Appendix C
Comprehensive Case

Comprehensive Case

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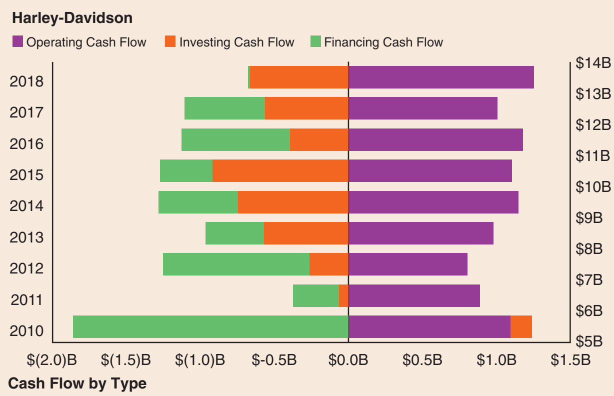
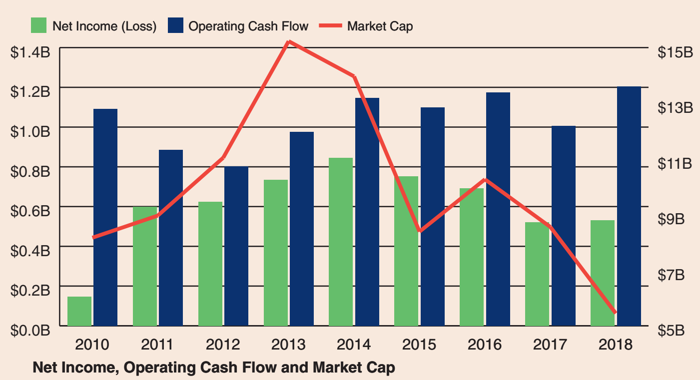
PREVIEW

This appendix consists of a comprehensive case that presents a financial accounting analysis and interpretation of Harley-Davidson's performance and position. We illustrate many of the key financial reporting topics covered in the book. We review the company's financial statements and notes, forecast key accounts, and conclude with estimates of Harley-Davidson's equity value.





Road Map

LO	Learning Objective I Topics	Page	eLecture
C-1	**Explain and illustrate a review of financial statements and their components.** Income Statement :: Balance Sheet :: Statement of Cash Flows :: Audit Opinion	C-3	eC–1
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Reviewing Financial Statements

eLectures MBC **LO1** Explain and illustrate a review of financial statements and their components.

This section reviews and analyzes the financial statements of Harley-Davidson.

Business Environment for Financial Reporting

Harley-Davidson is a Fortune 500 company and has been the historical market share leader in the U.S. 601+cc motorcycle market. The company's products are sold through a network of independent dealers, of which the majority sell Harley-Davidson motorcycles exclusively. These dealerships stock and sell the company's motorcycles, parts and accessories, general merchandise and licensed products, and perform service on Harley-Davidson motorcycles. In 2018, Harley reported 1,535 dealerships, 691 (45%) of which are located in the U.S.

Harley reports two business segments: the manufacturing company and the financial services subsidiary. Harley-Davidson Financial Services is engaged in the business of financing and servicing wholesale inventory receivables and retail consumer loans, primarily for the purchase of Harley-Davidson motorcycles. Its wholesale activities include financing for its dealers for the purchase of motorcycles for display, and its financing activities provide loan and lease financing to customers. This financial services subsidiary operates like a bank, borrowing money at a given rate to fund the lease receivables and setting a higher rate on its loans and leases. As is common for all lenders, managing the spread between lease income and interest expense and minimizing credit losses are core activities for Harley-Davidson Financial Services.

In the MD&A section of its 10-K, Harley-Davidson describes its competitive environment as follows.

> Competition in the segments of the motorcycle market in which the Company currently competes is based upon a number of factors including product capabilities and features, styling, price, quality, reliability, warranty, availability of financing, and quality of the dealer network that sells the product. The Company believes its motorcycles continue to generally command a premium price at retail relative to competitors' motorcycles. The Company emphasizes remarkable styling, customization, innovation, sound, quality and reliability in its products and generally offers a two-year warranty for its motorcycles. The Company considers the availability of a line of motorcycle parts & accessories and general merchandise, the availability of financing through HDFS and its global network of independent dealers to be competitive advantages.

Although dominant in the U.S. market (accounting for approximately 50% of new motorcycle registrations), Harley-Davidson faces stiff competition outside of the U.S. where it has only a 10% market share. With this as background, we begin the accounting analysis of Harley-Davidson by discussing its financial statements.

Income Statement Reporting and Analysis

Harley-Davidson's income statement is reproduced in Exhibit C.1.

Net Sales

Exhibit C.1 reveals that total revenue (product sales and financial services revenue) increased by 1.2% in 2018 to $5,716.9 million. However, revenues in 2018 are 4.7% lower than in 2016. In its MD&A report, management describes its results as follows.

> Retail sales of new Harley-Davidson motorcycles in the U.S. were down 10.2% in 2018. Overall, U.S. retail sales of new Harley-Davidson motorcycles were adversely impacted by the continued weak U.S. industry, which was down 8.7% compared to 2017. The Company believes that sales of new motorcycles continued to be adversely impacted by soft used motorcycle prices and a shift in rider preferences toward smaller displacement motorcycles.
>
> The Company's U.S. market share of new 601+cc motorcycles for 2018 was 49.7%, down 1.0 percentage points compared to 2017 (Source: Motorcycle Industry Council). The Company's U.S.

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market share reflects the adverse impact of a highly competitive marketplace and relatively strong growth in segments in which the Company does not currently compete. In the segments in which the Company does compete (Touring and Cruiser), which represent approximately 70% of the 601+cc market, the Company's market share was up 0.8 percentage points on a full-year basis.

International retail sales of new Harley-Davidson motorcycles were up 0.4% in 2018. Retail sales in emerging markets were up 9.8% partially offset by lower retail sales in developed markets, which declined 2.7% during 2018.

Exhibit C.1 ■ Harley-Davidson Income Statement

HARLEY-DAVIDSON INC.
Consolidated Statements of Income
Year Ended December 31

$ thousands	2018	2017	2016
Revenue			
Motorcycles and Related Products	$4,968,646	$4,915,027	$5,271,376
Financial Services	748,229	732,197	725,082
Total revenue	5,716,875	5,647,224	5,996,458
Costs and expenses			
Motorcycles and Related Products cost of goods sold	3,351,796	3,272,330	3,425,997
Financial Services interest expense	193,187	180,193	173,756
Financial Services provision for credit losses	106,870	132,444	136,617
Selling, administrative and engineering expense	1,258,098	1,180,176	1,213,794
Restructuring expense	93,401	—	—
Total costs and expenses	5,003,352	4,765,143	4,950,164
Operating income	713,523	882,081	1,046,294
Other income (expense), net	3,039	9,182	2,642
Investment income	951	3,580	4,645
Interest expense	30,884	31,004	29,670
Income before provision for income taxes	686,629	863,839	1,023,911
Provision for income taxes	155,178	342,080	331,747
Net income	$ 531,451	$ 521,759	$ 692,164

As required under GAAP, Harley-Davidson recognizes revenue when the ownership of its motorcycles is transferred to its customers. The following footnote provides additional detail on the company's revenue recognition for motorcycles as well as for its financial services revenue.

Motorcycles, Parts & Accessories, and General Merchandise—Sales of motorcycles, parts & accessories, and general merchandise are recorded when control is transferred to wholesale customers (independent dealers). This generally takes place upon shipment of the products . . . The Company offers sales incentive programs to dealers and retail customers designed to promote the sale of motorcycles, parts & accessories, and general merchandise. The Company estimates its variable consideration related to motorcycles and related products sold under its sales incentive programs using the expected value method . . . The Company offers to its dealers the right to return eligible parts & accessories and general merchandise. When the Company offers a right to return, it estimates returns based on an analysis of historical trends and records revenue on the initial sale only in the amount that it expects to be entitled . . . Variable consideration related to sales incentives and rights to return is adjusted at the earliest of when the amount of consideration the Company expects to receive changes or the consideration becomes fixed.

Financial Services—Interest income on finance receivables is recorded as earned and is based on the average outstanding daily balance for wholesale and retail receivables. Accrued and uncollected interest is classified with finance receivables. Certain loan origination costs related to finance receivables, including payments made to dealers for certain retail loans, are deferred and recorded within finance receivables and amortized over the estimated life of the contract.

As is customary, product-related revenues are recognized when Harley has performed its obligations to its customers, that is, when the motorcycles are shipped to its dealers. The amount recognized as revenue is equal to the sales price of the motorcycles less any sales allowances, such as sales discounts and other incentives. For financial services income, interest is accrued when earned over time and is recognized net of any origination costs paid to dealers to generate the finance receivables.

Cost of Products Sold and Gross Profit

Harley's 2018 gross profit margin is calculated using only the Motorcycles and Related Products revenue and cost of goods sold. For 2018, gross profit margin is 32.5% ([$4,968,646 − $3,351,796]/$4,968,646), one percentage point lower than the 33.4% gross profit margin reported for 2017. The company describes the factors that affected the change in gross margins as follows.

> The following factors affected the comparability of net revenue, cost of goods sold and gross profit from 2017 to 2018:
>
> - The decrease in volume was due to lower wholesale motorcycle shipments, as well as lower P&A and general merchandise sales. P&A and general merchandise sales were down due in large part to lower motorcycle shipments and lower retail motorcycle sales.
> - On average, wholesale prices for motorcycles shipped in 2018 were higher than in the prior year resulting in a favorable impact on revenue. The positive impact on revenue was partially offset by increased costs related to the additional content added to motorcycles shipped in 2018 as compared to the prior year.
> - The favorable revenue impact from foreign currency was partially offset by higher net foreign currency losses due primarily to the remeasurement of foreign-denominated balance sheet accounts, as compared to the prior year.
> - Shipment mix changes resulted in a positive impact on gross profit resulting from favorable changes in the mix of motorcycle families, as well as the mix of models within motorcycle families.
> - Raw material prices were higher primarily due to increased steel and aluminum costs which includes the impacts of U.S. tariffs on steel and aluminum imports.
> - Manufacturing and other costs were negatively impacted by lower fixed cost absorption due to lower production, higher depreciation, the impact of incremental tariffs and temporary inefficiencies associated with the Manufacturing Optimization Plan. In 2018, the impact of incremental tariffs was $23.7 million.

The choice of inventory costing method affects cost of goods sold. Harley uses the LIFO method to cost its inventory. In 2018, the company's LIFO reserve increased slightly by $6.3 million, possibly reflecting the increase in raw materials prices, cited above. The increase in the LIFO reserve meant that cost of goods sold was $6.3 million higher than it would have been under the FIFO inventory costing method; the LIFO method decreased gross profit by the same amount (see inventory discussion later in this appendix).

Selling, Administrative, and Engineering Expenses

In 2018, Harley-Davidson reports selling, administrative, and engineering expenses of $1,258 million (excluding restructuring expenses of $93.4 million), which is 22% of total revenue, higher than in both 2017 (20.9%) and 2016 (20.2%). Included in that account are research and development expenses of $191.6 million, higher than the $175.2 million in the prior year. SG&A also includes wages for retail and corporate employees, occupancy costs, and other administrative costs not reported separately.

Pension Expenses

Harley-Davidson's SG&A expenses include $32.8 million of pension expense (for its regular pension plan as well as for its supplemental employee retirement plan agreements [SERPA]) and $3.7 million of other postretirement benefit expense. This is reported in the following table in the pension footnote.

$ thousands	Pension and SERPA Benefits 2018	2017	2016	Postretirement Healthcare Benefits 2018	2017	2016
Service cost	$ 32,340	$ 31,584	$ 33,437	$ 7,180	$ 7,500	$ 7,478
Interest cost	82,778	85,076	90,827	11,556	13,648	14,814
Expected return on plan assets	(147,671)	(141,385)	(145,781)	(14,161)	(12,623)	(12,069)
Amortization of unrecognized:						
Prior service cost (credit)	(420)	1,018	1,019	(1,842)	(2,171)	(2,803)
Net loss	64,773	43,993	46,351	1,817	3,261	3,537
Net curtailment loss (gain)	1,017	—	—	(866)	—	—
Settlement loss	—	—	1,463	—	—	—
Net periodic benefit cost	$ 32,817	$ 20,286	$ 27,316	$ 3,664	$ 9,615	$10,957

For 2018, the expected return on pension investments ($147.7 million) provides an offset to the company's pension service and interest costs ($32.3 million and $82.8 million, respectively). The pension footnote in Harley-Davidson's 10-K reveals that pension investments realized an actual *return* of $185.5 million in 2018.

