988	12,954	21,598	30,153	35,090	40,660	49,653	57,607
Total Expense	₹	**50,409**	**57,625**	**62,936**	**61,163**	**87,881**	**1,14,635**	**1,38,911**	**1,65,179**	**1,95,292**	**2,23,624**
Profit before exceptional items and tax	₹	**-1,976**	**2,556**	**8,487**	**18,602**	**25,194**	**31,156**	**40,101**	**49,881**	**58,391**	**68,932**
Exceptional items- Impairment of goodwill	₹	-	1,258	1,126	-	609					
Profit before tax	₹	**-1,976**	**1,298**	**7,361**	**18,602**	**24,585**	**31,156**	**40,101**	**49,881**	**58,391**	**68,932**
Tax expense											
Current tax	₹	-	-	172	3,527	6,266					
Adjustment of tax relating to earlier periods	₹	-	-	18	-	44					
Deferred tax charge/credit	₹	-	-123	-	-1,171	155					
Net Expense	₹	**-**	**-123**	**190**	**2,356**	**6,465**	**7,842**	**10,093**	**12,555**	**14,697**	**17,350**
Profit for the year	₹	**-1,976**	**1,421**	**7,171**	**16,246**	**18,120**	**23,314**	**30,008**	**37,326**	**43,694**	**51,582**

Figure 13 Profit and Loss Statement

Revenue Assumptions	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E	FY25E	FY26E	FY27E
Revenue from contracts with customers	₹ 46,761	₹ 59,036	₹ 69,821	₹ 77,341	₹ 1,09,365	₹ 1,41,035	₹ 1,72,206	₹ 2,05,265	₹ 2,39,766	₹ 2,73,168
Other Income	₹ 1,672	₹ 1,145	₹ 1,602	₹ 2,424	₹ 3,710	₹ 4,756	₹ 6,806	₹ 9,796	₹ 13,916	₹ 19,389
Growth		-32%	40%	51%	53%	28%	43%	44%	42%	39%
Total	**₹ 48,433**	**₹ 60,181**	**₹ 71,423**	**₹ 79,765**	**₹ 1,13,075**	**₹ 1,45,791**	**₹ 1,79,013**	**₹ 2,15,060**	**₹ 2,53,683**	**₹ 2,92,557**

Other P&L Assumptions:	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E	FY25E	FY26E	FY27E
Employee benefits expense	₹ 35,254	₹ 38,505	₹ 44,123	₹ 45,238	₹ 62,000	₹ 79,608	₹ 97,958	₹ 1,17,392	₹ 1,36,915	₹ 1,55,289
Employee Count	2253	2462	2666	3228	4168	5002	5752	6442	7022	7443
Cost per employee	₹ 15.6	₹ 15.6	₹ 16.6	₹ 14.0	₹ 14.9	₹ 15.9	₹ 17.0	₹ 18.2	₹ 19.5	₹ 20.9
Growth Rate of expense per employee		-0.1%	5.8%	-15.3%	6.1%	7%	7%	7%	7%	7%
Other expense	₹ 13,862	₹ 15,048	₹ 15,988	₹ 12,954	₹ 21,598	₹ 30,153	₹ 35,090	₹ 40,660	₹ 49,653	₹ 57,607
As a percent of revenue	29%	25%	22%	16%	19%	21%	20%	19%	20%	20%
Exceptional items- Impairment of goodwil	₹ -	₹ 1,258	₹ 1,126	₹ -	₹ 609	₹ -	₹ -	₹ -	₹ -	₹ -
Profit before tax	**₹ -1,976**	**₹ 1,298**	**₹ 7,361**	**₹ 18,602**	**₹ 24,585**	**₹ 31,156**	**₹ 40,101**	**₹ 49,881**	**₹ 58,391**	**₹ 68,932**
Tax Rate						25.17%	25.17%	25.17%	25.17%	25.17%
Tax expense						₹ 7,842	₹ 10,093	₹ 12,555	₹ 14,697	₹ 17,350

Figure 14 Revenue and Other P&L assumptions

Figures 15 and 16 shows the Profit and Loss Statement and Assumptions Sheet respectively where revenue from operations has been taken from the revenue model shown earlier where we used the business metrics to forecast the future revenues. Since other income is a small percentage as compared to the total revenue earned by the company hence, we have just taken it to grow as an average percentage of the historical growth. Growth rate of expense per employee was not providing an idea about the future, hence as per our understanding of the of the IT sector as a whole where an employee with an experience of 3-5 years generally gets a raise between 5-10%, we have taken the employee expense to grow on similar lines. Moreover, the corporate tax rate is equivalent to 25.17%.

