Politecnico di Milano Student Research

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PIAGGIO S.p.A.

Date 01.21.2011

Automobiles & Parts

Ticker: Bloomberg (Reuters) - PIA IM (PIA.MI)

Italy

Recommendation Accumulate

Price target: € 2.65

Price, 21 Jan 2011: € 2.40

Upside: 10.4 %

Key Financial Data	
Book Value per Share	€ 1.19
Earnings per Share	€ 0.12
Dividend per Share	€ 0.07
Dividend Yield	2.92 %
FCF Yield	2.25 %
Debt/Equity	1.15 x
Net Debt/Equity	0.77 x
Net Debt/EBITDA	1.70 x
ROE	10.26 %
ROA	6.88 %
ROI	7.19 %
Forward 12m ratios:	
EV/SALES	0.8 x
EV/EBITDA	5.6 x
EV/EBIT	10.1 x
P/E	15.8 x

Source: Company's financial statements, Bloomberg, PdM estimates

Market Data	
Market Capitalization	€ 878.342 M
Shares Outstanding	371.794 M
Main Shareholders:	
- IMMSI S.p.A.	53.05 %
- Diego Della Valle	5.34 %
- State of New Jersey Common Pension Fund	3.23 %
Free Float	39.31 %
52w Price Range	€ 1.76 – € 2.71
Avg. Monthly Volume	18.804 M
Beta	1.00
Relative Performance vs.:	
FTSE MIB	
- 1m	(5.5) %
- 3m	(8.9) %
- 12m	28.5 %
EURO STOXX Automobiles & Parts	
- 1m	1.5 %
- 3m	(18.9) %
- 12m	(31.8) %

Source: Bloomberg, PdM estimates

Highlights

- **We initiate coverage of Piaggio with an accumulate rating and an end-of-the year target price of € 2.65, that offers a 10.42 % upside from current stock price.** Piaggio is the largest European manufacturer of two wheel motor vehicles and one of the leading players in the Indian Light Commercial Vehicles market. After the successful turnaround of its business, and the recent downturn of the European and the American economies, Piaggio's main growth driver has become product line expansion in the Emerging Markets of India and South-Eastern Asia.

- **Piaggio will grow revenues and expand margins** on the wake of the increasing exposure to Emerging Markets. Entry into new ASEAN countries and launch of new products in India and Vietnam will fuel 6.8% consolidated top line growth in 2011 and 7.8% CAGR from 2010 to 2013. EBITDA margin will expand by 45bps in 2011 and by 165bps by 2013, also because of efficiency improvements in European operations.

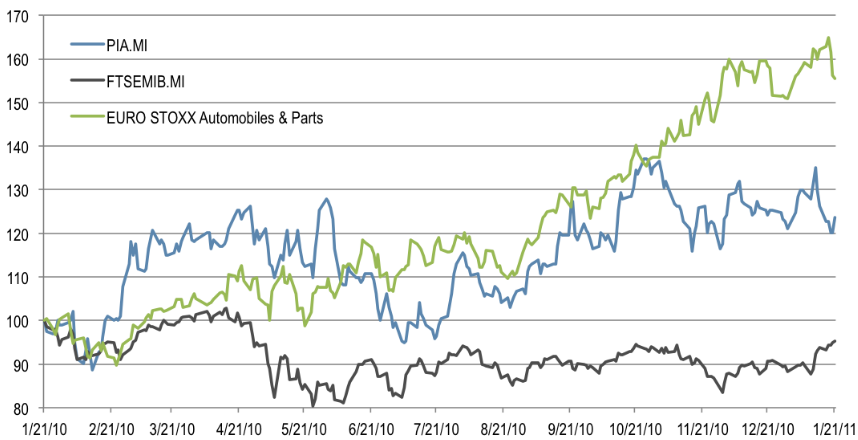
- **Net financial position is expected to improve.** Supported by top line growth and margin expansion, Operating Cash Flow is expected to increase and OCF to sales ratio to rise from 8.86% in 2010 to 9.82% in 2013. Based on our estimates, Piaggio's net financial position will fall from €342.9M in 2010 to €337.4M in 2011, and to €305.1M by 2013. This will leave Piaggio with ample financial flexibility to expand the production capacity and gain market share.

- **Valuation.** Our valuation methods lead to a target price of €2.65 by the end of 2011. We think Piaggio may offer long term upside in case it succeeds in executing its 2010-13 business plan. This year wil be crucial for Piaggio to prove its ability to succeed in its internationalization strategy. We evaluated Piaggio applying two techniques: Discounted Cash Flow and Multiple Analysis.

- **Main risks to our target price** are: failure to expand into new markets due to unsuccessful product launches and the increase in the level of competition in current markets. Other risks come from lower than expected growth in Emerging Markets, volatility in exchange rates, and a stronger than expected increase in energy, raw materials, and component costs.

Forecast Summary	2008	2009	2010 E	2011 E	2012 E	2013 E
Net Sales (€ M)	1,570.06	1,486.88	1,510.65	1,613.36	1,755.63	1,893.58
EBITDA (€ M)	189.05	200.80	201.67	222.64	251.06	284.04
Net Income (€ M)	43.33	47.42	45.58	55.51	69.11	86.89
Earning per Share (€)	0.11	0.12	0.12	0.15	0.19	0.24
Dividend per Share (€)	0.06	0.07	0.07	0.08	0.09	0.12

Source: Company's financial statements, PdM estimates



Source: Bloomberg

We initiate coverage of Piaggio with an accumulate rating and a target price of € 2.65, offering a 10.42% upside from current stock price. Piaggio is the largest European manufacturer of two wheel motor vehicles and one of the leading players in the Indian Light Commercial Vehicle market. During 2008 recession, Piaggio was able to maintain its margins, mainly thanks to its exposure to India and Vietnam. The stock outperformed FTSE MIB and is up 58% from Oct 15, 2008.

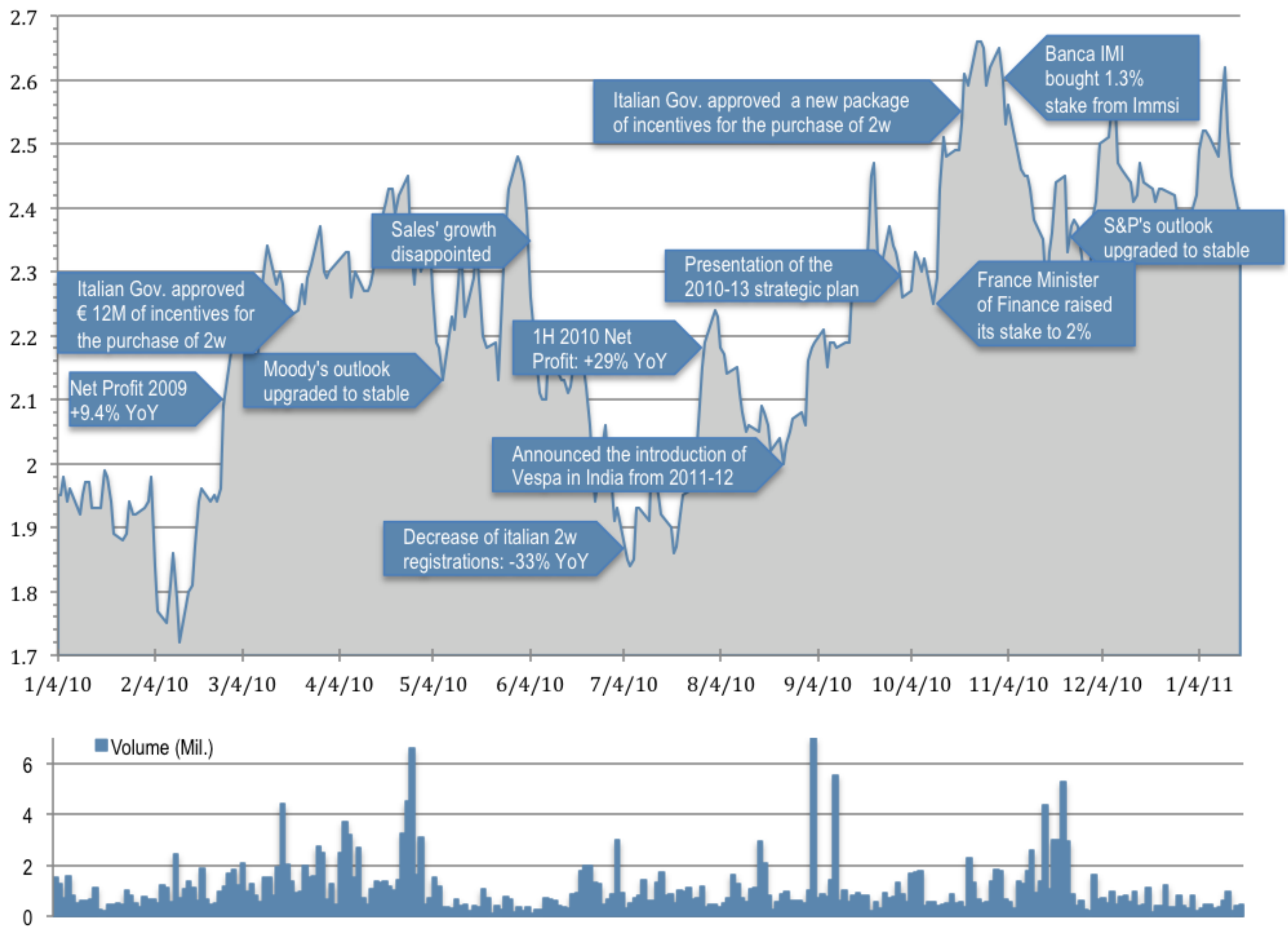
Management targets to increase revenues from Asia from 25% of total sales in 2009 to 40% by 2013, primarily through product line expansion in India (launch of Vespa and of new 4-wheel commercial vehicles) and in South-Eastern Asia (expansion of the Vietnamese operations and entry in other ASEAN countries such as Indonesia and Thailand). This strategy is expected to deliver a 2010-13 top-line CAGR of 7.8%, EBITDA CAGR of 12.1% and EPS CAGR of 19.7%. Further efficiency gains in European operations will support margin expansion. EBITDA margin is expected to increase by 165 bps by 2013.

As a consequence of top line growth and margin expansion, we expect Operating Cash Flow to increase, with the OCF to sales ratio expected to rise from 8.86% in 2010 to 9.82% in 2013. According to our estimates, cash generated will be employed to reduce Piaggio's net financial position from € 342.9M in 2010 to € 305.1M in 2013 and will leave the group with enough financial flexibility to expand its production capacity and gain market share in Emerging Markets (EMs) and to support its market share in Developed Markets (DMs).

Our end-of-the year target price of €2.65 is based on a Discounted Cash Flow and Multiple Analysis. As the Group operates in regions with different levels of growth, margins and risks, our DCF is based on a sum-of-the-parts approach that values separately the main geographic businesses in each region: EU and US, India and ASEAN. Also the multiple analysis values Piaggio at geographical and aggregate level. Our target price is the weighted average of the prices resulting from our DCF and our Multiple Analysis.

Main risks are connected to Piaggio's expansion into new markets: the Group's ability to succeed in entering new markets in Asia is largely related to the success of new product launches, which is unknown; besides, the high margins of these markets could be negatively impacted by an increase in rivalry among existing players as well as the entrance of new competitors. Moreover, a relevant degree of volatility in the Group's net profit is tied to Emerging Markets economic growth and their exchange rates with the Euro. Finally, a stronger than expected increase in energy, raw materials, and component costs could have a direct impact on Group's operating margins.