Harley describes how it determines the expected return in its footnotes. It is instructive to review the company's rationale, which is as follows.

> **Pension Plan Assets**—The Company's investment objective is to ensure assets are sufficient to pay benefits while mitigating the volatility of retirement plan assets or liabilities recorded in the balance sheet. The Company mitigates volatility through asset diversification and partial asset/liability matching. The investment portfolio for the Company's pension plan assets contains a diversified blend of equity and fixed-income investments. The Company's current overall targeted asset allocation as a percentage of total market value was approximately 56% equities and 44% fixed-income and cash. Assets are rebalanced regularly to keep the actual allocation in line with targets. Equity holdings primarily include investments in small-, medium- and large-cap companies in the U.S. (including Company stock), investments in developed and emerging foreign markets and other investments such as private equity and real estate. Fixed income holdings consist of U.S. government and agency securities, state and municipal bonds, corporate bonds from diversified industries and foreign obligations. In addition, cash equivalent balances are maintained at levels adequate to meet near-term plan expenses and benefit payments. Investment risk is measured and monitored on an ongoing basis through quarterly investment portfolio reviews.

The expected return on pension assets offsets service and interest costs, and serves to reduce pension expense. In general, increasing (decreasing) the expected return on pension assets increases (decreases) profit. In 2018, Harley left the expected return on plan assets of 7.25% unchanged from the prior year. The discount rate (used to compute the interest cost component of pension expense) declined by 59 basis points (4.30% to 3.71%).

Earnings per Share

Harley provides the following footnote relating to its computation of earnings per share.

$ thousands, except per share amounts	2018	2017	2016
Numerator			
Income used in computing basic and diluted earnings per share	$531,451	$521,759	$692,164
Denominator			
Denominator for basic earnings per share-weighted-average common shares	165,672	171,995	179,676
Effect of dilutive securities—employee stock compensation plan	832	937	859
Denominator for diluted earnings per share—adjusted weighted-average shares outstanding	166,504	172,932	180,535
Earnings per common share:			
Basic	$3.21	$3.03	$3.85
Diluted	$3.19	$3.02	$3.83

The difference between basic and diluted earnings per share usually arises from the dilutive effects of employee stock options. As Harley discusses in the footnote presented below, however, if stock options are "under water" (stock price is lower than the exercise price of the options), they are considered *anti-dilutive*, meaning that including them would *increase* EPS. Accordingly, they are excluded in the diluted EPS computation, but remain potentially dilutive if Harley's stock price subsequently rises above the exercise price of the options. Harley describes the EPS effects of anti-dilutive stock options in 2018 as follows.

> Options to purchase 1.1 million, 0.8 million and 1.4 million weighted-average shares of common stock outstanding during 2018, 2017 and 2016, respectively, were not included in the Company's computation of dilutive securities because the exercise price was greater than the market price and therefore the effect would have been anti-dilutive.

Although not present for Harley-Davidson, convertible debt and preferred shares are also potentially dilutive for many companies.

Income Taxes

Harley-Davidson's effective tax rate in 2018 is 22.6%, significantly lower than in both prior years, as disclosed in the following footnote.

	2018	2017	2016
Provision at statutory rate	21.0%	35.0%	35.0%
State taxes, net of federal benefit	2.6	1.9	1.8
Foreign rate differential	0.4	(0.8)	(0.6)
Domestic manufacturing deduction	—	(2.2)	(2.1)
Foreign derived intangible income	(1.2)	—	—
Research and development credit	(1.1)	(0.7)	(0.4)
Unrecognized tax benefits including interest and penalties	(0.6)	2.3	(1.3)
Valuation allowance adjustments	0.1	(0.1)	0.1
Deferred tax balance remeasurement for rate change	(1.2)	5.5	—
Territorial tax	1.4	(0.1)	—
Global intangible low-taxed income	0.4	—	—
Adjustments for previously accrued taxes	(1.0)	(1.2)	0.2
Rate differential on intercompany transfers	0.9	—	—
Executive compensation limitation	0.5	—	—
Other	0.4	—	(0.3)
Provision for income taxes	22.6%	39.6%	32.4%

While a number of transitory items affected Harley's effective tax rate, the most significant effect was the reduction of the corporate statutory tax rate from 35% to 21% as a result of the U.S. Tax Cuts and Jobs Act of 2017 (TCJA).

Common-Size Income Statement

It is useful for analysis purposes to prepare common-size statements. Exhibit C.2 shows Harley-Davidson's common-size income statement covering the two most recent years.

Motorcycles and Related Products cost of goods sold decreased from 66.6% of Motorcycles and Related Products sales in 2017 to 64.5% in 2018, increasing the gross profit margin on product sales by 210 basis points. As the company describes above, the increase in gross margin is due to increases in product prices and a favorable change in the mix of products sold toward higher gross profit items. This was offset, in part, by increases in raw materials prices and unit costs as fixed production costs were spread over a lower unit production base as well as increased tariffs. Harley also increased its selling, administrative, and engineering expense from 20.9% of total revenue in 2017 to 22.0% in 2018. The company attributes this increase to higher recall costs, increased spending on growth initiatives, and restructuring expense. Finally, net income as a percentage of total revenue increased by 0.1 percentage points from 9.2% in 2017 to 9.3% in 2018, primarily from lower income taxes due to the tax legislation passed in late 2017.

Exhibit C.2 ■ Harley-Davidson Common-Size Income Statement

Year Ended December 31	2018	2017
Revenue		
Motorcycles and Related Products	86.9%	87.0%
Financial Services	13.1%	13.0%
Total revenue	100.0%	100.0%
Costs and expenses		
Motorcycles and Related Products cost of goods sold*	64.5% :: 58.6%	66.6% :: 57.9%
Financial Services interest expense	3.4%	3.2%
Financial Services provision for credit losses	1.9%	2.3%
Selling, administrative and engineering expense	22.0%	20.9%
Restructuring expense	1.6%	0.0%
Total costs and expenses	87.5%	84.4%
Operating income	12.5%	15.6%
Other income (expense), net	0.1%	0.2%
Investment income	0.0%	0.1%
Interest expense	0.5%	0.5%
Income before provision for income taxes	12.0%	15.3%
Provision for income taxes	2.7%	6.1%
Net income	9.3%	9.2%

* Two percentage metrics: Motorcycles and Related Products COGS/Motorcycles and Related Products revenue :: Motorcycles and Related Products COGS/Total revenue

Management Discussion and Analysis

The Management Discussion and Analysis section of a 10-K is informative for interpreting company financial statements and for additional insights into company operations. To illustrate, Harley-Davidson provides the following analysis of its operating results in the MD&A section of its 2018 10-K.

The Company's net income for 2018 was $531.5 million, or $3.19 per diluted share, compared to $521.8 million, or $3.02 per diluted share, in 2017. Operating income from the Motorcycles segment in 2018 was down $184.4 million compared to 2017 due primarily to lower wholesale motorcycle shipments and higher costs related to the impact of incremental tariffs, increased metals costs, voluntary recalls and restructuring activities. During 2018, incremental European Union and China tariffs were imposed on the Company's products shipped from the U.S., as well as U.S. incremental tariffs on certain items imported from certain international markets. The European Union tariffs on Harley-Davidson motorcycles exported from the U.S. increased from 6% to 31% effective June 22, 2018. By their current terms, these tariffs are scheduled to increase to 56% effective June 1, 2021. The China tariffs on Harley-Davidson products exported from the U.S. increased from 30% to 55%, effective August 23, 2018, and are set to remain in place indefinitely. The Company also experienced increased costs for metals resulting from U.S. steel and aluminum tariffs.

Consolidated operating income was down 19.1% in 2018 driven by a decrease in operating income from the Motorcycles segment, which was down $184.4 million compared to 2017. Operating income for the Financial Services segment increased by $15.9 million during 2018 as compared to 2017.

Other income in 2018 was adversely impacted by higher amortization of actuarial losses following a 2018 first quarter remeasurement of the assets and obligations of the Company's qualified pension plan. Investment income was lower due to unfavorable changes in the fair value of marketable securities. The effective income tax rate for 2018 was 22.6% compared to 39.6% for 2017. The lower effective income tax rate was primarily due to the impact of the 2017 Tax Act. The 2017 Tax Act reduced the federal corporate income tax rate beginning in 2018 from 35% to 21%. In addition, because the 2017 Tax Act was enacted in 2017, the Company was required to remeasure its net deferred tax assets in 2017. The impact of remeasuring the deferred tax asset balances combined with other adjustments related to the enactment of the 2017 Tax Act resulted in a non-cash income tax charge of $53.1 million in the fourth quarter of 2017.

Diluted earnings per share were $3.19 in 2018, up 5.6% compared to 2017. Diluted earnings per share were positively impacted by the 1.9% increase in net income and also benefited from

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lower diluted weighted average shares outstanding. Diluted weighted average shares outstanding decreased from 172.9 million in 2017 to 166.5 million in 2018 driven by the Company's repurchases of common stock.

Balance Sheet Reporting and Analysis

Harley-Davidson's balance sheet is reproduced in Exhibit C.3 in thousands of dollars and in common size (as a % of total assets). The company reports total assets of $10,666 million in 2018, with noncurrent finance receivables as the largest asset (46.9% of total assets). Total current assets increased from 39.0% of total assets in 2017 to 42.0% in 2018. This decrease was primarily due to an increase in cash.

Exhibit C.3 ■ Harley-Davidson Balance Sheet

HARLEY-DAVIDSON INC.
Consolidated Balance Sheets

			As % of Total Assets	
December 31, $ thousands, except share amounts	**2018**	**2017**	**2018**	**2017**
Assets				
Current assets				
Cash and cash equivalents	$ 1,203,766	$ 687,521	11.3%	6.9%
Marketable securities	10,007	-	0.1%	0.0%
Accounts receivable, net	306,474	329,986	2.9%	3.3%
Finance receivables, net	2,214,424	2,105,662	20.8%	21.1%
Inventories	556,128	538,202	5.2%	5.4%
Restricted cash	49,275	47,518	0.5%	0.5%
Other current assets	144,368	175,853	1.4%	1.8%
Total current assets	4,484,442	3,884,742	42.0%	39.0%
Finance receivables, net	5,007,507	4,859,424	46.9%	48.7%
Property, plant and equipment, net	904,132	967,781	8.5%	9.7%
Prepaid pension costs	—	19,816	0.0%	0.2%
Goodwill	55,048	55,947	0.5%	0.6%
Deferred income taxes	141,464	109,073	1.3%	1.1%
Other long-term assets	73,071	75,889	0.7%	0.8%
	$10,665,664	$9,972,672	100.0%	100.0%
Liabilities and shareholders' equity				
Current liabilities				
Accounts payable	$ 284,861	$ 227,597	2.7%	2.3%
Accrued liabilities	601,130	529,822	5.6%	5.3%
Short-term debt	1,135,810	1,273,482	10.6%	12.8%
Current portion of long-term debt	1,575,799	1,127,269	14.8%	11.3%
Total current liabilities	3,597,600	3,158,170	33.7%	31.7%
Long-term debt, net	4,887,667	4,587,258	45.8%	46.0%
Pension liability	107,776	54,606	1.0%	0.5%
Postretirement healthcare liability	94,453	118,753	0.9%	1.2%
Other long-term liabilities	204,219	209,608	1.9%	2.1%
Commitments and contingencies				
Shareholders' equity				
Preferred stock, none issued	—	—	0.0%	0.0%
Common stock, (181,931,225 and 181,286,547 shares issued, respectively)	1,819	1,813	0.0%	0.0%
Additional paid-in-capital	1,459,620	1,422,808	13.7%	14.3%
Retained earnings	2,007,583	1,607,570	18.8%	16.1%
Accumulated other comprehensive loss	(629,684)	(500,049)	(5.9)%	(5.0)%
Treasury stock (22,273,278 and 13,195,731 shares, respectively), at cost	(1,065,389)	(687,865)	(10.0)%	(6.9)%
Total shareholders' equity	1,773,949	1,844,277	16.6%	18.5%
	$10,665,664	$9,972,672	100.0%	100.0%

On the liability side, current liabilities increased as a percent of total assets from 31.7% in 2017 to 33.7% in 2018. This was largely due to an increase in current maturities of long-term debt and was partially offset by a reduction in short-term debt payable in one year. On balance, Harley is highly levered; only 16.6% of 2018 total assets are financed by owners and 71.2% of 2018 total assets are financed by debt (10.6% + 14.8% + 45.8%). Despite the large proportion of noncurrent assets and high debt levels, the company has strong liquidity measures: current ratio is 1.25 and Cash and marketable securities comprise 11.4% of total assets in 2018 ([$1,206.8 + $10.0] million/$10,665.7 million), up from 6.9% in 2017.

