Analysing Business Value of Two Indian Pharma Majors

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ABSTRACT

This paper "Corporate Valuation" gives a brief idea about Analyzing the Balance Sheet and Profit and Loss Account of two pharmaceutical companies to know the performance of the companies.

The Profit and Loss accounts and Balance Sheets of pharmaceutical companies are taken into account to know the firm's value.

For the calculation of the value of the firm Discounted Cash Flow method has been adopted. In this method following steps have been considered

1. *Calculation of free cash flow,*
2. *Calculation of the cost of capital,*
3. *Calculation of Continuing value of the firm,*
4. *Calculation of firm value.*

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Introduction

Value maximization is the central theme in financial management. Owners of corporate securities will hold management if they fail to enhance value. Hence all senior managers must understand what determines value and how to measure it. While valuation was regarded as an abstruse academic subject in the past, it is of considerable importance to managers now.

In the wake of economic liberalization, companies are relying more on the capital market, acquisition and restructuring are becoming commonplace, strategic alliances are gaining popularity, employee stock option plans are proliferating, and regulatory bodies are struggling with tariff determination. In these exercises a crucial issue is: How should the value of a company or a division thereof be appraised?

The goal of such an appraisal is essentially to estimate a fair market value of a company. The most widely accepted the definition of fair market value was laid down by the Internal Revenue Service of the US. It defined fair market value as "the price at which the property would change hands between a willing buyer and a willing seller when the former is not under any compulsion to buy and the latter is not under any compulsion to sell, both parties having reasonable knowledge of relevant facts." When the asset being appraised is "a company", the property the buyer and the seller are trading consists of the claims of all the investors of the company. This includes outstanding equity shares, preference shares, debentures, and loans.

Valuation is the first step toward intelligent investing. When an Investor attempts to determine the worth of her shares based on the fundamentals, she can make informed decisions about what stocks to buy or sell. Without fundamental value, one is set adrift in a sea of random short-term price movements and gut feelings.

Valuing a Business

Finding a value for a company is no easy task — but doing so is an essential component of effective management. The reason: it's easy to destroy value with ill-judged acquisitions, investments or financing methods. This module will take participants through the process of valuing a company, starting with simple financial statements and the use of ratios, and going on to discounted free cash flow method and beyond How a business is valued depends on the purpose, so the second half of the day will be devoted to implementation of the methods in different contexts — such as valuing an acquisition target, and valuing a company in distress, and using valuation in corporate restructuring.

Objectives of the Study

1. To Study about Corporate Valuation of firms.
2. To know the value of firms using Discounted Cash Flow Technique (DCF).

3. To calculate the values of selected firms in Pharmacy sector
4. To Compare the values of the firms with in sector

Sources of Data and Methodology

The study is based on purely secondary data and the data is taken from the Annual Reports of the selected companies for a period of four years (2008 – 05).The companies taken for analysis are

Pharmacy: Cipla Pharmaceuticals Ltd and Dr. Reddy's Laboratories Ltd

The methodology includes

1. Discounted Cash Flow (FCF) technique, used to calculate the value of the two firms.
2. Percentages
3. Charts and Graphs

Approaches to Corporate Valuation

1. Adjusted Book Value Approach

The simplest approach to valuing a firm is to rely on the information found on its balance sheet. There are two equivalent ways of using the balance sheet information to appraise the value of a firm. Firstly the book values of investor claims may be summed directly. Second, the assets of the firm may be totaled and from this total non-investor claims (like accounts payable and provisions) may be deducted.

2. Stock and Debt Approach

When the securities of the firm are publicly traded, its value can be obtained by merely adding the market value of all its outstanding securities. This simple approach is called the stock and debt approach by property tax appraisers. It is also referred to as the market approach. Though the stock and debt approach is fairly straightforward, there is some debt about what prices to use when valuing the securities, particularly the equity shares. Since stock prices are volatile, some appraisers suggest using an average of recent stock prices, rather than the price on the lien date (the day on which the appraiser is attempting to value is called the lien date).