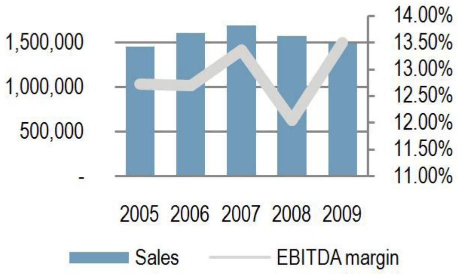
Figure 1. ***Piaggio's share price and news flow in the last 12 months***



Source: ***Bloomberg***

Piaggio&C. SpA is a historical Italian company, founded in 1884 and based in Pontedera (Pisa, Italy). It is famous worldwide for its brands, such as Vespa and Ape. Acquired in 2003 by Immsi SpA Holding, and headed by R. Colaninno, the company experienced a successful turnaround, followed by the listing on the Milan Stock Exchange in 2006. Nowadays ***Piaggio is the largest European manufacturer of two-wheel motor vehicles and one of the leading players in the Indian commercial vehicles' market.*** The company has about 7,300 employees. The main strengths of the Group are its brands and product portfolio, its production sites and specialized R&D centres in Europe and Asia, and its relationship with a vast network of about 14,000 independent dealers. In 2009 Piaggio outperformed the market, with limited net sales' decrease to €1,486.8M (-5.3% YoY) and an improvement both in EBITDA and in EBITDA margin (the latter +12.1% YoY, up to 13.5%), while in the first nine months of 2010 sales were up 0.3% compared to the same period of the previous year, largely driven by the growth in Asia.

Figure 2. ***Sales and Ebitda Margin (euro'000)***



Source: company dala (2009)

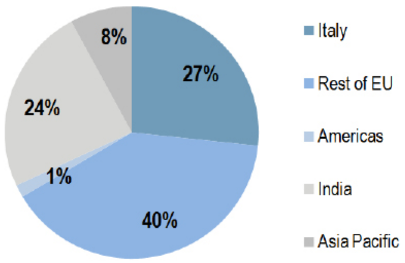
Business Units. The Group's business organizational structure is differentiated in the followings main units:

- ***Two-wheel Vehicles (2w)***: Piaggio's biggest segment, expected to account for 69% of revenues in 2010, includes scooters (72% of segment revenues expected in 2010), motorbikes (13.5%) and spare parts (14.5%). Vespa, Gilera, Aprilia, MotoGuzzi, Derbi, and Scarabeo are the main brands.
- ***Light Commercial Vehicles (LCVs)***: this segment comprehends three or four wheel vehicles (3w, 4w) with gross weight of less than 3.5 tonnes. The Indian LCV business contributes the majority of the revenues in this segment and it is growing. The main brands are: Ape, Porter, and Quargo.

Geographic Units. The Group's geographic organizational structure is differentiated in the following regions:

- ***Italy***: Piaggio's core historical market is expected to account for 26.7% of revenues in 2010, with a declining share compared to the previous years.
- ***Rest of Europe***: the biggest region in which Piaggio operates, is expected to contribute to 39.8% of revenues in 2010. The majority of the products sold in this segment are motorcycles, while LCVs account for only 21% of these revenues.
- ***South-Eastern Asia***: the most promising area for the 2w business, revenues are expected to be nearly € 103M (7.9% of the total sales in 2010). Piaggio initially entered this market in April 2004, through a strategic business agreement for the manufacturing and sales of engines, vehicles and components with Chinese Zongshen Group, and subsequently in October 2008, with the completion of the production unit in Hanoi (Vietnam).
- ***India***: this area has been focusing on the LCV business, but Piaggio expects to start selling 2w in India from mid-2012. It is expected to contribute to 24% of revenues in 2010.
- ***Americas***: the thinnest slice of Piaggio's revenues comes from North America (1.6% of the total expected in 2010).

Figure 3. ***Sales breakdown (Geographic Units)***



Source: company dala (Q3-2010)

Company Strategy. Piaggio's main growth driver is product line expansion in the emerging markets of ***India*** and ***South-eastern Asia*** (EMs). Sales from Asia were 25% of the total in 2009 and are expected to reach the 40% by 2013. To support growth, Piaggio has planned to expand its production capacity both in Vietnam (200k 2w per year by 2012) and in India, where the Group has already started to build a new plant for 2w production, with capacity of 150k 2w per year by 2012. Conversely, in ***Europe*** and the ***Americas***, Piaggio has planned to consolidate its position developing eco-friendly solutions, and to increase margins by improving efficiency in its operations.

Figure 4. ***Piaggio's production sites***

Source: company financial highlights

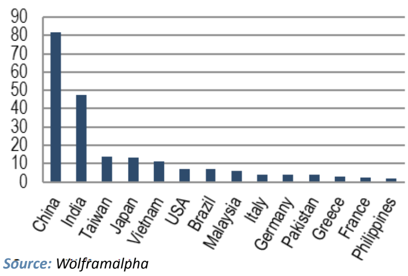
Industry overview

In this section we analyze the two main markets in which Piaggio operates: two wheel vehicles and light commercial vehicles.

The 2 wheel market: a changing scenario.

This market has 232.3 millions circulating vehicles worldwide. The three main regions for Piaggio are Europe, Emerging Asia and the US.

Figure 5. ***Top 15 nations for circulating veichles ('000.000 units)***



Source: Wolframalpha

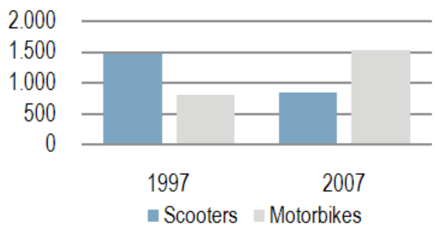
Europe: an aging core business. The EU market has been rapidly changing in the last ten years. Italy is still the leading market with 28% of European sales, with a record of 529,000 vehicles sold in 2000, and an average of 440,000 sold per year from 2000 to 2010. Spain, which accounted for only 11% of sales in the late '90s, has become the second biggest market with 415,000 vehicles sold in 2007, overtaking Germany and France. However, after the recession in 2008, the EU market saw a rapid contraction in sales.

There are two market trends in Europe that are worth some consideration: the substitution of scooters with motorbikes, and the introduction of new laws to limit pollution.

Substitution of scooters with motorbikes. The main reasons for this trend are consumer preferences and the ageing EU population, which prefer more powerful motorbikes compared to 50cc models, resulting in a drop in sales of the latter. This trend was consistent until 2008, but slowed down in 2009, particularly in Italy, because of the introduction of scooter replacement incentives.

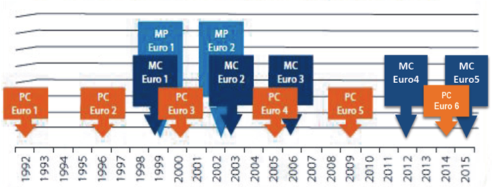
New laws. From 1999 to 2006 the EU introduced five new laws aimed at reducing CO2 emissions and to stop the circulation of some polluting engines. This trend should drive up sales of eco-friendly vehicles thanks also to tax incentives for new buyers.

Figure 6. ***Substitution trend in Europe ('000 units)***



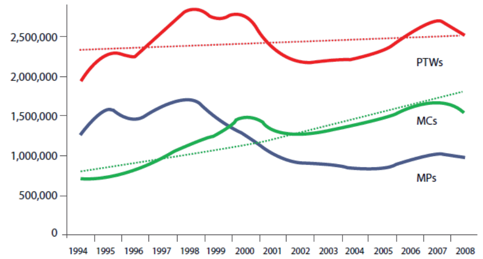
Source: Acem

Figure 7. ***Introduction of Euro reduction stages for passengers cars , motorcycles and mopeds***



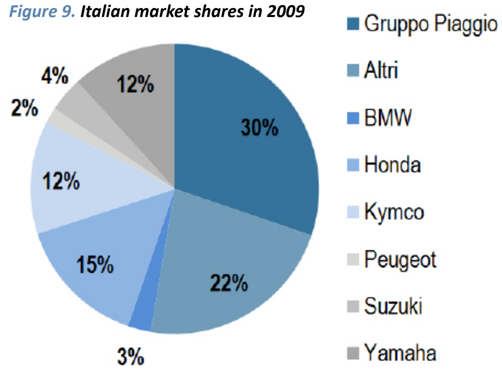
Source: Acem, PdM estimates

Figure 8. ***EU two wheel market evolution***



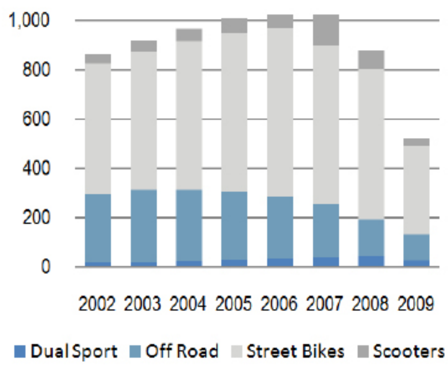
Source: Acem

Figure 9. ***Italian market shares in 2009***



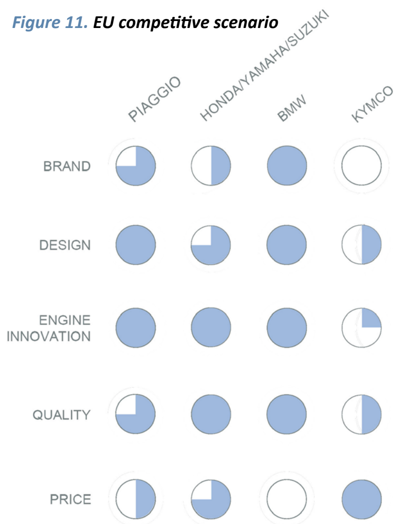
Source: Acem

Figure 10. ***US sales data ('000 units)***



Source: Knol

Figure 11. ***EU competitive scenario***



Source: PdM estimates

Emerging Asia: the growth engine. Despite the world facing the worst crisis since 1929, developing countries in Asia kept growing, even if at a reduced pace. In 2009, 34.5M scooters were sold solely in China and India, up 5% from 2008. Characterized by poor infrastructures and high traffic in urban areas, Asia is among the best markets for scooters. Therefore, it is a market with high growth potential for Piaggio and its Business plan for 2010-2013 confirms the company's willingness to pursue this opportunity.

US: a declining heavyweight. US market is represented by 7.1M vehicles of which 94% are high-powered motorbikes, with Harley-Davidson being #1 with 28% of market shares. Scooter sales are marginal and they actually halved their shares from 12% in 2007 to 6% in 2009. Moreover, we do not expect the market composition to change as low cost of fuel and long distances make high-powered vehicles a better choice for Americans.

The LCV market: a developing world business.

The number of LCV units sold in developed countries is modest. In fact, due to better infrastructure and centralized distribution systems, transportation relies more on trucks. On the contrary, LCVs are very popular in developing countries, especially in their rural areas. The main market for these vehicles is India where the sales of 3w and 4w vehicles were 22.5% of total vehicle sales in 2010. From 2003 to 2010, both 3w and 4w LCV market share in India have grown rapidly: 6.46% CAGR, 10.74% CAGR respectively. As developing countries get richer, this growth is expected to diverge: 4w's safety, stability and capacity will overtake the 3w's price advantage. For these reasons, many firms have committed to shift their production from 3 wheels to 4 wheels.

Competitive positioning

Market drivers vary depending on geographic area and type of product. The two reference markets for Piaggio are: 2w in EU and the US and the LCVs in India.

Two wheel market in EU and the US.

The most relevant drivers of competition are: brand, design innovation, engine innovation, quality and price:

- ***Brand management.*** Brand is seen as a distinguishing factor. Consumers love history and emotions channelled through brand and are willing to pay a premium price to them;
- ***Design innovation.*** In a market with the majority of demand driven by replacement sales, design innovation is a way to attract attention and trigger the desire for new models. While Honda, Yamaha and Suzuki must innovate to stand out of the crowd, Piaggio has some legendary models in its portfolio, including Vespa;
- ***Engine innovation.*** To cope with new pollution regulatory standards, fuel efficient engine design is critical;
- ***Quality of products.*** Quality standards are high and failing to deliver quality products can seriously damage a company's reputation.
- ***Price.*** The majority of market competition is based on the aforementioned four drivers; however the economic crisis has increased customers' price elasticity. New competitors such as Kymco and Sanyang are trying to exploit this opportunity with good results, introducing very low price and low quality 2w vehicles in the market. This may lead to lower margins due to price-competition.

