

Fair Value **Last Price** Moat Trend™ **Consider Buy** Consider Sell Uncertainty Economic Moat™ Stewardship **Industry Group** 56.59 USD 68 00 usp 40.80 usp 105 40 usp High Wide Stable Standard Autos

## Harley-Davidson Leadership Intent on Protecting Brand Equity; Shares Attractive at Current Level

See Page 2 for the full Analyst Note from 28 Apr 2015

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The primary analyst covering this company does not own its stock.

Research as of 28 Apr 2015 Estimates as of 21 Apr 2015 Pricing data through 01 May 2015 Rating updated as of 01 May 2015

Currency amounts expressed with "\$" are in U.S. dollars (USD) unless otherwise denoted

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#### **Investment Thesis** 21 Apr 2015

Harley-Davidson is one of the most storied brands in the recreation industry. With more than 100 years of experience manufacturing large-displacement bikes, its brand strength and dealer network have given the firm a wide economic moat and dominant position in the U.S. motorcycle market. However, there are no switching costs to protect Harley's well-regarded brand when consumers replace their products, and the premium price Harley commands relative to its peers could prove problematic during cyclical downturns. We've seen this recently with foreign competitors using the exchange rate differential as an opportunity to price their bikes much lower in the domestic market, hurting Harley's market share. Therefore, we believe continuing to produce quality, innovative products that cater to a wider audience while improving operational efficiency is imperative. The firm continues to maintain a leading market share position, which speaks highly about the brand. Domestic unit sales increased less than 1% for Harley in 2014, while industry unit sales expanded 2.5%, and European sales rose 8% versus a European industry increase of 13%, indicating some recent share weakness.

Harley continues to benefit from manufacturing efficiencies thanks to its lean and flexible manufacturing structure, reversing much of the operating margin compression it experienced during the recession. Additionally, we think the company is adapting well to the changing demographic demands of outreach Harley consumers, helping fill the gap of core consumers (Caucasian males 35 or older). Harley has become increasingly reliant on growing through its outreach channel (and international), which targets African-Americans, Hispanics, women, and youths; this channel is becoming more important, as we estimate it currently composes nearly a third of new purchases in the U.S. Additionally, new models, like the Street, could entice an entirely new target market of urban riders to try Harley's offerings for the first time. These newer bikes could also resonate well internationally as they are likely to be better tailored to the robust urban population, offering a wider target market globally.

Vital Statistics							
Market Cap (USD Mil)				11,970			
52-Week High (USD)				74.13			
52-Week Low (USD)				54.22			
52-Week Total Return %				-20.9			
YTD Total Return %				-13.7			
Last Fiscal Year End			31	Dec 2014			
5-Yr Forward Revenue CAGR %				5.8			
5-Yr Forward EPS CAGR %							
Price/Fair Value 0.83							
Valuation Summary and Fore	casts						
Fiscal Year:	2013	2014	2015(E)	2016(E)			
Price/Earnings	21.1	17.0	14.1	12.5			
EV/EBITDA	13.7	11.8	10.9	10.0			
EV/EBIT	16.8	14.4	12.6	11.6			
Free Cash Flow Yield %	5.1	6.6	13.2	7.2			
Dividend Yield %	1.2	1.7	2.2	2.6			
Financial Summary and Fore	casts (	USD Mil)					
Fiscal Year:	2013	2014	2015(E)	2016(E)			
Revenue	5,258	5,568	5,679	6,079			
Revenue YoY %	6.4	5.9	2.0	7.0			
EBIT	1,152	1,281	1,306	1,427			

Historical/forecast data sources are Morningstar Estimates and may reflect adjustments.

12.0

734

17 6

3.28

20.4

770

29.0

11.2

844

15.0

3.88

18.3

876

13.9

2.0

847

Π4

4.02

3.8

1.542

75.9

9.3

928

95

4.51

12.2

842

-45.4

#### **Profile**

EBIT YoY %

Diluted EPS

Net Income, Adjusted

Net Income YoY %

Diluted EPS YoY %

Free Cash Flow YoY %

Free Cash Flow

Harley-Davidson is the world's leading manufacturer of heavyweight motorcycles, parts, and accessories. It sells custom, cruiser, and touring motorcycles and offers a complete line of Harley-Davidson motorcycle parts, accessories, riding gear, and apparel, as well as general merchandise. Harley-Davidson Financial Services provides wholesale financing to dealers and retail financing and insurance brokerage services to customers. The company captures more than half of all heavyweight domestic retail motorcycle registrations.



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#### Morningstar Analysis

Harley-Davidson Leadership Intent on Protecting Brand Equity; Shares Attractive at Current Level 28 Apr 2015 Incoming Harley-Davidson CEO Matt Levatich and CFO John Olin hosted an investor meeting April 27 that touted the strength of the company's wide-moat brand and the firm's focus on value-creating projects that generate strong returns on investment. Management's financial guidance for 2015 is unchanged since last week's earnings update. We are maintaining our \$68 fair value estimate and view the shares as attractive at current levels. Our current intrinsic value is predicated on shipments that rise 2%, pricing that grows about 0.5%, gross margins of 36.5% and motorcycle operating margins of 18.2% in 2015. Longer term, we have shipments growing at a mid-single-digit pace and pricing that rises at a low-single-digit clip, leading to

motorcycle operating margins of nearly 20%.

Harley reiterated its desire to protect its brand--something it conveyed during its first-quarter earnings call--and plans to do so by lowering its shipment forecast over the near term to avoid filling the retail channel in periods of pricing duress. During the fourth-quarter conference call, management noted that around two thirds of its competitors had increased discounting levels, which have since ticked up as foreign exchange concerns (mostly U.S. dollar strength) have moved against the business. With nearly one third of Harley's domestic and two thirds of international new sales coming from new customers to the brand, training consumers to wait for discounts is a destructive strategy for a premium brand longer term. It's also a strategy that builds ill will with riders who have paid full price for bikes, as well as leading to prices that suffer in the used market, making those consumers more cautious about the brand when purchasing their next bike.

To avoid either of the above outcomes, Harley has focused heavily on brand marketing. The company highlighted two campaigns to attract consumers without discounting aggressively. First, it has launched the roll-your-own

campaign to drive interest in Street models, conveying the Harley lifestyle in media spots and reminding young riders about the affordability and obtainability of Street models (\$99 month, \$500 down). The second campaign focuses on the core consumer using the Road Glide model, whose return to the lineup was much awaited, with 1.99% APR financing driving interest. We like that Harley is using its finance arm to leverage interest in riders, and we do not believe it will take unnecessary credit risk to facilitate higher sales (80% of HDFS loans are prime). Also, we expect spending on these types of incentives could be pared back easily in periods of lower discounting.

