## Initiation of Coverage

## SECTOR VIEW

New:<br>Old:<br>1 - POSITIVE

## Autos \& Auto Parts

Two wheelers: Past its peak

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## Analyst Certification

We, Prabhat Awasthi, Kapil Singh and Alok Kumar Nemani, hereby certify (1) that the views expressed in this research Industry Report accurately reflect our personal views about any or all of the subject securities or issuers referred to in this Industry Report and (2) no part of our compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this Industry Report.

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We believe the current slowdown in the two-wheeler market is led by credit availability issues. Declining volumes in FYO8 are likely to lead to a base correction. Volume growth should continue from next year because of investment-led job creation and growth in incomes. We expect the domestic two-wheeler industry to show steady growth of $10 \%$ over the next three years.

- We expect domestic motorcycle volume growth to achieve a CAGR of $10 \%$ over FYO9E-11E and slow down to $7 \%$ in FY12E-16E. Thereafter, we expect the market to become saturated with terminal growth of $4 \%$ from FY17 onwards.
- The economy segment - the lowest end of the motorcycle spectrum - has been hardest hit by the credit crunch, but we expect it to pick up from FY09. This is because the maximum impact of growth in incomes and job creation could be felt in this segment.
- We believe consumers in the executive spectrum (middle-segment product) will start to look for cheaper automobiles, currently being developed by Tata Motors (TTMT.IN, 1-OW) and explored by Bajaj Auto (BJA.IN, 1-OW) in the medium term. We expect the top-end premium segment to continue to grow in tandem with industry volume growth.
- Bajaj Auto is our top pick in the sector, and we expect it to lead industry growth, mainly on its export initiatives. We believe Bajaj Auto's sales volume will post a CAGR of $12.9 \%$ from FYO8E-10E.

Figure 1: Initiating coverage of India's two-wheeler industry

| Company | Ticker | Rating | Price (INR) | Price target (INR) | Potential upside (\%) |
| :--- | :--- | :--- | ---: | ---: | ---: |
| Hero Honda | HH IN | 2-EW | 769.6 |  |  |
| Bajai Auto | BJA IN | 1-OW | 2459.0 | 2939.4 | -2.0 |
| TVS Motors | TVSL IN | 2-EW | 40.8 | 43.4 | 19.5 |

Source: Bloomberg, Lehman Brothers estimates: Prices as of 4th Feb 2008

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## Two-wheeler industry is past its peak

We expect the Indian two-wheeler industry to maintain a steady growth trajectory in the medium term, with a volume CAGR of $10 \%$ over the next three years. This is slower than the historical $13.2 \%$ CAGR over the past five years, during which the two-wheeler penetration rate in India rose from $15 \%$ of households to $25 \%$ of households. Penetration of financing in two-wheeler sales also jumped from $40 \%$ in FYO 3 to $65 \%$ in FYO7. Given the higher penetration rate, we expect to see a slowdown in volume growth in the future.

Negative growth in the current financial year is due to credit availability issues
The lower end of the vehicle segment has observed negative growth because financiers put the brakes on credit in this current financial year. In FYO8 (until December 2007), industry volume dropped $7.7 \%$ YoY. Increases in retail lending rates by 200-300 bp in FY07 led to higher delinquencies. This has prompted banks to slow their lending to customers who have a riskier profile, especially those in rural areas. We believe this is the reason for negative volume growth in the current year.

## Medium-term growth prospects remain strong

Historical data reveal that the performance of this sector has some positive leverage to industrial growth, which leads to rising incomes and job creation at the lower levels of the income pyramid in strong economic growth scenarios. Medium-term growth prospects still remain strong, although slower than those observed in the past due to higher penetration of both two-wheelers and financing in two wheelers.

Once the base corrects this fiscal year, steady growth should resume
We estimate that if the level of financing remains stable at current levels, a base correction this fiscal year should enable volume growth to recover from next year. Credit growth in this fiscal year has been weak at $21.4 \%$ YoY, while deposit growth has been relatively healthy at $23.6 \%$ YoY. We believe there is excess liquidity in the banking system, with the incremental creditto-deposit ratio at 67\% for 9MFYO8 compared with 92\% during the corresponding period last year. Hence, we believe it is unlikely that interest rates will move up further.

## Greater demand in low- and high-end segments ...

We expect two wheelers at the low-end (economy) and high-end (premium) of the price spectrum to achieve higher growth, which would essentially lead to a more balanced demand curve for the industry.

Figure 2: Growth forecast for various segments

| Price segment (\%) | Three-year CAGR (FYO4-07) | Three-year CAGR (FYO7-FY10E) |
| :--- | ---: | ---: |
| Economy | 23.8 | 13 |
| Executive | 14.0 | 8 |
| Premium | 16.6 | 10 |
| Aggregate | 17.7 | 10 |
| Source: Crisinfac |  |  |

## ... but margins to remain subdued in the short term, in our view

Industry margins have been strained over the past few quarters, and we expect the pressure to persist in the short term, given the combined effect of negative volume growth, an ongoing fight for supremacy between Bajai Auto and Hero Honda (HROR NS, 2-EW), and increasing commoditization of the motorcycle market.

Figure 3: Margin forecast for two-wheeler major players

| (\%) | FYO5 | FYO6 | FYO7 | FYO8E | FYO9E | FY1OE |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Hero Honda | 15.6 | 15.5 | 11.7 | 11.7 | 11.8 | 12.2 |
| Bajaj Auto | 15.7 | 17.5 | 14.9 | 14.6 | 15 | 15.1 |
| TVS | 7.4 | 6.3 | 3.6 | 2.7 | 3.4 | 4.0 |

Source: Company data, Lehman Brothers estimates

## Intensifying turf war

The two-wheeler industry is currently in the midst of a turf war between the two biggest players, Hero Honda and Bajaj Auto. While these companies were earlier content to take over the market share of marginal players, they are now eyeing a share of each other's pie. Structurally, the contest for market leadership is likely to cap price increases, with contenders adopting a discountled approach to raise volume sales at the expense of margins.

## Increasingly commoditized market

Both Bajai Auto and TVS Motors (TVS) have made inroads into the higher-end segments of the motorcycle market, which were largely Hero Honda's domain (note that Hero Honda has been able to regain some share from TVS in the current year). Therefore, competitive stress, which so far was restricted to the lower-end segments, has spread throughout the industry. This essentially means that even higher-margin segments are likely to face pressure, thus keeping the industry's overall margins capped.

## The product contest is primarily between Bajaj Auto and Hero Honda

Quick launches and high product mortality rates have characterized the two-wheeler industry in the past few years. Bajaj Auto has recently attempted to break into Hero Honda's stronghold, i.e. executive segment motorcycles with the launch of XCD. Similarly, Hero Honda's new launches are aimed at breaking into Bajaj Auto's stronghold in the premium segment of the motorcycle market. Most other players in the industry have been playing catch-up to Hero Honda and Bajaj Auto.