EU competitive scenario can be summarized in figure 11.

As you can see from the chart, the list of main competitors in the EU is short and the concentration is high, with a Herfindahl Index[1] of 14.23%. Piaggio increased its market share in Italy from 30% in 2009 and to 35% in 2010. In the EU, Piaggio's strategic objective is to keep and possibly increase market share, with particular focus on two brands, Aprilia and Moto Guzzi that have scope to improve their value perception. Despite of this, Piaggio must keep an eye on the low end of the market given Taiwanese Kymco's and Sanyang's aggressive price strategy. In particular Kymco market share in Italy went from 5.74% in 2006 to 13.03% in 2009. This trend will not affect Piaggio's strategy directly but it may hurt its margins as buyers may begin to perceive Piaggio's price premium as too high.

Two wheel market in Asia.

The main levers of value creation in the 2w segment are based on product line enlargement and on the entry in new markets.

Vietnam: on the wake of the successful launch of the Vespa LX, Piaggio has planned to introduce new models, such as the Beverly in the fourth quarter of 2010, and other middle range scooter by 2012. The production capacity of the Vietnamese plant will be doubled to 200k units/year by 2012. In the management's intentions, Vietnam will be their base for ASEAN expansion.

Indonesia, Malaysia, Thailand and Taiwan: the same models launched in Vietnam will be exported in these ASEAN countries as well; their potential market is huge and their growth outstanding.

India: Piaggio will launch its Vespa LX also in India by early 2012. Pursuing a premium price strategy in this market is more risky because of many local and Asian competitors with positioning similar to Piaggio. Nevertheless the Group can leverage its knowledge of the Indian market, its wide distribution network for LCVs and its dedicated Indian R&D centres.

1 Herfindahl-Hirschman Index (HHI) indicates the amount of competition in a market. It is defined as the sum of squares of the first 50 firms' market shares. A HHI of 1% indicates a highly competitive market, 10% low concentration, 18% moderate concentration while 18% or more, high concentration.

LCV market in India.

The relevant competitive drivers are production process quality, product design quality, price, and distribution network:

Production process quality. Assembling high quality vehicles is a key factor as Indian customers look for long-lasting and solid LCVs.

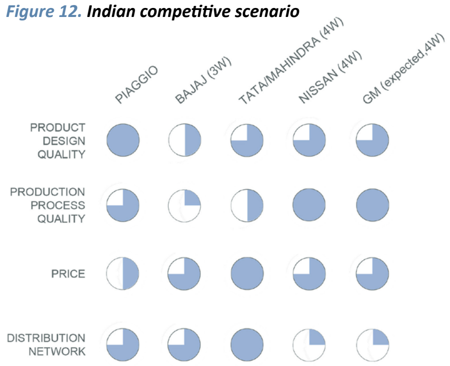
Product design quality. Indian roads and infrastructures are poor. Therefore, firms operating in this market must pay attention to environmental peculiarities, like holes in pathways and mud, and adapt their products accordingly.

Price. Although India GDP growth is high, GDP per capita is still low (Consensus expects 9.7% GDP growth in 2010 with $ 1,200 GDP per capita). Furthermore, most LCV customers work in small and often family operated businesses, whose attention to price tag is high.

Distribution network. In a fast growing market, a widespread and capable distribution network is fundamental to cope with growing demand.

The competitive scenario is summarized in figure 12.

Figure 12. Indian competitive scenario



Source: PdM estimates

Piaggio's main products in India, Ape and Quargo, are doing extremely well, reaching 35% market share in 2009. As mentioned above, the main reason is quality. In fact, Piaggio's competitors have focused on price competition, while Piaggio has exploited its quality advantage to gain share and strengthen its brand. We expect the following two factors may threaten Piaggio's market leadership in India:

New competitors entering the market: Nissan has started selling LCVs in India in Q3 2010 and General Motors expects to enter the market in 2012. These two firms will focus on the 4 wheel market and position themselves like Piaggio: high quality and price premium. These competitors may impact on Piaggio's market shares and margins.

LCV Market shift form 3 wheel to 4 wheel vehicles: This trend is gradual but consistent over time and will reduce Piaggio's current principal market, the 3w market, in which Piaggio has 41% share vs. its 5% share in 4w market. Competition in the 4w market is stronger, with experienced multinational players.

It is critical for Piaggio to successfully convert production from 3w to 4w and continue to increase brand awareness. To this end, the management has developed an aggressive product line expansion plan to penetrate the 4w segment and enlarge the addressable market. In 2011 Piaggio will introduce a new passenger version of the Ape Truck and a new Cargo vehicle, with a load capacity of 1.0 tons and Piaggio motorization. In 2012, another Cargo vehicle with higher load capacity and new Piaggio motorization will be launched. The new Indian engine production plant is strategic to Piaggio. On one hand it enables savings on import taxes (100% in the motorcycle sector) and to protect margins in a deteriorating competitive scenario. On the other hand it creates the opportunity for Piaggio to sign deals as engines supplier with other international automotive players.

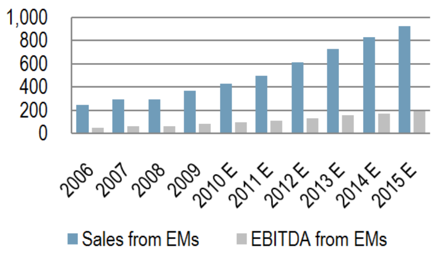
Please refer to the Appendix 8 for the SWOT analysis.

Financial Analysis

In this section we present the principal assumptions on which we base our valuation. We use 09-13 CAGR for consistency with the company's strategic plan.

Sales: Growth driven by product line expansion in Emerging Markets.

Figure 13. Sales and EBITDA from EMs (€M)

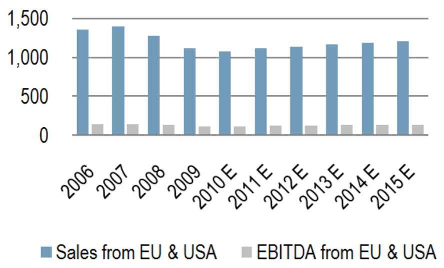


Source: PdM estimates

India: expansion in the four-wheel segment and entry in the two-wheel market. As far as commercial vehicles are concerned, Piaggio expects to sell 248,000 units by 2013 with an 8.1% volume CAGR and a 14.1% revenue CAGR from 2009 to 2013. Growth is driven by the launch of new 4w models by 2012, with higher prices than the 3w. After 2012, Piaggio plans to enter the Indian 2w market with Vespa. The company expects to sell 75,000 units and to achieve revenues of more than € 50M by 2013.

South-eastern Asia: expansion of Vietnamese product range and entry in other ASEAN countries. The introduction of new models in Vietnam and the entry in new markets, such as Indonesia, Malaysia, Thailand and Taiwan, is expected to expand unit growth to 106,000 units by 2013, with a 30.3% volume CAGR from 2009 to 2013. But the introduction of lower price models will limit revenue growth by 22% 09-13 CAGR.

Figure 14. Sales and EBITDA from DMs (€M)



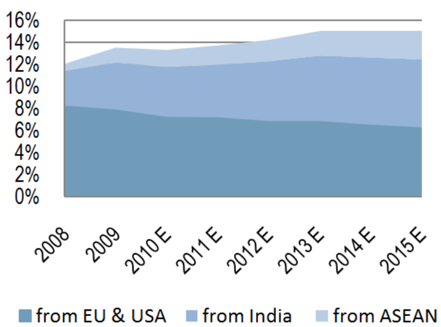
Source: PdM estimates

Europe and the US: maintaining its position in a flat growth scenario. In the 2w market, volumes are expected to remain flat, as the market is not growing and Piaggio is not interested to increase its market share. In the LCV business, a structural contraction of the market is instead forecasted to reduce volumes by -4.5% 09-13 CAGR and revenues by -6.2% 09-13 CAGR.

Margins: Internationalization and rationalization lead to improvements in profitability.

Management forecasts an EBITDA margin improvement of 150bps, from 13.5% in 2009 to 15% in 2013, driven by:

Figure 15. EBITDA margin breakdown



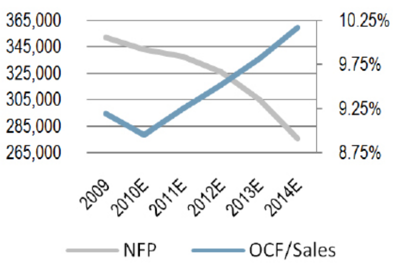
Source: PdM estimates

Changes in the geographical mix: Emerging markets represented 25% of sales in 2009 but contributed to approximately 40% of EBITDA, and for even a larger percentage of earnings. Management plans to increase Asian sales to 40% by 2013 and to expand the company's overall margins.

Efficiency improvements in Europe: Management aims to recover efficiency in European production system to increase profitability of mature markets. According to our estimates, we expect European EBITDA margin to increase by 110bps, from 10% in 2009, to 11.1% by 2013.

Changes in product mix: Piaggio is committed to pursuing a premium price strategy, but the introduction of new models in Vietnam with a lower price than Vespa's will put some pressure on margins. Nevertheless we expect the ASEAN EBITDA margin to remain substantially higher than company's average, at approximately 22.1% in 2013.

Figure 16. **OCF to Sales and NFP**



Source: PdM estimates

Cash Flow: Increasing along with revenues and margins.

Sales growth and margin expansion will increase operating cash flow. According to our estimates, Piaggio will generate €167M operating cash flow per year on average for the next three years. We forecast OCF to Sales ratio to reach 9.82% by 2013, moving from 8.86% of 2010. This cash flow will be used to finance €312M in capital expenditures, €60M increase in net working capital by 2013 and a reduction in net financial position. As far as dividends are concerned, we estimate an average 50% payout ratio from 2011 to 2013, with a dividend per share raising from €0.07 in 2009 to € 0.12 in 2013.

Financial structure: Sound but not fully exploited.

According to our estimates, Net Financial Position will decrease from €352M in 2009 to €305.1M by 2013. We believe that the resulting debt to equity ratio of 0.73 leaves room for financing future growth plans. We estimate financial charges to increase over the next years because of rising interest rates.
However, the impact on the income statement will be moderate. Piaggio has 45% of fixed rate debt.

Key Financial Ratios	2009	2010E	2011E	2012E		2009	2010E	2011E	2012E
Profitability ratios									
EBITDA margin	13.50%	13.35%	13.80%	14.30%	ROI	6.67%	7.19%	8.02%	9.13%
EBIT margin	7.02%	7.24%	7.69%	8.58%	ROE	11.19%	10.26%	11.76%	13.66%
Gearing ratios					Debt ratios				
Total Debt to Equity	1.31 x	1.15 x	1.01 x	0.89 x	Interest coverage ratio	3.14 x	3.94 x	4.36 x	4.66 x
Net Debt to Equity	0.83 x	0.77 x	0.71 x	0.64 x	Net Debt / EBITDA	1.75 x	1.70 x	1.52 x	1.30 x
Cash flow ratios					Capex				
OCF / Sales	9.19%	8.86%	9.24%	9.52%	Capex / Sales	6.3%	6.3%	6.3%	5.9%
OCF / Earnings	2.88%	2.94%	2.69%	2.42%	D&A / Capex	102.96%	97%	97%	97%
Market ratios					Cost structure				
EPS	€0.12	€0.12	€0.15	€0.19	Labour Cost / Sales	16.34%	16.60%	15.60%	14.80%
DPS	€0.07	€0.07	€0.08	€0.09	Materials Cost / Sales	58.62%	58.75%	59.10%	59.40%

Table 1 - *Source: PdM estimates*

Valuation

We evaluate Piaggio by applying two techniques: Discounted Cash Flow (DCF) and Multiple Analysis. The DCF analysis is based on a sum-of-the-parts approach that values the three main geographic businesses of the company separately. We deem this approach to be appropriate as the Group operates in regions with different level of growth, margin and risk. The Multiple Analysis is used to correct our results at geographic and aggregate levels.