Levatich highlighted consumer-led product development as another key way Harley can drive interest as well as healthy returns on investment when allocating capital properly. Project Rushmore was the primary example; it was a product tailored to the core market that became one of the topselling products to outreach consumers. The Street models were secondarily touted as a consumer-led product that was developed, which has generated rising demand in outreach and international markets for the brand. And finally, Project Live Wire (electric) was highlighted. We think this exemplifies the team's financial discipline on customer-led product development. While not economically feasible at this time, Harley continues to work to find a battery that can provide the distance its consumers demand at the right price in order to generate healthy margins on the electric bikes for the enterprise before committing to production. Some may find this persistent spending on research and development as unnecessary, but we believe it is imperative for Harley to continue to deliver the most innovative products on the market, allowing pricing power as brand perception improves.

For the first time in recent years, Olin sounded very comfortable with raising debt at the operating company. The last piece of operating company debt matured in 2014 and was raised at 15% during the economic slowdown. Given



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the lean operating profile of the business, we believe any debt raised in the year ahead would be at a much more reasonable rate and would not likely put the credit quality of the enterprise at risk. We usually shy away from higher leverage to solely repurchase shares, but in light of the low rate environment and depressed share price, we view it as a smart way to return excess cash to shareholders at this time, since the return arbitrage between the cost of debt and possible share return seems favorable.

In our opinion, the business remains in good position to succeed once foreign exchange pressures subside. Domestic outreach, increasing international breadth, and manufacturing flexibility all provide tailwinds for top- and bottom-line growth. While we can't predict how long the current foreign exchange differential will persist, we believe that if Harley continues to pursue strategies to protect the brand, it could come out of the aggressive pricing environment more competitively positioned than before thanks to better brand perception, leading to improved market share.

#### **Valuation, Growth and Profitability** 21 Apr 2015

We are lowering our fair value estimate to \$68 per share

from \$70 after adjusting for management's updated shipment guidance. Our outlook has reduced shipments to about 276,000 from 285,000. Our model assumes that Harley passes along steady, minimal price increases and continues to expand its outreach consumer base. Our fair value estimate implies a fiscal 2015 P/E ratio of 17 times and an enterprise value/EBITDA multiple of 13 times, which is slightly lower than the firm's five-year historical median P/E of 26 times (including depressed 2010) and in line with the EV/EBITDA multiple of 13 times.

As supply and demand characteristics shift over time, slow and sustained increases in pricing should help Harley. Over the next decade, we forecast that pricing can grow in the low single digits (with a 0.4% increase in 2015), while units growth at a mid-single-digit pace. In our view, parts and accessories will grow faster than the historical five-year average of 3% (at around 5% long term), while general merchandise rises 3% as the company completes its SKU rationalization. International sales should remain decent as Harley puts effort into its outreach programs to penetrate new audiences. Barring any changes to credit liquidity, we expect that credit will remain available to both wholesale and retail channels at either the current or improved levels. Along with slower growth for bikes relative to prior cycles, we have modeled HDFS revenue to grow in line with revenue as we expect approval rates to remain stable and loans to grow with demand.

The gross margin can still expand moderately over the next few years, and our base case assumes that gross margins stabilize at 37%, which we believe is reasonable because of the flexible manufacturing structure and lower future commodity cost pressures. The selling, general, and administrative expense ratio should decline from 18% in 2014 to 17% in 2020 as the company keeps its expenses in check. Harley has historically generated returns on invested capital above our calculated weighted average cost of capital (7.7%); however, HDFS had a disparate impact in



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2008, depressing ROICs as it had become a more relevant part of the business and delinquencies were higher than usual. ROICs increased in 2009 and again surpassed the weighted average cost of capital. Because retail demand is highly sensitive to the economic environment, we recommend investors seek a relatively wide margin of safety before buying this cyclical name.

#### Scenario Analysis

We have incorporated scenario analysis to help assess potential upside and downside to Harley's intrinsic value. The cyclicality of motorcycle industry sales leads us to give the company a high uncertainty rating, increasing the spread of our outcomes in good and bad scenarios.

In our more bullish scenario, economic stability returns and credit standards remain flexible, which helps drive improved pricing and demand for Harley's motorcycles, parts, and accessories. Here we forecast both pricing and unit growth to be in the mid-single-digit range over our 10-year explicit forecast period. We have commodity prices remaining moderate through 2015, which allow gross margins to expand to 39%, well above the five-year historical average of 35%, and motorcycle operating margins that climb to more than 24% (from 18% in 2014). Selling, general, and administrative expenses would improve to 15% of sales as the firm continues to allocate capital to create and promote new products. We expect interest expense to reflect rates that are at the current level (or slightly lower) as some HDFS debt gets refinanced likely at lower rates and securitization levels remain consistent. We expect the company will engage in no major acquisitions after selling MV Agusta and eliminating Buell in order to focus on the Harley brand, so free cash flow can be routed to the paydown of existing debt or repurchase of shares. If the company benefits from these positive events, our fair value estimate would be \$98.

In considering a downside case where the company

encounters a macro slowdown, more difficult credit standards for retail financing, and an increasingly competitive environment on pricing, we would expect pricing to grow minimally over the long term, while units slow to a low-single-digit rate through the decade. We have modeled persistence in inflation of commodity costs in our bear case, which are reflected in an increased cost of goods sold around 65% in 2015 (from 63.2% in 2014). These assumptions would drive our motorcycle operating margins down to 14% in 2016. In our bear case, the fair value estimate would be \$45.

For reference, during the past five years, Harley's average cost of goods sold ratio was 65%, while the selling, general and administrative expense ratio was 20%. In our model, a 100-basis-point change in both the cost of goods sold and SG&A ratio equates to about \$0.18 each in 2015 earnings per share, while a 100-basis-point change in the pricing and units equates to about \$0.02 each in 2015 earnings per share. Combined, a negative 100-basis-point move in all metrics would affect earnings per share by \$0.40 for 2015.

#### **Economic Moat**

Harley's distribution channel and brand loyalty give the firm a wide economic moat, in our view. The robust dealer network allows the company to have a broad reach with its products, and we believe the breadth of this distribution channel would be difficult and expensive to replicate quickly, particularly in North America and in certain international markets. Similarly, Harley has garnered brand loyalty from the manufacturing of quality motorcycles for more than 100 years, and its record for product innovation and reliability over a long time is difficult to copy. Harley has formidable competitors such as Honda and Ducati, and if consumer preferences shift toward smaller-displacement bikes there could be a new constraint on Harley's profitability (Harley is allaying this fear with its new, narrower-chassis Street model). Harley's dominance in the



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#### Morningstar Analysis

U.S. market for heavyweight motorcycles--with about 60% share--has allowed the firm to achieve economies of scale that have so far eluded its competitors.

