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CFA Institute Research Challenge
Initiation of coverage
14th February 2020

Ferrari N.V.

Italy | Consumer Discretionary | Automobiles

BUY

RACE

Price: €159.75
Target Price: €189.03
Upside: +18.3%
Dividend Yield: +0.7%
Total Shareholder Return: +19.0%

Primary exchange: Italian Stock Exchange
Tickers: RACE:IM (BBG), RACE.MI (RIC)
Secondary listing: NYSE (NY)
Tickers: RACE:US (BBG), RACE.N (RIC)

Market data:

Main shareholders:

Exor N.V.:	23.7%
Piero Ferrari:	10.1%
Free float:	66.2%
Shares outstanding:	185.87mn
Market cap:	€29.7bn

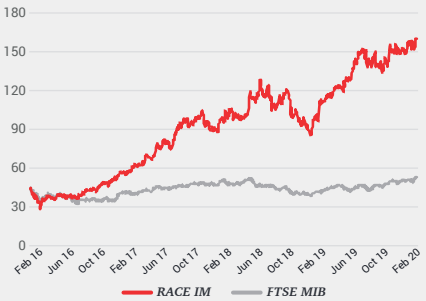
Stock data:

52 w H/L:	€84.1/€160.60
Avg. daily volume (52w):	464k

Key financials:

	2019A	2020E	2021E
EPS [€/share]	3.73	3.66	4.20
DPS [€/share]	1.13	1.10	1.26
Dividend Yield [%]	*0.8%*	*0.7%*	*0.8%*
Price to Book	19.2x	16.8x	15.0x
ROE [%]	*49.9%*	*42.4%*	*41.6%*
ROIC ex. gdw. [%]	*35.9%*	*30.1%*	*29.4%*

4Y price performance:



Find our investment case in charts on *Annex 1*

Ferrari, a scarce asset

We initiate our coverage on Ferrari N.V. (RACE) with a BUY recommendation and a year-end target price of €189.03, implying a +19.0% Total Shareholder Return, including a dividend yield of +0.7% and an upside of +18.3% on the 14th February 2020 closing price (€159.75). RACE is the most famous luxury performance car manufacturer in the world and it holds a legendary brand with a strong Italian heritage. We believe the market is not fully appreciating: *(i)* the **uniqueness of RACE business model**, which allows the Company to enjoy resilient and predictable revenues, *(ii)* the **strong operating cash flows** (€1.3bn in 2019) that the Company can generate and which will bring FCFs to unprecedented levels at the end of the CapEx cycle starting from 2022 (€931mn) and *(iii)* the **best-in-class and ever-growing margins**, that bring to light RACE superior competitive positioning within the Luxury Performance Car Industry *("LPCI")*.

Automotive in the surface, luxury in the soul

RACE unique brand and business model make it akin to personal **luxury players**. Relying on its superior brand recognition, customer care and technical edge, RACE enjoys a loyal customer base and a demand far exceeding supply, intentionally restricted and controlled through waiting lists. This implies: *(i)* a distinct visibility on future revenues and cash flows, *(ii)* a strong resilience to business fluctuations and *(iii)* margins and returns (32.6% EBITDAm adj. and 39.1% ROIC ex. goodwill adj. in 2018) that have no equals in the LPCI (avg. 19.4% and 19.9%) but, on the contrary, are aligned with the top-performing personal luxury brands (avg 28.4% and 33.4%). All these factors, combined with the **strong pricing power** RACE enjoys, led us to valuate it as a luxury company.

Many levers to sustain future growth

To ensure itself a bright future, RACE will continue to exploit its **iconic brand**, built over decades and recognized as one of the most powerful brands in the world. Further increases in performance will be enabled by: *(i)* a **strong pipeline of product launches** until 2022, which will entail the renovation of previous models and the introduction of new hybrid vehicles, with both of these factors contributing to increase the Average Selling Price *("ASP")*, *(ii)* the **consolidation of the ultra-exclusive Icona car family**, characterized by extremely high prices and margins, that significantly contributes to cash generation, *(iii)* the **entry in the luxury SUV segment** in 2022 through the launch of its first sport utility vehicle and *(iv)* the **re-orientation of the Brand activities** by focusing on high-end products categories and by reducing licensing agreements with potential image-detrimental partners.

Past of glories... and future of success

We predict revenues will grow at a +7.3% CAGR 2019-2027, reaching €6.6bn in 2027 as a consequence of **increasing ASP** (€289k in 2019 vs. €336k in 2027) **and volumes** (10,131 vs. 16,322 units shipped). EBITDA will increase to €2.9bn in 2027 (+10.7% CAGR 2019-2027) because of increasing revenues as well as **improving margins** (+954bps in 2019-2027). As a result, EPS will grow at a +9.9% CAGR 2019-2027, reaching €7.93 (net of the announced buyback). Finally, we expect **cash generation to increase significantly starting from 2022**, with the harvesting of the returns from the current CapEx cycle.

The best Ferrari is the one that has yet to be built

Our year-end target price of €189.03 derives from an **asset-side valuation**. This result stems from a DCF model, with a 6.03% WACC and a terminal growth rate equal to 2.65%, as this is the best methodology to appreciate: *(i)* the **uniqueness of RACE business model**, *(ii)* the **substantial future growth** fuelled by the current CapEx cycle and *(iii)* the **re-orientation of activities other than the cars business**. A relative valuation supports the results of our DCF model. Given the **luxury nature of the Company**, we selected RACE comparables among the personal luxury industry. The multiples analysis shows that RACE is currently traded at a 21.9% discount on peers' 1YF EV/CE regressed against 1YF ROCE and 3YF Sales CAGR.

	2017A	2018A*	2019A	2020E**	2021E	2022E	2023E
Shipments [units]	8,398	9,251	10,131	10,853	11,691	14,434	15,685
Revenues [€mn]	3,417	3,420	3,766	4,085	4,300	4,951	5,810
EBITDA [€mn]	1,036	1,115	1,269	1,395	1,642	1,958	2,393
EBITDA margin [%]	*30.3%*	*32.6%*	*33.7%*	*34.2%*	*38.2%*	*39.5%*	*41.2%*
EBIT [€mn]	775	827	917	977	1,114	1,322	1,648
EBIT margin [%]	*22.7%*	*24.2%*	*24.4%*	*23.9%*	*25.9%*	*26.7%*	*28.4%*
Tax rate [%]	*28.0%*	*19.6%*	*20.1%*	*27.0%*	*27.0%*	*27.0%*	*27.0%*
Net profit [€mn]	537	645	699	683	783	934	1,173
Net profit margin [%]	*15.7%*	*18.9%*	*18.6%*	*16.7%*	*18.2%*	*18.9%*	*20.2%*
EPS [€/share]	2.83	3.41	3.73	3.66	4.20	5.02	6.29
YoY [%]	-	*20.3%*	*9.3%*	*-1.7%*	*14.7%*	*19.3%*	*25.5%*
P/E	30.9x	25.5x	39.7x	43.6x	38.0x	31.9x	25.4x
EV/CE	12.6x	9.3x	12.3x	11.6x	10.8x	10.2x	8.4x
DPS [€/share]	0.71	1.03	1.13	1.10	1.26	1.50	1.89
Dividend Yield [%]	*0.8%*	*1.2%*	*0.8%*	*0.7%*	*0.8%*	*0.9%*	*1.2%*
Net Debt/(Cash) [€mn]	1,158	1,134	1,192	1,368	1,446	1,450	501
Net Industrial Debt/Cash [€mn]	473	341	337	481	532	473	-483

** adjusted for 2015-2016-2017 Patent Box effect*
*** first period without Patent Box tax relief*

sources: company data, team estimates

Maranello, gestione sportiva - source: company

Ferrari Roma - source: company

Ferrari Monza SP1 - source: Morini Gallarati publishing

Scuderia Ferrari team and cars - source: Formula 1

We initiate our coverage on Ferrari N.V. (RACE) with a BUY recommendation and a year-end target price of €189.03, implying a +19.0% Total Shareholder Return, including a dividend yield of +0.7% and an upside of +18.3% on the 14th February 2020 closing price (€159.75). Our investment case is based on the belief that RACE is a **scarce asset** because of: *(i)* the **predictability of its revenues**, thanks to its strategy of controlled growth, *(ii)* the **enviable pricing power** provided by its globally renowned brand and by the aura of exclusivity that surrounds it, *(iii)* the **growth opportunities** offered by the widening customer base and by the expansion of the product range of cars to enter unexplored market niches and *(iv)* RACE **resilience to negative macroeconomic outlooks** thanks to the business model based on waiting lists.

Company presentation

With a market cap of €29.7bn and revenues of €3.8bn, RACE is the most famous luxury performance car manufacturer in the world. RACE focuses on the design, engineering, production and sale of luxury performance cars, as well as on the licensing and direct commercialization of branded products. Also, RACE takes part to the FIA Formula One World Championship through its racing division **Scuderia Ferrari**. These activities are carried out exclusively inside its plants in **Maranello** (Italy), split between those devoted to the production of cars for sale and those dedicated to the racing activities. Despite the deep connection with this historical site, RACE presence is nowadays **global** and, thanks to the capillary positioning of its dealers, it has deep roots in the society of millionaires and billionaires in more than 60 countries worldwide. The current product range encompasses: *(i)* 5 **Sport** models (F8 Tributo, F8 Spider, 812 Superfast, 812 GTS and SF90 Stradale), *(ii)* 4 **GT** models (Portofino, Roma, GTC4Lusso T and GTC4Lusso), *(iii)* 2 **Special Series** models (488 Pista and 488 Pista Spider) and *(iv)* 1 **Icona** model available in two versions (Monza SP1 and SP2). Since its spin-off from the FCA Group in 2016, RACE has delivered solid results, as shown by *(i)* the strong revenue growth (+7.2% revenues CAGR 2015-2019), *(ii)* best-in-class margins (33.7% EBITDAm in 2019) and returns (35.9% ROIC ex. goodwill in 2019) in the LPCI and *(iii)* increasing free cash flows (€687mn in 2019 vs. €173mn in 2015).

Recent developments

In its FY2019 results presentation, RACE reported strong results: *(i)* shipments grew by +9.5% with respect to previous year and the geographical mix slightly favoured China thanks to higher deliveries anticipating the implementation of new emission regulations, *(ii)* EBITDAm increased by +109bps (33.7%), while EBITm only increased by +19bps (24.4%) as a consequence of higher depreciation reflecting the CapEx levels in 2018 and 2019 and *(iii)* the Q4 EPS of €0.90 was slightly lower than the consensus of €0.98, also for the yearly EPS (€3.73 vs. €3.78) *(Bloomberg, FacSet)*. However, the most impressive result was the *(iv)* **industrial free cash flow**, which reached €687mn as a consequence of the advanced payments of the first ever Icona and lower-than-expected CapEx. Investors should expect 2020 to be a year of consolidation for RACE, as defined by the CEO Louis Camilleri and perfectly aligned with our considerations.

Drivers of growth

RACE short-term growth will be driven by the full exploitation of the **price and mix levers** which will significantly increase the ASP. This will be obtained through: *(i)* the **consolidation of the Icona pillar** (€1.6mn starting retail price) *(ii)* the **renewal of the product portfolio**, which involves a significant price increase over precedent models (+3-5%) and the introduction of unprecedented top-line new models and *(iii)* the **hybridization of the fleet** that will allow a further increase in retail prices. The medium-term growth will be driven by: *(iv)* the **entry in the booming luxury SUV segment** and *(v)* the **re-orientation of the Brand activities** aimed at increasing their relevance to the Company and at avoiding the risk of brand dilution. RACE long-term growth will be mainly driven by the **increase in number and wealth of HNWI**.

Earnings forecast

We predict revenues will grow at a +7.3% CAGR 2019-2027, reaching €6.6bn in 2027 as a consequence of **increasing ASP** (€289k in 2019 vs. €336k in 2027) **and volumes** (10,131 vs. 16,322 units shipped). EBITDA will increase to €2.9bn in 2027 (+10.7% CAGR 2019-2027) because of increasing revenues as well as **improving margins** (+954bps in 2019-2027). As a result, EPS will grow at a +9.9% CAGR 2019-2027, reaching €7.93 (net of the announced buyback). Finally, we expect **cash generation to increase significantly starting from 2022**, with the harvesting of the returns from the current CapEx cycle.

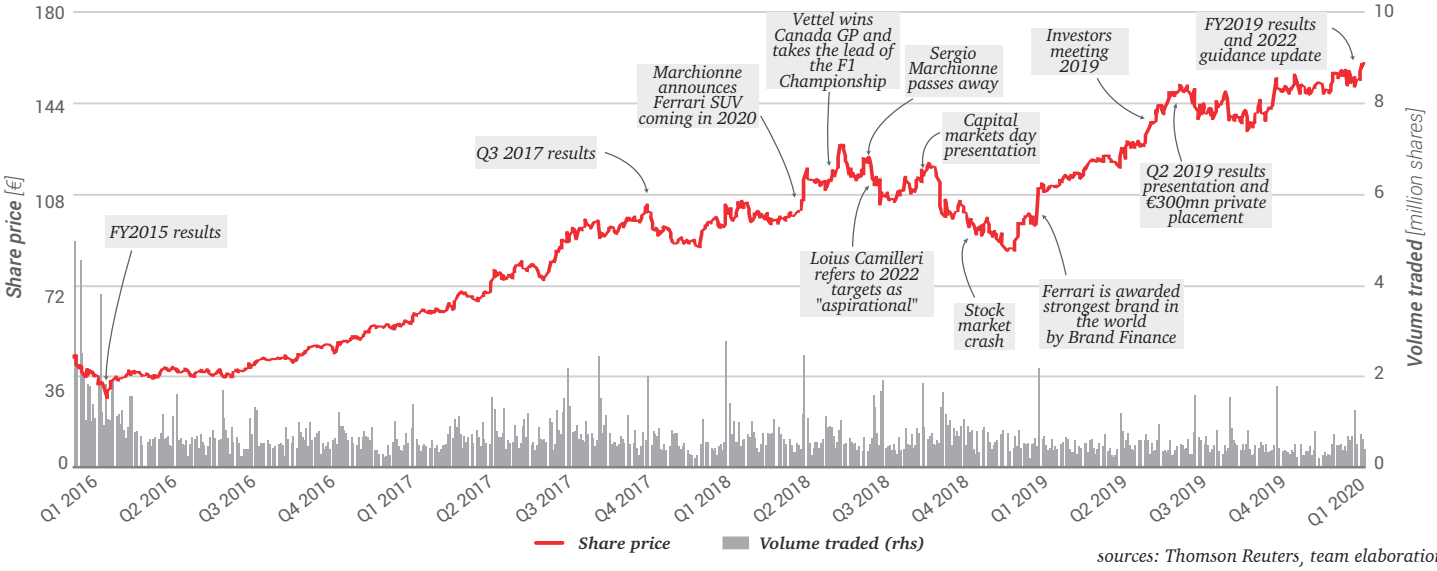
Valuation summary and investment action

Our year-end target price of €189.03 derives from an **asset-side valuation**. This result stems from a DCF model, using a 6.03% WACC and a terminal growth rate equal to 2.65%, as this is the best methodology to appreciate *(i)* the **uniqueness of RACE business model**, *(ii)* the **substantial future growth** fuelled by the current CapEx cycle and *(iii)* the **re-orientation of activities other than the cars business**. A relative valuation supports the results of our DCF model. Given the **luxury nature of the Company,** we selected RACE comparables among the personal luxury industry. The multiples analysis shows that RACE is currently traded at a 21.9% discount on peers' 1YF EV/CE regressed against 1YF ROCE and 3YF Sales CAGR.

Considering the results of our DCF and relative valuation, RACE stock currently shows a discount with respect to its **full potential**. We expect it will be fully priced when the Company gives evidence about the **forthcoming strong and stable cash flows**, during the Q4 2020 earnings call when RACE will release the 2021 guidance.

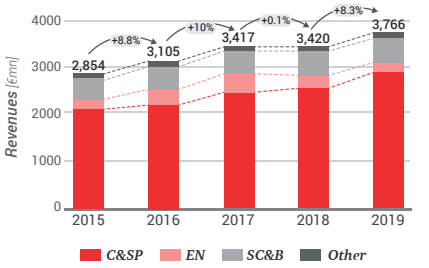
Investment risks

The main investment risks are represented by: *(i)* **brand dilution** due to an oversupply of cars in the market or to the loss of technical edge because of breakthroughs in relevant technologies. This risk is mitigated by RACE careful management of waiting lists and by its traditional first mover position in terms of innovation within the LPCI, as demonstrated by its positioning in turbocharged engines and hybrid powertrains. Additionally, a *(ii)* **slowdown in global economy**, could shrink the customer base for the Company and force it to reduce the sales to preserve the Ferrari brand. *(iii)* **Tightening emission regulations**, that result from rising concerns on climate change, could impact the Company demand and costs. RACE historical tendency to cope with emissions reduction targets before the due dates and the limited number of cars sold partially offset this risk. Finally, *(iv)* an **unsuccessful response** from the market **to the launch of new models**, especially the SUV, could significantly impact the short-term results.



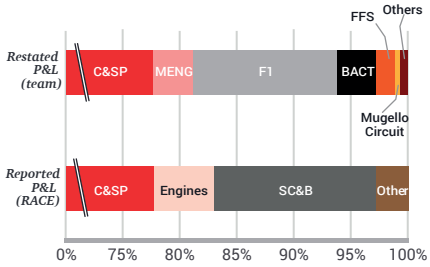
sources: Thomson Reuters, team elaboration

Revenues streams size and growth - *Exhibit 1*



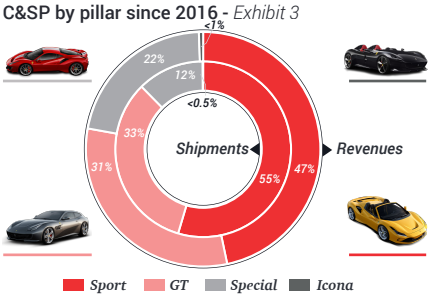
sources: company data, team estimates

Revenues for restated P&L - *Exhibit 2*



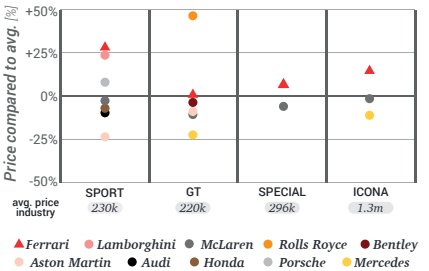
sources: company data,team estimates

C&SP by pillar since 2016 - *Exhibit 3*



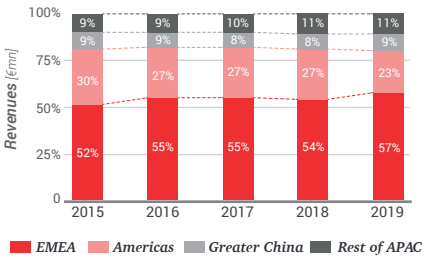
sources: company data, team estimates

Portfolio positioning - *Exhibit 4*



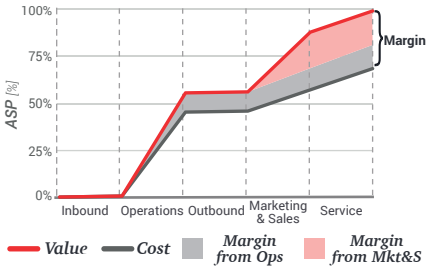
sources: company data, team estimates

Revenues breakdown by geography - *Exhibit 5*



sources: company data, team estimates

Value creation process - *Exhibit 6*



source: team estimates

Company presentation

The heritage of RACE goes back to 1929 when Enzo Ferrari founded Scuderia Ferrari as a racing team for competitions such as Mille Miglia, 24 hours of Le Mans and, since 1951, Formula 1. The Company was only established as a carmaker in 1947 with the launch of its first streetcar. In 1988, FIAT, which had been a minority shareholder for almost 20 years, took control over the Company after the death of its legendary founder. RACE continued to achieve superb sport and commercial results, becoming the most successful team in the history of motorsport and one of the most exclusive brands in the world *(Brand Finance)*. In 2016, the Company was subject to a spin-off from the FCA Group *(Annex 2)* and became an independent company under the name of Ferrari N.V.

The current management team of RACE has the experience and competencies necessary for leading an international and renowned company. After the passing of Sergio Marchionne in 2018, Louis Carey Camilleri – a board member of the Company since 2015 – was appointed as Chief Executive Officer. He was selected because of his vast expertise of international markets acquired during his experience as CEO of Philip Morris *("PM")*, his knowledge of RACE gained while working in PM – the main sponsor of Scuderia Ferrari in the last decades – and his passion for the brand, being a true *Ferrarista* himself. Early signals show that RACE is not suffering from this change in management, considering the positive performances delivered in the recent quarters.RACE 4 revenue streams, as classified by the Company (*Exhibit 1*), are: *(i)* Cars and spare parts, *(ii)* Engines provided to Maserati and other F1 teams, *(iii)* Sponsorship, commercial and brand activities, which group revenues generated through F1 participation and brand-related activities and *(iv)* Other, that comprises Ferrari Financial Services, the management of the Mugello Circuit and other smaller and not precisely defined activities. With this initiation, we provide a proprietary P&L restatement to better represent the Company financials *(Exhibit 2* and *Annex 3)*. The restatement results in 7 sources of revenues: *(i)* **Cars and spare parts** (77.7% of 2019 revenues), *(ii)* **Engines for Maserati** (3.5%), *(iii)* **Formula 1** (12.7%), *(iv)* **Brand activities** (3.4%), *(v)* **Ferrari Financial Services** (1.6%), *(vi)* **Mugello Circuit** (0.5%) and *(vii)* **Others** (0.7%).

Cars and spare parts *("C&SP")*: the driving force of the prancing horse (€2,926mn revenues, ca. 30.9% EBITm)

RACE is the leader in the market niche of luxury performance cars (power above 500 horsepower and retail price above €150k). The Company follows a low-volume production strategy to fuel exclusivity and preserve scarcity. The product range is organized into four pillars: **Sport**, **Gran Turismo** *("GT")*, **Special Series** and **Icona** *(Annex 4)*; in addition, RACE sells track-only cars, limited edition Hypercars and an extremely limited amount of Fuoriserie and One-offs (*Exhibit 3* – average shipments vs. revenues per pillar in 2016-2019). To purchase a Ferrari, customers must enter waiting lists, whose lengths vary according to the model and geographical market, and which contribute to boosting RACE reputation as a premium brand. *(i)* **Sport** is the most traditional of RACE segments and it is the largest in the number of shipments. The capacity to meet and exceed customer expectations in terms of performance and driving emotions, developed in 70+ years of activity, has led to a robust technical edge over competitors and to a best-in-class level of brand identification. These two factors support the high premium price assigned to the models belonging to this category *(Exhibit 4)* (starting retail price: €239k, minimum waiting period: 12 months). *(ii)* **GT** is the second biggest pillar in terms of shipments. The pricing power that RACE enjoys over the products of this class is weaker compared to the other pillars, a consequence of lower know-how in versatility and comfort and less consistency with the traditional values of the brand – racing heritage and sportive attitude (starting retail price: €194k, minimum waiting period: 6 months). *(iii)* **Special Series** are Sport models equipped with additional technical features derived from F1 and GT competitions; they represent a limited amount of shipments because of higher exclusivity (they are reserved to existing RACE clients) and higher prices (starting retail price: €296k, minimum waiting period: 18 months). *(iv)* **Icona** pillar was introduced in 2018 and it is reserved for Ferrari brand ambassadors, a class of particularly wealthy and loyal customers. These cars – modern reinterpretations of milestones in the history of RACE – are produced in very limited quantities and their price reflects this exclusivity (starting retail price: €1.6mn, sold out at launch event). Currently, most of the cars carrying the prancing horse are sold in developed countries (68% of 2019 shipments): Europe's top-5 markets for RACE represent 33% of its 2019 shipments, while the United States account for 28% *(Exhibit 5)*. Sales are made through a network of 167 authorized dealers operating 190 points of sale worldwide and acting as intermediaries between the Company and its customers.

Maserati engines *("MENG")*: sandbagging RACE true potential (€132mn revenues, ca. 5.0% EBITm)

MENG includes the sale of three kinds of powertrains (V6 turbo, V8 aspirated and V8 turbo) to Maserati, a subsidiary of the FCA Group. This revenue stream is detrimental to RACE margins, because *(i)* the business has a low-margin nature (average Auto Parts industry EBITm: 4.9%, *Thomson Reuters*) and *(ii)* the agreement was signed when the two companies were part of the same Group. The exposure of RACE to fixed costs related to this activity is mitigated by the presence of a "take or pay" clause, which provides the Company with the possibility to partially recover from expenses in case of lower purchases than the preannounced yearly quantity. The supply agreements are set to expire between 2020 and 2022 and they will not be renewed.

F1: Ferrari heritage and showcase (€477mn revenues, ca. -14.1% EBITm)

F1 revenues comprise *(i)* sponsorship agreements for Scuderia Ferrari (€232mn revenues in 2019, *team estimates*), *(ii)* RACE share of FIA Formula One World Championship commercial revenues (€179mn in 2019, *team estimates*) and *(iii)* the rental of engines to Haas F1 team and Alfa Romeo Sauber F1 team (€66mn in 2019). These revenues cover most of the sustained costs, providing RACE with a substantial benefit in terms of technological progress, since innovations developed and tested on F1 cars are then transferred to road cars (F1 R&D of €339mn in 2019, *team estimates*), as well as marketing, since F1 is the most popular motorsport competition in the world (490mn TV viewers in 2018, *Formula One World Championship Limited*).

Brand activities *("BACT")*: combining exclusivity with inclusivity (€127mn revenues, ca. 65.0% EBITm)

BACT includes the turnover generated by brand-related activities. RACE engages in *(i)* licensing contracts with selected partners for the development of products and services (for example branded theme parks) and *(ii)* retail activities of branded goods in a chain of 17 franchised and 18 directly managed stores. These activities are margin accretive, since more than half are based on royalty income (€73mn revenues for licensing vs. €54mn revenues for retail activities in 2019, *team estimates*).

Ferrari Financial Services *("FFS")*: the pass for the US market (€61mn revenues, ca. 6.2% EBITm)

FFS refers to income generated through financing activities offered to American customers and dealers by the fully owned American subsidiary FFS Inc. (average client's contract duration: 67 months). Despite its low relevance in terms of revenues and costs, FFS has a strategic role in enabling the sales of cars to the US market.

Drivers of value and cost

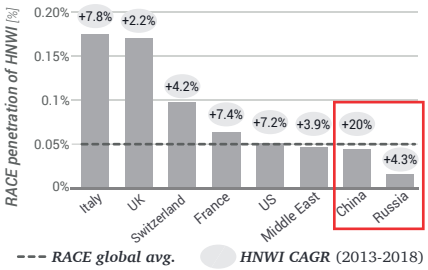
We performed a **Porter value chain** analysis to compare the **value perceived** by customers and the **costs sustained** by the Company *(Exhibit 6)*. Our results are based on RACE public fillings and 44 interviews with worldwide authorized dealers *(Annex 5)*. The first source of value is the **superior quality of RACE cars**, which represents 58% of the total value and 62% of the costs. These costs are produced during the **Inbound, Operations and Outbound** phases of the value chain and have two main components: *(i)* **COGS**: as a car and engine manufacturer, RACE incurs in high costs of sales (47.5% of revenues in 2019). Since no supplier accounts for more than 10% of the total procurement costs, the Company is mainly exposed to raw materials (primarily aluminium) and labour costs. Both of these costs should decline in the short term, given the aluminium price decreases and the possible cut in employment taxes in Italy, where ca. 95% of RACE employees are located. *(ii)* **R&D**: it accounted for 18.5% of RACE revenues in 2019. This item has been historically critical for RACE success as it contributes to build RACE technical hedge over competitors, but most importantly, it represents the vast majority of the Company's effort in its Formula 1 division: Scuderia Ferrari (€339mn out €699mn in 2019, *team estimates*). Furthermore, like many car manufacturers, RACE capitalizes a significant portion of development costs (37.1% in 2019). This practice, together with high investment in PPE, contributes to a high impact of D&A on the total operating costs; thus, EBITDAm is significantly higher than EBITm (33.7% vs. 24.4% in 2019). The second and third sources of value are the **high resonance of the brand** and the **best-in-class relationship with customers**, which represent 30% and 12% of the value perceived by the customer and 21% and 16% of the cost, respectively. The costs are mainly produced during the **Marketing & Sales and Service** phases and have as main component **SG&A**. This accounts for 9.6% of the turnover and is mainly generated by marketing and events, sales personnel and retail stores. Marketing and events comprise the costs related to client events, driving events and Ferrari Classiche: a set of exclusive initiatives aimed at fostering the sense of belonging of clients to the Ferrari brand.

