BRYAN, GARNIER & CO

INDEPENDENT RESEARCH

Hella

In the headlights

14th September 2016

Automotive

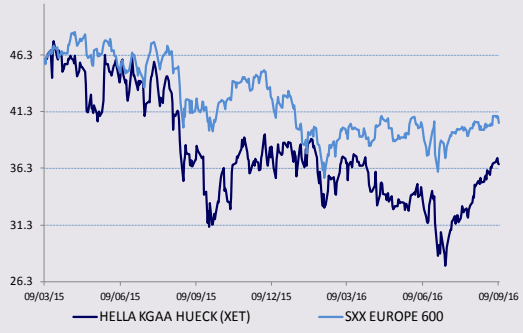
Fair Value EUR45 (price EUR36.67) **BUY**

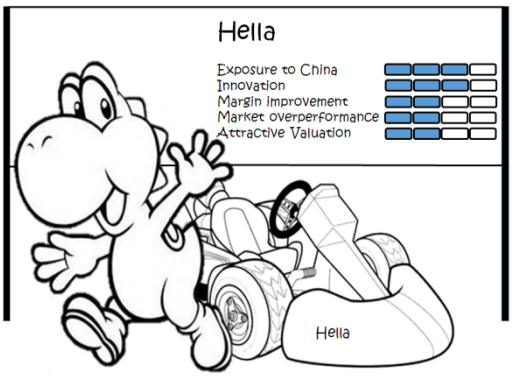
Coverage initiated

Bloomberg	HLE GR
Reuters	HLE.DE
12-month High / Low (EUR)	39.3 / 27.7
Market capitalisation (EURm)	4,074
Enterprise Value (BG estimates EURm)	4,099
Avg. 6m daily volume ('000 shares)	127.5
Free Float	2.3%
3y EPS CAGR	17.5%
Gearing (05/16)	29%
Dividend yields (05/17e)	2.62%

YE May	05/16	05/17e	05/18e	05/19e
Revenue (EURm)	6,352	6,611	6,940	7,288
EBIT(EURm)	366.51	446.66	479.59	538.33
Basic EPS (EUR)	2.42	3.20	3.47	3.93
Diluted EPS (EUR)	2.42	3.20	3.47	3.93
EV/Sales	0.66x	0.62x	0.57x	0.53x
EV/EBITDA	5.1x	4.7x	4.2x	3.7x
EV/EBIT	11.4x	9.2x	8.3x	7.1x
P/E	15.2x	11.5x	10.6x	9.3x
ROCE	8.5	9.6	9.8	10.4

Price and data as at close of 9th September





We are initiating coverage of Hella with a Buy recommendation and FV of EUR45. The group's innovative positioning in the lighting and electronic components segment should help it outperform automotive production in coming years, while guaranteeing an improvement in margins and ROCE to the benefit of shareholders.

- **Hella, a family group now gone global:** Created in **1899** to address the lamp and lights market for bicycles, carts and cars, the group rapidly specialised in the automotive segment and more precisely in the German market. After being bought by industrial family **Lüdenscheider Hueck in 1923** (*72.3% stake*), Hella then extended its international presence as of the 1960s enabling it to now generate **54%** of sales outside Europe (*in the OEM auto segment*).
- **Present in growth markets:** Hella's expertise in **LED** lights (*European leader with market share of 35%*) and **OLED** in the auto lighting sector, combined with its presence in the **electronic components** market (*15% global market share in Hella's segment*) should help the group benefit from the huge need for solutions enabling a reduction in vehicle CO_2 emissions as well as the development of autonomous vehicles.
- **Enabling it to outperform the market in coming years:** after outperforming automotive production **over the past seven years** (*+13% CAGR in sales vs. 7% for production*), this performance should last for the next five years *(+5% vs. +1.7%)*. Thanks to innovative products and control of distribution and R&D costs, we believe Hella should be able to improve EBIT margin by **90bp** to **8.4%** and **ROCE by 200bp** to **10.4%** by 2020.
- **A good entry point: we are initiating coverage of the stock with a Buy recommendation**: Hella is currently trading on a discount of **>15%** relative to historical multiples and **10%** relative to rivals, offering an excellent entry point to play long-term growth themes in the sector. **We are initiating Hella with a Buy recommendation and FV of EUR45 (+22%).**

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Company description

Hella is a Germany-based manufacturer of lightening and electronic components and systems for automotive industry. The group divides its business into the Automotive Original Equipment and Aftermarket segments. The Automotive OE segment comprises the Lighting and Electronics Business Divisions. The customer base for this segment is made up of automakers and other automotive suppliers. The product range of the Company embraces headlamps, multi-function lamps, light emitting diodes (LED), interior lighting, lighting electronics, vacuum pumps, sensors, central control units and access systems. The Aftermarket segment includes the Independent Aftermarket (IAM) and the business with Special OE suppliers (SOE) such as manufacturers of buses, caravans, and agricultural and construction machinery. The Company operates approximately 70 locations in approximately 30 countries.

Simplified Profit & Loss Account (EURm)	**31/05/14**	**31/05/15**	**31/05/16**	**31/05/17e**	**31/05/18e**	**31/05/19e**
Revenues	5,343	5,835	6,352	6,611	6,940	7,288
Change (%)	*6.9%*	*9.2%*	*8.9%*	*4.1%*	*5.0%*	*5.0%*
Adjusted EBITDA	656	766	816	875	944	1,037
EBIT	306	374	367	447	480	538
Change (%)	*3.8%*	*22.1%*	*-2.0%*	*21.9%*	*7.4%*	*12.2%*
Financial results	(35.6)	(35.7)	(39.2)	(37.2)	(33.0)	(26.8)
Pre-Tax profits	308	394	380	409	447	512
Exceptional	(24.1)	16.3	13.9	(10.0)	(10.0)	(10.0)
Tax	(79.2)	(98.2)	(108)	(106)	(116)	(133)
Profits from associates	37.8	55.3	53.0	56.1	58.6	61.1
Minority interests	(6.7)	(8.5)	(3.4)	(3.4)	(3.5)	(3.6)
Net profit	223	287	269	356	386	436
Restated net profit	223	287	269	356	386	436
Change (%)	*10.5%*	*29.0%*	*-6.4%*	*32.5%*	*8.4%*	*13.1%*
Cash Flow Statement (EURm)						
Operating cash flows	535	560	602	722	800	876
Change in working capital	(71.3)	(97.4)	(27.6)	(58.5)	(46.7)	(54.9)
Capex, net	(516)	(498)	(561)	(589)	(618)	(649)
Financial investments, net	(0.13)	(0.41)	0.0	0.0	0.0	0.0
Dividends	(55.3)	(59.1)	(86.6)	(85.6)	(107)	(116)
Other	218	(37.0)	27.3	1.7	1.7	1.8
Net debt	425	131	238	189	113	0.07
Free Cash flow	18.9	62.0	41.6	132	181	227
Balance Sheet (EURm)						
Tangible fixed assets	1,430	1,612	1,698	1,800	1,900	1,996
Intangibles assets	127	393	447	499	549	598
Cash & equivalents	637	603	585	634	710	823
current assets	2,412	2,636	2,635	2,768	2,924	3,127
Other assets	(148)	(327)	(370)	(406)	(472)	(573)
Total assets	4,459	4,917	4,995	5,294	5,611	5,971
L & ST Debt	1,418	1,139	1,152	1,152	1,152	1,152
Others liabilities	1,699	1,868	1,865	1,892	1,928	1,966
Shareholders' funds	1,312	1,880	1,973	2,243	2,522	2,842
Total Liabilities	4,459	4,917	4,995	5,294	5,611	5,971
Capital employed	2,759	3,121	3,622	3,653	3,873	4,074
Ratios						
Operating margin	5.73	6.41	5.77	6.76	6.91	7.39
Tax rate	25.67	24.94	26.00	26.00	26.00	26.00
Net margin	4.17	4.92	4.23	5.38	5.56	5.98
ROE (after tax)	16.96	15.26	13.61	15.86	15.29	15.34
ROCE (after tax)	8.19	8.90	8.50	9.61	9.78	10.36
Gearing	58.15	28.09	28.63	23.01	17.45	11.52
Pay-out ratio	24.71	29.81	31.86	30.00	30.00	30.00
Number of shares, diluted	100	111	111	111	111	111
Data per Share (EUR)						
EPS	2.23	2.58	2.42	3.20	3.47	3.93
Restated EPS	2.23	2.58	2.42	3.20	3.47	3.93
% change	*10.5%*	*16.1%*	*-6.4%*	*32.5%*	*8.4%*	*13.1%*
EPS bef. GDW	2.23	2.58	2.42	3.20	3.47	3.93
BVPS	NM	NM	NM	NM	NM	NM
Operating cash flows	5.35	5.04	5.42	6.49	7.20	7.89
FCF	0.19	0.56	0.37	1.19	1.63	2.04
Net dividend	0.55	0.77	0.77	0.96	1.04	1.18

Source: Hella; Bryan, Garnier & Co ests.

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1. Investment Case

Why the interest now?

The reason for writing now

We are initiating coverage of German automotive parts supplier **Hella** under the framework of our report on the automotive sector. Created in 1899 but only listed on the stock market since 2014, Hella should benefit in coming years from expansion **in the headlights market,** thanks especially to its presence in the LED segment, as well as from robust demand for solutions and innovations helping to reduce **vehicle CO_2 emissions** (*by reducing the weight of vehicles*). We estimate the group should continue to **outperform global automotive production over the next five years.**

Cheap or Expensive?

Valuation

As for **Faurecia**, **Plastic Omnium** and **Valeo,** we value Hella via two methods, namely comparison of peer **EV/sales, EV/EBIT** and **P/E** multiples and **DCF**. Our valuation puts the Hella share price at **EUR45**, pointing to upside of **>20%** relative to the recent share price, despite the healthy performance since the stock was floated in **November 2014** (+19%).

When will I start making money?

Catalysts

We consider the various announcements made by carmakers concerning the development of **electric** and **autonomous cars** as positive for the sector and for Hella. In the shorter term, we see no catalysts for the share apart from the publication of quarterly earnings (*Q1-16/17*) on **28th September 2016.**

What's the value added?

Difference from consensus

We are currently in line with the consensus in terms of attributable net profit. However, in terms of **EBITDA**, we are **5%** and **7%** lower for 2016/17 and 2017/18 estimates in view of restructuring costs *(factored into our estimates but not the consensus*).

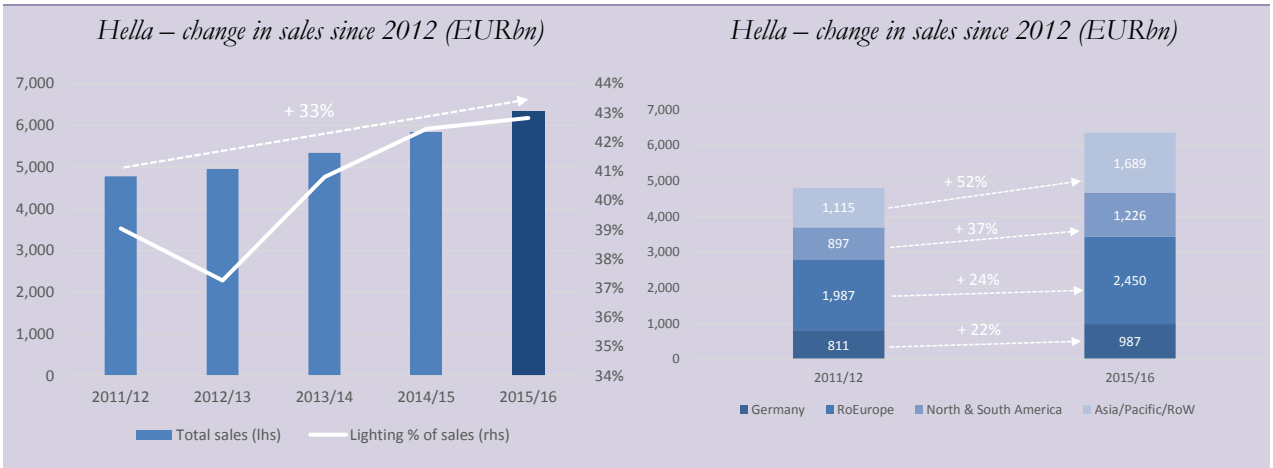
Could I lose money?