The remainder of this section includes a brief review and analysis for each of Harley-Davidson's balance sheet line items and its related footnote disclosures.

Accounts Receivable

Harley-Davidson reports $306.5 million in net accounts receivable and $7,221.9 million of short-term and long-term finance receivables at year-end 2018. This represents 70.6% of total assets [($2,214.4 million + $5,007.5 million) / $10,665.7 million]. Harley describes these receivables as follows.

> **Accounts Receivable, Net**—The Company's motorcycles and related products are sold to independent dealers outside the U.S. and Canada generally on open account and the resulting receivables are included in accounts receivable in the Company's consolidated balance sheets. The allowance for doubtful accounts deducted from total accounts receivable was $4.0 million and $4.1 million as of December 31, 2018 and 2017, respectively. Accounts receivable are written down once management determines that the specific customer does not have the ability to repay the balance in full. The Company's sales of motorcycles and related products in the U.S. and Canada are financed by the purchasing dealers through HDFS and the related receivables are included in finance receivables in the consolidated balance sheets.
>
> **Finance Receivables, Net**—Finance receivables include both retail and wholesale finance receivables, net, including amounts held by consolidated VIEs. Finance receivables are recorded in the financial statements at amortized cost net of an allowance for credit losses. The provision for credit losses on finance receivables is charged to earnings in amounts sufficient to maintain the allowance for credit losses at a level that is adequate to cover estimated losses of principal inherent in the existing portfolio. Portions of the allowance for credit losses are specified to cover estimated losses on finance receivables specifically identified for impairment. The unspecified portion of the allowance covers estimated losses on finance receivables which are collectively reviewed for impairment. Finance receivables are considered impaired when management determines it is probable that the Company will be unable to collect all amounts due according to the terms of the loan agreement.

Harley's receivables are a large asset for the company and our analysis of those receivables considers two dimensions.

1. **Magnitude** Receivables representing sales on open account, the smaller of the two balances for Harley, are generally non-interest-bearing and, therefore, do not earn a return. Further, the company incurs costs to finance them. Accordingly, a company wants to optimize its level of investment in receivables—that is, keep them as low as possible while still meeting industry-specific credit policies to meet customer demands. Finance receivables, such as those arising from lending or leasing activities, include interest. They are financed with borrowed money and the company must earn sufficient interest income to both cover the cost of borrowed funds and to cover the cost of uncollectible amounts.
2. **Collectibility** Receivables made on open account represent unsecured loans to customers. It is critical therefore, to understand the creditworthiness of these borrowers. Receivables are reported at net realizable value, that is, net of the allowance for doubtful accounts. Finance receivables are generally secured by the motorcycles financed with the loan or lease. This provides additional protection to Harley-Davidson, but the creditworthiness of the borrowers must be monitored nonetheless as repossessed motorcycles may not maintain sufficient resale value to cover the outstanding loan or lease balance.

Footnotes reveal an allowance for uncollectible accounts of $4.0 million for accounts receivable, about 1.2% of gross accounts receivable. Credit losses on open accounts are not a cause for concern. For its finance receivables, Harley's allowance for uncollectible accounts is $189.9 million, about 2.6% of gross lease and notes receivable. Due to the greater exposure to credit losses on finance receivables, Harley reports additional data on the allowance for credit losses.

For 2018, $ thousands	Retail	Wholesale	Total
Balance, beginning of period	$186,254	$6,217	$192,471
Provision for credit losses	105,292	1,578	106,870
Charge-offs	(154,433)	(8)	(154,441)
Recoveries	44,985	—	44,985
Balance, end of period	$182,098	$7,787	$189,885

The company reported a balance in the allowance for credit losses of $192.5 million at the beginning of 2018. During 2018, it increased this allowance account by $106.9 million. This is the amount of bad debt expense reported in the income statement. Write-offs of uncollectible accounts amounted to $154.4 million during the year, and recoveries of amounts written off (usually from the sale of the repossessed motorcycles) amounted to $45.0 million, yielding a $189.9 million balance at year-end. Because the estimated provision of $106.9 is approximately equal to the actual net credit losses for the year ($154.4 million − $45 million = $109.4 million), it appears that the company is adequately reserved for uncollectible accounts.

The allowance for credit losses should always reflect the company's best estimate of the potential loss in its finance receivables. This amount should not be overly conservative (which would understate profit), and it should not be inadequate (which would overstate profit). Harley's estimate of its potential losses results from its own (unaudited) review of the age of its receivables (older receivables are at greater risk of uncollectibility). And the company provides detail relating to the age of its finance receivables in the footnotes.

For 2018, $ thousands	Current	31–60 Days Past Due	61–90 Days Past Due	Greater than 90 Days Past Due	Total Past Due	Total Finance Receivables
Retail	$6,100,186	$136,945	$49,825	$41,245	$228,015	$6,328,201
Wholesale	1,081,729	522	273	1,091	1,886	1,083,615
Total	$7,181,915	$137,467	$50,098	$42,336	$229,901	$7,411,816

Nearly 97% of its finance receivables are either current or no more than 30 days overdue. Current receivables are less likely to become uncollectible and that is the reason why Harley does not need a significant balance in the allowance for uncollectible accounts.

Inventories

Harley-Davidson reports $556.1 million in inventories as of 2018. Footnote disclosures reveal the following inventory costing policy.

> **Inventories**—Substantially all inventories located in the United States are valued using the last-in, first-out (LIFO) method. Other inventories totaling $247.6 million and $234.9 million at December 31, 2018 and 2017, respectively, are valued at the lower of cost or net realizable value using the first-in, first-out (FIFO) method.

The use of multiple inventory costing methods for different pools of inventories is common and acceptable under GAAP.

Harley-Davidson provides the following footnote disclosure relating to inventories.

$ thousands	2018	2017
Components at the lower of FIFO cost or market		
Raw materials and work in process	$177,110	$161,664
Motorcycle finished goods	301,630	289,530
Parts and accessories and general merchandise	136,027	139,363
Inventory at lower of FIFO cost or net realizable value	614,767	590,557
Excess of FIFO over LIFO cost	(58,639)	(52,355)
Total inventories, net	$556,128	$538,202

Companies aim to optimize their investment in inventories because inventory is a non-income-producing asset until sold. Inventories must also be financed, stored, moved, and insured at some cost. Harley-Davidson reports $177.1 million of raw materials and work-in-process inventories, which is 28.8% of the total of $614.8 million FIFO inventories (see table above). Finished goods inventories (motorcycles awaiting sale to dealers) amount to another $301.6 million, and parts and accessories and general merchandise inventories amount to $136.0 million.

Harley-Davidson reports its total inventory cost at FIFO at $614.8 million then subtracts $58.6 million from this amount (the LIFO reserve) to yield the inventories balance of $556.1 million at LIFO as reported on the balance sheet. This means that, over time, Harley-Davidson has reduced gross profit and pretax operating profit by a cumulative amount of $58.6 million. This has also reduced pretax income and saved federal income tax and generated cash flow. For example, during 2018, Harley's LIFO reserve increased by $6,284,000, which reduced pretax income by that amount and saved the company $1,382,480 in taxes, assuming a 22% marginal federal and state tax rate ($6,284,000 × 22%).

Property, Plant, and Equipment

Harley-Davidson reports Property, Plant, and Equipment (PPE), net, of $904.1 million at year-end 2018.

$ thousands	2018	2017
Land and related improvements	$ 73,025	$ 70,256
Buildings and related improvements	483,965	464,454
Machinery and equipment	1,740,405	1,890,126
Software	733,180	660,090
Construction in progress	205,786	200,396
	3,236,361	3,285,322
Accumulated depreciation	(2,332,229)	(2,317,541)
Total property, plant and equipment, net	$ 904,132	$ 967,781

PPE makes up 8.5% of total assets in 2018. Given the cost of depreciable assets of $2,957.6 million (calculated as $484.0 million in buildings, $1,740.4 million in machinery and equipment, and $733.2 million in capitalized software) and accumulated depreciation of $2,332.2 million, PPE is 78.9% depreciated assuming straight-line depreciation ($2,332.2 million/$2,957.6 million) as of 2018. We conclude that Harley-Davidson's PPE is older than we would expect assuming a regular replacement policy. Footnotes reveal the following useful lives for depreciable assets.

Property, Plant and Equipment—Property, plant and equipment is recorded at cost. Depreciation is determined on the straight-line basis over the estimated useful lives of the assets. The following useful lives are used to depreciate the various classes of property, plant and equipment: buildings—30 years; building, equipment and land improvements—7 years; machinery and equipment –3 to 10 years; furniture and fixtures—5 years; and software—3 to 7 years. Accelerated methods of depreciation are used for income tax purposes.

Harley-Davidson's 2018 depreciation expense is $264.5 million (calculated as $264.9 million depreciation and amortization expense reported in the statement of cash flows less $0.4 million amortization expense reported in the footnotes). We calculate an average useful life of 11.3 years for PPE in 2018 as follows: [($2,957.6 million + $3,014.7 million*)/2/$264.5 million]. (2017 depreciable assets = $464.5 million in buildings + $1,890.1 million in machinery and equipment + $660.1 million in capitalized software.)

Goodwill and Other Intangible Assets

Harley-Davidson reports $55.0 million of goodwill at year-end 2018. This amount represents the excess of the purchase price for acquired companies over the fair market value of the acquired tangible and identifiable intangible assets (net of liabilities assumed). Under GAAP, goodwill is not systematically amortized, but is annually tested for impairment. It describes its accounting for goodwill as follows.

> **Goodwill**—Goodwill represents the excess of acquisition cost over the fair value of the net assets purchased. Goodwill is tested for impairment, based on financial data related to the reporting unit to which it has been assigned, at least annually or whenever events or changes in circumstances indicate that the carrying value may not be recoverable. The impairment test involves comparing the estimated fair value of the reporting unit associated with the goodwill to its carrying amount, including goodwill. If the carrying amount of the reporting unit exceeds its fair value, goodwill must be adjusted to its implied fair value. During 2018 and 2017, the Company performed a quantitative test on its goodwill balances for impairment and no adjustments were recorded to goodwill as a result of those reviews.

Deferred Tax Assets and Liabilities

Harley-Davidson provides the following disclosure relating to deferred tax assets and liabilities.

$ thousands	2018	2017
Deferred tax assets		
Accruals not yet tax deductible	$108,284	$ 92,158
Pension and postretirement benefit plan obligations	48,347	37,357
Stock compensation	13,295	12,669
Net operating loss carryforward	34,842	33,171
Valuation allowance	(21,868)	(21,561)
Other, net	43,870	52,422
	226,770	206,216
Deferred tax liabilities		
Depreciation, tax in excess of book	(79,326)	(88,989)
Other	(5,980)	(8,154)
	(85,306)	(97,143)
Total	$141,464	$109,073

Most of Harley's deferred tax assets (benefit) results from expenses that are recognized currently in Harley's income statement that are not deductible until paid. They, therefore, represent future tax deductions and future benefits. Examples include accrued expenses and pension expenses as well as stock compensation expenses. All of these expenses are recognized in Harley's income statement, but will not be recognized in Harley's tax returns until a later date when the items are settled in cash.