Cash Flow Statement (All Amount in ₹ Lakhs, Unless otherwise stated)	2023E	2024E	2025E	2026E	2027E
Net Profit	**₹ 23,314**	**₹ 30,008**	**₹ 37,326**	**₹ 43,694**	**₹ 51,582**
Add Finance Costs	₹ 1,758	₹ 1,860	₹ 1,920	₹ 1,937	₹ 1,911
Add Depreciation	₹ 3,115	₹ 4,003	₹ 5,207	₹ 6,787	₹ 8,817
Less Change in Net Working Capital	₹ -13,006	₹ -18,626	₹ -19,635	₹ -20,222	₹ -19,854
Cash Flow from Operating Activities	**₹ 15,181**	**₹ 17,246**	**₹ 24,817**	**₹ 32,196**	**₹ 42,456**
Change in Investments	₹ 43	₹ -3	₹ -29	₹ 11	₹ 10
Capital Expenditure	₹ -4,038	₹ -4,615	₹ -6,253	₹ -8,207	₹ -10,537
Cash Flow from Investing Activities	**₹ -3,995**	**₹ -4,618**	**₹ -6,282**	**₹ -8,196**	**₹ -10,527**
Changes to Equity	₹ -	₹ -	₹ -	₹ -	₹ -
Net Loans Raised	₹ 1,260	₹ 159	₹ 212	₹ 347	₹ -391
Finance Costs Paid	₹ -1,758	₹ -1,860	₹ -1,920	₹ -1,937	₹ -1,911
Dividend Paid	₹ -	₹ -	₹ -	₹ -	₹ -
Cash Flow from Financing Activities	**₹ -498**	**₹ -1,701**	**₹ -1,708**	**₹ -1,590**	**₹ -2,302**
Total Cash Flow	**₹ 10,687**	**₹ 10,927**	**₹ 16,828**	**₹ 22,411**	**₹ 29,627**
Beginning Cash Balance	₹ 6,729	₹ 17,416	₹ 28,343	₹ 45,171	₹ 67,582
Closing Cash Balance in Balance Sheet	**₹ 17,416**	**₹ 28,343**	**₹ 45,171**	**₹ 67,582**	**₹ 97,208**

Figure 15 Cash Flow Statement

*Balance Sheet (All Amount in ₹ Lakhs, Unless otherwise stated)