DCF models characteristics	
India / ASEAN	
Model	Three Stage: • Analytic stage • Convergence stage • Perpetuity
Europe and US	
Model	Two Stage: • Analytic stage • Perpetuity

Table 2

Discounted cash flow analysis:

Our DCF values Piaggio at €2.73 per share for the end of 2011. We estimate this price with the separate valuation of Indian, ASEAN and European operations. Figures are broken down across the regions according to the following assumptions:

Sales: Asia reaches approximately 40% of total sales by 2013 (25% India, 15% ASEAN) while Europe and America account for the remaining 60%.

Capex: the €312M capex outlined in the 2011-2013 industrial plan is divided across the regions according to their relative contribution to sales, in line with management's allocation history.

Change in net working capital: €60M increase in 2011-13 as planned by management.
We divide the total change in net working capital across regions according to the relative sales growth.

More detailed assumptions are made on each business region, on the basis of the forecasted competitive scenario described below:

In **India**, LCVs volumes and Average Revenues Per Unit increases because of product line expansion in the 4w segment. EBITDA margin is higher than the company's average but slightly decreasing over time because of competitive pressures by new entrants (Nissan and GM). As far as 2w is concerned, the Vespa market segment is crowded and we do not expect significant margin improvements.

In **ASEAN**, 2w volumes sharply increase, but Average Revenues Per Unit decrease along with EBITDA margin because of the introduction of lower price models.

In **Europe**, LCV volumes and Average Revenues Per Unit decrease because of declining demand, while in 2w a slight increase in prices compensates for lack of growth in volumes sold. EBITDA margin increases because of efficiency improvements in European operations.

Assumptions and results of the sum-of-the-parts analysis (2011-2015)				
	INDIA	ASEAN	EUROPE and US	Aggregate
ARPU* CAGR	+4.6% in LCV	- 5.2% in 2W	+2.3% in 2W ; -1.7% in LCV	-1.9%
Volumes CAGR	+6.6% in LCV	+26.8% in 2W	0.7% in 2W; -4.6% in LCV	+9.31%
EBITDA margin	20.8% → 20%	22.5% →21%	10.5% →11.1%	13.5% → 15%
Tax rate	42%	7.5%	30%	43%
WACC	9.31%	10.72%	7.63%	9.03%
EV	€537,711 M	€357,924 M	€461,659 M	€1359,354 M
Price	€1.08	€0.72	€0.93	€2.73

Table 3 - *Source: PdM estimates* *Average Revenues Per Unit

WACC assumptions	
Target D/E ratio	0.7
Cost of debt	5.58%
Tax rate	43%
Risk free rate	4,8%
Beta	1
Market premium	5.2%
Country risk premium	
India	3.6%
ASEAN	6%
Europe and USA	0.75%

Table 4 - *Source: PdM estimates*

WACC and terminal values' assumptions are summarized in tables 4 and 5. Detailed assumptions on terminal values, WACCs and taxes are reported in Appendix 5.

Main conclusions of our analysis are that:

- Developed Countries are at the moment Piaggio's cash cow, with high revenue contribution but modest growth potential and that

- The majority of Piaggio's value comes from Emerging Markets. In fact, despite generating small volumes and revenues, ASEAN operations have an extraordinary growth outlook and limited tax rate. India, size and growth combined, is by far the biggest source of value for Piaggio, even though it is penalized by the high tax rate.

In order to test the robustness of our valuation, we perform a sensitivity analysis on its most critical assumptions. Since India is responsible for the great part of the value, we focus on Indian operations, testing a reasonable range of values for its WACC and its terminal EBITDA margin. The assumption on EBITDA margin is particularly critical because terminal EBITDA margin is one of the main determinants of Indian Terminal Value.

Terminal values assumptions	
India / ASEAN	
Conv. stage length	10 years
Conv. stage growth rates	Exponential decay
Perpetuity growth	0.50%
Perpetuity WACC	7.63%
Europe and US	
Perpetuity growth	0.50%
Perpetuity WACC	7.63%

Table 5 - *Source: PdM estimates*

DCF sensitivity analysis (Indian WACC ↓ Terminal Indian EBITDA margin →)	18%	18.5%	19%	19.5%	20%	20.5%	21%	21.5%	22%
9.00%	€2.55	€2.58	€2.61	€2.64	€2.67	€2.70	€2.73	€2.76	€2.79
9.10%	€2.57	€2.60	€2.63	€2.66	€2.69	€2.72	€2.75	€2.78	€2.81
9.20%	€2.59	€2.62	€2.65	€2.68	€2.71	€2.74	€2.77	€2.80	€2.83
9.30%	€2.61	€2.64	€2.67	€2.70	**€2.73**	€2.76	€2.79	€2.82	€2.85
9.40%	€2.63	€2.66	€2.69	€2.72	€2.75	€2.78	€2.81	€2.84	€2.87
9.50%	€2.65	€2.68	€2.71	€2.74	€2.77	€2.80	€2.83	€2.86	€2.89
9.60%	€2.67	€2.70	€2.73	€2.76	€2.79	€2.82	€2.85	€2.88	€2.91

Table 6 - *Source: PdM estimates*

For a detailed volatility analysis of our Target Price, please see the risk section later in the report.

Multiple Analysis:

In this section we calculate a market-based range and a target price by comparing valuation of companies in the automotive and motorcycle sectors with that of Piaggio.

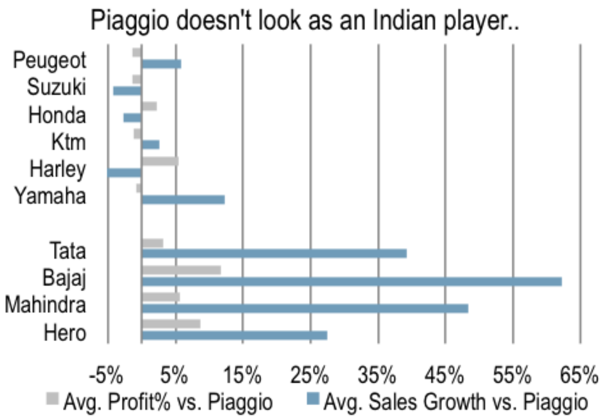
Piaggio is matchless. To obtain an accurate market-based valuation it is critical to identify a set of listed peers that are comparable. Among the currently listed companies, we define three different groups of comparable companies – described in the following table: (a) the Indian companies that are direct competitors of Piaggio in India (Hero Honda, Mahindra & Mahindra, Bajaj Auto, Tata Motors); (b) those companies whose core business is the production of 2w (Yamaha Motor, Harley-Davidson, KTM); and (c) those large corporations whose business is largely diversified (Honda Motor, Suzuki and PSA Peugeot Citroen). Our conclusion is that there is no direct comparison for Piaggio.

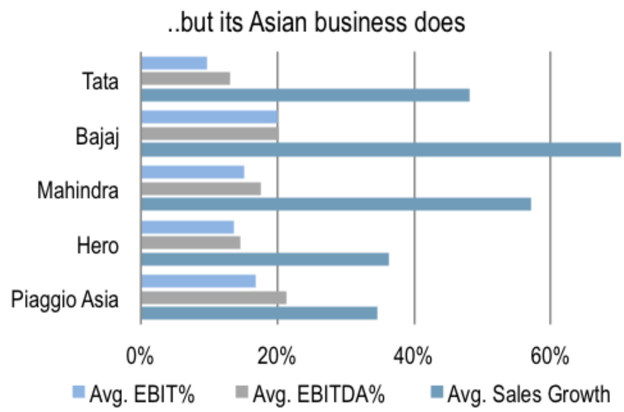
Comparable Company	Hero	Mahindra	Bajaj	Tata	Yamaha	Harley-D.	Ktm	Honda	Suzuki	Peugeot
Ticker (Bloomberg)	*HH.IN*	*MM.IN*	*BJAUT.IN*	*TTMT.IN*	*7272.JP*	*HOG.US*	*KTM.AV*	*7267.JP*	*7269.JP*	*UG.FP*
Country of Incorporation	*India*	*India*	*India*	*India*	*Japan*	*US*	*Austria*	*Japan*	*Japan*	*France*
Share Price *(01/20/11)*	INR 1,763	INR 751	INR 1,320	INR 1,194	JPY 1,408	USD 36.00	EUR 48.00	JPY 3,330	JPY 2,021	EUR 32.20
to 52w H/L (LC)	-16%/18%	-36%/53%	-54%/8%	-14%/85%	-4%/36%	-1%/69%	-4%/218%	-2%/35%	-9%/26%	-4%/80%
Market Presence - 2w(a)										
Market Presence - LCVs(a)										
% Diversification(b)										
Enterprise Value USD(c)	7,673	11,436	8,326	21,183	7,443	13,122	844	107,646	11,709	40,524
Market Value(c)	7,687	9,515	8,341	15,090	5,927	8,479	652	72,371	13,671	9,809
Free Float (%)	71.6%	74.7%	46.0%	56.8%	81.5%	98.7%	N/A	92.1%	70.4%	66.6%

Table 7 - *Source: Bloomberg, Reuters, PdM estimates.*

Legend: (a) Emerging Markets Presence (= lowest; = highest); Developed Markets Presence (= lowest; = highest). Market presence: proxy of the market share.
(b) Degree of Diversification: = 2w/LCVs is the core business; = its business is totally diversified (Auto, Farm equipment, ...).
(c) As of 01/20/2011.

Global players vs. Indian-based players. Piaggio and the Indian players have very different growth rates and profit margins. To highlight the disparity, we show in the chart below for each company difference between the 2010-11 average of these two measures from the same measures of Piaggio. Consequently it is more realistic to compare Piaggio to one of the other two groups (motorcycle manufacturers and large corporations). Yet, they have several different characteristics, such as positioning, market exposure, business diversification and product range, which make them also imperfect companies with which to compare Piaggio. These differences are not as pronounced when comparing only the Asian operation of Piaggio to the Indian players' group.





Source: *PdM estimates*

Valuation of the Asian Business. Piaggio's Asian activities includes both Indian and Vietnamese operations, and the related sales' volumes and margins are based on the same assumptions underlined in the financial valuation section (i.e. EBITDA margin is twice in Asia in respect to the EBITDA margin in Europe, sales being equal).

Estimated Piaggio-Asia EV:	
Non Discounted	€1,014 M
Discounted	€862 M
EV from DCF	€895.6 M

Table 8 - *Source: PdM estimates*

Which multiple to consider? We consider the EV/EBITDA multiple to calculate our target price. We believe the EV/EBITDA to be the most significant multiple as it is a good proxy for cash flows, and on the contrary to EV/EBIT multiple, it is not influenced by differences in accounting of D&A. We estimated the enterprise value of Piaggio's Asian business to be €1,014.5M. If we consider that the real value for Piaggio's shareholders of the Asian business must be discounted by about 15% to take into account additional taxes (15% tax rate on intercompany repatriated dividends, and 42% corporate tax rate for foreign companies vs. 34% for Indian companies), we obtain a very similar price to our DCF valuation: €862M. At current market prices the implied value of non-Asian business is therefore €342M, or 37% of the whole market EV; we judge this as a conservative valuation, compared to €461.6M given by the DCF model.