Harley also reports a deferred tax asset of $34.8 million relating to a net operating loss carryforward. The IRS allows companies to carry forward taxable losses to offset future taxable income, thereby reducing future tax expense. This benefit can only be recorded as an asset on the balance sheet if the company expects to generate taxable income before the carryforwards expire. If the company deems it more likely than not that the carryforwards will not be realized, a valuation allowance for the unrealizable portion is required (this is similar to establishing an allowance for uncollectible accounts receivable). As of 2018, Harley-Davidson has such a valuation allowance (of $21.9 million). Following is its discussion relating to this allowance.

> The Company reviews its deferred tax asset valuation allowances on a quarterly basis, or whenever events or changes in circumstances indicate that a review is required. In determining the requirement for a valuation allowance, the historical and projected financial results of the legal entity or consolidated group recording the net deferred tax asset is considered, along with any positive or negative evidence including tax law changes. Since future financial results and tax law may differ from previous estimates, periodic adjustments to the Company's valuation allowances may be necessary.
>
> At December 31, 2018, the Company had approximately $270.4 million of gross state operating loss carryforwards expiring in 2031. At December 31, 2018, the Company also had Wisconsin research and development credit carryforwards of $11.4 million expiring in 2024–2028. The Company had a deferred tax asset of $25.9 million as of December 31, 2018 for the benefit of these losses and credits. A valuation allowance of $2.9 million was established against the deferred tax asset, which is a decrease of $1.6 million from the prior year.
>
> The Company had foreign net operating losses (NOL) totaling $8.9 million as of December 31, 2018. It had a valuation allowance of $18.9 million against both the NOLs and other deferred tax assets of $10.0 million. The valuation allowance on foreign net operating losses increased by $1.8 million, reflecting movement related to realizability assessment on additional earnings and loss, as well as movements related to foreign currency rates.

Tax loss carryforwards reduce income tax expense in the year they are recognized. However, companies commonly establish both the loss carryforward and the valuation allowance concurrently. The net effect is to leave tax expense (and net income) unchanged. In future years, however, a reduction of the valuation account, in anticipation of utilization of the tax carryforwards (and not as a result of their expiration), reduces tax expense and increases net income. This is a transitory increase in profit and should not be factored into forecasts.

Current Liabilities

Harley-Davidson reports current liabilities of $3,597.6 million on its year-end balance sheet for 2018, which consists of the following.

$ thousands	2018	2017
Current liabilities		
Accounts payable	$ 284,861	$ 227,597
Accrued liabilities	601,130	529,822
Short-term debt	1,135,810	1,273,482
Current portion of long-term debt	1,575,799	1,127,269
Total current liabilities	$3,597,600	$3,158,170

Of Harley's current liabilities, $2,711.6 million relates to debt. The remaining items in current liabilities arise from common transactions, such as trade accounts payable and accrued expenses. These transactions are less prone to management reporting bias. We must, however, determine the presence of excessive "leaning on the trade" as a means to boost operating cash flow. Harley's trade accounts payable have not increased significantly and the increase is not of concern. The possibility of management reporting bias is typically greater for accrued liabilities, which are often estimated (and difficult to audit), involve no external transaction, and can markedly impact reported balance sheet and income statement amounts.

All accruals have similar effects on the financial statements: when the accrual is established, the company recognizes both an expense in the income statement and a liability on the balance sheet. The company subsequently reduces the liability as payments are made. Companies can (and do) use accruals to shift income from one period to another, say by over-accruing in one period to intentionally depress current period profits, and later reducing the liability account, rather than recording an expense, to increase future period profits. Accruals are sometimes referred to as "pads." They represent a cost that has previously been charged to the income statement. They also represent an account that can absorb future costs. We need to monitor accrual accounts carefully for evidence of earnings management.

Long-Term Debt

Harley-Davidson reports $4,887.7 million of long-term debt as of 2018. Footnotes reveal the following.

$ thousands	2018	2017
Secured debt (Note 12)		
Asset-backed Canadian commercial paper conduit facility	$ 155,951	$ 174,779
Asset-backed U.S. commercial paper conduit facilities	582,717	279,457
Asset-backed securitization debt	95,216	353,085
Less: unamortized discount and debt issuance costs	(49)	(461)
Total secured debt	833,835	806,860
Unsecured notes (at par value)		
6.80% Medium-term notes due in 2018, issued May 2008	—	877,488
2.25% Medium-term notes due in 2019, issued January 2016	600,000	600,000
Floating rate medium-term notes due in 2019, issued March 2017	150,000	150,000
2.40% Medium-term notes due in 2019, issued September 2014	600,000	600,000
2.15% Medium-term notes due in 2020, issued February 2015	600,000	600,000
Floating rate medium-term notes due in 2020, issued May 2018	450,000	—
2.40% Medium-term notes due in 2020, issued March 2017	350,000	350,000
2.85% Medium-term notes due in 2021, issued January 2016	600,000	600,000
Floating rate medium-term notes due in 2021, issued November 2018	450,000	—
3.55% Medium-term notes due in 2021, issued May 2018	350,000	—
2.55% Medium-term notes due in 2022, issued June 2017	400,000	400,000
3.35% Medium-term notes due in 2023, issued February 2018	350,000	—
3.50% Senior unsecured notes due in 2025, issued July 2015	450,000	450,000
4.625% Senior unsecured notes due in 2045, issued July 2015	300,000	300,000
Less: unamortized discount and debt issuance costs	(20,369)	(19,821)
Gross long-term debt	6,463,466	5,714,527
Less: current portion of long-term debt, net of unamortized discount and debt issuance costs	(1,575,799)	(1,127,269)
Long-term debt	$4,887,667	$4,587,258

Most of its long-term financing is in the form of unsecured notes that mature over the next 30 years. GAAP requires disclosure of scheduled maturities for each of the five years subsequent to the balance sheet date. Harley-Davidson's five-year maturity schedule follows.

$ thousands	2019	2020	2021	2022	2023	Thereafter	Total
Principal payments on debt	$2,717,597	$1,562,889	$1,570,815	$578,256	$440,137	$750,000	$7,619,694

We analyze debt maturity to determine whether or not a company is able to repay debt as it comes due. Alternatively, a company can refinance the debt. If a company is unable or unwilling to repay or refinance its debt, it must approach creditors for a modification of debt terms for those issuances coming due. Creditors are often willing to oblige but will likely increase interest rates or impose additional debt covenants and restrictions. However, if creditors are unwilling to modify debt terms, the company might face the prospect of bankruptcy. This highlights the importance of long-term debt maturity disclosures.

We have little concern about Harley's debt maturity schedule as the company has strong cash flows. It is worth noting that **Standard & Poor's** debt ratings for Harley is BBB+ with a negative outlook while **Moody's** is A3 with a stable outlook. While both ratings are investment grade (described as "lower-medium grade" to "upper-medium grade" debt), S&P is slightly more concerned about the longer-term outlook for Harley given the competitive pressures cited earlier.

Noncurrent Employee Benefits and Other Obligations

Harley-Davidson reports a (negative) funded status for its pension plan of $(110.1) million at year-end 2018 as well as for its postretirement healthcare benefit plan of $(96.2) million. This means that the company's pension and postretirement healthcare plans are underfunded by those amounts. This underfunding is computed as the difference between the benefit obligations of $1,984.7 million and $286.6 million, respectively, and the fair value of the plan assets of $1,874.6 million and $190.4 million, respectively. The reconciliation of the benefit obligations and plan assets is provided in the following table in Harley's footnotes.

$ thousands	Pension and SERPA Benefits 2018	Pension and SERPA Benefits 2017	Postretirement Healthcare Benefits 2018	Postretirement Healthcare Benefits 2017
Change in benefit obligation:				
Benefit obligation, beginning of period	$2,201,021	$1,986,435	$338,488	$ 346,431
Service cost	32,340	31,584	7,180	7,500
Interest cost	82,778	85,076	11,556	13,648
Actuarial (gains) losses	(213,583)	195,444	(42,039)	(8,408)
Plan participant contributions	—	—	2,492	2,525
Plan amendments	(12,926)	(13,227)	(4,710)	—
Special early retirement benefits	(106,280)	(84,291)	(23,448)	(23,208)
Benefits paid, net of Medicare Part D subsidy	1,358	—	(2,945)	—
Benefit obligation, end of period	1,984,708	2,201,021	286,574	338,488
Change in plan assets:				
Fair value of plan assets, beginning of period	2,162,885	1,899,889	217,537	170,092
Actual return on plan assets	(185,468)	320,144	(13,287)	32,445
Company contributions	—	25,000	—	15,000
Plan participant contributions	—	—	2,492	2,525
Benefits paid	(102,779)	(82,148)	(16,385)	(2,525)
Fair value of plan assets, end of period	1,874,618	2,162,885	190,357	217,537
Funded status of the plans, December 31	$ (110,090)	$ (38,136)	$ (96,217)	$(120,951)

Benefit obligations increase with the passage of time as employees earn additional benefits and as the company accrues interest on the obligations (these obligations are initially discounted to their present values and accrete (grow) over time to the expected pay-off amount at maturity). The obligations also increase or decrease as a result of actuarial gains and losses (changes to the assumptions used to compute the current balance of the obligations). And, when benefits are paid, both the plan assets and the obligations are reduced accordingly.

Benefit payments must be funded from a combination of investment income on plan investments and company contributions. Company contributions to other postemployment benefit obligations (future healthcare payments, called OPEB) are generally made as required to fund healthcare payments to retirees. Because federal law does not require minimum funding of these plans, and companies do not receive a tax deduction for such contributions, companies rarely fund OPEB plans in advance. In Harley's case, the company contribution is small and is not likely to be of concern in the foreseeable future. However, pension and postretirement healthcare funding requirements have been a burden for many companies, most notably General Motors prior to its bankruptcy.

The central issue with respect to pensions and other postemployment obligations, which Harley calls postretirement obligations, is the potential demand they present on operating cash flows. Companies can tap cash from two sources to pay pension and other postemployment obligations: from the returns on plan assets (i.e., the cumulative contributions and investment returns that have not yet been paid out to beneficiaries) and/or from operating cash flow. To the extent that plan assets are insufficient to meet retirement obligations, companies must divert operating cash flows from other investment activities, potentially reducing the dollar amount of capital projects that can be funded.

We can gain insight into potential cash flow issues by comparing expected future benefit payments to the funds available to make those payments. Companies must provide these disclosures in a schedule to the pension footnotes. Harley provides the following schedule of expected payments in the footnotes to its 10-K.

The expected benefit payments for the next five years and thereafter were as follows:

$ thousands	Pension Benefits	SERPA Benefits	Postretirement Healthcare Benefits
2019	$111,980	$ 2,314	$ 25,934
2020	93,580	2,862	27,328
2021	95,690	3,272	26,660
2022	99,118	3,504	25,378
2023	102,190	4,467	23,815
2024–2028	568,867	28,663	109,562

The schedule shows that Harley expects to pay out $114.3 million ($112.0 million + $2.3 million) in benefits to pension beneficiaries and $25.9 million in healthcare and other postemployment benefits (OPEB) to its former employees in 2019. The schedule also reveals that the company expects these amounts to remain about the same in aggregate over the next five years.

Stockholders' Equity

Harley-Davidson reports the following statement of stockholders' equity for 2018.

$ thousands, except share amounts	Common Stock: Issued Shares	Common Stock: Balance	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Treasury Balance	Total
Balance December 31, 2017	181,286,547	$1,813	$1,422,808	$1,607,570	$(500,049)	$ (687,865)	$1,844,277
Net income	—	—	—	531,451	—	—	531,451
Total other comprehensive loss, net of tax	—	—	—	—	(21,287)	—	(21,287)
Dividends	—	—	—	(245,810)	—	—	(245,810)
Repurchase of common stock	—	—	—	—	—	(390,606)	(390,606)
Share-based compensation and 401(k) match made with Treasury shares	—	—	33,293	—	—	13,082	46,375
Issuance of nonvested stock	485,005	4	(4)	—	—	—	—
Exercise of stock options	159,673	2	3,523	—	—	—	3,525
Cumulative effect of change in accounting	—	—	—	6,024	—	—	6,024
Reclassification of certain tax effects	—	—	—	108,348	(108,348)	—	—
Balance December 31, 2018	181,931,225	$1,819	$1,459,620	$2,007,583	$(629,684)	$(1,065,389)	$1,773,949

Since its inception, Harley has issued 181,931,225 shares of its $0.01 par value common stock. The common stock account is, therefore, equal to $1,819 thousand, computed as 181,931,225 shares × $0.01. The additional paid-in capital (APIC) represents the excess of proceeds from stock issuance over par value. It includes adjustments relating to the recognition of stock-based compensation and the exercise of stock-based awards and other minor adjustments.