RACE traditional customer segmentation - *Exhibit 7*

	the Achiever	the Tifoso	the Ambassador
age	50+	45+	40+
worth	>$1mn	>$5mn	>$30mn
car(s)	GT or Sport V8	GT & Sport V12	Sport V12 & Special
description	Self made business owner that considers the purchase of a Ferrari the reward for the successful career	High-end businessman with a passion for F1 as active Tifoso loves the experiences Ferrari offers to its customers	VIP, successful athlete or aristocrat who looks for adrenaline and driving emotions and enjoys collecting the most exclusive cars

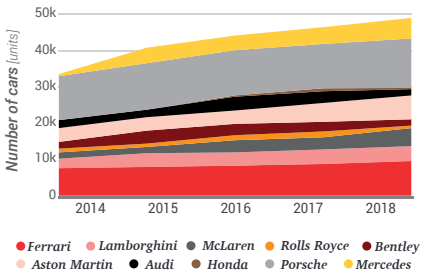
sources: dealers interviews, team elaboration

HNWI penetration in selected markets - *Exhibit 8*



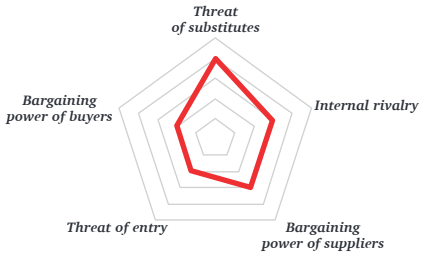
sources: company data, Capgemini, team estimates

Luxury performance cars sold 2014-18 - *Exhibit 9*



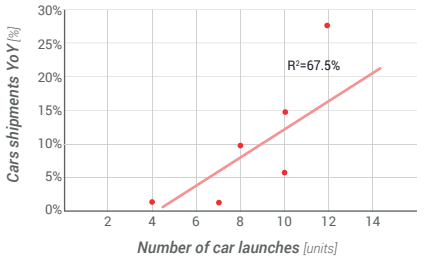
sources: company data, team estimates

LPCI five forces analysis - *Exhibit 10*



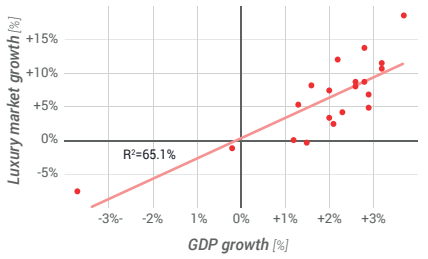
source: team estimates

New launches effect in the LPCI - *Exhibit 11*



sources: company data, team elaboration

Luxury industry cyclicality (1996-2019) - *Exhibit 12*



sources: IMF, Altagamma, team elaboration

Strategic guidelines

RACE strategy for the mid-long term is based on three pillars:

1. Price: taking full advantage of pricing power. In recent years, RACE has mainly exploited volume as a determinant of growth. Since the use of this lever exposes the Company to the risk of harming the exclusivity of the brand, the management decided to take greater advantage of the price/mix effect for its new industrial plan.

The early signals have been extremely positive: the Company announced the launch of 15 new models between 2019 and 2022 (+50% compared to number of launches in 2015-2018), which will show price increases compared to their predecessors and to the ASP of the portfolio – as demonstrated by F8 Tributo, F8 Spider, SF90 Stradale (Sport cars) and Monza SP1/SP2 (Icona).

Further opportunities to boost revenues without increasing volumes will be offered by: *(i)* the hybridization of the range, which will increase the ASP of the fleet (we estimated a +15% price premium for hybrid models) and *(ii)* higher impact of personalization, which currently accounts for slightly less than +20% over list prices and will be boosted by the opening of a tailor-made center in New York, the inauguration of a new atelier in Maranello and the launch of a configurator system available in dealers' shops.

2. Segments and markets: exploiting untapped opportunities in underpenetrated markets. RACE traditional customer base is well consolidated in three main clusters (*Exhibit 7* and *Annex 6*), which differ in age, favourite car category and net worth. RACE has been able to successfully satisfy all their specific needs with its current product range. However, given the expected sharp increase of wealthy people *("HNWI[1]")* in currently underpenetrated countries like China and Russia (*Exhibit 8*), the Company is trying to broaden its horizons to catch future growth opportunities. To satisfy the appetite of these customers for versatile, comfortable and easily drivable performance cars, RACE aims at enriching its GT offering through the launch of improved or totally new vehicles (participation of GT in shipments of 36% in 2019 vs. 40% in 2022, *management guidance*), especially of the long-waited high-performance SUV *("Purosangue")*.

3. BACT: re-focused brand extension strategy to increase the impact on margins. In the mid-term (6 to 9 years), RACE aims at redefining its offer of branded products and overhaul the store concept and distribution process. RACE is reorganizing its portfolio to focus on exclusivity and preserve the brand from dilution (the plan envisages to eliminate 30% of product categories and to halve the number of licensing agreements). The new portfolio will mainly consist of luxury and expensive garments and accessories, some of which will be sold exclusively to car owners. The new concept stores and online channels will stand out from RACE current points of sale, both in terms of clientele, portfolio and prices. After the redefinition of the offer, BACT is expected to account for 10% of RACE EBIT in 2027. This strategy will expand the Company margins thanks to the higher participation of these activities, which are margin accretive.

Industry Overview & Competitive Positioning

Luxury performance car industry

Market size, growth and main players

The Luxury Performance Cars industry *("LPCI")* is a niche of the automotive industry that has expanded during last years, showing a +7.1% CAGR 2015-2018 in the number of cars sold, and that accounted for ca. 49,000 units of vehicles sold worldwide in 2018 *(Exhibit 9* and *Annex 8)*. The main players of the market can be split in two categories: most of them are luxury-focused automotive manufacturers (Aston Martin, Bentley, Ferrari, Lamborghini, McLaren, Porsche and Rolls Royce), while for some others the LPCI represents a limited portion of their shipments (Audi, Ford, Honda and Mercedes).

Industry attractiveness

The LPCI is facing numerous challenges in terms of regulation, investments for new technologies and brand protection. The following highlights emerge from a Porter five forces analysis *(Exhibit 10* and *Annex 9)*.

(i) The degree of **internal rivalry** is medium/high, and this undermines the attractiveness of the industry, as demonstrated by the numerous players struggling to stay afloat, as well as by the 5.9% 2018 average EBITm of incumbents, -170bps compared to 2017 *(FactSet, Thomson Reuters, team estimates)*. An exception is represented by subsidiaries of big automotive groups, which positively enjoy the support of their parent company, and by smaller competitors that managed to elevate their business model to a level where they are more akin to personal luxury brands. *(ii)* **Substitute products** for luxury performance cars are only partly represented by alternative means of transportation (these cars are usually the third or fourth vehicle purchased by the household), while considerable pressure for substitution is put by other personal luxury goods. This is because, similarly to them, the purchase of these cars is often driven by the search for social status rather than by the expected usage of the product itself. As for *(iii)* **suppliers' bargaining power**, many players adopt an outsourcing strategy, thus becoming dependent on a third party's capability to supply raw materials and parts.

Finally, *(iv)* **threat of new entrants** and *(v)* **bargaining power of buyers** are almost non-material. On the one hand, the high capital requirements and difficulties in shaping a strong identity in a short time have proven to be high barriers for new entrants (most of the newcomers that entered the market after the '80s either failed just after few years of activity – ca. 45% – or they were only able to secure meagre volumes – ca. 27% delivering more than 10 units per year and none more than 100, *team estimates*). On the other hand, the atomicity of the customer base and its low sensitivity to price allow luxury car manufacturers to hold the bargaining power at full. Overall, the five forces jointly determine a medium level of intensity and profitability in the LPCI.

Industry trends

To assess the trends shaping the industry's future needs, we start from LPCI **dual nature** as a intersection between the automotive and luxury industries.

As far as the first one is concerned, we can see LPCI players facing:

1. Environmental concerns and tightening emission regulations, which are forcing firms to invest in the development of hybrid and electric powertrains. EU imposed strict limits on average CO_2 fleet emissions (95 g/km from 2020, 59 g/km from 2030), while LPCI cars average in 2018 was 271 g/km *(JATO dynamics, team estimates)*, because of the greater flexibility of the Small Vehicle Manufacturer *("SVM")* status which is enjoyed by some LPCI makers. Since top-performing Internal Combustion Engines *("ICE")* are high-polluting, introducing hybrid and electric vehicles is a way through which LCPI manufacturers can meet the emission reduction targets.

2. Demand depending on new product launches. The introduction of new models in the market has proven to be a crucial factor in determining the demand curve of companies: the launch of new cars is positively correlated with the growth in number of vehicles sold by the industry *(Exhibit 11)*. Thus, LPCI manufactures have been shortening cars' lifecycles and increasing product launches in the last years.

3. Evolving customers' needs and tastes. Many players of the LPCI have historically manufactured mostly 2-door low-clearance cars. However, in recent years some of them have expanded their product portfolio with 4-door high-clearance SUVs. The astonishing results they achieved in terms of sales growth (+23.9% in shipments in the year following the launch, *team estimates*) is a strong demonstration of the importance of identifying and adapting to the changes in customers' needs.

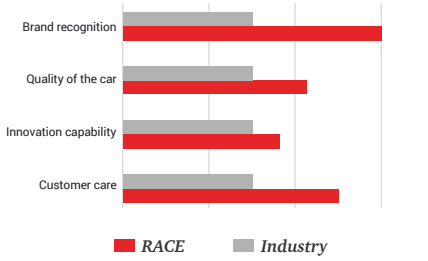
On the other hand, LPCI shares some trends with personal luxury brands:

4. Expanding population of High Net Worth Individuals. The number of HNWI, which accounted for 18mn people in 2018, has been growing in the last years (+7.3% CAGR 2011-2018, *World Wealth Report by Capgemini*) following the upward trend of the stock market. LPCI should benefit from the projected growth of its customer base, which is expected to expand at a +5.9% CAGR 2018-2025E. Asian countries will be the locomotive of this growth, as shown by their +9.0% CAGR 2018-2025E, with a massive contribution from China (27.0% of total growth, *Capgemini*).

5. The industry is cyclical and positively correlated with GDP. Historical data demonstrates that luxury industry growth is fostered by economic prosperity *(Exhibit 12)*. This is not just a matter of wealth and financial availability, but also of social acceptance: in periods of economic downturn, many consumers are hesitant to purchase or use luxury goods, since these are perceived as an offensive display of wealth *(team interviews)*. GDP is expected to grow steadily in mature markets (+1.6% CAGR 2019-2023E, *IMF*), while emerging countries should develop at a higher pace (4.6% CAGR 2019-2023E, *IMF*).

1 HNWI are people with financial assets, excluding primary residence, with a value greater than $1mn. We refer to them as RACE potential customers.

LPCI competitive drivers - *Exhibit 13*



source: team estimates

SWOT analysis - *Exhibit 14*

STRENGTHS

- Iconic brand with strong heritage
- Established waiting lists system
- Strong order book
- Excellent R&D capabilities
- High level of vertical integration
- Best-in-class customer loyalty
- Tight control on dealers network

WEAKNESSES

- It is not part of a big automotive group:
  - Fewer synergies
  - Less financial availability
- Low presence in emerging markets

OPPORTUNITIES

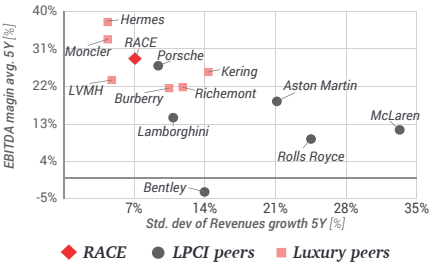
- Expanding customer base (HNWI population)
- Luxury market growth in emerging countries
- New market segments within the car industry
- Brand extension in the personal luxury industry

THREATS

- Industry dependence on economic outlook
- Tightening of emissions regulations
- Change in customers' tastes

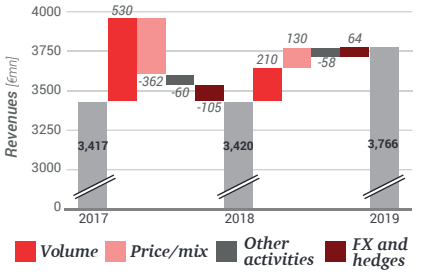
source: team elaboration

Peer group definition - *Exhibit 15*



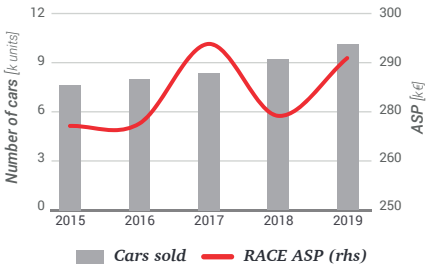
sources: company data, team elaboration

Revenues bridge - *Exhibit 16*



sources: company data, team elaboration

Volume and price/mix effects - *Exhibit 17*



sources: company data, team elaboration

Competitive positioning

Industry competitive drivers

Industry drivers. The main drivers that shape the competition in the LPCI and determine each company's demand are: *(i)* brand recognition, given the high number of status-driven purchases, *(ii)* quality of cars in terms of performances, comfort, driving experience and design, *(iii)* innovation capability, considering the importance of launching new products to stimulate demand and *(iv)* customer care, because of the customers' tendency to rely on their loyalty to a brand.

RACE positioning. As shown by its 33.7% EBITm, a figure far above the industry average of 5.9%, RACE benefits from a robust competitive advantage *(Exhibit 13)*. Indeed, RACE has been recognized as the strongest brand worldwide by Brand Finance for two consecutive years, thus demonstrating its superior position within the industry concerning *(i)* **brand recognition**. Regarding *(ii)* **cars' quality**, RACE is considered best-in-class, especially in the Sport segment, given the high level of performance and driving emotions provided. In the GT segment, the Company has yet to make up ground in terms of comfort, but design and driving emotions are in line with RACE top-of-the-industry standards. Regarding *(iii)* **innovation capability**, on one side, RACE has fewer financial resources to leverage on than those competitors that are part of big automotive groups and can take advantage of synergies. However, this disadvantage is offset both by the R&D that RACE employs in F1, which the Company then transfers to its road cars, and by the established expertise on car design, which allows it to exploit learning economies. Finally, RACE has a strong focus on *(iv)* **customer care**, which historically translated in a high percentage of repetitive buyers.

RACE competitive advantages demonstrate the similarity with personal luxury brands. In fact, similarly to RACE, *(i)* **controlled growth**, *(ii)* **demand higher** than supply and *(iii)* **brand strength** are recognized as the key success factors in the personal luxury industry.

SWOT analysis

By leveraging on its **strengths**, RACE can take advantage of the **opportunities** arising in the LPCI, as well as protect itself from the **threats** affecting the industry *(Exhibit 14)*. The Company can increase its penetration in the growing HNWI population, especially in China, by *(i)* employing top-level human capital and R&D funds to develop GT and SUV cars, that are more appealing to Chinese and other unexplored customers *(management guidance)*, *(ii)* effectively managing its order book and waiting lists to avoid oversupplying cars and harming its strong brand, and *(iii)* keeping high standards for dealers and energetically managing customer events to sustain RACE exclusive allure.

As far as the threats are concerned, RACE is less exposed to cyclicality than the LPCI and most of the personal luxury companies, because of the established waiting lists system, that makes the Company's sales less volatile and more predictable. Another threat for LPCI is the ongoing tightening of emission regulations, which can force firms to accelerate the transition to hybrid and electric models. Even though RACE is already investing in the hybrid technologies (already used in F1 engines), the Company can further leverage on its R&D capabilities and vertical integration, to be the first mover in the LPCI to develop fully electric cars. Nonetheless, it can still suffer from the lack of synergies and lesser availability of financial resources if compared to big conglomerates.

Competitive financial analysis: a luxury company that happens to produce cars

RACE competitive advantages and business model based on waiting lists make it akin to luxury personal product companies (Burberry, Kering, Hermès, LVMH, Moncler and Richemont, *"luxury peer group"*). The main similarities are represented by limited production, with demand higher than supply, a strong focus on brand appeal and heritage and a substantial pricing power. To further assess which of the two RACE natures prevails (automotive vs. luxury), we carried out a competitive financial analysis (*Annex 10* for details on company selection and data).

RACE resilient financial profile sets it apart from automotive peers (Aston Martin, Bentley, Lamborghini, McLaren, Porsche and Rolls Royce, *"LPCI peer group"*) both in terms of **limited volatility** in sales and **best-in-class margins** *(Exhibit 15)*. Considering these two dimensions, Porsche is the closest to RACE. However, the two companies differ in terms of: *(i)* price levels, as RACE targets the high-end market while Porsche targets a lower-end customer base, with the gross margin reflecting this tendency (RACE 52.6% vs. Porsche 27.8% in 2018), *(ii)* number of cars shipped (9,251 Ferrari vs. 256,255 Porsche in 2018), and *(iii)* improvements in profitability, since RACE EBITDAm adj. grew from 26.2% to 32.6% in 2015-2018, while Porsche EBITDAm remained constant at 26.6%.

RACE resembles personal luxury firms not only from a strategic standpoint and for growth consistency, but also in terms of return metrics. Indeed, ROIC ex. goodwill[2] adj. and EBITDAm adj. are above the average of its luxury peers, highlighting RACE luxury nature once again. Finally, even considering all the capitalized R&D costs as expenses (37.1% of RACE total R&D was capitalized in 2019), RACE still behaves like a luxury company in terms of EBITDAm adj. for R&D (23.3% vs. 26.9% weighted average luxury peers in 2018) as well as ROIC ex. goodwill adj. for R&D (42.2% vs. 25.8%), further supporting its higher resemblance to the luxury peer group.

Financial Analysis

Historical analysis

Introduction: a winning company

Since the spin-off from the FCA Group in 2016, RACE has had a history of success: *(i)* the number of cars shipped increased at a +7.2% CAGR 2015-2019, in line with the industry rate of +7.1%, *(ii)* revenues increased at a +7.2% CAGR 2015-2019 and *(iii)* margins improved substantially from a 25.2% EBITDAm and 15.6% EBITm in 2015 to 33.7% and 24.4% in 2019.

Revenues: RACE has many levers to sustain a controlled growth

1. CS&P (77.7% of revenues in 2019, +8.9% CAGR 2015-2019): volume and price/mix effects *(Exhibit 16)*. In the last 5 years, CS&P revenue growth was mainly driven by **volume**, with the strong deliveries of Sport (488 GTB in 2016 and 812 Superfast in 2018) and GT cars (California T in 2015 and Portofino in 2019). However, in 2017 the **price/mix** effect was more relevant because of the deliveries of LaFerrari Aperta (net revenues per car starting at €1.2mn) that made the ASP achieve a historical high of €292k *(Exhibit 17)*. In 2019, the price/mix effect started to play an important role only in the last semester, pushed by the first deliveries of the Monza SP1/SP2, the first Iconas ever (net revenues per car starting at €1.1mn). Revenues from personalization increased from 15% to 20% of the top line over the period.

2. Other activities (22.3% of revenues in 2019, +2.1% CAGR 2015-2019): volatile streams under restructuring. *(i)* **MENG** (3.5% of revenues in 2019, *team estimates*) has been volatile, since demand depends on Maserati expected sales, and will finish between 2020 and 2022. *(ii)* **F1 activities** revenues are split between: engines rentals for F1 team (1.8% of revenues in 2019, *team estimates*), which have a small contribution upon overall revenues and are uncertain, since they depend on other F1 racing teams' needs, and commercial revenues from Scuderia Ferrari, that account for 10.9% of the total revenues *(team estimates)*. *(iii)* Contribution from **BACT** (3.4% of revenues in 2019, *team estimates*) has shrunk by 5.3% due to current restructuring aimed at enhancing the exclusivity of RACE branded products, targeting a reduction of 30% in the product categories and 50% in the number of licensing agreements. *(iv)* Other revenues have been fairly steady since 2016, generating €104mn in 2019, representing a decrease from the €114mn in 2015 due to the deconsolidation of FFS GmbH in November 2016 (*Annex 12* for details about RACE financing activities).

Margins and returns: excellence among automakers

RACE 33.7% EBITDAm and 24.4% EBITm have been improving over the last five years as gross margin increased (47.5% in 2015 vs. 52.5% in 2019, *team estimates*) and SG&A and R&D expenses as a fraction of revenues slightly decreased (31.5% in 2015 vs. 28.1% in 2019, *team estimates*). The cars' gross margins improved thanks to: *(i)* the introduction of Special Series cars, Iconas and Hypercars, that target recurrent and price-insensitive customers and have **high contribution margins** (*Exhibit 18* for comparison between Monza – the first Icona – and Portofino – the current most popular GT car) and *(ii)* the **substitution of Sport and GT models** by equivalent cars whose price increase is higher than the increase in costs (*management guidance*). Furthermore, RACE margins benefited from *(iii)* the **decrease in the shipments of engines to Maserati** in 2018 and 2019 that are detrimental to the Company's margin and *(iv)* the **dilution of overhead expenses** as the number of shipments grew (*Exhibit 19* for operating leverage adjusted for constant prices).

RACE ROIC ex. goodwill has improved consistently from 2015 to 2018 *(Exhibit 20)*, due to *(i)* increasing capital

2 RACE goodwill accounted for €785mn in 2018 and mainly derives from the FCA Group acquisition and spin-off in 2016.

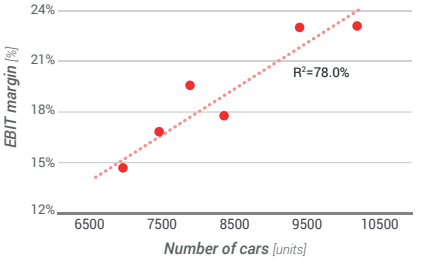
Monza equivalents - *Exhibit 18*

€k	Monza	Portofino
Starting retail price	1,600	196
VAT and dealer's margin	*33%*	*33%*
Net revenues for RACE	1,072	131
Production cost	322	75
Contribution	750	56

1 **Monza** has the same contribution of *13.3* **Portofino**

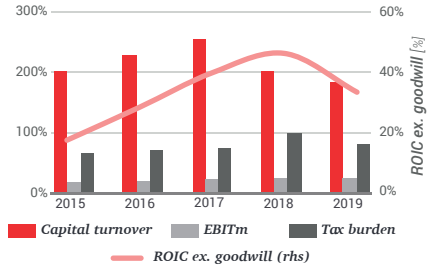
source: team estimates

Operating leverage *(constant ASP of 2014)* - *Exhibit 19*



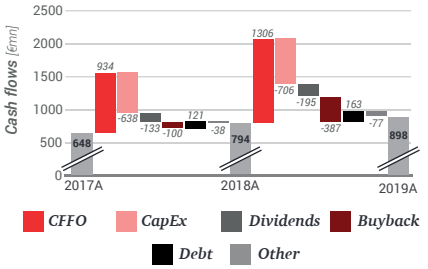
sources: company data, team estimates

DuPont analysis - *Exhibit 20*



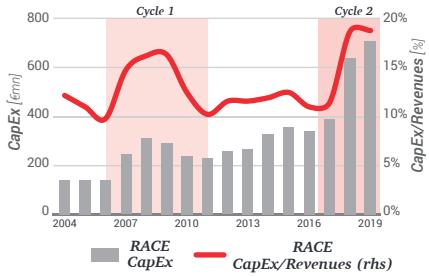
sources: company data, team elaboration

Cash flow bridge - *Exhibit 21*



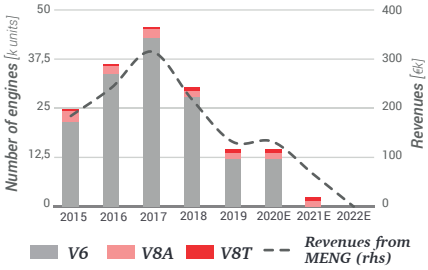
sources: company data, team elaboration

CapEx cycles - *Exhibit 22*



sources: company data, team estimates

MENG revenues - *Exhibit 23*



sources: company data, team estimates

turnover (2.0 in 2015 vs. 2.6 in 2017), *(ii)* increasing operating margins (15.6% in 2015 vs. 24.2% in 2018) and *(iii)* decrease in tax rates related to the Patent Box, especially in 2018 *("Patent Box: a decrease in 700bps in tax rate")*. However, in 2019 RACE ROIC decreased and we attribute this to high investments in CapEx that depress capital turnover in the short-term (2.6 in 2017 vs. 2.0 in 2018 vs. 1.8 in 2019, *team estimates*), as the revenues from new models lag behind in time the investments for their development. Thus, the short-term adverse effects on ROIC are the result of RACE intention to thrive in the medium-long term through the expansion of its car portfolio.

Cash flows: RACE makes enough money for CapEx and shareholders

1. Cash is flowing to the Company and its owners *(Exhibit 21)*. RACE has plenty of cash (industrial FCF/EBIT of 74.9% in 2019, *team estimates*) and effectively manages operating working capital (140.2 DPO vs. 21.5 DSO, net of financial receivables in 2019, *team estimates*).
Generous cash flows have been used in 2018 and 2019 and will be employed in the future for: *(i)* CapEx (CapEx/Revenues of 12.5% in 2015 vs. 18.7% 2019), *(ii)* dividends (dividend payout of 30% based on adjusted net profit in 2019) and *(iii)* buyback program *("RACE will still buy back €1.1bn in shares")*.
2. Soon to be net cash positive. Following the spin-off from the FCA Group in 2016, RACE was burdened with €1.5bn debt due to restructuring activities and its net industrial debt climbed up to €1.1bn (*Annex 12* for RACE financial structure). Starting from 2016, net industrial debt has been continuously decreasing, reaching €337mn in 2019 (-57.7% in 2015-2019). However, excluding share repurchase proceeds, the Company would have been net industrial cash positive in 2019. Consequently, Net Industrial Debt/EBITDA has been continuously improving (1.11 in 2015 vs. 0.27 in 2019).

Highlights: a unique company in a unique moment

1. A business subject to investment cycles. RACE CapEx is subject to cyclicality *(Exhibit 22)*: the 2007-2010 CapEx cycle is attributable to investments for the development of turbo engines and RACE just started a new CapEx cycle in 2018 related to the development of new models, including the RACE first-ever SUV Purosangue, and improvements in the hybrid powertrains. CapEx will account for €3.6bn between 2018 and 2022 *(management guidance)* and negatively impacts cash flows.
2. Patent Box: a decrease in 700bps in tax rate. In 2018, RACE signed an agreement with the Italian Revenues Agency to benefit from the Patent Box tax regime for the five years 2015-2019, with the possibility to renew it. The effective tax rate the Company bears under this special tax regime is around 20%, which rises to 27% under the ordinary regime *(team estimates)*. Given that several Italian companies are still negotiating for the 2015-2019 period, we do not believe the Patent Box regime will be renewed soon after the expiration of the First Round (2015-2019).
3. RACE bought back €0.4bn and will still buyback €1.1bn in shares. The Company announced a €1.5bn buyback program to be executed between 2019 and 2022 and funded by available cash. The total amount corresponds to ca. 5% of current RACE market capitalization. €1.1bn (75%) will still be used between 2020 and 2022 to repurchase New York Stock Exchange and Italian Stock Exchange shares, negatively affecting the Company's cash.
4. A global business exposed to currency fluctuations. In 2018, 49% of RACE revenues were exposed to exchange rate fluctuations, with the USD and GBP being the most representative (57% and 10% of the total exposition respectively). These values have been relatively stable over time and represent a good proxy for the short-term (2020-2022). However, in 2019 currency exposure has slightly changed due to higher deliveries to China in the first semester, anticipating the implementation of new emission regulations. Furthermore, in 2020 a small reduction in USD exposition is expected as a result of a lag in deliveries of new products in the US due to homologation requirements. Given the temporary nature of these two events, we forecast a return to historical values from 2021 onwards. To cope with currency risk, the Company hedges between 50% and 90% of such exposures through derivative financial instruments (*Annex 19* for sensitivity of RACE revenues and EBIT for USD and GBP fluctuations).

Future analysis and valuation assumptions

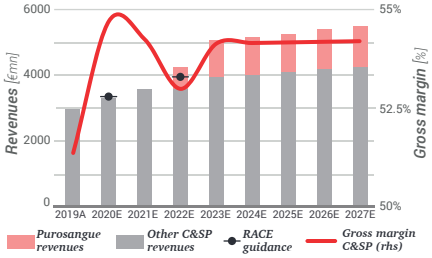
Introduction: RACE to keep its rightful place in pole position

In the **short-term (2020-2022)**, we expect RACE financial performance will be mainly impacted by: *(i)* intense launch of new models to reach the planned **expansion in range**, *(ii)* increasing participation of **hybrid vehicles** (60% of mix in 2022, *management guidance*), *(iii)* **non-renewal of the engine supply contract with Maserati**, *(iv)* **F1 breakeven** by 2022 supported by the introduction of the budget cap in 2021 and *(v)* high CapEx intensity.
In the **medium-term (2023-2027)**, RACE financials will be driven by: *(vi)* entrance in the booming luxury SUV segment with the Purosangue and *(vii)* harvesting of the **restructuring of BACT**, in accordance with the *Strategic guidelines*, *Industry trends* and RACE earning calls.
According to our projections, revenues will grow at a +7.3% CAGR 2019-2027, primarily as a consequence of increasing volumes (10,131 in 2019 vs. 16,322 units in 2027) and ASP (€289k vs. €336k). As a result, RACE will continue to strengthen its EBITm and EBITDAm (+684bps and +954bps in 2019-2027 respectively) thanks to the increasing relative importance of C&SP and BACT businesses and the dismissal of low-margin MENG, as well as the consolidation of the Icona pillar and increasing personalization. Finally, we expect cash generation to increase substantially starting from 2022, with the harvesting of the returns from the CapEx cycle.