#### **Moat Trend**

We believe Harley's moat trend is stable. In the past, we were concerned that Harley would face tenuous headwinds as its core consumer (Caucasian men over 35) became a smaller proportion of the total population and we anticipated that the company could find it difficult to penetrate new markets with its traditionally heavy displacement bikes. However, Harley has made significant inroads into its key outreach categories (African-Americans, Hispanics, women, and youths) over the past few years, and this outreach segment now makes up 30% of all new domestic bike sales. This change, along with an increase in international penetration, offers promising opportunities in years ahead for the company. Rather than having a perpetually shrinking consumer base, we think it can grow base significantly, and we have modeled outreach/international units growing at a low-double-digit rate, with core consumer units growing at a low-single-digit rate. Although the rate of population growth for men and women is practically in line, Hispanic and African-American population segments are growing significantly faster than their peers'.

Additionally, we still think Harley has pricing power as the company commands a premium price because of a strong brand identity. We expect the company to be successful carrying its pricing power into outreach markets, and that it will not need to discount to entice new consumers to try the brand. This pricing power should translate into stable returns on invested capital, which have averaged 31% over the past five years, and we forecast it will increase in periods ahead as volume ticks up. Finally, a strong dealer network and brand equity, which we believe remain difficult to duplicate, continue to protect Harley's stable moat trend.



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### Bulls Say/Bears Say

#### **Bulls Say**

- Harley-Davidson's brand is more than 100 years old and resonates globally with a wide consumer base, particularly its core market (men over 35). Outreach initiatives should pay off longer term as the company identifies with a wider target market.
- ► The company has historically generated strong free cash flow, and we expect it to continue to do so, producing more than \$5.3 billion of cumulative free cash flow over the next five years.
- Harley remains a market share leader in the custom and touring segments domestically, two of the most profitable motorcycle categories.

#### **Bears Say**

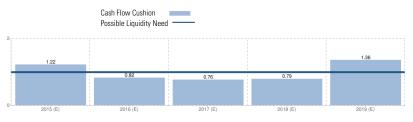
- Harley's core demographic is aging, which is likely to reduce the demand for the firm's products. To mitigate the lost revenue from this consumer, outreach to new segments must continue to be successful.
- Compelling rival brands, like Polaris' Indian, could threaten Harley's leadership position, offering products with new innovation at similar prices and stealing share.
- ► HDFS is highly dependent on credit availability in the retail market. If credit standards tighten, the cost of financing could increase, which could limit the number of loans to customers and depress retail sales.



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Five Year Adjusted Cash Flow Forecast (USD Mil)												
	2015(E)	2016(E)	2017(E)	2018(E)	2019(E)							
Cash and Equivalents (beginning of period)	907	42	19	73	127							
Adjusted Available Cash Flow	928	587	601	636	699							
Total Cash Available before Debt Service	1,835	629	620	709	826							
Principal Payments	-1,499	-750	-799	-887	-598							
Interest Payments	4	0	0	1	1							
Other Cash Obligations and Commitments	-12	-12	-13	-13	-13							
Total Cash Obligations and Commitments	-1,507	<i>-762</i>	-812	-899	-609							

#### **Cumulative Annual Cash Flow Cushion**



#### **Adjusted Cash Flow Summary**

	USD Millions	Commitments
Beginning Cash Balance	907	19.8
Sum of 5-Year Adjusted Free Cash Flow	3,451	75.2
Sum of Cash and 5-Year Cash Generation	4,358	95.0
Revolver Availability	_	_
Asset Adjusted Borrowings (Repayment)	_	_
Sum of Cash, 5-Year Cash Generation, Revolver and Adjustments	4,358	95.0
Sum of 5-Year Cash Commitments	-4,589	_

#### **Financial Health**

Harley-Davidson carries more debt on its balance sheet than we would like, as leverage is required to finance its HDFS arm and offer loans to customers, but we still assign it a BBB issuer credit rating. HDFS generates both increased financial risk and weak profitability when credit standards tighten or credit markets become less liquid. The firm had \$964 million in cash and marketable securities at the end of 2014; it strives to hold enough liquid assets to cover its liquidity needs for 12 months. We believe this is a sensible strategy, given the inherent risk in the business model due to HDFS. For the remainder of 2015, the company has a \$600 million medium-term note coming due in September and already noted it would raise \$500 million at the end of February. The firm does have a defined-benefit pension program, and weak return performance of its portfolio could become a problem if it needs to make sizable contributions to it

When accounting rules changed, both the assets and liabilities of its formerly unconsolidated qualifying special-purpose entities had to be consolidated. In 2008, debt/total capital was less than 50%. However, with the consolidation of securitization interests, that ratio jumped to 73%. The company took this down to 51% at the end of 2014, and we expect the ratio will continue to fall as Harley sells receivables and uses its free cash flow to meet its liquidity requirements, rather than issuing further debt. We also like that the company has two \$675 million revolvers available to address the seasonality of production and shipments. Additionally, the company maintains flexibility in its capital structure through stock repurchases and dividends. Harley has share-repurchase authorizations available to use, with availability for buybacks in 2015. The company's dividend, declared at \$0.31 per quarter, also allows it to manage the cash it keeps on the balance sheet.



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#### **Enterprise Risk**

Harley faces a number of risks to its business. Motorcycles are big-ticket purchases, and a continued slowdown in the domestic economic environment could hamper the replacement and adoption rates of these products. Another downturn could also affect the financial-services segment, making lending more costly and the ability to securitize receivables increasingly difficult. We believe Harley finances about half of its consumers' purchases domestically, which can affect overall net income materially. The company's products are also concentrated in the over-35 demographic, which has an increasing proportion moving into retirement age--offering slower demand growth due to a more conservative consumer. We like that Harley has embarked on an outreach to target other demographic segments and continued to innovate products to adapt to changing consumer preferences (narrower chassis, lower seat height, lower priced options and possibly an electric version in the future). We note that missteps in marketing its products could damage the brand and see the uncertainty of the business as high because of the product's discretionary nature.

Top 5 Sellers

T. Rowe Price Associates, Inc.

American Century Inv Mgt, Inc.

CastleArk Management LLC

Capital Research Global Investors

Fidelity Management and Research Company



## Harley-Davidson Inc HOG (NYSE) | ★★★★

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### Management & Ownership

#### **Management Activity** Report Date\* Position Shares Held InsiderActivity MR. GEORGE H. Director 52,573 28 Apr 2014 39.700 CONRADES RICHARD I. BEATTIE 24,296 28 Apr 2014 Director MR. KEITH E. WANDELL CEO/Chairman of the Board/ 11,723 10 Feb 2015 82.166 Director/President, Director BARRY K. ALLEN Director 9.148 28 Apr 2014 JAMES A. NORLING Director 8,152 31 Dec 2014 SARA L. LEVINSON Director 4,537 28 Apr 2014 MATTHEW S. LEVATICH COO, Subsidiary/President, 3,601 06 Feb 2015 Subsidiary/Director MR JOCHEN ZEITZ Director 2.984 28 Apr 2014

<sup>\*</sup>Represents the date on which the owner's name, position, and common shares held were reported by the holder or issuer.