Harley-Davidson's stockholders' equity is reduced by $(1,065.4) million relating to cumulative repurchases of common stock. These treasury shares are the result of a stock purchase plan approved by Harley's board of directors, and evidences Harley's conviction that its stock is undervalued by the marketplace. The repurchased shares are held in treasury until such time as they are reissued, perhaps to fund an acquisition or to compensate employees under a stock purchase or stock option plan (treasury shares can also be retired). By comparing the amounts reported in the balance sheet for treasury shares, we can determine that during 2018, the company repurchased an additional 9,077,547 shares (22,273,278 shares in 2018 less 13,195,731 in 2017) for $390.606 million for an average purchase price of $43.02. During the year, retained earnings increased by $531.5 million due to net income and decreased by $245.8 million due to the declaration of dividends. Two accounting changes totaling $109.4 million also increased retained earnings during the year.

Accumulated other comprehensive income (AOCI) began 2018 with a balance of $(500.0) million; this negative balance reduces stockholders' equity. During the period, AOCI decreased (became more negative) by $(129.6) million, resulting in an ending balance of $(629.7) million. Footnotes reveal the following details relating to the change.

For 2018, $ thousands	Foreign Currency Translation Adjustments	Marketable Securities	Derivative Financial Instruments	Pension and Postretirement Benefit Plans	Total
Balance, beginning of period	$(21,852)	$—	$(17,254)	$(460,943)	$(500,049)
Other comprehensive (loss) income before reclassifications	(28,212)	—	35,686	(84,725)	(77,251)
Income tax	3,202	—	(8,455)	19,893	14,640
Net other comprehensive (loss) income before reclassifications	(25,010)	—	27,231	(64,832)	(62,611)
Reclassifications:					
Realized (gains) losses—foreign currency contracts	—	—	(11,492)	—	(11,492)
Realized (gains) losses—commodities contracts	—	—	(24)	—	(24)
Realized (gains) losses—treasury rate lock			498	—	498
Realized (gains) losses—interest rate swaps			1,552	—	1,552
Prior service credits	—	—	—	(2,262)	(2,262)
Actuarial losses	—	—	—	66,590	66,590
Curtailment and settlement gains	—	—	—	(886)	(886)
Total before tax	—	—	(9,466)	63,442	53,976
Income tax	—	—	2,244	(14,896)	(12,652)
Net reclassifications	—	—	(7,222)	48,546	41,324
Other comprehensive (loss) income	(25,010)	—	20,009	(16,286)	(21,287)
Reclassification of certain tax effects	(2,746)	—	(970)	(104,632)	(108,348)
Balance, end of period	$(49,608)	$—	$ 1,785	$(581,861)	$(629,684)

Operating Leases

Harley-Davidson has leases classified as "operating" for financial reporting purposes under the former lease reporting standard because companies are not required to adopt the new standard until FY2019. The company discusses this in the following footnote:

In February 2016, the FASB issued ASU No. 2016-02 Leases (Topic 842) (ASU 2016-02). ASU 2016-02 amends the existing lease accounting model by requiring a lessee to recognize the rights and obligations resulting from certain leases as assets and liabilities on the balance sheet. ASU 2016-02 also requires a company to disclose key information about their leasing arrangements. The Company is required to adopt ASU 2016-02 for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018 using a modified retrospective approach. Pursuant to ASU 2018-11, Leases (Topic 842): Targeted Improvements, the Company plans to apply the new leases standard at the adoption date and recognize a cumulative effect adjustment to the opening balance sheet in the period of adoption. The Company has elected the practical expedients upon transition that allow entities not to reassess lease identification, classification and initial direct costs for leases that existed prior to adoption. The adoption of ASU 2016-02 will result in the initial recognition of right of use assets and lease liabilities related to the Company's leasing arrangements totaling approximately $60 million.

The upshot of this disclosure is that Harley-Davidson's 2018 balance sheet excludes $60 million of assets and liabilities owing to the historical leasing standard. The new accounting standard requires that companies recognize all leased assets and lease obligations on the balance sheet. Harley will begin reporting these leased assets and lease obligation starting in 2019.

The $60 million of lease assets and liabilities that Harley will recognize relates to the present value of Harley's expected future minimum operating lease payments. In a footnote, the company reports the following nominal expected future minimum operating lease payments.

Future minimum operating lease payments at December 31, 2018 were as follows (in thousands):

2019	$20,416
2020	16,195
2021	13,702
2022	10,330
2023	5,345
Thereafter	7,988
Total operating lease payments	$73,976

We can use Harley's estimate of the present value of these forecasted lease payments ($60 million) to estimate an implied discount rate of 7.87% as follows.

	A	B	C	D	E	F	G	H	I	J	K	L
1	**Excel**											
3	**Operating leases**											
4	N	0	1	2	3	4	5	6	7	8		Tot pmts
5	Amount	(60,000)	20,416	16,195	13,702	10,330	5,345	5,345	2,643			73,976
6	IRR	7.87 %										
8		*Formula for cell B6 is =IRR(B13:L13,.1)						=	7,988			

These leases represent an unreported asset and an unreported liability; both amounting to $60.027 million. This amount is computed as follows and assumes a 7.87% discount rate ($ thousands).

Year	Operating Lease Payment	Discount Factor (i = 0.0787)	Present Value
1	$20,416	0.92704	$18,926
2	16,195	0.85941	13,918
3	13,702	0.79671	10,917
4	10,330	0.73858	7,630
5	5,345	0.68469	3,660
>5	7,988	1.35973	4,976
Remaining life = $7,988/$5,345 = 1.494 years			$60,027

Pensions and Other Postretirement Plans (OPEB)

As discussed above, Harley-Davidson's pension and other postemployment benefit (OPEB) plans are underfunded. Total pension and OPEB obligations are $2,274.3 million ($1,984.7 million + $286.6 million) and plan assets have a market value of $2,065.0 million at year-end 2018 ($1,874.6 million + $190.4 million). Neither of these amounts appears on the balance sheet, but they are reported in the footnotes. Only the net amount of $(206.3) million ($110.1 million + $96.2 million) appears on the balance sheet as the funded status of the pension and OPEB plans ($4.1 million as a current accrued liability and $202.2 million as a long-term liability).

Variable Interest Entities

Footnotes reveal that Harley-Davidson owns investments in entities that are considered to be a variable interest entity (VIE) under GAAP. These entities are typically non-stock entities, such as joint ventures, partnerships, and trusts, and the accounting for these entities depends upon whether the investor is deemed to be the primary beneficiary. If so, the investor must consolidate the VIE. If not, the investor accounts for its investment using the equity method. Harley's footnote disclosure relating to these investments reports that all such VIE investments are consolidated; and thus, no adjustment is required.

Principles of Consolidation and Basis of Presentation—The consolidated financial statements include the accounts of Harley-Davidson, Inc. and its wholly-owned subsidiaries (the Company), including the accounts of the groups of companies doing business as Harley-Davidson Motor Company (HDMC) and Harley-Davidson Financial Services (HDFS). In addition, certain variable interest entities (VIEs) related to secured financing are consolidated as the Company is the primary beneficiary. All intercompany accounts and transactions are eliminated.

Asset-Backed Financing—The Company participates in asset-backed financing both through asset-backed securitization transactions and through asset-backed commercial paper conduit facilities. In the Company's asset-backed financing programs, the Company transfers retail motorcycle finance receivables to special-purpose entities (SPE), which are considered VIEs under U.S. GAAP. Each SPE then converts those assets into cash, through the issuance of debt. The Company retains servicing rights for all of the retail motorcycle finance receivables transferred to SPEs as part of an asset-backed financing. The accounting treatment for asset-backed financings depends on the terms of the related transaction and the Company's continuing involvement with the VIE.

Harley-Davidson sells lease receivables to a separate company that finances the purchase by issuing debt in the capital markets. This is a way for Harley to monetize those receivables and serves as an important financing source. Since the lease receivables are pledged as collateral to secure those borrowings, the cash received from lessees can only be used to repay the related borrowings and is, therefore, restricted as to use by Harley-Davidson. Harley discloses the amount of its lease receivables that have been so pledged in the following table in its 10-K.

$ thousands	2018	2017
Balances held by consolidated variable interest entities		
Current finance receivables, net	$175,043	$194,813
Other assets	1,563	2,148
Noncurrent finance receivables, net	591,839	521,940
Restricted cash—current and noncurrent	47,203	48,706
Current portion of long-term debt, net	189,693	209,247
Long-term debt, net	488,191	422,834

Of the total lease receivables of $7,421,931 ($2,214,424 current and $5,007,507 noncurrent, in $000s), $766,882 are restricted ($175,043 + $591,839 in $000s). We, therefore, classify these restricted lease receivables as nonoperating in our analysis below because the cash inflows are not available for general corporate use.

Derivatives

Harley-Davidson is exposed to a number of market risks as outlined in the following footnote to its 10-K.

> **Derivative Financial Instruments**—The Company is exposed to certain risks such as foreign currency exchange rate risk, interest rate risk and commodity price risk. To reduce its exposure to such risks, the Company selectively uses derivative financial instruments. All derivative transactions are authorized and executed pursuant to regularly reviewed policies and procedures, which prohibit the use of financial instruments for speculative trading purposes.
>
> The Company utilizes commodity contracts to hedge portions of the cost of certain commodities consumed in the Company's motorcycle production and distribution operations.
>
> The Company's foreign currency exchange contracts and commodity contracts generally have maturities of less than one year.
>
> The Company periodically utilizes treasury rate lock contracts to fix the interest rate on a portion of the principal related to the anticipated issuance of long-term debt. To the extent effective, the gains and losses on the fair value of the treasury rate lock are recorded in accumulated other comprehensive loss until the forecasted debt is issued. Gains and losses are subsequently reclassified into earnings over the life of the debt.
>
> The Company periodically utilizes interest rate swaps to reduce the impact of fluctuations in interest rates on its long-term debt.

The company hedges these risks using derivatives, including forwards, options, and swap contracts. These hedging activities transfer risk from Harley to another entity (called the counterparty), which assumes that risk for a fee.

The accounting for derivatives is discussed earlier in the book. In brief, the derivative contracts and securities, along with the assets or liabilities to which they relate, are reported on the balance sheet at fair value. Any unrealized gains and losses are ultimately reflected in net income, although they can be accumulated in AOCI for a short time. To the extent that a company's hedging activities are effective, the market values of the derivatives and the assets or liabilities to which they relate are largely offsetting, as are the net gains or losses on the hedging activities. As a result, the effect of derivative activities is generally minimal on both income and equity. It is generally only when companies use derivatives for speculative purposes that these investments markedly affect income and equity. The GAAP derivative disclosures highlight these speculative activities and we need to read risk footnotes carefully to assess whether companies are hedging or speculating with derivatives.

Statement of Cash Flows Reporting and Analysis

The statement of cash flows for **Harley-Davidson** is shown in Exhibit C.4A and C.4B.

As reported in Note 6 to its 10-K (and reproduced below as Exhibit C.4A), in 2018, Harley generated $1,205.9 million of operating cash flow.

