A Study on Application of Brand Valuation Techniques With Reference To Software Companies

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Abstract

Brand Valuation from the financial view is estimating the monetary value of the Brand of a Company which can help in ascertaining the worth of the company to the investors and creditors. This research paper is been taken up to develop a model for ascertaining an appropriate method of valuing brand and has been confined to valuing the brand of Software Companies. In this regard, the researcher has opted to use five top most Software Companies consolidated income statement and the balance sheets along with the market capitalization of the said companies. The final result has shown that the model can give guidance with regard to the approximate rate at which the brand value of selected companies can be ascertained.

Key Words: Brand, Brand value, Market Capitalization, Software Companies

Introduction

Brand refers to any name, design, symbol or any other feature that differentiates one product from another. It is intangible which includes trade names, trademarks, trade symbols, domain names, design rights, trade dress, packaging, copyrights, associated goodwill and advertising visuals. Brand value or brand valuation is an estimate of the financial value of a brand. The method to determine brand value is still not established & hence each company can adopt from the three main types of brand valuation methods, viz, cost approach, market approach and income approach.

Methods of valuating brands

1. **Cost based approach** – this approach measures the value of brand by referring to the cost invested in creating, replacing or reproducing the brand. As the value of brands do not equates to costs invested in creating them, this approach is not widely used.

2. **Market based approach** – this approach measures the value of brand based on what the other purchaser in the market is ready to pay for the similar asset. It is an estimate of price expected if the brand were to be sold in the open market. As brands are unique & it is often hard to find relevant comparables this approach is not used.

3. **Income based approach** – this approach measures the value of brand based on the economic benefits expected to be received over the remaining useful economic life of the brand. This involves, estimating expected future after tax cash flows specifically attributable to the brand, then discounting them to present value using an appropriate discount rate. As the value of brands stem from their ability to generate higher profits for either their existing or potential new owners, this approach is most widely accepted and used to value the brand.

Determining cash flow under income approach

There are various ways to determine future cash flows under income approach to value the brand. They are –

Royalty relief method – this method assumes that the brand is not owned by the branded business but is licensed in from a third party. The value is deemed to be present value of royalty payments saved by virtue of owning the brand. The brand value thus obtained is related to specific industry nature & based on current brand licensing practices. It does not consider the added value of owning the brand instead of licensing it. This method can be more applicable for numerous fiscal authorities.

Price premium & volume premium method – this method estimates the value of brand based on price premium it commands over unbranded, weakly branded or generic products or services. Volume premium estimates the value of brand by referring to the volume premium that is generated by the brand.

Incremental cash flow method – this method identifies all cash flows generated by the brand. Cash flows are generated through both increased revenues and reduced costs. This is compared with comparable businesses with no such brand. It a more detailed and complex approach which tends not be used in technical brand valuations.

Discounted cash flow method – as per this method the value of brand is equal to present value of net cash flows expected to be generated by the asset. The discount rate is used for arriving at present value is the weighted average cost of capital reflecting the business and financial risks associated with the investment.

Earnings multiple method – this method values the brand cash flow by multiplying the earnings attributable to brand with suitable earnings multiple. Based on the companies been compared, price-earnings ratio can be used as the earnings multiple.

Problem Statement

There is no specific and standardized method to value the brand of companies. This has given undue advantage to few large business organisations to overvalue their brands and attract the potential investors. In light of this drawback, this research is been taken to study the approaches available and from the analysis of these approaches, to derive a model which could be more suitable for specific companies to adopt brand valuation techniques. This research paper has been taken up to frame a model of brand valuation technique which could be adopted by the Software Companies.