Methodology: a careful analysis of RACE unique moment

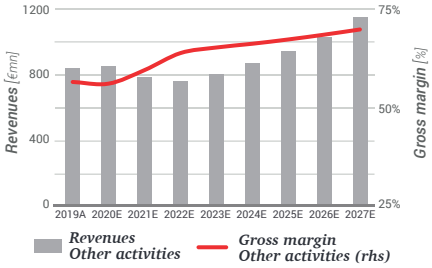
Starting from the restated P&L developed by the team *(Annex 3)*, we estimated the revenues and gross profit of each of the 7 sources of revenues for the period 2020-2027 separately (*Annex 13* for further details):
1. C&SP: range expansion in the short-term and Purosangue impact in the mid-term. To model the primary source of RACE turnover in the three years 2020-2022, we used a **bottom-up approach**. We avoided linking revenues to external variables (top-down) as sales depend mainly on RACE decisions and production capacity rather than customer demand ("controlled growth through waiting lists"). An accurate estimation of future launches, volumes and mix for this three-year period was carried out by *(i)* identifying trends in product launches since 2000 and *(ii)* carefully analyzing management guidance. As a result, we forecast 10 new launches in the aforementioned period, with an increase in hybrid vehicles to reach the Company target of 60% hybrid shipments in 2022.
After the end of the current industrial plan, we assume RACE new SUV will drive the vast majority of volume and revenues increase, while the rest of the range will only be subject to periodic renovation and price increases. Specifically, we predict Purosangue will reach maturity in 2023, with sales expected to be around 3,000 units per year and a €350k starting retail price. Prices are set starting from the list prices provided to the team by RACE dealers, to which we applied historical price inflation (+3-5%) to renewed range models and an extra premium to hybrid models (15%). Finally, costs are calculated separately for each pillar as a result of a study of both internal and comparable products (*Annex 13* for details).
2. BACT: restructuring benefits ripped from the end of the industrial plan. In accordance with CEO Louis Camilleri, we expect this stream of revenues to decrease in absolute terms until 2021 as a result of the ongoing reduction in licensing agreements and product categories. From 2022, the restructuring actions aimed at enhancing exclusivity and luxuriousness of the Ferrari branded products will start to be more consistently converted into sales and, by 2027, BACT will represent 6.6% of group sales and 10% of EBIT, in line with management guidance.
3. F1: breakeven reached in 2022. The imminent introduction of the budget cap for team expenses excluding engine and pilot costs as well as rising sponsorship proceeds led us to assume F1 to breakeven by 2022 and have a slightly positive margin for the following years, an assumption in line with the management guidance.
4. Others: fading impact as the years go by. To predict the remaining turnover, we expect: *(i)* MENG streams to be null by the end of all supply contracts in 2022 *(Exhibit 23)*, *(ii)* FFS to grow in line with C&SP increase in revenues in the short-term (2020-2022), resulting from little change in geographical sales mix in the period and then to grow in line with inflation from 2022 to 2027, *(iii)* Mugello Circuit and *(iv)* Others to grow in line with expected OECD inflation.
5. OpEx and CapEx. *(i)* **COGS**: we assumed CS&P costs will vary on the basis of mix, while we fixed the costs of Other activities according to our divisional model. *(ii)* **SG&A**: we set a 9.6% fixed impact over revenues – in line with the values of the last 3 years –, since higher absolute SG&A expenses due to restructuring of BACT offset any possible optimization from economies of scale. *(iii)* **R&D**: to be conservative, we assumed R&D expensed for C&SP to increase in line with growth in turnover, while R&D expensed for F1 will raise by 20% in 2020 as a result of anticipating the development of the 2021's model, a pre-emptive investment given the change in rules for 2021 and the introduction of the budget cap. This change will result in a 27% cut in costs, needed to reach F1 breakeven in 2022. From 2022 onwards, we assume these expenses to increase proportionally to F1 revenues. *(iv)* **CapEx**: we expect its decrease as a portion of sales after the 19.6% peak reached in 2020, normalizing at a ratio close to 12% consistent with the historical average (on-cycle and off-cycle periods).

C&SP forecasts - *Exhibit 24*



sources: company data, team estimates

Other activities forecasts - *Exhibit 25*



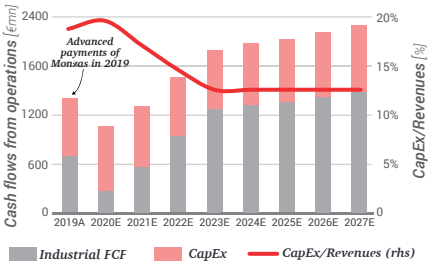
sources: company data, team estimates

Margins checkbox - *Exhibit 26*

%	Team	Guidance	Consensus
EBITDAm 2020	*34.2%*	*≥34%*	*35.6%*
EBITm 2020	*23.9%*	*~24%*	*25.5%*
EBITDAm 2022	*39.5%*	*38%*	*38.1%*
EBITm 2022	*26.7%*	*25%*	*27.0%*

sources: team estimates, company data, Bloomberg

FCFF and CapEx/Revenues forecasts- *Exhibit 27*



sources: company data, team estimates

Revenues: RACEing fast

1. C&SP (+9.6% CAGR 2019-2022 vs. +6.0% CAGR 2022-2027): RACE flagship. Team estimations suggest most of the increase in C&SP revenues will materialize in the short-term, thanks to: *(i)* range 60% hybrid by 2022 (hybrid premium to ICE), *(ii)* consolidation of the Icona pillar (high ASP), *(iii)* strong increase in shipments (+42.5% from 2019 to 2022). This will lead to €4.2bn in revenues by 2022, resulting in an 84.7% weight on the group turnover, with respect to 77.7% in 2019. As regards revenue growth, price and mix will be the main drivers in 2020 due to the strong deliveries of Monzas and the first shipments of the Sport cars SF90 Stradale and 812 GTS, all having a selling price at least 30% higher than the average of the vehicles shipped in 2019. In 2021 and 2022, the gradual phase-out of the Monzas will cause a 2.6% decrease in ASP (€291k in 2022) and volume will stand out as the main driver. In the medium term (2023-2027), C&SP will benefit from the solid sales of the first-ever RACE SUV, reaching €5.5bn at the end of the period. C&SP relative impact, however, will remain approximately constant as a result of a much steeper development of BACT over the period. We expect shipments of Purosangue to start in the second quarter of 2022 and reach strong annual sales from 2023 onwards with 3,000 units per year *(Exhibit 24)*. We believe sales will be ca. 60% lower than its closest comparable Lamborghini Urus, whose shipments have been close to 5,000 units in 2019. Lower deliveries are explained by the significantly higher price of the Purosangue compared to its peer. This comes from: *(i)* hybrid engine and *(ii)* willingness of RACE to protect its brand by entering the high-end segment with an exclusive product. Finally, we expect personalization to decrease to 18.5% of the top line in 2020 due to the high impact over sales of the very expensive Monza SP1 and SP2 *(management guidance)*. However, the growing trend registered in the past few years will start again from 2021, with personalization reaching 20% and 22% respectively in 2021 and 2022, to finally settle at 23% from 2023, the result of current efforts of RACE to increase this figure.

2. Other activities (-3.4% CAGR 2019-2022 vs. +8.7% CAGR 2022-2027): The ascent of BACT and the downfall of MENG *(Exhibit 25)*. Non-core revenues stream will have a negative impact on total turnover in the short term, on account of *(i)* a steady decline of engines sold to Maserati towards zero in 2022 and *(ii)* a temporary reduction of contribution from BACT for the abandonment of product categories deemed as detrimental for the brand equity. Indeed, total revenues excluding C&SP will drop from €840mn in 2019 to €756mn in 2022, and their share of total revenue follows, from 22.3% to 15.3%. These results are in full accordance with the Company guidance provided during the 2018 Capital markets day, where the variation of these source of sales was forecasted to be null from 2018 to 2022, but a contribution from MENG was included as Maserati's decision to terminate the supply contract was not already known.

Margins and returns: astonishing margins confirm RACE as a luxury player

We expect RACE EBIT and EBITDA in the short term to grow with a +13.0% and +15.6% CAGR 2019-2022, reaching €1.3bn and 2.0bn in 2022, in line with updated guidance (> €1.2bn and €1.8-2.0bn). The higher growth of these metrics compared to revenues allows the Company to reach 26.7% EBITm and 39.5% EBITDAm in 2022 *(Exhibit 26)*. Such results are enabled by: *(i)* **growth in volumes and dilution of fixed costs** (operating leverage), *(ii)* intensifying the launch of **high-end and hybrid vehicles**, which accrue higher margins, *(iii)* **termination of the MENG stream**, *(iv)* **BACT restructuring** aimed at increasing the portion of luxury product sold at the expense of lower-end ones, *(v)* **introduction of budget cap in F1** on some costs and reduction of related R&D expenses. The effects of these measures will be even more evident in the mid-term (2023-2027), when EBITm and EBITDAm will hit 31.2% and 43.2% respectively, due to the higher impact of BACT, the most margin-accretive among RACE revenue streams.

As far as returns are concerned, RACE ROIC ex. goodwill will decrease until 2021 (35.9% in 2019 vs. 29.4% in 2021) because of: *(i)* the investments in car pipeline expansion, *(ii)* the restructuring of Other activities and *(iii)* the expiration of the Patent Box tax regime at the end of 2019. However, the quality of the Company's investments is reflected in ROIC ex. goodwill skyrocketing up to 51.8% in 2027, with the upward trend beginning in 2022, together with the end of the CapEx cycle.

Cash flows: *per aspera ad astra*

1. Increasing industrial FCF. We expect RACE industrial FCF will shrink from €687mn in 2019 to €250m in 2020 (vs. €400mn in management guidance), because of: *(i)* non-renewal of the Patent Box in 2020, which increases tax rate from 20% to 27%, *(ii)* peak in CapEx cycle (19.6% CapEx/Revenues in 2020), *(iii)* advanced payments from Monzas cashed-in in 2019 that will be mainly delivered in 2020 and 2021 (we expect 30 deliveries of Monzas in 2019 vs. 258 in 2020), negatively affecting the net working capital. However, after 2021, **RACE will enjoy significant and unprecedented industrial FCFs** *(Exhibit 27)*: €931mn in 2022 (vs. €1.1-1.25bn in management guidance) and an industrial FCF +9.8% CAGR in 2022-2027. Thus, even though RACE will slightly reduce its cash in 2020 and 2021, given the high levels of CapEx, a payout ratio of 30% and generous share repurchase pursued each year, the Company will have plenty of cash after 2022, which provides RACE flexibility to its balance sheet and future opportunities.

2. From net industrial debt to net cash. Our forecast is aligned with the management guidance that the Company will remain net industrial cash positive in 2020, excluding the impacts of the buyback, because of cash generation (not because of debt repayment). However, considering the current €1.5bn buyback program (2019-2022), we expect RACE will become cash positive in 2023, after the CapEx cycle, when the Net Industrial Debt/EBITDA goes from 0.24 in 2022 to -0.20 in 2023.

Table 1 - P&L and financial indicators

€mn	2015	2016	2017	2018	2019	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E
Revenues	2,854	3,105	3,417	3,420	3,766	4,085	4,311	4,962	5,820	5,994	6,185	6,397	6,636
of which CS&P	2,080	2,180	2,456	2,535	2,926	3,239	3,524	4,205	5,014	5,128	5,245	5,364	5,487
MENG	177	238	302	218	132	132	66	0	0	0	0	0	0
F1	n.a.	n.a.	n.a.	438	477	487	498	509	520	532	543	555	568
BACT	n.a.	n.a.	n.a.	134	127	116	105	116	151	197	256	334	436
FFS	n.a.	n.a.	n.a.	53	61	67	73	87	89	91	93	95	97
Mugello's Circuit	n.a.	n.a.	n.a.	18	18	19	19	19	19	20	20	21	21
Others	n.a.	n.a.	n.a.	24	25	25	25	25	26	26	27	28	28
Revenues growth	*3.3%*	*8.8%*	*10.0%*	*0.1%*	*10.1%*	*8.5%*	*5.5%*	*15.1%*	*17.3%*	*3.0%*	*3.2%*	*3.4%*	*3.7%*
Gross profit	1,356	1,525	1,766	1,797	1,977	2,246	2,380	2,711	3,241	3,351	3,474	3,614	3,777
Gross margin	*47.5%*	*49.1%*	*51.7%*	*52.6%*	*52.5%*	*55.0%*	*55.2%*	*54.6%*	*55.7%*	*55.9%*	*56.2%*	*56.5%*	*56.9%*
SG&A as % of Revenues	*11.9%*	*9.5%*	*9.6%*	*9.6%*	*9.6%*	*9.6%*	*9.6%*	*9.6%*	*9.6%*	*9.6%*	*9.6%*	*9.6%*	*9.6%*
R&D exp. as % of Rev.	*15.7%*	*16.4%*	*16.3%*	*15.4%*	*14.8%*	*15.8%*	*12.9%*	*11.2%*	*10.5%*	*10.5%*	*10.5%*	*10.4%*	*10.3%*
R&D amort. % of Rev.	*4.0%*	*3.4%*	*2.9%*	*3.4%*	*3.7%*	*5.7%*	*6.8%*	*7.1%*	*7.1%*	*8.0%*	*6.1%*	*5.9%*	*5.8%*
EBIT	444	595	775	827	917	977	1,118	1,326	1,657	1,671	1,861	1,963	2,075
EBIT margin	*15.6%*	*19.2%*	*22.7%*	*24.2%*	*24.4%*	*23.9%*	*25.9%*	*26.7%*	*28.5%*	*27.9%*	*30.1%*	*30.7%*	*31.3%*
Profit before taxes	434	567	746	803	875	935	1,076	1,284	1,615	1,629	1,819	1,921	2,033
Effective tax rate	*33.2%*	*29.5%*	*28.0%*	*2.0%*	*20.0%*	*27.0%*	*27.0%*	*27.0%*	*27.0%*	*27.0%*	*27.0%*	*27.0%*	*27.0%*
Net profit	290	400	537	787	699	683	786	937	1,179	1,189	1,328	1,402	1,484
Net profit margin	*10.2%*	*12.9%*	*15.7%*	*23.0%*	*18.6%*	*16.7%*	*18.2%*	*18.9%*	*20.3%*	*19.8%*	*21.5%*	*21.9%*	*22.4%*
Shipments [units]	7,664	8,014	8,398	9,251	10,131	10,853	11,691	14,434	15,685	15,842	16,000	16,160	16,322
ASP [€k]	271	272	292	274	289	298	301	291	320	324	328	332	336
EBITDA	719	843	1,036	1,115	1,269	1,395	1,646	1,962	2,402	2,528	2,629	2,739	2,873
EBITDA margin	*25.2%*	*27.1%*	*30.3%*	*32.6%*	*33.7%*	*34.2%*	*38.2%*	*39.5%*	*41.3%*	*42.2%*	*42.5%*	*42.8%*	*43.3%*
FCFF	224	292	367	201	639	215	525	865	1,266	1,326	1,351	1,408	1,481
Industrial FCF	173	238	309	347	687	250	555	933	1,273	1,334	1,359	1,415	1,488
CapEx	356	342	391	638	706	800	735	721	727	749	773	800	829
CapEx/Revenues	*12.5%*	*11.0%*	*11.4%*	*18.7%*	*18.7%*	*19.6%*	*17.1%*	*14.5%*	*12.5%*	*12.5%*	*12.5%*	*12.5%*	*12.5%*
CapEx/D&A	1.29	1.38	1.50	2.21	2.01	1.91	1.39	1.13	0.98	0.87	1.01	1.03	1.04
Net Industrial Debt	797	653	473	341	337	480	528	468	-492	-1,441	-2,411	-3,396	-4,433
ROIC ex. goodwill	***21.1%***	***31.2%***	***41.8%***	***47.9%***	***35.9%***	***30.1%***	***29.5%***	***32.6%***	***40.4%***	***41.9%***	***47.4%***	***49.6%***	***51.9%***

source: team estimates

We foresee a year-end target price of **€189.03**, which implies an 18.3% upside on 14th February 2020 closing price in the Italian Stock Exchange and a BUY recommendation. Our valuation is based on an **asset-side DCF model** as this is the best methodology to appreciate *(i)* the singularity of RACE business model and *(ii)* the unique moment of the Company, as described in *Future analysis and valuation assumptions (Exhibit 28)*. A **relative valuation** supports the result of our DCF model. We considered the Luxury nature of RACE, its strong revenue growth in the next years and return on capital. Moreover, we assessed the additional value for shareholders from the **renewal of the Patent Box** and the best scenario for the **usage of excess cash**.

Discounted cash flows

We performed a three-stage asset-side DCF to account for *(i)* the restructuring of its activities until 2027, *(ii)* a fading out period when revenue growth slows down and *(iii)* a perpetuity value *(Exhibit 29)*.

First stage (2020-2027): CapEx, Icona, Purosangue, F1, MENG and BACT (avg. EBITm of 28.1%). According to our forecasts presented in the Future analysis, we predict revenues and EBIT to grow at a +7.3% and +10.7% CAGR 2019-2027. In the short-term (2020-2022), we considered the high level of CapEx, the maturity of the Icona pillar, the dismissal of MENG and the F1 breakeven. In the medium-term (2023-2027), we took into account the introduction and maturity of Purosangue and the conclusion of the restructuring of the BACT. Starting from 2027, we expect revenue to grow +3.7% YoY, a value higher than our terminal growth of 2.65%. Thus, we introduced a fade-out period.

Second stage (2028-2030): slow down (avg. EBITm of 31.2%). In this stage, revenue and FCFF growth progressively slows down and reaches a 2.65% terminal growth rate. This rate results from the sum of the long-term GDP growth rate in advanced economies (2.0%, *OECD*) and the across-the-cycle premium growth of luxury goods over total economy (+0.65%, *BCG* and *Fondazione Altagamma*).

Third stage: terminal value (EBITm of 31.3%). We calculated the terminal value using the perpetuity formula with the FCFF forecasted for 2031, which considers a revenue and EBIT growth of 2.65% and CapEx/Sales of 10.5%, in line with the average across the cycle.

The DCF was performed with a **WACC** of 6.03% (*Table 2* and *Annex 14* for details about WACC computation) and led us to a target price of €189.

Table 2 - WACC

WACC assumptions		
Beta (β)	1.01	Given that RACE is dual-listed, the beta was estimated as the weighted average of: *(i)* the regression of RACE returns on the Italian Stock Exchange against the STOXX Europe 600 and *(ii)* the regression of RACE returns on the New York Stock Exchange against the S&P 500, for a period of 2 years and weekly intervals. The weights were assigned by keeping into account the volumes traded in each Exchange.
Risk free rate (rf)	*1.12%*	The risk-free rate was computed as the weighted average of the normalized risk-free rate in the Eurozone (2-year average of the 10-year German government bond yield) and the United States (2-year average of the 10-year American government bond yield). The weights were assigned by keeping into account the volumes traded in each Exchange.
Market premium (MP)	*5.20%*	The market risk premium was obtained by averaging the implied European and American market risk premium *(Damodaran, "Country Default Spread and Risk Premiums")*.
Cost of equity (k_e)	*6.38%*	We applied the Capital Asset Pricing Model: $k_e = rf + \beta \times MP$
Cost of debt (r_d)	*0.57%*	We computed the implicit long-term cost of debt for RACE based on its two current listed bonds (ISIN: XS1720053229 and XS1380394806).
Marginal tax rate (t)	*24.0%*	To account for the debt tax shield, we assumed a tax rate of 24%, which applies to earnings before taxes. The Italian regional tax IRAP and the Patent Box do not generate a tax shield benefit, since they are only related to operational revenues and costs.
Leverage (D/(D+E))	*6.00%*	We considered the current leverage, that includes the market value of the total debt and market capitalization in January 2020.

source: company data, FactSet, Thomson Reuters, Damodaran and team elaboration

Sensitivity analysis and Monte Carlo simulation

According to our sensitivity analysis for the target price on the WACC and terminal growth rate *(Exhibit 30)*, the **BUY scenario is the most frequent**. Additionally, we carried out a Monte Carlo simulation (*Annex 16* for further details on inputs and results) to assess the potential impact of the quantifiable risks of our valuation of the Company. Given the investment risks identified, we considered as variables every year's *(i)* **revenue growth** and *(ii)* **EBITDA margin**, *(iii)* **useful life of PPE and capitalized R&D** and *(iv)* the level of **CapEx/Revenues** at perpetuity. We obtained a right-skewed distribution (skewness of 0.20) for the share price with an average of €188.99 and a probability of an upside higher than 10% (our threshold for the BUY recommendation) in 69.7% of the cases *(Exhibit 31)*.

Relative valuation

We performed a relative valuation in order to cross-check the market reliance of the DCF. Our analysis of RACE business model and financial profile has shown that the Company has almost no common ground with listed automotive peers – nor in terms of value drivers, nor in terms of profitability. On the contrary, evidence supports RACE comparability with luxury personal product companies, especially in terms of *(i)* key role of brand strength and recognizability, *(ii)* purchase drivers mainly related to social status, *(iii)* sales resilience and consistency over time and *(iv)* strong pricing power. For this reason, our relative valuation is based on a selected cluster of comparable companies that operate exclusively in the high-end luxury industry (*Annex 17* for comparables selection).

Our OLS regressions underline the presence of a weak correlation between **EV/EBITDA** and any regressor (we considered 12 different metrics), with no pair showing R^2 higher than 10.0% *(Exhibit 32)*. On the other hand, we assessed that the market prices firms according to their capability to generate returns over capital employed (R^2=83.3%). We analyzed the statistical robustness of **EV/CE** vs. ROCE, deriving a 1YF EV/CE of 7.2x vs. 12.3x currently, which would suggest that the market is overvaluing the Company. However, to avoid superficially concluding that RACE is overvalued, we should also consider growth in evaluating RACE multiple because the **robust pipeline and momentum** will allow the Company to obtain a higher visibility on future revenue growth and much steeper growth trajectory in the next few years compared to peers. In fact, not only is RACE one of the few companies that can manage demand through waiting lists, but it also has a strong and very credible stream of new products coming in the pipeline. Finally, by factoring-in also the expected sales growth (3YF Sales CAGR) and running a multiple regression (adj. R^2=84.5%) *(Exhibit 33)*, we obtained a 2020 1YF EV/CE of 14.8x, which implies a market price of €192.84 and a +20.7% upside, that support the result of our DCF model.

Further valuation assessments

Throughout our modelling of RACE future cash flows, we did not include the impact of the Patent Box fiscal regime. Instead, we computed its impact separately. Furthermore, we analyzed the convenience of RACE current buyback program as opposed to M&A scenarios as a way to use excess cash.

Patent Box renewal

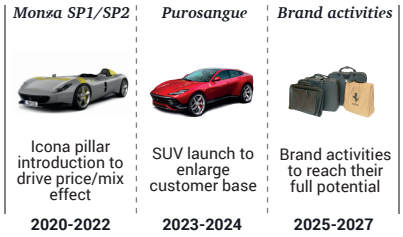
To calculate the upside deriving from an eventual **renewal of the Patent Box tax regime**, we hypothesized a decrease in cash outflows in 2024 equal to the difference between the taxes calculated with a corporate tax rate of 27% (RACE standard tax rate) and with a corporate tax rate of 20% (the one shown during the past period of the Patent Box fiscal relief) on the years from 2020 to 2024. We obtain a further upside of €1.94 per share, resulting in a total target price of €190.97 (+19.5% upside).

The dilemma any company would like to face: what to do with excess cash

Once completed the current renewal and expansion of the portfolio of cars in 2021, RACE will start to generate massive cash flows. In our view, **organic growth** through new lines of business (both the announced brand activities and any further expansion) **will not represent a relevant source of cash consumption**, as the only sectors where the Company could make its core competences count and enjoy non-dilutive margins are not capital intensive ones (for example the design of interiors and exteriors for other luxury means of transportation).

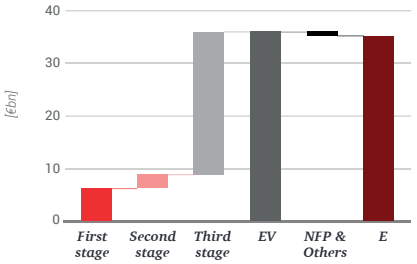
To compare the remaining possibilities for the usage of excess cash (dividends, buybacks and acquisitions), we

Key performance contributors - *Exhibit 28*



sources: company data, team estimates

DCF bridge - *Exhibit 29*



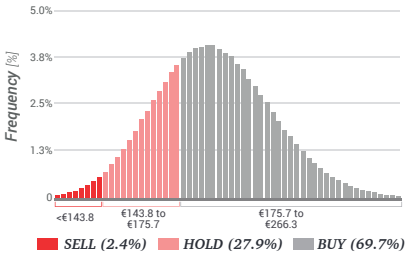
source: team estimates

Sensitivity analysis - *Exhibit 30*

WACC \ Terminal growth rate	1.65%	1.90%	2.15%	2.40%	**2.65%**	2.90%	3.15%	3.40%	3.65%
5.28%	189	200	214	229	248	270	298	333	379
5.53%	175	185	196	209	225	243	265	292	327
5.78%	164	172	182	193	205	221	238	260	287
6.03%	153	160	169	178	189	202	216	234	255
6.28%	144	150	157	166	175	185	198	212	229
6.53%	136	141	147	155	163	172	182	194	208
6.78%	128	133	139	145	152	159	168	179	190

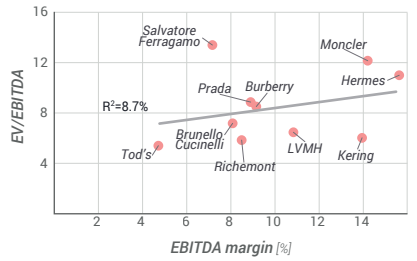
source: team estimates

Monte Carlo simulation - *Exhibit 31*



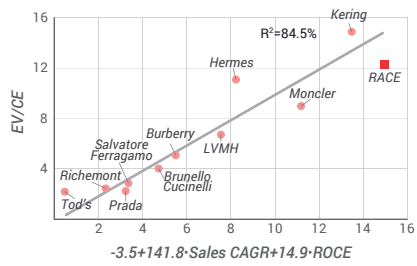
source: team estimates

EV/EBITDA vs. EBITDAm: low correlation - *Exhibit 32*



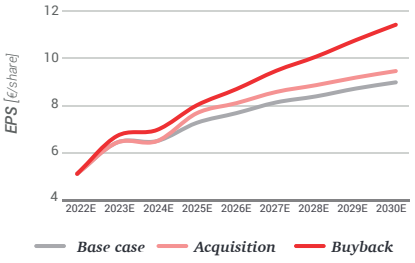
sources: Bloomberg, Thomson Reuters, team estimates

Relative valuation (multiple regression) - *Exhibit 33*



sources: Bloomberg, Thomson Reuters, team estimates

EPS in different scenarios - *Exhibit 34*



source: team estimates

Potential targets for M&A - *Exhibit 35*

Company	Market cap	1YF P/E	1YF FCF yield
Aston Martin	€1.2bn	n.a.	*-3.8%*
Brunello Cucinelli	€2.3bn	40.8x	*1.2%*
Moncler	€9.6bn	26.1x	*3.6%*
Prada	€8.9bn	37.2x	*3.1%*
Salvatore Ferragamo	€2.8bn	27.4x	*4.9%*
Tod's	€1.2bn	99.4x	*3.2%*

sources: Bloomberg, team elaboration

developed a discounted FCFE model *(Annex 18)*. The metric we used to make the comparison is **Total Value for Eternal Shareholders** *("TVES")*, defined as the sum per share of paid dividends and potential ones (FCFE) discounted to the present. We set as a base case the scenario in which all cash flows are distributed as dividends. Using this framework, we searched for the optimal share repurchase level in the years 2023-2030 to maximize the TVES. The result shows that the **buyback creates an increase of 3.7% in the TVES** thanks to **accretion of earnings** (2030 EPS of €11.43/share in the buyback scenario vs. €8.98/share in the base case – *Exhibit 34)*, which also confirms the soundness of the current repurchase program.