Exhibit C.4A ■ Harley-Davidson Statement of Cash Flows

$ thousands	2018	2017	2016
Cash flows from operating activities:			
Net income	$ 531,451	$ 521,759	$ 692,164
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization of intangibles	264,863	222,188	209,555
Amortization of deferred loan origination costs	81,315	82,911	86,681
Amortization of financing origination fees	8,367	8,045	9,252
Provision for long-term employee benefits	36,481	29,900	38,273
Employee benefit plan contributions and payments	(10,544)	(63,277)	(55,809)
Stock compensation expense	35,539	32,491	32,336
Net change in wholesale finance receivables related to sales	(56,538)	35,172	(3,233)
Provision for credit losses	106,870	132,444	136,617
Gain on off-balance sheet asset-backed securitization	—	—	(9,269)
Loss on debt extinguishment	—	—	118
Deferred income taxes	(33,981)	50,855	(165)
Other, net	37,554	8,559	(6,907)
Changes in current assets and liabilities:			
Accounts receivable, net	9,143	(18,149)	(45,934)
Finance receivables – accrued interest and other	773	(1,313)	(1,489)
Inventories	(31,059)	(20,584)	85,072
Accounts payable and accrued liabilities	196,192	10,128	38,237
Derivative instruments	473	1,866	(3,413)
Other	29,022	(27,934)	(27,747)
Total adjustments	674,470	483,302	482,175
Net cash provided by operating activities	$1,205,921	$1,005,061	$1,174,339

The 2018 operating cash flow is well in excess of Harley's capital expenditures of $213.5 million as presented in Exhibit C.4B. Harley used excess operating cash flow to pay $245.8 million in dividends to shareholders and to repurchase stock for $390.1 million. Overall, the cash flow picture for Harley-Davidson is healthy with strong and increasing operating cash flows used to expand PPE and to return cash to shareholders in the form of dividends and stock repurchases.

Exhibit C.4B ■ Harley-Davidson Statement of Cash Flows

$ thousands	2018	2017	2016
Net cash provided by operating activities	$1,205,921	$1,005,061	$1,174,339
Cash flows from investing activities:			
Capital expenditures	(213,516)	(206,294)	(256,263)
Origination of finance receivables	(3,752,817)	(3,591,948)	(3,664,495)
Collections on finance receivables	3,325,669	3,228,311	3,175,031
Proceeds from finance receivables sold	—	—	312,571
Purchases of marketable securities	(10,007)	—	—
Sales and redemptions of marketable securities	—	6,916	40,014
Other	(11,598)	547	411
Net cash used by investing activities	(662,269)	(562,468)	(392,731)

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Exhibit C.4B ■ Harley-Davidson Statement of Cash Flows

$ thousands	2018	2017	2016
Cash flows from financing activities:			
Proceeds from issuance of medium-term notes	1,591,828	893,668	1,193,396
Repayments of medium-term notes	(877,488)	(800,000)	(451,336)
Repayments of securitization debt	(257,869)	(444,671)	(665,400)
Borrowings of asset-backed commercial paper	509,742	469,932	62,396
Repayments of asset-backed commercial paper	(212,729)	(176,227)	(71,500)
Net (decrease) increase in credit facilities and unsecured commercial paper	(135,356)	212,809	(145,812)
Dividends paid	(245,810)	(251,862)	(252,321)
Purchase of common stock for treasury	(390,606)	(465,263)	(465,341)
Excess tax benefits from share-based payments	—	—	2,251
Issuance of common stock under employee stock option plans	3,525	11,353	15,782
Net cash used by financing activities	(14,763)	(550,261)	(777,885)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(15,351)	26,747	(9,443)
Net increase (decrease) in cash, cash equivalents and restricted cash	$ 513,538	$ (80,921)	$ (5,720)
Cash, cash equivalents and restricted cash:			
Cash, cash equivalents and restricted cash—beginning of period	$ 746,210	$ 827,131	$ 832,851
Net increase (decrease) in cash, cash equivalents and restricted cash	513,538	(80,921)	(5,720)
Cash, cash equivalents and restricted cash—end of period	$1,259,748	$ 746,210	$ 827,131
Reconciliation of cash, cash equivalents and restricted cash to the Consolidated Balance Sheet:			
Cash and cash equivalents	$1,203,766	$ 687,521	$ 759,984
Restricted cash	49,275	47,518	52,574
Restricted cash included in other long-term assets	6,707	11,171	14,573
Total cash, cash equivalents and restricted cash shown in the Statement of Cash Flows	$1,259,748	$ 746,210	$ 827,131

Independent Audit Opinion

Harley-Davidson is subject to various audit requirements. Its independent auditor, **Ernst & Young LLP**, issued the following clean opinion on Harley's 2018 financial statements.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors of Harley-Davidson, Inc.:

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Harley-Davidson, Inc. as of December 31, 2018 and 2017, and the related consolidated statements of income, comprehensive income, shareholders' equity and cash flows for each of the three years in the period ended December 31, 2018, and the related notes and financial statement schedule listed in the Index at item 15(a) (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of Harley-Davidson, Inc. at December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated February 28, 2019 expressed an unqualified opinion thereon.

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Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP
We have served as the Company's auditor since 1982
Milwaukee, Wisconsin
February 28, 2019

Although this report is a routine disclosure, it should not be taken for granted. Exceptions to a clean audit report must be scrutinized. Also, any disagreements between management and the independent auditor must be documented in an SEC filing. If this occurs, it is a "red flag" that must be investigated. Management activities and reports that cannot meet usual audit standards raise serious concerns about integrity and credibility. At a minimum, the riskiness of investments and relationships with such a company markedly increases.

Assessing Profitability and Creditworthiness

eLectures MBC **LO2** Assess company profitability and creditworthiness.

This section reports a profitability analysis of **Harley-Davidson**. We begin by computing several key measures that are used in the ROE disaggregation, which is the overriding focus of this section. The ROE disaggregation process is defined in Module 4, and we begin with the traditional DuPont analysis.

ROE Disaggregation—DuPont Analysis

We present the DuPont analysis over the 2014–2018 period for Harley-Davidson in Exhibit C.5. For 2018, Harley reports a return on equity (ROE) of 29.4%. Following are the computations for 2018.

DuPont Analysis	2018	Computations ($ thousands)
Profit margin (PM)	9.3%	$531,451 / $5,716,875
Asset turnover (AT).	0.55	$5,716,875 / ([$10,665,664 + $9,972,672]/2)
Return on assets (ROA) . . .	5.2%	$531,451 / ([$10,665,664 + $9,972,672]/2) or 9.3% × 0.55 = 5.12% (difference due to rounding)
Financial leverage (FL). . . .	5.70	([$10,665,664 + $9,972,672]/2) / ([($1,773,949 + $1,844,277]/2)
Return on equity (ROE) . . .	29.4%	$531,451 / ([($1,773,949 + $1,844,277]/2) or 5.2% × 5.70 = 29.6% (difference due to rounding)

Ratios for 2014–2017 are computed similarly (balance sheets and income statements for prior years are not included as exhibits in this appendix).

Exhibit C.5 ■ Harley-Davidson DuPont Analysis 2014–2018

DuPont Analysis	2014	2015	2016	2017	2018
Profit margin (PM)	13.6%	12.5%	11.5%	9.2%	9.3%
Asset turnover (AT	0.66	0.61	0.60	0.57	0.55
Return on assets (ROA)	8.9%	7.7%	7.0%	5.3%	5.2%
Financial leverage (FL).	3.20	4.11	5.28	5.28	5.70
Return on equity (ROE)	28.5%	31.7%	36.8%	27.7%	29.4%

Harley-Davidson's ROE is high, primarily because of its high financial leverage (FL). We make the following observations ($ in thousands).

- **Gross profit margin.** Harley's ability to maintain its gross profit margin on product sales of 32.5% ([$4,968,646 − 3,351,796]/$4,968,646) in an increasingly competitive market reflects the strength of its brand, but its gross margins have been decreasing over the five-year period (36.4% in 2014).
- **SG&A margin.** The SG&A expense margin of 22.0% in 2018 ($1,258,098/$5,716,875) is up one percentage point over 2017 (20.9%), and considerably higher than the 18.6% reported in 2014.
- **Asset turnover.** Harley's balance sheet includes a significant investment in PPE assets, as we would expect for a manufacturing company. And, because it offers lease financing for motorcycle purchases, its balance sheet also includes a significant amount of lease receivables in addition to the usual accounts receivable. Together, these depress asset turnover below 1.0.
- **Cash conversion cycle.** Harley's cash conversion cycle is slightly over 55 days in 2018, about the same as in 2017, but considerably higher than the 39 days reported in 2014, due to an increase in days to collect receivables and in days to sell inventory as the market for its products weakened.

Days sales outstanding (DSO)	23.4	(365 × ([$306,474 + $329,986]/2)/$4,968,646
Days inventory outstanding (DIO) . . .	59.6	(365 × ([$556,128 + $538,202]/2)/$3,351,796
Days payables outstanding (DPO) . . .	(27.9)	(365 × ([$284,861 + $227,597]/2)/$3,351,796
Cash conversion cycle (CCC)	55.1	(23.4 – 59.6 – 27.9)

Using trade accounts receivable to compute the average collection period is a bit misleading, however, as a significant portion of Harley's motorcycle sales are financed in leases that extend the ultimate collection of cash. In order to maintain its operating cash flow, Harley uses variable interest entities (VIEs) to securitize its lease portfolio as we discuss above, thus adding financial leverage to its balance sheet. This is not unusual for companies that offer leasing alternatives to their customers.

- **Financial leverage.** Harley finances its leasing portfolio with variable interest entities that issue bonds to finance the purchase of leases from Harley. Since Harley is the primary beneficiary of these VIEs, it must consolidate them with its own financial statements. Consequently, both the leases and the secured borrowings appear on Harley's consolidated balance sheet.

ROE Disaggregation—Operating Focus

Our first step is to compute the ROE and, then, disaggregate it into its operating (return on net operating assets or RNOA) and nonoperating components. Harley's 2018 net operating profit after taxes, or NOPAT, is $705,485 (in $000s) and its net operating assets, or NOA, total $7,343,295 (in $000s).[1] In computing Harley's NOA, we assume that cash labeled as "restricted" is nonoperating as it is not available to support operating activities. Likewise, we classify the finance receivables held by the VIEs as nonoperating. Harley reports the following details about these finance (lease) receivables.

[1] NOPAT $705,485 = ($5,716,875 – $3,351,796 – $106,870 – $1,258,098 – $93,401 + $3,039) – ($155,178 + [($30,884 + $193,187 – $951) × 22%]).
NOA $7,343,295 = $10,665,664 – $1,203,766 – $10,007 – $49,275 – $175,043 – $591,839 – $284,861 – $601,130 – $94,453 – $107,776 – $204,219

$ thousands	2018	2017
Balances held by consolidated variable interest entities		
Current finance receivables, net	$175,043	$194,813
Other assets	1,563	2,148
Noncurrent finance receivables, net	591,839	521,940
Restricted cash—current and noncurrent	47,203	48,706
Current portion of long-term debt, net	189,693	209,247
Long-term debt, net	488,191	422,834

Harley securitizes its finance lease receivables by transferring them to a variable interest entity which, subsequently, issues bonds to finance the purchase. These borrowings are secured by the lease receivables pledged as collateral and the receivables can only be used to pay off the secured borrowing. Consequently, classify the finance receivables held by VIEs as nonoperating because they are not available to support current operating activities.

Using the NOPAT and NOA computed above, Harley's RNOA is 9.6% ($705,485/([$7,743,295 + $7,380,494)/2) and the following is a disaggregation of its ROE.

ROE	=	RNOA	+	Nonoperating return
29.4%	=	9.6%	+	19.8%

RNOA accounts for 32.6% (9.6%/29.4%) of Harley's ROE. Harley successfully uses its nonoperating activities to increase its 9.6% RNOA to produce a 29.4% ROE.

Disaggregation of RNOA—Margin and Turnover

The next level analysis of ROE focuses on RNOA disaggregation. Harley-Davidson's net operating profit margin (NOPM) and net operating asset turnover (NOAT) are as follows.

$$\text{RNOA} = \frac{\text{NOPAT}}{\text{Average Net Operating Assets}} = \underbrace{\frac{\text{NOPAT}}{\text{Sales}}}_{\text{NOPM}} \times \underbrace{\frac{\text{Sales}}{\text{Average Net Operating Assets}}}_{\text{NOAT}}$$

RNOA		NOPM		NOAT
9.6%	=	12.3%	×	0.78

where (in $000s): NOPM = $705,485/$5,716,875

NOAT = $5,716,875/[($7,343,295+$7,380,494)/2]

Harley-Davidson's RNOA of 9.6% consists of a net operating profit margin of 12.3% and a net operating asset turnover of 0.78 times per year.