Risks to our investment case

The automotive cycle is about to slow both in mature and emerging countries, and this slowdown could be worse than expected, in particular due to **Brexit** and **international tension**. Like all car components makers, Hella could suffer from a **rapid downturn in automotive production.**

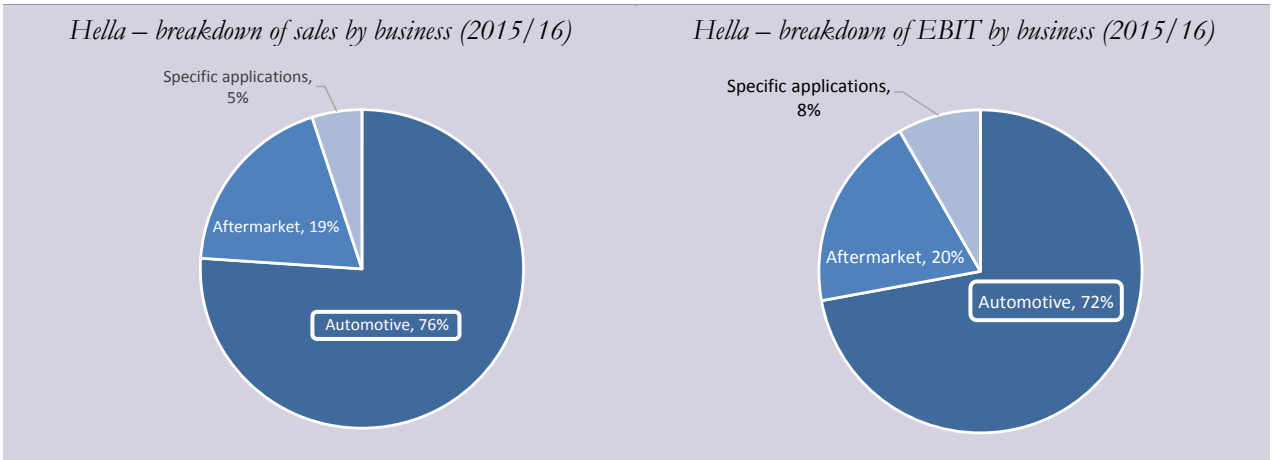
2. Hella in six charts

Fig. 1: Growth driven by Asia and north/south America and by the lighting segment



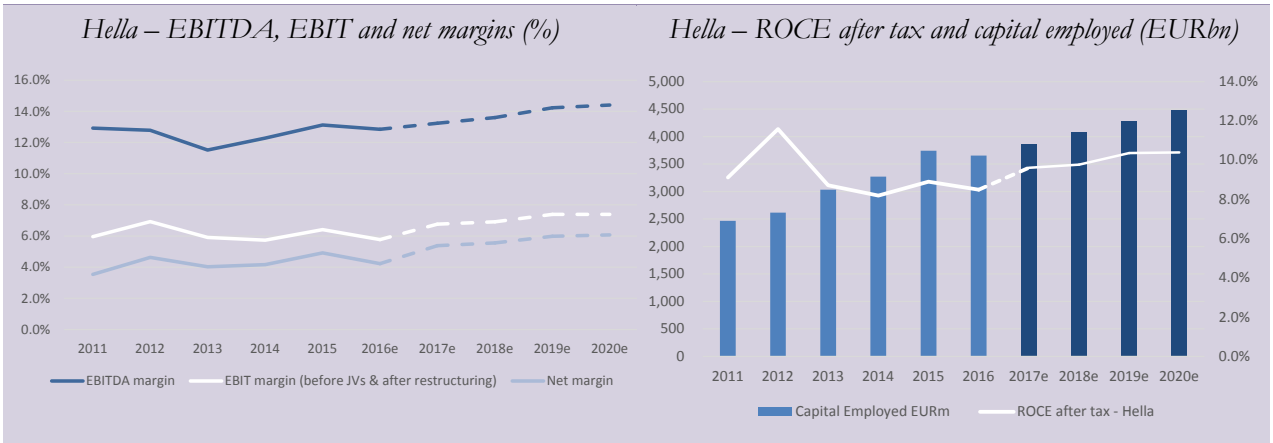
Source: Hella; Bryan, Garnier & Co ests.

Fig. 2: Product portfolio very exposed to the auto sector



Source: Hella; Bryan, Garnier & Co ests.

Fig. 3: Sharp improvement in ratios



Source: Hella; Bryan, Garnier & Co ests.

3. Under the headlamps

Following the **deployment of connected objects in the auto sector** and the significant innovations at the root of the development of **connected, autonomous** and **carbon-free vehicles**, technological innovation is playing an increasingly important role in a sector as old and industrial as the auto industry.

We estimate that the automotive sector in generally is primarily set to be driven by a more beneficial **model mix and price effect than during the previous cycle** whereas growth stemming from **volumes is likely to be lower than over the past six years**. The least innovative and least technological players with lower pricing power are therefore set to suffer from the slowdown in global demand, obliging them to optimise their cost bases and especially their R&D spending to the detriment of future innovation. In contrast, we estimate that certain more innovative and technological players, **especially car components makers such as Hella,** should continue to outperform the market in coming years.

Created in **1899** in order to address the lamps/lights market for bicycles, carts and cars, the German group rapidly specialised in the auto segment and more specifically, the German market. Bought in **1923** by **industrial group Lüdenscheider Hueck** (*which owns 72.3%*), Hella then extended its international presence as of the 1960s, enabling it to now generate **54%** of sales outside Europe (*in the auto segment OEM*).

The group's expertise in **LED** (*European leader with 35% market share*) and **OLED** in the auto lighting sector, combined with its presence in the **electronic components** segment (*15% market share on a global scale for Hella's segments*), should help the group to surf on the huge need for solutions enabling a reduction in vehicle CO_2 emissions while benefiting from the development of the autonomous car.

After outperforming global auto production over the past seven years (*CAGR of 13% in sales vs. 7% for production*), we estimate this performance should last over the next five years *(+5% vs. +1.7%).* Thanks to innovative products and control of the base of distribution and R&D costs, we also believe that Hella should be capable of improving EBIT margin by **90bp to 8.4%** and **ROCE by 200bp to 10.4%** by 2020.

Following the group's problems with a Chinese outsourcer that prompted it to reduce 2015/16 margin estimates, the Hella share underperformed the sector and its main rivals on the stock market yet recently picked-up (*share being down 4.5% YTD vs. -12.5% for the SXAP and 0% for other suppliers*). We missed the perfect entry price at **EUR28** in early July but still see upside on share price.

Hella is currently trading on a **15%** discount relative to historical multiples and 1**0%** relative to rivals.

Buy, FV of EUR45 *(+22%).*

4. An ideal product positioning for outperforming the sector...

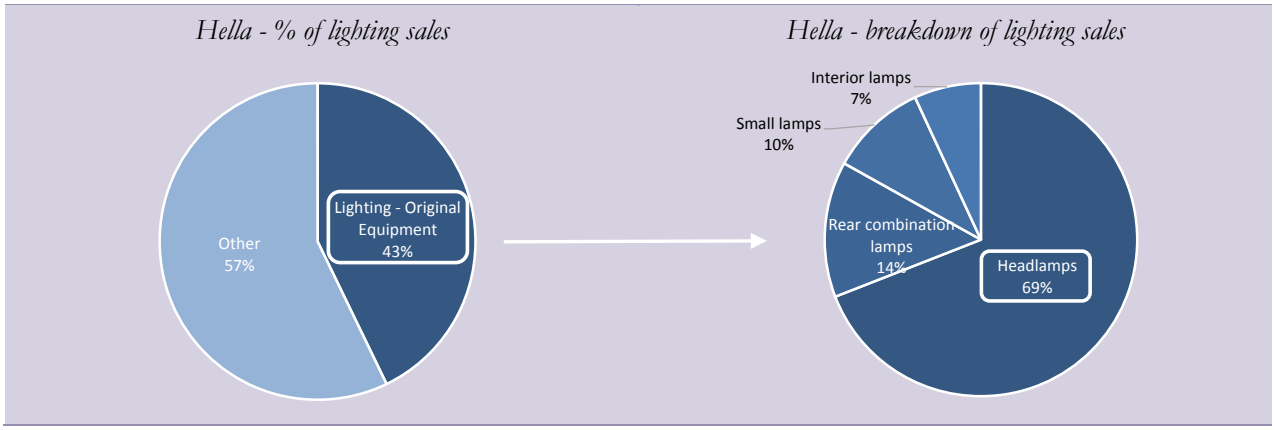
4.1. Let there be light! And there was light!

LED technology should gradually take over from halogen and xenon technologies, which currently account for 98% of the global lighting market

Although vehicles were first fitted with lighting systems such as headlights and rear-lights more than a century ago, and that the purpose of these systems still seems to be the same (***to see and to be seen***), technological progress has multiplied in this field and should continue to develop in coming years. **Halogen headlights** gradually replaced electrical lights in the **1970s**, whereas **xenon lights** have been equipping upscale vehicles since the **1990s** (*while remaining a minority on a global market scale*). Finally, **LED** lights emerged and began to equip certain vehicles as of the **2000s**. New regulatory restrictions in Europe (*reduction in CO_2 emissions and diurnal lights obligatory in the EU for new cars registered since 2011)*, should increase the need for LED technologies in favour of players such as Valeo, Hella and Osram etc.

Hella's lighting business represents 43% of the group's sales and **57%** of its OEM auto sales and offers its clients products using **halogen, xenon, LED, OLED** and **laser** technologies. It is constantly innovating to offer ever-more innovative technologies/solutions. The technological assets of LED should gradually take over from halogen and xenon technologies, which currently account for **98%** of the global auto lighting market.

Fig. 4: Hella derives 43% of sales from lighting, of which 69% from headlights

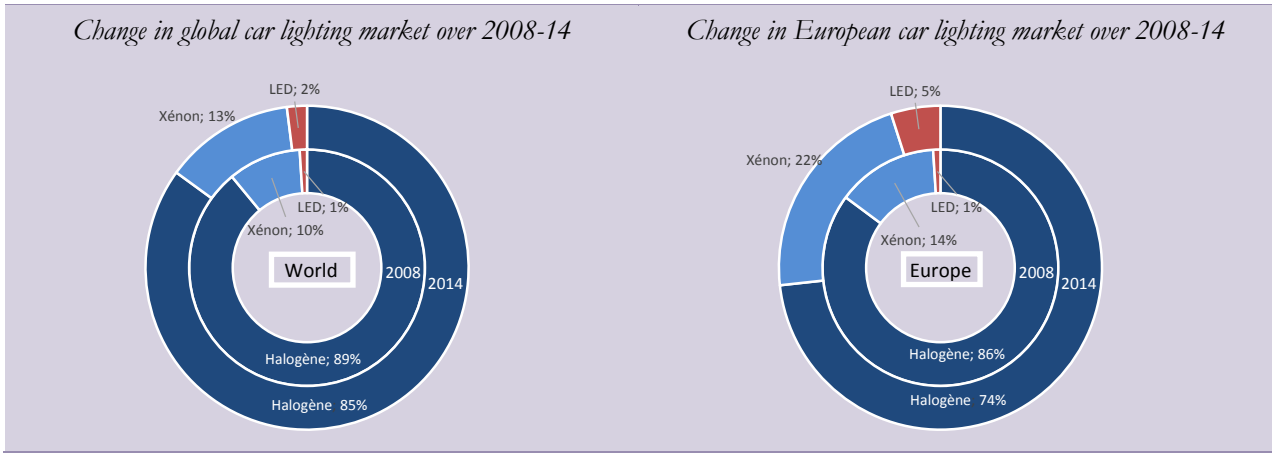


Source: Hella; Bryan, Garnier & Co ests.

4.1.1. LED, the technology of tomorrow

Today still, the global lighting market remains dominated by the **xenon** and **halogen** technologies, despite their low level of efficiency relative to new technologies.

Fig. 5: LED technology only represents 2% of the global market



Source: Hella; Bryan, Garnier & Co ests.

Halogen headlamps are based on the following principle: an electric current is sent to the metal filament that heats up and creates a light source. These lights are the **most widespread** in the fleet of vehicles in circulation and remain dominant in new car registrations despite their **technical obsolescence** (*weak luminosity, limited projection, low lifespan and fragility*) and their power consumption. The very basic reason for this is their very low price (*between EUR25 and EUR30 on average for a pair*), stemming directly from the low manufacturing costs itself. The affordable nature of halogen headlights and their ability to adapt to virtually all car models on the market make them virtually unavoidable for mass carmakers and their entry and mid-range cars.

Xenon headlamps, in which an electric current is sent into xenon gas in order to stimulate and generate its light source, are more recent and less widespread in vehicles despite their low power consumption. Firstly, the **higher price** (*around EUR100*) of xenon lights compared with halogen headlamps, given the rareness of xenon gas, is the first barrier to the widespread expansion of this technology. However, the main brake remains the very nature of the **light emitted, which tends to blind** other drivers. Xenon headlamps are therefore restricted to the **upscale and sports categories**. Indeed, the fact that many consumers dislike this blue light explains the lower penetration rate of xenon in the US and in China, relative to Europe.

LED lights (*Light Emitting Diode*) have only been used recently for headlamps and remain marginal for new models (*5% in Europe according to Hella*). In this technology, the beam is not generated by the heat of an electric current, but by the semiconductors making up the light. The strong heat created when the system is lit could set an electrical wire on fire in the event of prolonged use (like side lights or full-beam) and for years, has obliged carmakers to place LED lights only in rear lights needing less brightness, and in indicators. This technology has now been underscored for its **low power consumption,** its conversion rate (*80% of electrical power used for a LED is transformed into light compared with 20% for a conventional lamp*), as well as its lifespan **equivalent to that of a car (***around 6,000 hours)***.** In contrast, the light generated by a LED lamp is less intense, thereby obliging carmakers to multiply

the number of LED lamps in the car light for an already-high price per vehicle (*between EUR150 and 300*), thereby meaning the technology is primarily destined for **premium and electrical vehicles**.

Fig. 6: Overview of technological characteristics of car lighting

Technology	Light colour	Luminosity (mcd.m²)	Projection (m)	Lifespan (h)	Average price (EUR)	Intensity (lumens)	Power consumption (W)
Halogen	White yellow	30	150	1 000	25-30	1 600	55
Xenon	Blue	70	220	2 000	100	3 200	35
LED	**White**	**75**	**300**	**6 000**	**150-450**	**7 800**	**35**
LED laser	White	-	600	30 000	> 2 000	-	-

Source: Hella; Bryan, Garnier & Co ests.