Then, to assess the likelihood of a future M&A and its impact over the value for shareholders, we modelled the acquisition in 2024 of a company with a P/E of 26.1x (currently the best figure available among potential targets – *Exhibit 35*). Considering a 35% control premium over the market cap (in line with recent transactions) and assuming no synergies with RACE, **the acquisition would induce a decrease in 2030 EPS of 17.2% and a variation of -8.2% in the TVES** if compared to the buyback scenario.

Finally, given the rumours of a possible **sale or listing of Lamborghini** by the Volkswagen Group, we considered its potential acquisition by RACE. From a financial standpoint, assuming no payments in RACE shares or capital rises, *(i)* the Company would need to massively increase its debt (Bloomberg intelligence estimates an equity value of €10bn) reaching very high and unendurable levels of Net Debt/EBITDA, *(ii)* the acquisition would be costly (implied P/E and EV/EBITDA of 90x and 36x respectively considering 2018 results which are the last ones available) and *(iii)* it would be dilutive to the margins given Lamborghini lower pricing power. Besides, from a strategic standpoint: *(iv)* the two companies have different growth strategies (controlled growth vs. chased growth) and *(v)* the acquisition could end up hurting both brands, diluting the exclusivity associated with Ferrari and destroying Lamborghini heritage of being RACE archenemy. **These facts lead us to consider inorganic growth as not accretive.**

Investment Risks

Besides the main valuation risks, assessed through our sensitivity analysis and Monte Carlo simulation, several factors could pose risks to RACE and undermine our BUY recommendation. Starting from a critical analysis of RACE mid and long-term corporate strategy, especially regarding the growth of the C&SP business, we dug deeper into uncertainties related to the industry and competition landscape, combining them with the most relevant macro-economic trends. In the **short-to-mid-term**, trade policies, tightening emission regulations and potential slowdown in Asian luxury purchases because of the coronavirus emerge as critical threats to RACE growth and profitability. In the **mid-to-long-term** the concerning factors are a possible slowdown in the growth of HNWI wealth, loss of technical edge over competitors caused by technological breakthroughs (for example electrical powertrains) and, most importantly, brand dilution. From a financial perspective, ForEx can potentially represent a swing factor for profitability from year to year, while the capital intensity of the LPCI remains a predominant risk. Finally, we do not see liquidity, credit and interest rate risks as threats for our valuation, given that the Company has *(i)* strong cash generation capability, *(ii)* low net debt/EBITDA ratio and *(iii)* low and capped interest rate, variable debt.

Table 3 - Investment risks

		Likelihood	Impact	Type of impact	Outlook
Business risk	**Brand dilution.** RACE relies on the exclusivity of its brand to sustain the business model based on scarcity. A dilution of the Ferrari brand by overproduction, poor customer relationship or inappropriate licensing agreements would have adverse effects on the demand curve for the Company products, on its pricing power and, consequently, on its revenues and profitability. This scenario is unlikely because of the way in which order books and waiting lists are carefully managed, as well as the high level of control exercised over dealers and licensing partners.			Lower demand and pricing power	**Lightening** Current restructuring of brand activities
	Loss of technical edge. RACE leverages its technical edge over competitors to deliver top-performing, highly innovative cars to the market. Historically, RACE has always been the first mover among LPCI in terms of innovation (for example zero-lag turbocharged engines, mild and full hybrid powertrains). However, if one player were to obtain relevant technological breakthroughs in the future (for example electrical powertrains), it might hurt RACE both in terms of brand reputation and demand for its products.			Lower demand and higher R&D	**Stable** First mover of the LPCI in the hybrid technology
	Dependence on the Maranello plant. RACE relies on a single manufacturing facility in Maranello (Italy). Consequently, it could face production capacity shortage (currently around 17,000 units/ year) in case some extraordinary event was to damage it or in case of significant increases in volumes.			Slowdown in production and potential CapEx for PPE	**Worsening** Launch of Purosangue can put pressure on Maranello's capacity
	Competition from incumbents and substitutes. Competitive pressures and contraction of the customer base of the LPCI could increase the intensity of rivalry among incumbents and, subsequently, reduce the average profitability of the industry. The solid growth expected for the market in the short-to-mid-term and the high level of differentiation greatly reduce the likelihood of such a scenario.			Lower margins	**Stable**
	Devaluation of the secondary market. The strength of the secondary market is a vital indicator of the health of the Ferrari brand. On one side, high residual price contributes to defending the exclusivity of the brand, decreasing the number of individuals that can afford to drive a car carrying the prancing horse on its bonnet. On the other, it contributes to lower the total ownership costs for direct RACE customers, as it grants them the opportunity of covering some of the purchase costs at the sale of the vehicle. In the short-term, a contraction of the demand for used cars or an expansion of the supply, resulting in a decrease in the prices, could hurt the demand curve for the Company and, in the long-term, it might damage the brand image.			Lower demand and damage to brand equity	**Stable** RACE cars residual values are in line with the past
	Dependence on new product launches. As discussed earlier *(Industry trends)*, the demand curve of LPCI players is influenced to a large extent by the launch of new models. This trend, which has brought to a reduction of the product lifecycle, increases the volatility of sales and requires a constant focus on the development of new and improved cars. RACE inability to sustain a fast pace in product launches can harm its competitive positioning and undermine the Ferrari brand.			Higher R&D	**Worsening** Shorter cars lifecycles
	Poor Formula 1 performances. Scuderia Ferrari is the most successful team in the history of F1. Nonetheless, it has been 11 years since the last World Championship win (constructors' title in 2008). A continued losing streak could end up harming the Ferrari image of technical and sportive excellence.			Damage to brand equity	**Worsening** Changes in F1 regulations increase level of uncertainties
	Supply issues. RACE relies on multiple single-source suppliers. The inability of one of them to follow the stipulated contract could harm the Company's ability to timely execute the plans in terms of production and deliveries. To protect against this eventuality, RACE adopts a highly vertically integrated structure and it is planning to furtherly increase its backwards integration.			Slowdown in production	**Lightening** Increasing backward integration
Financial risk	**Capital intensity.** Capital requirements for R&D purposes and purchase of PPE have been the biggest detractors of RACE cash flows in the past and they will keep representing a relevant outflow for the Company, as innovation will remain a characteristic of the LPCI. A further increase in the CapEx, needed to face continuous technological improvements and fiercer competition, could undermine the ability to generate cash flows in the future.			Higher CapEx and lower margins	**Stable**
	ForEx. RACE presence is global and, as such, a big portion of its revenues (ca. 49% in 2019) is exposed to currency fluctuations (*Annex 19* for sensitivity of RACE revenues and EBIT for USD and GBP fluctuations). Even if ForEx has affected the Company results more than once, we believe that it does not represent a severe risk in the mid-to-long-term, given RACE possibility to adjust prices periodically in case of big currency changes and considering that negative swings in a determined year usually dictate a positive contribution from ForEx in the following periods.			Lower revenues	**Stable** Clearer outlooks for Brexit

		Likelihood	Impact	Type of impact	Outlook
Macroeconomic risk	**Decline in number of HNWI.** HNWI represents the customer base for the LCPI and a deterioration of their wealth could reduce the demand for products, thus affecting RACE sales. RACE currently has a penetration rate 0.05% of HNWI, but the expected increase in shipments could raise it to as much as 0.1% *(management guidance)* A decrease in size of the customer base could harm the exclusivity of the brand or prevent the Company from fully exploiting the undertaken portfolio expansion.			Lower demand	**Stable**
	Slowdown in global economy. Apart from its correlation with the previous risk, a slowdown in global economy would affect the Company because of the outbreak of luxury aversion social dynamics *(Industry trends)*.			Lower demand	**Stable**
	Tightening emission regulations. Rising concerns on climate change can lead to more restrictive environmental regulations. The likelihood of this scenario is high, considering that many governments worldwide have tightened their requirements and updated regulations on the matter. However, the impact of new regulation on RACE will probably be limited, since the Company has always been able to cope with its emissions reduction targets ahead of times and it has granted itself special right and less restrictive limits thanks to the low number of units produced.			Lower margins and higher R&D	**Worsening** Rising climate change concerns and loss of SMV status in the United States
	Changes in trade policies. RACE shipments to countries of the EU account for ca. 25% of the total. For this reason, the Company is highly exposed to changes in trade tariffs which are volatile and heterogeneous from one country to another. The impact of the worsening global outlook from this perspective (for example Brexit and trade war between the US and China), however, limitedly threatens RACE, as the Company would be able to charge its customers the additional cost.			Lower demand and/or margins	**Worsening** Rising trade tensions worldwide
	Coronavirus. Coronavirus is expected to significantly slowdown the growth of Chinese economy (+6.1% in 2019, *IMF*). As opposed to other luxury players, RACE exposure to the Chinese market is limited (8.2% of the shipments in 2019) and it is not expected to increase considerably in the short-term (2020-2022). Consequently, the impact of a pessimistic economic outlook for this region would be limited.			Lower demand from China	**Stable** Diffusion of coronavirus is slowing down
Governance risk	**Concentration of shareholders and conflict of interest.** RACE two largest shareholders (respectively Exor N.V. and Piero Ferrari) hold a combined voting power of more than 49% of the total (33.6% and 15.5% respectively). In addition, the two have entered "a shareholder agreement pursuant to which they have undertaken to consult for the purpose of forming, where possible, a common view on the items on the agenda of shareholders meetings" *(Environmental, Social and Governance* for further details). As a result, they have a decisive influence over the decisions to be taken by the shareholders' assembly and the Company is potentially exposed to conflicts of interest with other companies controlled by Exor and Piero Ferrari.			Operational inefficiencies and lower attractiveness for investors because of higher perceived risk	**Stable**

Environmental, Social and Governance

ESG framework - *Exhibit 36*

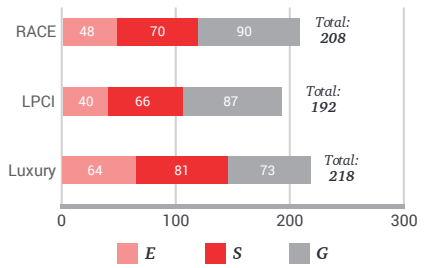
E	S	G
Impact on climate change	Employees	Board structure
Waste	Institutions	Remuneration policy
Natural resources consumption	Communities	Audit & Risk
		Shareholder interests

source: team elaboration

We developed a **framework to evaluate ESG performances** (*Exhibit 36* and *Annex 20*), which takes inspiration from existing ESG assessment methodologies *(ISS "Governance Quality Score methodology", JP Morgan "ESG index", MSCI "ESG rating methodology")*. The index takes into consideration 9 environmental, 10 social and 34 governance parameters. The maximum attainable score is 300, with a maximum of 100 points in each dimension (E, S and G). We compared RACE score with the average value of both the automotive and luxury industries. RACE final score is 208/300 *(Exhibit 37)*.

With this value, the Company is above the average of the automotive industry (192/300), while it lags behind personal goods luxury companies (218/300), especially in its environmental performance. From our evaluations, RACE has a major lack in the environmental dimension (in line with the automotive industry average), while improvements have been made in social and governance practices. To double-check our results, we compared the results obtained with the "Standard Ethics rating" released by the independent agency "Standard Ethics". The rating assigned in October 2018 was E+[3] with a positive outlook (automotive average score: E vs. luxury average score: E+) which means that they expect a "good" level of future ESG practices (the options are: weak, low, good and strong). The similarity between our result and the Standard Ethics rating strengthens the validity of our model.

ESG score - *Exhibit 37*



sources: company data, team estimates

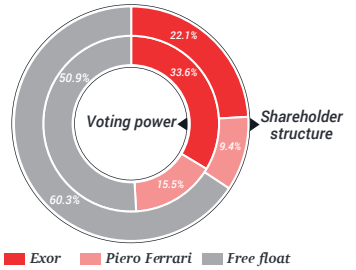
Environmental: 48 of RACE vs. 40 of the LPCI vs. 64 of the LI

RACE benefits from exemptions due to its **SVM status**, so it can more easily comply with international emission standards. However, the Company is striving to reduce average fleet emissions in order not to infringe regulations in the future, especially in the US, where it is about to lose the SVM status. To assess the environmental impact of RACE cars, we have to consider the high emissions of performance cars (average fleet CO_2 emissions in 2018: 280 g/km), but also the small volume produced and the low yearly mileage driven by customers. Indeed, these cars are not considered as a mean of transportation, but rather as a collectible good characterized by scarcity. Hence, the environmental impact of RACE cars is partially reduced. The Company is investing in **hybrid technologies** and this will partly reduce emissions. Only the introduction of **fully electric vehicles** will bring a substantial reduction in emissions, but they are not embedded in the current industrial plan. Concerning production, the Company is improving both in energy efficiency (energy is internally produced thanks to a trigenerator plant and the remaining demand is covered by power purchase agreements of renewable energy) and in waste recycling. However, there is still room for improvement, especially for the latter (44.8% of waste was recycled last year, a value far below both automotive and luxury industry average).

Social: 70 of RACE vs. 66 of the LPCI vs. 81 of the LI

RACE carefully monitors its social impact both on external and internal stakeholders. Some positive elements are: *(i)* the presence of an internal **Code of Conduct** that highlights the Company's commitment to operate ethically, *(ii)* the training and health assistance given to employees and their families, *(iii)* a high safety level, confirmed by meager accident rates and the ISO 45001 certification, *(iv)* a low turnover rate (4%), evidence of an overall high employee satisfaction and *(v)* the absence of gender pay-gap. There is still room for improvement, however, as: *(i)* the gender mix is still unbalanced (87% of workers are men), *(ii)* RACE should apply stricter controls on its suppliers by screening them on social criteria, *(iii)* contributions to charity activities is insufficient, since it is almost null, and *(iv)* the Company does not disclose information about inclusion of people with disability.

RACE governance - *Exhibit 38*



source: company data, team elaboration

Governance: 90 of RACE vs. 87 of the LPCI vs. 73 of the LI

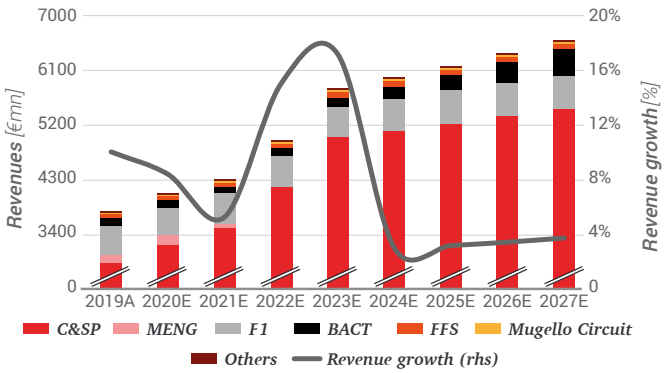
To evaluate governance, we assessed RACE position with respect to 34 parameters. This list of parameters includes the most relevant best practices recommended by the Italian Code (***"Codice di Autodisciplina"***) and **Dutch Governance Code**, and it is further expanded by some inputs from the ISS Governance Quality Score methodology. We considered both Italian and Dutch codes since RACE head office is located in Amsterdam, but the Company is listed on the Italian Stock Exchange. We highlighted some positive elements of RACE governance regarding board independence, diversity and shareholders protection: *(i)* 70% of the board is independent, *(ii)* there is separation between CEO and Chairman, *(iii)* at least 1/3 of board is made of women, *(iv)* there are Governance & Sustainability, Compensation and Audit committees, *(v)* the principal-agent problem is solved through medium-long term performance-linked incentives to CEO, aligning manager and shareholders' interest, and *(vi)* there are mutual pre-emptive rights for Exor and Piero Ferrari in case one of them sells its shares, thus ensuring long-term stability to RACE strategy. Some concerns arise from *(i)* the presence of shares with multiple voting rights, due to the Special Voting Shares program (*Exhibit 38*), *(ii)* John Elkann, chairman of the Board and Governance & Sustainability Committee, is an executive (since April 2019) and not independent, and *(iii)* in each committee (Governance & Sustainability, Compensation and Audit) there is at least one not independent member.

3 Scale: F, E-, E, E+, EE-, EE, EE+, EEE-, EEE.

Annex - Table of Content

1. Appendix to the investment summary

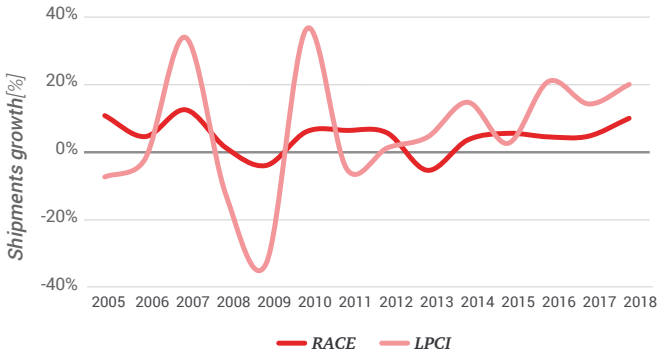
Revenues by division and growth



sources: company data, team estimates

Several factors will impact RACE's revenues streams: *(i)* exploitation of pricing power, *(ii)* strong models launch, *(iii)* fade out of MENG and (iv) reorientation of BACT.

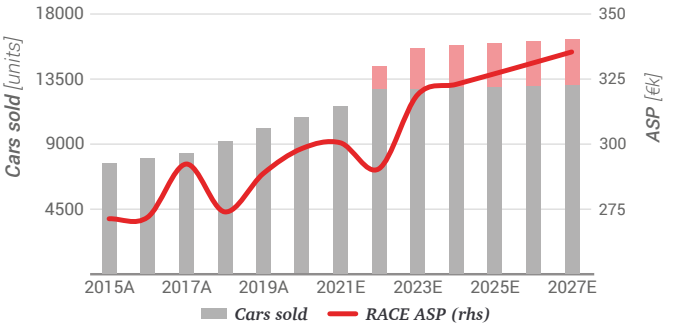
Shipments growth



sources: company data, team elaboration

RACE is less subject to economic cycles because of its unique business model that takes advantage of: *(i)* management of waiting lists, *(ii)* controlled volume growth and *(iii)* global presence.

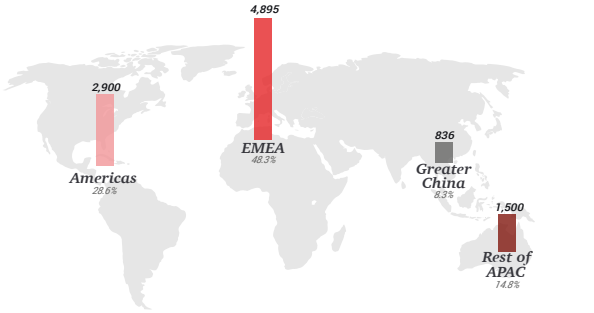
Volume and price/mix effects



sources: company data, team estimates

The two main levers of RACE revenues are volume and price/mix effects.

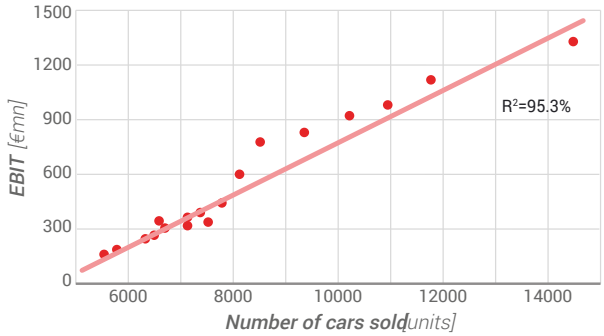
Number of cars by geography in 2019



sources: company data, team elaboration

As RACE has global presence, it can temporally shift deliveries from one region to another in order to prevent local instabilities to affect its sales.

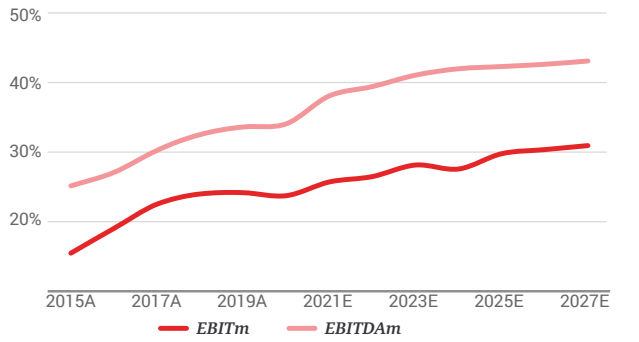
Operating leverage



sources: company data, team elaboration

There is a strong correlation between number of cars sold and EBIT. However, ASP and contribution from Other activities (especially F1 and BACT) can also greatly impact RACE's EBIT.

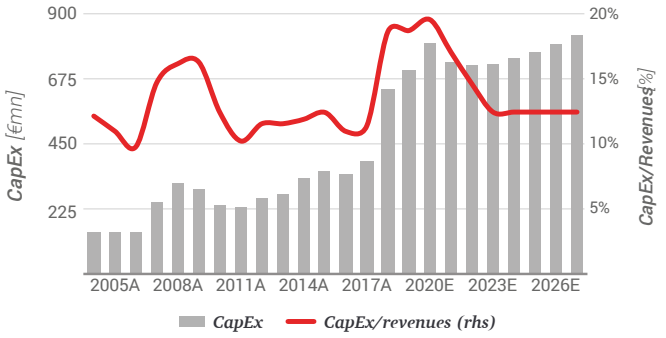
Margins



sources: company data, team estimates

Since the spin-off RACE's margin have been constantly improving and we believe there is still more room for improvements.

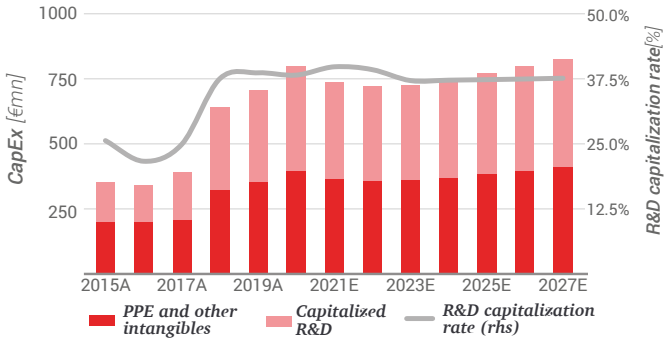
CapEx levels



sources: company data, team estimates

The high level of CapEx/Revenues is temporary and should return to historical values.

CapEx breakdown

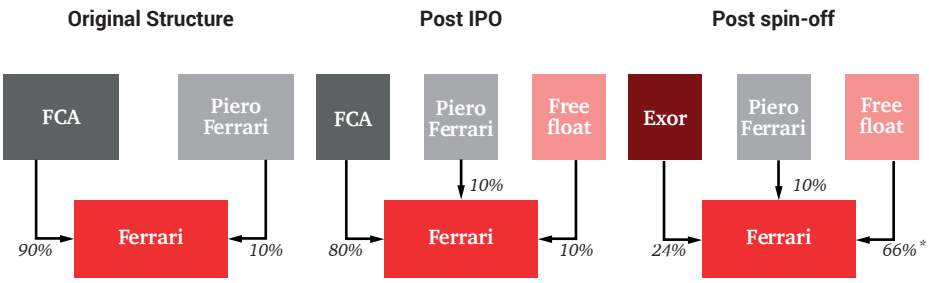


sources: company data, team estimates

RACE can capitalize R&D costs, thus affecting income statement results, but not cash flows.

2. RACE spin-off from the FCA Group

In 2015, Fiat Crisler Automobiles underwent an intra-group restructuring to raise $48bn to reach its ambitious business plan to turn 3 of its brands (Alfa Romeo, Jeep and Maserati) into global brands. RACE spin-off would help FCA to accomplish its objectives and strengthen its balance sheet. Also, post IPO results show that both firms could follow different growth strategies and achieve better results in the mid-term.
Formerly, 90% of RACE shares were held by FCA Group, while the remaining 10% was in the hand of Piero Ferrari. The first phase of FCA restructuring (20th October 2015) culminated in the IPO of 10% of RACE. During the second phase, which consisted of the spin-off of FCA's remaining stake (80%), RACE common shares were divided among Exor SpA and public shareholders.



* includes previous free float and FCA shareholders who received RACE shares

sources: public data, team elaboration

3. Restatement of the divisional P&L

MENG: Revenues have been obtained from 2018 RACE annual report in the section of related-party transactions. Costs have been estimated considering a 5% EBITm, a figure in line with the Auto Parts industry average (4.9%) and coherent with the fact that Maserati and RACE were part of the same group when the supply contract was signed *(management guidance)*.
Mugello Circuit: Revenues and costs have been obtained from Mugello Circuit SpA private company statements *(Thomson Reuters)*.
FFS: Revenues from FFS Inc. have been obtained from 2018 RACE annual report. COGS have been obtained from 2018 RACE annual report. Other costs have been defined by assuming an equal cost structure to that of Ferrari Financial Services GmbH (not consolidated).
F1: Revenues related to F1 activities steam from 3 sources: *(i)* Engines rental to other F1 teams. This voice has been obtained from the 2018 RACE annual report. *(ii)* RACE share of team payments for F1 TV rights and other commercial revenues. This voice has been estimated from the total team payments (available in the annual report of Formula 1 World Championship Limited) combined with a consensus for RACE share among sportive reporters. *(iii)* Sponsorship revenues. They were estimated taking Mercedes-Benz Grand Prix Limited revenues *(British Chambers of Commerce)* and increasing them by 33% as a premium for RACE historicity. We determined this bonus by analysing the difference in sponsorship income among the top 10 European football clubs; of these, 5 can be considered historical (Barcelona, Bayern München, Juventus, Manchester United and Real Madrid) while the other 5 are newcomers (Chelsea, Liverpool, Manchester City, Paris Saint-Germain and Tottenham). Costs related to F1 activities have been assumed equal to the sum of the costs bore by Mercedes-Benz Grand Prix Limited and Mercedes AMG High-Performance Powertrains Limited (Daimler's subsidiary in charge of the development and production of F1 engines) since RACE is involved in both car and engine development and production.
BACT: Revenues for Brand activities were estimated from 2018 RACE annual report by subtracting from the revenues of Sponsorship, commercial and brand activities the revenues from F1 commercial and sponsorship activities, as described above. Costs have been estimated based on interviews with former high-level employees in the Retail and Licensing department of RACE and other industry professionals.
Others: Revenues come from ancillary (for example Paddock passes for F1 races) and other not well-defined activities and have been obtained from 2018 RACE annual report. Costs have been estimated fixing the margins to the Company average for lack of better solutions.
C&SP: Revenues have been obtained from 2018 RACE annual report. Costs have been estimated as the difference between the total costs and the sum of the costs from other divisions. In addition, we performed several sanity checks for CS&P gross margin.

€mn	RACE	C&SP	MENG	F1	BACT	Mugello Circuit	FFS	Others
Revenues	3,420	2,535	218	438	134	18	53	24
% Revenues	*100.0%*	*74.1%*	*6.4%*	*12.8%*	*5.3%*	*0.5%*	*1.5%*	*0.7%*
Cost of sales	-1,626	-1,201	-197	-151	-20	-12	-34	-11
Selling	-168	-110	0	-21	-20	-2	-13	-1
G&A	-160	-118	-10	-20	-6	-1	-2	-1
R&D expensed	-528	-208	0	-320	0	0	0	0
R&D amortized	-115	-115	0	0	0	0	0	0
Result from investments	3	0	0	0	0	0	0	3
EBIT	827	783	11	-74	87	3	3	13
EBIT margin	*24.2%*	*30.9%*	*5.0%*	*-16.9%*	*65.0%*	*16.7%*	*6.2%*	*54.1%*
EBIT contribution	*100.0%*	*94.8%*	*1.3%*	*-9.0%*	*10.6%*	*0.4%*	*0.4%*	*1.6%*
D&A	289	248	21	16	2	0	1	0
EBITDA	1,115	1,031	32	-58	89	3	4	13
EBITDA margin	*32.6%*	*40.7%*	*14.6%*	*-13.2%*	*66.6%*	*19.1%*	*7.7%*	*54.1%*

sources: company data, team estimates

4. Ferrari DNA: product portfolio and racing competitions

By the date of publication of this initiation of coverage, RACE range was composed of: *(i)* 5 Sport cars, *(ii)* 4 GT cars, *(iii)* 2 Special Series and *(iv)* 1 Icona (with 2 versions):

	Sports				
	F8 Tributo	F8 Spider	SF90 Stradale	812 Superfast	812 GTS
					
Launch	Q1 2019	Q3 2019	Q2 2019	Q1 2017	Q3 2019
Start of deliveries	Q4 2019	Q2 2020	Q2 2020	Q3 2017	Q3 2020
Engine	ICE V8	ICE V8	Hybrid V8	ICE V12	ICE V12
Start retailing price (€k)	239	265	433	304	338
Forecast of shipments in 2020	2,750	1,050	450	1,600	468
Estimated gross profit per car (€k)	86	96	165	110	122

sources: company data, dealers interviews and team estimates

	GT			
	GTC4Lusso T	Ferrari Portofino	Roma	GTC4Lusso
				
Launch	Q4 2016	Q3 2017	Q4 2019	Q1 2016
Start of deliveries	Q1 2017	Q2 2018	Q4 2020	Q3 2016
Engine	ICE V8	ICE V8	ICE V8	ICE V12
Start retailing price (€k)	238	194	198	270
Forecast of shipments in 2020	370	1,700	100	190
Estimated gross profit per car (€k)	69	56	57	78

sources: company data, dealers interviews and team estimates

	Special		Icona	
	Ferrari 488 Pista	Ferrari 488 Pista Spider	Ferrari Monza SP1	Ferrari Monza SP2
				
Launch	Q1 2018	Q3 2018	Q3 2018	
Start of deliveries	Q3 2018	Q2 2019	Q3 2019	
Engine	ICE V8	ICE V8	ICE V12	
Start retailing price (€k)	294	324	1,600	
Forecast of shipments in 2020	1,150	767	258	
Estimated gross profit per car (€k)	108	119	750	

sources: company data, dealers interviews and team estimates

Besides the C&SP business, the Ferrari DNA also encompasses the racing competitions in which RACE participates: Formula 1 and One-make championships.