## Bajaj Auto is our top pick

We initiate coverage of Bajaj Auto with a 1 -Overweight rating and a 12 -month sum-of-the-parts-based price target of $\operatorname{INR} 2,939.60$, representing potential upside of $19.5 \%$ from current levels. While Bajaj Auto has not performed well in the domestic market this year, we believe it has enough potential upside catalysts, including: 1) We expect Bajaj Auto's newly launched XCD to gain some ground over Hero Honda's flagship product Splendour; 2) Bajaj Auto's insurance business has grown strongly in the recent past and the upcoming demerger could bring valuation upside; and 3) Bajaj Auto's exports have ramped up strongly and we expect this robust growth to be sustained over the next few years.

## Hero Honda has limited potential upside due to volume growth

Hero Honda has introduced a series of new models (mostly variants) in the past year. While this has helped it gain market share in FYO8, we think that such a high pace of product launches is unsustainable. With new launches like XCD from Bajaj Auto coming to the fore in the executive segment, we believe Hero Honda's market share will once again face threats. Its export opportunity is also limited, given the non-competitive agreement with Honda (7267.T, 1-OW). Nonetheless, flat volume growth this year has caused the stock to underperform the market by $18 \%$ and its valuation is not expensive, in our view. We initiate coverage of Hero Honda with a 2-Equal weight rating and a DCF-based 12-month price target of INR754, representing $2 \%$ potential downside.

## TVS faces a threat to its margins; low financial flexibility to mar prospects, in our view

We initiate coverage of TVS Motors with a 2-Equal weight rating and a discounted cash flow-based 12-month price target of INR43.4, representing $6.5 \%$ potential upside from current levels. We believe TVS's margins will remain under constant threat from the strong competitive environment. TVS's past success in volumes had come entirely from the economy segment, where pricing power is very low. In order to improve its performance, TVS must demonstrate success with high-end products, which it is yet to do convincingly, in our view. We also believe TVS has the least financial flexibility among the three large twowheeler players in India. The company's capex plans are aggressive in relation to cash flows, rendering it more susceptible to negative pressure on margins, in our view.

Figure 4: Relative valuation

| Company | Ticker | Currency | Price (Feb 4, 08) | Mkt cap (US\$ mn) | LB Rating | CY06-09E EPS CAGR (\%) | P/E (x) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | CYO6 | CYO7E | CYO8E | CY09E |
| China |  |  |  |  |  |  |  |  |  |  |
| H Share |  |  |  |  |  |  |  |  |  |  |
| Dongfeng Motor | 489 HK | HK\$ | 5.3 | 5,843 | 1-OW | 19.2 | 20.1 | 12.7 | 11.2 | 10.0 |
| Denway Motor | 203 HK | HK\$ | 4.9 | 4,742 | l-OW | 12.7 | 16.3 | 15.5 | 12.6 | 10.1 |
| Great Wall Motor | 2333 HK | HK\$ | 9.7 | 1,355 | l-OW | 17.4 | 11.9 | 10.7 | 8.0 | 6.3 |
| Brilliance China | 1114 HK | HK\$ | 1.6 | 748 | 3-UW | n.a. | NA | 43.0 | 17.5 | 12.0 |
| Geely Auto | 175 HK | HK\$ | 0.9 | 567 | $3-\mathrm{UW}$ | 20.6 | 16.7 | 17.7 | 9.7 | 7.9 |
| H Share average |  |  |  |  |  | 17.5 | 16.3 | 14.1 | 11.8 | 9.3 |
| A Share |  |  |  |  |  |  |  |  |  |  |
| Shanghai Auto | 600104 CH | CNY | 21.5 | 19,573 | 2-EW | 44.6 | 98.5 | 27.3 | 25.8 | 22.5 |
| Korea |  |  |  |  |  |  |  |  |  |  |
| Hyundai Motor (a) | 005380 KS | KRW | 71,400.0 | 1,666,029 | 1-OW | 24.9 | 13.1 | 8.6 | 6.9 | 5.4 |
| Kia Motors (a) | 000270 KS | KRW | 10,350.0 | 381,390 | 1-OW | n.a. | NA | 117.6 | 15.6 | 6.2 |
| Ssangyong Motor (a) | 003620 KS | KRW | 4,770.0 | 61,152 | 1-OW | n.a. | NA | 28.1 | 8.0 | 5.2 |
| Korea Average |  |  |  |  |  | 24.9 | 13.1 | 51.4 | 10.2 | 5.6 |
|  |  |  |  |  | 0 |  |  |  |  |  |
| India |  |  |  |  |  |  | FY07A | FY08E | FY09E | FYIOE |
| Maruti Suzuki India | MSIL IN | INR | 896.6 | 6,563 | 1-OW | 15.6 | 16.6 | 12.2 | 10.6 | 9.3 |
| Tata Motors | TMMT IN | INR | 770.0 | 7,521 | 1-OW | 8.2 | 13.9 | 15.4 | 11.8 | 10.1 |
| Ashok Leyland | AL IN | INR | 37.3 | 1,256 | 2-EW | 4.0 | 11.3 | 11.9 | 10.6 | 9.6 |
| *Bajaj Auto Ltd | BJA IN | INR | 1263.2 | 6,305 | 1-OW | 4.2 | 9.9 | 10.9 | 9.6 | 8.4 |
| Hero Honda | HH IN | INR | 769.6 | 3,894 | 2-EW | 7.3 | 17.9 | 18.3 | 16.1 | 13.5 |
| TVS Motor Company | TVSL IN | INR | 40.75 | 245 | 2-EW | 3.9 | 14.5 | 26.6 | 20.2 | 12.5 |
| India Average |  |  |  |  |  | 9.3 | 13.9 | 13.2 | 11.0 | 9.7 |
| Source: Bloomberg, Lehman Brothers estimates, Pricing as of Feb 4, 2008, *Estimated ex-insurance business |  |  |  |  |  |  |  |  |  |  |

## Industry update

## We expect steady growth amidst increased consolidation

We expect volume growth in the domestic two-wheeler sector to rebound in FYO9. While the recent credit crunch has resulted in a sharp drop in growth in FYO8 year-to-date (YTD), we expect a base correction to wear off this one-off impact. With jobs and incomes in India slated to grow strongly, led by investment in infrastructure, we estimate that domestic volumes will post a CAGR of $10 \%$ over FYO8-FY1 1 .

In our view, Bajaj Auto will top industry volume growth because its export initiatives are paying off. Other marginal two-wheeler Indian players are likely to be left on the sidelines because they have neither the financial muscle nor product innovation skills to compete effectively.