3. Direct Comparison Approach

Economic logic tell us that similar assets should sell at similar assets should sell at similar prices. Based on this principle, one can value an asset by looking at the price at which a comparable asset has changed hands between a reasonably informed buyer and a reasonably informed seller. This approach, referred to as the direct comparison approach, is commonly applied in real estate.

4. Discounted Cash flow Approach

Traditionally, the adjusted book value approach and the direct comparison approach were used more commonly. From the 1990's however, the discounted cash flow approach has received greater attention, emphasis and acceptance. This is mainly because of its conceptual superiority and its string endorsement by leading consultancy organizations. Valuing a firm using the discounted cash flow approach is conceptually identical to valuing a capital project using the present value method.

To sum up, valuing a firm using the discounted cash flow approach calls for forecasting cash flows over an indefinite period of time for an entity that is expected to grow. That indeed a daunting proposition. To tackle this task, the value of the firm is separated into two time periods.

Value of the firm = present value of cash flow during an explicit forecast Period +

Present value of cash flow after an explicit forecast Period

The discounted cash flow approach to valuing a firm involves the following steps:

- Forecast the cash flow during explicit forecast period.
- Establish the cost of capital.
- Determine the continuing value at the end of the explicit forecast period.
- Calculate the firm value and interpret results.

Forecast the cash flow during explicit forecast period:

Calculating of free cash flow (FCF) is the post-tax cash flow generated from the operations of the firm after providing for the investments in fixed assets plus net working capital required for the operations of the firm.

FCF = NOPLAT-Net Investments
FCF = (NOPLAT + Depreciation) – (Net Investment + Depreciation)

Where Net Investment =

Net Fixed Assets at the End of the year + Net Current Assets at the End of the year

Net Fixed Assets at the Beginning of the year + Net Current Assets at the Beginning of the year

NOPLAT = EBIT – Taxes on EBIT

Cost of Capital

Shareholders want to be suitably compensated for investing funds in the firm. The cost of capital reflects what they expect. It is the discount rate used for converting the expected FCF into its present value.

Cost of Capital(K) = [(%Ke*Ke) + (%kd*Kd)]

Continuing Value

It is the value of FCF beyond the explicit forecast period. Typically, the terminal value is the dominant component in a company's value.

$$CVt = \frac{FCFt + 1}{K - g}$$

So where

CVt = Continuing value at the end of the year t
K = Weighted average cost of capital
g = Expected growth rate of sales.

Firm Value

The value of the firm is equal to the sum of the following components.

Present value of the free cash flow during the explicit forecast period

Present value of the continuing value

Value of non operating assets (which were ignored in FCF analysis)

Firm Value = PV (FCF) + PV (CV) + Non-operating assets

Financial Analysis of Dr. Reddy's Ltd

Discounted Cash Flows Method (DCF) is adopted for corporate valuation of companies

Following are the requisites for corporate valuation under DCF method

- Calculation of Net investment
- Calculation of NOPLAT
- Calculation of Free cash flows (FCF)
- Calculation of continuing value
- Calculation of Firm Value

Table showing calculation of Net Investment of Dr. Reddy's Labs from 2005-2008
(Rs in crores)

Net Investment				
Years	**2008**	**2007**	**2006**	**2005**
Net Fixed Assets at the end of the year	987.42	682.04	561.82	562.54
Net Current Assets at the end of the year	1,960.27	2,773.62	1,599.92	1,366.20
Total (A)	2947.69	3455.66	2161.74	1928.74
Net Fixed Assets atthe beginning of the year	682.04	561.82	562.54	458.1
Net Current Assets at the beginning of the year	2,773.62	1,599.92	1,366.20	929.84
Total (B)	3455.66	2161.74	1928.74	1387.94
Net Investment (A-B)	-507.99	1293.92	233	540.8

Interpretation

The Net Investment of Dr. Reddy's in 2005 was 540.8 crores and it increased to 1293.2 crores by 2007 and decreased to -507.99 crores by 2008.