Assets	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E	FY25E	FY26E	FY27E
Non-current assets										
Property, plant and equipment	₹ 264	₹ 214	₹ 93	₹ 69	₹ 78	₹ 99	₹ 167	₹ 272	₹ 411	₹ 583
Capital work in progress	₹ 14	₹ -	₹ -	₹ 14	₹ -	₹ -	₹ -	₹ -	₹ -	₹ -
Goodwill	₹ 2,961	₹ 1,736	₹ 610	₹ 7,644	₹ 7,896	₹ 7,896	₹ 7,896	₹ 7,896	₹ 7,896	₹ 7,896
Other Intangible assets	₹ 793	₹ 196	₹ 72	₹ 2,966	₹ 2,396	₹ 2,628	₹ 2,787	₹ 3,067	₹ 3,453	₹ 3,929
Intangible assets under development	₹ -	₹ 17	₹ 17	₹ -	₹ 35	₹ -	₹ -	₹ -	₹ -	₹ -
Right of use assets	₹ 5,484	₹ 3,965	₹ 3,006	₹ 2,150	₹ 5,390	₹ 6,060	₹ 6,445	₹ 7,106	₹ 8,000	₹ 9,073
Financial Assets										
i. Loans	₹ 585	₹ 618	₹ 767	₹ -	₹ 762	₹ 683	₹ 708	₹ 730	₹ 721	₹ 710
ii. Other Financial assets	₹ 185	₹ 239	₹ 368	₹ 2,458	₹ 1,827	₹ 2,016	₹ 1,960	₹ 1,977	₹ 1,971	₹ 1,973
Income tax assets (net)	₹ 584	₹ 920	₹ 1,335	₹ 1,408	₹ 680	₹ 898	₹ 833	₹ 853	₹ 847	₹ 848
Other Assets	₹ 40	₹ 48	₹ 33	₹ 7	₹ 1	₹ 3	₹ 2	₹ 2	₹ 2	₹ 2
Deferred tax assets (net)	₹ -	₹ -	₹ -	₹ 1,026	₹ 697	₹ 796	₹ 766	₹ 775	₹ 772	₹ 773
Total Non-current assets	₹ 10,910	₹ 7,953	₹ 6,301	₹ 17,742	₹ 19,762	₹ 21,079	₹ 21,563	₹ 22,677	₹ 24,074	₹ 25,788
Current assets										
Financial assets										
i. Investments	₹ 13,862	₹ 9,815	₹ 8,337	₹ 39,148	₹ 46,400	₹ 55,033	₹ 69,620	₹ 83,779	₹ 97,131	₹ 1,10,674
ii. Trade receivables	₹ 9,437	₹ 12,927	₹ 11,487	₹ 12,192	₹ 16,738	₹ 22,487	₹ 27,124	₹ 32,314	₹ 37,771	₹ 43,049
iii. Cash and cash equivalents	₹ 1,652	₹ 2,627	₹ 4,353	₹ 8,583	₹ 6,729	₹ 17,416	₹ 28,343	₹ 45,171	₹ 67,582	₹ 97,208
v. Loans	₹ 273	₹ 77	₹ 100	₹ 812	₹ 4	₹ 171	₹ 271	₹ 391	₹ 418	₹ 472
vi. Other financial assets	₹ 1,141	₹ 7,091	₹ 19,177	₹ 12,385	₹ 19,476	₹ 25,991	₹ 31,569	₹ 37,290	₹ 43,728	₹ 49,826
Other assets	₹ 1,424	₹ 862	₹ 1,060	₹ 1,333	₹ 3,392	₹ 3,340	₹ 4,218	₹ 5,104	₹ 5,966	₹ 6,764
Total current assets	₹ 27,789	₹ 33,399	₹ 44,514	₹ 74,453	₹ 92,739	₹ 1,24,439	₹ 1,61,144	₹ 2,04,049	₹ 2,52,596	₹ 3,07,993
Total assets	₹ 38,699	₹ 41,352	₹ 50,815	₹ 92,195	₹ 1,12,501	₹ 1,45,519	₹ 1,82,707	₹ 2,26,726	₹ 2,76,670	₹ 3,33,781
Equity and liabilities										
Equity										
Equity share capital	₹ 375	₹ 597	₹ 879	₹ 2,837	₹ 2,854	₹ 2,854	₹ 2,854	₹ 2,854	₹ 2,854	₹ 2,854
Instruments entirely in the nature of equity	₹ 2,229	₹ 2,230	₹ 3,634	₹ -	₹ -	₹ -	₹ -	₹ -	₹ -	₹ -
Other equity	₹ -13,492	₹ -9,432	₹ 22,018	₹ 51,762	₹ 63,726	₹ 87,040	₹ 1,17,048	₹ 1,54,374	₹ 1,98,067	₹ 2,49,649
Total Equity	₹ -10,888	₹ -6,605	₹ 26,531	₹ 54,599	₹ 66,580	₹ 89,894	₹ 1,19,902	₹ 1,57,228	₹ 2,00,921	₹ 2,52,503
Liabilities										
Non-current Liabilities										
Financial Liabilities										
i. Borrowings	₹ 1,483	₹ 850	₹ 132	₹ 3,661	₹ 1,724	₹ 2,942	₹ 3,036	₹ 3,181	₹ 3,432	₹ 3,085
ii. Lease Liabilities	₹ 4,314	₹ 2,964	₹ 1,731	₹ 1,223	₹ 4,119	₹ 4,161	₹ 4,226	₹ 4,294	₹ 4,390	₹ 4,346
iii. Other Financial Liabilities			₹ -	₹ 2,455	₹ 1,291	₹ 1,640	₹ 1,535	₹ 1,567	₹ 1,557	₹ 1,560
Provisions	₹ 812	₹ 940	₹ 1,255	₹ 1,653	₹ 1,618	₹ 1,629	₹ 1,625	₹ 1,626	₹ 1,626	₹ 1,626
Deferred tax liabilities (net)	₹ 123	₹ -	₹ -	₹ 725	₹ 468	₹ 545	₹ 522	₹ 529	₹ 527	₹ 527
Total non-current liabilities	₹ 6,732	₹ 4,754	₹ 3,118	₹ 9,717	₹ 9,220	₹ 10,917	₹ 10,945	₹ 11,197	₹ 11,532	₹ 11,145
Current Liabilities										
Contract Liabilities	₹ 547	₹ 1,067	₹ 818	₹ 1,072	₹ 1,346	₹ 1,830	₹ 2,212	₹ 2,638	₹ 3,079	₹ 3,511
Financial Liabilities										
i. Borrowings	₹ 6,855	₹ 6,012	₹ 6,916	₹ 10,972	₹ 17,340	₹ 18,022	₹ 19,328	₹ 20,083	₹ 20,232	₹ 20,479
ii. Lease Liabilities	₹ 1,456	₹ 1,582	₹ 1,816	₹ 1,422	₹ 1,792	₹ 2,340	₹ 2,665	₹ 2,787	₹ 2,681	₹ 2,515
iii. Trade payables	₹ 2,498	₹ 2,878	₹ 3,442	₹ 4,101	₹ 6,072	₹ 7,545	₹ 9,269	₹ 11,072	₹ 12,928	₹ 14,721
iv. Other Financial liabilities	₹ 30,008	₹ 29,930	₹ 6,397	₹ 6,874	₹ 5,788	₹ 9,531	₹ 11,638	₹ 13,639	₹ 15,892	₹ 18,190
Provisions	₹ 820	₹ 998	₹ 1,246	₹ 1,508	₹ 1,698	₹ 2,417	₹ 2,935	₹ 3,482	₹ 4,062	₹ 4,637
Other current liabilities	₹ 671	₹ 736	₹ 531	₹ 1,930	₹ 2,665	₹ 3,023	₹ 3,815	₹ 4,600	₹ 5,343	₹ 6,080
Total Current Liabilities	₹ 42,855	₹ 43,203	₹ 21,166	₹ 27,879	₹ 36,701	₹ 44,708	₹ 51,860	₹ 58,302	₹ 64,216	₹ 70,133
Total liabilities	₹ 49,587	₹ 47,957	₹ 24,284	₹ 37,596	₹ 45,921	₹ 55,624	₹ 62,805	₹ 69,499	₹ 75,749	₹ 81,278
Total Equity and liabilities	₹ 38,699	₹ 41,352	₹ 50,815	₹ 92,195	₹ 1,12,501	₹ 1,45,519	₹ 1,82,707	₹ 2,26,726	₹ 2,76,670	₹ 3,33,781
Balancing Check	₹ -	₹ -	₹ -	₹ -	₹ -	₹ -	₹ -	₹ -	₹ -	₹ -