Figure 5: Domestic bike volume growth forecast for Indian two-wheeler major players

| Units | FYO4 | FYO5 | FYO6 | FYO7 | FY08E | FY09E | FYIOE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Industry sales volumes | 4,170,445 | 4,963,498 | 5,810,533 | 6,557,405 | 5,901,665 | 6,491,831 | 7,141,014 |
| YoY growth (\%) |  | 19.00 | 17.10 | 12.90 | -10.00 | 10.00 | 10.00 |
| Bajaj Auto |  |  |  |  |  |  |  |
| Volumes | 973,307 | 1,344,922 | 1,747,806 | 2,078,860 | 1,725,454 | 1,897,999 | 2,087,799 |
| YoY growth (\%) |  | 38.20 | 30.00 | 18.90 | -17.00 | 10.00 | 10.00 |
| Market share (\%) | 23.30 | 27.10 | 30.10 | 31.70 | 29.20 | 29.20 | 29.20 |
| Hero Honda |  |  |  |  |  |  |  |
| Volumes | 2,033,649 | 2,557,385 | 2,893,070 | 3,157,429 | 3,147,768 | 3,461,482 | 3,807,630 |
| YoY growth (\%) |  | 25.80 | 13.10 | 9.10 | -0.30 | 10.00 | 10.00 |
| Market share (\%) | 48.80 | 51.50 | 49.80 | 48.20 | 53.30 | 53.30 | 53.30 |
| TVS |  |  |  |  |  |  |  |
| Volumes | 682,698 | 640,271 | 751,662 | 841,970 | 558,285 | 601,007 | 646,954 |
| YoY growth (\%) |  | -6.20 | 17.40 | 12.00 | -33.70 | 7.70 | 7.60 |
| Market share (\%) | 16.40 | 12.90 | 12.90 | 12.80 | 9.50 | 9.30 | 9.10 |

Source: Society of Indian Automobile Manufacturers (SIAM), Lehman Brothers estimates

Figure 6: Total volume sales growth forecast for Indian two-wheeler major players (including exports)

| Units | FYO4 | FYO5 | FYO6 | FYO7 | FY08E | FY09E | FYIOE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bajai |  |  |  |  |  |  |  |
| Volumes | 1,288,949 | 1,602,646 | 2,029,176 | 2,399,996 | 2,240,373 | 2,538,984 | 2,855,448 |
| YoY growth (\%) | 3.0 | 24.3 | 26.6 | 18.3 | -6.7 | 13.3 | 12.5 |
| Hero Honda |  |  |  |  |  |  |  |
| Volumes | 2,070,147 | 2,621,400 | 3,015,766 | 3,347,019 | 3,356,317 | 3,691,948 | 4,061,143 |
| YoY growth (\%) | 23.4 | 26.6 | 15.0 | 11.0 | 0.3 | 10.0 | 10.0 |
| TVS |  |  |  |  |  |  |  |
| Volumes | 1,147,161 | 1,167,016 | 1,340,375 | 1,526,289 | 1,344,322 | 1,446,348 | 1,547,283 |
| YoY growth (\%) | 2.5 | 1.7 | 14.9 | 13.9 | -11.9 | 7.6 | 7.0 |

## Changing demographics to propel low-end two-wheeler sales

To figure out which stocks in the two-wheeler market offer good investment opportunities, we believe that it is important to examine the composition of growth in the market. We believe growth will shiff from being affordability-led (i.e. via financing) to being led by the creation of new buyers, given the strong economic growth outlook.

## Credit crunch has impacted financing-led growth

We believe that credit availability has been the primary demand dampener in FYO8. In the past, a number of banks were aggressively lending to two-wheeler customers, which pushed the penetration of financing in two-wheeler sales up from $40 \%$ in FYO to $65 \%$ in FY07. Consequently, growth was strong for the past four years with a CAGR of $13 \%$. With the rise in interest rates in the past one year, customers are facing a crunch from a number of factors, such as higher housing interest rates and the availability of personal loans. We believe this has increased delinquency ratios for financers, causing them to halt credit expansion in the two-wheeler financing market (e.g., GE Money). We expect these ratios to remain high, which should mute growth in $\mathrm{FYO8}$ until the base corrects.

Figure 7: Growth in the economy segment most affected


* YTD until October 2007

Source: Crisil

## Investment-led job creation likely to fuel demand for the next three years

Under the Eleventh Five-Year Plan, the Committee on Infrastructure headed by the Prime Minister estimated investments in some key sectors such as highways, civil aviation, ports, and railways to be at INR2,200 bn (US\$55 bn), INR400 bn (US\$10 bn), INR500 bn (US\$12.5 bn) and INR300 bn (US\$7.5 bn), respectively. In addition, work is already underway for schemes like the Bharat Nirman Yojna and the Jawaharlal Nehru National Urban Renewal Mission UNNURM), which were launched in 2005-06. We believe this will help fuel job creation and provide thrust to strong income growth in the next few years.

## Economy segment is likely to pick up growth

Figure 7 shows that the middle-income group is growing at a robust rate, with the strongest growth seen in the INR90,000-200,000 income bracket, followed by the INR200,000500,000 bracket. Most bicycle owners, who desire to move up to owning motorcycles, fall in the INR90,000-200,000 range. The creation of new buyers in this group constitutes a huge opportunity for two-wheeler players because these new buyers will fuel growth in entry-level (economy) bikes.

Figure 8: Growth rate of income classes

| Income groups | Expected growth rate from  <br> (NR '000) Growth rate from 2001-02 to 2005-06 (\%) | No. of households (2001-02) (mn) |  |
| :--- | ---: | ---: | ---: |
| Up to 90 | -13.5 | -2.3 | 135.4 |
| $90-200$ | 41.3 | 29.1 | 41.3 |
| $200-500$ | 61.2 | 52.9 | 9 |
| $500-1000$ | 92.2 | 87.6 | 1.7 |
| $1000-2000$ | 111.5 | 105.5 | 0.5 |
| $2000-5000$ | 128.4 | 125.9 | 0.2 |
| $5000-10,000$ | 147.6 | 157.5 | -165 |
| Above 10,000 | 166 | 8.6 | 0.02 |
| Total | 8.6 | 188.2 |  |

Source: Tata Statistical Outline of India, 2004-05

Hence, we expect the low-end pricing segment of the two-wheeler market to grow faster since the purchasing power of new buyers would not be very high. This has important implications for the industry margins and player strategies.

## Better volumes for Indian players over MNCs ...

The current product positioning suggests that beneficiaries of the economy segment-led growth would primarily be Hero Honda (CD Dawn and CD Deluxe), Bajaj Auto (CT100 and Platina) and TVS (Star City). MNCs are practically non-existent at the lower end of the price band, leaving the three Indian majors to reap significant volume benefits.

## ... though margins will remain strained

Lower-end motorcycle margins are much slimmer than those at the higher end. Furthermore, buyers in this segment are highly price sensitive and tend to shift preferences more easily. We believe this has led to a significant incidence of price undercutting among players (recent examples include TVS's aggressive pricing of Star City and resultant price cuts announced by Bajaj Auto for Platina).

## Bajaj Auto-Hero Honda tussle for market share could constrain pricing power

In the face of strong industry growth and rising player concentration, pricing power could still remain subdued. This is primarily because the fight to capture the number one position may continue to put pressure on both Bajaj Auto and Hero Honda, considering the likely onset of discount-led pricing wars.

We therefore think it will be difficult for margins to expand from current levels. At the same time, we believe that cost pressures, due to significantly higher raw material prices, will likely ease up in comparison with the past two to three years.

## Bajaj Auto's handle on executive segment could strengthen sales mix

We believe Bajaj Auto can make further inroads in the mid-range or executive segment, given it is a relatively new player in this segment. Feedback from dealers also supports our view. In addition, given that Bajaj Auto has built decent demand traction in the lower-end segment, buyers opting for an upgrade may choose to do so within the Bajaj Auto family, in our view.

Hence, the company's sales mix is likely to remain relatively healthy while Hero Honda's could deteriorate in favour of lower-end motorcycles.