	Formula 1			Formula E			One-make championships
	2020 participant	Team name	World championships	2020 participation	Team name	World championships	
RACE	✓	Scuderia Ferrari Mission Winnow	16	✗	-	-	✓
Aston Martin*	✗	-	-	✗	-	-	✓
Audi	✗	-	-	✓	Audi Sport ABT Schaeffler	1	✓
Bentley	✗	-	-	✗	-	-	✗
Ford	✗	-	-	✗	-	-	✗
Honda**	✓	Aston Martin Red Bull Racing	4	✗	-	-	✗
Lamborghini	✗	-	-	✗	-	-	✓
McLaren	✓	McLaren F1 Team	8	✗	-	-	✓
Mercedes	✓	Mercedes-AMG Petronas	6	✓	Mercedes-Benz EQ	0	✗
Porsche	✗	-	-	✓	Tag Heuer Porsche	0	✓
Rolls-Royce	✗	-	-	✗	-	-	✗

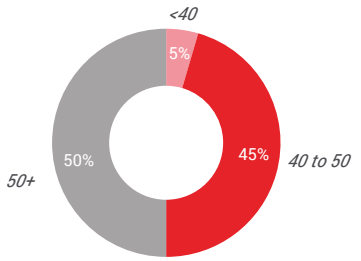
** Aston Martins sponsors the "Aston Martin Red Bull Racing team", but is not directly involved in the R&D of the racing car.*
*** Honda develops the power unit of the "Aston Martin Red Bull Racing team".*

sources: company data, dealers interviews and team estimates

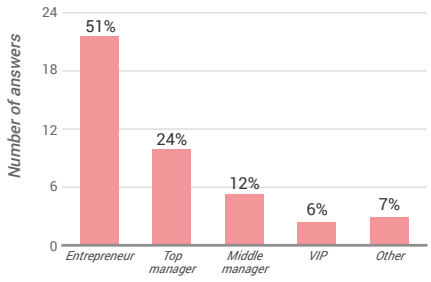
5. Insights from interviews with dealers

In order to better understand customers' profiling and identify ongoing trends, we interviewed 72 official dealers and secondary-market resellers all around the world – from Italy, US, Canada, UK and Australia – obtaining a successful response from 44 of them (61% hit rate). The main questions are summarized below:

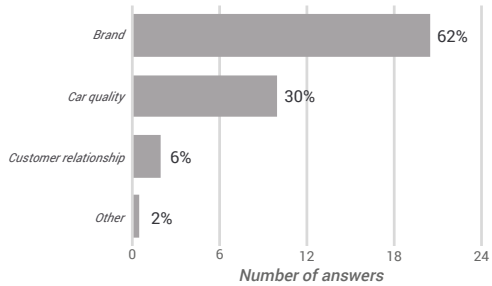
What is the average age of Ferrari customers?

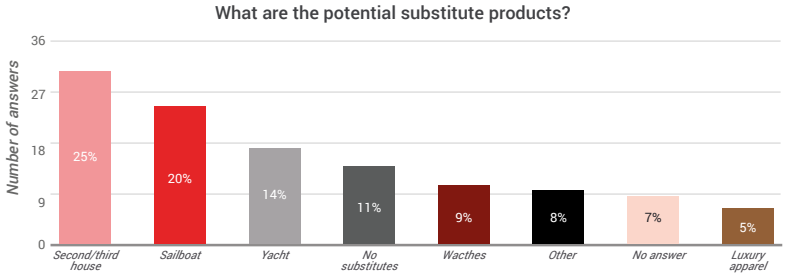


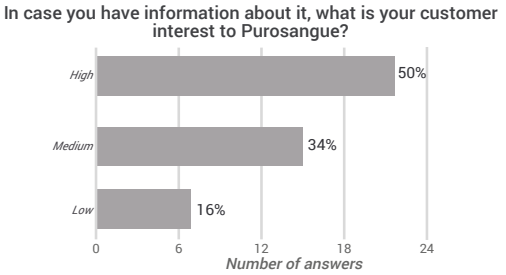
What is their professional background?

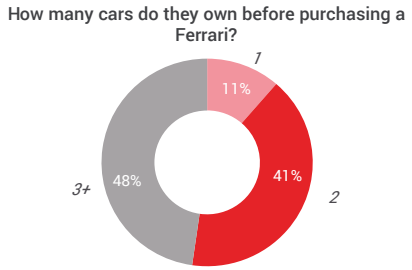


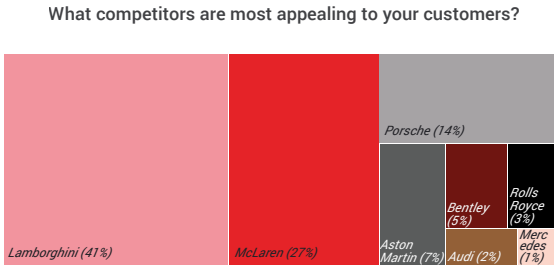
What are the main purchase drivers?

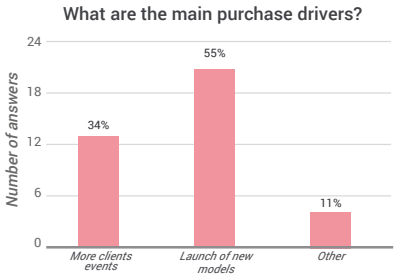












sources: dealer interviews, team elaboration

6. Segmentation of RACE clients

By analyzing data collected within our dealers' survey, we identified 3 main clusters in which most of RACE clients can be grouped. These clusters are represented in the following table:

	The Achiever	The Tifoso	The Ambassador
Incidence	*40%*	*55%*	*5%*
Age	50+	45+	40+
Purchase motivation	• Likes the brand and wants the status of Ferrari owner • Considers it a career achievement award	• Passionate about the racing heritage • Likes the Ferrari owner lifestyle and experiences associated with it	• Likes the adrenaline and the emotions of driving • Enjoys the status of Ferrari Ambassador
Job	Small Business Owner, Freelancer.	Business Owner, High-level professional	VIP, Famous Athlete, Aristocrat
Salary	> $200k/year	> $500k/year	>1mn/year (impossible to determine)
Worth	More than $1mn	More than $5mn	More than $30mn
Car	GT or Sport V8	Starts with GT or Sport V8 but then also Sport V12	Starts with a Sport and finally becomes ultra-loyal, thus gaining access to Iconas
Substitutes threat	Might make sacrifices to buy the first car	Does not have to make sacrifices to buy a Ferrari	Does not have to make sacrifices to buy a Ferrari and can also purchase other substitute luxury products in the same year

sources: dealer interviews, team elaboration

7. Porter value chain

RACE primary activities are divided into 5 categories: inbound logistics, operations, outbound logistics, marketing & sales and after-sales services.
1. Inbound logistics phase comprises material handling, quality inspection and storage. It does not represent a significant proportion of RACE costs and it is not a value differential for the Company.
2. Operations. Within this stage, the Company generates all the value related to the car's quality. The primary activities are: production of components (melting, milling and other industrial activities), painting, car assembly and testing. These are supported by secondary activities: *(i)* procurement, during which the Company has to scout and select the best supplier of raw materials and other parts, *(ii)* human resource management, to ensure the presence of high-skilled engineers, talented designers and trained blue-collars, and *(iii)* product development, which involves the design of new models, parts and components. Operations also comprise the development of production and assembly lines, as well as the setting of supporting information systems. Delivering top-quality, unique and technically advanced products implies high costs. For this reason, the most significant portion of costs is sustained during this phase.
3. Outbound logistics mainly consists in the shipment of cars to dealers or final customer (by road to Europe and by sea to other continents). It does not generate extra value for the customer, and it represents only a small proportion of costs.
4. Marketing & Sales comprise primary activities that contribute to nurture and sustain the strength of the Ferrari brand. In particular, these are: *(i)* F1 participation, which RACE considers its main marketing leverage, *(ii)* the management of waiting lists, which have to be considered as a marketing leverage, given their strategical relevance in creating the exclusivity perception and *(iii)* organization of client events, consisting in new models unveiling events and driving events (competitive and non-competitive). Finally, there are *(iv)* other brand-enhancing activities, like the management of Museo Ferrari and the licensing of theme parks. Marketing and sales supporting activities mainly refer to procurement and human resources, during which RACE scouts, selects, trains and evaluates the dealer. Costs associated with this phase are lower than those linked to Operations, while the contribution to the total cost is the highest throughout the value chain.
5. Service is the category that groups activities regarding *(i)* RACE post-sale services and car maintenance, *(ii)* Ferrari Classiche, which increases the value perceived by customers since it certificates and assists in the maintenance of older cars, and *(iii)* other certification services.

Industry Overview and Competitive Positioning

8. Market size of the LPCI

The market size for 2-door cars with more than 500 horsepower and price above €150k amounted to ca. 49k units in 2018. This number is slightly higher than data available on RACE report (44k units), since we included sales from all over the world, while RACE took into account only the 22 top-countries.
This analysis is run by considering the following models:

- Rolls Royce Wraight and Down
- Bentley Continental GT Coupè/Cabrio
- Aston Martin DBS, DB11 and Vantage
- Mercedes AMG GT and AMG GT Roadster
- Ford GT
- Honda/Acura NSX
- Audi R8
- Lamborghini Aventador and Huracàn
- McLaren 570 S/GT,540C, 720S and 600LT
- Porsche 911 Turbo and Turbo S
- RACE whole range

Brand	2015	2016	2017	2018
Rolls-Royce	888	1322	1508	746
Bentley	3,509	3,029	2,629	1,637
Aston Martin	3,615	3,687	5,098	6,441
Mercedes	4,108	3,954	4,520	5,555
Ferrari	7,664	8,014	8,398	9,251
Lamborghini	3,707	3,579	3,935	4,006
McLaren	1,654	3,286	3,340	4,829
Porsche	12,533	12,244	12,012	13,352
Audi	2,074	3,688	3,179	1,764
Ford	0	0	97	940
Honda	0	319	756	262
Total	**39,752**	**43,122**	**45,472**	**48,783**
YoY	-	*8.5%*	*5.4%*	*7.3%*

sources: companies data, ANDC, JATO Dynamics, team estimates

9. Porter's five forces

Threat of entry	***Economies of scale***	Scale economies are not critical in the industry and do not represent a significant barrier for new entrants, since the production volumes are low. .
	Product differentiation	Existing firms can leverage their strong brand identification, product design, and history. These drivers are the most relevant in the industry and can be extremely hard to replicate for new firms, thus representing a substantial deterrent for new entrants.
	Capital requirements	The industry is capital intensive, as high levels of CapEx are required to acquire and maintain PPE but also to pursue R&D. The physical assets are also not easily re-deployable. Consequently, it is a significant deterrent for new entrants.
	Switching costs	There are not high switching costs for customers since there are no new specific capabilities to acquire to use the product. They do not prevent the entrance of newcomers.
	Distribution channels	Access to distribution channels represents an entry barrier since luxury carmakers usually sell their products through licensed sale points. In this regard, a newcomer might have some difficulties in finding dealers for its products. However, the establishment of directly managed salespoints could lower this entry barrier but impose higher fixed distribution costs.
	Cost disadvantages independent of scale	Cost disadvantages independent of scale increase the entry barriers and are represented by: *(i)* presence of proprietary product technology (extremely relevant in the industry as there is specific know-how that is hard to acquire or copy), *(ii)* favorable access to raw materials and parts (top quality suppliers already have relationship with incumbents and there is little-no space for newcomers), *(iii)* favorable location (it is relevant since some countries have a longer heritage as carmakers - Italy and UK -, thus increasing the intangible value of the product), *(iv)* learning experience curve (which incumbents have already almost saturated in the process of engineering, development and manufacturing luxury cars), and *(v)* lobbying power, which incumbents might exercise on government thus gaining privileged treatment on certain matters.
	Government policy	There are no governmental limitations to a potential entrant.
	Expected retaliation	In the past, new entrants launched their cars in the market, but with minimal numbers and with record-high prices, thus targeting a small niche of potential customers. In this regard, incumbents reacted neither by decreasing price, nor by rising the promotional/marketing expenses. All these elements demonstrate a low likelihood of retaliation.
	Entry deterring price	Incumbent firms in the luxury car industry set prices that are far higher than the entry deterring price, thus increasing the attractiveness of the industry.
Intensity among incumbents	***Concentration and size of competitors***	Concentration is moderate (C_4=70.9% and Herfindahl Index=16.1%, *team estimates*). There is a discrete number of key competitors with similar market shares.
	Industry growth	The number of luxury performance cars sold worldwide has been increasing at a fast pace in the last 15 years (7.1% CAGR 2015-2018 , team estimates) and this trend is expected to continue in the next years (10.6% CAGR 2019-2022, *Technavio*).
	Presence of fixed costs	In the luxury car industry, fixed costs are high. Companies undergo cycles of increased CapEx on regular occurrences, during which EBITDA margins twitch.
	Product differentiation	Product differentiation is the key driver for this industry, as buyers have defined preferences and loyalty to brands. Differentiation is based on car design, performance, brand heritage and personalization - factors that decrease the competition among incumbents.
	Capacity augmented in large increments	Given the niche nature of the industry, capacity augmentations are not achieved in large increments, as economies of scale do not dictate key advantages.
	Diversity of competitors	Players are well diversified in origins, styles and personalities. This makes them diverse, as they target customers with specific tastes and characteristics, thus slightly decreasing the intensity of competition.
	High exit barriers	*(i)* Specialized assets: the assets required to the production of luxury cars are highly specialized and hard to redeploy. On the other hand, flexibility can be achieved through human capital, which is easily re-deployable. *(ii)* Fixed cost of exit: contract contingencies with suppliers could obstacle exit from the market. *(iii)* Strategic interrelationships: interrelationships are very limited for the competitors in the industry, as only a few competitors have a diversified business. Interrelationship can be considered relevant only for players that are part of big automotive groups, where synergies are created among different divisions (shared facilities, the supply of parts, marketing expenditure and others). *(iv)* Emotional barriers: the risk of economically unjustified decisions by the management are limited, since most of these companies are exposed to market dynamics. However, emotional barriers could arise for those companies that have a strong heritage and are still managed by their founders. *(v)* Government and social restrictions: most of the companies are not big automakers and the number of employees is limited. This mitigates the importance of government denials or discouragement of exit. However, this aspect is strongly related to the location of the company, as government approaches vary according to geography.
	Shift in rivalry	Historically, the factors that have driven competition have remained the same. However, with the advent of new technologies (for example hybridization, electrification), competition might shift from traditional elements.
Substitutes products	***Number of substitutes***	Luxury sports cars are not a substitute for other means of transportation, especially considering that these cars are usually the third or fourth vehicle purchased by the household. Instead, higher pressure is posed by other luxury products (holiday homes, sailboats, watches, yachts, jewelry, clothes etc.). Substitution risk strongly depends on the taste and money supply of customers, thus posing some limits in the quantification of this threat's magnitude. However, we consider this threat relevant since luxury goods are purchased "una tantum" by most of the customers, thus putting them in front of a choice among alternatives.
	Relative price	The relative price of substitutes varies a lot depending on the specific product. However, price is not a relevant driver for substitution: differentiation and the status achievable through the purchase of a luxury good represent the central motif behind the purchasing decision.
	Relative quality	Relative quality undoubtedly plays an essential role since luxury products are in the top-range and customers have high expectations. However, it is not just a matter of product features, but again of reaching a social status. Hence, quality is fundamental, but what really matters is brand recognition.
Bargaining power of suppliers	***Concentration of supplier industry***	There are seven most relevant industries of suppliers: *(i)* Generic auto parts (C_4=24.6%, HI=2.6%), *(ii)* Safety equipment (C_4=80.7%, HI=20%), *(iii)* Brake systems (C_4=59.9%, HI=12.1%), *(iv)* Steering & suspensions (C_4=70.0%, HI=22.4%), *(v)* Tyre (C_4 = 57%, HI = 9.8%), *(vi)* Exhaust & Emission (C_4=97.7%, HI=60.3%) and *(vii)* Body & Chassis (C_4=90.6%, HI=51.8%). The indexes show that the industries in which the suppliers operate have heterogeneous levels of concentration, with Exhaust & Emissions, Body & Chassix and Safety Equipments that reach peak levels. Generally, we can affirm that the bargaining power is mainly in the hands of the luxury car makers, as they can pick from large pools of potential suppliers.
	Substitutes of suppliers' products	While raw materials suppliers face a low level of competition, parts suppliers (especially of ICE) are increasingly menaced by more technologically-advanced substitute products (for example electrical engines and autonomous systems).
	Product differentiation	The level of differentiation can vary a lot depending on the supplied product. However, in general terms, the parts that have a higher impact on final product are highly differentiated (for example brakes, suspensions, transmissions).
	Suppliers size	The size of suppliers varies a lot, from small local manufacturers to big multinationals.
	Dependence on the industry	Given the low volumes of luxury cars produced, the weight on suppliers' revenues is low.
	Forward integration	Given *(i)* the high level of capital required to become an automaker, *(ii)* the long time it takes to nurture a strong brand and *(iii)* the specific capabilities in R&D necessary to succeed, the risk of forward integration by suppliers is almost null.
Bargaining power of customers	***Buyers concentration***	We consider as customers of LPCI the final buyers (B2C) because *(i)* most of the cars are sold on order, *(ii)* most of the official dealers are branded and *(iii)* even in a B2B2C scenario the demand is pulled by final customers. Buyer concentration is atomistic.
	Product differentiation	There is a high level of differentiation, mainly determined by the brand and design, which makes each product unique.
	Price sensitivity	The customer base of the industry – represented by HNWI – is not price sensitive. Luxury performance cars are luxury goods, so the status and the emotions related to the purchase are more relevant drivers compared to price.
	Switching costs	Switching cost are almost null, both monetary and psychological ones, since there are no new specific capabilities to be acquired to switch from one car to the other.

source: team elaboration

10. RACE vs. Luxury companies

The main objective of the competitive financial analysis we performed is to determine whether RACE generates financial results which resembles metrics of the LPCI players or personal luxury players. The outcome of this investigation sheds light on which is the predominant nature of the Company from a quantitative point of view and has been used as one of the starting points in the selection of comparable companies in relative valuation.
The composition of two groups mentioned above and the indicators considered in the analysis are reported in the following table. The choice of the representative companies has been carried out as follows: *(i)* LPCI players are the set of competitors identified by RACE in its 2018 annual report in its two main segments (Sport and GT), from which we have ruled out Audi, Ford, Honda/Acura and Mercedes Benz as shipments of LPCI represents a very small portion of their sales, and *(ii)* personal luxury players are the best-in-class in terms of EBITm and EBITDAm among a pool of 20 conglomerates or firms belonging to the apparel, accessories & luxury goods industry. Indeed, we believe that contrasting RACE against top performers is the best way to assess its affinity to personal luxury players.

2018	Size, growth and stability			Margins			Returns		Capex			Liquidity
	Revenues	Revenues 5Y CAGR	Std. dev. of revenues growth 5Y	Gross margin	EBITDAm	EBITm	ROA	ROIC ex. goodwill	Capex/ Revenues	Capex/D&A	DOL	Net Debt/ EBITDA
RACE												
RACE adj.	3,420	7.9%	7.0%	52.6%	32.6%	24.1%	18.3%	39.1%	18.6%	2.21	2.98	0.31
RACE adj. for R&D	3,420	7.9%	7.0%	52.6%	23.3%	18.2%	15.6%	42.2%	9.4%	1.85	2.59	0.43
LPCI												
Aston Martin	1,097	16.1%	21.2%	39.7%	22.5%	13.4%	8.0%	16.3%	28.3%	3.1	9.6	2.3
Bentley*	1,269	-2.1%	14.0%	17.0%	Negative margin	Negative margin	-35.2%	Negative NOPAT	11.2%	1.2	Negative EBIT	Negative EBITDA
Lamborghini*	1,631	22.0%	11.0%	n.a.	17.3%	8.4%	4.5%	n.a.	14.6%	1.6	3.0	n.a.
McLaren	1,420	18.3%	33.4%	28.6%	11.9%	Negative margin	-0.3%	Negative NOPAT	23.1%	1.9	Negative DOL	3.3
Porsche*	25,784	7.5%	9.4%	27.8%	26.6%	16.6%	11.7%	16.7%	12.2%	1.2	1.7	1.0
Rolls Royce*	740	20.7%	24.6%	31.8%	18.5%	15.4%	19.8%	26.7%	7.1%	1.1	4.3	1.8
Median	1,345	17.2%	17.6%	28.6%	18.5%	14.4%	6.2%	16.7%	13.4%	1.4	3.6	2.0
Average	5,324	13.8%	18.9%	29.0%	19.4%	13.4%	1.4%	19.9%	16.1%	1.7	4.6	2.1
Weighted average	-	8.9%	11.5%	26.5%	24.1%	14.7%	9.0%	14.7%	13.2%	1.3	1.9	1.1
Luxury companies												
Burberry	3,156	2.3%	10.6%	68.4%	20.3%	16.1%	19.4%	21.6%	4.1%	1.0	1.7	Net cash
Kering	14,872	6.4%	14.5%	74.5%	33.1%	29.8%	18.7%	25.8%	6.1%	1.1	1.4	0.4
Hermès	5,966	9.7%	4.5%	70.0%	37.9%	34.3%	28.7%	57.1%	5.2%	1.4	1.3	Net cash
LVMH	46,826	10.0%	4.8%	66.6%	26.0%	21.1%	13.7%	25.8%	6.5%	1.3	1.5	0.5
Moncler	1,420	19.6%	4.4%	77.4%	33.1%	29.2%	27.6%	60.4%	6.5%	1.6	1.0	Net cash
Richemont	13,989	6.9%	11.8%	61.8%	19.7%	13.9%	7.2%	9.8%	6.4%	1.1	Negative DOL	0.7
Median	9,978	8.3%	7.7%	69.2%	29.5%	25.1%	19.0%	25.8%	6.2%	1.2	1.4	0.5
Average	14,372	9.2%	8.4%	69.8%	28.4%	24.0%	19.2%	33.4%	5.8%	1.3	1.4	0.6
Weighted average	-	8.8%	7.8%	67.7%	26.9%	22.3%	15.0%	25.8%	6.2%	1.2	1.2	0.5

**LPCI players which are part of big conglomerates.*

sources: Orbis, Thomson Reuters, FactSet, company data, team elaboration

Financial Analysis

11. Financial statements and indicators

Consolidated P&L [€mn]	2015	2016	2017	2018	2019	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E
Revenues	**2,854**	**3,105**	**3,417**	**3,420**	**3,766**	**4,085**	**4,300**	**4,951**	**5,810**	**5,984**	**6,174**	**6,386**	**6,626**
Growth	3.3%	8.8%	10.0%	0.1%	10.1%	8.5%	5.3%	15.1%	17.3%	3.0%	3.2%	3.4%	3.7%
Cost of sales	-1,499	-1,580	-1,651	-1,623	-1,789	-1,838	-1,926	-2,246	-2,579	-2,643	-2,711	-2,782	-2,859
% of Revenues	52.5%	50.9%	48.3%	47.4%	47.5%	45.0%	44.8%	45.4%	44.4%	44.2%	43.9%	43.6%	43.1%
Gross profit	**1,356**	**1,525**	**1,766**	**1,797**	**1,977**	**2,246**	**2,374**	**2,706**	**3,230**	**3,340**	**3,464**	**3,604**	**3,767**
Gross margin	47.5%	49.1%	51.7%	52.6%	52.5%	55.0%	55.2%	54.6%	55.6%	55.8%	56.1%	56.4%	56.9%
SG&A	-339	-295	-329	-327	-360	-391	-412	-474	-556	-573	-591	-611	-634
% of Revenues	11.9%	9.5%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%
R&D expensed	-447	-510	-557	-528	-559	-645	-554	-557	-613	-629	-646	-665	-685
% of Revenues	15.7%	16.4%	16.3%	15.4%	14.8%	15.8%	12.9%	11.2%	10.5%	10.5%	10.5%	10.4%	10.3%
C&SP	n.a.	n.a.	n.a.	-208	-220	-239	-251	-290	-340	-350	-361	-373	-387
F1	n.a.	n.a.	n.a.	-320	-339	-407	-303	-267	-273	-279	-285	-291	-298
R&D amortized	-115	-104	-101	-115	-140	-233	-294	-354	-415	-477	-375	-375	-383
% of Revenues	4.0%	3.4%	2.9%	3.4%	3.7%	5.7%	6.8%	7.2%	7.1%	8.0%	6.1%	5.9%	5.8%
Other expenses, net	-11	-25	-7	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3
% of Revenues	0.4%	0.8%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%
Result from investments	0	3	2	3	3	3	4	4	4	5	5	5	5
% of Revenues	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
EBIT	**444**	**595**	**775**	**827**	**917**	**977**	**1114**	**1322**	**1648**	**1663**	**1853**	**1955**	**2067**
EBIT margin	15.6%	19.2%	22.7%	24.2%	24.4%	23.9%	25.9%	26.7%	28.4%	27.8%	30.0%	30.6%	31.2%
Net financial expenses	-10	-28	-29	-24	-42	-42	-42	-42	-42	-42	-42	-42	-42
Profit before taxes	**434**	**567**	**746**	**803**	**875**	**935**	**1,072**	**1,280**	**1,606**	**1,621**	**1,811**	**1,913**	**2,025**
Income tax expense	-144	-168	-209	-16	-176	-252	-290	-346	-434	-438	-489	-517	-547
Effective tax rate	33.2%	29.5%	28.0%	2.0%	20.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%
Net profit	**290**	**400**	**537**	**787**	**699**	**683**	**783**	**934**	**1,173**	**1,183**	**1,322**	**1,396**	**1,478**
Non-controlling interest	-2	-1	-2	-2	-3	-3	-3	-4	-5	-5	-6	-6	-6
Net profit for shareholders	288	399	535	785	696	680	779	930	1,168	1,178	1,316	1,390	1,472
EBITDA	**719**	**843**	**1,036**	**1,115**	**1,269**	**1,395**	**1,642**	**1,958**	**2,393**	**2,520**	**2,620**	**2,731**	**2,864**
EBITDA margin	25.2%	27.1%	30.3%	32.6%	33.7%	34.2%	38.2%	39.5%	41.2%	42.1%	42.4%	42.8%	43.2%

