



Financial Management

Task 2

Ratio Analysis for Harley Davidson

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HARLEY DAVIDSON

Harley Davidson Inc. is a motorcycle company which has been running since 1903. This company is however on the brink of facing financial shortcomings due to the fact that its sales aren't up to the mark and various other reasons like the buyers preferring other types of bikes. Harley Davidson financial service is also a part of the incorporation which is essentially a one stop shop for the motorbike buyers which helps financing the motorcycle after parts, clothes and accessories. In this assignment, we took the financial statements of Harley-Davidson for 2015 and found the required ratios based on the financial statements.

BALANCE SHEET

(in USD thousands)	FY 2013	FY 2014	FY 2015
Current Assets:			
Cash and Cash Equivalence	\$12,11,419	\$10,05,307	\$8,10,476
Short-Term Investment	\$99,009	\$57,325	\$45,192
Net Receivables	\$21,38,376	\$22,54,172	\$24,03,756
Inventory	\$4,24,507	\$4,48,871	\$5,85,907
Sundry debtors	\$1,15,492	\$1,82,420	\$1,37,823
Total Current Assets	\$39,88,803	\$39,48,095	\$39,83,154
Long-Term Assets:			
Long-Term Investments	\$42,25,877	\$45,16,246	\$48,14,571
Fixed Assets	\$8,42,477	\$8,83,077	\$9,42,418
Goodwill	\$30,452	\$27,752	\$54,182
Intangible Assets	\$0	\$0	\$0
Other Assets	\$3,14,092	\$75,092	\$97,228
Deferred Assets Charges	\$3,339	\$77,835	\$99,614
Total Assets	\$94,05,040	\$95,28,097	\$99,91,167

Current Liabilities:

Accounts Payable	\$6,67,129	\$6,46,185	\$7,07,578
Short-Term Debts	\$18,42,457	\$17,43,101	\$20,45,000
Other Current Liabilities	\$0	\$0	\$0
Total Current Liabilities	\$25,09,586	\$23,89,286	\$27,52,578
Long-Term Debt	\$34,16,713	\$37,61,528	\$48,45,388
Other Liabilities	\$4,19,756	\$4,67,997	\$5,53,547
Deferred liability Charges	\$49,499	\$0	\$0
Misc. Stocks	\$0	\$0	\$0
Minority Interest	\$0	\$0	\$0
Total Liabilities	\$63,95,554	\$66,18,811	\$81,51,513

Stockholders' Equity:

Common Stocks	\$3,432	\$3,442	\$3,449
Capital Surplus	\$11,75,052	\$12,65,257	\$13,28,561
Retained Earnings	\$78,52,729	\$84,59,040	\$89,61,985
Treasury Stock	\$56,89,051	\$63,03,510	\$78,39,136
Other Equity	(\$3,32,676)	(\$5,14,943)	(\$6,15,205)
Total Equity	\$30,09,486	\$29,09,286	\$18,39,654
Total Liabilities and Equity	\$94,05,040	\$95,28,097	\$99,91,167