Table showing calculation of NOPLAT of Dr. Reddy's Labs from 2005-2008

NOPLAT = (profit before tax +interest expense) – (tax + 40%tax shield on interest expense)

(Rs in crores)

NOPLAT				
Years	**2008**	**2007**	**2006**	**2005**
Profit Before Tax	584.1	1365.85	263.76	44.36
Interest & Financial Charges	14.69	51.96	24.62	12.74
Total (A)	598.79	1417.81	288.38	57.1
Tax	108.88	188.99	52.64	-21.1
40%tax on Interest Expense	5.87	20.78	9.85	5.09
Total (B)	114.75	209.77	62.49	-16.01
NOPLAT (A-B)	484.04	1208.04	225.79	73.11

Interpretation

The NOPLAT of Dr. Reddy's in 2005 was 73.11 crores and it increased to 1208.04 crores by 2007 and decreased to 484.04 crores by 2008. This may be due to the decrease in sales in 2008

Table showing calculation of Free Cash Flows of Dr. Reddy's Labs from 2005-2008

(Rs in crores)

Free Cash Flows				
Years	**2008**	**2007**	**2006**	**2005**
3455.66	2161.74	1928.74	1387.94	
Net Investment (A)	-507.99	1293.92	233	540.8
NOPLAT(B)	484.04	1208.04	225.79	73.11
FCF (B-A)	992.03	-85.88	-7.21	-467.69

Interpretation

The FCF's of Dr. Reddy's in 2005 was -467.69 crores and it increased to 992.03 crores by 2008. This may be due to the decrease in Net Investment in 2008

Table showing calculation of Cost of Capital of Dr. Reddy's Labs from 2005-2008

(Rs in crores)

Year	**2008**	**2007**	**2006**	**2005**
% of Equity				
Shareholders Fund	4811.81	4373.36	2262.14	2074.08
Total Source of Fund	5274.12	4703.26	3186.01	2347.32
	2008	**2007**	**2006**	**2005**
Cost of Equity				
Dividend	63.12	62.99	38.36	38.26
Shareholders Fund	4811.81	4373.36	2262.14	2074.08
	2008	**2007**	**2006**	**2005**
% of Debt				
Loan Fund	462.31	329.9	923.87	273.24
Total Source of Fund	5274.12	4703.26	3186.01	2347.32
	2008	2007	2006	2005
Cost of Debt				
Interest	14.69	51.96	24.62	12.74
Loan Fund	462.31	329.9	923.87	273.24

Table showing calculation of continuing Value of Dr. Reddy's Labs from 2005-2008

(Rs in crores)

(% Ke*Ke)+(% Kd*Kd)				
Year	**2008**	**2007**	**2006**	**2005**
% of Equity	0.91234	0.92985	0.71002	0.88359
Cost of Equity	0.01311	0.01440	0.01695	0.01844
Total	0.01196	0.01338	0.01203	0.01629
% of Debt	0.08765	0.07014	0.28997	0.11640
Cost of Debt	0.03177	0.15750	0.02664	0.04662
Total	0.00278	0.01104	0.00772	0.00542
Cost of Capital	0.01474	0.02442	0.01975	0.02171
% for Present Value	2%	2%	2%	2%
CONTINUING VALUE				
Years	2008	2007	2006	2005
FCF	992.03	-85.88	-7.21	-467.69
K	2%	2%	2%	2%
G	-14.7	92.2	29.4	-6.5
Continuing Value	=	**5946.29**		

Table showing calculation of Firm Value of Dr. Reddy's Labs from 2005-2008

(Rs in crores)

PV(FCF)+PV(CV)					
Years	**2008**	**2007**	**2006**	**2005**	**Continuing Value**
FCF	992.03	-85.88	-7.21	-467.69	**5946.29**
Present Value	2%	2%	2%	2%	2%
Total	918.55	-81.02	-6.93	-458.52	5505.82
TOTAL FIRM VALUE	=	**5877.85**			

Interpretation

The Firm Value of Dr. Reddy's Labs was 5877.85

Financial Analysis of Cipla Ltd

Table showing calculation of Net Investment of Cipla Ltd from 2005-2008

(Rs in crores)