## Export spade work would pay rich dividends

Bajaj Auto is the leading motorcycle exporter in India with more than a $60 \%$ market share in FYO8 YTD. Its export volume has registered a CAGR of $74 \%$ in the past five years. We expect the company to sustain this momentum because we think its risks will dissipate due to a much higher base. Hero Honda has a global scale and it is the largest manufacturer of two wheelers in the world, but it would have to go through Honda's network. Given that Honda also has its own 100\%-owned subsidiary in India, we think exports from Hero Honda's stable will remain limited.

## Smaller players may be gradually edged out

We believe smaller players will find it progressively tougher to compete in the market. One reason is their lack of financial strength (please refer to Figure 8). Note that Hero Honda, apart from Bajaj Auto, is the only company that has managed to make it big in the twowheeler space. Hero Honda's success can be attributed to Bajai Auto's earlier miscalculated moves in product offerings (its focus was on scooters). However, no such headroom remains in the market currently, in our view.

Figure 9: Absolute profit differential between various players


Source: Company data, Lehman Brothers research

Another factor is changing market behaviour, characterized by shrinking product life cycles. This implies that a company's competitive quotient could be determined by its ability to continually churn out new products, which would be a tall order for financially weaker players.

We therefore believe that the two-wheeler market will remain consolidated, if not get even more concentrated amongst the top players.

## Domestic penetration levels are much higher than in the past

The domestic volume growth of two-wheelers in the past five years has been strong with a CAGR of $13.3 \%$, fuelled by strong GDP growth and consequently growth in incomes. While we expect strong GDP ahead, we think the penetration level of two-wheelers in the system is at a much higher level compared to the past. At our estimated growth rates, penetration would cross $40 \%$ of households in FY1 6E compared with $25 \%$ in FYO E .

Figure 10: Penetration of addressable market ('000)

| Replacement cycle | FYO2 | FYO6 |  |
| :--- | :--- | ---: | :--- |
| Eight years | No. of Households in target group | 50,296 | 67,089 |
|  | No. of two-wheelers in the market | 25,875 | 38,462 |
|  | \% Penetration | 51.4 | 57.3 |
| Ten years (Our base case) | No. of two-wheelers in the market | 29,138 | 44,473 |
|  | \% Penetration | 57.9 | 66.3 |
|  |  | 21,012 | 31,349 |
| Six years | No. of two-wheelers in the market | 41.8 | 46.7 |

[^0]Figure 11: Overall penetration of two-wheelers

|  | FYO2 | FYO8E | FY10E | FY16E |
| :--- | ---: | ---: | ---: | ---: |
| No of households(m) | 193.6 | 212 | 218 | 238 |
| Bike stock (mn) | 29.1 | 53.4 | 62.7 | 99.8 |
| \% Penetration | 15.1 | 25.2 | 28.7 | 41.9 |
| Source: Lehman Brothers estimates |  |  |  |  |

High base would result in a slowdown in long-term growth rates
We believe volume growth will stay subdued, but still remain healthy at a $10 \%$ CAGR over FYO9E-11E before slowing further to a $7.2 \%$ CAGR during FY11E-16E. We expect the number of two-wheelers to rise from 53.4 mn in FYO8E to 100 mn in FY 16 E , compounded by a high base of 13.4 mn two-wheelers per year sold in FY16E, which would result in lower growth rates thereaffer. We estimate the longterm two-wheeler volume growth to be close to $4 \%$ thereafter.

## Market segmentation

The two-wheeler market can be broadly categorized into motorcycles, scooters and mopeds. Motorcycles have emerged as the largest segment and are the focus of our analysis. Over time, the motorcycle market has changed from a monolithic structure with most models priced at around INR40,000 to one with three broad price segments, namely premium (INR50,000-plus), executive (INR40,000-50,000) and economy (INR30,000$40,000)$. The introduction of low-end motorcycles has aided the rapid shift in customer preferences towards this two-wheeler category, leading to a drastic reduction in scooter and moped sales, a situation which we think is unlikely to change in the near future.

Figure 12: Category-wise two-wheeler volume sales for FYO7


Source: SIAM, Lehmann Brothers research

## Motorcycles

The motorcycle market has seen significant segmentation over the past few years. The process started with TVS's launch of its MAX bike. However, the MAX is only slightly cheaper than Hero Honda's bestselling bike, the CD100 Deluxe.

Figure 13: TVS's MAX, first attempt at market segmentation

| Model | 1998 price (INR) | Volumes in 1998 |
| :--- | ---: | ---: |
| CDIOO Deluxe | 41,507 | 95,000 |
| MAX | 39,137 | 12,500 |

Source: Company data, Lehmann Brothers research

## Bajaj Auto's Boxer changed the rules of the game at the lower end

At the low end, Bajaj Auto changed the rules of the game by launching Boxer in July 2000. At INR36,000, it was priced cheaper than any other bike. TVSL was the first to have tried that with its MAX bike, but on a smaller scale. Bajaj Auto's move paved the way for the migration of a large number of users from scooters and even mopeds to motorcycles.

Figure 13 shows that volume sales of scooters and mopeds started to decline sharply around the start of FYO1, which coincided with the launch of Boxer in July 2000. In addition, a steady decline in interest rates and increasing availability of consumer loans eased the switch from scooters and mopeds to somewhat pricier (though cheaper than before) motorcycles.

Figure 14: Volume sales of scooters and mopeds dipped with the launch of Boxer


Source: SIAM, Lehmann Brothers research

## Hero Honda first segmented the upper end ...

At the upper end, Hero Honda was the first to segment the market with the launch of its 150cc bike CBZ in 1999. At INR55,000, it was priced at a significant premium to other bikes then available. After a strong initial response, the bike's sales volume tapered off gradually.

## ... but Bajaj Auto has since been crowned leader

Bajaj Auto entered into this segment relatively late as it introduced its Pulsar only in November 2001. However, Pulsar has since emerged as the leader, in part attributable to its superior features even as pricing has played an important role. The fully loaded 180cc Pulsar with disc brakes and electric start was launched at INR53,896, the 150 cc model with disc brakes and electric at $\operatorname{NR} 48,923$, and the 150 cc model with disc brakes at INR44,884 (all prices ex-showroom price). Since Bajaj Auto was making a strong bid to push volume sales, its pricing strategy was more aggressive.

## A three-tier market structure

To summarize, the motorcycle market in India has changed from a monolithic structure with most models priced around $\operatorname{NR} R 40,000$ to a market with three broad price segments: premium (INR50,000-plus), executive (INR40,000-50,000) and economy (INR30,00040,000).