INCOME STATEMENT

(in thousands USD)	FY 2013	FY 2014	FY 2015
Revenue:			
Motorcycle and Related Products	\$ 52,58,290	\$ 55,67,681	\$ 53,08,744
Financial Services	\$ 6,41,582	\$ 6,60,827	\$ 6,86,658
Total revenue	\$ 58,99,872	\$ 62,28,508	\$ 59,95,402
Cost of Revenue:			
Motorcycle and Related Products COGS	\$ 33,95,918	\$ 35,42,601	\$ 33,56,284
Financial Services interest Expense	\$ 1,65,491	\$ 1,64,476	\$ 1,61,983
Financial Services Provision for credit losses	\$ 60,008	\$ 80,946	\$ 1,01,345
Total Cost of Revenue	\$ 36,21,417	\$ 37,88,023	\$ 36,19,612
Gross Profit	\$ 22,78,455	\$ 24,40,485	\$ 23,75,790
Operating Expenses:			
Depreciation	\$ 42,200	\$ 45,400	\$ 48,600
Sales, General and Administration	\$ 11,24,753	\$ 11,59,502	\$ 11,71,495
Operating Income	\$ 11,11,502	\$ 12,35,583	\$ 11,55,695
Additional income/expense items	\$ 5,859	\$ 6,499	\$ 6,585
Earning before Interest and Tax	\$ 11,17,361	\$ 12,42,082	\$ 11,62,280
Interest Expense	\$ 45,256	\$ 4,162	\$ 12,117
Earning before Tax	\$ 10,72,105	\$ 12,37,920	\$ 11,50,163
Income Tax	\$ 3,80,312	\$ 4,38,709	\$ 3,97,956
Net Income	\$ 6,91,793	\$ 7,99,211	\$ 7,52,207
Net Income to Common Shareholders	\$ 6,91,793	\$ 7,99,211	\$ 7,52,207
Earnings per common share:			
Basic	\$ 3.30	\$ 3.90	\$ 3.71
Diluted	\$ 3.28	\$ 3.88	\$ 3.69
Cash dividends per common share	\$ 0.84	\$ 1.10	\$ 1.24
Number of shares outstanding (in thousands)	2,09,634.24	2,04,925.90	2,02,751.21

Liquidity Ratios

A liquidity ratio looks at the ability of a firm to meet its financial obligations in the short run, usually within one year. They attempt to measure a company's ability to pay off its short-term debt obligations.

- **Current ratio**

A current ratio measures the company's ability to pay off the short term investments in a years' time. This is the ratio of the total current assets divided by the total current liabilities. A ratio of greater than 1 is considered favorable.

$$\text{Current ratio} = \frac{\text{current assets}}{\text{current liabilities}} = \frac{3983154}{2752578} = 1.447$$

Since this value of current ratio is higher than 1, the company is in a financially safe position.

- **Acid Test ratio**

An acid test ratio tells us how quickly the current liabilities can be paid off through the quick assets (possibly a month or so).

$$\text{Acid test ratio} = \frac{\text{quick assets}}{\text{current liabilities}} = \frac{810476+137823}{275278} = 0.344$$

Here, the ratio is not very good, as a value of 0.344 means that there are 0.344 valued assets to every one unit of current liabilities.

- **Cash Ratio**

This is a measure of how quickly the liabilities can be paid off within about 24 hours. This is a very stringent ratio. The current stock is not taken into account for this ratio as it is not very easy to get rid off.

$$\text{Cash ratio} = \frac{\text{cash} + \text{bank} + \text{current investments}}{\text{current liabilities}} = \frac{810476+45192}{275278} = 0.318$$

Comments on the company's Liquidity ratios:

S. No.	Ratio	Value	Comments
1.	Current Ratio	1.447	A ratio higher than 1 gives assurance to the people that the current liabilities can be paid back with at least a year's time.
2.	Acid test ratio	0.344	Like the current ratio, it is desired to have a ratio of about 1:1, but since here it is .344, we can see that most of the current assets are tied up in the stock.
3.	Cash Ratio	0.318	This value suggests that the company is not keeping enough cash to fund its operations. But, it also has its other current assets to be able to payback the current liabilities.

Leverage Ratios

A leverage ratio looks at how much capital comes in the form of debt (loans), or assesses the ability of a company to meet financial obligations.

It has two types of ratios:

- **Structural Ratios:**

It is based on the debt and equity in the financial structure of the firm

- **Debt-Equity Ratio**

This is calculated by dividing a company's total liabilities by its stockholders equity. The D/E ratio indicates how much debt a company is using to finance its assets relative to the amount of value represented in shareholders' equity.

$$\begin{aligned}\text{Debt - Equity Ratio} &= \text{Total Liabilities} / \text{Stakeholders Equity} \\ &= 8151513 / 1839654 = 4.43\end{aligned}$$

- **Debt- Asset Ratio**

The debt to total assets ratio is calculated by dividing a corporation's total liabilities by its total assets. It explains the percentage of total assets that were financed by creditors, liabilities, debt.

$$\begin{aligned}\text{Debt - Asset Ratio} &= \text{Total Liabilities} / \text{Total Assets} \\ &= 8151513 / 9991167 = 0.816\end{aligned}$$