Fig. 7: Luminosity differences depending on technology used

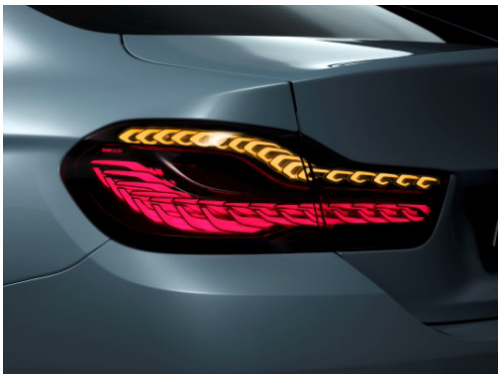
Source: Hella; Bryan, Garnier & Co ests.

Lifespan of LED Laser lights beats all records at around 30,000 hours, although price restricts it to use to very upscale vehicles

4.1.2. New applications for the future

LED technology is now accompanied by several derivatives such as **OLED** *(Organic Light Emitting Diode*) and **LED laser** highlighted by certain **specialist components makers such as Hella, Valeo or FCA's supplier, Magnetti Marelli**. OLED lighting functions in the same way as LED except that the diodes are made of more flexible superposed organic semiconductor materials, therefore enabling far greater **freedom of creation** and a virtually unlimited choice of colours for a far more modern if not futuristic style. Furthermore, these diodes require even less space than classic LED lights. The most recent innovation is the LED laser, a procedure enabling a **doubling in the light projection distance** (*up to 600m*) relative to classic LED while gaining in luminosity and precision. In fact, the headlights convert the beams emitted by the tiny laser diodes to produce a very intense white light similar to daylight while consuming **30% less energy than LED headlamps** considered themselves as more economical. Their lifespan beats all records at around **30,000 hours** but the price (*more than EUR2,000 a pair*) restricts it to **very upscale cars**, as is the case at present with certain **Audi** and **BMW** models.

Fig. 8: OLED headlights and rear lights in BMW M4 Iconic Lights



Source: Hella; Bryan, Garnier & Co ests.

4.1.3. Development of Hella portfolio focusing on LED... …

The Hella portfolio includes a very wide range of lighting systems (*lighting is the group's main business accounting for 42% of overall sales and headlamps are a key business representing more than 29% of consolidated sales*), offering all types of interior and exterior lighting types as well as all technologies (*hydrogen, xenon, LED, OLED and laser*), **albeit with a clear focus on recent LED technologies and their derivatives.**

Fig. 9: Hella: a portfolio focused on the LED technology

	Halogen	Xenon	LED	OLED	LED laser
Headlamps	x	x	x		
Intelligent headlamps		x			x
Rear lights			x	x	
Other outside lights			x		
interior lamps			x		

Source: Hella; Bryan, Garnier & Co ests.

According to NHTSA, almost 49% of accidents in the US take place at night

As a parts supplier with a strong technological expertise, Hella is one of the precursors in the LED headlamp segment and intelligent laser lights equipped with a system capable of adjusting intensity and projection angles depending on the environment. Road safety associations such as the National Highway Traffic Safety Administration (NHTSA) regularly warn the public of the dangers of driving, especially at **night, when the risks of an accident are twice as high** than during the day. The NHTSA estimates that almost **49%** of accidents that take place in the US occur at night and almost **38%** of these have proved to be fatal for those in the cars concerned. Indeed, during the night, drivers not only have reduced vision but are frequently dazzled by overly-bright or badly adjusted headlamps in oncoming vehicles. Given this fact, **lighting systems exceed their simple framework, and are becoming systems associated with safety and driver assistance.**

Hella's recent offers in automated, smart and adaptive lighting systems are in line with this trend for further safety and autonomy of cars in circulation. Adaptive headlamps made up of **25-80 independent LED light bulbs** (*or xenon in the case of smart lights offered in the US market*) and a range of sensors and cameras, are capable of adapting, with very sharp angle precision, the intensity and projection of the light beam, via the multiple light components making up the light depending on the vehicles present on the road and other factors that could interfere:

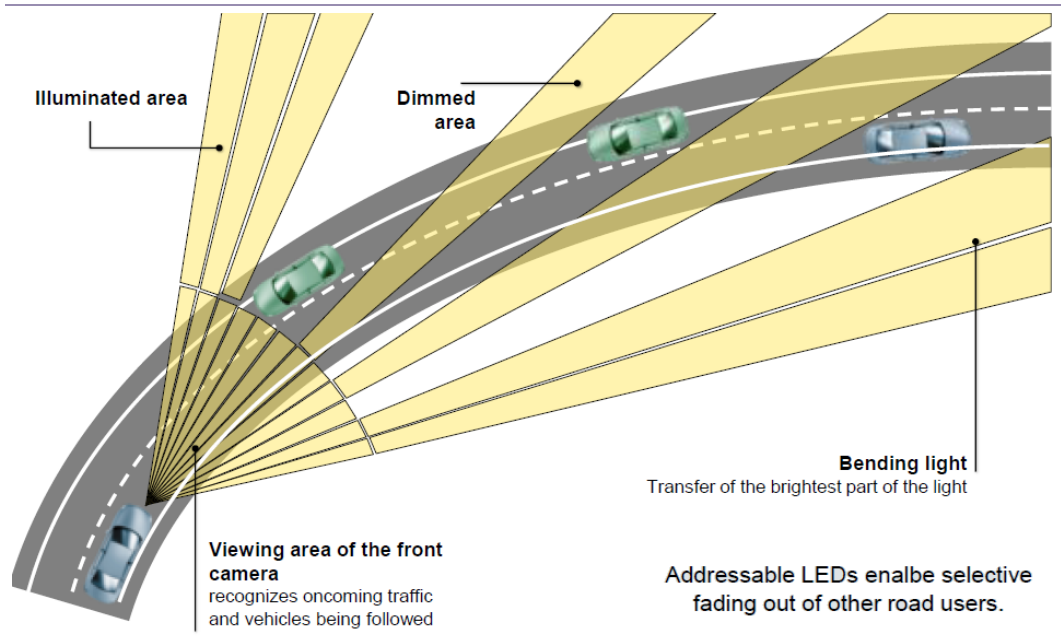
- **Adaptive Frontlighting System (AFS),** helps increase visibility on zones that are generally not very visible at night (*pedestrians on the side of the road in rural zones, on pavements in urban zones or driving and side lanes when driving around bends and corners*).

- **Adaptive cut-off line**, uses the AFS characteristics described previously but by adding additional functions. This automatically adapts the scope of the light projected in order to stop just behind the vehicle ahead or just before the vehicle coming in the opposite direction.

- **Vertical cut-off line**. This is the same procedure as the adaptive cut-off line, but with a smarter system functioning by segment, such that the lights are capable of reducing the intensity of the light beam or cutting it just for specific corridors corresponding to the trajectory of the vehicle followed or the cars coming in the opposite direction while continuing to light up the rest of the road and surroundings (*contrary to the vertical cut-off line which reduces the scope of the projection to the same extent in all directions*).

- **Led matrix beam** is the most advanced system in the range, covering all the options stated above while including the LED laser technology, which automatically increases the scope of the projection (*600m vs. 300m for classic LED bulbs*). This was the first system of its kind to be installed for the first time on the **Audi A8** model in 2014. Since then it is also an optional fitting on the **Audi R8** and **BMW i8 models,** thereby remaining restricted to very upscale models given the average price of the **Audi R8** (*EUR185,200*) and **BMW i8** (*EUR142,400*). Audi bills the option at **EUR3,960 per model for the R8 and BMW EUR6,500**. Interestingly, these automatic systems are still banned in the US, with a regulation dating from 1968 stipulating that an on-board command must exist enabling the driver to switch from one lighting method to the other.

Fig. 10: Hella's adaptive laser LED lighting system (Led Matrix Beam)



Source: Hella; Bryan, Garnier & Co ests.

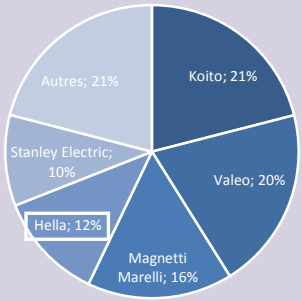
4.1.4. … in response to a sharp increase in demand

Hella's positioning, notably in smart lighting systems, looks coherent in view of current trends placing safety and driver assistance at the heart of concerns. In addition, the automotive lighting market is undergoing a revolution itself with the arrival of LED technology which seems to be the most buoyant market segment.

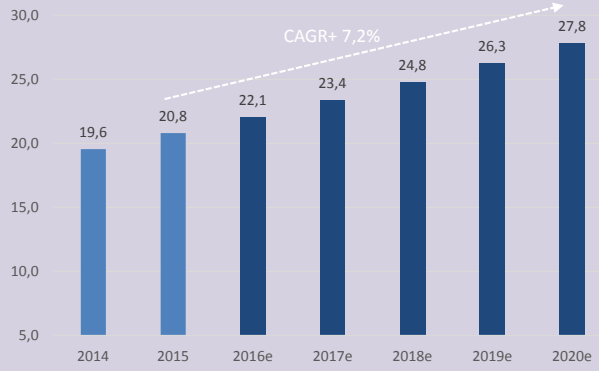
Hella currently ranks **no. 4** in global automotive lighting systems (*EUR2.5bn in sales for market share estimated at 12%)* in a market estimated at **EUR20.8bn** in 2015. Driven by growth in new vehicle registrations as well as the incorporation of an ever higher standard of technology in lighting products such as headlamps, the global market is set to grow at **a CAGR of around 7.2% over 2015-20e.**

Fig. 11: Lighting systems: a concentrated and robust market

Top 5 in the sector in market share (2015)



Change in global auto lighting market (EURbn)

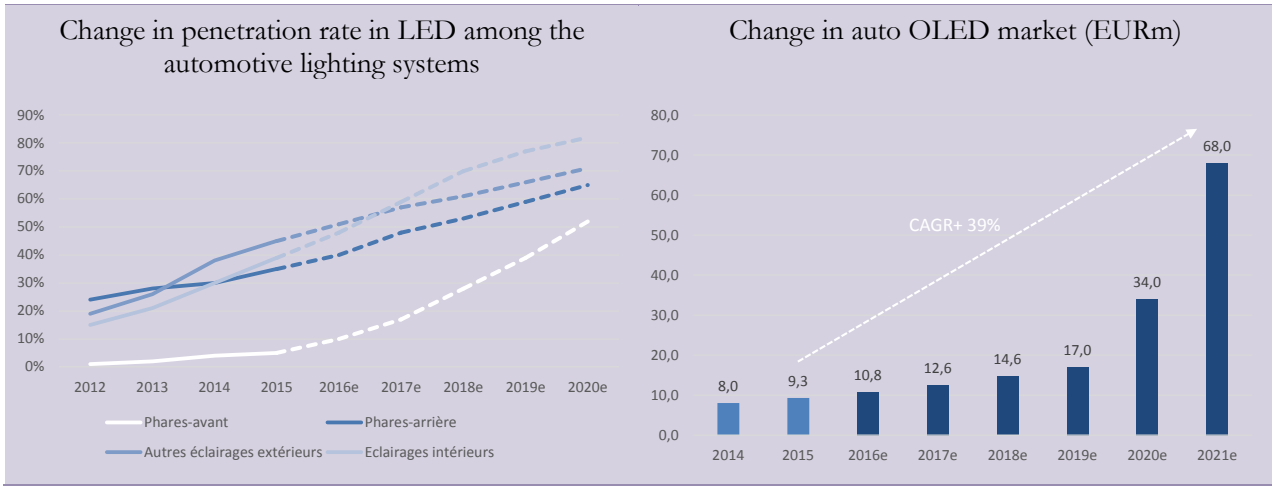


Source: Hella; Bryan, Garnier & Co ests.

In detail, two segments stand out in this market growth in view of their high prospective growth. **LED** is indeed one of the most robust segments in view of its **energy efficiency** (*note that 80% of power used for a LED light is transformed into light compared with 20% for a conventional lamp*), its smaller size requiring less space than other technologies and its lifespan equivalent to that of a car. Paradoxically, LED remains little adopted by carmakers (*2% penetration rate on a global scale*). Its price restricts it to premium and electric segments. However, **economies of scale** resulting from the gradual adoption of the technology by other premium and electric models should be enough to slash prices and make LED accessible to mass markets to the detriment of halogen. A **penetration rate in headlamps of more than 50% can be expected between now and 2020** according to independent institute SNE Research specialised in the environment and energy efficiency. The incorporation of LED in headlamps also suggests a widening in the utility of the light emitted over the medium-term with the possibility of showing figures and messages on the road (*showing speed limits on the road for the driver, interacting by message with pedestrians nearby or with other vehicles etc.*), although these possibilities nevertheless remain in the study phase.

Finally, although **OLED** is a niche market with slightly more than **EUR9m** throughout the world, it is set to grow rapidly (*2015-19e CAGR of 14% according to research institute Technavio*) thanks to the **flexible texture of the lights and the choice of colour they offer.** This technology is already used in other technological domains such as televisions and other touch screens and meets all current criteria: energy efficiency, little space required, greater freedom in design. However, like LED, its development has so far been hampered by its price *(>USD300/kilo-lumens in 2013)*, which has dropped considerably since. Specialists in the sector are expecting the price to fall to below **USD50/kilo lumens**.