	Piaggio's EV (EUR M)	Median	HH IN	MM IN	BJAUT IN	TTMT IN
EV/EBITDA						
2009	882.5	11.0	12.87	7.09	11.77	10.24
2010E	1,029.8	11.1	13.35	9.97	12.20	7.01
2011E	**1,014.5**	**9.7**	12.19	8.89	10.45	5.55
2012E	1,250.9	9.6	10.92	N/A	9.65	4.75
EV/SALES						
2009	729.3	2.2	2.24	1.70	2.52	0.85
2010E	818.4	2.0	1.98	1.82	2.51	0.88
2011E	806.9	1.7	1.73	1.51	2.07	0.75
2012E	922.5	1.5	1.51	N/A	1.81	0.64

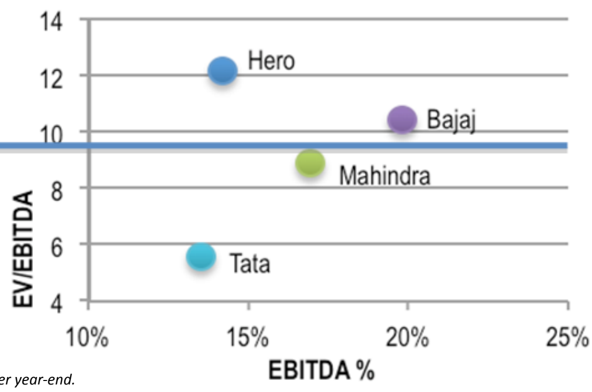


Table 9 - *Source:* Bloomberg, Starmine smart estimates, *PdM estimates.*

Note: these Indian-based companies have a march FY-end. Thus the financial statements have been calendarized to a December year-end.

% of SALES from EMs	
Piaggio	25 %
Hero Honda	100 %
Mahindra & Mahindra	90 %
Bajaj Auto	100%
Tata Motors	92 %
Yamaha Motor	62 %
Harley-Davidson	3 %
Ktm	16 %
Honda Motor	74 %
Suzuki	33 %
PSA Peugeot Citroen	21 %

Table 10 - *Source:* Company's financial statements, *last available data*

A peer multiple comparison. We also perform a cross-check among different valuation metrics and apply competitors' multiples to Piaggio (a comprehensive chart is shown in Appendix: 6), in order to estimate a market based price-range and multiple target price. We stated before that Piaggio can be separated into two businesses, based on their geographic exposure. Also, it is possible to estimate an approximate value for the EM business. For the sake of this analysis, we assume Indian companies multiples are a proxy for Emerging Market multiples. Unfortunately, the same methodology cannot be applied to non-Indian companies, as there are no companies exposed to the non-Asian business only. Nonetheless, for each company in the group that has non-Asian business, we estimate a Developed Market only EV/EBITDA multiple calculated from market multiples of these companies and assuming that, sales being equal, the EBITDA margin in EMs is 50% higher than the EBITDA margin in DMs, and we use the information about their sales to breakdown the EV/EBITDA[2]. The price we obtain for Piaggio is €2.48 (table 11).

2 We used this equation so as to compute the DMs Multiple: Market_Multiple = (EBITDA_DMs x Multiple_DMs) + (EBITDA_EMs x Multiple_EMs)

EV/EBITDA	
Multiple EMs	9.7 x
Multiple DMs	3.8 x
Target Price	€ 2.48

Table 11 - *Source:* *PdM estimates*

P/E - Price Range	
Lower limit	€ 2.23
Upper limit	€ 2.97

Table 12 - *Source:* *PdM estimates*

Target Price:	€ 2.65
DCF	€ 2.73
Multiple	€ 2.48

Table 13 - *Source:* *PdM estimates*

Since the EV/EBITDA multiple does not capture some fundamental differences such as different tax rates or D&A/Sales ratios, we look also at P/E multiples and derive a price range (table 12). Using the median P/E of all peers for FY2011E we derive a price of €2.17 (14.3x P/E). Excluding the firms involved also in the automotive business – Tata, Honda, Suzuki, PSA – that have lower expected growth, we calculate a price of €2.23 (14.7x P/E). Hence we define that the lower bound for Piaggio's share price should be €2.23, since its growth prospects and margins are behind only to the Indian peers and Harley-Davidson, while the upper bound should be €2.97, which is the price implied by the P/E ratio of Suzuki, the highest among the group, excluding Ktm at 36x P/E multiple. Suzuki has a consistently higher P/E multiple due to its Indian exposure (54% stake in Maruti Suzuki) and relatively low earnings volatility (partly because Suzuki is under-levered relative to the other peers).

Conclusions:

TP € 2.65 with further upside potential in the medium term. We estimate a year-end target price of €2.65 (table 13), that has been obtained from a weighted average of the prices resulting from our DCF and our Multiple Analysis. Weights are 70% and 30% respectively. We assign a lower weight to the Multiple Analysis because of the inherent difficulties in finding a group of close comparable to Piaggio as we explained above. In our opinion Piaggio offers further upside potential in the medium term, as long as the growth strategy in emerging markets proves to be successful. We believe that the market is still not fully discounting the growth potential from EMs, but we also understand that there is an elevated degree of risk in executing this strategy. 2011 results and business updates will be of particular importance to show that Piaggio is able to deliver on growth through product line expansion, especially with regards to India.

Corporate Governance and Corporate Social Responsability

Based on our firm conviction that Corporate Governance (CG) and Corporate Social Responsibility (CRS) could enhance the potential of the company, and consequently its long term value, we performed an assessment of Piaggio in these areas of interest. For more details on CG and CSR long term value impact, please see Appendix 9.

Corporate Governance. Since 2006 Piaggio Group publishes its report on CG adopting the framework of the "Codice di Autodisciplina": Italian Corporate Governance Code of best practices. Analyzing Piaggio's report on CG we have identified areas in which the company complies with best practices as indicated in the Code and areas in which it does not. Results are reported in the table below:

Comply	Does not comply
Independence of the board of directors: 4 of 11 members are independent.	**Independence of Chairman**: Chairman and CEO are not separate.
Internal Control Committee: Composed of independent directors, convenes at least 5 times per year.	**Board of Directors members' maximum offices in other companies:** Board has not established a limit to the number of offices directors can cover in other companies.
Appointment Proposals Committee: The majority of members are non executives, and there is a transparent procedure for the presentation of candidate lists.	**Remuneration Committee**: The attendance of the CEO by invitation creates a conflict of interest.
Financial disclosure and transparency: Piaggio follows COSO Reporting[3] guidelines.	**Internal Control Supervisor**: Tight relationship between the Company and Immsi Audit S.c.ar.l. CEO undermines auditors' autonomy.

Table 14 - *Source:* *PdM estimates.*

CSR Issue	CST Targets
Environment	New hybrid vehicles, lower consumption and emissions; Construction of Indian plant minimizing consumption, emissions and waste.
Safety	Development of jackets with airbag and airbag on vehicles
Employees	Talent project and easy-to-use computer tools

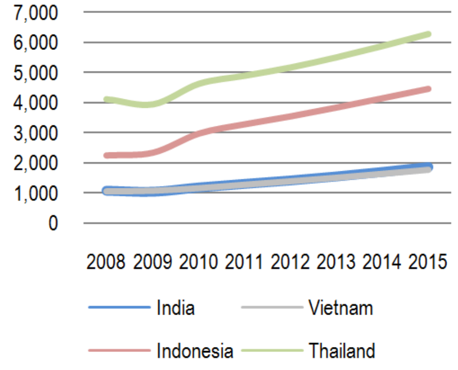
Table 15 - *Source:* Piaggio's 2010-2012 CSR plan

Corporate Social Responsibility. The automotive industry is very concerned about CSR (please refer to Appendix 9 for the Influence of CSR on automotive industry). In particular, the 2w segment focuses on safety, due to the high mortality rate involving 2w incidents. In 2008, Piaggio established the **Business Ethics** Committee and published its first **CSR report** adopting **G3 Guidelines**[4]. The Group's focus on CSR is expected to increase as the company published new and stricter targets in its CSR Plan for 2010-2012 (Piaggio's CSR main targets are reported in Table 10). In 2009 only 10% of Italian companies invested in CSR policies.

Please refer to Appendix 9 for CG and CSR rating for Piaggio and its main competitors.

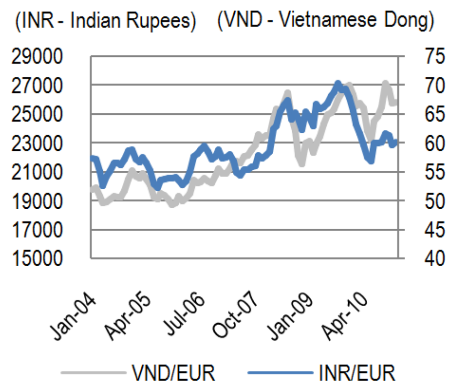
3 Reference model for internal control
4 Sustainability Reporting Framework promoted by Global Reporting Initiative (GRI)

Figure 17. *Gross domestic product per capita current prices (US dollars)*



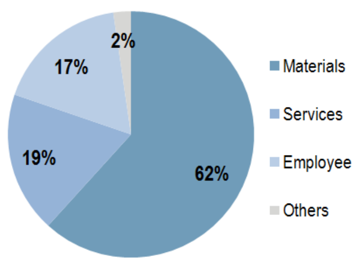
Source: *IMF, world economic outlook database (Oct 2010)*

Figure 18. *Euro exchange rates (monthly average)*



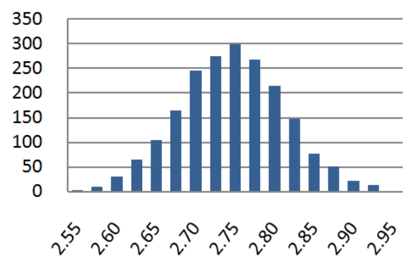
Source: *Pacific exchange rate service*

Figure 19. *Costs breakdown (2010E)*



Source: *PdM estimates*

Figure 20. *DCF Target price distribution*



Source: *PdM estimates*

In this section we analyze the main risks that could affect our target price.

Strategic risks:

Unsuccessful product launch. Piaggio's strategy in EMs is growing through product line expansion. If new products do not meet customers' needs and tastes, Group's sales may be lower than expected. To minimize this risk, the company is developing the new models directly in Indian and Vietnamese R&D departments to better meet local preferences and needs.

GDP growth rates. Piaggio's growth strategy is underpinned by GDP growth. On the basis of IMF forecasts, during the next five years GDP at constant prices is expected to grow on average by 2% per year in DMs, 8% per year in India and 7% per year in Vietnam; we expect Piaggio's 2011-2015 revenues to grow 2.1% CAGR in DMs and 16.6% CAGR in EMs. Higher inflation may trigger a tighter monetary policy from central banks in EMs and reduce consumption in EMs, affecting revenues and margins. Nevertheless, the Group mitigates the possible negative effects on margins with a flexible production structure and fixed term employment contracts. As for Europe, unexpected growth may boost Piaggio's revenues and expand its margins.

Stronger competition and/or excessive focus on EMs. The entrance of Nissan and General Motors in India's LCV market may lead competition from an oligopoly (current Herfindal index = 23.24%) to oligopolistic competition (we estimate Herfindahl to drop to 18%, edge between oligopoly and oligopolistic competition). This context may force the company to reduce prices to maintain its 35% market share, affecting margins. Excessive focus on EMs may lead Piaggio to lose market share in its core markets, where investments could be lower than competitors', and thus force the company to reduce prices to maintain its market share, again affecting margins.

Penetration of low-mid end markets. The launch of low-mid cost scooters represents a shift from a premiumisation strategy to a price strategy. Competition in price strategy focuses on price reduction, therefore Piaggio's margins could progressively decrease.