sources: company data, team estimates

Divisional P&L [€mn]	2015	2016	2017	2018	2019	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E
CS&P													
Total shipments	**7,664**	**8,014**	**8,398**	**9,251**	**10,131**	**10,853**	**11,691**	**14,434**	**15,685**	**15,842**	**16,000**	**16,160**	**16,322**
Revenues	2,080	2,180	2,456	2,535	2,926	3,239	3,514	4,195	5,004	5,118	5,235	5,354	5,477
Growth	*7.0%*	*4.8%*	*12.7%*	*3.2%*	*15.4%*	*10.7%*	*8.5%*	*19.4%*	*19.3%*	*2.3%*	*2.3%*	*2.3%*	*2.3%*
Gross profit	n.a.	n.a.	n.a.	1,334	1,502	1,772	1,906	2,222	2,709	2,772	2,836	2,901	2,968
Gross margin	*n.a.*	*n.a.*	*n.a.*	*53%*	*51%*	*55%*	*54%*	*53%*	*54%*	*54%*	*54%*	*54%*	*54%*
MENG													
Revenues	**177**	**238**	**302**	**218**	**132**	**132**	**66**	**0**	**0**	**0**	**0**	**0**	**0**
Growth	*n.a.*	*34.5%*	*26.9%*	*-27.8%*	*-39.5%*	*0.0%*	*-50.0%*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*
Gross profit	**n.a.**	**n.a.**	**n.a.**	**21**	**13**	**13**	**6**	**0**	**0**	**0**	**0**	**0**	**0**
Gross margin	*n.a.*	*n.a.*	*n.a.*	*10%*	*10%*	*10%*	*10%*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*
F1													
Revenues	**n.a.**	**n.a.**	**n.a.**	**438**	**477**	**487**	**498**	**509**	**520**	**532**	**543**	**555**	**568**
Growth	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*8.9%*	*2.2%*	*2.2%*	*2.2%*	*2.2%*	*2.2%*	*2.2%*	*2.2%*	*2.2%*
Gross profit	**n.a.**	**n.a.**	**n.a.**	**287**	**313**	**320**	**327**	**334**	**341**	**349**	**356**	**364**	**372**
Gross margin	*n.a.*	*n.a.*	*n.a.*	*66%*	*66%*	*66%*	*66%*	*66%*	*66%*	*66%*	*66%*	*66%*	*66%*
BACT													
Revenues	**n.a.**	**n.a.**	**n.a.**	**134**	**127**	**116**	**105**	**116**	**151**	**197**	**256**	**334**	**436**
Growth	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*-5.3%*	*-8.8%*	*-9.6%*	*10.4%*	*30.4%*	*30.4%*	*30.4%*	*30.4%*	*30.4%*
Gross profit	n.a.	n.a.	n.a.	114	108	98	89	98	128	167	218	284	370
Gross margin	*n.a.*	*n.a.*	*n.a.*	*84.8%*	*84.8%*	*84.8%*	*84.8%*	*84.8%*	*84.8%*	*84.8%*	*84.8%*	*84.8%*	*84.8%*
FFS													
Revenues	**n.a.**	**n.a.**	**50**	**53**	**61**	**67**	**73**	**87**	**89**	**91**	**93**	**94**	**96**
Growth	*n.a.*	*n.a.*	*n.a.*	*4.9%*	*15.4%*	*10.7%*	*8.5%*	*19.4%*	*2.0%*	*2.0%*	*2.0%*	*2.0%*	*2.0%*
Gross profit	**n.a.**	**n.a.**	**19.3**	**19**	**22**	**24**	**26**	**31**	**32**	**32**	**33**	**34**	**34**
Gross margin	*n.a.*	*n.a.*	*38.4%*	*35.8%*	*35.8%*	*35.8%*	*35.8%*	*35.8%*	*35.8%*	*35.8%*	*35.8%*	*35.8%*	*35.8%*
Mugello Circuit													
Revenues	**15**	**18**	**19**	**18**	**18**	**19**	**19**	**19**	**19**	**20**	**20**	**21**	**21**
Growth	*21.0%*	*15.6%*	*8.1%*	*-4.4%*	*0.6%*	*0.6%*	*1.2%*	*1.2%*	*2.0%*	*2.0%*	*2.0%*	*2.0%*	*2.0%*
Gross profit	**5**	**7**	**7**	**6**	**6**	**6**	**6**	**7**	**7**	**7**	**7**	**7**	**7**
Gross margin	*31.2%*	*37.7%*	*38.6%*	*34.4%*	*34.4%*	*34.4%*	*34.4%*	*34.4%*	*34.4%*	*34.4%*	*34.4%*	*34.4%*	*34.4%*
Others													
Revenues	**n.a.**	**n.a.**	**n.a.**	**24**	**25**	**25**	**25**	**25**	**26**	**26**	**27**	**28**	**28**
Growth	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*3.9%*	*0.6%*	*1.2%*	*1.2%*	*2.0%*	*2.0%*	*2.0%*	*2.0%*	*2.0%*
Gross profit	**n.a.**	**n.a.**	**n.a.**	**12**	**13**	**13**	**13**	**13**	**14**	**14**	**14**	**14**	**15**
Gross margin	*n.a.*	*n.a.*	*n.a.*	*52.5%*	*52.5%*	*52.5%*	*52.5%*	*52.5%*	*52.5%*	*52.5%*	*52.5%*	*52.5%*	*52.5%*

sources: company data, team estimates

Reclassified balance sheet [€mn]	2015	2016	2017	2018	2019	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E
Net PPE and other capitalized investments	912	992	1,118	1,461	1,875	2,262	2,475	2,566	2,553	2,451	2,456	2,478	2,508
Goodwill and acquired intangibles	809	816	818	821	815	809	803	797	791	785	785	785	785
Goodwill	787	785	785	785	785	785	785	785	785	785	785	785	785
Acquired intangibles	22	31	33	35	29	24	18	12	6	0	0	0	0
Other noncurrent operating assets, net of liabilities	-169	-146	-168	-224	-222	-219	-217	-213	-210	-207	-203	-200	-196
Net working capital	670	374	435	694	434	551	635	652	613	614	616	618	621
% of Revenues	*23.5%*	*12.0%*	*12.7%*	*20.3%*	*11.5%*	*13.5%*	*14.8%*	*13.2%*	*10.5%*	*10.3%*	*10.0%*	*9.7%*	*9.4%*
Operating working capital	*1,120*	*743*	*759*	*827*	*870*	*917*	*945*	*1,001*	*1,008*	*1,016*	*1,024*	*1,034*	*1,044*
% of Revenues	*39.2%*	*23.9%*	*22.2%*	*24.2%*	*23.1%*	*22.4%*	*22.0%*	*20.2%*	*17.3%*	*17.0%*	*16.6%*	*16.2%*	*15.8%*
Trade receivables	158	244	239	211	233	252	266	306	359	370	382	395	410
Receivable from financing activities	1,174	790	733	878	927	962	991	1,059	1,066	1,074	1,082	1,089	1,097
Inventories	295	324	394	391	431	443	464	541	621	637	653	670	689
Trade payables	507	615	608	654	721	741	776	905	1,039	1,065	1,092	1,121	1,152
Other current operating assets, net of liabilities	-450	-370	-324	-133	-436	-366	-310	-349	-395	-402	-408	-415	-422
Invested capital (including goodwill)	**2,222**	**2,037**	**2,203**	**2,751**	**2,901**	**3,403**	**3,696**	**3,802**	**3,747**	**3,643**	**3,653**	**3,682**	**3,719**
Goodwill as % of Invested capital	*35.4%*	*38.6%*	*35.6%*	*28.5%*	*27.1%*	*23.1%*	*21.2%*	*20.7%*	*21.0%*	*21.6%*	*21.5%*	*21.3%*	*21.1%*
Invested capital (excluding goodwill)	**1,435**	**1,252**	**1,418**	**1,966**	**2,116**	**2,617**	**2,911**	**3,017**	**2,962**	**2,858**	**2,868**	**2,897**	**2,934**
Growth	*3.7%*	*-12.8%*	*13.3%*	*38.7%*	*7.6%*	*23.7%*	*11.2%*	*3.6%*	*-1.8%*	*-3.5%*	*0.4%*	*1.0%*	*1.3%*
Debt and debt equivalents, net of cash	2,242	1,707	1,419	1,398	1,456	1,632	1,710	1,714	765	-174	-1,133	-2,108	-3,133
Debt	2,260	1,848	1,806	1,927	2,090	2,122	2,149	2,212	2,219	2,226	2,233	2,240	2,247
Debt equivalents	220	306	282	269	269	269	269	269	269	269	269	269	269
Cash and cash equivalents	322	458	648	794	898	754	703	762	1,718	2,664	3,631	4,612	5,645
Financial assets, net of liabilities	-83	-10	21	5	5	5	5	5	5	5	5	5	5
Equity	-19	330	784	1,354	1,445	1,770	1,986	2,088	2,982	3,817	4,787	5,790	6,852
Invested capital (including goodwill)	**2,222**	**2,037**	**2,203**	**2,751**	**2,901**	**3,403**	**3,696**	**3,802**	**3,747**	**3,643**	**3,653**	**3,682**	**3,719**

sources: company data, team estimates

Cash flow statement [€mn]	2015	2016	2017	2018	2019	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E
Net income	**290**	**400**	**537**	**787**	**699**	**683**	**783**	**934**	**1,173**	**1,183**	**1,322**	**1,396**	**1,478**
D&A	275	248	261	289	352	418	528	636	745	857	767	776	798
Change in NWC	8	-33	-61	-259	260	-117	-84	-18	40	-1	-2	-2	-3
Extraordinary events and other non-cash expenses	134	391	-74	118	-5	0	0	0	0	0	0	0	0
Cash flow from operations	**707**	**1,005**	**663**	**934**	**1,306**	**984**	**1,227**	**1,553**	**1,957**	**2,039**	**2,087**	**2,170**	**2,273**
CapEx	-356	-342	-391	-638	-706	-800	-735	-721	-726	-748	-772	-798	-828
CapEx/Revenues	*12.5%*	*11.0%*	*11.4%*	*18.7%*	*18.7%*	*19.6%*	*17.1%*	*14.6%*	*12.5%*	*12.5%*	*12.5%*	*12.5%*	*12.5%*
CapEx/D&A	1.29	1.38	1.50	2.21	2.01	1.91	1.39	1.13	0.98	0.87	1.01	1.03	1.04
Extraordinary events	39	22	12	1	0	0	0	0	0	0	0	0	0
Cash flow from investing activities	**-317**	**-320**	**-379**	**-637**	**-706**	**-800**	**-735**	**-721**	**-726**	**-748**	**-772**	**-798**	**-828**
Change in Industrial debt	1,670	-8	10	13	101	0	0	0	0	0	0	0	0
Change in debt of Financial Services Activities	80	-404	-52	108	62	32	27	63	7	7	7	7	7
Dividends	-54	-104	-121	-135	-195	-211	-206	-236	-281	-352	-356	-397	-419
Non-controlling interests	-54	-17	-1	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2
Parents of the company	0	-87	-120	-133	-193	-209	-204	-234	-279	-350	-353	-395	-417
Buybacks	0	0	0	-100	-387	-149	-364	-600	0	0	0	0	0
Extraordinary events	-1,984	211	191	98	0	0	0	0	0	0	0	0	0
Cash flow from financing activities	**-342**	**-410**	**-93**	**-151**	**-419**	**-328**	**-543**	**-773**	**-274**	**-345**	**-349**	**-390**	**-412**
Change in cash	**48**	**275**	**190**	**146**	**181**	**-144**	**-51**	**59**	**957**	**945**	**967**	**982**	**1,033**
EBIT	**444**	**595**	**775**	**827**	**917**	**977**	**1,114**	**1,322**	**1,648**	**1,663**	**1,853**	**1,955**	**2,067**
Tax rate	*33.2%*	*29.5%*	*28.0%*	*2.0%*	*20.1%*	*27.0%*	*27.0%*	*27.0%*	*27.0%*	*27.0%*	*27.0%*	*27.0%*	*27.0%*
NOPAT	**297**	**419**	**558**	**810**	**733**	**713**	**814**	**965**	**1,203**	**1,214**	**1,353**	**1,427**	**1,509**
FCFF	**224**	**292**	**367**	**201**	**639**	**215**	**522**	**862**	**1,261**	**1,321**	**1,346**	**1,402**	**1,475**
FCFE	**48**	**275**	**190**	**146**	**186**	**-144**	**-51**	**59**	**957**	**945**	**967**	**982**	**1,033**

sources: company data, team estimates

Main operational metrics and financial ratios	2015	2016	2017	2018	2019	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E
Shipments [units]	7,664	8,014	8,398	9,251	10,131	10,853	11,691	14,434	15,685	15,842	16,000	16,160	16,322
ASP [€k]	271	272	292	274	289	298	301	291	319	323	327	331	336
CS&P growth	***7.0%***	***4.8%***	***12.7%***	***3.2%***	***15.4%***	***10.7%***	***8.5%***	***19.4%***	***19.3%***	***2.3%***	***2.3%***	***2.3%***	***2.3%***
of which Volume effect	*5.6%*	*4.6%*	*4.8%*	*10.2%*	*9.5%*	*7.1%*	*7.7%*	*23.5%*	*8.7%*	*1.0%*	*1.0%*	*1.0%*	*1.0%*
of which Price and Mix effect	*1.4%*	*0.2%*	*7.9%*	*-6.9%*	*5.9%*	*3.6%*	*0.8%*	*-4.1%*	*10.6%*	*1.3%*	*1.3%*	*1.3%*	*1.3%*
ROIC	***13.5%***	***19.7%***	***26.3%***	***32.7%***	***25.9%***	***22.6%***	***22.9%***	***25.7%***	***31.9%***	***32.9%***	***37.1%***	***38.9%***	***40.8%***
ROIC ex. goodwill	***21.1%***	***31.2%***	***41.8%***	***47.9%***	***35.9%***	***30.1%***	***29.4%***	***32.6%***	***40.2%***	***41.7%***	***47.2%***	***49.5%***	***51.7%***
Capital turnover	2.03	2.31	2.56	2.02	1.85	1.73	1.56	1.67	1.94	2.06	2.16	2.22	2.27
EBIT margin	*15.6%*	*19.2%*	*22.7%*	*24.2%*	*24.4%*	*23.9%*	*25.9%*	*26.7%*	*28.4%*	*27.8%*	*30.0%*	*30.6%*	*31.2%*
Tax burden	*66.8%*	*70.5%*	*72.0%*	*98.0%*	*79.9%*	*73.0%*	*73.0%*	*73.0%*	*73.0%*	*73.0%*	*73.0%*	*73.0%*	*73.0%*
ROCE	***53.4%***	***43.3%***	***39.9%***	***42.9%***	***31.2%***	***26.7%***	***28.1%***	***31.6%***	***33.4%***	***27.0%***	***25.0%***	***22.3%***	***20.3%***
ROA	***10.4%***	***15.4%***	***19.4%***	***18.4%***	***18.0%***	***17.8%***	***19.3%***	***21.9%***	***24.4%***	***21.5%***	***21.4%***	***20.2%***	***19.2%***
ROE	***23.5%***	***266.0%***	***97.0%***	***73.8%***	***49.9%***	***42.4%***	***41.6%***	***45.8%***	***46.1%***	***34.7%***	***30.6%***	***26.3%***	***23.3%***
Tax rate	***33.2%***	***29.5%***	***28.0%***	***2.0%***	***20.1%***	***27.0%***	***27.0%***	***27.0%***	***27.0%***	***27.0%***	***27.0%***	***27.0%***	***27.0%***
Tax rate adjusted for Patent Box	***25.2%***	***20.6%***	***19.8%***	***19.6%***	***n.a.***	***n.a.***	***n.a.***	***n.a.***	***n.a.***	***n.a.***	***n.a.***	***n.a.***	***n.a.***
Degree of operating leverage	**4.27**	**3.86**	**3.02**	**65.62**	**1.08**	**0.77**	**2.66**	**1.23**	**1.42**	**0.30**	**3.58**	**1.60**	**1.52**
Net Industrial Debt/EBITDA	**1.11**	**0.78**	**0.46**	**0.31**	**0.27**	**0.34**	**0.32**	**0.24**	**-0.20**	**-0.57**	**-0.91**	**-1.24**	**-1.54**
D/E	**Neg.**	**5.69**	**2.32**	**1.43**	**1.45**	**1.20**	**1.08**	**1.06**	**0.75**	**0.58**	**0.47**	**0.39**	**0.33**
Quick ratio	**0.66**	**1.06**	**1.38**	**1.55**	**1.50**	**1.39**	**1.35**	**1.36**	**1.95**	**2.55**	**3.13**	**3.71**	**4.29**
Payout ratio	***0.0%***	***30.2%***	***30.1%***	***24.9%***	***24.6%***	***30.0%***	***30.0%***	***30.0%***	***30.0%***	***30.0%***	***30.0%***	***30.0%***	***30.0%***
Cash to stockholders to FCFE ratio	***52.7%***	***27.5%***	***39.0%***	***61.7%***	***75.8%***	***166.5%***	***109.8%***	***93.5%***	***22.7%***	***27.1%***	***26.9%***	***28.8%***	***28.9%***

sources: company data, team estimates

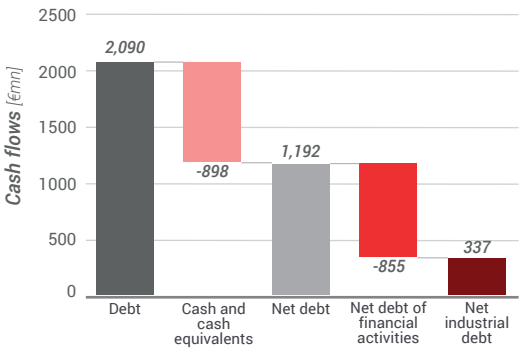
Multiples	2015	2016	2017	2018	2019	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E
Price [€]	44.09	55.30	87.45	86.78	147.90	159.75	159.75	159.75	159.75	159.75	159.75	159.75	159.75
Number of shares outstanding [mn]	189	189	189	189	187	185	185	185	185	185	185	185	185
Number of shares outstanding (diluted) [mn]	189	189	190	189	188	186	186	186	186	186	186	186	186
Market cap [€mn]	8,329	10,447	16,524	16,367	27,623	29,632	29,632	29,632	29,632	29,632	29,632	29,632	29,632
Gross debt [€mn]	2,260	1,848	1,806	1,927	2,090	2,122	2,149	2,212	2,219	2,226	2,233	2,240	2,247
Net debt [€mn]	1,938	1,390	1,158	1,134	1,192	1,368	1,446	1,450	501	-438	-1,398	-2,372	-3,397
EV [€mn]	10,268	11,838	17,682	17,501	28,815	31,001	31,078	31,083	30,133	29,195	28,235	27,260	26,235
EPS [€]	1.52	2.11	2.83	3.41	3.73	3.66	4.20	5.02	6.29	6.35	7.10	7.50	7.93
EPS (diluted) [€]	1.52	2.11	2.82	3.40	3.71	3.65	4.18	4.99	6.27	6.33	7.07	7.47	7.90
DPS [€]	0.46	0.64	0.71	1.03	1.13	1.10	1.26	1.50	1.89	1.91	2.13	2.25	2.38
DPS (diluted) [€]	0.46	0.63	0.70	1.03	1.12	1.09	1.26	1.50	1.88	1.90	2.12	2.24	2.37
EV/IC	4.7x	5.6x	8.3x	7.1x	10.2x	9.8x	8.8x	8.3x	8.0x	7.9x	7.7x	7.4x	7.1x
EV/IC ex. goodwill	7.3x	8.8x	13.2x	10.3x	14.1x	13.1x	11.2x	10.5x	10.1x	10.0x	9.9x	9.5x	9.0x
EV/CE	13.6x	10.0x	10.9x	8.1x	11.3x	11.0x	10.5x	9.9x	7.4x	5.9x	4.8x	4.0x	3.3x
EV/Sales	3.6x	3.8x	5.2x	5.1x	7.7x	7.6x	7.2x	6.3x	5.2x	4.9x	4.6x	4.3x	4.0x
EV/EBITDA	14.3x	14.0x	17.1x	15.7x	22.7x	22.2x	18.9x	15.9x	12.6x	11.6x	10.8x	10.0x	9.2x
EV/EBIT	23.1x	19.9x	22.8x	21.2x	31.4x	31.7x	27.9x	23.5x	18.3x	17.6x	15.2x	13.9x	12.7x
EV/NOPAT	34.6x	28.2x	31.7x	26.3x	39.3x	43.5x	38.2x	32.2x	25.0x	24.0x	20.9x	19.1x	17.4x
P/E	28.9x	26.2x	30.9x	25.5x	39.7x	43.6x	38.0x	31.9x	25.4x	25.1x	22.5x	21.3x	20.1x
P/B	Neg.	32.1x	21.2x	12.1x	19.2x	16.8x	15.0x	14.2x	10.0x	7.8x	6.2x	5.1x	4.3x
Dividend yield [%]	*1.0%*	*1.1%*	*0.8%*	*1.2%*	*0.8%*	*0.7%*	*0.8%*	*0.9%*	*1.2%*	*1.2%*	*1.3%*	*1.4%*	*1.5%*
FCFE yield [%]	*0.6%*	*2.6%*	*1.1%*	*0.9%*	*0.7%*	*-0.5%*	*-0.2%*	*0.2%*	*3.2%*	*3.2%*	*3.3%*	*3.3%*	*3.5%*

**adjusted for Patent Box*

sources: company data, team estimates

12. RACE financial structure

In order to assess RACE financial position, it is important to consider its financial activities and their impact on the Company's balance sheet. RACE engages in client and dealer financing in different ways all over the world: *(i)* directly in the US through the fully-owned subsidiary FFS Inc. (financial results are consolidated in RACE financial statements), *(ii)* through the associate FFS GmbH in some EMEA markets, mainly the UK, Germany and Switzerland (currently RACE investment in FFS GmbH is accounted for using the equity method and it corresponds to the voice "Result from investments" in the P&L) and *(iii)* through partnerships in other countries, mainly rest of Europe, Japan and Australia (they do not impact RACE numbers). In particular for FFS Inc., the subsidiary has been reducing its dependency on intercompany funding (that is, increasing self-financing) by increasing the portion of self-liquidating debt through the securitization of the financial receivables portfolio.
Thus, RACE financial position can be analyzed through different lenses: *(i)* the debt only related to industrial activities, which are mainly related to Ferrari SpA. without its subsidiaries, and *(ii)* the total debt of the Company, that includes the industrial debt and the debt of financial services activities. We believe the industrial debt is the best metric to analyze the liquidity, since it is related to the core of the business and it is free of distortions caused by financing receivables and debt. Out of the €1,192mn net debt of the Company in 2019, €855mn (71.7%) is related to financing activities and the remaining €377mn (28.3%) is related to the industrial activities.



sources: company data, team elaboration

13. Revenues and costs forecast

Pipeline forecast

A sound bottom-up model for revenues forecast must be built on solid foundations. Thus, we carefully analysed the launch dates and lifecycles for all of road cars RACE introduced in the market since the beginning of 2000s, with the exceptions of Fuoriserie and One-offs. Data suggests repetitive patterns in the cadence of presentation, which gives a trustworthy proxy of product's lifespan. We integrated this information with management guidance on: *(i)* future launches, *(ii)* participation of each pillar in total shipments and *(iii)* expected portion of hybrid vehicles to predict RACE range composition until 2022. We shaped RACE future product portfolio assuming that: *(i)* the Company will stop producing V12 GT cars, *(ii)* all future GT launches will be hybrid, *(iii)* GT models equipped with a V12 ICE will possess a V8 hybrid engine, while the V6 hybrid engine will replace the V8 and *(iv)* Sport and Icona cars will keep offering V12 ICE powered engines.

				Quarters since		
		Model	Launch	Previous launch	Coupé launch	Series model launch
Sport	V8	F430	Q3 2004			
		458 Italia	Q3 2009	20		
		488 GTB	Q1 2015	22		
		F8 Tributo	Q1 2019	16		
	V8 Spider	F430 Spider	Q1 2005		2	
		458 Spider	Q3 2011	26	8	
		488 Spider	Q3 2015	16	2	
		F8 Spider	Q3 2019	16	2	
	Range Supercar	SF90 Stradale	Q2 2019			
	Range Supercar Spider	SF90 Stradale Spider*	Q1 2022		11	
	V12	575M Maranello	Q1 2002			
		599 GTB Fiorano	Q1 2006	16		
		F12 Berlinetta	Q1 2012	24		
		812 Superfast	Q1 2017	20		
		New 812 Superfast*	Q1 2022	20		
	V12 Spider	812 GTS	Q3 2019		10	
GT	V8 Convertible	California	Q4 2008			
		California 30	Q1 2012	13		
		California T	Q1 2014	8		
		Portofino	Q3 2017	14		
		New Portofino*	Q1 2021	14		
	V8 Coupé	Roma	Q4 2019			
	V8 2+2	GTC4Lusso T	Q4 2016			
		New GTC4Lusso T*	Q2 2021	18		
	V12 2+2	612 Scaglietti	Q1 2004			
		FF	Q1 2011	28		
		GTC4Lusso	Q1 2016	20		
		New GTC4Lusso*	Q2 2020	17		
	SUV	Purosangue*	Q3 2021			
Special Series	V8	430 Scuderia	Q3 2007			12
		458 Speciale	Q3 2013	24		16
		488 Pista	Q1 2018	18		12
		F8 Speciale*	Q2 2022	17		13
	V8 Spider	Scuderia Spider 16M	Q4 2008		5	15
		458 Speciale Spider	Q4 2014	24	5	13
		488 Pista Spider	Q3 2018	15	2	12
		F8 Speciale Spider*	Q4 2022	17	2	13
	V12	Superamerica	Q1 2005			12
		599 GTO	Q2 2010	21		17
		F12tdf	Q4 2015	22		15
		812 GTO*	Q3 2020	19		15
	V12 Spider	SA Aperta	Q4 2010		2	
Icona	V12	Ferrari Monza SP1/SP2	Q3 2018			
		New Icona*	Q4 2021	13		

** model not yet launched*

sources: company data, public information

		Model	2016				2017				2018				2019				2020				2021				2022			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Sport	*V8*	*488 GTB*																												
		F8 Tributo																												
	V8 Spider	*488 Spider*																												
		F8 Spider																												
	Range Supercar	*SF90 Stradale*																												
	Range Supercar Spider	*SF90 Stradale Spider**																												
	V12	*F12 Berlinetta*																												
		812 Superfast																												
		*New 812 Superfast**																												
	V12 Spider	*812 GTS*																												
GT	*V8 Convertible*	*California T*																												
		Portofino																												
		*New Portofino**																												
	V8 Coupè	*Roma*																												
	V8 2+2	*GTC4Lusso T*																												
		*New GTC4Lusso T**																												
	V12 2+2	*FF*																												
		GTC4Lusso																												
		*New GTC4Lusso**																												
	SUV	*Purosangue**																												
Special Series	*V8*	*488 Pista*																												
		*F8 Speciale**																												
	V8 Spider	*488 Pista Spider*																												
		*F8 Speciale Spider**																												
	V12	*F12tdf*																												
		*812 GTO**																												
	Hypercar	*LaFerrari*																												
		LaFerrari Aperta																												
Icona	*V12*	*Ferrari Monza SP1/SP2*																												
		*New Icona**																												

** model not yet launched*

sources: company data, team estimates

Legend:

- Launch
- Start/Phase out
- Ramp-up/Ramp-down
- Strong deliveries

Revenues

We forecasted C&SP revenues starting from RACE expected product portfolio, multiplying the future quantity sold of each model for its ex. factory price (retail price excluding 22% VAT and 14% dealer margin). *(i)* Volmes: we started from the breakdown of shipments provided by the company in its past annual reports and past trends, integrating them with management guidance. *(ii)* Prices: we started from the list prices and applied a set of appreciations based on pillar and power source. We determined a 15% price premium for hybrid vehicles as a result of an analysis on 19 cars having both internal combustion and hybrid engine (Porsche, Volvo, Mercedes and BMW). All values have been adjusted for the level of personalization of each period. Calculations suggests that revenues coming from Fuoriserie and One-offs, Track Cars, car related services and spare parts account for about 25% of total C&SP turnover.