Fig. 12: LED and OLED, promising markets in the automotive segment



Source: SNE Research; Hella; Bryan, Garnier & Co ests.

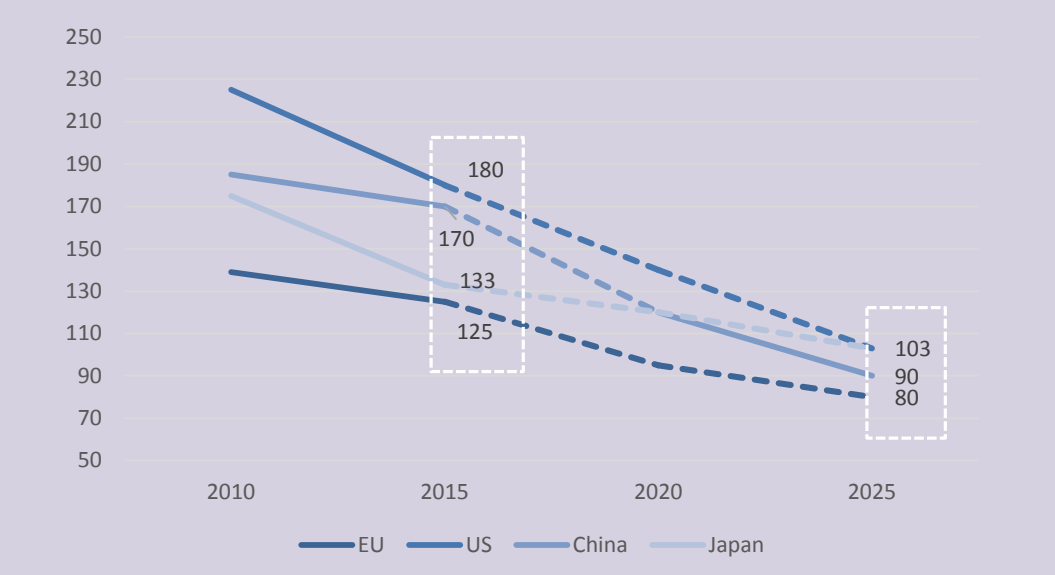
In our model for Hella, we forecast a **CAGR** for sales in the lighting segment of **6%** between 2016 and 2020, with sales in the segment rising from **EUR2.7bn** to **EUR3.4bn.**

4.2. Overhaul of electrical architecture favourable to the electronic components business

4.2.1. Regulatory pressure on carmakers …

Since environmental awareness has taken root, **regulatory pressure** has not stopped rising in the automotive sector, thereby placing **CO_2** emissions and more recently **NOx** (*nitrogen oxides emitted by diesel cars)* at the heart of concerns. These emissions are now regulated and the next decade should see several issue thresholds imposed by the authorities, whether in mature countries such as the US *(-43% in emissions by 2025 for 103g/km*), in the EU *(-36% in emissions by 2025 for 80g/km*) or in Japan (-23% in emissions by 2025 for 103g/km). Emerging markets are not quiet with the case of China where regulatory pressure has proved sharper *(-47% in emissions for 90g/km*) **thereby forcing carmakers to rethink their vehicles.**

Fig. 13: CO_2 emissions under intense regulatory pressure in the future (g CO_2/km)



Source: Local authorities; Bryan, Garnier & Co ests.

4.2.2. … beneficial for components suppliers

Apart from reducing the weight of modules making up a vehicle, engine downsizing and emissions control, targets to reduce emissions are also set to be **reached by installing electronic components that provide increased power management and better transmission**. However, these new energy efficiency components enter the vehicle's assembly at the same time as driver assistance systems and other safety systems, thereby increasing the number of devices that need power in order to work, and thereby questioning the **electrical architecture** (*based on 12V since the 1970s*) put in place by carmakers and the majority of devices and components produced by parts makers.

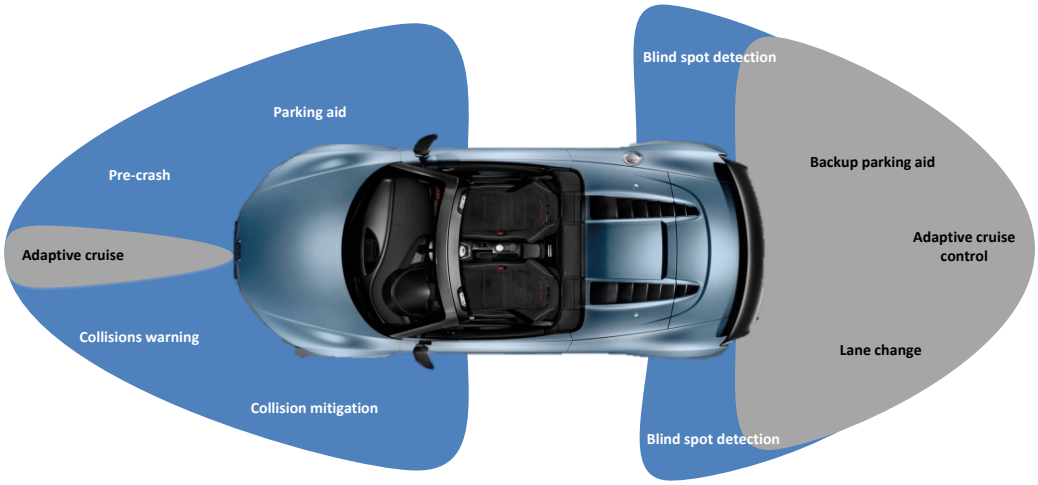
Given that the established **electrical architecture is no longer capable of meeting the needs of embedded devices in all circumstances**, the only solution for conventional vehicles seems to be an overhaul of the vehicle's electrical system (*hybrid/electric vehicles could also use a battery with a greater voltage*). The smarter short-term choice would be a **dual 12V/48V system** with some systems functioning at 12 volts and others at 48 volts in order not to have to change all of the devices and systems in the vehicle.

Hella offers its auto clients voltage stabilisers, energy storage modules and 12-48V transformers

4.2.3. A challenger positioning in ultra high-tech segments: Hella

In line with the trend to overhaul electrical architecture, which nevertheless remains a **niche market** for the moment, Hella offers **voltage stabilisers, power storage modules and 12-48V transformers** enabling 48V systems to fully integrate an architecture designed for 12 volts. In addition to electronic components in transmissions, seat control, car radios and electronic keys for central locking, Hella's products also range in the safety segments. This primarily concerns radar sensors installed right around the car that are capable of warning the driver of dangers, whether on-coming, from the sides or behind, or blind spots.

Fig. 14: Example of extent of radar sensor capacities in a vehicle



Source: Bryan, Garnier & Co ests.

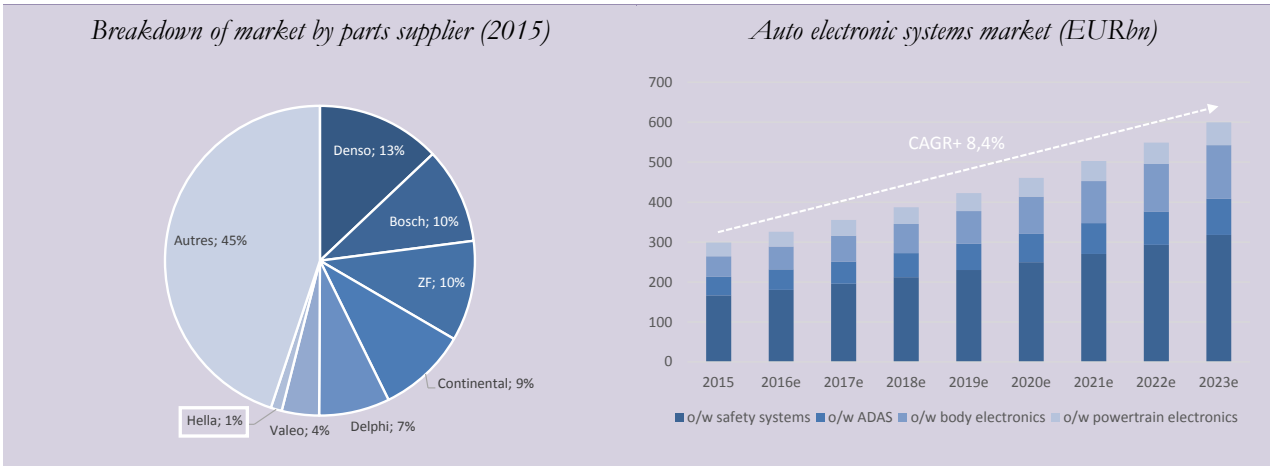
Given its positioning in niche segments (*conversion to 48V, safety sensors*), **Hella** does not seem to be a significant player in the global auto electronics market currently estimated at **EUR167bn** with slightly more than **1%** market share. Note that its very technological positioning is similar to **Valeo's** *(<4% market share*) whereas the rest of the market remains dominated by auto giants such as **Continental**, **Bosch** and Japanese group **Denso**. **As an indication, Hella estimates it has global market share of 15% in segments in which it is present.**

An overhaul of the competitive backdrop is nevertheless possible over the medium-term assuming **Hella** and **Valeo's** exposure to segments that are set to benefit from more robust growth than in classical segments such as transmission electronics and other command modules in which the leaders are very concentrated.

In a sector looking for autonomy and safety, the security and driver assistance segments (*the most technological and the most developed at challengers such as Hella*) are expected to post CAGR **of 8.5%** and **13%** respectively over **2015-23e**.

This rate should be more modest on the transmission side (*5.5%*) and commands *(6.4%)*. More generally, the whole electronics systems market is expected to grow by **8.4%** a year to end up doubling in size between 2015 and 2023 and reach **EUR335bn**.

Fig. 15: Presentation of electronics systems market and growth prospects



Source: Global Newswire; Hella; Companies data; Bryan, Garnier & Co ests.

In our model, we are forecasting a 2016-2020 **CAGR** in sales in the electronics segment of **4%** increasing sales in the segment from **EUR2.1bn** to **EUR2.4bn**. We are more cautious than the lighting segment given the group's lower market share in this market (*1% vs. 12%*).

5. Replacement parts, a defensive but less profitable business, for Hella at least

5.1. Closer to end customers…

Hella has an **unusual strategic positioning** in the replacement parts market *(19% of group sales)* by working with **garages** *(5% of replacement sales)*, **distributors** *(42% of replacement sales)* and above all **end customers** *(42% of replacement sales)* **via sales points.** In reality, the birth of this network of Hella sales points is still recent with the opening of the first stores as of 2010. The extent of its range of customers enables Hella to cover the entire scope of the aftermarket. Only the on-line sales channel does not seem to be fully covered for the moment, an option that management said it was considering at its investor day.

In order to extend its replacement offer, initially restricted to lighting and electrical products also proposed to OEM carmakers, to include more diagnostics tools and services for replacement market professions, Hella has multiplied the number of **partnerships created** over the years. These partnerships concern German and French specialists such as **Behr** in 2005 (*JV in energy management*), Gutmann in 2008 (*JV in vehicle diagnostic products*), **Nussbaum** (*JV concerning products and tools in air conditioning and cooling systems*) and French group **TMD Friction** (*for its expertise in braking technologies*). Hella's replacement parts offering fits with its OEM skills and is above all focused on **lighting, power management, electronic and electrical equipment.**

From a sector perspective, Hella's portfolio is also well-positioned to meet **technological and regulatory trends**. The all-digital era for cars is also leading customers to consult professionals more to help set the parameters for their devices and to update them. At the same time, stricter regulations concerning the environment and safety increase the number of visits and checks needed to be made during a single visit.

Hella's replacement parts offer focuses primarily on lighting, power management systems, electrical and electronic parts, in line with its OEM skills

5.2. … to the detriment of margins

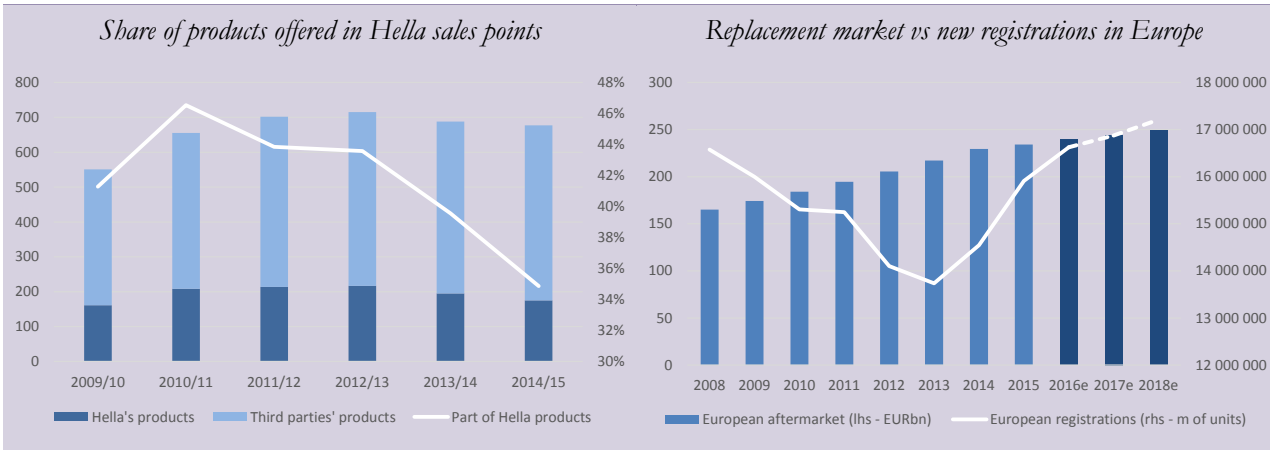
Despite an offer focused on technological trends and niche markets (*vehicle diagnostic systems for garages*) the margin generated by Hella (*6% EBIT*) seems to be below the European sector average (*around 10% for other components makers present in the replacement parts market*). This fact seems even more surprising in that replacements parts manufactured for Europe (*representing 80% of sales in the components segment)* stem from Romania where production costs are competitive.