Figure 15: Price segmentation and models of each competitor

| (INR) | Hero Honda | Bajaj Auto | TVS | Suzuki | HMSI | Yamaha |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Premium |  |  |  |  |  |  |
| 55,000+ | CBZ Xtreme, Karizma; Glamour FI, Hunk | Pulsar 180, Avenger | Apache RTR |  | Unicorn ES |  |
| 50,000-55,000 | Achiever; Glamour | Pulsar 150 | Apache KS |  | Unicorn KS | Fazer DIX |
| Executive |  |  |  |  |  |  |
| 45,000-50,000 | Super Splendor, | Discover upper end | Victor upper end, Flame | Zeus CD | Shine | Fazer LX, Gladiator DLX |
| 40,000-45,000 | Splendor, Passion, Glamour | Discover, XCD | Victor Edge | Zeus DU |  | Libero; Gladiator; Alba |
| Economy |  |  |  |  |  |  |
| 35,000-40,000 | CD Deluxe | Platina | Centra; Star City ES | Heat |  | Crux |
| 30,000-35,000 | CD Dawn | CTIOO; | Star | - | - |  |

Source: Autocar Magazine, October 2007

Bajaj Auto has maintained the lead in the economy segment; we expect this segment to gain momentum after a slowdown in FYO8; maximum benefits should accrue to the market leader

Figure 16: Market share in economy segment


Source: Crisinfac Note: * denotes YTD until October 2007

Figure 17: Market share in executive segment
Hero Honda has led the executive segment fort many years; we expect it to remain the leader, but also believe Bajaj Auto will win significant share from it in the next few years


Source: Crisinfac Note: * denotes YTD until October 2007

Figure 18: Market share in premium segment

The premium segment has been Bajaj Auto's forte; we expect Bajaj Auto to continue to lead this segment with its flagship product, Pulsar


We believe the evolution of the market in terms of segmental growth will determine how the market share of various players will shift in the future.

## Hero Honda leads the motorcycle market ...

The motorcycle market continues to be dominated by the executive segment, in which Hero Honda is the largest player. Hero Honda's largest-selling model is Splendor and its variants.

## ... but Bajaj Auto is catching up, opening a new segment ...

Bajaj Auto made its entry into the motorcycle market with segments in which Hero Honda had little presence. At the low end, Bajaj Auto first tasted success with the Boxer, and then with the CT 100. Its recently launched Platina was also well received in the market. At the high end, Bajaj Auto has done very well with the Pulsar.

## ... and is now moving into Hero Honda's territory

Bajaj Auto's biggest achievement in the past two years is the inroads it has made into Hero Honda's territory, i.e., in executive segment motorcycles. The success of Discover has significantly accelerated Bajaj Auto's volume growth and we expect XCD to further dent sales volume of Hero Honda's Splendour. As a result, Bajaj Auto now performs well in all segments whereas Hero Honda's volumes are mainly from the executive segment. We believe Bajaj Auto's broad product range will attract more customers and raise the potential of scaling customers up the value chain once they enter showrooms.

## Scooters

Scooters, which formed the mainstay of the two-wheeler market until the early 1990s, are now down to $12 \%$ of the market's volume sales (based on FYO7 sales). Since most buyers have shifted to motorcycles, scooter players have seen a significant shift in product focus.

## No USP remains ...

The original grounds for the popularity of scooters are as follows:

- Lower pricing. This is no longer true. Honda's largestselling scooter model is priced at INR37,000, higher than the typical entry-level motorcycle at INR33,000. In the past when scooters were the largest-selling two-wheeler category, they were cheaper than motorcycles by INR 10,000.
- Family vehicle. This positioning clearly does not work now because the slot has been taken over by small cars.

Given that the above-mentioned planks for sales of scooters have dissipated, their appeal as a mass-market product has disappeared, in our view. Besides, the typical scooter's engine capacity of $\sim 150 \mathrm{cc}$ is a natural constraint on fuel efficiency, which is an important consideration in these times of high fuel prices.
... which means major volumes from this segment are ruled out
Since customer preference has shifted in favour of motorcycles, traditional leaders in the scooter business have withdrawn from the market, giving way to new leaders in a significantly smaller market. From June to November 2007, sales of scooters barely averaged 94,430 per month, compared with 561,511 for motorcycles.

Figure 19: Scooter volumes by player


Source: SIAM, Lehmann Brothers research

Note that TVS's volume sales mainly come from TVS Scooty, which at INR35,000, is priced about the same as a low-end motorcycle.

## Scooters would be a niche market

In our view, the market for scooters is confined to: 1) low-priced vehicles like Scooty, which appeal to low-budget buyers like youngsters. Yet, in this segment volumes are still likely to remain low because buyers would have to stretch their budget just a bit to graduate to motorcycles; and 2) niche vehicles, such as Hero Honda's scooters, are positioned as easy-to-ride vehicles for women.

We believe there will be no major change in the fortunes of the scooter market in the near future. Even if there was a major push by any company in the scooter segment, we do not expect it to translate into significant volumes.

## Mopeds

Sales of mopeds have shrunk radically over the years, owing to the drop in prices of entrylevel motorcycles and increased availability of cheap loans that have made motorcycles more affordable to consumers. Note that the fuel efficiency gap that existed between motorcycles and mopeds in the early 1990s has narrowed.

Overall, we believe that mopeds will continue to remain a very small segment. It is possible for some growth in other segments to trickle down to mopeds given the high economic growth. We estimate that the moped segment will rise at a CAGR of $6.7 \%$ for the next three years.

## Competitive landscape

The two-wheeler industry in India has become highly consolidated since the competitive strength of smaller players has progressively dwindled. Hero Honda, Bajai Auto and TVS have emerged as the top three players, commanding over $84 \%$ of the two-wheeler market. Despite the high market concentration, the pricing power of these players is not very high since much of the volume growth in the industry comes from low-priced segments. As Bajaj Auto and Hero Honda battle for market share, we believe it will cap price increases.

## Two-wheeler industry has witnessed increasing consolidation

One of the most striking features of the two-wheeler industry is that despite rapid growth over the past ten years, the competitive strength of at least four players - LML (not rated), Yamaha Motor India Pte Ltd (not listed), Enfield (not listed) and Kinetic (not rated) - has taken a significant beating. Even TVS has lost ground to Bajaj Auto and Hero Honda. To that extent, the two-wheeler industry in India has become increasingly consolidated over a period of time.

Figure 20: Rising market share of major players reflects industry consolidation

| $(\%)$ | Bajaj Auto | Yamaha | Hero Honda | Honda | Kinetic | TVS | Top 2 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Mar 97 | 41.6 | 7.3 | 9.1 | 0 | 9.1 | 17.3 | 50.7 |
| Mar 98 | 37.2 | 5.9 | 13.4 | 0 | 8.8 | 18.9 | 50.6 |
| Mar 99 | 36.1 | 5.6 | 15.6 | 0 | 7.7 | 20.7 | 51.7 |
| Mar 00 | 32.6 | 6.5 | 20.3 | 0 | 7.4 | 22.4 | 52.9 |
| Mar 01 | 28.6 | 4.2 | 27.9 | 0 | 7.4 | 23.4 | 56.5 |
| Mar 02 | 27.8 | 5.0 | 33.5 | 1.3 | 5.8 | 20.4 | 61.3 |
| Mar 03 | 24.8 | 5.3 | 34.2 | 3.1 | 4.6 | 22.4 | 59.0 |
| Mar 04 | 22.4 | 4.3 | 37.9 | 5.8 | 3.7 | 20.9 | 60.3 |
| Mar 05 | 23.7 | 3.4 | 41.2 | 8.3 | 2.8 | 18.0 | 64.9 |
| Mar 06 | 26.3 | 26.6 | 41.2 | 8.0 | 1.7 | 17.9 | 67.5 |
| Mar 07 | 24.1 | 41.3 | 8.8 | 1.0 | 18.1 | 67.9 |  |
| Dec 07* | 1.6 | 43.7 | 11.8 | 0.6 | 16.2 | 67.9 |  |
| * YTD. Source: SIAM, Lehmann Brothers research |  |  |  |  |  |  |  |

## Multinationals have not been able to make much headway

Yamaha was the first multinational company (MNC) to expand its two-wheeler business to India, followed by Honda, and more recently, Suzuki (7269 T, l-OW). But the combined volume sales of these companies constitute less than $7.5 \%$ of the domestic two-wheeler market.