Financial risks:

Fluctuations of exchange rates. Piaggio is exposed to exchange rate risk: in its 2011-2013 strategic plan 40% of revenues are expected to come from foreign countries (35.5% from EMs, 4.5% from the US). In particular, Indian Rupee and Vietnamese Dong fluctuations, due to growth rates of those countries and limited exchange control policies, may affect margins. On the basis of six years of average monthly data, we estimate a coefficient of variation of 7.97% for the Rupee to Euro exchange rate and of 11.61% for the Dong to Euro exchange rate. The Group hedges the exchange rate risk applying derivatives on 100% of the transaction risk and on 66% of the translation risk within the accounting year. Nonetheless margins could be affected by exchange rate fluctuations in the longer term.

Operative risks:

Increase in energy, raw materials and components costs. Energy, raw materials and components costs weigh for approximately 60% of Piaggio's total cost. Therefore their fluctuation has an important impact on profitability. The company does not use financial hedging, but it has enough pricing power to transfer part of the higher costs to consumers.

Vehicles defects and Intellectual Property risk. Defects and plagiarism may affect Piaggio's image and cause a negative impact on revenues. Vehicles can have defects, and require frequent repairs under guarantee as well as result in recall campaigns. Vehicles are also exposed to intellectual property (IP) risk, particularly in EMs where lack of regulatory protection on IP may undermine the technological and design advantage that is one of the key success factors for Piaggio.

Compliance risks:

Tighter regulations. Piaggio operates in a highly-regulated industry, mandating requirements about emissions, safety and labor practices. Tighter regulations would force the company to sustain higher costs to meet the requirements, affecting profitability. Piaggio's CG and CSR help to mitigate this risk with technological advancements and stricter internal targets that anticipate tighter regulations.

Volatility analysis – Greater Risk in the East:

Starting from the risks presented, we performed a Montecarlo simulation on our DCF model to estimate the volatility of our target price. The result is a probability distribution with a standard deviation of €0.07 around the €2.73 mean. Since the mean has been adjusted according to our Multiple Analysis, the same standard deviation applies to our target price of €2.65. Therefore, we believe that the company's price may fluctuate in the range of [€2.57; €2.74] with a probability of 80%. Decomposing the standard deviation across the regions, we discovered that Asia is the biggest source of risk, as it accounts for 80% of the total volatility. Indian volumes are an amplifier of exchange rate risk and strategic risks, such as unsuccessful product launches. Detailed assumptions on the Montecarlo simulation are reported in Appendix 4.

Appendix 1. Income statement (€'000)

	2008	2009	2010 E	2011 E	2012 E	2013 E
Net Sales	1,570,060	1,486,882	1,510,650	1,613,358	1,755,635	1,893,585
Reported Growth	-7.2%	-5.3%	1.6%	6.8%	8.8%	7.9%
Business Units						
Two Wheeler Vehicles	1,180,666	1,065,417	1,057,177	1,121,380	1,217,681	1,303,487
Reported Growth	-8.8%	-9.8%	-0.8%	6.1%	8.6%	7.0%
Commercial Vehicles	389,394	421,465	453,474	491,978	537,954	590,098
Reported Growth	2.4%	8.2%	7.6%	8.5%	9.3%	9.7%
Geographical Area						
Europe and America	1,280,932	1,116,191	1,080,672	1,113,972	1,140,716	1,166,090
Reported Growth	-8.6%	-12.9%	-3.2%	3.1%	2.4%	2.2%
India	243,972	286,753	327,199	373,607	460,922	486,051
Reported Growth	2.5%	17.5%	14.1%	14.2%	23.4%	5.4%
ASEAN	45,156	83,938	102,779	125,779	153,927	188,000
Reported Growth	-13.2%	85.9%	22.4%	22.4%	22.4%	22.1%
Other operating income	133,474	135,938	128,405	130,682	135,184	143,912
Cost for materials	(936,603)	(871,653)	(887,507)	(953,495)	(1,042,847)	(1,130,470)
Cost for services	(292,920)	(272,065)	(265,874)	(280,724)	(298,458)	(314,335)
Employee costs	(250,967)	(242,916)	(250,768)	(251,684)	(259,834)	(266,995)
Other operating costs	(33,993)	(35,387)	(33,234)	(35,494)	(38,624)	(41,659)
EBITDA	189,051	200,799	201,672	222,643	251,056	284,038
EBITDA margin	12.04%	13.50%	13.35%	13.80%	14.30%	15.00%
D&A	94,540	96,378	92,316	98,592	100,475	102,860
% Capex	91.85%	102.76%	97.00%	97.00%	97.00%	97.00%
EBIT	94,511	104,421	109,356	124,051	150,581	181,178
EBIT margin	6.02%	7.02%	7.24%	7.69%	8.58%	9.57%
Financial charges	(41,288)	(33,275)	(27,754)	(28,423)	(32,341)	(31,740)
% Tot Financial Liabilities	10.18%	5.98%	6.00%	6.20%	6.50%	6.90%
Other Financials	6,379	4,905	4000	3500	3000	3000
Earnings before tax	59,633	74,093	85,602	99,128	121,240	152,438
Taxation for the period	16,302	26,674	40,019	43,616	52,133	65,548
Actual tax rate (%)	27.34%	36.00%	46.75%	44.00%	43.00%	43.00%
Consolidated net income	43,331	47,419	45,583	55,512	69,107	86,890
Profit margin	2.76%	3.19%	3.02%	3.44%	3.94%	4.59%
Minority Shareholders	330	1,388	228	278	346	434
Earnings per share (€)	0.11	0.12	0.12	0.15	0.19	0.24
Avg. number of Ordinary Shares	396,041	396,041	371,800	369,000	369,000	369,000
Dividend per share (€)	0.06	0.07	0.07	0.08	0.09	0.12
Earnings paid as dividends	22,120	25,795	25,000	28,000	35,000	43,000
Payout Ratio	51%	56%	55%	51%	51%	50%

Table 16 - *Source: Company financial highlights, PdM estimates*

Appendix 2. Balance sheet (€'000)

	2008	2009	2010 E	2011 E	2012 E	2013 E
FIXED ASSETS	**899,186**	**892,251**	**889,171**	**892,220**	**895,328**	**898,509**
Intangible assets	648,234	641,254	644,370	644,370	644,370	644,370
Tangible assets	250,354	250,415	244,219	247,268	250,376	253,557
Financial assets	598	582	582	582	582	582
NET WORKING CAPITAL	**(3,726)**	**17,212**	**30,553**	**51,550**	**72,011**	**92,326**
Current trade receivables	90,278	103,164	141,720	163,272	186,975	209,241
Other current receivables	21,380	24,198	20,376	22,587	24,579	26,510
Other non-current receivables	12,587	12,914	13,606	14,520	16,679	19,883
Inventories	257,961	252,496	267,542	295,245	328,304	361,675
Trade payables	(362,224)	(345,987)	(385,439)	(411,568)	(444,351)	(477,373)
Short term Tax receivables	27,772	23,979	38,348	30,033	30,033	30,033
Long term Tax receivables	8,166	4,990	6,496	6,551	6,551	6,551
Deferred tax assets	36,227	46,462	45,107	42,599	42,599	42,599
Short term Tax payables	(19,065)	(18,952)	(36,167)	(24,728)	(24,728)	(24,728)
Long term Tax payables	(166)	-	-	-	-	-
Other short term payables	(70,677)	(79,567)	(75,075)	(80,668)	(87,782)	(94,679)
Other long term payables	(5,965)	(6,485)	(5,961)	(6,292)	(6,847)	(7,385)
PROVISIONS	**(137,531)**	**(133,685)**	**(131,100)**	**(134,475)**	**(135,724)**	**(135,805)**
NET CAPITAL EMPLOYED	**757,929**	**775,778**	**788,624**	**809,296**	**831,614**	**855,030**
NET FINANCIAL POSITION	**359,708**	**351,976**	**342,936**	**337,400**	**325,610**	**305,137**
Short term debt	140,691	113,178	130,081	120,000	130,000	90,000
Long term debt	264,789	443,164	379,025	355,000	320,000	310,000
Other liquid assets	5,787	4,127	25,334	15,000	15,000	10,000
Cash	39,985	200,239	140,836	122,600	109,390	84,836
TOTAL SHAREHOLDER'S EQUITY	**398,221**	**423,802**	**444,385**	**471,897**	**506,004**	**549,893**
SOURCES OF FUNDS	**757,929**	**775,778**	**788,624**	**809,296**	**831,614**	**855,030**

Table 17 - *Source: Company financial highlights, PdM estimates*

Appendix 3. Geographic cash flow statements (€'000)

INDIA	2011 E	2012 E	2013 E	2014 E	2015 E
LCV volumes (units)	212,327	229,951	248,000	263,873	274,032
LCV ARPU (€)	1,760	1,857	1,960	2,038	2,103
2w volumes (units)		50,000	75,000	95,000	110,000
2w ARPU (€)		680	707	735	765
Sales from India	**373,607**	**460,992**	**539,121**	**607,631**	**660,474**
% tot sales	23.16%	26.26%	28.47%	30.06%	30.94%
% growth	14.18%	23.39%	16.95%	12.71%	8.70%
EBITDA from India	77,710	95,886	111,598	123,349	132,095
EBITDA margin India	20.80%	20.80%	20.70%	20.30%	20.00%
D&A India	23,886	24,342	24,920	25,649	26,333
% Capex India	94.00%	94.00%	94.00%	94.00%	94.00%
EBIT from India	53,824	71,544	86,678	97,700	105,762
EBIT margin India	14.41%	15.52%	16.08%	16.08%	16.01%
Tax Rate India	42.00%	42.00%	42.00%	42.00%	42.00%
Op. Tax India	22,606	30,049	36,405	41,034	44,420
Adj. Op. Tax India	28,749	37,497	46,032	49,717	54,038
Adj. Tax Rate India	53.41%	52.41%	53.11%	50.89%	51.09%
D&A India	23,886	24,342	24,920	25,649	26,333
Change in NWC India	(9,488)	(12,567)	(11,506)	(10,158)	(8,461)
Cash Flow From Indian Operations	**39,473**	**45,822**	**54,060**	**63,474**	**69,596**
Capex India	25,410	25,896	26,510	27,286	28,014
% Capex	25.00%	25.00%	25.00%	25.00%	25.00%
FCFF India	**19,668**	**26,660**	**36,307**	**44,003**	**50,263**
% growth		41.70%	38.26%	31.35%	14.91%

Table 18 - *Source: Company financial highlights, PdM estimates*

EUROPE and US	2011 E	2012 E	2013 E	2014 E	2015 E
2W volumes (units)	362,000	366,000	369,000	371,000	372,000
2W ARPU (€)	2,750	2,814	2,878	2,944	3,012
LCV volumes (units)	14,289	13,632	13,004	12,406	11,836
LCV ARPU (€)	8,284	8,140	7,999	7,859	7,723
Sales from Europe and US	**1,113,972**	**1,140,716**	**1,166,090**	**1,189,896**	**1,211,930**
% tot sales	69.05%	64.97%	61.58%	58.87%	56.78%
% growth	3.08%	2.40%	2.22%	2.04%	1.85%
EBITDA from Europe and US	116,967	120,916	129,436	132,078	134,524
EBITDA margin Europe and US	10.50%	10.60%	11.10%	11.10%	11.10%
D&A Europe and US	61,595	62,771	64,261	66,142	67,906
% Capex Europe and US	101.00%	101.00%	101.00%	101.00%	101.00%
EBIT from Europe and US	55,372	58,145	65,175	65,936	66,618
EBIT margin Europe and US	4.97%	5.10%	5.59%	5.54%	5.50%
Tax Rate Europe and US	30.00%	30.00%	30.00%	30.00%	30.00%
Op. Tax Europe and US	16,612	17,443	19,553	19,781	19,986
Adj. Op. Tax Europe and US	22,932	23,497	26,792	25,641	26,044
Adj. Tax Rate Europe and US	41.41%	40.41%	41.11%	38.89%	39.09%
D&A Europe and US	61,595	62,771	64,261	66,142	67,906
Change in NWC Europe and US	(6,808)	(3,846)	(3,737)	(3,530)	(3,528)
Cash Flow From EU Operations	**87,228**	**93,573**	**98,908**	**102,908**	**104,953**
Capex Europe	60,985	62,149	63,624	65,488	67,233
% Capex	60.00%	60.00%	60.00%	60.00%	60.00%
FCFF Europe	**26,243**	**31,423**	**35,283**	**37,420**	**37,719**
% growth		19.74%	12.28%	6.06%	0.80%