Harley's net operating assets (NOA), net operating profit (NOPAT), and return on net operating assets (RNOA) for 2014–2018 are as follows.

$ thousands	2014	2015	2016	2017	2018
Effective tax rate	37%	37%	37%	37%	22%
NOA	$5,924,837	$6,282,497	$7,041,312	$7,380,494	$7,343,295
NOPAT	$946,759	$857,741	$817,396	$652,558	$705,485
RNOA	16.7%	14.1%	12.3%	9.0%	9.6%
NOPM	15.2%	14.3%	13.6%	11.6%	12.3%
NOAT	1.10	0.98	0.90	0.78	0.78

Because a large portion of Harley's assets are nonoperating, its RNOA is about twice the level of ROA (9.6% vs. 5.2%), but the level has declined in the past year as sales softened and operating asset turnover continued to slow. This pattern is similar to that which we observe in our analysis of ROA and its components.

Credit Analysis

Credit analysis is an important part of a complete company analysis. Following is a selected set of measures for 2015 that can help us gauge the relative creditworthiness of Harley-Davidson ($ thousands):

Current ratio ($4,484,442/$3,597,600)	1.25
Quick ratio ($1,203,766 + $10,007 + $306,474 + $2,039,381)/$3,597,600	0.99
Total liabilites-to-equity ($10,665,664 – $1,773,949)/$1,773,949	5.01
Long-term debt/Equity ($1,575,799 + $4,887,667)/$1,773,949	3.64
Times interest earned (Earnings before interest and taxes/Interest expense, gross) ($5,716,875 – $3,351,796 – $106,870 – $14,258,098 – $93,401)/($30,884 + $193,187)	4.00
Operating cash flows/Total liabilities $1,205,921/($10,665,664 – $1,773,949)	0.14

Harley's current and quick ratios are not particularly high, and both have decreased slightly over the past five years (not shown here). These ratios do not imply any excess liquidity, and probably do not suggest any room for a further decrease in liquidity.

Harley's financial leverage, as reflected in both total liabilities-to-equity and long-term-debt-to-equity ratios, is high and reflects the consolidation of Harley's variable interest entities that incur debt in order to finance lease receivables. Normally, this is cause for some concern. However, Harley-Davidson has strong operating and free cash flows that mitigate this concern.

Harley's times interest earned ratio of 4.0 is healthy, indicating a sufficient buffer to protect creditors if earnings decline. The company also has relatively little off-balance-sheet exposure. Thus, we do not have any serious concerns about Harley's ability to repay its maturing debt obligations.

Credit rating agencies use ratios such as these to determine credit ratings for Harley's short-term and long-term debt. Harley discloses the credit ratings on its debt in its MD&A.

> To access the debt capital markets, the Company relies on credit rating agencies to assign short-term and long-term credit ratings. Generally, lower credit ratings result in higher borrowing costs and reduced access to debt capital markets. A credit rating agency may change or withdraw the Company's ratings based on its assessment of the Company's current and future ability to meet interest and principal repayment obligations. The Company's short-term debt ratings affect its ability to issue unsecured commercial paper. The Company's short- and long-term debt ratings as of December 31, 2018 were as follows:

	Short-Term	Long-Term	Outlook
Moody's	P2	A3	Stable
Standard & Poor's	A2	BBB+	Negative
Fitch	F1	A	Stable

Harley-Davidson's long-term debt is rated as "upper-medium grade" although S&P signals its concern with a negative outlook and a "lower-medium grade" rating (see our discussion of credit ratings earlier in the text). This rating allows Harley to continue to access credit markets at a reasonable cost of debt.

Summarizing Profitability and Creditworthiness

Harley is facing an increasingly competitive environment and its gross profit margin on motorcycle sales has decreased over the past five years from 36.4% to 32.5%. Further, the company has been unable to reduce its SG&A margin, which has increased from 18.6% to 22.0% of total revenue. Improved asset turnover ratios have only partially offset the declining profit margins, resulting in an overall five-year decline in ROA from 8.9% to 5.2% and a decline in RNOA from 16.7% to 9.6%. These are worrisome trends.

Long-term leasing activities necessitate long-term financing and Harley's financial leverage, as measured by both total assets-to-equity and net operating assets-to-equity, has increased significantly. Harley's liquidity, as measured by the current and quick ratios, is strong, but both metrics have declined and the company's cash conversion cycle has lengthened. Harley has, however, been able to maintain its operating cash flow.

The negative trends in profitability and leverage are troubling. In 2018, S&P indicated concern by issuing a "negative outlook" although Harley's bond ratings continue to be investment grade. These issues have also weighed on Harley's stock price, which has ranged from nearly $66 five years ago to just over $34 at fiscal 2018 year-end.

Forecasting Financial Statements

eLectures MBC **LO3** Forecast financial statements.

The valuation of Harley's common stock requires forecasts of free cash flows over a forecast horizon period and a forecast terminal period. Our approach is to project individual income statement and balance sheet items using the methodology we discuss earlier in the text. Harley presented its 4Q results and 2019 guidance to analysts on January 29, 2019, and provided the following slide relative to its expectations for 2019 (posted on the Harley-Davidson investor relations website).

2019 Expectations
as of Jan. 29, 2019

Motorcycles and related products segment	Motorcycle shipments	217,000 – 222,000 [Q1 53,000 – 58,000]
	Gross margin %	Down yr./yr.
	SG&A	Lower yr./yr. (Lower as a percent of revenue)
	Operating margin %	8.0% – 9.0% (~flat versus 2018 excluding restructuring plan costs and incremental tariff impact)(1)
Financial services segment	HDFS operating income	Down yr./yr.
Harley-Davidson, Inc.	Capital expenditures	$225 million – $275 million (Including $20 million of mfg. optimization)
	Effective tax rate	24.0% to 25.0%

(1) This is a non-GAAP measure. Refer to the slides relating to non-GAAP measures and reconciliations included later in this presentation.

Harley's guidance is for about 1% sales growth and lower gross profit margins as explained in the following comments.

> The Company expects Motorcycles segment gross margin as a percent of revenue to be lower than 2018 driven by a significant increase in incremental tariffs, lower shipment volumes and unfavorable product mix, partially offset by aggressive cost reductions, including the benefit of $25 million to $30 million of savings from the Company's Manufacturing Optimization plan.

Based on the guidance in the table and footnote above, we assume sales growth of 1% for Motorcylces and Related Products along with a one percentage point increase in COGS as a percentage of Motorcycle and Related Product sales for 2019 (from 67.5% to 68.5%). We also assume a 1% increase in HDFS revenue and a similar change in related lease receivables.

Harley's guidance is for a modest reduction in the SG&A margin and the company provides the following discussion in the MD&A section.

> The Company expects selling, administrative and engineering expenses for the Motorcycles segment to be lower in 2019 behind aggressive cost management and lower recall costs. For 2019, the Company has reallocated a substantial amount of spending to invest in its More Roads plan to drive future growth.

We assume that SG&A as a proportion of total revenue margin will decrease by 0.4% to 21.6% for 2019. We also assume that the company will not incur any restructuring expense in 2019. Finally, Harley estimates its effective tax rate between 24.0%–25.0% and we use 24.5%, the midpoint, to forecast income tax expense.

For the balance sheet, we have assumed the following.

- Goodwill will not change.
- All operating assets and liabilities (other than PPE, as explained below) will remain the same percentage of total revenues as in 2018.
- All nonoperating assets and liabilities will not change, in dollar terms, except for long-term debt and current maturities as explained below.
- We assume CAPEX of $235,000 thousand, slightly higher than for 2018 due to the additional CAPEX for manufacturing optimization that Harley cites in its guidance. This level of CAPEX is at the mid-point of Harley's guidance of $225–$245 million above. We assume depreciation expense of $260,264 thousand, which is the same percentage of depreciation expense to prior year PPE, gross (8.8%).
- We forecast additional borrowings of $855 million in order to yield a targeted cash balance of 15% of sales (an average percentage for the past five years). This will partially replace scheduled maturities of long-term debt of $1,575,815 thousand. We assume that the company will renew short-term borrowings and, therefore, forecast no change to that account. We do not reduce interest expense because although aggregate debt will fall, this might be offset by higher interest rate levels due to potential credit downgrades. Maintaining the current level of interest expense is a conservative approach.
- Harley provides the following schedule of long-term debt maturities over the next five years that we have incorporated into our forecasts.

$ thousands	2019	2020	2021	2022	2023	Thereafter	Total
Principal payments on debt	$2,717,597	$1,562,889	$1,570,815	$578,256	$440,137	$750,000	$7,619,694

- We assume no change in stockholders' equity other than the increase in retained earnings from forecasted net income and the decrease relating to dividend payments which we forecast to remain at the 2018 dividend payout level of 46.3% of net income. In this forecast, we do not assume additional stock purchases.

These assumptions result in the forecasted income statement and balance sheet in Exhibit C.6.

Exhibit C.6 ■ Harley-Davidson Forecasted Income Statement and Balance Sheet

Consolidated Statements of Operations ($ thousands)	2018	Historical	Forecast Computations	2019
Revenue				
Motorcycles and related products	$4,968,646		$4,968,646 × 101%	$5,018,332
Financial services	748,229		$748,229 × 101%	755,711
Total revenue	5,716,875		subtotal	5,774,043
Costs and expenses:				
Motorcycles and related products cost of goods sold	3,351,796	67.50%	$5,018,332 × 68.5%	3,437,557
Financial services interest expense	193,187		no change	193,187
Financial services provision for credit losses	106,870	1.90%	$5,774,043 × 1.9%	109,707
Selling, administrative and engineering expense	1,258,098	22.00%	$5,774,043 × 21.6%	1,247,193
Restructuring expense	93,401		assumed $0	—
Total costs and expenses	5,003,352		subtotal	4,987,644
Operating income	713,523		subtotal	786,399
Other income (expense)	3,039		subtotal	3,039
Investment income	951		no change	951
Interest expense	30,884		no change	30,884
Income before provision for income taxes	686,629		subtotal	756,466
Provision for income taxes	155,178		$756,466 × 24.5%	185,334
Net income	$ 531,451		total	$ 571,132

continued

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Exhibit C.6 ■ Harley-Davidson Forecasted Income Statement and Balance Sheet

Consolidated Balance Sheets ($ thousands)	2018	Historical	Forecast Computations	2019
Current assets				
Cash and cash equivalents	$ 1,203,766	21.10%	plug	$ 750,214
Marketable securities	10,007		no change	10,007
Accounts receivable, net	306,474	5.40%	$5,774,043 × 5.4%	311,798
Finance receivables, net	2,039,381	35.70%	$5,774,043 × 35.7%	2,061,333
Restricted finance receivables held by variable interest entities, net	175,043		no change	175,043
Inventories	556,128	9.70%	$5,774,043 × 9.7%	560,082
Restricted cash held by variable interest entities	49,275		no change	49,275
Other current assets	144,368	2.50%	$5,774,043 × 2.5%	144,351
Total current assets	4,484,442		subtotal	4,062,103
Finance receivables, net	4,415,668	77.20%	$5,774,043 × 77.2%	4,457,561
Restricted finance receivables held by variable interest entities, net	591,839		no change	591,839
Property, plant and equipment, net	904,132		$235,000 – $260,264	878,868
Goodwill	55,048		no change	55,048
Deferred income taxes	141,464	2.50%	$5,774,043 × 2.5%	144,351
Other long-term assets	73,071	1.30%	$5,774,043 × 1.3%	75,063
Total assets	$10,665,664		total	$10,264,833
Current liabilities				
Accounts payable	$ 284,861	5.00%	$5,774,043 × 5.0%	$ 288,702
Accrued liabilities	601,130	10.50%	$5,774,043 × 10.5%	606,275
Short-term debt	1,135,810		no change	1,135,810
Current portion of long-term debt	1,575,799		$1,562,889 – $1,575,799	1,562,889
Total current liabilities	3,597,600		subtotal	3,593,676
Long-term debt	4,887,667		$850,000 – $1,562,889	4,174,778
Pension liability	107,776	1.90%	$5,774,043 × 1.9%	109,707
Postretirement healthcare liability	94,453	1.70%	$5,774,043 × 1.7%	98,159
Other long-term liabilities	204,219	3.60%	$5,774,043 × 3.6%	207,866
Shareholders' equity				
Preferred stock, none issued	—		no change	—
Common stock, 344,855,704 and 344,174,653 shares issued, respectively	1,819		no change	1,819
Additional paid-in-capital	1,459,620		no change	1,459,620
Retained earnings	2,007,583		$571,132 – $264,434	2,314,281
Accumulated other comprehensive loss	(629,684)		no change	(629,684)
Treasury stock (160,121,966 and 132,297,840 shares, respectively), at cost	(1,065,389)		no change	(1,065,389)
Total shareholders' equity	1,773,949		subtotal	2,080,647
Total liabilities and shareholders' equity	$10,665,664		total	$10,264,833

The forecasted statement of cash flows is in Exhibit C.7. This forecasted statement uses the forecasted income statement and comparative balance sheets as presented in Exhibit C.6 and is prepared as we illustrate earlier in the text. We forecast that Harley will generate $817,641 thousand in cash from operating activities in 2016 and will report projected CAPEX of $238,000 thousand and dividends of $264,164 thousand. Harley's cash has historically been at a level of about 15% of sales, implying a target cash balance of about $750 million. We have forecasted additional long-term borrowing of $850 million to yield the targeted cash balance.