Literature review

1. Pieter (2015)[1] – This article explores the implications of prohibition of recognizing internally generated brands as per IAS 38. The article highlights the information content relevant to unrecognized brand assets and that is not currently disclosed to users of financial statements. The article also explains how the situation may compromise the usefulness of financial statements.
2. Roger (2014)[2] – This article explains the nature of contradictions at the global accounting standard setting bodies with regard to brand under conditions of mergers and acquisitions and brands under internally created. The author's analysis shows that the problem is caused by a basic conceptual conflict. In the intangible asset standards the unit of account is cost. In business combination it becomes fair value. Requiring internally generated intangibles (brands) to be measured by their fair value resolves the conflict.
3. Hyunjung Lee (2012)[3] – This article proposes brand valuation model and a new brand value measure in context of mergers and acquisitions. Data is collected from Thomson ONE Banker Mergers & Acquisitions database, SEC filings, COMPUSTAT data base, CRSP database and USPTO's Trademark database. The sample of 98 mergers & acquisitions are dealt. Valuation models like Ohlson's Valuation approach, brand value based on shareholder's value, & four-parameter risk adjustment is used. The results show that the validity of using shareholder's value is largely supported by results of this study.
4. Kristina (2010)[4] – This research article discusses the research that has been conducted in financial accounting concerning accounting measurement. It is concluded that the goodwill is overestimated due to new standards with impairment testing. It is also difficult to assess value relevance of research and development only on the basis about how much is spent. There is need for information about successful and not successful projects.
5. Aswath (2009)[5] – This paper looks at the characteristics shared by Companies with intangible assets and the valuation issues that follow. It also looks at the dark side of valuation and some remedies. The results shows that both earnings and book value numbers at the Companies taken for study are skewed and using them in valuation can lead to poor estimates of values.
6. Philip (2007)[6] – This paper reviews the existing and recently promulgated accounting standards relating to intangibles. It also tries to provide evidence and alternatives to help improve the measurement and recognition of intangible capital. This would lead to reporting of quality earning

that reflect the qualities of relevance and reliability. The study points out that the predictive value of financial statement is diminished when statements do not include these intangibles.

7. Lloyd (2007)[7] – This article tries to understand the problems involved in developing accounting standards for intangible assets. It also looks at the nature of assets and the special case of intangibles. It describes the requirements of IASB's 38 and consider consequences of its adoption. The study has found that accounting standard setters are aware of potential information gaps in reporting intangible assets both before and after adoption of IAS 38. IASB has noted deficiencies and weakness in the guidance given by IAS 38.

8. Tony Tollington (1999)[8] – This article examines the various brand asset recognition methods used by accounting profession. This paper also examines the latest rule change, FRS10, to assess whether the recognition of brand assets is likely to remain restrictive in future. The author exposes the weaknesses in current accounting standards related to intangible assets and provides the marketers with ammunition to force the decision – either brand are an asset or they are not asset. He suggests that the recognition of brands as intangible assets is right.

Operational Definition

1. Revenue - The term revenue for the study includes the total sales earning or profits generated from the sale of software products and services provided.
2. Non brand income or Other Income - The term other income for the study includes those incomes which are generated due to other activities other than sale of software products and services provided.
3. Inflation factor - To ascertain the present value of income stated in income statement consumer price index is used. Historical values are transformed in to current value.
4. Brand profits - It is the difference between revenue and other income
5. Present value of brand profits - It is arrived from the product of brand profits and inflation factor.
6. Weighted Factor - Weights are assigned based chronological order from current years to previous years.
7. Weighted average brand profits

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$$\frac{\sum wp}{\sum w}$$

8. P/E ratio = $\dfrac{\text{Market price per share}}{\text{Earnings per share}}$

9. Dividends - It includes the dividends paid to the shareholders.
10. Capitalization rate - It is the reciprocal of P/E Ratio to reflect the market capitalization as discount rate.
11. Capitalized value of brand- It is the product of weighted post tax brand profit and capitalization rate weighted average price earnings ratio

Objectives of Study:-

1. To determine the Brand Value by using appropriate method. (Income integrated market capitalization Approach)
2. To compare market capitalization with Brand value arrived.
3. To establish a model which is ideal for Software Companies

Research Design

The study follows "Analytical and Descriptive study". Analytical research is used to analyze the consolidated income statements, balance sheet and cash flow statements of the sample companies. The Descriptive research is used to describe the various methods available to value the brand and method available to estimate the cash flow of the brands.

Research Methodology

Sample Population - It consists of Software Companies from the Information Technology Industry.

Sample Unit

The selection of top 5 Software Companies in India is take for the purpose of this study. They include – Infosys, Mphasis, TCS, HCL & Mindtree.