Table 19 - *Source: Company financial highlights, PdM estimates*

ASEAN	2011 E	2012 E	2013 E	2014 E	2015 E
2W volumes (units)	62,543	81,425	106,008	132,509	161,662
2W ARPU (€)	2,011	1,890	1,777	1,688	1,621
Sales from ASEAN	**125,779**	**153,927**	**188,374**	**223,694**	**261,990**
% tot sales	7.80%	8.77%	9.95%	11.07%	12.27%
% growth	22.38%	22.38%	22.38%	18.75%	17.12%
EBITDA from ASEAN	28,300	34,172	41,631	48,542	55,018
EBITDA margin ASEAN	22.50%	22.20%	22.10%	21.70%	21.00%
D&A ASEAN	12,959	13,207	14,315	14,735	15,128
% Capex ASEAN	85.00%	85.00%	90.00%	90.00%	90.00%
EBIT from ASEAN	15,341	20,965	27,315	33,807	39,890
EBIT margin ASEAN	12.20%	13.62%	14.50%	15.11%	15.23%
Tax Rate ASEAN	7.50%	7.50%	7.50%	7.50%	7.50%
Op. Tax ASEAN	1,151	1,572	2,049	2,536	2,992
Adj. Op. Tax ASEAN	2,902	3,755	5,083	5,540	6,619
Adj. Tax Rate ASEAN	18.91%	17.91%	18.61%	16.39%	16.59%
D&A ASEAN	12,959	13,207	14,316	14,735	15,128
Change in NWC ASEAN	(2,965)	(2,715)	(3,620)	(3,929)	(4,668)
Cash Flow From ASEAN Operations	**22,434**	**27,701**	**32,928**	**39,072**	**43,731**
Capex ASEAN	15,246	15,537	15,906	16,372	16,808
% Capex	15.00%	15.00%	15.00%	15.00%	15.00%
FCFF ASEAN	**7,188**	**12,164**	**17,022**	**22,700**	**26,923**
% growth		69.23%	39.94%	33.36%	18.60%

Table 20 - *Source: Company financial highlights, PdM estimates*

Appendix 4. Montecarlo volatility analysis

On the basis of the main risks presented in the report, we perform a Montecarlo simulation assigning probability distributions with given variance to the lines of our DCFs. Upside and downside risks are modeled with lognormal distributions. All the other risks are modeled with normal ones. The variance of each distribution is computed on the basis of assumptions on the magnitude of each specific risk. For the sake of simplicity, we focused the analysis only on those risks whose impact could be modeled with a certain confidence. The principal assumptions of our analysis are reported in the following table:

RISK	DRAWN QUANTITY	DISTRIBUTION	ST.DEV.	COMMENTS
GDP growth rates				
LCV India	YoY volumes growth (%)	Inverted Lognormal	1.0%	> Downside risk from Indian slowdown
2W India	YoY volumes growth (%)	Inverted Lognormal	5.0%	> Downside risk from Indian slowdown
LCV Europe	YoY volumes growth (%)	Normal	0.5%	> Structural decline
2W Europe	YoY volumes growth (%)	Lognormal	1.0%	> Upside risk from unexpected economic recovery
2W ASEAN	YoY volumes growth (%)	Inverted Lognormal	2.0%	> Downside risk from Vietnamese slowdown
Success/insuccess of new models				
LCV India	Volumes (u)	Normal	10000u	> Risk not considered for Europe
2W India	Volumes (u)	Normal	5000u	because of Piaggio's established presence in the
2W ASEAN	Volumes (u)	Normal	7000u	market
Stronger competition				
LCV India	Ebitda Margin (%)	Inverted Lognormal	1.0%	> Although some margin erosion is already
2W ASEAN	Ebitda Margin (%)	Inverted Lognormal	1.0%	modeled in our DCF we assumed further erosion
2W Europe	Ebitda Margin (%)	Inverted Lognormal	0.5%	due to unexpected competitive pressure
Exchange rate				
India	Ebit (€)	Normal	3.5%*Ebit	> Exchange rates volatility not covered by Piaggio's
ASEAN	Ebit (€)	Normal	5%*Ebit	hedging policy

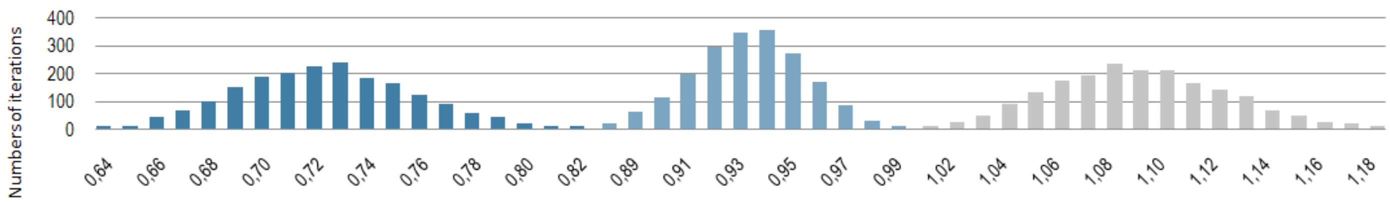
Table 21 - *Source:* *PdM estimates*

Hereafter, we report the results obtained with 2000 iterations. On the basis of the assumptions made, the bulk of the volatility comes from Asia. This is not surprising, given that this regions are the most exposed to the strategic risks outlined in the report. European operations generate less volatility instead.

	INDIA	ASEAN	EU and US	Aggregate
Mean	€1.08	€0.72	€0.93	€2.73
St. Dev.	€0.04	€0.04	€0.02	€0.07
Mean St. Error	€0.00	€0.00	€0.00	€0.00
Minimum	€0.98	€0.63	€0.84	€2.51
First Quartile	€1.06	€0.70	€0.91	€2.69
Median	€1.08	€0.72	€0.93	€2.73
Third Quartile	€1.11	€0.74	€0.94	€2.78
Maximum	€1.20	€0.84	€1.01	€2.97

Table 22 - *Source:* *PdM estimates*

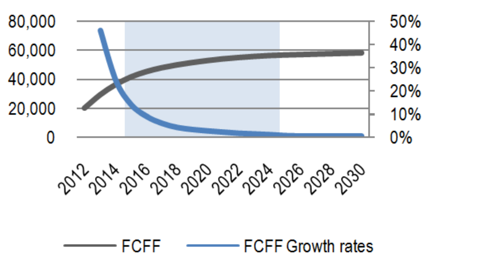
Figure 21. ***Price distributions***



Source: *PdM estimates*

Appendix 5. DCF's Assumptions

Figure 22. ***Exponential decay of Indian FCFF growth rates (€'000)***



Source: *PdM estimates*

Terminal values: Our analytic period, or first stage, spans from 2011 to 2015. Further analytical forecasting would be an academic exercise since Piaggio's industrial plan stops in 2013. As for the terminal values, we make different modeling assumptions for developed and developing markets. For Europe and America we adopt the perpetuity model, because of their lower medium-run growth potential. For both ASEAN and India we introduce a convergence stage, or second stage, in which we assume decreasing Free Cash Flow growth rates over a ten years long period. The path followed is an exponential decay that links the last growth rate of the analytic period to the terminal growth rate of the perpetuity that follows. The terminal growth rate is fixed at 0.5% for all geographic areas, since in the steady state we assume homogeneity among the countries. The average weight of our terminal values is approximately 75%. This is due both to the limited length of the analytic forecasting period, and to the temporal distribution of the generation of value.

Weighted Average Cost of Capital: as a direct consequence of our sum-of-the-parts approach we adopt different costs for different geographic regions. The main source of change is the country risk premium, estimated according to the researches of Damodaran[5]. The assumptions are defined in the table below:

	ASEAN	India	EU and US	Description:
WACC	10.72%	9.31%	7.63%	Our estimation.
Gearing ratio (D/E)		0.7		Target gearing ratio stated by Piaggio, consistent with our DCF.
Cost of Debt		5.58%		Average cost of outstanding Debt.
Fixed rate Bond		7.00%		27% of total debt. Fixed interest rate.
Bank Loans		2.70%		52% of total debt. Flexible interest rate: Euribor6M + spread [min 0.65%/max 2.2%]. Comfortably within covenants.
Other		10.90%		21% of total debt. Includes principally: interest paid on leases, bank charges, cash discount for customers, etc.
Marginal tax rate		43.00%		The corporate tax rate. In fact approximately the whole Debt is owned by the consolidated Piaggio group, and not by its subsidiaries.
Cost of Equity	16.01%	13.61%	10.76%	Cost of Equity, differentiated among countries.
Risk free rate		4.81%		Yield on the Italian BTP 10Y as of 20/1/2011
Equity market premium		5.20%		Implied market risk premium at 1/1/11 (Source: Damodaran, http://pages.stern.nyu.edu/~adamodar/).
Country risk premium	6.00%	3.60%	0.75%	The country's default spread - based on the country rating from Moody's - adjusted by the relative equity market volatility. (Source: Damodaran).
Beta ß		1.00		Estimated by regressing weekly returns on stock against the FTSE MIB index using 5 years of data. (Source: Damodaran).

Table 23 - *Source:* PdM estimates

The WACC adopted in the last stage of our terminal values is lower than the WACC adopted in the analytic period, because we expect the differences between developed and developing economies to vanish when a long run steady state will be reached. Thus it is homogeneous across the regions, and equal to the EU and US WACC.

Taxes: We estimate the aggregate tax rate reported in the income statement from company's guidelines. Local taxes are estimated according to the different fiscal legislations. In the following table we present the tax rates on EBT across countries:

National tax rates adopted in the analysis		
Country	**Tax rate**	**Comment**
Italy	27.5%	IRES (Italian corporate tax rate)
Europe	~30%	Average European corporate tax rate
US	35%	American corporate tax rate
India	43%	Indian foreign companies corporate tax rate
Vietnam	7.5%	Vietnam corporate tax rate is 25% but Piaggio will pay a 7.5% preferential tax rate, because of government tax incentives. Piaggio has already enjoyed 3 years of fiscal tax holiday at 0% tax rate
Indonesia, Thailand, Taiwan and Malaysia	~25%	Average ASEAN corporate tax rate

Table 24 - *Source:* Company's guidelines, *http://www.taxrates.cc/index.htm*

However, an important share of the Group's taxes depends on rates that are not directly based on EBT (such as the Italian IRAP, computed as the 3.9% of the Net Value of Production, and the Indian Dividend Distribution Tax, computed as the 15% of repatriated dividends). Therefore, it is more accurate to indirectly derive an adjusted tax rate for every region that reconciles with the aggregate taxes reported in the income statement. To this end, we compute the difference between aggregate taxes and the sum of national taxes on EBT (reported in the table above), and we divide it across the regions according to the contribution of each region to the company's EBIT. In the following table we report the adjusted tax rates we estimate for each area.