Net Investment				
Year	**2008**	**2007**	**2006**	**2005**
Net Fixed Assets atthe end of the year	1,652.39	1,379.10	1,047.29	728.85
Net Current Assets atthe end of the year	2,347.12	1,780.77	1,286.13	885.5
Total (A)	3,999.51	3159.87	2333.42	1614.35
Net Fixed Assets atthe beginning of the year	1,379.10	1,047.29	728.85	537.38
Net Current Assets atthe beginning of the year	1,780.77	1,286.13	885.5	690.7
Total (B)	3,159.87	2333.42	1614.35	1228.08
Net Investment (A-B)	839.64	826.45	719.07	386.27

Interpretation

The Net Investment of Cipla Ltd in 2005 was 386.27 crores and it increased to 839.64 crores by 2008.

Table showing calculation of NOPLAT of Cipla Ltd from 2005-2008

NOPLAT = (profit before tax +interest expense) – (tax + 40%tax shield on interest expense)

(Rs in crores)

NOPLAT				
Year	**2008**	**2007**	**2006**	**2005**
Profit Before Tax	838.36	807.98	709.84	514.61
Interest & Financial Charges	18.05	11.16	16.07	11.66
Total (A)	856.41	819.14	725.91	526.27
Tax	136.93	139.95	102.2	105
40%tax on Interest Expense	7.22	4.46	6.43	4.66
Total (B)	144.15	144.41	108.63	109.66
NOPLAT (A-B)	712.26	674.73	617.28	416.61

Interpretation

The NOPLAT of Cipla Ltd in 2005 was 416.61 crores and it increased to 712.26 crores by 2008. There is continuous growth in NOPLAT from 2005 to 2008

Table showing calculation of Free Cash Flows of Cipla Ltd from 2005-2008

(Rs in crores)

Free Cash Flows				
Year	**2008**	**2007**	**2006**	**2005**
Net Investment (A)	839.64	826.45	719.07	386.27
NOPLAT (B)	712.26	674.73	617.28	416.61
FCF (B-A)	-127.38	-151.72	-101.79	30.34

Interpretation

The FCF of Cipla Ltd in 2005 was 30.34 crores and was negative from 2006 to 2008.

This may be because of utilization of internal financial resources.

Table showing calculation of Cost Of Capital of Cipla Ltd from 2005-2008

(Rs in crores)

Year	2008	2007	2006	2005
% of Equity				
Shareholders Fund	3746.85	3227.3	1973.95	1543.57
Total Source of Fund	4,327.38	3,350.86	2,442.86	1,738.62
	2008	2007	2006	2005
Cost of Equity				
Dividend	155.46	155.46	155.46	104.95
Shareholders Fund	3746.85	3227.3	1973.95	1543.57
	2008	2007	2006	2005
% of Debt				
Loan Fund	580.53	123.56	468.91	195.04
Total Source of Fund	4,327.38	3,350.86	2,442.86	1,738.62
	2008	2007	2006	2005
Cost of Debt				
Interest	18.05	11.16	16.07	11.66
Loan Fund	580.53	123.56	468.91	195.04

Table showing calculation of continuing Value of Cipla Ltd from 2005-2008

(Rs in crores)

(% Ke*Ke)+(% Kd*Kd)				
Year	**2008**	**2007**	**2006**	**2005**
% of Equity	0.8658	0.9631	0.8080	0.8878
Cost of Equity	0.0415	0.0482	0.0788	0.0680
Total	0.03593	0.04642	0.06367	0.06037
% of Debt	0.1342	0.0369	0.1919	0.1122
Cost of Debt	0.0311	0.0903	0.0343	0.0598
Total	0.00417	0.00333	0.00658	0.00671
Cost of Capital	0.0401	0.04975	0.07025	0.06708
% for Present Value	4%	5%	7%	7%
CONTINUING VALUE				
Years	**2008**	**2007**	**2006**	**2005**
FCF	-127.38	-151.72	-101.79	30.34
K	4%	5%	7%	7%
G	16%	17%	30%	17%
Continuing Value	=1069.83			