Fund Ownership				
Top Owners	% of Shares Held	% of Fund Assets	Change (k)	Portfolio Date
Vanguard Mid-Cap Index Fund	1.91	0.38	97	31 Mar 2015
Vanguard Total Stock Mkt Idx	1.78	0.06	22	31 Mar 2015
T. Rowe Price Mid Cap Growth Fund	1.28	0.65	_	31 Mar 2015
Vanguard Five Hundred Index Fund	1.12	0.07	-9	31 Mar 2015
Vanguard Institutional Index Fund	1.05	0.07	-5	31 Mar 2015
Concentrated Holders				
DUNCAN ROSS EQUITY	0.03	8.83	-2	30 Sep 2014
DUNCAN ROSS POOLED TRUST	0.15	7.69	_	30 Sep 2014
JHancock Select Growth Fund	0.14	4.66	_	28 Feb 2015
AXA LE Baillie Gifford American	0.23	4.49	16	31 Dec 2014
Seligson & Co Phoebus	0.01	4.42	_	31 Mar 2015
Institutional Transactions				
Top 5 Buyers Citadel Advisors Llc	% of Shares Held 1.27	% of Fund Assets 0.21	Shares Bought/ Sold (k) 2,007	Portfolio Date 31 Dec 2014
Wellington Management Company LLP	6.85	0.25	1,577	31 Dec 2014
Nordea Investment Mgmt Bank Demark A/s	0.59	0.27	1,153	31 Mar 2015
Systematic Financial Management L.P.	0.43	0.45	920	31 Dec 2014
MFS Investment Management K.K.	1.07	0.08	644	31 Dec 2014

#### Management 23 Feb 2015

Matt Levatich is set to take the helm at Harley-Davidson in May. Levatich has been with Harley for more than 20 years in multiple roles (currently president and COO), and we think he has a good handle on issues and resolutions across both the supply chain and distribution network, which should help keep the business on the positive trajectory set by current CEO Keith Wandell. Wandell is also stepping down as chairman of the board, with lead independent director Richard Beattie, an experienced lawyer with expertise in corporate governance, expected to slide into the position.

The current board contains a broad range of legal, accounting, and executive experience and touts integrity, with 11 of the 13 directors being independent. The long-term incentive program Harley has implemented consists of a blend of options, restricted stock, and a cash award, which vest during three years. While we think this aligns the long-term interests of shareholders with management, we are somewhat more skeptical of the short-term incentive plan the company has in place, as we do not believe promoting near-term objectives supports the long-term strategy or retains executive talent. We think the ownership requirements of executive officers help balance this out, with guidelines based on the position one holds within the firm. Currently, only 2 million shares are owned directly by directors and executive officers (224 million outstanding at fiscal year-end); we'd like management to have more skin in the game.

0.09

0.04

0.10

0.08

0.02

-3,528

-1,612

-1,487

-1,288

-899

31 Dec 2014

2.95

0.92

0.61

4.10

0.01



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#### **Analyst Notes**

#### Motorcycle Discounting Leads Harley to Lower Shipment Outlook; Shares Provide Value at Current Level

21 Apr 2015

Investors responded negatively to wide-moat Harley-Davidson's shipment guidance for the full year, sending shares tumbling 10%, despite better-than-expected profit performance. We applaud the management team for adjusting to the competitive environment, pulling shipments back in order to maintain the brand's premium posturing at such a time, and we believe this will allow pricing to remain stable during the period ahead. While the company could have planned to ship its original guidance, stuffing the retail channel with inventory during periods of heavy discounting would have done more harm than good and probably would have led to increased price pressure on Harley units sold. We plan to tick our \$70 fair value estimate down modestly in response to the lower shipments projected for 2015, but we think the shares provide a compelling value at current levels.

The first quarter was tough for Harley, with foreign competitors using the exchange rate differential as an opportunity to price their bikes much lower in the domestic market. We fear that if foreign exchange rates remain at current levels, this behavior could continue, leading to competitive pricing for a duration longer than management may currently expect. Revised guidance of 276,000-281,000 for the 2015 year (down from 282,000-287,000) conveys Harley's unwillingness to participate in pricing wars over the near term, but also implies a return to double-digit shipment rates over the second half of the year, which could be tricky to achieve if the current environment prevails. This rise in competitive pricing led Harley to lose 4.7% in market share in the United States (at 51.3%) and 1.5% in Europe (at 9.8%) over the last quarter, a trend the company was fortunate to thwart since the last recession.

The silver lining came from the operating excellence that is

pervasive through the organization and has been ingrained in the manufacturing process over the past six years, which is allowing Harley to maintain its motorcycle operating margin guidance of 18%-19% for the full year (unchanged from the prior quarter). Management expects this will be possible by targeting gross margins that are flat to slightly higher than last year (36.4%) and selling, general, and administrative expense that is lower than last year (18.4% of sales). We believe this is highly contingent on second-half shipments successfully aligning with the leadership's current outlook.

Sales in the first quarter on motorcycle-related products fell 4% to \$1.5 billion, affected by unfavorable foreign exchange and lower shipments. For reference, major currencies including the euro, yen, Brazilian real, and Australian dollar were 14% weaker compared with the prior-year quarter and resulted in an revenue impact of about 3.5%. However, motorcycle operating margins rose 0.8% to 22.9%, thanks to higher gross margins and flat SG&A spending. Gross margins, at 39.1%, were the highest in 15 years during the quarter, benefiting from price, mix, raw materials, and manufacturing, despite a nearly \$40 million impact from foreign exchange. Domestic retail sales fell modestly, to 35,488 units (down 0.7%), hindered by difficult weather, discounting by peers, and the launch of Rushmore in the year-ago period. International was similarly disappointing, with retail sales falling 2.4% as Europe experienced a weaker economic environment, currency headwinds in dollar-denominated sales, and lighter demand in Brazil.

We believe the management team is posturing the company to be in a good competitive position for when the unfavorable foreign exchange situation abates. This will allow Harley to protect its brand and pricing, helping increase operating profitability over time. If peers are able to clear excess inventory over the next quarter, the company could have a successful second half. However, if the pricing



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#### **Analyst Notes**

environment persists, Harley will need to either cut shipments further or discount slightly to move units at retail (which we do not expect). Longer term, we still forecast motorcycle operating margins that expand to around 20%, pricing that rises modestly annually (just above 2%), and shipments that grow at a mid-single-digit pace as Harley continues to penetrate outreach customers domestically and a higher percentage of potential buyers internationally, particularly with its newer Street models.