		Model	Ex. factory price	2016	2017	2018	2019	2020E	2021E	2022E
Sport	*V8*	*488 GTB*	€158.12k	2,728	3,392	2,638	953	-	-	-
		F8 Tributo	€160.13k	-	-	-	-	2,750	3,500	2,800
	V8 Spider	*488 Spider*	€175.54k	1,493	1,453	1,752	634	-	-	-
		F8 Spider	€177.55k	-	-	-	-	1,050	2,332	1,868
	Range Supercar	*SF90 Stradale*	€290.1k	-	-	-	-	450	1,000	1,100
	Range Supercar Spider	*SF90 Stradale Spider**	€321.67k	-	-	-	-	-	-	300
	V12	*F12 Berlinetta*	€183.85k	550	139	-	-	-	-	-
		812 Superfast	€203.6k	-	414	1,513	1,871	1,600	750	-
		*New 812 Superfast**	€213.86k	-	-	-	-	-	-	280
	V12 Spider	*812 GTS*	€226.46k	-	-	-	-	468	1,068	502
	Total Sport			4,771	5,398	5,903	3,458	6,318	8,650	6,850
	Growth			*59.5%*	*64.3%*	*63.8%*	*34.1%*	*58.2%*	*74.0%*	*47.5%***
GT	*V8 Convertible*	*California T*	€127.30k	2,247	1,200	20	-	-	-	-
		Portofino	€129.98k	-	-	1,339	2,467	1,700	450	-
		*New Portofino**	€135.71k	-	-	-	-	-	200	1,600
	V8 Coupè	*Roma*	€132.66k	-	-	-	-	100	1,200	1,800
	V8 2+2	*GTC4Lusso T*	€159.46k		419	850	652	370		
		*New GTC4Lusso T**	€166.49k	-	-	-	-	-	40	610
		FF	€176.88k	172	-	-	-	-	-	-
	V12 2+2	*GTC4Lusso*	€180.90k	222	936	769	535	190	-	-
		*New GTC4Lusso**	€188.88k	-	-	-	-	-	720	1,000
	SUV	*Purosangue**	€234.50k	-	-	-	-	-	-	1,875
	Total GT			2,641	2,555	2,978	3,654	2,360	2,610	6,885
	Growth			*33.0%*	*30.4%*	*32.2%*	*36.1%*	*21.7%*	*22.3%*	*47.7%*
Special Series	*V8*	*488 Pista*	€196.98k	-	-	339	2322	1,150	-	-
		*F8 Speciale**	€229.41k	-	-	-	-	-	-	100
	V8 Spider	*488 Pista Spider*	€217.08k	-	-	-	667	767	-	-
		*F8 Speciale Spider**	€252.50k	-	-	-	-	-	-	-
	V12	*F12tdf*	€261.30k	474	325	-	-	-	-	-
		*812 GTO**	€318.44k	-	-	-	-	-	220	579
	Hypercar	*LaFerrari*	€818.07k	79	-	-	-	-	-	-
		LaFerrari Aperta	€1,246.20k	49	120	31	-	-	-	-
	Total Special Series			602	445	370	2,989	1,917	220	679
	Growth			*7.5%*	*5.3%*	*4.0%*	*29.5%*	*17.7%*	*1.9%*	*4.7%*
Icona	*V12*	*Ferrari Monza SP1/SP2*	€1,072.00k	-	-	-	30	258	211	-
		*New Icona**	€1,179.20k	-	-	-	-	-	-	20
	Total Icona			0	0	0	30	258	211	20
	Growth			*0.0%*	*0.0%*	*0.0%*	*0.3%*	*2.4%*	*1.8%*	*0.1%*
Total				**8,014**	**8,398**	**9,251**	**10,131**	**10,853**	**11,691**	**14,434**
Personalization				*16%*	*17%*	*17%*	*20%*	*18.5%*	*20%*	*22%*

** model not yet launched*
*** includes the Purosangue*

source: team esstimates

Costs and margins

We estimated gross margins separately for each pillar. *(i)* Icona: in the light of the peculiarity of this pillar, we set best-in-class 70% margin of Pagani Automobili *(Thomson Reuters, FactSet, Capital IQ)*. *(ii)* Sport, GT and Special Series: in consistency with quarterly C&SP revenues and volumes disclosed by the Company, we assumed respectively 54%, 43% and 55% margins. These results are in line with information provided by RACE dealers and with the fact that GT cars manufactures such as Rolls-Royce and Bentley enjoy lower gross margins than Sport car producers as Lamborghini and Aston Martin.

Pillar	Engine	Price increase (new vs. old)	Hybrid premium	Gross margin
Sport	*V8*	*3%*	*15%*	*54%*
	V12	*5%*		
GT	*V8 and V12*	*3%*		*43%*
Special Series	*V8*	*3%*		*55%*
	V12	*10%*		
Icona	*V12*	*10%*		*70%*

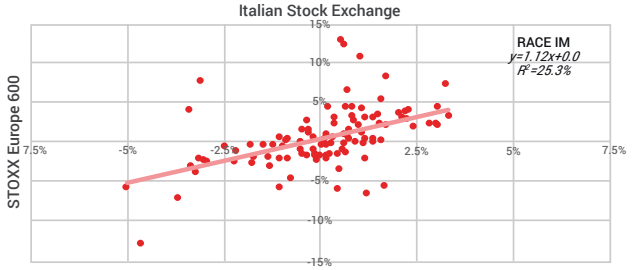
source: team esstimates

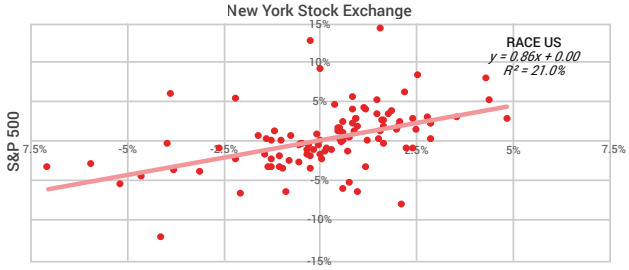
Valuation

14. WACC computation

Beta

We computed the beta as the weighted average of two values: *(i)* the first was obtained by regressing RACE returns on the Italian Stock Exchange against the STOXX Europe 600 (beta of 1.12), while *(ii)* the second was obtained by regressing RACE returns on the New York Stock Exchange against the S&P 500 (beta of 0.86). The weights were assigned keeping into account the volumes traded in each Exchange. We analyzed the returns over the past two years, with weekly intervals to avoid daily biases. The resulting beta is 1.01.





sources: FactSet, team elaboration

This approach has been pursued because: *(i)* as RACE is dual listed, its shares benefit from additional liquidity and are available for international investors, and *(ii)* the Company's sales are exposed to global markets, mainly EMEA and the Americas.
In addition, we run 42 regressions considering *(i)* RACE returns on the Italian Stock Exchange vs. New York Stock Exchange, *(ii)* local, regional and global indexes (Italy: FTSE MIB, Europe: STOXX Europe 50, Global: MSCI ACWI, FTSE All-World and S&P Global 1200) and *(iii)* different lengths of the estimation period (1 year, 2 years and all time). The betas obtained do not change significantly for different stock exchanges or indexes, while shorter time horizons (1 or 2 years) resulted in lower betas. This reveals that RACE risk with respect to the market is reducing over the time. However, to be cautious and conservative, we did not choose the one-year time horizon even if RACE is currently less volatile than the market.

Risk-free rate

The risk-free rate was computed by averaging Germany and United States 10-year government bond yields in order to account for *(i)* the international nature of RACE investors and *(ii)* the geographical exposure of the Company's sales; similar reasoning we applied to the beta computation. These yields were selected as they represent the risk-free rate for the two monetary areas in which RACE is listed. Weights were once again assigned on the basis of the volumes traded in each Exchange. The final risk-free rate is 1.12%.

Stock Exchange	Currency	Government	10-year bond yield	Weight
Italian Stock Exchange	Euro	Germany	*0.11%*	*58%*
New York Stock Exchange	Dollar	United States	*2.51%*	*42%*

sources: FactSet, team elaboration

Equity risk premium and Cost of equity

As for the risk-free rate, we computed the equity risk premium as the weighted average of Germany and United States market risk premiums according to RACE revenues in each region *(Damodaran, "Country Default Spread and Risk Premiums")*. The final equity risk premium is 5.20%. The cost of equity was computed using the CAPM model, adopting the perspective of RACE investors. The final value is 6.38%.

Stock Exchange	Currency	Government	Equity risk premium	Weight
Italian Stock Exchange	Euro	Germany	*5.20%*	*58%*
New York Stock Exchange	Dollar	United States	*5.20%*	*42%*

sources: Damodaran, team elaboration

Cost of debt

For the computation of the cost of debt we took the perspective of RACE. The marginal rate which the Company will borrow in the future must be in line with the yields of the Euro area since RACE *(i)* has historically raised its debt in Euro and *(ii)* all of its cars are produced in Italy, so operating costs are incurred in Euro. Furthermore, raising debt in Euro costs less compared to other currencies as the USD, making it convenient for the company. RACE holds two listed bonds (ISIN: XS1720053229 and XS1380394806), the first one expiring on 16th January 2021 and second one on 16th March 2023. We consider these maturities to be unsuitable to represent long-term cost of debt. Indeed, the cost of debt does not only result from firm's perceived risk, but it also reflects the level of interest rates in the market (*Damodaran, "Damodaran on Valuation"*). Being the interest rate term structure upward sloping in most markets, to avoid underestimating RACE cost of debt with a yield of a 3 years maturity bond, we computed the average value of the spreads between RACE two securities and the respective Triple A rated bonds in the eurozone. The spread obtained was then applied to the 10-year risk free rate, obtaining 0.57% as RACE cost of debt. The choice to consider only Triple A rated bonds in the Euro area stems from the fact that most of RACE debt is denominated in euro.

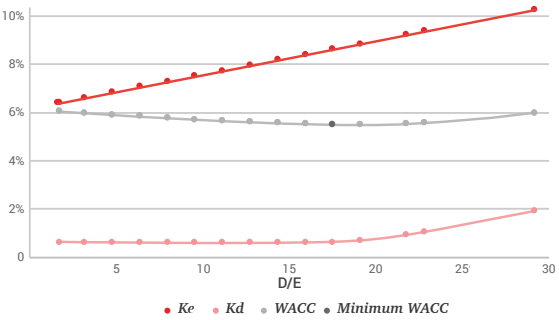
sources: ECB, FactSet, team elaboration

Weights of debt and equity components

The WACC was computed using the market values of equity and debt on 16th January 2020. For the equity, we considered a market capitalization of €28.7bn (number of shares outstanding times the stock price). For the debt, we considered the market value of the two outstanding bonds, the debt of the subsidiary FFS Inc. and leased liabilities. The final value is €1.8bn. Finally, to account for the debt tax shield, we applied a tax rate of 24% which applies to earnings before taxes. Note that the Italian regional tax IRAP and the Patent Box do not generate a tax shield benefit, since they are only related to operational revenues and costs. The WACC computed is 6.03%.

WACC optimization

Considering that RACE is net industrial cash positive excluding the impact of buybacks, we tried to assess the level of leverage that would minimize the cost of capital and thus create most value for shareholders.
The main assumptions of our analysis are: *(i)* RACE spread follows the predictions made by Damodaran according to the interest rate coverage ratio (indeed, we calculated an implicit spread of 0.7% for RACE, while the scholar recommends 0.63%), *(ii)* the marginal tax rate is 24% and *(iii)* the unlevered beta is 0.97.
We estimated an optimal WACC of 5.45%, that corresponds to a Total Debt/Equity of 0.64 and a Net Industrial Debt/EBITDA of 15. However, we do not believe RACE should increase its debt to achieve the optimal level, because *(i)* given that the automotive sector is being subjected to technological disruptions, RACE must have a certain degree of financial flexibility for unexpected investments, *(ii)* RACE will generate big amounts of excess cash from 2024 onwards and *(iii)* the luxury peers of RACE have net cash positions or very low degrees of financial leverage. Nevertheless, a partial re-leverage can accrue value for RACE shareholders.



sources: Damodaran, company data, team elaboration

15. Discounted cash flow model

DCF	2015	2016	2017	2018	2019	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E
EBIT	**444**	**595**	**775**	**827**	**917**	**977**	**1,114**	**1,322**	**1,648**	**1,663**	**1,853**	**1,955**	**2,067**	**2,129**	**2,211**	**2,275**	**2,348**
Growth		*33.9%*	*30.3%*	*6.6%*	*11.0%*	*6.6%*	*14.0%*	*18.6%*	*24.7%*	*0.9%*	*11.4%*	*5.5%*	*5.7%*	*3.0%*	*3.8%*	*2.9%*	*3.2%*
Tax rate	*33.2%*	*29.5%*	*28.0%*	*2.0%*	*20.1%*	*27.0%*	*27.0%*	*27.0%*	*27.0%*	*27.0%*	*27.0%*	*27.0%*	*27.0%*	*27.0%*	*27.0%*	*27.0%*	*27.0%*
NOPAT	**297**	**419**	**558**	**810**	**733**	**713**	**814**	**965**	**1,203**	**1,214**	**1,353**	**1,427**	**1,509**	**1,554**	**1,614**	**1,661**	**1,714**
D&A	275	248	261	289	352	418	528	636	745	857	767	776	798	816	752	774	785
CapEx	-356	-342	-391	-638	-706	-800	-735	-721	-726	-748	-772	-798	-828	-788	-814	-837	-785
Change in NWC	8	-33	-61	-259	260	-117	-84	-18	40	-1	-2	-2	-3	2	-2	0	0
FCFF	**224**	**292**	**367**	**201**	**639**	**215**	**522**	**862**	**1,261**	**1,321**	**1,346**	**1,402**	**1,475**	**1,584**	**1,551**	**1,598**	**1,714**
Terminal value																	**50,701**
WACC						*6.03%*	*6.03%*	*6.03%*	*6.03%*	*6.03%*	*6.03%*	*6.03%*	*6.03%*	*6.03%*	*6.03%*	*6.03%*	*6.03%*
Year*						0.5	1.5	2.5	3.5	4.5	5.5	6.5	7.5	8.5	9.5	10.5	10.5
Discounted value						**208**	**478**	**745**	**1028**	**1015**	**975**	**958**	**951**	**963**	**890**	**864**	**27,417**

* *mid-year convention*

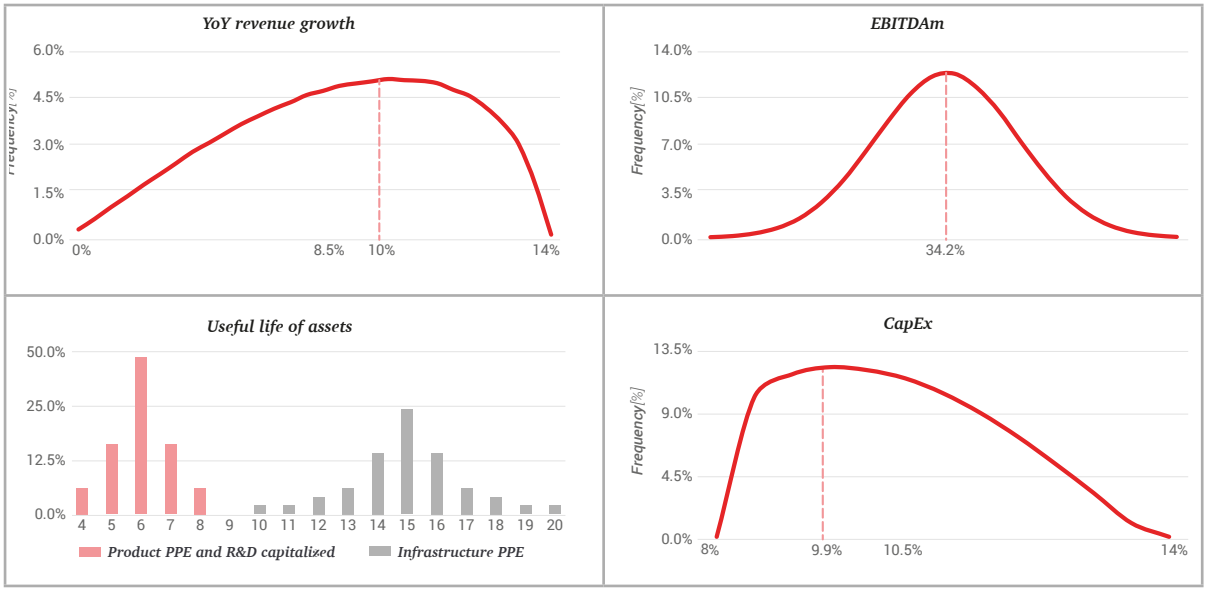
source: team estimates

Enterprise value	**36,493**
Net debt	1,192
Minorities	5
Pension	87
Market Cap	**35,209**
NOSH, basic (k)	185,492
NOSH, dilluted (k)	186,260
Price	189.03

16. Monte Carlo simulation

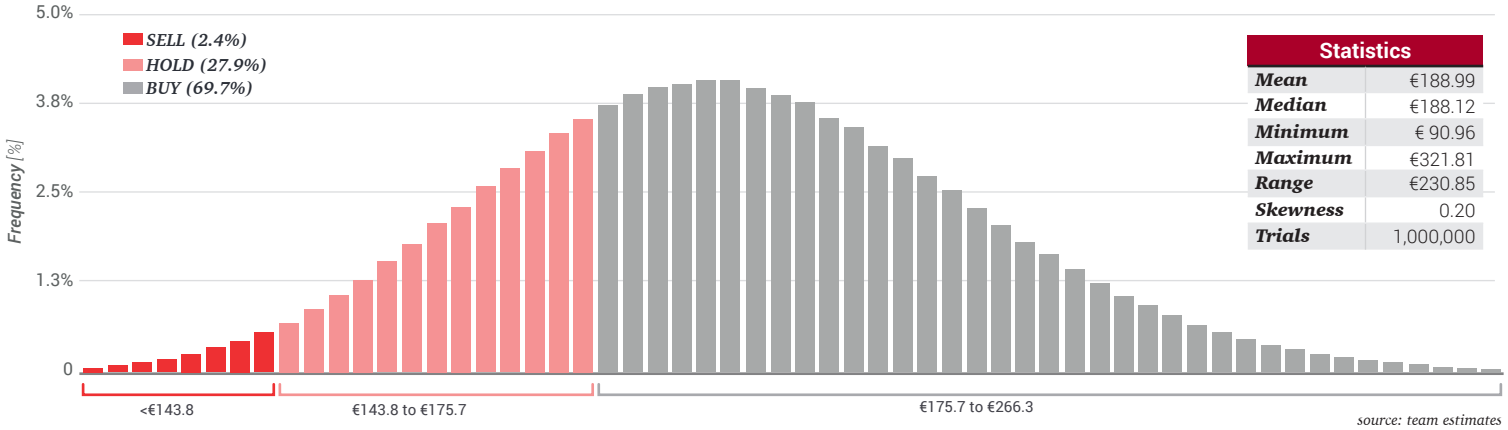
We used the Monte Carlo simulation to test the response of the target price to the following variables:
YoY revenue growth. The usage of waiting lists greatly reduces the impact of external factors over RACE revenues (as demonstrated by the resilience to the 2009 and 2012 economic crisis), thus increasing their predictability. For this reason, we used a Beta distribution to model this variable, setting a lower bound of 0% revenue growth, an expected value equal to our prediction and an upper value that varies accordingly for each year.
EBITDAm. We consider EBITDAm as a variable to take into account a series of factors that could impact the Company's profitability, in particular: pricing power, relevance of BACT over the total sales, costs related to the hybridization of the range and costs to cope with emission regulations or potential fines. We used a normal distribution with an expected value equal to our prediction and a standard deviation of 3.2% (standard deviation of EBITDAm over the years 2015-2019).
Useful life of assets. Given the high levels of CapEx expected in the short-term and the increased relevance of D&A over the Company total costs, we set a symmetric discrete distribution of probability centred around our estimations for the useful life of: infrastructure PPE, product PPE and R&D capitalized.
CapEx/Revenues. The capital intensity of RACE business has a great relevance from a cash flow standpoint. To model this variable, we used a Beta distribution with a lower bound of 8%, an expected value of 10.5% equal to our DCF assumption and a wider upper bound of 14% to test the impact of pessimistic outlooks.

	YoY revenue growth	EBITDAm	Useful life of assets	CapEx/Revenues
Distribution	Beta	Normal	Discrete	Beta
Parameters	For 2021, alpha: 2, beta: 1.5, minimum bond: 0%, expected value: 8.5%, mode: 10.0%; maximum bond: 14.5%.	For 2021, mean: 34.2%, standard deviation: 3.2%.	For infrastructure PPE, minimum bond: 10, mode: 15, maximum bond: 20. For product PPE and R&D capitalized, minimum bond: 4, mode: 6, maximum bond: 8.	For perpetuity, alpha: 1.5, beta: 2, minimum bond: 8%, expected value: 10.5%, mode: 9.9%; maximum bond: 14.0%.



source: team elaboration

The main results of our analysis are: *(i)* 69.7% of the outcomes support a BUY recommendation and only 27.9% and 2.4% of outcomes supporting a HOLD and a SELL respectively and *(ii)* the most sensitive variable is the YoY revenue growth, while CapEx/Revenues and useful life of assets had a minor impact on the target price. The output distribution is slightly right-skewed (skewness of 0.20), since the distributions of revenue growth and CapEx/Revenues are asymmetric to account for unexpected negative scenarios.

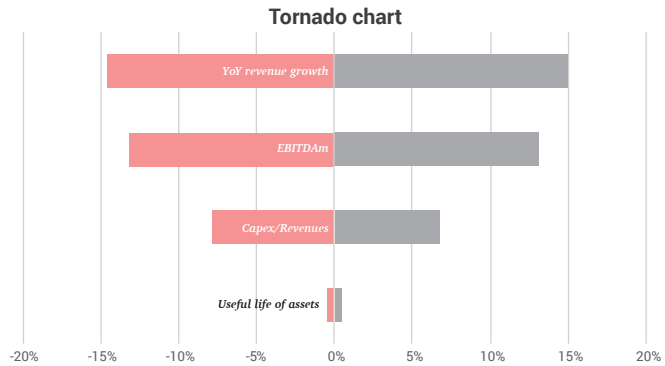


Statistics	
Mean	€188.99
Median	€188.12
Minimum	€ 90.96
Maximum	€321.81
Range	€230.85
Skewness	0.20
Trials	1,000,000

source: team estimates

	5th percentile		95th percentile	
Variable	**Target price**	**% variation**	**Target price**	**% variation**
Revenue growth	€161.44	*-14.6%*	€217.33	*15.0%*
EBITDA marign	€164.05	*-13.2%*	€213.95	*13.2%*
D&A (useful life of of PPE and capitalized R&D)	€188.21	*-0.4%*	€189.80	*0.4%*
Capex/Revenues in perpetuity	€174.21	*-7.8%*	€201.75	*6.7%*

source: team elaboration



source: team elaboration

17. Relative valuation

To select RACE comparable companies, we took into consideration a pool of luxury firms that operate in different industries (consumer cyclicals and consumers non-cyclicals, *Thomson Reuters*). In order to guarantee a sufficient level of comparability, we analyzed the business model and financial performances of each company. In the table below we summarized the main considerations.

Company	Qualitative											Quantitative								
	General			Geographical mix				Value drivers				Profitability			Risk			Cash	Growth	
	Country	Sales 2018 [€mn]	Market cap [€bn]	Americas	EMEA	Greater China	RoAPAC & RoW	Waiting lists*	Brand strength	Brand rating**	Sales std. dev.	EBITm	EBITDAm	ROIC	D/E	Rating	Net Debt/ EBITDA	Avg. 4Y CFFO/ Curr. Liab.	Sales CAGR [15-18]	EBITDA CAGR [15-18]
Ferrari	IT	3,420	30	*27%*	*54%*	*8%*	*11%*	1	3	AAA	6.2%	*24.0%*	*33.1%*	*24.0%*	0.3	A+	0.6	0.48	*6.2%*	*20.9%*
Prada	IT	3,142	8	*14%*	*42%*	*8%*	*37%*	0.5	3	AAA	10.5%	*10.5%*	*24.3%*	*5.6%*	0.3	BB	4.1	0.12	*3.9%*	*-9.5%*
Aston Martin	UK	1,240	3	*28%*	*46%*	*12%*	*14%*	0.5	2	n.a.	16.1%	*6.6%*	*13.9%*	*-5.0%*	1.6	CCC+	0.3	0.43	*29.0%*	*47.5%*
Brunello Cucinelli	IT	553	2	*33%*	*51%*	*10%*	*6%*	0	2	n.a.	3.1%	*12.6%*	*17.4%*	*17.9%*	0.1	A-	0.1	0.30	*5.0%*	*12.2%*
Hugo Boss	DE	2,796	3	*21%*	*65%*	*8%*	*6%*	0	2	AAA-	4.5%	*13.3%*	*17.7%*	*20.4%*	0.0	BBB	-1.5	0.68	*-0.2%*	*-7.6%*
Burberry Group	UK	3,084	11	*23%*	*30%*	*17%*	*30%*	0	2	AAA-	4.8%	*16.6%*	*25.7%*	*20.2%*	-0.6	A	-0.8	0.95	*3.7%*	*0.2%*
Richemont	CH	13,989	37	*16%*	*35%*	*27%*	*22%*	0.5	3	AAA-	11.9%	*14.0%*	*21.3%*	*13.6%*	0.6	A	2.2	0.40	*10.5%*	*5.1%*
Capri Holdings	UK	4,526	5	*64%*	*23%*	*7%*	*6%*	0	2	AAA-	12.1%	*16.8%*	*18.5%*	*13.2%*	0.3	BBB-	0.1	2.10	*3.6%*	*-6.5%*
Christian Dior	FR	46,826	84	*24%*	*36%*	*18%*	*22%*	0.5	3	n.a.	6.9%	*21.3%*	*27.5%*	*18.4%*	-0.1	A-	0.1	0.12	*10.1%*	*15.7%*
Canada Goose	CA	551	3	*66%*	*17%*	*10%*	*8%*	0	1	AAA	11.2%	*24.9%*	*13.7%*	*28.6%*	0.3	A	-1.5	0.24	*42.2%*	*73.2%*
Hermès International	FR	5,966	73	*18%*	*40%*	*10%*	*32%*	0.5	3	AAA	4.0%	*36.0%*	*42.3%*	*23.0%*	-0.6	AAA	0.5	1.07	*7.2%*	*9.9%*
LVMH	FR	46,826	214	*27%*	*37%*	*5%*	*32%*	0.5	3	AAA-	4.3%	*21.3%*	*27.5%*	*12.8%*	0.0	AA-	-1.0	0.44	*9.5%*	*13.5%*
Moncler	IT	1,420	10	*16%*	*41%*	*8%*	*36%*	0	3	AAA	4.0%	*31.2%*	*37.8%*	*28.5%*	-0.5	A+	0.4	0.86	*17.3%*	*16.2%*
Kering	FR	13,665	75	*21%*	*38%*	*8%*	*33%*	0.5	3	AAA+	12.6%	*28.9%*	*35.1%*	*15.5%*	0.1	A+	1.0	0.32	*5.7%*	*28.9%*
Salvatore Ferragamo	IT	1,347	3	*29%*	*25%*	*31%*	*16%*	0	2	n.a.	4.5%	*11.3%*	*16.0%*	*10.7%*	-0.3	A-	-0,8	0.53	*-2.0%*	*-10.7%*
Tiffany & Co	US	3,787	15	*45%*	*13%*	*26%*	*16%*	0	3	AAA-	4.2%	*17.8%*	*22.2%*	*12.2%*	0.1	A-	0,1	1.12	*2.7%*	*0.6%*
Tod's	IT	940	1	*8%*	*56%*	*22%*	*14%*	0	2	n.a.	4.1%	*7.7%*	*13.8%*	*3.7%*	0.1	BB+	0,6	0.52	*-3.2%*	*-19.5%*

** 0=no waiting lists, 0.5=waiting lists for some products, 1=waiting lists for all products*
*** source: Brandfinance*
source: Bloomberg, company data, team estimates

From the table, Aston Martin stands out as an outsider both in terms of profitability, risk, cash generation and growth. Furthemore, from a strategic perspective, *(i)* it does not enjoy of the strong pricing power of RACE as demonstrated by its lower prices and *(ii)* it lacks the historical heritage that RACE has. All these reasons led us to exclude the company from a first screening of comparables.