Design

Analytical and Descriptive study

Sampling Method

Convenient Sampling based on availability of financial information for the identical period

Method of Data collection

Annual reports of the companies for the years 2012 -2016, Secondary data provided by NSE India, Moneycontrol.com, morningstar.in

Data

Consolidated Financial statements for the year 2012-2016, Market Price per share & Market capitalization from NSE India, morningstar.in, moneycontrol.com, RBI website for inflation factor.

Data presentation

The data collected will be consolidated in a way to arrive at the brand value of selected Software Companies.

Limitations of the Study

1. The study is confined only to top 5 IT companies dealing with Software products and services from 2012 t0 2016
2. Secondary data as published by the Companies annual reports and available statistical data in RBI for inflation factor and NSE India for market prices per share.

Proposed Brand Valuation Model in case of Software Companies

$$\textbf{Capitalized Value of Brand} = \frac{\text{Weighted Post Tax Brand Profits}}{\text{Capitalization rate weighted average Price Earnings}}$$

The above model of brand valuation is based on the present value of perpetuity, brand profit assumed to be perpetual cash flow. Weighted post tax brand profit is considered as perpetual cash flow, which is discounted at the rate of weighted average price earnings ratio. The reciprocal P/E ratio can be used as capitalization rate to reflect the market capitalizations of software firm.

Data Analysis

The analysis below of selected five companies shows that the total revenue generated by the company is taken from which non-branded or other incomes are deducted to arrive at revenue generated from brand or revenue generated from sale of their brand products and services. From this brand revenue all the other expenses are deducted to arrive at total revenue from brand after expense. The brand revenue after expenses is multiplied with inflation factor to arrive at present value of brand. This value is further multiplied with weighted factors to get weighted average of brand revenue. Further the remuneration to capital which is dividend is deducted after calculating weighted average of such dividends, so as to normalize the weighted average of brand revenue. Similar treatment is given to tax paid to arrive at brand revenue post tax. This post-tax brand revenue is further capitalized by using price earnings ratio, thus arriving at **capitalized value of brand.**

Table1–Calculation of Capitalized value of brand for INFOSYS CO. (Amounts in crores)

Particulars	**2016**	**2015**	**2014**	**2013**	**2012**
Total Revenue	65,569	56,749	52,797	42,717	35,638
Less - Non-Branded Income	3,128	3,430	2,664	2,365	1,904
Revenue Generated from Brand	62,441	53,319	50,133	40,352	33,734
Less – Total expenses	46,587	39,465	38,069	29,918	23,939
Brand Revenue after Expenses(i)	15,854	13,854	12,064	10,434	9,795
Inflation Factor(ii)	3.85	4.88	9.35	9.35	10
Value of Brand revenue after inflation factor (iii = i*ii)	16,464.379	14,530.0752	13,191.984	11,409.579	10,774.5
Weighted factor (iv)	5	4	3	2	1
Weighted Average of Brand revenue (v = sum of iii*iv/15)	14,240.7870	---	---	---	---
Amount of Dividends paid (vi)	6,813	4,935	2,686	2,684	2,001
Weighted factor for Dividend (vii)	5	4	3	2	1
Weighted Average of Dividend paid (viii = sum of vi*vii/15)	4,615.46666	---	---	---	---
Tax paid (ix)	5,120	4,907	4,634	3,808	3,370
Weighted factor for tax (x)	5	4	3	2	1
Weighted Average of Tax Paid (xi = sum of ix*x/15)	4,674.4	---	---	---	---
Brand Related revenue post tax (a = iii – vii – xi)	4,950.92038	---	---	---	---
Price Earnings Ratio	17	21.94	21.67	18.4	18.37
Weighted factor of P E R	5	4	3	2	1
Weighted PE ratio	19.5293333	---	---	---	---
Capitalized rate of weighed PE ratio (b)	0.05120502	---	---	---	---
Capitalized value of Brand revenue (a/b)	**96,688.174**	---	---	---	---

As per the adopted brand valuation model, the capitalized value of brand revenue of Infosys for the year 2012-1016 is **Rs. 96,688 crores**.