The group's **low EBIT margin** is a result of its positioning with operated sales points for which critical mass in the products offered is necessary to attract customers (*high level of investments, high level of stocks*). However, Hella needs to offer third-party brand products in order to fill its shelves and provide a credible offering, in a **commercial strategy that is likely to eat into margins that are already low in the end distribution of spare parts**. At present, the share of Hella products offered for sale among all of the parts on sale only stands at **35%** and this share has even tended to decline since the opening of sales points.

However, the positive side to this low profitability compared to other OEM activities lies in its **defensive** nature. Indeed, the replacement parts market is **not at all correlated** to the automotive market.

Once consumers decide to postpone the purchase or replacement of their vehicle, the **fleet in circulation automatically ages with the need to replace aging parts prompting car owners to visit repair and replacement specialists more often.**

Fig. 16: The aftermarket sector, a defensive segment for Hella



Source: Hella; Bryan, Garnier & Co ests.

In a European market with a fleet that has been constantly ageing since 2007 *(+15% over eight years to reach 9.7 years)*, the replacement sector is set to **show a CAGR of 2% in Europe**. The rising number of parts at the end of their lifespan given the age of the vehicle fleet, pressure from environmental standards and awareness of the importance of preventive maintenance should ensure a slight increase in volumes. The most buoyant segment should be that of **electronic products** with a **CAGR of 4.4%**. In addition to this growth factor, we estimate that sales in the sector and at the group should be driven by significant marketing spend as well as higher demand stemming from eastern European countries.

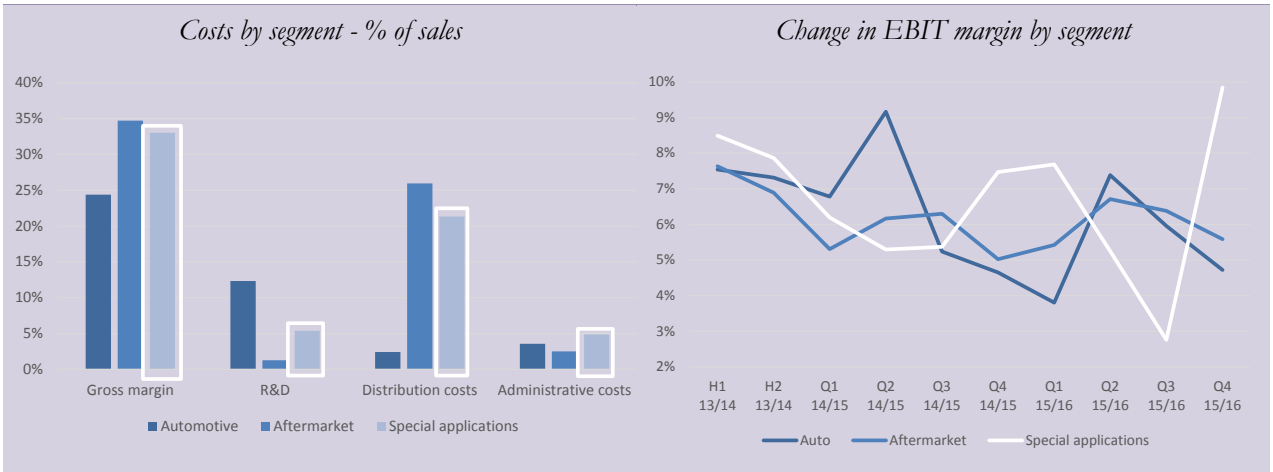
In our model for Hella, we have forecast a **CAGR** for sales in the aftermarket segment of **3.5%** between 2016 and 2020, lifting sales in the segment from **EUR1.25bn** to **EUR1.4bn.** We also estimate that the group's operating margin should improve towards **7%** in 2020, as in 2014, driven in particular by the rising momentum of the LED replacement market following the development of this technology for new vehicles over the past five years.

6. Special applications: low-cost diversification

Via this business, Hella transposes its core skills, originally developed for mass car production, in other auto segments and other industrial sectors in order to meet the needs of more specific clients. For this, the group offers a wide range of **lighting and electronics systems for specific vehicle makers** *(buses, caravans, farm equipment and building engines*), and **other industrialists** *(motorway companies and concessions, local authorities, airports for lamps, various industrial groups for their interior lighting and ship builders).*

This positioning based on innovations developed by the automotive division helps generate **significant synergies,** primarily visible in R&D spending. As an example, the automotive division generates **76%** of sales while consuming **95%** of the group's R&D costs, whereas special applications only account for **3%** of innovation spending but represent **5%** of sales. In addition, this strategy **reduces the commercial and financial risks** associated with the launch of a new product in that the majority of development costs have already been shouldered by the auto division and the product's utility has already been approved by clients in this division. The highest costs for the segment are **distribution costs,** which account for **21%** of sales in the segment compared with **8%** for the group.

Fig. 17: A diversification that costs little in terms of R&D



Source: Hella; Bryan, Garnier & Co ests.

The main production sites are primarily based in **Europe, India and Oceania** and enable Hella to **diversify its customer exposure** by adding specific manufacturers and industrialists not connected to the automotive market such as motorway concessions and local authorities. These players are nevertheless looking for the same type of innovation as carmakers, primarily with **LED** and shortly **OLED,** enabling increased autonomy, lower maintenance and considerable energy savings. Note that the global LED market for all applications is expected to grow sharply with a **CAGR** of **13.5%** a year by 2020 according to Allied Market Research.

For street lighting alone, local authority investment plans could represent an opportunity estimated at **EUR48.6bn** for the sector between now and 2025 (*PR Newswire*).

Having suffered a slowdown in the farming sector, which accounts for an important part of sales generated by the group with specialised clients, growth and margins in the segment have deteriorated

in recent years. The group recently indicated that a recovery in this segment was visible, potentially implying a catch-up effect in sales and in margins in coming quarters.

In our Hella model, we are forecasting a **CAGR in sales** for Special Applications of **2.5%** between 2016 and 2025. We estimate that operating margin in the segment should remain fairly high, and higher than that in the aftermarket segment, at least until 2019.

7. Growth benefiting margins

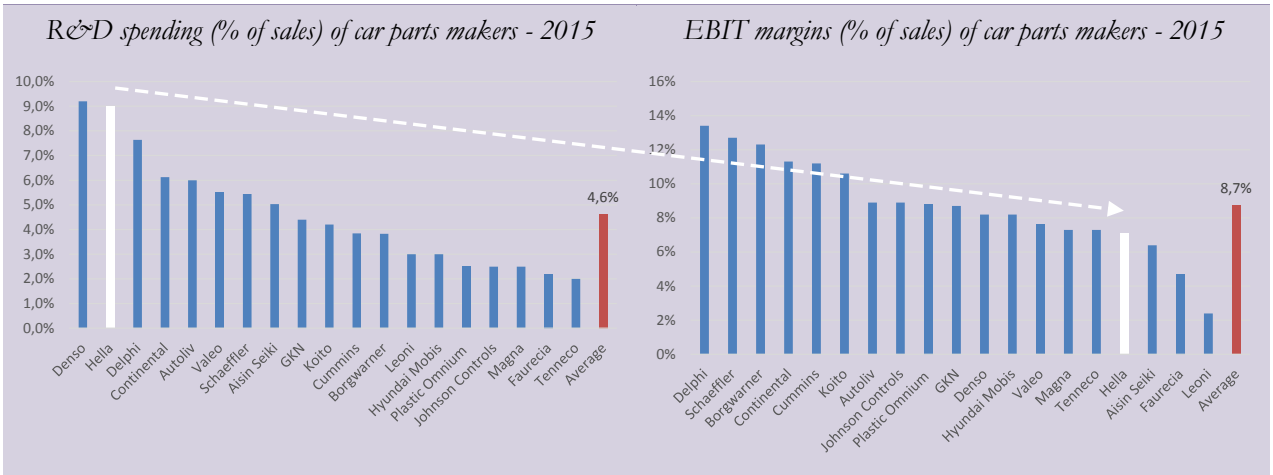
7.1. Heading for higher margins

Thanks to its positioning in growth sectors, we believe Hella is capable of continuing to outperform automotive production by **2-3pp** minimum over 2016-2025. This growth is set to be driven primarily by emerging countries (*volume growth*), but also by an increase in value per vehicle, enabling the group to generate a CAGR of **4.3%** in sales over 2016-25 and widen EBIT margin (*before contributions from joint ventures and after restructuring costs*) of **200bp** to **7.8%** thanks to the control of structural operating costs (*distribution costs and administrative costs*), but also thanks to a reduction in R&D costs to below **9%**.

We estimate Hella is capable of generating a CAGR of 4.7% in sales over 2016-25, implying an outperformance in the automotive sector of 2-3pp.

Note that **Hella** is among the car components manufacturers that spend the most on R&D (*in terms of percentage of sales, 9.8% at the group level and 12.2% at the OEM level*), but belongs to the components makers that generate the least EBIT margin (*7.5% estimated in 2015/16 compared with the sector average of 8.7%).* We estimate that growth potential should therefore stem primarily from better control of R&D spending, as well as distribution costs, with the group having already correctly optimised administrative costs, in comparison with certain rivals.

Fig. 18: More R&D spending for more innovations and more margin



Source: Company Data; Bryan, Garnier & Co ests.

Comparison of the group's cost base with its main listed rivals (*Denso, Valeo, Koito, Continental and Delphi)*, shows that the group - which commands one of the highest pricing powers among the components makers, with average gross margin per employee of **EUR52,000** (*compared with an average of EUR46,000 for its rivals*) - spends an average **5pp** more of its sales on R&D (*as a percentage of sales*). This difference should last over time, although we estimate that the group could reduce the ratio by **50-100bp** in order to approach **8.5/8.9%,** while maintaining distribution spending and administrative spending at around **6%** of sales (*Auto sales with OEM)*

This gain could be achieved thanks to the signing of new partnerships with other parts markets (*in order to share development costs*), thanks to a **better optimisation of engineers dedicated to R&D**.

Fig. 19: Analysis of Hella's cost base relative to rivals (2015)

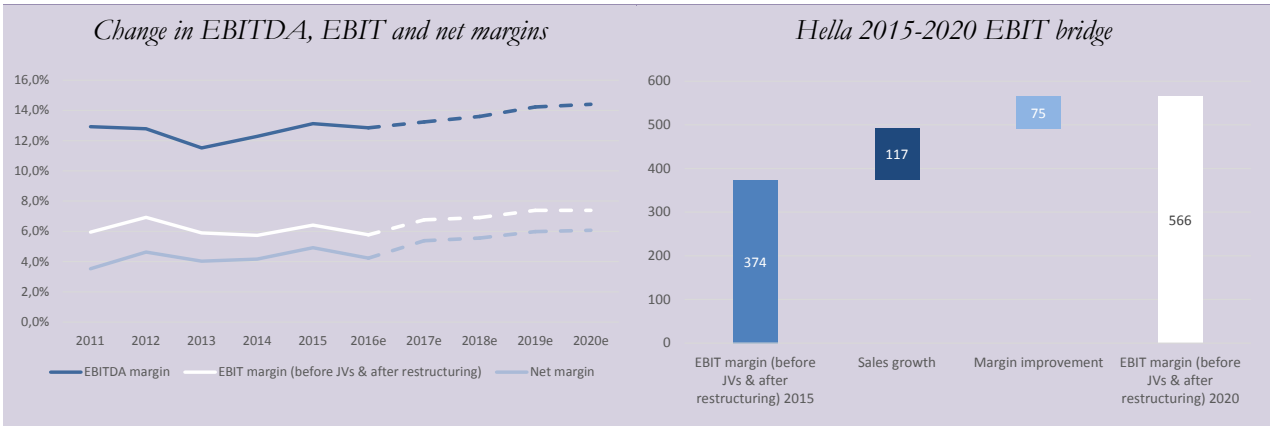
	Gross margin	R&D	Selling/Dist. Costs	Others	EBIT margin
Hella – OEM sales	**23,8%**	**11,9%**	**6,1%**	**0,1%**	**5,7%**
Denso	25,9%	9,3%	9,1%		7,5%
Delphi	27,9%	7,9%	6,7%	1,8%	11,5%
Continental	25,9%	6,2%	7,9%	1,4%	10,3%
Autoliv	20,1%	5,7%	4,5%	2,0%	7,9%
Valeo	18,0%	5,5%	5,2%		7,3%
Koito	20,3%	4,5%	7,3%		8,4%
Average	23,1%	7,3%	6,7%	1,3%	8,4%

Source: Company Data; Bryan, Garnier & Co ests.