Figure 21: Market share of MNCs in overall two-wheeler industry


Source: SIAM, Lehmann Brothers research

The failure of MNCs to establish a strong presence in the domestic market can be attributed to a number of factors: 1) widespread service networks of domestic manufacturers, which make for low cost of ownership on their vehicles compared with a sprinkling of MNC service centers; 2) MNCs' inability to establish any significant technological superiority; and 3) difficulty in dealing with Indian labor (examples include strikes at the Honda and Toyota plants).

Another issue is that the two-wheeler business is not really a capital guzzler, unlike the car business. That means that MNCs cannot steal a march over their domestic competitors just by pumping in extra capital. Hence, we do not believe that MNCs pose any threat to Indian companies, at least not in the medium term.

## However, pricing power remains limited

Although the two-wheeler market is relatively consolidated, the pricing power of players is not very high. This is largely due to the following.

- Emergence of low-end segments. The two-wheeler market has undergone a structural change - what was earlier a homogenous market, comprising 100 cc bikes, has been segmented into three price categories. Much of the volume growth in the industry is due to the emergence of low-priced segments. While this has bolstered growth in volume sales of motorcycles (partly by inducing users of mopeds and scooters to trade up), we think price competition in this segment has led to margin erosion; and
- Volume competition between Bajaj Auto and Hero Honda. Bajaj Auto has come a long way in catching up with Hero Honda's volumes in the past two years. For Hero Honda, it is of utmost importance to protect its volume leadership, which rests primarily on the 13 -year-old brand Splendor (note that there have been several upgrades to the product). Hence, if Bajaj Auto's volumes continue to inch closer to Hero Honda's, the latter might resort to price cuts. We believe that structurally, the contest for market leadership will tend to cap price increases, with contenders adopting a discountled approach to raise volume sales.


## ROI of the biggest two-wheeler companies are still very large

Indian two-wheeler companies continue to generate very high returns on their investment. Despite strong competition, the return on investment (ROI) of top players has remained high because investments required to raise volumes have been relatively low.

Figure 22: ROIs - Indian two-wheeler companies

|  |  | Baiaj Auto | Hero Honda | TVS |
| :--- | :--- | ---: | ---: | ---: |
|  |  | (\%) | (\%) | (\%) |

Source: Company data, Lehmann Brothers research

## Large players pass on a sizeable part of investments to their vendors

One result of the industry's consolidation is that vendors of leading motorcycle brands have very low bargaining power against manufacturers that have the leverage of huge volumes. As a result, a large part of cost escalation and even required investments sit in the books of vendors. The financials of the vendors show that the ROIC of the business is not high and is supported by keeping returns for vendors very close to their cost of capital, in our view.

Figure 23: PAT margin of auto ancillaries


## India's two-wheeler exports are accelerating ...

Indian two-wheeler companies started exploring the export market after a slowdown in the domestic market. We believe their exports initiatives are now starting to pay off. Figure 23 shows that export growth of Indian two-wheeler companies has been accelerating on a rising base, indicating increased acceptance of Indian goods in foreign markets.

Figure 24: Two-wheeler export growth


Source: SIAM, Lehmann Brothers research
... and we expect the growth momentum to be sustained
We expect strong growth in exports to continue on the strength of:

- Global scale (Hero Honda is the world's largest maker of two-wheelers);
- Quality, partly thanks to tie-ups with global companies and fierce competition in the domestic market;
- Ample cash flows to invest in long-term customer acquisition in target markets; and
- Spade work from export leader Bajai Auto.


## We believe a lack of focus on exports has kept volumes low...

Until now, two-wheeler exports were not considered a focus area primarily because of the limited technical capability of two-wheeler players and a small porfflio of successful models. For the half year ending September 2000, exports constituted just $2.3 \%$ of sales. While this has since risen to $10.6 \%$ in 1 HFY08 at a CAGR of $25 \%$, the volume are still very low ( 0.7 mn vehicles for 2006-07).

Figure 25: Company exports as a percentage of total sales (half yearly)


Source: SIAM, Lehmann Brothers research

## ... but Indian players are now geared for foreign markets

However, armed with a wider and more technologically advanced product porffolio as well as pricing advantage, there is no reason to believe that Indian companies cannot replicate their domestic success in other markets as well. Bajaj Auto is already showing signs of confidence in its products as evidenced by its entry into the Indonesian sports motorcycle market, which is dominated by world giants like Honda.

## Emerging markets offer tremendous opportunity

Indian two-wheeler companies have adopted a strategy of targeting markets that are comparable to India in terms of purchasing power and, therefore, have a similar appetite for products. So far, players have been exploring smaller untapped markets like Nigeria (bike market of 1 mn ), Iran ( 0.5 mn ), Indonesia ( 5 mn ), and Columbia ( 1 mn ). Nigeria, for instance, is currently dominated by Chinese and second-hand Japanese bikes. These are either high on maintenance or suffer from the unavailability of genuine spare parts. In countries like Iran, more stringent emission norms are likely to put pressure on the position of Chinese competitors. Similarly, other world markets offer significant untapped potential.

## Bajaj Auto is the clear leader in exports

Bajaj Auto has been leading the pack in terms of exports, clocking consistent expansion in its share of exports in the industry for the past five years. Its strong performance is a function of several factors, such as consumer preferences, good distributors, a strong after-sales service and spare parts availability.

Figure 26: Export market shares in two-wheelers (half-yearly)


Source: SIAM, Lehman Brothers research

## Bajaj Auto Ltd: 1-Overweight with a price target of INR2,939.60

We have valued BJA on a sum-of-the-parts (SOTP) basis. For this, we have taken into account the structure that will emerge after the de-merger. As guided by management through a press release on 17 May 2007, the de-merger should happen in fiscal 1 HO . While we believe that there is likely to be value dilution at the holding company level, value discovery in the insurance business is likely to be a stronger trigger on an overall basis, in our view. BJA will de-merge into three companies:

- New Bajaj Auto (NBJA). This entity will hold 70\% of BJA's (1) existing auto business and (2) cash and investments of INR 15,000 mn.
- Bajaj Finserve (BFS). This entity will hold $70 \%$ of BJA's (1) general insurance business, (2) life insurance business, (3) Bajaj Auto Finance, and (4) cash and investments worth INR8,000 mn.
- Bajaj Holding and Investments Ltd (BHIL). This entity will hold (1) $30 \%$ of NBJA, (2) $30 \%$ of BFS, (3) listed equity and (4) the company's remaining cash and investments.


## 1-Overweight with a price target of INR 2,939.6

We have assumed a discount of $30 \%$ to the holding company because it will be purely an investment company with no core business. We have valued cash at 10x FY09E non-core EPS of INR42.76 and allocated it to the three different companies on the basis of their cash holdings.