Table showing calculation of Firm Value of Cipla Ltd from 2005-2008

(Rs in crores)

PV(FCF)+PV(CV)					
Years	**2008**	**2007**	**2006**	**2005**	**Continuing Value**
FCF	-127.38	-151.72	-101.79	30.34	**1069.83**
Present Value	4%	5%	7%	7%	4%
Total	-108.871	-136.2	-88.977	28.355	914.462
TOTAL FIRM VALUE	=	**608.769**			

Interpretation

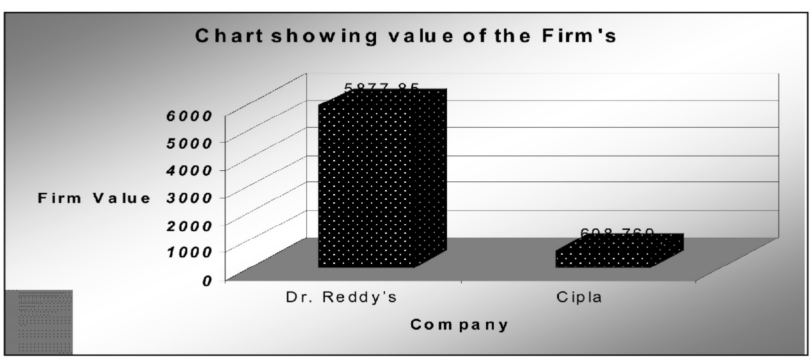
The Firm Value of Cipla Ltd in 2008 was 608.769 crores

Table showing comparison of value of the firm

(Rs in crores)

Company	Dr. Reddy's	Cipla
Firm Value	5877.85	608.769

CHART



Interpretation

The Value of Dr. Reddy's Labs is 5877.85 Crores and Cipla Ltd is 608.77 Crores. The Value of Dr. Reddy's Laboratories is greater than Cipla Ltd.

Findings and Coclusion

Free Cash Flow

- The FCF's of Dr. Reddy's in 2005 was -467.69 crores and it increased to 992.03 crores by 2008. This may be due to the decrease in Net Investment in 2008
- The FCF of Cipla Ltd in 2005 was 30.34 crores and was negative from 2006 to 2008.
- This may be because of utilization of internal financial resources.

Cost of captial

The Cost of Capital of Cipla Ltd has been decreasing. It was 7% in the year 2005 and decreased to 4% in the 2008. Whereas the cost of capital of Dr. Reddy's is 4% and it constant from 2005 to 2008

Continuing Value

Dr. Reddy's continuing value is more than Cipla Ltd, this may be because of high free cash flow Dr. Reddy's than Cipla pharmaceutical

Value of the Firm

The value of Dr. Reddy's Pharmaceutical was at 5877.85. crores in 2005 and whereas the value of Cipla was at 608.769 crores in 2005.

The value of Dr. Reddy's Pharmaceutical Ltd is higher than Cipla Ltd

Equity Dividend

The Equity Dividend of Dr. Reddy's was 38.26 in 2004 and increased to 63.12 in 2008. Whereas Equity Dividend of Cipla Ltd has been increasing from 89.96 to 155.46 from 2004 to 2006 and is constant from 2006 to 2008 in 2008 and the dividend of Dr. Reddy's is less than Cipla

Limitations of the Study

1. Considering only the last 4 years Balance Sheet and Profit and Loss Account to evaluate the value of the firm.
2. This study has been conducted only based on one sector namely (Pharma sector), to examine the Financial pattern of the selected Companies with in sector, which covers a period of four years from 2008-2005.
3. The major source of information being only through secondary source of data i.e. annual reports of the company. As the information presented in such report is subject to statutory obligation, business practices, accounting concepts and conventions and generally Accepted standards of disclosure in the interest of the company and such information may sometimes not reveal the correct Financial Positions of the company.

Future Scope

By using the company value we can find out the value of each share of the company in the market.

We can know whether the share value is high or low when compared with company value.