Exhibit C.7 ■ Harley-Davidson Forecasted Statement of Cash Flows

$ thousands	Forecast Assumptions	2019 Est.
Operating activities		
Net income	from forecast	$ 571,132
Add: Depreciation	historic percentage	260,264
Change in accounts receivable	$306,474 – $311,798	(5,324)
Change in short-term finance receivables	$2,039,381 – $2,061,333	(21,952)
Change in inventories	$556,128 – $560,082	(3,954)
Change in other current assets	$144,368 – $144,351	17
Change in accounts payable	$288,702 – $284,861	3,841
Change in accrued liabilities	$606,275 – $601,130	5,145
Change in pension liability	$109,707 – $107,776	1,931
Change in postretirement healthcare liability	$98,159 – $94,453	3,706
Change in other long-term liability	$207,866 – $204,219	3,647
Net cash from operating activities	subtotal	818,453
Investing activities		
Capital expenditures		(235,000)
Change in long-term finance receivables	$4,415,668 – $4,457,561	(41,893)
Change in other long-term assets	$141,464 – $144,351	(2,887)
Net cash from investing activities	$73,071 – $75,063	(1,992)
		(281,772)
Financing activities		
Dividends	$571,132 × 46.3%	(264,434)
Decrease in current maturities long-term debt	per schedule	(12,910)
Change in long-term debt	per schedule	(712,889)
Repurchase of stock	assume $0	—
Net cash from financing activities	subtotal	(990,233)
Net change in cash	total	(453,552)
Beginning cash	from balance sheet	1,203,766
Ending cash	from balance sheet	$ 750,214

Valuing Equity Securities

LO4 Describe and illustrate the valuation of firm equity.

In this section, we estimate the per share value of Harley-Davidson's common stock as of its year-end. We use the forecasted income statement and balance sheet for 2019 from Exhibit C.6 to yield sales, NOPAT and NOA forecasts. We then forecast the remaining horizon period (2020 to 2022) and the terminal period using the parsimonious method as described in the forecasting module. We assume that total revenue will grow by 1% and that net operating profit margin (NOPM) and net operating asset turnover (NOAT) will remain at their forecasted levels for 2019 of 12.9% and 0.783, respectively. We assume a 1% growth rate in the terminal period. These assumptions yield the table of forecasted sales, NOPAT, and NOA in Exhibit C.8.

Exhibit C.8 ■ Harley-Davidson Multiyear Forecasts of Sales, NOPAT, and NOA

Harley-Davidson ($ thousands)	Reported 2018	Forecast Horizon Period 2019	2020	2021	2022	Terminal Period
Revenue growth		as forecasted	1.0%	1.0%	1.0%	1.0%
Revenue (unrounded)	$5,716,875	$5,774,043.00 as forecasted	$5,831,783.43 ($5,774,043 × 1.01)	$5,890,101.26 ($5,831,783.43 × 1.01)	$5,949,002.28 ($5,890,101.26 × 1.01)	$6,008,492.30 ($5,949,002.28 × 1.01)
Revenue (rounded)		$5,774,043	$5,831,783	$5,890,101	$5,949,002	$6,008,492
NOPAT	$ 705,485	$745,166 as forecasted	$752,300 = ($5,831,783 × 12.9%)	$759,823 = ($5,890,101 × 12.9%)	$767,421 = ($5,949,002 × 12.9%)	$775,095 = ($ 6,008,492 × 12.9%)
NOA	$7,343,295	$7,377,746	$7,447,999 = ($5,831,783/0.783)	$7,522,479 = ($5,890,101/0.783)	$7,597,704 = ($5,949,002/0.783)	$7,673,681 = ($6,008,492/0.783)

Valuation Insight ■ Computation of Harley-Davidson's WACC

Cost of Debt Using the debt balances and rates provided in the footnotes: we compute the pretax cost of Harley-Davidson debt as 2.9% as of December 31, 2018.

Debt	Balance	Rate	Weighted average rate
Conduit facilities	$ 833,884	2.790%	0.358818319
Unsecured notes	600,000	2.250%	0.208208537
LIBOR 2.52 + 35bps	150,000	2.870%	0.066395389
	600,000	2.400%	0.222089106
	600,000	2.150%	0.198954824
LIBOR 2.52 + 50bps	450,000	3.020%	0.209596594
	350,000	2.400%	0.129551978
	600,000	2.850%	0.263730813
LIBOR 2.52 + 94bps	450,000	3.460%	0.240133846
	350,000	3.550%	0.191628968
	400,000	2.550%	0.157313117
	350,000	3.350%	0.180832970
	450,000	3.500%	0.242909960
	300,000	4.625%	0.213992107
	$6,483,884		2.884156527%

Cost of Equity Assuming a beta of 1.22 (Yahoo finance), a 10-year T-bill rate of 2.686% as of December 31, 2018, and a market premium of 8.014%, Harley-Davidson's cost of equity is 2.686% + 1.22 (8.014%) = 12.46%.

WACC Using the relative market values of Harley-Davidson's debt and equity, we compute Harley's WACC of 6.55% as follows.

Debt, market value	$ 7,506,321	57.9%	From footnotes
Equity, market value	5,447,531	42.1%	YE stock price × shares outstanding
	$12,953,852	100.0%	
R_d cost of debt pretax	2.90%	Weight	
R_d cost of debt after-tax	2.26%	57.9%	
R_e cost of equity	12.46%	42.1%	
WACC	6.55%		

Discounted Cash Flow Valuation

Exhibit C.9 shows the discounted cash flow (DCF) model results. In addition to the forecasted NOPAT and NOA from Exhibit C.8, we assume a discount rate (WACC) of 6.55%. We use shares outstanding of 159,658 thousand (from the balance sheet), net nonoperating obligations (NNO) of $5,569,346 (in 000s): $(1,575,799 + 1,135,810 + 4,887,667 − 1,203,766 − 10,007 − 49,275 − 175,043 − 591,839).

Exhibit C.9 ■ Harley-Davidson Discounted Cash Flow (DCF) Valuation

Harley-Davidson, DCF ($ 000s except per share values and discount factors)	Reported 2018	Forecast Horizon Period 2019	2020	2021	2022	Terminal Period
Total revenue (rounded)	$5,716,875	$5,774,043	$5,831,783	$5,890,101	$5,949,002	$6,008,492
NOPAT	705,485	745,166	752,300	759,823	767,421	775,095
NOA	7,343,295	7,377,746	7,447,999	7,522,479	7,597,704	7,673,681
Increase in NOA		34,451	70,253	74,480	75,225	75,977
FCFF (NOPAT − Increase in NOA)		710,715	682,047	685,343	692,196	699,118
Discount factor $[1/(1 + r_w)^t]$		0.93853	0.88083	0.82668	0.77587	
Present value of horizon FCFF		667,027	600,767	566,559	537,054	
Cum. present value of horizon FCFF	$2,371,407					
Present value of terminal FCFF	9,773,418					
Total firm value	12,144,825					
Less NNO	5,569,346					
Firm equity value	$6,575,479					
Shares outstanding	159,658					$r_w = 0.0655$
Stock value per share	$ 41.18					$g = 0.010$

The DCF valuation model yields a stock price estimate of $41.18 per share, slightly above the $37.12 closing price for Harley's stock on February 28, 2019, the day the company's Form 10-K was filed with the SEC making their annual financial data publicly available.

Residual Operating Income Valuation

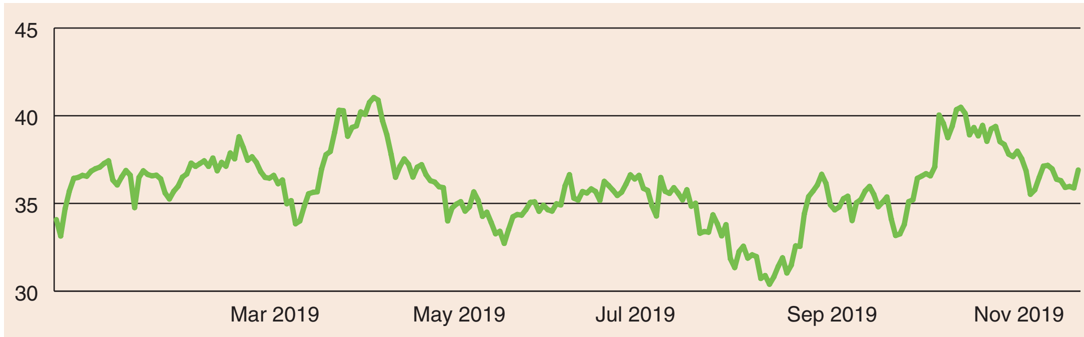
Exhibit C.10 reports estimates of the values of Harley-Davidson's equity and common stock per share using the residual operating income (ROPI) model. All of the assumptions remain the same as for the DCF model.

Exhibit C.10 ■ Harley-Davidson Residual Operating Income (ROPI) Valuation

Harley-Davidson, ROPI ($ 000s except per share values and discount factors)	Reported 2018	Forecast Horizon Period 2019	2020	2021	2022	Terminal Period
Total revenue (rounded)	$ 5,716,875	$5,774,043	$5,831,783	$5,890,101	$5,949,002	$6,008,492
NOPAT	857,741	745,166	752,300	759,823	767,421	775,095
NOA	7,343,295	7,377,746	7,447,999	7,522,479	7,597,704	7,673,681
ROPI (NOPAT − $[NOA_{beg} \times r_w]$)		264,180	269,058	271,979	274,699	277,445
Discount factor $[1/(1 + r_w)^t]$		0.93853	0.88083	0.82668	0.77587	
Present value of horizon ROPI		247,941	236,994	224,840	213,131	
Cum. present value of horizon ROPI	$ 922,906					
Present value of terminal ROPI	3,878,581					
NOA	7,343,295					
Total firm value	12,144,782					
Less NNO	5,569,346					
Firm equity value	$ 6,575,436					
Shares outstanding	159,658					$r_w = 0.0655$
Stock value per share	$ 41.18					$g = 0.010$

Assessment of the Valuation Estimate

The closing stock price on December 31, 2018, for Harley-Davidson (HOG) was $34.12 per share. The stock price increased to $37.12 by February 28, 2019, the day the company filed its 10-K report with the SEC. Our model's estimates, therefore, suggest that Harley's stock is undervalued as of that date. As it turns out, its stock price increased to $38.76 subsequent to that date as shown in the following graph.



Summary Observations

Overall, this appendix presents a financial accounting analysis and interpretation of Harley-Davidson's performance and position. It illustrates many of the key financial reporting topics covered in the book. We review the company's financial statements and notes, forecast key accounts, and conclude with estimates of Harley's equity value.

The Harley-Davidson case provides an opportunity for us to apply many of the procedures conveyed in the book in a comprehensive manner. With analyses of additional companies, we become more comfortable with, and knowledgeable of, variations in financial reporting, which enhances our analysis and business decision-making skills. Our analysis of a company must go beyond the accounting numbers to include competitor and economic factors, and we must appreciate that estimation and judgment are key ingredients in financial accounting.