- **Coverage Ratios:**

It shows the relation between debt servicing commitments and the sources for meeting these burdens

- **Interest Coverage Ratio**

The interest coverage ratio is calculated by dividing a company's earnings before interest and taxes (EBIT) by the company's interest expenses for the same period. This is used to determine how easily a company can pay their interest expenses on outstanding debt.

$$\begin{aligned}\text{Interest Coverage Ratio} \\ &= (\text{Profit Before Interest and Tax} + \text{Depreciation}) / \text{Interest} \\ &= (1162280 + 48600) / 12117 = 99.93\end{aligned}$$

- **Fixed Charges Coverage Ratio**

This is a measure of a firm's ability to meet its fixed-charge obligations. This is equal to the ratio of Earnings before interest, depreciation and amortization minus unfunded capital expenditures and distributions to total debt service.

$$\begin{aligned}\text{Fixed Charges Coverage Ratio} \\ &= (\text{Profit Before Interest and Tax} + \text{Depreciation}) / (\text{Interest} + (\text{Repayment of Loan} / (1 - \text{Tax rate}))) \\ &= (1162280 + 48600) / (12117 + (2752578 / (1 - 0.346))) = 0.2868\end{aligned}$$

- **Debt Service Coverage Ratio**

The Debt-Service Coverage Ratio (DSCR) is a measure of the cash flow available to pay current debt obligations. The ratio states net operating income as a multiple of debt obligations due within one year, including interest, principal, sinking-fund and lease payments.

$$\begin{aligned} &\text{Debt Service Coverage Ratio} \\ &= (\text{Profit After tax} + \text{Depreciation} + \text{interest on term loans} + \text{lease rentals}) / \\ &(\text{Interest on term loan} + \text{lease rentals} + \text{repayment of term loan}) \\ &= (752207 + 48600 + 12117 + 0) / (12117 + 0 + 2752578) = 0.294 \end{aligned}$$

Comments on the company based on the Leverage ratios

S.No.	Ratio	Value	Comment
1	Debt Equity Ratio	4.43	<ol style="list-style-type: none"> 1. Lower the ratio, higher the production enjoyed by the creditors. 2. General consensus is that it should not be above 2. 3. Hence it is often associated with high levels of risk.
2	Debt Asset Ratio	0.816	<ol style="list-style-type: none"> 1. Lower ratios (0.4 or lower) are considered better debt ratios. 2. Companies with this ratio greater than 0.5 are said to be highly leveraged. 3. Most of this company's assets are financed through debt.
3	Interest Coverage Ratio	99.93	<ol style="list-style-type: none"> 1. Higher ratio indicates a better financial health i.e. the company is more capable of meeting its interest obligations from operating earnings. 2. It's too safe.
4	Fixed Charges Coverage Ratio	0.2868	<ol style="list-style-type: none"> 1. A low ratio means drop in earnings could be dire for the company. 2. It is a situation which the lender tries to avoid.

5	Debt Service Coverage Ratio	0.294	<ol style="list-style-type: none"> 1. The satisfactory range is 1.5 to 2. 2. This doesn't have sufficient income to pay its current debt obligations.
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Turnover Ratios

It measures how efficiently the assets are employed by the firm. These ratios are based on the relation between the level of activity, represented by sales or cost of goods sold and levels of various assets.

- **Inventory Turnover**

Inventory turnover is a measure of the number of times inventory is sold or used in a time period such as a year. The equation for inventory turnover equals the cost of goods sold divided by the average inventory.

$$\begin{aligned}\text{Inventory Turnover} &= \text{Cost of goods sold} / \text{Average Inventory} \\ &= 3356284 / ((448871 + 585907)/2) = 6.487\end{aligned}$$

- **Debtors Turnover**

This is also known as receivables turnover ratio. This is an activity ratio measuring how efficiently a firm uses its assets. This can be calculated by dividing the net value of credit sales during a given period by the average sundry debtors during the same period.