Figure 16 Balance Sheet

After forecasting all 3 basic financial statements, i.e. Balance Sheet, Income Statement and Cash Flow Statement, we will now calculate the firm's intrinsic value by calculating FCFF (i.e. Free Cash Flow to the Firm). For the next 5 years, we have already forecasted the values, then after 2027 till 2044, we have assumed the FCFF growth rate to decline and reach 6.7% in 2044E, after which we have assumed a constant growth rate which will be used in calculating the terminal value.

$$TV = \frac{FCF_n * (1+g)}{(r-g)}$$

Where g = terminal growth rate

r = cost of capital

FCF = free cash flow

		Happiest Minds	Nifty 100	Returns/Happiest	Returns/Nifty 100
2	17-09-2020	₹ 368	11646		
3	18-09-2020	₹ 356	11640	-3.3%	-0.1%
4	21-09-2020	₹ 347	11367	-2.6%	-2.3%
5	22-09-2020	₹ 352	11265	1.3%	-0.9%
6	23-09-2020	₹ 350	11242	-0.5%	-0.2%
7	24-09-2020	₹ 335	10922	-4.3%	-2.8%
8	25-09-2020	₹ 361	11176	7.7%	2.3%
9	28-09-2020	₹ 365	11365	1.0%	1.7%
10	29-09-2020	₹ 349	11354	-4.3%	-0.1%
11	30-09-2020	₹ 346	11385	-0.7%	0.3%
12	01-10-2020	₹ 340	11546	-1.7%	1.4%
13	05-10-2020	₹ 343	11626	0.8%	0.7%
14	06-10-2020	₹ 348	11771	1.3%	1.2%
15	07-10-2020	₹ 343	11834	-1.4%	0.5%
16	08-10-2020	₹ 355	11925	3.5%	0.8%
17	09-10-2020	₹ 348	11991	-1.8%	0.5%
18	12-10-2020	₹ 342	11999	-1.9%	0.1%
19	13-10-2020	₹ 346	11996	1.2%	0.0%
20	14-10-2020	₹ 352	12039	1.7%	0.4%
21	15-10-2020	₹ 338	11758	-3.8%	-2.3%
22	16-10-2020	₹ 323	11843	-4.4%	0.7%
23	19-10-2020	₹ 322	11953	-0.4%	0.9%
24	20-10-2020	₹ 322	11977	0.0%	0.2%
25	21-10-2020	₹ 317	12009	-1.6%	0.3%
26	22-10-2020	₹ 318	11972	0.3%	-0.3%
27	23-10-2020	₹ 318	12006	-0.1%	0.3%
28	26-10-2020	₹ 315	11843	-0.8%	-1.4%
29	27-10-2020	₹ 307	11972	-2.6%	1.1%
30	28-10-2020	₹ 318	11819	3.7%	-1.3%

CMP	808.9
No of Shares in Lakh	1469

Beta = Cov (Stock, Market)/var (market)

Ke = Rf + Betax equity risk premium

WACC	
Beta	0.70
Risk Free Rate	7.23%
Equity Risk Premium	7.83%
Cost Of Equity	**12.75%**
Market Value of Equity	₹ 11,88,274
Value Of Debt	₹ 27,465
Cost of Debt	**6.4%**
Cost Of Equity	**12.75%**
Proportion of Debt	2%
Proportion of Equity	98%
Effective Tax rate	25.17%
WACC	**12.57%**

Terminal Growth Rate Calculation		
GDP USA	3.7%	60%
US IT Sector Growth	5.5%	35%
GDP India	6.8%	10%
Worldwide Digital Industry Growth	10.3%	5%
Terminal Growth Rate		**4.0%**

Figure 17 WACC ,Terminal Growth Rate and Beta Calculation

Beta has been calculated using the Nifty50 Index. After referring to various equity research reports for companies in IT Sector, we have arrived at a methodology to evaluate the terminal growth rate for Happiest Minds using the GDP and Growth of the IT sector in the country where this company has the most number of clients which is the USA in this case. Furthermore, after assigning weightage to all the factors, we arrive at a terminal growth rate of 4%.(Tiwari, 2016)