#### COO Levatich to Take Helm at Harley-Davidson in May; No Change to Our Fair Value Estimate 05 Feb 2015

Upon retirement of current CEO Keith Wandell, company veteran Matt Levatich will take the reins at Harley-Davidson on May 1. Levatich has been with the business for more than 20 years across multiple roles (currently president and COO), and we think he has a good handle on issues and resolutions across both the supply chain and distribution network, which should help keep the business on the positive trajectory that Wandell set. We believe Levatich will continue to pursue operational excellence, outreach, and international growth, which have been key factors in rising sales and operating margins in recent years. We think Wandell left the business in excellent shape for an executive transition, with the completion of the company's five-year restructuring plan (which generated more than \$300 million in annual savings) in 2014. Wandell is also stepping down as chairman of the board, with lead independent director Richard Beattie, an experienced lawyer with expertise in corporate governance, expected to slide into the position.

Given the consistent vision of the new CEO, we are maintaining our \$70 fair value estimate, wide moat rating, and Standard Stewardship Rating and view the shares as attractive at current levels, at a 10% discount to our intrinsic value. In our opinion, Harley can still achieve mid-single-digit top-line growth, operating margin expansion, and low-double-digit earnings per share growth over the next five years as it continues to benefit from its rising global

presence and selling, general, and administrative expense leverage on rising sales.

#### International and Outreach Drive Harley Unit Demand; Shares Moderately Undervalued 29 Jan 2015

Wide-moat Harley-Davidson continues to captivate new consumer demand through its outreach consumer, staving off the slower unit growth of its past core consumer. We don't expect to make any material change to our \$70 fair value estimate, and we view shares as modestly undervalued at current levels. However, we think near-term uncertainty surrounding foreign exchange (international sales composed 37% of unit totals in 2014) and a schizophrenic European consumer could provide a headwind for the business over the next few quarters. In our opinion, expansion into new markets and share grab with the new Street model bikes in certain geographies should more than offset this concern, depending on the magnitude of currency weakness.

Total sales for the company were flat year over year during the fourth quarter, dragged down by weak parts and accessories and general merchandise segment performance. Motorcycle sales grew a modest 0.4% as the company shipped just 500 more units than a year ago, with little in the way of higher price per unit. As Street models continue to grow as a percentage of total units, we expect average selling price to have difficulty rising, since pricing is materially lower than the traditional Harley lineup. Internationally, Harley's performance remained solid, with EMEA retail sales rising 8.7%, Asia Pacific ticking up 14.2%, and Latin America growing 4.7%. Gross margin fell 100 basis points to 30.5%, weighed down by foreign exchange, despite better mix and higher volumes, leading to motorcycle operating margins of just 3.5%.

Looking ahead, management forecasts 2015 shipments of



Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
56.59 USD	68.00 USD	40.80 USD	105.40 USD	High	Wide	Stable	Standard	Autos

#### **Analyst Notes**

282,000-287,000 motorcycles (up 4%-6%), which we believe can be supported by international expansion, additional domestic outreach and wider demographic demand for Street models. The company plans to grow motorcycle operating margins modestly, which we anticipate will be largely through the SG&A line, as gross margins are likely to continue to feel the impact of foreign exchange and mix, at least through the first half of the year. Continued operational excellence and volume sales increases should help motorcycle operating margins lever to nearly 20% over the next decade, but we see some difficulty in launching new initiatives to reduce costs ahead as many of the simple cost reductions to the business have been already made.

Harley has positioned the business so that going forward, expenses and revenues are more closely matched, through manufacturing efficiencies and a flexible workforce. We expect longer term, this will help continue to grow free cash flow, helping support R&D expenses as well as rising dividends to shareholders.



**Last Price** Stewardship **Fair Value Consider Buy Consider Sell** Economic Moat™ Moat Trend™ Uncertainty **Industry Group** 56.59 USD 68.00 USD 40.80 USD 105.40 USD High Wide Stable Standard Autos

## Morningstar Analyst Forecasts

Financial Summary and Forecasts							
Fiscal Year Ends in December						Forecast	
	3-Year						5-Year
Growth (% YoY)	Hist. CAGR	2012	2013	2014	2015	2016	Proj. CAGR
Revenue	6.1	6.0	6.4	5.9	2.0	7.0	5.8
EBIT	12.6	14.6	12.0	11.2	2.0	9.3	6.4
EBITDA	10.2	10.1	10.0	10.5	-3.4	9.0	5.0
Net Income	15.5	13.8	17.6	15.0	0.4	9.5	6.3
Diluted EPS	18.4	16.7	20.4	18.3	3.8	12.2	9.5
Earnings Before Interest, after Tax	16.8	19.7	21.8	9.2	-13.3	9.4	3.2
Free Cash Flow	8.6	-12.7	29.0	13.9	75.9	-45.4	3.5
	3-Year						5-Year
Profitability	Hist. Avg	2012	2013	2014	2015	2016	Proj. Avg
Operating Margin %	21.9	20.8	21.9	23.0	23.0	23.5	23.4
EBITDA Margin %	27.0	26.0	26.9	28.1	26.6	27.1	26.9
Net Margin %	13.9	12.6	14.0	15.2	14.9	15.3	15.3
Free Cash Flow Margin %	14.2	12.1	14.6	15.7	27.1	13.9	16.5
ROIC %	_	_	_	_	_	_	_
Adjusted ROIC %	33.6	38.0	32.6	30.1	33.0	40.7	40.5
Return on Assets %	7.8	6.6	7.9	8.9	9.6	11.4	11.7
Return on Equity %	26.7	25.1	26.4	28.5	28.2	28.5	28.9
	3-Year						5-Year
Leverage	Hist. Avg	2012	2013	2014	2015	2016	Proj. Avg
Debt/Capital	0.65	0.67	0.64	0.65	0.55	0.51	0.50
Total Debt/EBITDA	3.74	3.97	3.72	3.52	2.49	2.13	2.05
EBITDA/Interest Expense	-324.31	33.27	35.90	-1,042.10	-350.19	-3,918.54	-3,530.69

	2013	2014	2015(E)	2016(E)
Price/Fair Value	1.08	0.94	_	_
Price/Earnings	21.1	17.0	14.1	12.5
EV/EBITDA	13.7	11.8	10.9	10.0
EV/EBIT	16.8	14.4	12.6	11.6
Free Cash Flow Yield %	5.1	6.6	13.2	7.2
Dividend Yield %	1.2	1.7	2.2	2.6
Key Valuation Drivers				
Cost of Equity %				9.0
Pre-Tax Cost of Debt %				6.5
Weighted Average Cost of Ca	pital %			7.7
Long-Run Tax Rate %				35.0
Stage II EBI Growth Rate %				3.7
Stage II Investment Rate %				25.5
Perpetuity Year				25
Aller I et al.				

**Valuation Summary and Forecasts** 

Additional estimates and scenarios available for download at http://select.morningstar.com.