$$\begin{aligned}\text{Debtors Turnover} &= \text{Net Credit Sales} / \text{Average sundry debtors} \\ &= 5995402 / 160121.5 = 37.44\end{aligned}$$

- **Average Collection Period**

The average collection period is equal to the ratio of 365 days in a year to the accounts receivable turnover.

$$\begin{aligned}\text{Average Collection Period} &= 365 / \text{Debtors Turnover} \\ &= 365 / 37.44 = 9.748\end{aligned}$$

- **Fixed Assets Turnover**

Fixed-asset turnover is the ratio of net sales to the value of fixed assets. It indicates how well the business is using its fixed assets to generate sales.

$$\begin{aligned}\text{Fixed Assets Turnover} &= \text{Net Sales} / \text{Average Net Fixed Assets} \\ &= 5995402 / ((883077 + 942418)/2) = 6.57\end{aligned}$$

- **Total Assets Turnover**

The asset turnover ratio is an efficiency ratio that measures a company's ability to generate sales from its assets by comparing net sales with average total assets. This ratio shows how efficiently a company can use its assets to generate sales.

$$\begin{aligned}\text{Total Assets Turnover} &= \text{Net Sales} / \text{Average Total Assets} \\ &= 5995402 / ((9528097 + 9991167)/2) = 0.614\end{aligned}$$

Comments on the company based on the Turnover ratios

S. No.	Ratio	Value	Comment
1	Inventory Turnover	6.487	<ol style="list-style-type: none"> 1. This measure shows how easily a company can turn its inventory into cash. 2. This means it has very good inventory control
2	Debtors' Turnover	35.79	<ol style="list-style-type: none"> 1. Higher debtors' turnover ratio is good because it implies faster collection of money. 2. We can manage debtors in better rates.

3	Average Collection Period	9.748	<ol style="list-style-type: none"> 1. Possessing a low average collection period (compared to industry benchmark) is normally a positive sign 2. This is because it means that it does not take the company very long to turn its receivables into cash.
4	Fixed Assets Turnover	6.57	<ol style="list-style-type: none"> 1. Higher the fixed assets turnover, better is the company in managing its fixed assets. 2. The company is effectively using its fixed assets to generate sales better than its competitors.
5	Total Assets Turnover	0.614	<ol style="list-style-type: none"> 1. Higher ratio is always more favourable. Lower ratios mean that the company isn't using its assets efficiently and most likely have management or production problems. 2. So here it is not using its asserts efficiently

Valuation Ratios

These ratios indicate how the equity stock of the company is assessed in the capital market. Since the market value of equity reflects the combined influence of risk and return, valuation ratios are the most comprehensive measures of a firm's performance.

- **Price- Earnings Ratio**

It is a summary measure which primarily reflects the following factors - growth prospects, risk characteristics, shareholder orientation, corporate image and degree of liquidity. It is defined as market price per share (can be on a certain day or average over a period of time) over earnings per share (EPS).

Market Price per share for Harley Davidson = \$45.20

$$\begin{aligned}\text{EPS} &= \text{Net Income/Number of outstanding shares} \\ &= 752207/202751.21 = 3.71\end{aligned}$$

$$\begin{aligned}\text{PE ratio} &= \text{Market Price per share/ EPS} \\ &= 45.2/3.71 = 12.18\end{aligned}$$

- **EV-EBITDA ratio**

EV represents Enterprise Value of the company and EBITDA represents Earnings Before Interest, Tax, Depreciation and Amortization. The ratio of EV to EBITDA is supposed to reflect profitability, growth, risk, liquidity and corporate image.

EV of Harley Davidson = \$17.02 Billion

$$\begin{aligned}\text{EBITDA} &= \text{EBIT} + \text{Depreciation} \\ &= \$1162280 + \$48600 \\ &= \$1210880 \text{ (in thousands of dollars)}\end{aligned}$$

$$\begin{aligned}\text{EV-EBITDA ratio} &= \text{EV/ EBITDA} \\ &= 17020000/1210880 = 14.05\end{aligned}$$

- **Market Value to Book Value ratio:**

Defined as market value per share over book value per share, this ratio reflects the contribution of a firm to the wealth of the society. A ratio greater than 1 indicates that the firm has contributed to the creation of wealth in society.