Figure 27: BJA - sum-of-the-parts valuation

|  | Full value (INR mn) | Discount (\%) | Value of stake (INR mn) | Value/share (INR) |
| :---: | :---: | :---: | :---: | :---: |
| New Bajaj Auto (NBJA) |  |  |  |  |
| Existing auto business | 108,049 | 0.0 | 108,049 | 1,067.7 |
| Cash + investments | 15,000 | 41.9 | 10,568 | 104.4 |
| Total |  |  | 118,616 | 1,172.1 |
| Value of 70\% stake |  |  | 83,031 | 820.5 |
| Bajaj Finserve (BFS) <br> Bajaj General Insurance | Full value (INR mn) | Discount (\%) | Value of stake (INR mn) | Value/share (INR) |
|  | 43,805 | 51.0 | 22,341 | 220.8 |
| Bajaj Allianz Life Insurance | 429,659 | 26.0 | 111,711 | 1,103.9 |
| Bajaj Auto Finance | 14,074 | 46.3 | 6,518 | 64.4 |
| Cash + investments | 8,000 | 41.9 | 5,636 | 55.7 |
| Total |  |  | 146,206 | 1,444.7 |
| Value of $70 \%$ stake |  |  | 102,344 | 1,011.3 |
| Bajaj Holding \& Investments Ltd. (BHIL) | Full value (INR mn) | Discount (\%) | Value of stake (INR mn) | Value/share (INR) |
| New BJA | 118,616 | 30.0 | 35,585 | 351.6 |
| Bajai Finserve | 146,206 | 30.0 | 43,862 | 433.4 |
| Listed equity |  |  | 47,193 | 466.3 |
| Cash + investments with BHIL |  |  | 27,067 | 267.5 |
| Total |  |  | 153,707 | 1,518.8 |
| Value of BHIL after holding discount @30\% |  |  | 118,236 | 1,168.3 |
| Total value of all three shares |  |  |  | 3,000.1 |
| Price target (end Jan 2009) |  |  |  | 2939.6 |
| Source: Company data, Lehman Brothers estimates |  |  |  |  |

## Valuation of auto business

Figure 28: BJA - auto business valuation

|  | EPS FYO9E (INR) | Multiple (x) | Value/share (INR) |
| :--- | ---: | ---: | ---: |
| Core earnings | 89.0 | 12.0 | 1,068 |
| Non-core earnings | 42.8 | 10.0 | 428 |
| Total | 131.7 | 11.4 | 1,495 |
| Rolled back to Jan 2008 | 131.7 | 11.0 | 1,450 |

Source: Lehman Brothers estimates

We value BJA's core auto business at $12 x$ FYO9E core EPS of INR89 and non-core earnings at $10 \times$ FYO9E non-core EPS of INR42.8. The weighted average multiple of these is $11 \times$ FYO9E EPS. We have allocated the value of non-core earnings in the ratio of cash being given to the three companies post de-merger. After allocation, the discount works out to be $41.9 \%$ of the company's cash on books in FYO9E

## Valuation of insurance JVs

Bajaj has done two joint ventures with Allianz group of Germany for life insurance and general insurance business. The valuation of these JVs has been done by our Indian banking analyst, Srikanth Vadlamani. We value Baiaj's life insurance business at 23x FYO9E NBAP and its general insurance business at $21 \times$ FYO9E surplus PAT.

## Bajaj Allianz Life Insurance

We value the life insurance business at $\operatorname{INR1,070}$. We are building in assumptions of $120 \%, 50 \%$ and $35 \%$ growth in annualized premium equivalent (APE) for FYO8E, FYO9E and FYIOE, respectively. We are building in NBAP margins of $18 \%$ in FYO9E and $17 \%$ in FYIOE. We value the life insurance business at $23 x$ FYO9E NBAP, which implies a value of INR430 bn for the life insurance entity. We value the $26 \%$ effective stake of Bajaj at INR104 bn or INR1,070/share.

Figure 29: Bajaj Allianz Life Insurance - valuation methodology

| (INR mn) | FYO6 | FYO7 | FY08E | FY09E | FY10E |
| :---: | :---: | :---: | :---: | :---: | :---: |
| APE | 13,379 | 31,518 | 69,339 | 104,008 | 140,411 |
| Growth rate (\%) |  | 136 | 120 | 50 | 35 |
| NBAP margins (\%) |  |  |  | 18 | 17 |
| NBAP |  |  |  | 18,722 | 23,870 |
| P/E multiple |  |  |  | 23 | 18 |
| Structural value |  |  |  | 429,659 | 429,659 |
| Embedded value (net of capital costs) |  |  |  |  |  |
| Total value of BJA |  |  |  | 429,659 | 429,659 |
| Total value of Bajai's 26\% stake |  |  |  | 111,711 | 111,711 |
| No of shares |  |  |  | 101 | 101 |
| Value/share of Bajaj - end FYO9 |  |  |  | 1,104 | 1,104 |
| Value/share of Bajaj - 12 -month forward |  |  |  | 1,070 | 1,070 |

Source: Company data, Lehman Brothers estimates

## Bajaj Allianz General Insurance

We value the general insurance business at INR2 14 per share
Bajaj reported a combined growth ratio of $98 \%$ in $\mathrm{FYO7}$. We are building in assumptions of $30 \%, 80 \%$ and $30 \%$ growth in post-tax combined surplus for FYO8E, FYO9E and FY1OE, respectively. We value the general insurance business at $21 \times$ FYO9E post-tax combined surplus, which is INR22 bn or INR214/share of Bajaj.

Figure 30: Bajaj Allianz General Insurance - valuation methodology

| (INR mn) | FY07 | FY08E | FY09E | FYIOE |
| :---: | :---: | :---: | :---: | :---: |
| Gross written premium | 17,863 |  |  |  |
| Growth (\%) | 40 |  |  |  |
| Retention ratio (\%) | 58 |  |  |  |
| Net written premium | 10,398 |  |  |  |
| Growth (\%) | 49 |  |  |  |
| Combined growth ratio | 98\% |  |  |  |
| Combined ratio surplus | 900 |  |  |  |
| Investment income | 300 |  |  |  |
| Total surplus - PBT | 1,200 |  |  |  |
| Tax rate (\%) | 25 |  |  |  |
| PAT - surplus | 900 | 1,170 | 2,106 | 2,738 |
| Growth (\%) |  | 30 | 80 | 30 |
| Multiple |  |  | 21 | 16 |
| Business valuation |  |  | 43,805 | 43,805 |
| Stake of Bajaj (\%) |  |  | 51 | 51 |
| Value of Bajai's stake |  |  | 22,340 | 22,340 |
| Value/share of Bajaj - end FY09 |  |  | 221 | 221 |
| Value/share of Bajaj - 12 -month forward |  |  | 214 | 214 |
| Source: Company data, Lehman Brothers estimates |  |  |  |  |

## Hero Honda: 2-Equal weight with target price of INR754

We have valued HH by discounting free cash flow to equity (FCFE). For this purpose, we have assumed flat profit for FYO8, followed by a $15.5 \%$ profit CAGR until FY1 1 . We have assumed a terminal growth rate of $4 \%$, a cost of equity at $13 \%$, and a terminal ROE of $30 \%$. This implies a multiple of $15.8 \times$ FYO9E EPS.