In our model, we have assumed that the group manages to reduce R&D spending (*total spending for the group at 9.8% in 2016 compared with 12.2% for the OEM division*) to below **9%** at **8.9%** compared with **9.3%** in 2015 and **9.6%** in 2016, while maintaining other items at similar ratios to those the group published in 2016. A slight reduction in investment spending should also help the group benefit from a decline in D&A in the P&L account, to the benefit of EBIT margin (*with no impact on cash however).*

The high growth in sales over 2016-20, combined with this optimisation of the group's cost structure and R&D costs should help Hella widen its EBIT margin (*before JVs and after restructuring*) from **6.4%** to **7.4%** and therefore increase its net margin from **4.2%** to **6.1%** by 2020.

Fig. 20: Change in Hella margins

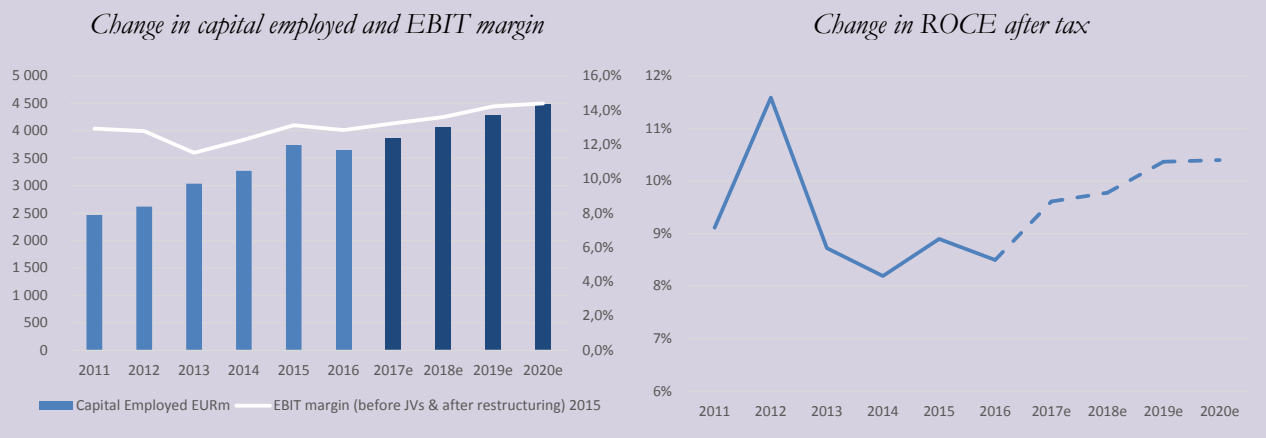


Source: Hella; Bryan, Garnier & Co ests.

7.2. And heading towards better ROCE

We estimate that this improvement in margin combined with strict control of investments should help the group increase its ROCE ratio to the benefit of shareholders.

Fig. 21: Change in Hella ROCE



Source: Hella; Bryan, Garnier & Co ests.

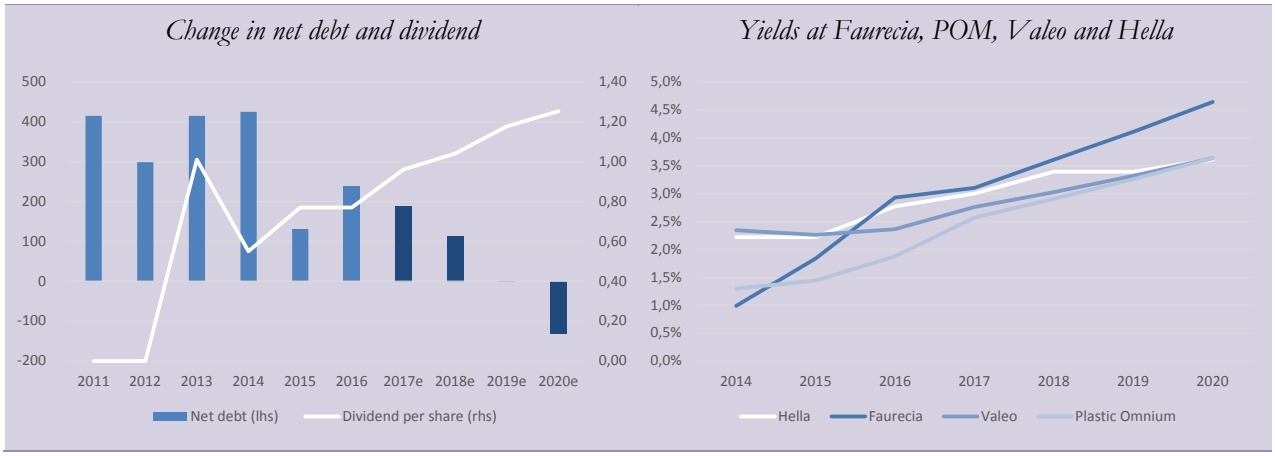
We consider an improvement in EBIT margin and in the ROCE ratio feasible for Hella in view of **1/**a catching up effect in the margin relative to 2015/16 affected by the group's upsets with Chinese outsourcers, **2/** an improvement in the product mix and **3/**control of R&D spending and investments over 2015-20. **The group's ROCE should also rise to 11.8% by 2020, close to the 2012 level (11.6%), whereas dividends should increase by 70% in 2020 relative to 2016.**

Fig. 22: Hella – Cash flow statement

Debt analysis (EURm)	2011	2012	2013	2014	2015	2016	2017e	2018e	2019e	2020e
EBITDA reported	**565**	**615**	**576**	**656**	**766**	**816**	**875**	**944**	**1 037**	**1 102**
EBITDA margin	12,9%	12,8%	11,5%	12,3%	13,1%	12,8%	13,2%	13,6%	14,2%	14,4%
Operating Cash-flow	**391**	**624**	**463**	**535**	**560**	**602**	**722**	**800**	**876**	**943**
Total capex & R&D capitalized	*(350)*	*(423)*	*(541)*	*(516)*	*(498)*	*(561)*	*(589)*	*(618)*	*(649)*	*(682)*
o/w Capex	(315)	(380)	(489)	(463)	(429)	(490)	(510)	(535)	(562)	(590)
o/w R&D capitalized	(34)	(44)	(52)	(53)	(68)	(71)	(79)	(83)	(87)	(92)
Free Cash Flow	**41**	**201**	**(78)**	**19**	**62**	**42**	**132**	**181**	**227**	**261**
Acquisitions/Disposals	35	37	10	17	20	14	0	0	0	0
Dividends	(22)	(40)	(61)	(55)	(59)	(87)	(86)	(107)	(116)	(131)
Others	(89)	(65)	176	201	(57)	13	2	2	2	2
Net debt reported	**415**	**299**	**415**	**425**	**131**	**238**	**189**	**113**	**0**	**(132)**

Source: Hella; Bryan, Garnier & Co ests.

Fig. 23: Change in net debt, dividend and yield



Source: Company Data; Bryan, Garnier & Co ests.

8. Our estimates

As for Faurecia, Plastic Omnium & Valeo, our model for Hella takes into account automotive production growth forecast of **2.4%** for 2016, **1.7%** for 2017 and **1.7%** for 2018. As for 2019-2025 we anticipate a market growth of **1.5%.**

Fig. 24: Hella – P&L – EURm

	31/05/11	31/05/12	31/05/13	31/05/14	31/05/15	31/05/16	31/05/17e	31/05/18e	31/05/19e
Revenues	**4 371**	**4 810**	**4 999**	**5 343**	**5 835**	**6 352**	**6 611**	**6 940**	**7 288**
Change (%)	ns	10,0%	3,9%	6,9%	9,2%	8,9%	4,1%	5,0%	5,0%
Adjusted EBITDA	565	615	576	656	766	816	875	944	1 037
EBIT	**260**	**333**	**295**	**306**	**374**	**367**	**447**	**480**	**538**
Change (%)	ns	28,0%	-11,4%	3,8%	22,1%	-2,0%	21,9%	7,4%	12,2%
Financial results	(45)	(46)	(44)	(36)	(36)	(39)	(37)	(33)	(27)
Pre-Tax profits	229	307	266	308	394	380	409	447	512
Exceptional	21	23	36	(24)	16	14	(10)	(10)	(10)
Tax	(65)	(76)	(60)	(79)	(98)	(108)	(106)	(116)	(133)
Profits from associates	13	20	15	38	55	53	56	59	61
Minority interests	(9)	(8)	(5)	(7)	(8)	(3)	(3)	(3)	(4)
Net profit	154	223	201	223	287	269	356	386	436
Restated net profit	**154**	**223**	**201**	**223**	**287**	**269**	**356**	**386**	**436**
Change (%)	ns	44,3%	-9,5%	10,5%	29,0%	-6,4%	32,5%	8,4%	13,1%

Source: Hella; Bryan, Garnier & Co ests.

Fig. 25: Hella – Cash-flow statement – EURm

	31/05/11	31/05/12	31/05/13	31/05/14	31/05/15	31/05/16	31/05/17e	31/05/18e	31/05/19e
Operating cash flows	**391**	**624**	**463**	**535**	**560**	**602**	**722**	**800**	**876**
Change in working capital	(51)	54	26	(71)	(97)	(28)	(59)	(47)	(55)
Capex, net	(350)	(423)	(541)	(516)	(498)	(561)	(589)	(618)	(649)
Financial investments, net	(3)	(20)	0	(0)	(0)	0	0	0	0
Dividends	(22)	(40)	(61)	(55)	(59)	(87)	(86)	(107)	(116)
Other	(50)	(8)	186	218	(37)	27	2	2	2
Net debt	**415**	**299**	**415**	**425**	**131**	**238**	**189**	**113**	**0**
Free Cash flow	**0**	**206**	**(78)**	**19**	**62**	**42**	**132**	**181**	**227**

Source: Hella; Bryan, Garnier & Co ests.

Fig. 26: Hella – Balance sheet – EURm

Balance Sheet (EURm)	31/05/11	31/05/12	31/05/13	31/05/14	31/05/15	31/05/16	31/05/17e	31/05/18e	31/05/19e
Tangible fixed assets	951	1 093	1 324	1 430	1 612	1 698	1 800	1 900	1 996
Intangibles assets	186	234	242	127	393	447	499	548	597
Cash & equivalents	296	430	477	637	603	585	634	710	823
current assets	1 613	1 783	2 059	2 412	2 636	2 635	2 768	2 924	3 127
Other assets	(120)	(224)	(179)	(148)	(327)	(370)	(406)	(471)	(571)
Total assets	**2 926**	**3 315**	**3 922**	**4 459**	**4 917**	**4 995**	**5 294**	**5 611**	**5 971**
L & ST Debt	771	771	1 100	1 418	1 139	1 152	1 152	1 152	1 152
Others liabilities	1 233	1 479	1 614	1 699	1 868	1 865	1 892	1 928	1 966
Shareholders' funds	889	1 027	1 179	1 312	1 880	1 973	2 243	2 522	2 842
Total Liabilities	**2 926**	**3 315**	**3 922**	**4 459**	**4 917**	**4 995**	**5 294**	**5 611**	**5 971**
Capital employed	**2 148**	**2 292**	**2 759**	**2 759**	**3 121**	**3 622**	**3 653**	**3 873**	**4 074**

Source: Hella; Bryan, Garnier & Co ests.

Fig. 27: Hella – Ratios - %

	31/05/11	31/05/12	31/05/13	31/05/14	31/05/15	31/05/16	31/05/17e	31/05/18e	31/05/19e
Operating margin	**6,0%**	**6,9%**	**5,9%**	**5,7%**	**6,4%**	**5,8%**	**6,8%**	**6,9%**	**7,4%**
Tax rate	28,4%	24,8%	22,4%	25,7%	24,9%	26,0%	26,0%	26,0%	26,0%
Net margin	3,5%	4,6%	4,0%	4,2%	4,9%	4,2%	5,4%	5,6%	6,0%
ROE (after tax)	17,4%	21,7%	17,1%	17,0%	15,3%	13,6%	15,9%	15,3%	15,3%
ROCE (after tax)	**12,7%**	**15,4%**	**11,2%**	**11,0%**	**11,9%**	**11,5%**	**13,0%**	**13,2%**	**14,0%**
Gearing	45%	32%	52%	58%	28%	29%	23%	17%	12%
Pay-out ratio	0,0%	0,0%	50,2%	24,7%	29,8%	31,9%	30,0%	30,0%	30,0%
Number of shares, diluted	100	100	100	100	111	111	111	111	111

Source: Hella; Bryan, Garnier & Co ests.

Fig. 28: Hella – Data per share – EUR

Data per Share (EUR)	31/05/11	31/05/12	31/05/13	31/05/14	31/05/15	31/05/16	31/05/17e	31/05/18e	31/05/19e
EPS	**1,54**	**2,23**	**2,01**	**2,23**	**2,58**	**2,42**	**3,20**	**3,47**	**3,93**
Restated EPS	1,54	2,23	2,01	2,23	2,58	2,42	3,20	3,47	3,93
% change	ns	44,3%	-9,5%	10,5%	16,1%	-6,4%	32,5%	8,4%	13,1%
EPS bef. GDW	1,54	2,23	2,01	2,23	2,58	2,42	3,20	3,47	3,93
BVPS	8,89	10,27	11,79	13,12	16,92	17,76	20,19	22,70	25,58
Operating cash flows	3,9	6,2	4,6	5,3	5,0	5,4	6,5	7,2	7,9
FCF	0,0	2,1	-0,8	0,2	0,6	0,4	1,2	1,6	2,0
Net dividend	**0,00**	**0,00**	**1,01**	**0,55**	**0,77**	**0,77**	**0,96**	**1,04**	**1,18**

Source: Hella; Bryan, Garnier & Co ests.