Discounted Cash Flow Valuation			
	USD Mil	Firm Value (%)	Per Share Value
Present Value Stage I	7,691	40.4	36.50
Present Value Stage II	5,954	31.3	28.26
Present Value Stage III	5,405	28.4	25.65
Total Firm Value	19,050	100.0	90.42
Cash and Equivalents	964	_	4.58
Debt	-5,505	_	-26.13
Preferred Stock	_	_	_
Other Adjustments	-402	_	-1.91
Equity Value	14,108	_	66.96
Projected Diluted Shares	211		
Fair Value per Share (USD)	_		

The data in the table above represent base-case forecasts in the company's reporting currency as of the beginning of the current year. Our fair value estimate may differ from the equity value per share shown above due to our time value of money adjustment and in cases where probability-weighted scenario analysis is performed.



# Harley-Davidson Inc HOG (NYSE) | $\star\star\star\star$

**Last Price** Fair Value Moat Trend™ **Consider Buy Consider Sell** Uncertainty Economic Moat™ Stewardship **Industry Group** 40.80 USD 56.59 USD 68.00 USD 105.40 USD High Wide Stable Standard Autos

## Morningstar Analyst Forecasts

Income Statement (USD Mil) Fiscal Year Ends in December				Fore	cast
Tistal Teal Elias III December	2012	2013	2014	2015	2016
Revenue	4,943	5,258	5,568	5,679	6,079
Cost of Goods Sold	3,222	3,396	3,543	3,608	3,854
Gross Profit	1,720	1,862	2,025	2,071	2,225
Selling, General & Administrative Expenses	976	994	1,022	1,035	1,076
Other Operating Expense (Income)	-285	-283	-278	-270	-278
Other Operating Expense (Income)	_		_	_	
Depreciation & Amortization (if reported separately)	_		_	_	
Operating Income (ex charges)	1,029	1,152	1,281	1,306	1,427
Restructuring & Other Cash Charges	28	-2	_	_	_
Impairment Charges (if reported separately)	_	_	_	_	_
Other Non-Cash (Income)/Charges		_	_		
Operating Income (incl charges)	1,000	1,154	1,281	1,306	1,427
Interest Expense	39	39	-2	-4	0
Interest Income					
Pre-Tax Income	962	1,114	1,282	1,310	1,427
Income Tax Expense	338	380	439	463	499
Other After-Tax Cash Gains (Losses)	_	_	_	_	_
Other After-Tax Non-Cash Gains (Losses)	_	_	_	_	_
(Minority Interest)	_	_	_	_	_
(Preferred Dividends)		_	_		_
Net Income	624	734	844	847	928
Weighted Average Diluted Shares Outstanding	229	224	218	211	206
Diluted Earnings Per Share	2.72	3.28	3.88	4.02	4.51
Adjusted Net Income	624	734	844	847	928
Diluted Earnings Per Share (Adjusted)	2.72	3.28	3.88	4.02	4.51
Dividends Per Common Share	0.62	0.84	1.10	1.24	1.49
EBITDA	1,258	1,416	1,563	1,510	1,646
Adjusted EBITDA	1,286	1,414	1,563	1,510	1,646



# Harley-Davidson Inc HOG (NYSE) | $\star\star\star\star$

**Last Price** Moat Trend™ **Fair Value Consider Buy Consider Sell** Uncertainty Economic Moat™ Stewardship **Industry Group** 40.80 USD 56.59 USD 68.00 USD 105.40 USD High Wide Stable Standard Autos

## Morningstar Analyst Forecasts

Balance Sheet (USD Mil)					
Fiscal Year Ends in December	2012	2013	2014	Fore 2015	<u>cast</u> 2016
Cook and Equivalents	1,068	1.067	907	42	19
Cash and Equivalents	•	99	57	42 60	63
Investments Accounts Receivable	136 230	261	248	285	289
	230 394			285 453	289 489
Inventory Deferred Tax Assets (Current)	394 111	425	449 90	433 90	409 90
		2 120			
Other Short Term Assets  Current Assets	2,113 <b>4,051</b>	2,138 <b>3,989</b>	2,198 <b>3,948</b>	1,500 <b>2,429</b>	1,606 <b>2,555</b>
Current Assets	4,031	3,303	3,340	2,423	2,333
Net Property Plant, and Equipment	815	842	883	929	935
Goodwill	30	30	28	28	28
Other Intangibles	_	_	_	_	_
Deferred Tax Assets (Long-Term)	172	3	78	79	85
Other Long-Term Operating Assets	64	314	75	77	82
Long-Term Non-Operating Assets	4,039	4,226	4,516	4,516	4,516
Total Assets	9,171	9,405	9,528	8,058	8,201
Accounts Payable	257	240	197	267	279
Short-Term Debt	732	1,842	1,743	_	_
Deferred Tax Liabilities (Current)	_	_	_	_	_
Other Short-Term Liabilities	514	427	449	458	491
Current Liabilities	1,503	2,510	2,389	726	770
Long-Term Debt	4,371	3,417	3,762	3,762	3,513
Deferred Tax Liabilities (Long-Term)	_	_	_	_	
Other Long-Term Operating Liabilities	740	469	468	477	511
Long-Term Non-Operating Liabilities	_	_	_	_	_
Total Liabilities	6,613	6,396	6,619	4,964	4,794
Preferred Stock	_	_	_	_	_
Common Stock	3	3	3	3	3
Additional Paid-in Capital	1,066	1,175	1,265	1,265	1,265
Retained Earnings (Deficit)	7,306	7,853	8,459	9,045	9,666
(Treasury Stock)	-5,211	-5,689	-6,304	-6,705	-7,013
Other Equity	-608	-333	-515	-515	-515
Shareholder's Equity	2,558	3,009	2,909	3,093	3,407
Minority Interest	_	_	_	_	_
Total Equity	2,558	3,009	2,909	3,093	3,407



# Harley-Davidson Inc HOG (NYSE) | $\star\star\star\star$

**Last Price** Moat Trend™ **Fair Value Consider Buy Consider Sell** Uncertainty Economic Moat™ Stewardship **Industry Group** 56.59 USD 68.00 USD 40.80 USD 105.40 USD High Wide Stable Standard Autos

## Morningstar Analyst Forecasts

Cash Flow (USD Mil)					
Fiscal Year Ends in December				Fore	cast
	2012	2013	2014	2015	2016
Net Income	624	734	845	847	928
Depreciation	169	167	179	204	219
Amortization	89	96	103		_
Stock-Based Compensation	41	41	38	42	43
Impairment of Goodwill	_	_	_	_	_
Impairment of Other Intangibles	_	_	_	_	_
Deferred Taxes	128	53	-8	-2	-6
Other Non-Cash Adjustments	-135	-18	34	_	_
(Increase) Decrease in Accounts Receivable	-14	-37	-10	-37	-5
(Increase) Decrease in Inventory	21	-46	-51	-4	-36
Change in Other Short-Term Assets	0	0	-3	698	-106
Increase (Decrease) in Accounts Payable	-11	-54	19	70	12
Change in Other Short-Term Liabilities	-111	41	-1	9	32
Cash From Operations	801	977	1,147	1,828	1,082
(Capital Expenditures)	-189	-208	-232	-250	-225
Net (Acquisitions), Asset Sales, and Disposals	_	_	_	_	_
Net Sales (Purchases) of Investments	-72	-377	-514	-3	-3
Other Investing Cash Flows	_	16	2	8	28
Cash From Investing	-261	-569	-745	-245	-200
Common Stock Issuance (or Repurchase)	-266	-429	-578	-402	-308
Common Stock (Dividends)	-142	-188	-238	-261	-306
Short-Term Debt Issuance (or Retirement)	573	-28	465	-1,743	_
Long-Term Debt Issuance (or Retirement)	-1,210	188	-220	_	-249
Other Financing Cash Flows	55	63	34	-42	-43
Cash From Financing	-990	-393	-536	-2,448	-905
Exchange Rates, Discontinued Ops, etc. (net)	-9	-17	-26	_	_
Net Change in Cash	-459	-2	-160	-865	-23



Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
56.59 USD	68.00 USD	40.80 USD	105.40 USD	High	Wide	Stable	Standard	Autos

# Comparable Company Analysis

These companies are chosen by the analyst and the data are shown by nearest calendar year in descending market capitalization order.

Valuation Analysis																
		Price/Ea	rnings		EV/EBITD	Α		Price/Fre	ee Cash Flo	w	Price/Bo	ok		Price/Sa	les	
Company/Ticker	Price/Fair Value	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)
Polaris Industries Inc PII USA	0.83	22.7	18.8	16.3	12.0	9.6	8.8	41.6	20.5	16.5	11.5	7.3	5.9	2.2	1.8	1.7
Average		22.7	18.8	16.3	12.0	9.6	8.8	41.6	20.5	16.5	11.5	7.3	5.9	2.2	1.8	1.7
Harley-Davidson Inc HOG US	0.83	17.0	14.1	12.5	11.8	10.9	10.0	15.3	7.6	14.0	4.8	3.9	3.5	2.5	2.1	2.0

Returns Analysis		ROIC %			Adjusted	ROIC %	:	Return o	n Equity %		Return o	n Assets %		Dividend	l Yield %	
Company/Ticker Polaris Industries Inc PII USA	Last Historical Year Total Assets (Mil) 2,075 USD	2014	2015(E)	2016(E)	2014 64.5	2015(E) 65.4	2016(E) 69.2	2014 64.0	2015(E) 47.4	2016(E) 41.0	2014 24.2	2015(E) 22.1	2016(E) 21.3	2014 1.3	2015(E) 1.6	2016(E) 2.0
Average		_	_	_	64.5	65.4	69.2	64.0	47.4	41.0	24.2	22.1	21.3	1.3	1.6	2.0
Harley-Davidson Inc HOG US	<b>9,528</b> USD	-	_	-	30.1	33.0	40.7	28.5	28.2	28.5	8.9	9.6	11.4	1.7	2.2	2.6

Growth Analysis																
	Last Historical Year	Revenue	Growth %		EBIT Gro	wth %		EPS Gro	wth %		Free Cas	h Flow Gro	wth %	Dividend	l/Share Gro	wth %
Company/Ticker	Revenue (Mil)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)
Polaris Industries Inc PII USA	4,480 USD	18.6	11.9	10.4	22.6	10.9	11.4	23.3	11.5	15.6	221.4	65.4	18.7	15.5	14.0	29.4
Average		18.6	11.9	10.4	22.6	10.9	11.4	23.3	11.5	15.6	221.4	65.4	18.7	15.5	14.0	29.4
Harley-Davidson Inc HOG US	<b>5,568</b> USD	5.9	2.0	7.0	11.2	2.0	9.3	18.3	3.8	12.2	13.9	<i>75.9</i>	-45.4	31.3	12.7	20.0



Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
56.59 USD	68.00 USD	40.80 USD	105.40 USD	High	Wide	Stable	Standard	Autos

# Comparable Company Analysis

These companies are chosen by the analyst and the data are shown by nearest calendar year in descending market capitalization order.

<b>Profitability Analysis</b>																
Last Historical Year		Gross Margin %		EBITDA Margin %		Operating Margin %			Net Margin %			Free Cash Flow Margin %				
Company/Ticker Polaris Industries Inc PII USA	Net Income (Mil) 454 USD	2014 29.5	2015(E) 29.5	2016(E) 29.7	2014 18.8	2015(E) 19.8	2016(E) 19.5	2014 16.0	2015(E) 15.8	2016(E) 16.0	2014 10.1	2015(E) 10.1	2016(E) 10.5	2014 7.2	2015(E) 9.5	2016(E) 10.3
Average		29.5	29.5	29.7	18.8	19.8	19.5	16.0	15.8	16.0	10.1	10.1	10.5	7.2	9.5	10.3
Harley-Davidson Inc HOG US	<b>844</b> USD	36.4	36.5	36.6	28.1	26.6	27.1	23.0	23.0	23.5	15.2	14.9	15.3	16.4	27.8	14.1

Leverage Analysis		Debt/Equ	iity %		Debt/Tota	ıl Cap %		EBITDA/	nterest Ex	tp.	Total Del	bt/EBITDA		Assets/E	quity	
Company/Ticker Polaris Industries Inc PII USA	Last Historical Year Total Debt (Mil) 203 USD	2014 23.2	2015(E) 15.8	2016(E) 12.7	2014 18.8	2015(E) 13.7	2016(E) 11.3	2014 74.9	2015(E) 91.0	2016(E) 142.9	2014 0.2	2015(E) 0.2	2016(E) 0.2	2014 2.4	2015(E) 2.0	2016(E) 1.9
Average		23.2	15.8	12.7	18.8	13.7	11.3	74.9	91.0	142.9	0.2	0.2	0.2	2.4	2.0	1.9
Harley-Davidson Inc HOG US	<b>5,505</b> USD	189.2	121.6	103.1	65.4	54.9	50.8 -	1,042.1	<i>-350.2</i>	-3,918.5	3.5	2.5	2.1	3.3	2.6	2.4

Liquidity Analysis																
	Market Cap	Cash per	Share		Current R	atio		Quick Ra	tio		Cash/Sho	ort-Term De	ebt	Payout F	latio %	
Company/Ticker	(Mil)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)
Polaris Industries Inc PII USA	9,272 USD	2.02	6.89	11.00	1.29	1.66	1.87	0.62	1.01	1.22	54.43	_	_	28.0	28.6	32.0
Average		2.02	6.89	11.00	1.29	1.66	1.87	0.62	1.01	1.22	54.43	_	_	28.0	28.6	32.0
Harley-Davidson Inc HOG US	<b>11,970</b> USD	4.16	0.20	0.09	1.65	3.35	3.32	1.46	2.72	2.68	0.52	_	_	28.4	30.8	33.0



## **Research Methodology for Valuing Companies**

#### Components of Our Methodology

- ► Economic Moat<sup>TM</sup> Rating
- ► Moat Trend™ Rating
- ► Moat Valuation
- ► Three-Stage Discounted Cash Flow
- Weighted Average Cost of Capital
- ► Fair Value Estimate
- ► Scenario Analysis
- ► Uncertainty Ratings
- ► Margin of Safety
- ► Consider Buying/Selling
- ► Stewardship Rating

The Morningstar Rating for stocks identifies companies trading at a discount or premium to our analysts' assessment of their fair value. A number of components drive this rating: (1) our assessment of the firm's economic moat, (2) our estimate of the stock's intrinsic value based on a discounted cash-flow model, (3) the margin of safety bands we apply to our Fair Value Estimate, and (4) the current stock price relative to our fair value estimate.