Table 2 Calculation of Capitalized value of brand for MPHASIS CO.(Amounts in crores)

Particulars	**2016**	**2015**	**2014**	**2013**	**2012**
Total Revenue	6,284	5,992	2,646	5,937	5,525
Less - Non-Branded Income	196	197	52	140	168
Revenue Generated from Brand	6,088	5,795	2,594	5,797	5,357
Less – Total expenses	5,290	5,051	2,218	4,942	4,497
Brand Revenue after Expenses(i)	798	744	376	855	860
Inflation Factor(ii)	3.85	4.88	9.35	9.35	10
Present Value of Brand revenue (iii = i*ii)	828.723	780.3072	411.156	934.9425	946
Weighted factor (iv)	5	4	3	2	1
Weighted Average of Brand revenue (v = sum of iii*iv/15)	754.2797867	---	---	---	---
Amount of Dividends paid (vi)	405	172	418	415	159

Weighted factor for Dividend (vii)	5	4	3	2	1
Weighted Average of Dividend paid (viii = sum of vi*vii/15)	330.4	---	---	---	---
Tax paid (ix)	197	165	84	255	238
Weighted factor for tax (x)	5	4	3	2	1
Weighted Average of Tax Paid (xi = sum of ix*x/15)	176.3333333	---	---	---	---
Brand Related revenue (a = iii – vii – xi)	247.5464533	---	---	---	---
Price Earnings Ratio	15.64	15.47	12.01	11.43	10.41
Weighted factor of P E R	5	4	3	2	1
Weighted PE ratio	13.95866667	---	---	---	---
Capitalized rate of weighed PE ratio (b)	0.07164008	---	---	---	---
Capitalized value of Brand revenue (a/b)	**3,455.418427**	---	---	---	---

As per the adopted brand valuation model, the capitalized value of brand revenue of Mphasis Company for the year 2012-1016 is **Rs. 3,455 crores**.

Table 3 – Calculation of Capitalized value of brand for TCS CO. (Amount in crores)

Particulars	**2016**	**2015**	**2014**	**2013**	**2012**
Total Revenue	1,11,700	97,878	83,446	64,168	49,322
Less - Non-Branded Income	3,054	3,230	1,637	1,178	428
Revenue Generated from Brand	1,08,646	94,648	81,809	62,990	48,894
Less – Total expenses	80,024	72,070	58,044	46,078	35,399
Brand Revenue after Expenses(i)	28,622	22,578	23,765	16,912	13,495
Inflation Factor(ii)	3.85	4.88	9.35	9.35	10
Present Value of Brand revenue (iii = i*ii)	29,723.947	23,679.8064	25,987.0275	18,493.272	14,844.5
Weighted factor (iv)	5	4	3	2	1
Weighted Average of Brand revenue (v = sum of iii*iv/15)	24,875.40581	---	---	---	---
Amount of Dividends paid (vi)	9,524	17,105	5,520	5,737	3,897
Weighted factor for Dividend (vii)	5	4	3	2	1
Weighted Average of Dividend paid (viii = sum of vi*vii/15)	9,864.733333	---	---	---	---
Tax paid (ix)	7,282	6,248	6,121	4,356	3,855
Weighted factor for tax (x)	5	4	3	2	1
Weighted Average of Tax Paid (xi = sum of ix*x/15)	6,155.466667	---	---	---	---
Brand Related revenue (a = iii – vii – xi)	8,855.205807	---	---	---	---
Price Earnings Ratio	20.27	20.44	22.82	21.83	22.2
Weighted factor of P E R	5	4	3	2	1
Weighted PE ratio	21.162	---	---	---	---
Capitalized rate of weighed PE ratio (b)	0.047254513	---	---	---	---
Capitalized value of Brand revenue (a/b)	**1,87,393.8653**	---	---	---	---

As per the adopted brand valuation model, the capitalized value of brand revenue of TCS Company for the year 2012-1016 is **Rs. 1,87,394 crores**.