Fig. 29: Hella - Valuation – EURm

	31/05/12	31/05/13	31/05/14	31/05/15	31/05/16	31/05/17e	31/05/18e	31/05/19e
Market capitalization	**-**	**-**	**3 185**	**4 497**	**4 074**	**4 074**	**4 074**	**4 074**
Net debt	-	-	425	131	238	189	113	0
Pensions	-	-	197	242	243	243	243	243
Minorities	-	-	94	118	47	48	49	50
Financial assets	-	-	200	445	412	456	490	526
EV	**-**	**-**	**3 701**	**4 544**	**4 190**	**4 099**	**3 989**	**3 841**
EV/Sales	-	-	69%	78%	66%	62%	57%	53%
EV/EBITDA	-	-	5,6x	5,9x	5,1x	4,7x	4,2x	3,7x
EV/EBIT	**-**	**-**	**12,1x**	**12,1x**	**11,4x**	**9,2x**	**8,3x**	**7,1x**
P/E	-	-	16,5x	14,2x	15,2x	11,5x	10,6x	9,3x
Dividend Yield (%)	**-**	**-**	**1,5%**	**2,1%**	**2,1%**	**2,6%**	**2,8%**	**3,2%**

Source: Hella; Bryan, Garnier & Co ests.

9. Valuation

As for **Faurecia**, **Valeo** and **Plastic Omnium**, we value **Hella** using two methods: **1/**comparison of peer multiples and **2/ DCF**. In all, the combination of the various methods (*three Fair Values stemming from peer comparison and one from a DCF valuation, with a weighting of 25% for each of these methods*), points to a FV of **EUR45** per share, implying upside potential of **22%** relative to the last listed share price (EUR36.7).

Like for the other automotive suppliers stock we are initiating in our sector report, we decided to **overweight the method by multiple** (*three times 25% each*) to **the detriment of DCF** (*25%*) to reflect properly the high volatility of the sector.

We are initiating coverage of Hella with a Buy recommendation.

Fig. 30: Hella – FV @ €45

Hella - FV sum-up	Multiples	FV
EV/Sales (2016-25) – 25%	**75%**	**41.2 €**
EV/EBIT (2016-25) – 25%	**10,5x**	**42.8 €**
P/E (2016-25) – 25%	**14,1x**	**43.5 €**
DCF model (2026-25) – 25%	**-**	**51.3 €**
o/w WACC	7,4%	
o/w LTG	2,5%	
o/w Average EBIT margin	7,1%	
o/w LT EBIT margin	7,0%	
Implied FV		**45.0 €**
Current price		36,7 €
Upside		22,0%

Source: Hella; Bryan, Garnier & Co ests.

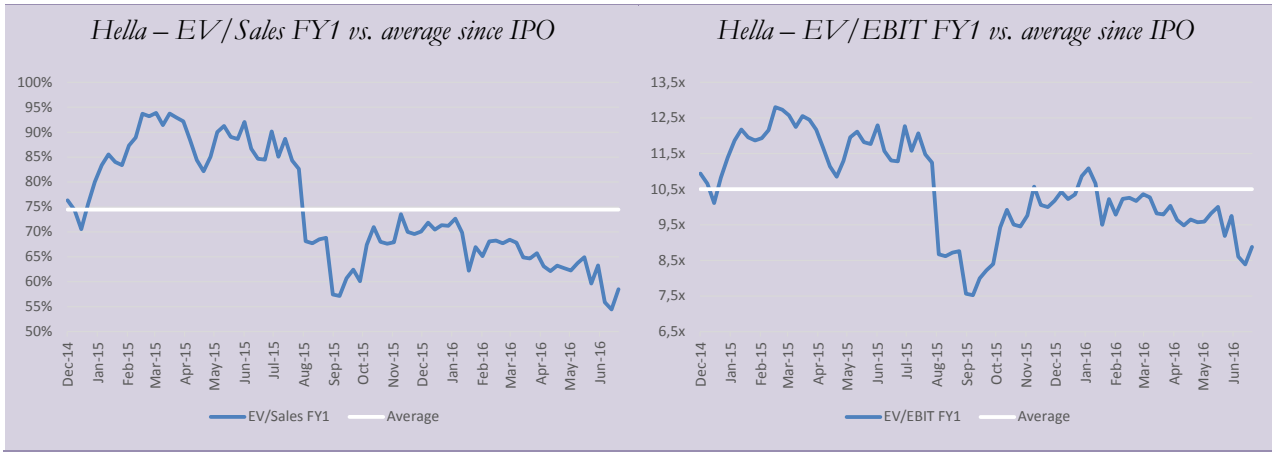
9.1. Valuation multiples

We have used **EV/sales, EV/EBIT** and **P/E** multiples taken from a group of peers in order to value **Hella**, by applying the premiums/discounts historically paid by investors since the IPO in 2014. Our FV's are calculated over the 2017-26 period (discounted by WACC each year) implying respectively **EUR41.2, EUR42.8** and **EUR43.5 of FV**.

We are using current multiples:

- **EV/Sales** multiple of **75%** in line with historical multiple of the group since IPO
- **EV/EBIT** multiple of **10.5x** in line with historical multiple of the group since IPO
- **P/E** multiple of **14.1x** in line with historical multiple of the group since IPO

Fig. 31: Implicit Hella multiples EV/Sales & EV/EBIT since IPO



Source: Datastream; Bryan, Garnier & Co ests.

9.2. DCF valuation

We have also valued Hella using the discounted cash flow model, based on the following assumptions:

- **WACC** of **7.4%**
- **A growth rate to infinity of 2.5%,** implying a slight outperformance by **Hella** relative to the automotive market *(+1.5%)*
- **EBIT margin** (*with restructuring and without the joint ventures*) of **7.1%** on average and a margin to infinity of **7%.**

Fig. 32: Hella – Estimations DCF - €m

	2017e	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	Perpetuity
Revenues - Core business	**6 611**	**6 940**	**7 288**	**7 656**	**8 047**	**8 328**	**8 621**	**8 927**	**9 246**	**9 579**	**9 477**
Revenue Growth Rate	-	5,0%	5,0%	5,1%	5,1%	3,5%	3,5%	3,5%	3,6%	3,6%	2,5%
Operating Margin	6,8%	6,9%	7,4%	7,4%	7,4%	7,8%	7,8%	7,8%	7,8%	7,8%	7,0%
EBIT *(excluding JVs & Associates, with restr. Charges)*	**447**	**480**	**538**	**566**	**595**	**648**	**671**	**695**	**720**	**746**	**663**
Adjustment for provisions	1,1	3,3	3,5	3,7	3,9	2,8	2,9	3,1	3,2	3,3	3,1
(-) Taxes on EBIT	(116)	(125)	(140)	(147)	(155)	(168)	(174)	(181)	(187)	(194)	(172)
(+/-) Movements in working capital	(59)	(47)	(55)	(54)	(58)	(37)	(43)	(45)	(47)	(49)	(49)
(+) Depreciation and amortization	428	464	498	537	578	605	631	670	694	720	845
(-) Capital Expenditures	(510)	(535)	(562)	(590)	(621)	(642)	(665)	(688)	(713)	(739)	(731)
(-) Intangibles	(79)	(83)	(87)	(92)	(97)	(100)	(103)	(107)	(111)	(115)	(114)
Free Cash Flow	112	157	196	222	247	308	320	347	360	373	
Present Value of Free Cash Flow	**104**	**136**	**157**	**166**	**171**	**199**	**192**	**194**	**187**	**180**	

Source: Hella; Bryan, Garnier & Co ests.

Fig. 33: Hella – DCF @ €51

Valuation	
PV of Free Cash Flows	1 699
PV of Terminal Value	4 118
EV implied - EURm	**5 817**
- Net financial debt (N-1) - EURm	238
- Pensions Liabilities (N-1) - EURm	243
- Minority Interest value - EURm	47
+ Financial assets - EURm	412
Value of Equity	**5 701**
Value of Equity per share	**51.3€**
Price	36.7€
Upside/Downside	36.4%

Source: Hella; Bryan, Garnier & Co ests.

10. Hella – SWOT

Fig. 34: Hella – SWOT analysis

Strength	Weaknesses
• A products portfolio in line with the green and autonomous vehicle trend • Strong expertise in **exterior lighting systems** • Among auto suppliers the most advanced and well positioned on LED, OLED and matrix technologies (*European LED leader with 35% market share)* • Solid track-record of outperformance over global automotive production *(+5% in average*) • An increasingly diversified geographical exposure (*49% sales generated outside Europe)*	• Minor position in global electronics components market (*1% market share*) • Low margin generation in the aftermarket business (*6% EBIT margin*) impacting the group profitability • R&D expenses among the highest (*10% of sales*) for lower margins than the sector average
Opportunity	**Threats**
• A continuing regulatory enhancement in **CO_2 and Nox emissions** • Still room for margin improvement through cost structure optimization in R&D (*engineers, rebilling rate*) • Should continue to benefit from the Chinese market growth through local exposure (27% of sales) • Vigorous **autonomous and electric vehicle development**	• Another Chinese supplier failure cannot be exclude • A volatility resurgence in raw materials would highly impact agricultural vehicles sales (*filed in special applications*) • A global automotive market slowdown would directly impact **76%** of Hella's activities

Source: Bryan, Garnier & Co ests.

11. Hella in short

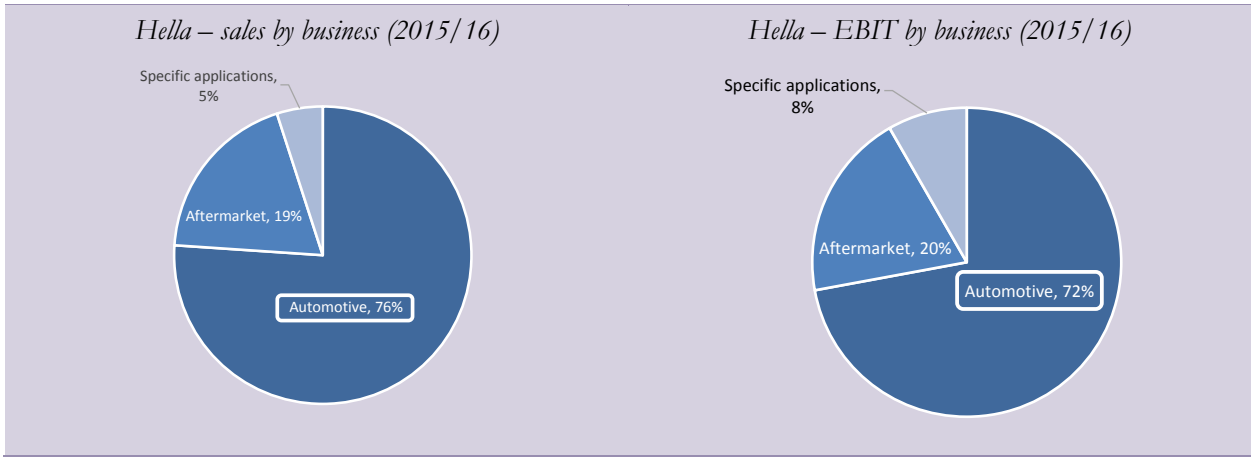
11.1. A bit of history

Hella was created in **1899** under the name of **Westfälische Metall-Industrie Aktien-Gesellschaft** before being renamed Hella and then Hella KGaa Hueck & Co in 1986. The group has managed to carve itself a position among the major names in listed German car components makers (*Continental, BASF, ThyssenKrupp, Schaeffler, Hella KGaa Hueck & Co, Leoni*). The group's **international expansion** was launched as of the 1960s with development primarily concentrated on Europe as well as Asia, with access to this market made possible by the creation of **JVs** in China and South Korea. Its listing on the Frankfurt Stock Exchange is recent, dating back to November **2014**, with a flotation price of **EUR26.5**, valuing the company at around **EUR2.6bn** in terms of market capitalisation. Today, the group is valued at **EUR4bn** with free float of **27%.** With sales of **EUR6.3bn** at the end of 2015-16 (*FYE 31st May*), Hella ranks **no. 35** in the global ranking of car parts makers behind Faurecia (*no. 7*) and Valeo (*no. 11*), but ahead of Plastic Omnium (*no. 40*). Although historically focused on the automotive sector, with recognised know-how in terms of **lighting systems**, the group recently decided to apply its skills in this field to meet the needs of industrial clients excluding auto players, with its subsidiary Hella Industries.

11.2. Portfolio focused on the auto industry

Present in the **OEM** segment **(76% of 2015/16 sales)** as well as in the **replacement** market **(19% of 2015/16 sales)**, Hella has developed genuine expertise surrounding **two flagship businesses** in the auto industry: **1/ lighting systems**, whether interior or exterior and **2/ electronics systems** (components, safety, power...) destined to reduce $C0_2$ emissions and improve fuel consumption while increasing safety and comfort for the driver and passengers. These two businesses feed the group's three divisions: **Automotive OEM, Automotive Aftermarket and Specific Applications,** thereby meeting the needs of carmakers, individuals, garage owners and industrialists outside the auto sector. Hella therefore derives a considerable share of its revenues from the auto sector *(>95%)* bearing in mind that the specific applications division also concerns activities linked to the auto sector (*buses, trucks*).