The concept of the Morningstar Economic Moat™ Rating plays a vital role not only in our qualitative assessment of a firm's investment potential, but also in our valuation process. We assign three moat ratings—none, narrow, or wide—as well as the Morningstar Moat Trend™ Rating—positive, stable, or negative—to each company we cover. There are two major requirements for firms to earn either a narrow or wide moat rating: (1) the prospect of earning above-average returns on capital; and (2) some competitive edge that prevents these returns from quickly eroding. The assumptions we make about a firm's moat determine the length of "economic outperformance" that we assume in the latter stages

of our valuation model. We also quantify the value of each firm's moat, which represents the difference between a firm's enterprise value and the value of the firm if no future net investment were to occur. Said differently, moat value identifies the value generated by the firm as a result of any future net new investment. Our Moat Trend Rating reflects our assessment of whether each firm's competitive advantage is either getting stronger or weaker, since we think of moats as dynamic, rather than static.

At the heart of our valuation system is a detailed projection of a company's future cash flows. The first stage of our three-stage discounted cash flow model can last from 5 to 10 years and contains numerous detailed assumptions about various financial and operating items. The second stage of our model—where a firm's return on new invested capital (RONIC) and earnings growth rate implicitly fade until the perpetuity year—can last anywhere from 0 years (for no-moat firms) to 20 years (for wide-moat companies). In our third stage, we assume the firm's RONIC equals its weighted average cost of capital, and we calculate a continuing value using a standard

#### **Morningstar Research Methodology for Valuing Companies**

Fundamental Analysis

Economic Moat™ Rating Company Valuation

Fair Value Estimate

Uncertainty Assessment \*\*\*\* \*\*\* \*\*\*

Analyst conducts company and industry research:

- Financial statement analysis
- ► Channel checks
- ► Trade-show visits
- Industry and company reports and journals
- ► Conference calls
- Management and site visits

Strength of competitive advantage is rated: None, Narrow, or Wide

Advantages that confer an economic moat:

High Switching Costs (Microsoft)

Cost advantage (Wal-Mart)

Intangible assets (Johnson & Johnson)

Network Effect (Mastercard)

Efficient Scale (Lockheed Martin)

Analyst considers past financial results and focuses on competitive position and future prospects to forecast future cash flows.

Assumptions are entered into Morningstar's proprietary discounted cash-flow model.

Analyst uses a discounted cash-flow model to develop a Fair Value Estimate, which serves as the foundation for the Morningstar Rating for stocks.

The analyst then evaluates the range of potential intrinsic values for the company and assigns an Uncertainty Rating: Low, Medium, High, Very High, or Extreme.

The Uncertainty Rating determines the margin of safety required before we would recommend the stock. The higher the uncertainty, the wider the margin of safety.

The current stock price relative to Morningstar's Fair Value Estimate, adjusted for uncertainty, determines the Morningstar Rating for stocks.

The Morningstar Rating for stocks is updated each evening after the market closes.



## **Research Methodology for Valuing Companies**

#### Detailed Methodology Documents and Materials\*

- ► Comprehensive Equity Research Methodology
- ► Uncertainty Methodology
- ► Cost of Equity Methodology
- ► Morningstar DCF Valuation Model
- Stewardship Rating Methodology
- Please contact a sales representative for more information.

perpetuity formula. In deciding on the rate at which to discount future cash flows, we ignore stock-price volatility. Instead, we rely on a system that measures the estimated volatility of a firm's underlying future free cash flows, taking into account fundamental factors such as the diversity of revenue sources and the firm's fixed cost structure.

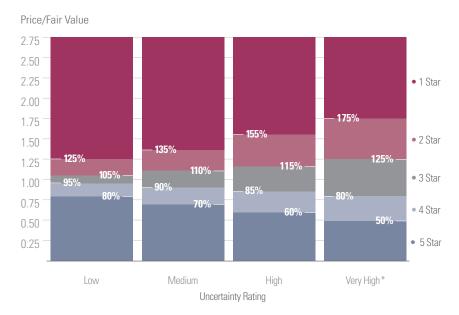
We also employ a number of other tools to augment our valuation process, including scenario analysis, where we assess the likelihood and performance of a business under different economic and firm-specific conditions. Our analysts typically model three to five scenarios for each company we cover, stress-testing the model and examining the distribution of resulting fair values.

The Morningstar Uncertainty Rating captures the range of these potential fair values, based on an assessment of a company's future sales range, the firm's operating and financial leverage, and any other contingent events that may impact the business. Our analysts use this range to assign an appropriate margin of safety—or the discount/premium

to a fair value we apply in setting our consider buying/consider selling prices. Firms trading below our consider-buying prices receive our highest rating of five stars, whereas firms trading above our consider-selling prices receive our lowest rating of one star.

Our corporate Stewardship Rating represents our assessment of management's stewardship of shareholder capital, with particular emphasis on capital allocation decisions. Analysts consider companies' investment strategy and valuation, financial leverage, dividend and share buyback policies, execution, compensation, related party transactions, and accounting practices. Corporate governance practices are only considered if they've had a demonstrated impact on shareholder value. Analysts assign one of three ratings: "Exemplary," "Standard," and "Poor." Analysts judge stewardship from an equity holder's perspective. Ratings are determined on an absolute basis. Most companies will receive a Standard rating, and this is the default rating in the absence of evidence that managers have made exceptionally strong or poor capital allocation decisions.

#### Morningstar Margin of Safety and Star Rating Bands



<sup>\*</sup> Occasionally a stock's uncertainty will be too high for us to estimate, in which case we label it Extreme



Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
56.59 USD	68.00 USD	40.80 USD	105.40 USD	High	Wide	Stable	Standard	Autos



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Five-star stocks sell for the biggest risk-adjusted discount whereas one-star stocks trade at premiums to their intrinsic value. Based on a fundamentally focused methodology and a robust, standardized set of procedures and core valuation tools used by Morningstar's Equity Analysts, four key components drive the Morningstar Rating: 1. Assessment of the firm's economic moat, 2. Estimate of the stock's fair value, 3. Uncertainty around that fair value estimate and 4. Current market price. Further information on Morningstar's methodology is available from http://global.morningstar.com/equitydisclosures.

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