Table4–Calculation of Capitalized value of brand for HCL TECH CO.(Amount in crores)

Particulars	**2016**	**2015**	**2014**	**2013**	**2012**
Total Revenue	31,676	37,840	32,821	25,932	21,036
Less - Non-Branded Income	895	1139	677	351	206
Revenue Generated from Brand	30,781	36,701	32,144	25,581	20,830
Less – Total expenses	24,707	28,724	24,904	20,662	17,827
Brand Revenue after Expenses(i)	6,074	7,977	7,240	4,919	3,003
Inflation Factor(ii)	3.85	4.88	9.35	9.35	10
Present Value of Brand revenue (iii = i*ii)	6,307.849	8,366.2776	7,916.94	5,378.9265	3,303.3
Weighted factor (iv)	5	4	3	2	1
Weighted Average of Brand revenue (v = sum of iii*iv/15)	6,854.421893	---	---	---	---
Amount of Dividends paid (vi)	2,251	2,385	1,118	695	691
Weighted factor for Dividend (vii)	5	4	3	2	1
Weighted Average of Dividend paid (viii = sum of vi*vii/15)	1,748.666667	---	---	---	---
Tax paid (ix)	1,364	1,815	1,572	1,244	934
Weighted factor for tax (x)	5	4	3	2	1
Weighted Average of Tax Paid (xi = sum of ix*x/15)	1,481.2	---	---	---	---
Brand Related revenue (a = iii – vii – xi)	3,624.555227	---	---	---	---
Price Earnings Ratio	14.58	23.94	21.78	16.17	15.29
Weighted factor of P E R	5	4	3	2	1
Weighted PE ratio	18.77533333	---	---	---	---
Capitalized rate of weighed PE ratio (b)	0.053261371	---	---	---	---
Capitalized value of Brand revenue (a/b)	**68,052.23257**	---	---	---	---

As per the adopted brand valuation model, the capitalized value of brand revenue of HCL Tech Company for the year 2012-1016 is **Rs. 68,052 crores**.

Table5–Calculation of Capitalized value of brand for MINDTREECO.(Amount in crores)

Particulars	**2016**	**2015**	**2014**	**2013**	**2012**
Total Revenue	4,770	3,645	3,081	2,397	1,954
Less - Non-Branded Income	81	84	50	35	39
Revenue Generated from Brand	4,689	3,561	3,031	2,362	1,915
Less – Total expenses	3,993	2,955	2,503	1,973	1,692
Brand Revenue after Expenses(i)	696	606	528	389	223
Inflation Factor(ii)	3.85	4.88	9.35	9.35	10
Present Value of Brand revenue (iii = i*ii)	722.796	635.5728	577.368	425.3715	245.3
Weighted factor (iv)	5	4	3	2	1
Weighted Average of Brand revenue (v = sum of iii*iv/15)	598.9612133	---	---	---	---
Amount of Dividends paid (vi)	215	144	92	21	18
Weighted factor for Dividend (vii)	5	4	3	2	1
Weighted Average of Dividend paid (viii = sum of vi*vii/15)	132.4666667	---	---	---	---
Tax paid (ix)	174	155	128	85	43
Weighted factor for tax (x)	5	4	3	2	1
Weighted Average of Tax Paid (xi = sum of ix*x/15)	139.1333333	---	---	---	---
Brand Related revenue (a = iii – vii – xi)	327.3612133	---	---	---	---
Price Earnings Ratio	12.59	20.26	48.12	63.82	67.48
Weighted factor of P E R	5	4	3	2	1
Weighted PE ratio	32.23133333	---	---	---	---
Capitalized rate of weighed PE ratio (b)	0.03102571	---	---	---	---
Capitalized value of Brand revenue (a/b)	**10,551.28839**	---	---	---	---

As per the adopted brand valuation model, the capitalized value of brand revenue of Mindtree Company for the year 2012-1016 is **Rs. 10,551 crores**.

Table - 6 showing comparison of capitalized value of brand and market capitalization (Amount in crores)

COMPANY	Capitalized Value Of Brand	Market Capitalization	PERCENTAGE
INFOSYS	96,688	2,79,837	34.55154251
MPHASIS	3,455	10,300	33.54368932
TCS	1,87,394	4,65,405	40.26471568
HCL	68,052	1,16,773	43.96890931
MINDTREE	10,551	10,961	34.07835664
Average			37.28144269

From the above table, the value of the brand in the software firms ranging from 33% to 43%, where as the average is 37%.

Implications of Model

1. The results obtained by using the proposed model of valuing the brand of Software Companies can be helpful to the financial institutions and banks to decide the rate of loan which can be approximated to the percentage of the market capitalization as calculated.
2. In case of mergers and acquisitions the model gives guidelines to quote a purchase price.

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