Free Cashflow to Firm Calculation	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E	2034E	2035E
EBIT	₹ 32,914	₹ 41,962	₹ 51,801	₹ 60,328	₹ 70,844								
EBIT(1-t) (or NOPAT)	₹ 24,630	₹ 31,400	₹ 38,762	₹ 45,143	₹ 53,012								
Add Depreciation	₹ 3,115	₹ 4,003	₹ 5,207	₹ 6,787	₹ 8,817								
Less Change in Net Working Capital	₹ -13,006	₹ -18,626	₹ -19,635	₹ -20,222	₹ -19,854								
Less Capital Expenditure	₹ -4,038	₹ -4,615	₹ -6,253	₹ -8,207	₹ -10,537								
FCFF	₹ 10,701	₹ 12,163	₹ 18,081	₹ 23,502	₹ 31,438	₹ 41,347	₹ 53,746	₹ 69,041	₹ 87,633	₹ 1,09,890	₹ 1,36,118	₹ 1,66,524	₹ 2,01,175 ₹
FCFF Growth		13.7%	48.7%	30.0%	33.8%	31.5%	30.0%	28.5%	26.9%	25.4%	23.9%	22.3%	20.8%
							1.5%						

Valuation Parameters	
Valuation as on Specified Date	31-03-2023
Date of Year Ending	31-03-2023
Tax Rate (Effective Future Rate)	25.2%
WACC	12.57%
Terminal Growth Rate	4.0%

Years	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E	2034E
Time to Cashflow in Years	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
FCFF	₹ 10,701	₹ 12,163	₹ 18,081	₹ 23,502	₹ 31,438	₹ 41,347	₹ 53,746	₹ 69,041	₹ 87,633	₹ 1,09,890	₹ 1,36,118	₹ 1,66,524 ₹
Discounted FCFF	₹ 10,701	₹ 10,805	₹ 14,269	₹ 16,477	₹ 19,580	₹ 22,876	₹ 26,417	₹ 30,146	₹ 33,992	₹ 37,866	₹ 41,668	₹ 45,285 ₹

Terminal Value of FCFF	₹ 73,88,585
NPV of Explicit Cash Flows	₹ 8,48,966
NPV of Terminal Value	₹ 6,15,066
Enterprise Value	₹ 14,64,032
Less Debt	₹ -27,465
Add Cash	₹ 17,416
No. of Shares Outstanding (in lakhs)	1469
Equity Value	₹ 14,53,984
CMP	₹ 809
Value per Share (today)	₹ 990
Upside/Downside	22%

Figure 18 FCFF & Value Per Share Calculation

Fig 20 shows the free cash flow to the firm calculation, discounted at a WACC of 12.57% after incorporating the cash and cash equivalent's part & and market value of debt. We get the intrinsic market value of Rs 14,53,984 Lakhs. Dividing it by the total number of outstanding shares, we get the value per share = Rs 990 compared to the current market price of Rs 809. Hence on the FCFF valuation, we predict the company to have a 22% upside. Moving onto the relative valuation next, since this firm is still new as compared to the other IT giants present in India like Infosys, TCS etc., it will not be a correct comparison between the peers; hence we have to take into consideration like Revenue CAGR(%), EBITDA Margin (%) and also the type of the company is in, so we get a competitive landscape to understand who all can be in that peer set so that the relative valuation makes sense,

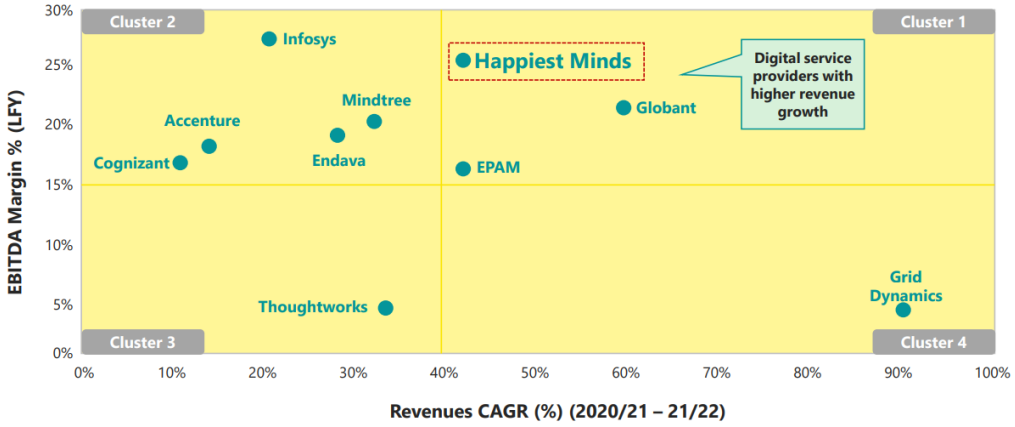


Figure 19 Competitive Landscape Happiest Minds

Source: Project Delight Corporate Presentation

As per this competitive landscape, the perfect peer set for Happiest Minds would include EPAM and Globant, but since both these firms are not based out of India hence to factor in the country of origin, we would include the next closest firm, which in this case would be Mindtree.