Figure 31 : HH - DCF-based valuation

| (INR mn) | FYO5 | FYO6 | FY07 | FY09E | FYıOE | FYıle |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total revenue | 74,551 | 87,515 | 99,482 | 110,779 | 123,008 | 136,587 |
| YoY growth (\%) |  | 17.4 | 13.6 | 11.0 | 11.0 | 11.0 |
| Operating profit | 11,923 | 13,910 | 12,099 | 13,522 | 15,501 | 17,210 |
| OPM (\%) | 16.0 | 15.9 | 12.2 | 12.2 | 12.6 | 12.6 |
| Interest | -1 | -61 | -230 | 0 | 0 | 0 |
| Depreciation | 894 | 1,146 | 1,398 | 1,992 | 2,246 | 2,479 |
| PBT | 12,173 | 14,122 | 12,461 | 13,657 | 15,874 | 17,913 |
| Tax | 4,068 | 4,409 | 3,882 | 4,140 | 4,481 | 4,982 |
| Tax rate (\%) | 33.42 | 31.22 | 31.15 | 30.31 | 28.23 | 27.81 |
| PAT | 8,105 | 9,713 | 8,579 | 9,517 | 11,393 | 12,930 |
| YoY growth (\%) | - | 19.85 | (11.68) | 13.45 | 19.71 | 13.50 |
| Depreciation | 894 | 1,146 | 1,398 | 1,992 | 2,246 | 2,479 |
| Increase in WC | -4,097 | 1,858 | 1,662 | -668 | -1,019 | -891 |
| Capex | 2,499 | 3,711 | 4,744 | 2,500 | 2,500 | 2,500 |
| Debt raised-Debt repaid | 271 | -160 | -206 | 229 | 116 | 185 |
| Equity raised | 0 | 0 | 0 | 0 | 0 | 0 |
| Free cash flow | 10,868 | 5,130 | 3,365 | 9,906 | 12,274 | 13,986 |
|  | FY12 | FY13 | FY14 | FY16 |  |  |
| PAT | 14,094 | 15,363 | 16,745 | 19,172 |  |  |
| YoY growth (\%) | 9.00 | 9.00 | 9.00 | 7.00 |  |  |
| FCFE | 9,866 | 10,754 | 11,722 | 14,698 |  |  |
| ROE (\%) | 30.0 | 30.0 | 30.0 | 30.0 |  |  |
| Retention ratio | 30.0 | 30.0 | 30.0 | 23.3 |  |  |
| NPV of FCFE | 133,320 |  | Term. ROE (\%) | Cost of Eq. (\%) | TV (INR mn) |  |
| No of shares | 200 |  | 30.0 | 13.0 | 191,999 |  |
| Price/share [Jan 2008] | 668 |  |  |  |  |  |
| Price/share [Jan 2009] | 754.4 |  |  |  |  |  |

Source: Company data, Lehman Brothers estimates

## TVS Motor: 2-Equal weight with target price of INR43.4

We initiate coverage of TVS with a 2 -Equal weight rating and a 12 -month price target of INR43.4, which is based on discounted cash flow (DCF) of free cash flow-to-equity (FCFE). This implies a multiple of $13.3 \times \mathrm{FY}$ OE earnings.

Figure 32: TVS - DCF-based valuation

| INR (mn) | FYO5 | FYO6 | FYO7 | FYO8E | FYO9E | FYıOE | FY11E |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total revenues | 29,498 | 32,821 | 39,101 | 35,041 | 38,790 | 42,165 | 45,835 |
| YoY growth (\%) |  | 12.5 | 19.2 | -10.3 | 10.7 | 8.7 | 8.7 |
| Operating Profit | 2,855 | 2,516 | 1,924 | 1,400 | 1,821 | 2,230 | 2,686 |
| OPM (\%) | 9.7 | 7.7 | 4.9 | 4.0 | 4.7 | 5.3 | 5.9 |
| Interest | 8 | 131 | 321 | 346 | 341 | 307 | 241 |
| Depreciation | 896 | 939 | 876 | 985 | 1,093 | 1,154 | 1,215 |
| PBT | 2,005 | 1,684 | 908 | 519 | 683 | 1,107 | 1,645 |
| Tax | 629 | 515 | 243 | 156 | 205 | 332 | 493 |
| Tax rate (\%) | 31 | 31 | 27 | 30 | 30 | 30 | 30 |
| PAT | 1,376 | 1,170 | 666 | 363 | 478 | 775 | 1,151 |
| YoY growth (\%) |  | -15.0 | -43.1 | -45.4 | 31.6 | 62.0 | 48.6 |
| Depreciation | 896 | 939 | 876 | 985 | 1,093 | 1,154 | 1,215 |
| Increase in WC | 580 | 934 | 820 | -720 | 156 | 135 | 146 |
| Capex | 1,520 | 1,113 | 2,835 | 1,000 | 1,000 | 1,000 | 1,000 |
| Debt raised-debt repaid | 678 | 1,982 | 2,485 | 362 | 116 | 138 | 311 |
| Equity raised | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Free cash flow | 850 | 2,044 | 373 | 1,431 | 531 | 931 | 1,531 |
|  | FY12E | FY13E | FY14E | FY15E | FY16E |  |  |
| PAT | 1076 | 1162 | 1255 | 1343 | 1437 |  |  |
| YoY growth (\%) | 8.00 | 8.00 | 8.00 | 7.00 | 7.00 |  |  |
| FCFE | 359 | 418 | 483 | 647 | 692 |  |  |
| ROE (\%) | 12.00 | 12.50 | 13.00 | 13.50 | 13.50 |  |  |
| Retention ratio | 66.67 | 64.00 | 61.54 | 51.85 | 51.85 |  |  |
| NPV of FCFE | 9,115 |  | Term. ROE | Terminal growth | Cost of Eq. | TV |  |
| No of shares (mn) | 238 |  | 13.50 | 4.00 | 13.00 | 11,688 |  |
| Price per share [Jan 2008] | 38.4 |  |  |  |  |  |  |
| Price per share [Jan 2009] | 43.4 |  |  |  |  |  |  |

Source: Company data, Lehman Brothers estimates

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Other Material Conflicts
Hyundai Motor Company (005380.KS): Lehman Brothers International (Europe), Seoul branch is a liquidity provider of equity linked notes for Hyundai Motor Company.

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| :---: | :---: | :---: | :---: |
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| Great Wall Motor C0 | 2333.HK | HKD 9.81 | 1-Overweight / 1-Positive |
| Hero Honda | HROH.NS | INR 769.60 | 2-Equal weight / 1-Positive |
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| Shanghai Automotive $\mathrm{Co}^{\text {O }}$ | 600104.5S | CNY 21.37 | 2-Equal weight / 1-Positive |
| Ssangyong Motor | 003620.KS | KRW 5000 | 1-Overweight / 1-Positive |
| Suzuki Motor | 7269.T | JPY 2870 | 1-Overweight / 2-Neutral |
| Tata Motors | TAMO.NS | INR 769.95 | 1-Overweight / 1-Positive |
| TVS Motor | TVSM.NS | INR 40.75 | 2-Equal weight / 1-Positive |

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[^0]:    Source: Lehman Brothers research,