Fig. 35: Dominance of auto activities



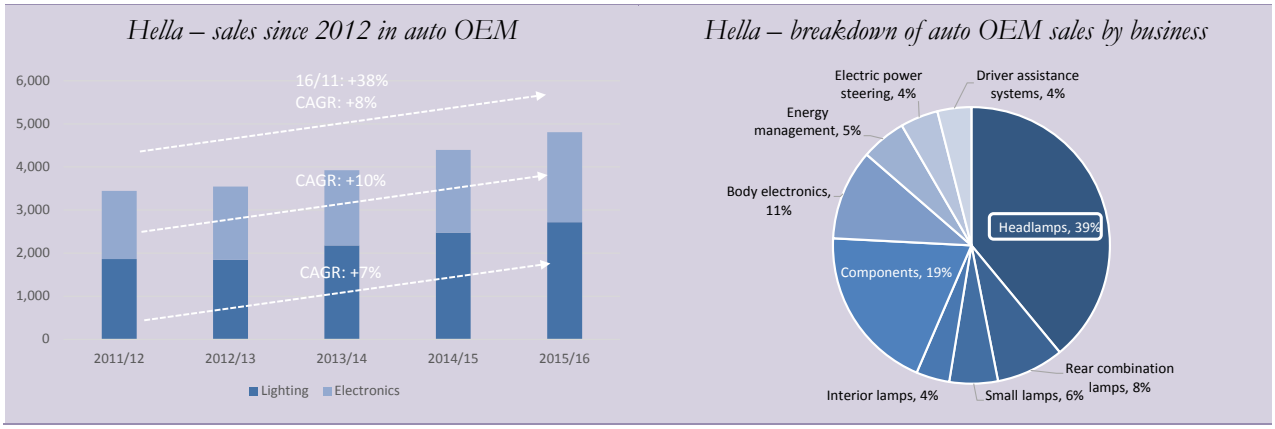
Source: Hella; Bryan, Garnier & Co ests.

11.2.1. Auto OEM - 76% of sales - 72% EBIT

Hella's **Automotive OEM division** develops and manufactures systems and components guaranteeing power management, visibility, in-car comfort and driver assistance. **Hella is the no. four player** in lighting systems with **EUR2.7bn in sales, behind Koito**, **Valeo** and **Magnetti Marelli,** and **no. 4** in electronic systems with **EUR2.1bn** in sales.

This division is divided into **two product groups**: **1/ lighting systems** *(headlights, rear lights, interior lighting, electronic lighting systems*), where Hella has managed to lift itself to the no. 1 position in Europe for **LED headlights** by developing lighting technologies concerning both vehicle interiors and exteriors by focusing on the low consumption of lighting systems, **2/ electronic systems** (*electronic components, power management, driver assistance systems, detectors, steering systems*), destined to reduce the weight of vehicles while accompanying the current trend for more autonomous cars. Over the past four years, we have noted that growth in the auto segment was primarily driven by **lighting** (*CAGR of 10% over 2011/12 – 2015/16 vs. just 7% for electronics*), thanks namely to the strengthening of the LED segment in this market.

Fig. 36: Hella – automotive OEM sales (EURm)



Source: Hella; Bryan, Garnier & Co ests.

The development of this division is set to stem from three major factors, namely **regulations, autonomous cars** and **China.** Whether in Europe or the US, regulations are becoming stricter for $C0_2$ emissions and the trend is likely to continue between now and 2015, with a target of **103g/km** in the US (*vs. 180g/km in 2015*) and **80g/km** in the EU (*vs. 139g/km in 2015*). A possible reduction in emissions prompted by the installation of **LED headlights** requiring less space and consuming less energy, with the low penetration rate of this technology in the fleet in circulation (*around 2%)* making Hella optimistic in terms of its development potential. Electronic components are also tools that help respect new regulatory frameworks (*increased safety, lower CO_2 emissions and less fuel consumption*), although these same electronic components only accounted for **30%** of car production costs in 2010. Hella therefore expects this share to rise to **50%** by 2030.

Momentum in autonomous vehicles and the rising demand for these products (*+19.2% by 2019 according to Hella*), is obliging carmakers to respond by undertaking considerable R&D spending. **A beneficial outsourcing trend** is also underway for car parts makers in general and Hella in particular, with the group having already developed **strong expertise in driver assistance systems and safety systems.** Finally, China is a focus of attention for the group, which has created no less than seven

JVs since the 1990s in order to strengthen its positions in the country. Today, we estimate that China accounts for **15%** of the group's sales.

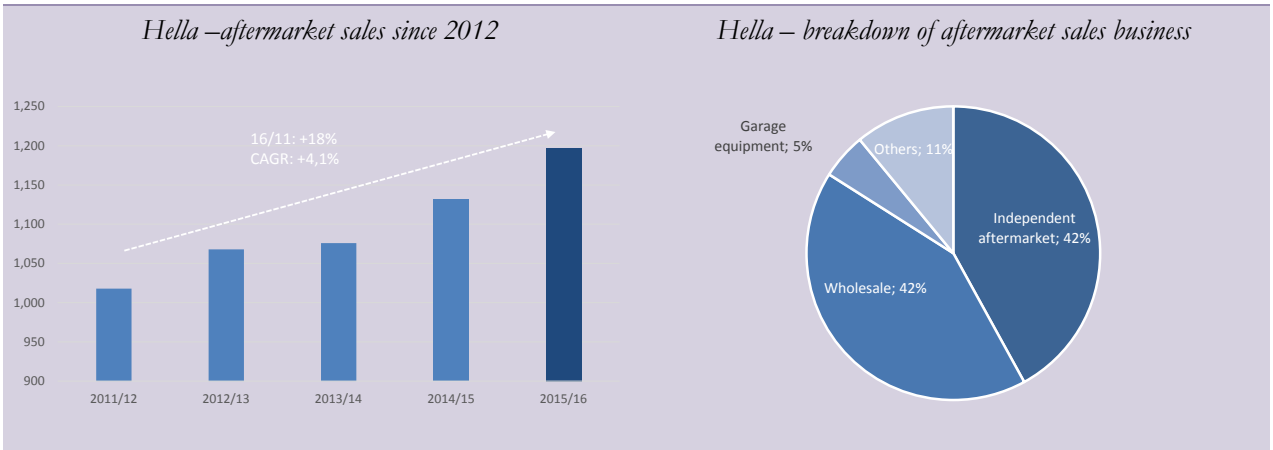
In this segment, we estimate EBIT margin at **5.5%** in 2015/16, slightly below of the group average *(5.8%)*.

11.2.2. Automotive Aftermarket – 19% of sales – 20% EBIT

Via its **Automotive Aftermarket division**, Hella offers replacement parts and accessories for individuals, wholesalers and garages, as well as associated services to professionals in the repair and maintenance sector, such as garages and concessions. This activity generated **EUR1.2bn** in sales in 2015/16, up **18%** relative to 2011/12.

This division is divided into three sub-segments: **1/ retail sales** (*replacement spare parts, accessories, tools, technical services, sales support*) for **42%** of revenues in the division, responding primarily to the needs of independent concessions, garages and even individuals, **2/ wholesale sales** (*spare parts, tools, logistical services*) destined for wholesalers and carmakers and focusing **42%** of sales in the division, **3/ equipment for garages** (*diagnostic tools, online platform aggregating vehicle data as well as repair processes by model, tools, battery*) capturing **5%** of business in the division and specially dedicated to garage owners.

Fig. 37: Sales – Hella – auto aftermarket (EURm)



Source: Hella; Bryan, Garnier & Co ests.

The group intends to make the most of the current recovery in the **repairs** and **spare parts market**, benefiting directly from the **ageing of the fleet** of cars in circulation since 2007 *(+15% to 9.7 years in Europe)*. In addition, the **digitalisation** started with the arrival of new channels and interfaces has obliged garage owners and concession holders to adapt and invest more in new technologies associated in particular with Big Data. Clients now have the ability to compare offers of various professionals and are focusing more on players offering global product ranges and connected services. Indeed, Hella bases its replacement products and services on this principle via its Big Data diagnostic platforms and per model reparation process.

In this segment we estimate EBIT margin at **6%** in 2015/16, slightly ahead the group average *(5.8%)*.

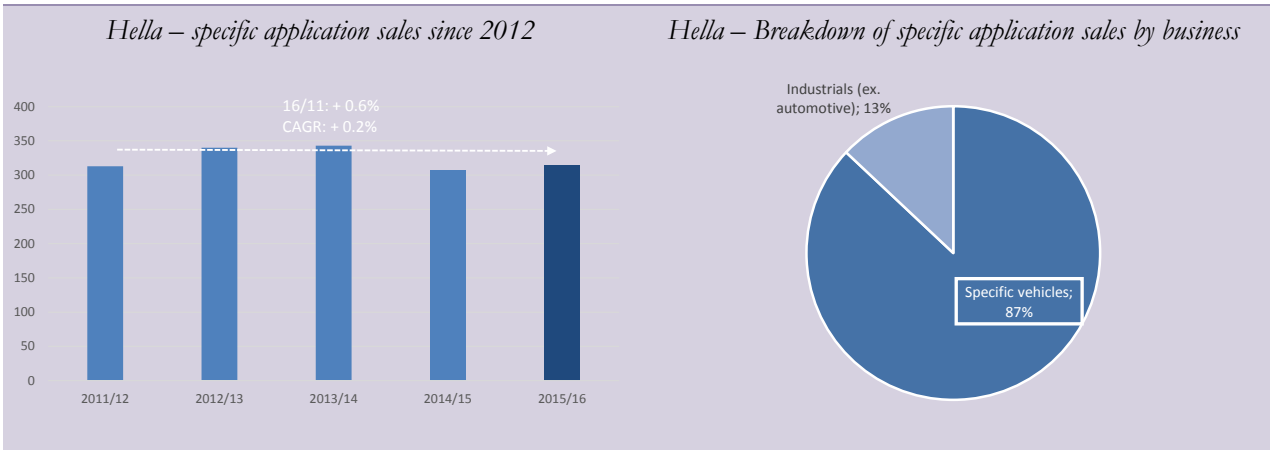
11.2.3. The Specific Applications – 5% of sales – 8% EBIT

Finally, the **Specific Applications division** concerns both the automotive and industrial sectors and replicates the key skills that Hella has managed to highlight in passenger cars, namely lighting and

electronic systems. The group generated **EUR315m** in sales over 2015/16 via this complementary business, in line with 2011/12 sales.

In the speciality market, Hella transposes its automotive know-how to **more specific vehicles** (buses, trucks, vans, farm and building vehicles) and therefore offers similar lighting and electronic systems to those in the auto OEM segment. The auto business accounts for **87%** of revenues in the division and is clearly at the heart of Hella's business. Specific applications destined for **other non-auto industrial segments** therefore remain minor, with just **13%** of sales in the division and **0.7%** of the group's total sales. This concerns primarily street, industrial and shop lighting and light systems for airport runways.

Fig. 38: Hella – Specific application sales (EURm)



Source: Hella; Bryan, Garnier & Co ests.

Here again, the group is expecting a sharp increase in the penetration rate for LED technology in lighting systems installed in industrial complexes, city and airport infrastructure (from a power-saving stance). The segment was recently affected by the slowdown in the farm sector (with a Food Price Index and Cereals Price Index at respectively 155 and 163 hitting record lows since the crisis in 2007), which is a large non-auto industrial client, and potentially offers the group a **catching-up effect** for prices over the medium term, and automatically, momentum in farm equipment investments.

In this segment, we estimate EBIT margin at **9.7%** in 2015/16, ahead the group average (*5.8%*).

Bryan Garnier stock rating system

For the purposes of this Report, the Bryan Garnier stock rating system is defined as follows:

Stock rating

BUY — Positive opinion for a stock where we expect a favourable performance in absolute terms over a period of 6 months from the publication of a recommendation. This opinion is based not only on the FV (the potential upside based on valuation), but also takes into account a number of elements that could include a SWOT analysis, momentum, technical aspects or the sector backdrop. Every subsequent published update on the stock will feature an introduction outlining the key reasons behind the opinion.

NEUTRAL — Opinion recommending not to trade in a stock short-term, neither as a BUYER or a SELLER, due to a specific set of factors. This view is intended to be temporary. It may reflect different situations, but in particular those where a fair value shows no significant potential or where an upcoming binary event constitutes a high-risk that is difficult to quantify. Every subsequent published update on the stock will feature an introduction outlining the key reasons behind the opinion.

SELL — Negative opinion for a stock where we expect an unfavourable performance in absolute terms over a period of 6 months from the publication of a recommendation. This opinion is based not only on the FV (the potential downside based on valuation), but also takes into account a number of elements that could include a SWOT analysis, momentum, technical aspects or the sector backdrop. Every subsequent published update on the stock will feature an introduction outlining the key reasons behind the opinion.

Distribution of stock ratings

BUY ratings 55,3% NEUTRAL ratings 33,3% SELL ratings 11,3%

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