P/E Based Valuation		
Peer Set	**P/E**	Weightage
EPAM	49.7	25%
Globant	50.44	25%
LTI	37.6	50%
Peer Average	**43.84**	
Happiest Minds:		
EPS NTM	20.43	
Target Share Price		
Happiest Minds Relative Price	₹ 895	

Model	Price	Weightages Assigned
DCF suggested Price	₹ 990	50%
Relative Suggested Price	₹ 895	50%
Blended Target Price	**₹ 942.6**	

Figure 20 Relative Valuation

Since Mindtree is based out of India, hence much more weightages have been given to it as compared to its counterparts. Here we have taken the P/E multiple with Earnings as the EPS NTM i.e. Earnings per share for the next twelve months. We get value per share using relative valuation to be equivalent to Rs 895. Combining both methods of valuation with an equal weightage we can get the value per share as Rs 942.6 showing upside of 17%.

CONCLUSION

Happiest Mind's revenues grew at 26.1% CAGR in INR terms over two-year period from FY20-FY22, led by broad-based growth across verticals; DBS (28.0% CAGR), IMSS (25.6% CAGR) PES (21.7% CAGR). In FY21, the first quarter was impacted badly due to covid19 and that resulted in low growth of 10.8% in FY21. But the revenue growth bounced back strongly from the start of FY2022 as it grew at 7.5% CQGR over past seven quarters(Q1FY22-Q3FY23). The growth was led by its capabilities in the high demand areas of digital, cloud, analytics and new-gen technologies; We expect the revenue growth momentum to remain strong led by 1) its strong focus on client mining as it aims to increase wallet share among key clients. It has identified certain accounts as strategic and aims to increase market share in those accounts through investments and improving access to the CXOs of those clients. 2) Increasing participation in $10-50mn deals that will require it to fill key gaps in the product portfolio and deepen domain specialization 3) Expanding sales coverage that will help it to improve geographical footprint and gain access to new markets. and 4) M&A – It has acquired four companies till date; and we expect the M&A intensity to increase that will help it to fill gaps in its offerings. We believe the company has potential to achieve its vision to reach US$1bn in revenues by FY31.

It has delivered 20%+ revenue CAGR growth over last two years while maintaining EBIT margin above 20% range. This margin profile is slightly higher than mid-cap IT services (despite being significantly smaller in size) led by higher offshore mix and greater digital revenue mix. Around 95% of its employees are in India, compared to 65%-75% offshore effort mix for Indian tier 2 IT companies. It derives close to 97% of its revenues from digital technologies compared to ~50- 60% for Indian tier 2 IT services companies. EBITDA margin expanded from ~14% pre-covid level to 24.5% in FY21 led by improvement in utilisation, benefit from covid-led cost savings (lower travel, SGA costs, etc. In FY22, the margin contracted slightly by 90bps QoQ to 23.6%, but remained much above pre-covid levels despite facing supply-side pressures due to high attrition across the industry. Going forward, we believe falling attrition, improving employee pyramid and positive operating leverage will be the key margin levers. There is also scope for increase in fixed price contracts (currently at around 25% of revenue) which can further support margin. Employee utilization has improved

from 76.9% in FY20 to 80.5% in FY22 and is expected to stabilize around 80%. EBITDA margin is expected to be in the range of 23-24% in near term. We expect it to sustain superior margin profile going ahead compared to Indian tier 2 IT peers.

After all the coverage on Happiest Minds, we have identified a BUY recommendation and target price of Rs 990/share. The business outlook remains strong, led by rising demand for digital transformation across enterprises. Its digital offerings include security solutions, Cloud, SaaS, Analytics AI & IoT solutions. The high digital focus (97% of revenue) is expected to help it to grow at ~24% CAGR over the next two years (FY24-FY25). A strong client mining focus is expected to drive higher wallet share among key clients. The revenue base remains diversified across verticals and geographies, which mitigates business risk. Employee attrition has started falling and would support the operating margin. A higher offshore effort mix and a major presence in the fast-growing digital segment would help it post a 22-24% EBITDA margin in the near term. We value Happiest Minds through DCF Method over the forecasted period FY24E-FY33E period with a terminal growth rate of 4% and WACC of 12.57%. We estimate its revenue to grow by CAGR of 22.5% over the FY24E-FY33E period, with an average EBIT margin of 21.4%. The target price implies a PE multiple of 44x over FY25E. Its premium valuation is due to its strong positioning in digital offerings along with a superior margin profile. RoE at ~30% remains strong for an IT company of just Rs 10bn revenue. We expect acquisitions to be a key part of its strategy to achieve its goal of reaching US$1bn in revenues by 2031. It has cash equivalents of Rs 6.9bn on its balance sheet as of December 31, 2022 and that can to be utilised for M&A. It has completed four acquisitions till day. Of these, OSS Cube, Cupola Technologies, were relatively small in size and were done for strengthening specific capabilities, while PGS acquisition done in 2021, was of around 5% revenue size of Happiest Minds; Sri Mookambika Infosolutions acquisition done in Jan 2023 was ~6% of the revenue of Happiest Minds. Its acquisition targets include companies: 1) that have high digital capabilities and ~$10mn- $20mn in revenue size, 2) which help to expand geographical presence across markets such as USA, Europe, Middle East and ANZ, 3) which help to fill gaps in new-age technologies – cloud operations, Security, AI etc. 4) that help to deepen vertical capabilities.