We can determine causes for fluctuations by doing some marketing analysis and can find out root cause for fluctuations.

Conclusion

- It is concluded that the firm value of Dr. Reddy's Pharmaceutical was at 5877.85. crores in 2005 and whereas the value of Cipla was at 608.769 crores in 2005.

- The value of Dr. Reddy's Pharmaceutical Ltd is higher than Cipla Ltd. This is because of utilization of internal financial resources in Cipla Ltd and decrease in net investment of Dr. Reddy's Labs Ltd

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Annexure

Financial Analysis of Dr. Reddy's Ltd

Balance sheet of Dr reddy's Ltd

(Rs in crores)

Particulars	**Mar ' 08**	**Mar ' 07**	**Mar ' 06**	**Mar ' 05**	**Mar ' 04**
Sources of funds					
Owner's fund					
Equity share capital	84.09	83.96	38.35	38.26	38.26
Share application money	-	-	-	-	-
Preference share capital	-	-	-	-	-
Reserves & surplus	4,727.72	4,289.40	2,223.79	2,035.82	2,008.76
Loan funds					
Secured loans	3.4	1.92	145.13	3.27	35.64
Unsecured loans	458.91	327.98	778.74	269.96	22.58
Total	**5,274.11**	**4,703.26**	**3,186.01**	**2,347.32**	**2,105.24**
Uses of funds					
Fixed assets					
Gross block	1,750.21	1,291.19	1,052.90	1,004.22	810.95
Less : revaluation reserve	-	-	-	-	-
Less : accumulated depreciation	762.8	609.15	491.08	441.68	352.85
Net block	987.42	682.04	561.82	562.54	458.1
Capital work-in-progress	245.71	280.61	112.92	60.13	105.25
Investments	2,080.71	966.99	911.36	358.46	612.05
Investments	2,080.71	966.99	911.36	358.46	612.05
Net current assets					
Current assets, loans & advances	3,348.01	4,028.55	2,398.87	2,000.88	1,343.70
Less : current liabilities & provisions	1,387.74	1,254.93	798.95	634.68	413.86
Total net current assets	1,960.27	2,773.62	1,599.92	1,366.20	929.84
Miscellaneous expenses not written	-	-	-	-	-
Total	**5,274.11**	**4,703.26**	**3,186.01**	**2,347.32**	**2,105.24**

Annexure

Financial Analysis of Cipla Ltd

Balance sheet of Cipla Ltd

(Rsincrores)

Particulars	**Mar ' 08**	**Mar ' 07**	**Mar ' 06**	**Mar ' 05**	**Mar ' 04**
Sources of funds					
Owner's fund					
Equity share capital	155.46	155.46	59.97	59.97	59.97
Share application money	-	-	-	-	-
Preference share capital	-	-	-	-	-
Reserves & surplus	3,591.39	3,071.84	1,913.98	1,483.60	1,193.90
Loan funds					
Secured loans	16.98	7.25	51.27	40.37	30.6
Unsecured loans	563.55	116.31	417.64	154.67	179.99
Total	4,327.38	3,350.86	2,442.86	1,738.62	1,464.45
Uses of funds					
Fixed assets					
Gross block	2,201.79	1,799.71	1,366.67	986.67	740.79
Less : revaluation reserve	8.97	8.97	9.32	10.06	10.18
Less : accumulated depreciation	540.43	411.64	310.06	247.76	193.23
Net block	1,652.39	1,379.10	1,047.29	728.85	537.38
Capital work-in-progress	233.12	73.19	87.01	105.96	56.01
Investments	94.75	117.8	22.43	18.3	180.37
Net current assets					
Current assets, loans & advances	3,743.98	2,834.68	2,292.28	1,752.89	1,436.23
Less : current liabilities & provisions	1,396.86	1,053.91	1,006.15	867.39	745.54
Total net current assets	2,347.12	1,780.77	1,286.13	885.5	690.7
Miscellaneous expenses not written	-	-	-	-	-
Total	**4,327.38**	**3,350.86**	**2,442.86**	**1,738.62**	**1,464.45**