Market Value per share for Harley Davidson (MV) = \$45.02

Book Value per share (BV)

$$\begin{aligned}
 &= (\text{Total Assets} - \text{Total Liabilities}) / \text{Number of outstanding shares} \\
 &= (9991167 - 8151513) / 202751.21 \\
 &= 1839654 / 202751.21 \\
 &= 9.073
 \end{aligned}$$

$$\begin{aligned}
 \text{MV to BV ratio} &= \text{MV per share} / \text{BV per share} \\
 &= 45.02 / 9.073 \\
 &= 4.982
 \end{aligned}$$

Comments on the company based on the Valuation ratios

S.No	Ratio	Value	Comment
1	Price- Earnings ratio	12.18	The P/E of a company must be greater than 5 to eliminate weak companies, but not more than 3 times the current Market P/E (24) because the situation is much too risky. So the ratio for Harley Davidson is in a safe but low range.
2	EV-EBITDA ratio	14.05	This ratio is used in conjunction to P/E ratio to determine fair market value of the company. The EV-EBITDA ratio is high and this indicates that the company shares could be overvalued, which would result in a fall in market price per share. The ideal range is 6-8.

3	Market Value to Book Value ratio	4.982	The value of a company should be in the bottom 20% of the overall market. Harley Davidson's MV/BV is not in the bottom 20% criterion (below 1.09), and it therefore fails this test.
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Profitability Ratios

- **Gross Profit Margin**

Gross profit margin is used to assess a company's financial health and business model by revealing the proportion of money left over from revenues after accounting for the cost of goods sold (COGS).

Gross profit margin= (Revenue-COGS)/ Revenue= 0.3962

- **Net Profit Margin**

Net Profit Margin reveals the amount of profit that a business can extract from its total sales

Net Profit Margin= Net Profit/ Net sales= 0.285022

- **Return on assets**

Return on assets gives an idea of how profitable a company is relative to the total assets.

Return on assets= Net profit/ Average total assets= 0.075287

- **Earning Power**

Earning Power ratio is a measure that calculates the earning power of a business before the effect of the business' income taxes and its financial leverage.

$$\text{Earning Power Ratio} = \text{PBIT} / \text{Average total assets} = 0.116331$$

- **Return on capital employed**

It is a financial ratio that measures a company's profitability and the efficiency with which its capital is employed.

$$\text{ROCE} = (\text{EBIT}) / \text{Capital Employed} = 0.07608$$

- **Return on equity**

It is a measure of profitability that calculates how many dollars of profit a company generates with each dollar of shareholders' equity.

$$\text{ROE} = \text{Equity earnings} / \text{Average net worth} = 0.408$$

Comments on the company based on the Profitability ratios

S.No	Profitability ratios	Value	Comments
1	Gross Profit Margin	0.3962	The obtained ratio is reasonably high and therefore indicates good financial health of the company
2	Net Profit Margin	0.285022	Generally, a net profit margin of above 25% is considered to be good. Therefore Harley Davidson is operating in favourable conditions.
3	Return on assets	0.075287	With a return on Assets of 7.5% it can be said that Harley Davidson is utilizing its assets decently.

4	Earning Power	0.116331	Earning Power of Harley Davidson seems to be considerably low.
5	Return on capital employed	0.07608	ROCE of Harley Davidson is low. Reducing costs, increasing sales, and paying off debt or restructuring financing could increase the productivity of capital
6	Return on Equity	0.408	A ROE of 0.402 indicates low returns to shareholders' equity.

Conclusion

The EBITDA margin and Net Profit margin of Harley Davidson seems to be higher than its competitors implying a higher profitability as a percentage of its total revenue. The ROE seems to be well above that of Honda Motors indicating better performance. Though ROCE and ROE are low in the absolute sense, they are higher than the corresponding ratios of the competitors. Total Assets Turnover ratio is low so it is not using its assets efficiently. By Debt Equity Ratio and Debt Asset Ratio we can say that most of this company's assets are financed through debt.