LIMITATIONS

Financial models are effective tools that may aid companies and investors in making wise choices, but they have certain drawbacks. The accuracy of financial models depends on the data used to create them. Incomplete or faulty data might cause results that are imprecise or unreliable. Financial models depend on various future-event assumptions, including those relating to interest rates, economic development & exchange rates of currencies. The model's forecasts would be off if these presumptions were false. Comprehending the underlying hypotheses and computations of financial models may take time due to their complexity. Consequently, interpreting the findings may be challenging, and inaccuracies may arise if the model needs to be applied correctly. Financial models can occasionally not be accurate; thus, there is always a chance that the forecasts made by the model will not come true. This is referred to as model risk, and if it is not adequately handled, it may result in substantial losses. Financial models can only take into consideration the aspects that are included in the model since they are based on mathematical equations and algorithms. Unexpected occurrences or elements that the model does not take into consideration cannot be accounted for. Users should not depend only on the model's output since financial models are only as accurate as the beliefs and inputs they utilize. They must also use judgment. Financial models have been shown to be utterly insufficient. Many people use the 2008 subprime mortgage crisis as an example to make this argument. Nevertheless, it is important to realize that the model itself is subject to error. Nobody has the information to accurately estimate variables like tax rates, interest rates, and market shares. If someone had such a talent, they would not need to develop financial models since they would earn a fortune trading stocks and derivatives! As a result, the financial model's results should be interpreted cautiously. One may nearly always assume that if figures are forecast far into the future, they will not be reached. Several mergers have failed as a result of soft issues, such as challenges merging the cultures of the two acquired firms, which are often overlooked. Such characteristics cannot be included into financial models. On the one hand, models account for cost savings brought about by the merger, which will result in synergies. On the other hand, they fail to account for the costs that may result from a lack in cultural compatibility. Over time, this causes assets to be overvalued. Even though financial projections had indicated that such scenarios would be successful, many mergers had already failed.

REFERENCES

[1] Benninga, S. (2014). *Financial modeling* (Fourth edition). The MIT Press.

[2] *Discounted Cash Flow (DCF) Explained With Formula and Examples*. (n.d.). Investopedia. Retrieved April 9, 2023, from https://www.investopedia.com/terms/d/dcf.asp

[3] Francis, J., Olsson, P., & Oswald, D. R. (2000). Comparing the Accuracy and Explainability of Dividend, Free Cash Flow, and Abnormal Earnings Equity Value Estimates. *Journal of Accounting Research*, *38*(1), 45. https://doi.org/10.2307/2672922

[4] Kaplan, S. N., & Ruback, R. S. (1996). THE MARKET PRICING OF CASH FLOW FORECASTS: DISCOUNTED CASH FLOW VS. THE METHOD OF "COMPARABLES." *Journal of Applied Corporate Finance*, *8*(4), 45–60. https://doi.org/10.1111/j.1745-6622.1996.tb00682.x

[5] Levin, J., & Olsson, P. (n.d.). *Terminal Value Techniques in Equity Valuation—Implications of the Steady State Assumption* .

[6] *MENA | UNICEF Middle East and North Africa*. (n.d.). Retrieved April 9, 2023, from https://www.unicef.org/mena/topics/mena?page=4

[7] Miller, M. H., & Modigliani, F. (1961). Dividend Policy, Growth, and the Valuation of Shares. *The Journal of Business*, *34*(4), 411. https://doi.org/10.1086/294442

[8] Mostafa, W. (2014). The relative information content of cash flows and earnings affected by their extremity: UK evidence. *Managerial Finance*, *40*(7), 646–661. https://doi.org/10.1108/MF-06-2013-0128

[9] Ohlson, J. A. (1995). Earnings, Book Values, and Dividends in Equity Valuation. *Contemporary Accounting Research*, *11*(2), 661–687. https://doi.org/10.1111/j.1911-3846.1995.tb00461.x

[10] Penman, S. H., & Sougiannis, T. (1998). A Comparison of Dividend, Cash Flow, and Earnings Approaches to Equity Valuation. *Contemporary Accounting Research*, *15*(3), 343–383. https://doi.org/10.1111/j.1911-3846.1998.tb00564.x

[11] Petersen, C., & Plenborg, T. (2011). The Implementation And Application Of Firm Valuation Models. *Journal of Applied Business Research (JABR)*, *25*(1). https://doi.org/10.19030/jabr.v25i1.1044

[12] Plenborg, T. (2002). Firm valuation: Comparing the residual income and discounted cash flow approaches. *Scandinavian Journal of Management*, *18*(3), 303–318. https://doi.org/10.1016/S0956-5221(01)00017-3

[13] Rojo-Ramírez, A. A., Martínez-Romero, M. J., & Mariño-Garrido, T. (2018). How the Equity Terminal Value Influences the Value of the Firm? *Journal of Business Valuation and Economic Loss Analysis*, *13*(1), 20170010. https://doi.org/10.1515/jbvela-2017-0010

[14] Steiger, F. (2010). *The Validity of Company Valuation Using Discounted Cash Flow Methods*. https://doi.org/10.48550/ARXIV.1003.4881

[15] Tiwari, R. (2016). Intrinsic value estimates and its accuracy: Evidence from Indian manufacturing industry. *Future Business Journal*, *2*(2), 138–151. https://doi.org/10.1016/j.fbj.2016.10.001

[16] Tjia, J. S. (n.d.). *Building Financial Models*.