Region	Adj. Tax Rate
India	~51%
EU and US	~39%
ASEAN	~16%

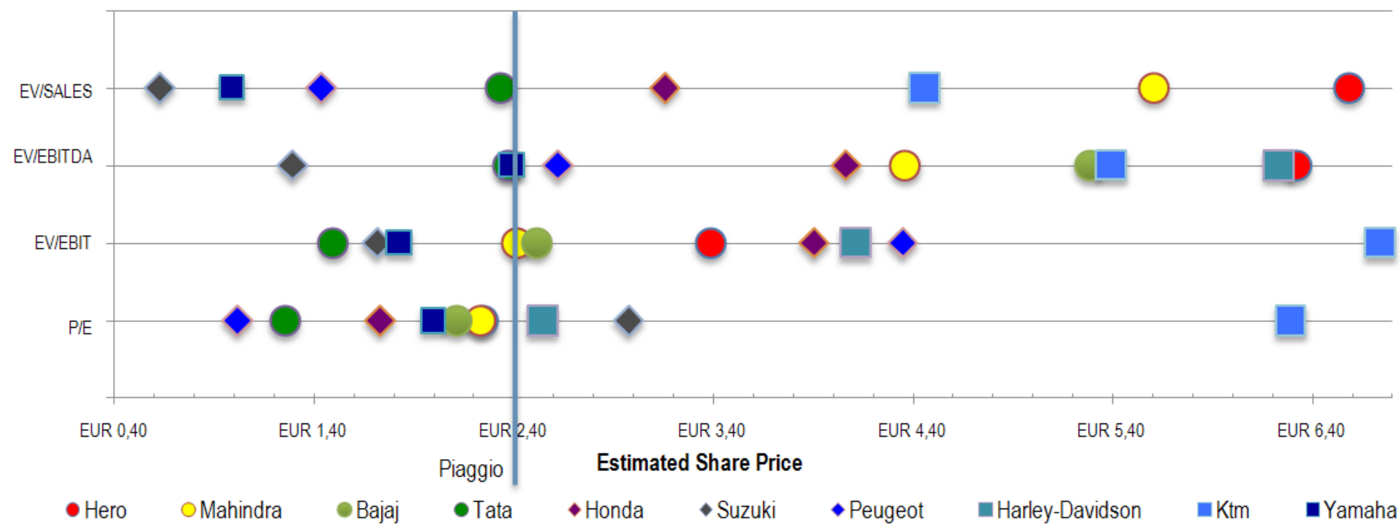
Table 25 - *Source:* PdM estimates

5 Aswath Damodaran is a Professor of Finance at the Stern School of Business at New York University, best known as the author of several widely used academic and practitioner texts on Valuation.

Appendix 6. Multiple analysis

The following chart contains the estimated share prices of Piaggio calculated using comparables' multiples. In each of the four lines (representing one of the four multiples) there are ten estimated share prices of Piaggio, each computed by applying the value of the multiple of each comparable company to Piaggio fundamentals.
The multiple range is wider for EV-based multiples in respect to the P/E ratio.

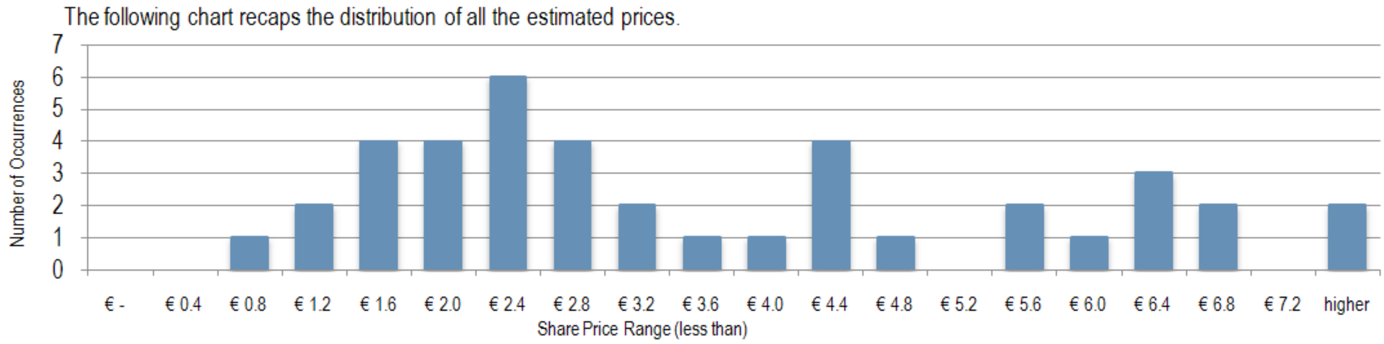
Figure 23. ***Estimated Share Price***



Source: PdM estimates

The following chart recaps the distribution of all the estimated prices.

Figure 24. ***Frequency distribution***



Source: PdM estimates

Appendix 7. Product launches

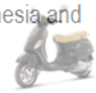
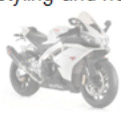
	2009	2010	2011	2012	2013
Asia 4w	apé truck plus (4w cargo 865kg) in India 	apé mini (4w cargo half tonne) in India 	4w passenger vehicle in India	4w cargo vehicle 1.5t in India	Late: NT3 
Asia 2w	Vespa LX 125/150 in Vietnam 	Beverly in Vietnam 	Introducing Vespa and other scooters in Indonesia and Thailand 	Mid: Vespa LX 125 in India 	
EU **US**		MP3 Hybrid 300i 	Vespa PX, new scooter and motorbikes (Typhoon, Aprilia) nine new 2w models 	Scooters restyling and new motorbikes models. 	

Table 26 - *Source: PdM estimates*

Appendix 8. SWOT analysis

STRENGHTS	WEAKNESSES
• Strong Brands and product line • Great innovation capabilities, both in engines and design • Possibility to sign deals as engines supplier for global automotive player with further economies of scale in the production of engines	• Poor ability to compete in the motorbike sector • Low competitivity in the 4w segment
OPPORTUNITIES	**THREATS**
• Poor infrastructures and high urban traffic fuel 2w growth in Emergin Markets • Developed Markets regulation on CO_2 may increase 2W sales	• Weak European market recovery • New competitors in European market focusing on price: Kymco and Sanyang • New competitors in Indian 4w market: GM and Nissan • Rise of input's costs

Table 27- *Source: PdM estimates*

Appendix 9. Corporate Governance and Corporate social responsibility

CG and CSR rating for Piaggio and its main competitors

The following table summarizes CG and CSR rating for Piaggio and its main competitors. Ratings are reported on a scale from 1 to 10. CG and CSR are classified as "Strong" if ratings are above 6, "Average" if ratings are between 4.5 and 5.5, and "Weak" if ratings are below 4.

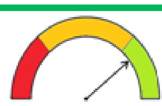
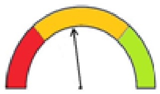
Company	GMI rating	CG and CSR Valuation
BMW	7.5	 Strong
Mahindra	6	
Honda	5.5	 Average
Piaggio	5	
Tata	5	
Nissan	5	
Bajaj	5	
Suzuki	4	 Weak
Yamaha	3	

Table 28 - *Source: Governance Metrics International (GMI), PdM estimates (we estimated rating for Piaggio on the basis of our CG and CSR analysis).*
Methodology: The average rating of the companies analyzed is 5.1. We assumed that average ratings are in the range 5.1 ± 10%.

General impact of CG and CSR on company fundamentals

The following table describes the long term impact of good CG and CSR policies on the following company fundamentals.

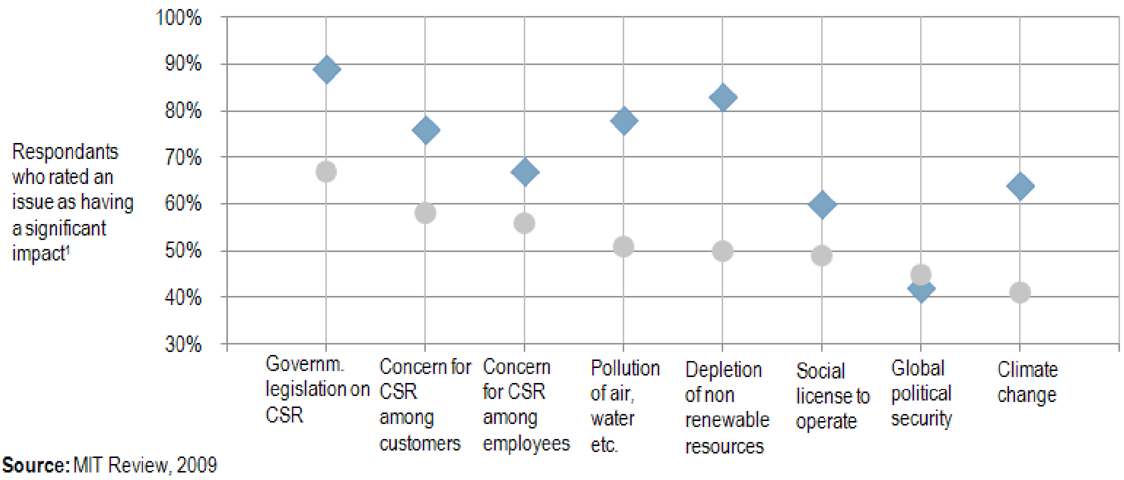
Value driver	CG and CSR impact
Revenues	Enhanced ability to enter new markets and comply with stricter regulations
Margins	Pricing: Stronger brand and premiumisation
	Costs: Operational efficiency, lower taxes, greater employees productivity
Financing	Lower cost of capital and greater access to financing and insurance

Table 29 - *Source: The sustainability Initiative 2009 Survey, BCG and MIT Sloan Management Review*

Influence of CSR issues on Automotive industry

Automotive is very concerned about CSR. In this chart we illustrate the impact of CRS on the automotive industry vs the industries average.

Figure 25. ***Influence of CSR issues on Automotive industry***



Source: MIT Review, 2009

[1]Respondents were asked to rate the issue on a scale to 1 (no impact) to 5 (major impact); this exibit reflects the percentage of respondents who reted each issue with 4 or 5. The sample is composed by 2000 Italian managers.

Appendix 10. An assessment of the likelihood of commercial success

We searched the keyword "Piaggio Vespa" on Google Trends, to assess the "likelihood of commercial success" of the products. Some authors argue that query data may be correlated with the current level of economic activity in a given industries and thus may be helpful in predicting the subsequent data releases. Moreover query data could give hints about future growth of units sold. The results of our search show that Vespa is a much searched brand in Indonesia, suggesting to us that the entrance in this market will be successful. On the other hand, the name is not searched in India, which is a bit frightening.

Description: Google Trends analyses Google web searches to compute how many searches have been done for the keywords you entered, relative to the total number of searches that have been done on Google over time. Trends displays the top regions, cities, and languages in which people searched.

Region	piaggio vespa	piaggio vespa (std error)
1. Italy	1.000	0%
2. Greece	0.320	3%
3. Switzerland	0.245	3%
4. Viet Nam	0.205	3%
5. Indonesia	0.190	5%
6. Portugal	0.160	3%
7. Belgium	0.155	3%
8. Austria	0.150	3%
9. Spain	0.145	3%
10. Germany	0.135	2%

Table 30 - *Source: Google Trends*

Language	Piaggio vespa	piaggio vespa (std error)
1. Italian	1.000	0%
2. Greek	0.365	3%
3. Vietnamese	0.205	3%
4. Indonesian	0.165	3%
5. German	0.155	2%
6. Dutch	0.135	3%
7. French	0.105	3%
8. Swedish	0.090	5%
9. Spanish	0.070	3%
10. Polish	0.035	5%

Table 31 - *Source: Google Trends*

Note: The internet users are 81M in India (6.9% of the population), 30M in Indonesia (12.3% of the population) and 24M in Vietnam (27.1% of the population). Google's market share is 80% in India, 65% in Indonesia and 90% in Vietnam.

6 HyunyoungChoi andHalVarian. «Predicting the Present with Google Trends.» ©Google Inc., 10 April 2009.

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