[17] *Valuation: Measuring and Managing the Value of Companies*. (n.d.).

[18] *What Is Valuation?* (n.d.). Investopedia. Retrieved April 9, 2023, from https://www.investopedia.com/terms/v/valuation.asp

PAPER NAME

Jaskaran Juneja_2K21DMBA55.docx

WORD COUNT

11742 Words

CHARACTER COUNT

64318 Characters

PAGE COUNT

44 Pages

FILE SIZE

2.0MB

SUBMISSION DATE

Apr 18, 2023 11:02 AM GMT+5:30

REPORT DATE

Apr 18, 2023 11:03 AM GMT+5:30

11% Overall Similarity

The combined total of all matches, including overlapping sources, for each database.

- 7% Internet database
- 3% Publications database
- Crossref database
- Crossref Posted Content database
- 7% Submitted Works database

Excluded from Similarity Report

- Bibliographic material
- Quoted material
- Cited material
- Small Matches (Less then 8 words)

11% Overall Similarity

Top sources found in the following databases:

- 7% Internet database
- Crossref database
- 7% Submitted Works database
- 3% Publications database
- Crossref Posted Content database

TOP SOURCES

The sources with the highest number of matches within the submission. Overlapping sources will not be displayed.

1	University of Economics Ho Chi Minh on 2022-11-24 Submitted works	<1%
2	yumpu.com Internet	<1%
3	jofamericanscience.org Internet	<1%
4	Plenborg, T.. "Firm valuation: comparing the residual income and disco... Crossref	<1%
5	bseindia.com Internet	<1%
6	mzfsir.weebly.com Internet	<1%
7	thinkswap.com Internet	<1%
8	icsi.edu Internet	<1%

9	mdpi.com Internet	<1%
10	slideshare.net Internet	<1%
11	deepai.org Internet	<1%
12	Bahrain Polytechnic on 2021-05-30 Submitted works	<1%
13	Indian Institute of Management, Bangalore on 2021-04-10 Submitted works	<1%
14	pinpdf.com Internet	<1%
15	wallstreetprep.com Internet	<1%
16	livemint.com Internet	<1%
17	Bocconi University on 2012-09-07 Submitted works	<1%
18	Imperial College of Science, Technology and Medicine on 2010-11-10 Submitted works	<1%
19	University of Durham on 2017-01-31 Submitted works	<1%
20	Kingston University on 2014-04-29 Submitted works	<1%

21	Colorado Technical University on 2022-10-18 Submitted works	<1%
22	Mike Davies, Ron Paterson, Allister Wilson. "UK GAAP", Springer Scien... Crossref	<1%
23	University of Hull on 2015-01-22 Submitted works	<1%
24	research-api.cbs.dk Internet	<1%
25	landscapeprofessionals.org Internet	<1%
26	University of Lancaster on 2012-10-02 Submitted works	<1%
27	Far Eastern University on 2022-09-10 Submitted works	<1%
28	cupdf.com Internet	<1%
29	worldvisionbusiness.com Internet	<1%
30	duonghiem.wordpress.com Internet	<1%
31	legalzoom.com Internet	<1%
32	sentinelgroup.com Internet	<1%

33	King's College on 2014-05-14 Submitted works	<1%
34	University of Sydney on 2011-04-15 Submitted works	<1%
35	consulmanagement.com Internet	<1%
36	researchgate.net Internet	<1%
37	Heriot-Watt University on 2021-11-06 Submitted works	<1%
38	Ke Li, Boqiang Lin. "The efficiency improvement potential for coal, oil a... Crossref	<1%
39	Thomas Plenborg. "Firm valuation: comparing the residual income and ... Crossref	<1%
40	University of Hull on 2022-01-09 Submitted works	<1%
41	abacmba.com Internet	<1%
42	investopedia.com Internet	<1%
43	University of Dehli on 2016-01-15 Submitted works	<1%
44	Vietnamese-German University on 2020-03-22 Submitted works	<1%

45	export.arxiv.org Internet	<1%
46	pdfcoffee.com Internet	<1%
47	robertcmerton.com Internet	<1%
48	staging.iaitam.org Internet	<1%
49	American InterContinental University on 2023-04-17 Submitted works	<1%
50	London School of Business and Finance on 2017-03-04 Submitted works	<1%
51	Queen Mary and Westfield College on 2013-01-15 Submitted works	<1%
52	School of Economics and Management, Lisbon on 2019-01-08 Submitted works	<1%
53	Siti Nuryanah, Sardar M. N. Islam. "Corporate Governance and Financia... Crossref	<1%
54	University of Western Ontario on 2023-03-20 Submitted works	<1%
55	business.woonsocketcall.com Internet	<1%
56	fr.scribd.com Internet	<1%