Company	Business model	Is it relevant for RACE valuation?
Prada SpA (1913 HK)	• Prada is an Italy-based company specialized in leather products, travel accessories, shoes, ready-to-wear apparel and perfumes. • After a decline in sales, the company re-arranged its distribution network by strengthening direct channels to avoid excessive discounting pursued by wholesalers. • Prada sales increased +14.6% YoY in 2018 (-3.0% CAGR 2014-2018) and EBITDAm declined at 17.5% (23.6% average EBITDAm 2014-2018). • Prada ROCE has stabilized at 5.8% in 2018.	• Like RACE, Prada is one of the most recognized and best-loved Italian luxury brands. • Compared to RACE, Prada has a more volatile growth profile, lower resilience in economic downturn and lower ROIC. • Considering its strong Italian heritage and worldwide recognizability, as well as its recent recovery, we included the company in the peer group.
Brunello Cucinelli SpA (BC IM)	• Brunello Cucinelli is an Italy-based luxury company specialized in high-end clothing, cashmere garments and accessories. • BC unique business model is based on its reliance on a single product segment (apparel), its focus on quality rather than fashion and the top-level pricing power. • BC sales increased +8.1% YoY in 2018 (+11.6% CAGR 2014-2018). • BC EBITDAm has been stable around 17.4% (17.6% average EBITDAm 2014-2018). • BC ROCE has stabilized at 16.6% in 2018.	• Similarly to RACE, BC brand storytelling focuses on its high-quality Italian heritage, craftmanship and exclusive distribution. • Both Brunello Cucinelli and RACE have a consistent growth profile, resilience during periods of economic downturn and best-in-class profitability. • Even though it has lower market capitalization and trading volumes, BC shares the same key value drivers of RACE. Hence, we included it in the peer group.
Hugo Boss AG (BOSS GY)	• Hugo Boss is a Germany-based company that designs, manufactures and distributes clothing and accessories. • After many attempts to diversify the product portfolio and elevate the brand to luxury upmarket, this strategic repositioning was abandoned given the disappointing market response. • BOSS sales increased +2.3% YoY in 2018 (+2.1% CAGR 2014-2018). • BOSS EBITDAm has decreased to 17.7% (19.6% average EBITDAm 2014-2018). • BOSS ROCE has stabilized at 16.7% in 2018.	• Unlike RACE, the brand does not have strong pricing power. • Unlike RACE, the brand is not positioned in the high-end segment of luxury but in the so-called "affordable luxury". • The difference in value drivers and the decreasing marginalities and returns led us to exclude BOSS from the peer group
Burberry Group PLC (BRBY LN)	• Burberry is a London-based company with a portfolio of luxury apparel, accessories and beauty products. • Burberry underperformance in past years has been addressed with a successful rebranding strategy that led to sales growth higher than consensus. • BRBY sales slightly decreased -1.2% YoY in 2018 (+4.1% CAGR 2014-2018). • BRBY EBITDAm has been stable around 22.4% (23.8% average EBITDAm 2014-2018). • BRBY ROCE has stabilized at 23.5% in 2018.	• Like RACE, the brand can boast an iconic line of products that never goes out of fashion (Burberry trench coats). • Like RACE, the brand is strongly entrenched with its nation heritage. • We included BRBY in the peer group given the consistent financial profile, positive marginalities and long history that characterize the brand.
Christian Dior SE (CDI FP)	• Christian Dior is a Paris-based company engaged in the production and distribution of a wide portfolio of high-end luxury products. • CDI sales increased +7.2% YoY in 2018 (+7.5% CAGR 2014-2018). • CDI EBITDAm has been improved to 25.5% (24.1% average EBITDAm 2014-2018). • CDI ROCE has stablized at 12.0% in 2018.	• Like RACE, the company has a portfolio of high-end luxury brands. • Unlike RACE, the conglomerate structure could cause brand dilution. • We excluded the Company from the peer group since it is controlled by LVMH.
Compagnie Financiere Richemont SA (CFR SW)	• Richemont is a Switzerland-based company that owns a portfolio of high-end jewelry and watch iconic brands. • Its reliance on the ailing hard luxury segment has slowed revenue growth over the last years. However, CFR is benefitting from the recent operating margin recovery of specialty watchmakers. • CFR sales increased +3.4% YoY in 2018 (+2.4% CAGR 2014-2018). • CFR EBITDAm has decreased to 19.8% (22.8% average EBITDAm 2014-2018). • CFR ROCE has stabilized at 14.2% in 2018.	• Like RACE, Richemont portfolio comprises high-end luxury products with strong heritage and well consolidated brand recognition. • Unlike RACE, Richemont could face dilution due to its conglomerate structure. • CFR is increasingly facing competition by other groups expanding in jewelry/watches segments (i.e., LVMH recent acquisition of Tiffany & Co.). • Considering the relevance of iconic brands in the portfolio and the strong heritage attached, CFR has been included in the peer group.

Company	Business model	Is it relevant for RACE valuation?
Capri Holdings Ltd (CPRI US)	• Capri Holdings Limited is a US-based designer, marketer, distributor and retailer of apparel, shoes and accessories. • From 2017, the former Michael Kors Holdings Limited started a plan of inorganic growth that consisted in the acquisitons of iconic brands Jimmy Choo (2017) and Versace (2018) and culminated with the Group IPO under the name of Capri Holdings Ltd. • CPRI sales increased +5.0% YoY in 2018 (+9.3% CAGR 2014-2018). • CPRI EBITDAm has decreased to 19.8% (22.8% average EBITDAm 2014-2018). • CPRI ROCE has stabilized at 54.2% in 2018.	• Unlike RACE, the portion of high-end luxury products in CPRI portfolio is relatively low, thus failing to guarantee an adequate economic moat in terms of premium prices. • Recent M&A deals have yet to provide synergies, given the fall in profitability and increasing operating costs. • Considering its recent restructuring and the low impact of true luxury brands in the portfolio, we excluded CPRI from the peer group.
Canada Goose Holdings Inc (GOOS US)	• Canada Goose is a Canadian company focused on the production and sale of top-quality winter clothing. • In recent years, GOOS has been growing organically, increasing its wholesale distribution and pushing its direct-to-consumer business (online and through owned-stores). • Sales increased 46.4% YoY (+40.4% CAGR 2014-2018). • EBITDAm increased at 26% (14.1% average EBITDAm 2014-2018). • ROCE has stabilized at 30.8% in 2018.	• Like RACE, Canada Goose offers high quality products. • Like RACE, GOOS has an almost fully vertically integrated supply chain. • Differently from RACE, GOOS is not unanimously recognized as a luxury brand, even if its recent re-positioning efforts have improved profitability and premiums. • GOOS does not match RACE characteristics in terms of marginalities, financial consistency and exclusivity. For this reason, the company was not included in the peer group.
Kering SA (KER FP)	• Kering is France-based group that manages some of the most iconic French and Italian luxury brands. KER operates in the product segments of fashion, leather goods, jewellery and watches. • KER has been coordinating both inorganically and organically, engaging in M&A transaction as well as enhancing the performances of its current portfolio. • Sales increased 26.3% YoY (+8% CAGR 2014-2018). • EBITDAm increased at 32.5% (23.9% average EBITDAm 2014-2018). • ROCE has stabilized at 21.9% in 2018.	• Like RACE, Kering manages brands with a relevant heritage. • Like RACE, the company maintains high level of innovation with focus on customer care. • KER is one of the few players that uses waiting lists for the most exclusive products, thus increasing its pricing power. • Considering the match in terms of value drivers with RACE, we decided to include KER in the peer group.
LVMH Moet Hennessy Louis Vuitton SE (MC FP)	• LVMH is a France-based giant in the luxury industry that manages many different historical brands covering several product lines, from fashion to wine, from jewellery to perfumes. • LVMH is well-diversified and operates in segments with high future expectations. The quality of the management is appreciated by analysts and luxury experts. • Sales increased 9.8% YoY (+11.2% CAGR 2014-2018). • EBITDAm increased at 25.7% (23.6% average EBITDAm 2014-2018). • ROCE has stabilized at 12.7% in 2018.	• Like RACE, LVMH focuses on the high-end of luxury industry, offering high luxury products. • Unlike RACE, LVMH growth strategy relies on M&A. • Like RACE, LVMH is a market leader. The company has put strong focus on developing strong innovation capabilities as well as establishing its leadership position in the transition to to online and social media channels. • Considering its portfolio of iconic brands, its top financial metrics and the high quality of the management, we included the company in the peer group.
Moncler SpA (MONC IM)	• Moncler is an Italy-based company with a portfolio of high-end sportswear, outerwear, knitwear and skiwear. • With its recent industrial plans, the company has focused the expansion of its product categories towards a higher end of the luxury industry, thus obtaining higher profitability. • Sales increased 19% YoY (+19.6% CAGR 2014-2018). • EBITDAm increased at 35.2% (34.3% average EBITDAm 2014-2018). • ROCE has stabilized at 28.6% in 2018.	• Like RACE, Moncler is a powerful Italian brand. • Like RACE, MONC enjoys high margins, which demonstrate the strong pricing power the company can exercise on customers. • Unlike RACE, MONC outsources the production to third parties. • We included the company in the peer given similarities in value drivers as well as aligned financial performances.
Hermès International SCA (RMS FP)	• Hermès is a France-based company that produces and sell top-quality leather goods, saddlery, ready-to-wear, accessories, silk and textiles. • It is admittedly considered the top brand in the apparel luxury industry. This unique positioning was achieved by nurturing a unique aura of exclusiveness, especially through the use of waiting lists. • Sales increased 7.5% YoY (+9.7% CAGR 2014-2018). • EBITDAm increased at 42.8% (38% average EBITDAm 2014-2018). • ROCE has stabilized at 23.3% in 2018.	• Like RACE, RMS has a business model characterized by waiting lists, through which both companies reduce their exposure to demand volatility, leading to more stable and predictable revenues and cash flows. • Like RACE, RMS offers top-high quality product and has best in class brand appeal. • Like RACE, RMS enjoys a superior pricing power which is reflected in the high margins and returns. • Given all the above-mentioned dimensions, we included Hermès in the group.
Salvatore Ferragamo SpA (SFER IM)	• Ferragamo is an Italy-based company active in the creation, production and sale of luxury goods for men and women: footwear, leather goods, apparel, silk goods, jewels, other accessories and fragrances. The product range also includes eyewear and watches manufactured through license agreements with third parties. • Since 2017, after some years of strong growth, the group started facing hard times, as shown by declining revenues. • Sales increased 16% YoY (+20.3% CAGR 2014-2018). • EBITDAm declined at 16% (20.3% average EBITDAm 2014-2018). • ROCE has stabilized at 14.4% in 2018.	• SFER shares with RACE the made in Italy DNA which is an appreciated characteristic in the luxury industry. • Both SFER and RACE have successfully exploited their italianness as a selling point to scale into globally renowned companies. • Unlike RACE, Ferragamo has low margins and a different penetration in the Asian market. • We included Ferragamo in the peer group given the common Italian heritage and strong brand appeal.
Tiffany & Co (TIF US)	• Tiffany is a US-based iconic brand operating in the jewelry industry. • TIF manages more than 300 stores in which it directly sells its mainly high-quality gemstone jewelry and diamonds. • The company has recently been acquired by LVMH, thus boosting market expectations on future results. • Sales increased 4.2% YoY (+0.8% CAGR 2014-2018). • EBITDAm increased at 24.4% (24.1% average EBITDAm 2014-2018. • ROCE has stabilized at 13.4% in 2018.	• Like RACE, TIF boasts a strong brand heritage and is recognized as a status symbol. • Like RACE, TIF offers top-quality products. • Despite the similarities, we excluded TIF from the peer group since it has just been acquired by LVMH and its share price almost doubled in few days.
Tod's SpA (TOD IM)	• Tod's is an Italian luxury company that produces and sells footwear, leather goods, accessories and apparel. • The company is facing a tough time since its performance is worsening from last years. This is mainly caused by the management, which was not able to effectively renovate company's products and keep high the brand appeal. • Sales decreased -3.2% YoY (-0.6% CAGR 2015-2018). • EBITDAm declined at 12.2% (16.9% average EBITDAm 2014-2018). • ROCE has stabilized at 5.2% in 2018.	• Like RACE, Tod's is a famous brand which leverages on its Italian heritage. • Like RACE, TOD puts great focus on product quality. • Like RACE, TOD manufactures its products in full, exploiting the fully integrated supply chain. • Thus, we decided to include Tod's in the peer group.

sources: Bloomberg, company data, team elaboration

Our multiple regression has sound statistical foundation:
R^2. This metric indicates how well a model forecast and it represents the portion of the total variation which is accounted in the regressors. We considered the adj. R2 to take into consideration the use of two regressors. The value of 84.5% shows that sales CAGR and ROCE can explain most of the variation in our multiple, EV/CE.
F-test. This test is equivalent to joint test that all the coefficients, apart from the constant, are zero. The high value of the F-test (25.55, p-value < 0.0%) suggests that we have to reject the hypothesis that both the coefficients of sales CAGR and ROCE are jointly zero.
t-tests. The t-test and the corresponding p-value indicate the statistical significance of our regressors. The results are 1.62 (p-value of 14.7%) for sales CAGR and 2.82 (p-value of 2.6%) for ROCE. Thus, ROCE seems to be more significant for determining EV/CE and for a significance level of 15%, both regressors are significant.
Coefficients. The coefficients for sales CAGR and ROCE are +141.77 and +14.87, respectively. Since both coefficients are positive, higher sales CAGR and ROCE lead to a higher EV/CE, as expected. Also, since the coefficient of sales CAGR is higher than the coefficient of ROCE, 1% of sales CAGR has a higher impact on EV/CE than 1% of ROCE.

	Sales CAGR	ROCE	EV/CE
Prada	*3.9%*	*8.8%*	2.3
Brunello Cucinelli	*4.7%*	*10.7%*	4.1
Burberry Group	*3.7%*	*25.6%*	5.1
Richemont	*4.0%*	*1.5%*	2.5
Kering	*6.0%*	*57.1%*	14.9
LVMH	*4.7%*	*29.3%*	6.7
Moncler	*5.6%*	*45.1%*	9.0
Hermès	*5.4%*	*27.4%*	11.1
Salvatore Ferragamo	*3.4%*	*13.7%*	2.9
Tod's	*2.5%*	*3.7%*	2.2
RACE	***10.1%***	***26.7%***	**14.8**

CE	€2,510mn
EV	€37,203mn
NFP	€1,284mn
Market cap	€35,919mn
# shares	186,260
Price	**€192.84**
Current price	€159.75
Upside	*20.7%*

source: Bloomberg, team elaboration

18. Excess cash usage: dividends/buyback vs. M&A

The analysis is based on an equity-side discounted free cash flow. This granted us the opportunity to evaluate the impact of changes in the equity structure and potential M&As on the Total Value for Eternal Shareholders *("TVES")*, the metric considered to compare the different scenarios.
The skeleton of the model is represented by the FCFF obtained from our DCF, to which we added the changes necessary to obtain the FCFE. We assumed *(i)* interest payments to be constant after 2022, as the only *(ii)* changes in debt structure that we hypothesized are related to FFS Inc., whose interest expenses are considered as a cost of sales. Then, we computed *(iii)* dividends based on a 30% payout ratio. Finally, we decreased the remaining value by the amount devoted to *(iv)* buyback programs, for which we also estimated the number of shares repurchased considering a yearly total shareholder return equal to the cost of equity (6.38%) and a subsequent increase in the share-price of ke – div. yield *(Gordon's formula)*.
Starting from this framework, we considered four different scenarios: we set a *(i)* base case where no buyback is performed after 2022. Then, we calculated the optimal value of *(ii)* buyback in the years 2023-2030 in order to maximize the TVES considering a minimum cash available for RACE operating cycle. This procedure confirmed the soundness of RACE buyback strategy that could increase the value for eternal shareholders by as much as 3.7%. Next, we analysed the possibility of *(iii)* a future acquisition by the Company in 2024, setting a cash outflow for the acquisition equal to the estimated firepower in the year (cash generated in previous years minus operating cash needed) and considering a multiple of 26.1x P/E (the lowest among potential targets) to which we added a control premium of 35% in line with recent transactions. We calculated the FCF generated assuming that the company is mature and has a low level of indebtedness, implying that FCF ≈ Net Income.
The result is aligned to the management guidance about the impossibility to find value accretive targets for acquisitions. Indeed, the model highlights a decrease of 8.2% in the TVES because of significantly lower EPS if compared to the buyback case.
Finally, we remind the reader that the purpose of this analysis is to assess the different possibilities for using excess cash. Even a debt-financed acquisition would not change the previous conclusion (buyback is preferable over M&A), as an increase in debt could likewise be used for further buybacks.

Base Case	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	TV
FCFF	**214.5**	**522.4**	**862.4**	**1,261.5**	**1,321.3**	**1,346.0**	**1,402.1**	**1,475.2**	**1,583.8**	**1,551.4**	**1,598.5**	-
Interest payment, net of taxes	-30.7	-30.7	-30.7	-30.7	-30.7	-30.7	-30.7	-30.7	-30.7	-30.7	-30.7	-
Change in debt	32.4	26.8	62.8	6.9	7.0	7.0	7.1	7.1	12.5	11.6	10.8	-
Dividends	-210.8	-206.0	-235.9	-281.1	-352.3	-355.5	-397.0	-419.2	-443.5	-457.2	-475.0	-
Buybacks	-149.3	-363.5	-600.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
FCFE	**-143.9**	**-51.0**	**58.5**	**956.6**	**945.4**	**966.9**	**981.6**	**1,032.5**	**1,122.1**	**1,075.2**	**1,103.5**	**-**
Shares repurchased	934,498	2,153,272	3,363,895	-	-	-	-	-	-	-	-	-
Shares outstanding [k]	186,368	184,214	180,850	180,850	180,850	180,850	180,850	180,850	180,850	180,850	180,850	-
Discounted FCFE/Share	-0.7	-0.3	0.3	4.3	4.0	3.8	3.6	3.6	3.7	3.3	3.2	94.0
Discounted Dividends/Share	1.1	1.0	1.1	1.2	1.5	1.4	1.5	1.5	1.4	1.4	1.4	38.0
Value for Shareholders	**0.3**	**0.8**	**1.4**	**5.5**	**5.4**	**5.2**	**5.1**	**5.0**	**5.1**	**4.7**	**4.6**	**132.0**
TVES	**€175.09**											

Buyback	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	TV
FCFF	**214.5**	**522.4**	**862.4**	**1261.5**	**1321.3**	**1346.0**	**1402.1**	**1475.2**	**1583.8**	**1551.4**	**1598.5**	-
Interest payment, net of taxes	-30.7	-30.7	-30.7	-30.7	-30.7	-30.7	-30.7	-30.7	-30.7	-30.7	-30.7	-
Change in debt	32.4	26.8	62.8	6.9	7.0	7.0	7.1	7.1	12.5	11.6	10.8	-
Dividends	-210.8	-206.0	-235.9	-281.1	-352.3	-355.5	-397.0	-419.2	-443.5	-457.2	-475.0	-
Buybacks	-149.3	-363.5	-600.2	-1427.8	-936.7	-957.3	-971.0	-1020.6	-1110.6	-1064.2	-1093.2	-
FCFE	**-143.9**	**-51.0**	**58.5**	**-471.2**	**8.7**	**9.5**	**10.6**	**12.0**	**11.5**	**11.0**	**10.3**	**-**
Shares repurchased	934,498	2,153,272	3,363,895	7,580,297	4,719,166	4,590,154	4,432,607	4,444,295	4,619,293	4,234,099	4,164,871	-
Shares outstanding [k]	186,368	184,214	180,850	173,270	168,551	163,961	159,528	155,084	150,465	146,230	142,066	-
Discounted FCFE/Share	-0.7	-0.3	0.3	-2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	119.6
Discounted Dividends/Share	1.1	1.0	1.1	1.3	1.6	1.5	1.7	1.7	1.7	1.7	1.7	48.4
Value for Shareholders	**0.3**	**0.8**	**1.4**	**-0.9**	**1.6**	**1.6**	**1.7**	**1.7**	**1.8**	**1.8**	**1.8**	**168.0**
TVES	**€181.57**											

Acquisition	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	TV
FCFF	**214.5**	**522.4**	**862.4**	**1261.5**	**-1278.7**	**1419.8**	**1479.0**	**1556.1**	**1670.6**	**1636.4**	**1686.1**	-
Interest payment, net of taxes	-30.7	-30.7	-30.7	-30.7	-30.7	-30.7	-30.7	-30.7	-30.7	-30.7	-30.7	-
Change in debt	32.4	26.8	62.8	6.9	7.0	7.0	7.1	7.1	12.5	11.6	10.8	-
Dividends	-210.8	-206.0	-235.9	-281.1	-352.3	-355.5	-397.0	-419.2	-443.5	-457.2	-475.0	-
Buybacks	-149.3	-363.5	-600.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
FCFE	**-143.9**	**-51.0**	**58.5**	**956.6**	**-1654.6**	**1040.7**	**1058.4**	**1113.4**	**1208.9**	**1160.2**	**1191.2**	**-**
Shares repurchased	934,498	2,153,272	3,362,710	0	0	0	0	0	0	0	0	-
Shares outstanding [k]	186,368	184,214	180,852	180,852	180,852	180,852	180,852	180,852	180,852	180,852	180,852	-
Discounted FCFE/Share	-0.7	-0.3	0.3	4.3	-6.9	4.1	3.9	3.9	4.0	3.6	3.4	96.6
Discounted Dividends/Share	1.1	1.0	1.1	1.2	1.5	1.4	1.5	1.5	1.4	1.4	1.4	36.3
Value for Shareholders	**0.3**	**0.8**	**1.4**	**5.5**	**-5.5**	**5.5**	**5.4**	**5.3**	**5.4**	**5.0**	**4.8**	**132.9**
TVES	**€166.73**											

source: team estimates

Investment Risks

19. ForEx focus

As RACE operates in several countries worldwide, a significant portion of its revenues are denominated in currencies different from EUR. Since most of its costs are incurred in EUR, the Company cannot enjoy of a high degree of natural hedging. Exposure is primarily transactional and ForEx volatility has a strong impact on financials. Over the past years, approximately half of RACE turnover has been exposed to foreign currency exchange risk, with most of the burden being in USD and GBP. These two currencies also cause translational risk, since most of RACE main subsidiaries operates in the US and UK. USD has historically been accountable for over half of the Group's turnover in foreign currency, but the presence of dollar denominated debt slightly mitigates the risk. However, the absence of strong natural hedges has brought RACE to enter into derivative financial instruments to hedge from 50% to 90% of exposures. This decision has been taken after abandoning the commercial strategy of fixing all prices in EUR, as it would have penalized some clients and harmed RACE reputation.
Given the impact that currency fluctuations had on revenues (+1.6% in 2019) and EBIT (+5.4% in 2019) over the past few years, we decided to perform a sensitivity analysis focusing on USD and GBP exposures in 2020. The scenarios considered are three: *(i)* null hedging, *(ii)* 50% hedging and *(iii)* 90% hedging. For each scenario, we tested the effects on revenues and EBIT of ±2%, ±4%, ±6% and ±8 variations on 2019 average exchange rate. Operating costs are assumed to be entirely incurred in EUR. The results below show that RACE choice to subscribe forward contracts strongly reduces earnings and cash flows volatility.

Revenues

Null hedging

EUR/GPB % \ EUR/USD %	-8%	-6%	-4%	-2%	0%	2%	4%	6%	8%
-8%	2.9%	2.2%	1.6%	1.0%	0.4%	-0.1%	-0.6%	-1.2%	-1.6%
-6%	2.7%	2.1%	1.5%	0.9%	0.3%	-0.2%	-0.8%	-1.3%	-1.8%
-4%	2.6%	2.0%	1.4%	0.8%	0.2%	-0.3%	-0.9%	-1.4%	-1.9%
-2%	2.5%	1.9%	1.3%	0.7%	0.1%	-0.4%	-1.0%	-1.5%	-2.0%
0%	2.4%	1.8%	1.2%	0.6%	0.0%	-0.5%	-1.1%	-1.6%	-2.1%
2%	2.3%	1.7%	1.1%	0.5%	-0.1%	-0.6%	-1.2%	-1.7%	-2.2%
4%	2.2%	1.6%	1.0%	0.4%	-0.2%	-0.7%	-1.3%	-1.8%	-2.3%
6%	2.2%	1.5%	0.9%	0.3%	-0.3%	-0.8%	-1.4%	-1.9%	-2.3%
8%	2.1%	1.4%	0.8%	0.2%	-0.4%	-0.9%	-1.4%	-1.9%	-2.4%

Cost of hedging: 0.0%

50% hedging

EUR/GPB % \ EUR/USD %	-8%	-6%	-4%	-2%	0%	2%	4%	6%	8%
-8%	1.4%	1.1%	0.8%	0.5%	0.2%	-0.1%	-0.3%	-0.6%	-0.8%
-6%	1.4%	1.0%	0.7%	0.4%	0.2%	-0.1%	-0.4%	-0.6%	-0.9%
-4%	1.3%	1.0%	0.7%	0.4%	0.1%	-0.2%	-0.4%	-0.7%	-0.9%
-2%	1.3%	0.9%	0.6%	0.3%	0.1%	-0.2%	-0.5%	-0.7%	-1.0%
0%	1.2%	0.9%	0.6%	0.3%	0.0%	-0.3%	-0.5%	-0.8%	-1.0%
2%	1.2%	0.8%	0.5%	0.2%	0.0%	-0.3%	-0.6%	-0.8%	-1.1%
4%	1.1%	0.8%	0.5%	0.2%	-0.1%	-0.4%	-0.6%	-0.9%	-1.1%
6%	1.1%	0.8%	0.4%	0.1%	-0.1%	-0.4%	-0.7%	-0.9%	-1.2%
8%	1.0%	0.7%	0.4%	0.1%	-0.2%	-0.5%	-0.7%	-1.0%	-1.2%

Cost of hedging: 0.3%

90% hedging

EUR/GPB % \ EUR/USD %	-8%	-6%	-4%	-2%	0%	2%	4%	6%	8%
-8%	0.3%	0.2%	0.2%	0.1%	0.0%	0.0%	-0.1%	-0.1%	-0.2%
-6%	0.3%	0.2%	0.1%	0.1%	0.0%	0.0%	-0.1%	-0.1%	-0.2%
-4%	0.3%	0.2%	0.1%	0.1%	0.0%	0.0%	-0.1%	-0.1%	-0.2%
-2%	0.3%	0.2%	0.1%	0.1%	0.0%	0.0%	-0.1%	-0.1%	-0.2%
0%	0.2%	0.2%	0.1%	0.1%	0.0%	-0.1%	-0.1%	-0.2%	-0.2%
2%	0.2%	0.2%	0.1%	0.0%	0.0%	-0.1%	-0.1%	-0.2%	-0.2%
4%	0.2%	0.2%	0.1%	0.0%	0.0%	-0.1%	-0.1%	-0.2%	-0.2%
6%	0.2%	0.2%	0.1%	0.0%	0.0%	-0.1%	-0.1%	-0.2%	-0.2%
8%	0.2%	0.1%	0.1%	0.0%	0.0%	-0.1%	-0.1%	-0.2%	-0.2%

Cost of hedging: 0.6%

EBIT

Null hedging

EUR/GPB % \ EUR/USD %	-8%	-6%	-4%	-2%	0%	2%	4%	6%	8%
-8%	11.9%	9.2%	6.6%	4.2%	1.8%	-0.5%	-2.7%	-4.8%	-6.9%
-6%	11.5%	8.8%	6.2%	3.7%	1.3%	-1.0%	-3.2%	-5.3%	-7.3%
-4%	11.0%	8.3%	5.7%	3.2%	0.9%	-1.4%	-3.6%	-5.8%	-7.8%
-2%	10.6%	7.9%	5.3%	2.8%	0.4%	-1.9%	-4.1%	-6.2%	-8.2%
0%	10.2%	7.5%	4.9%	2.4%	0.0%	-2.3%	-4.5%	-6.6%	-8.6%
2%	9.8%	7.1%	4.5%	2.0%	-0.4%	-2.7%	-4.9%	-7.0%	-9.1%
4%	9.4%	6.7%	4.1%	1.6%	-0.8%	-3.1%	-5.3%	-7.4%	-9.4%
6%	9.0%	6.3%	3.7%	1.2%	-1.2%	-3.4%	-5.7%	-7.8%	-9.8%
8%	8.6%	5.9%	3.3%	0.9%	-1.5%	-3.8%	-6.0%	-8.1%	-10.2%

Cost of hedging: 0.0%

50% hedging

EUR/GPB % \ EUR/USD %	-8%	-6%	-4%	-2%	0%	2%	4%	6%	8%
-8%	6.0%	4.6%	3.3%	2.1%	0.9%	-0.3%	-1.4%	-2.4%	-3.4%
-6%	5.7%	4.4%	3.1%	1.8%	0.7%	-0.5%	-1.6%	-2.7%	-3.7%
-4%	5.5%	4.2%	2.9%	1.6%	0.4%	-0.7%	-1.8%	-2.9%	-3.9%
-2%	5.3%	3.9%	2.6%	1.4%	0.2%	-0.9%	-2.0%	-3.1%	-4.1%
0%	5.1%	3.7%	2.4%	1.2%	0.0%	-1.1%	-2.2%	-3.3%	-4.3%
2%	4.9%	3.5%	2.2%	1.0%	-0.2%	-1.3%	-2.4%	-3.5%	-4.5%
4%	4.7%	3.3%	2.0%	0.8%	-0.4%	-1.5%	-2.6%	-3.7%	-4.7%
6%	4.5%	3.1%	1.9%	0.6%	-0.6%	-1.7%	-2.8%	-3.9%	-4.9%
8%	4.3%	3.0%	1.7%	0.4%	-0.8%	-1.9%	-3.0%	-4.1%	-5.1%

Cost of hedging: 1.3%

90% hedging

EUR/GPB % \ EUR/USD %	-8%	-6%	-4%	-2%	0%	2%	4%	6%	8%
-8%	1.2%	0.9%	0.7%	0.4%	0.2%	-0.1%	-0.3%	-0.5%	-0.7%
-6%	1.1%	0.9%	0.6%	0.4%	0.1%	-0.1%	-0.3%	-0.5%	-0.7%
-4%	1.1%	0.8%	0.6%	0.3%	0.1%	-0.1%	-0.4%	-0.6%	-0.8%
-2%	1.1%	0.8%	0.5%	0.3%	0.0%	-0.2%	-0.4%	-0.6%	-0.8%
0%	1.0%	0.7%	0.5%	0.2%	0.0%	-0.2%	-0.4%	-0.7%	-0.9%
2%	1.0%	0.7%	0.4%	0.2%	0.0%	-0.3%	-0.5%	-0.7%	-0.9%
4%	0.9%	0.7%	0.4%	0.2%	-0.1%	-0.3%	-0.5%	-0.7%	-0.9%
6%	0.9%	0.6%	0.4%	0.1%	-0.1%	-0.3%	-0.6%	-0.8%	-1.0%
8%	0.9%	0.6%	0.3%	0.1%	-0.2%	-0.4%	-0.6%	-0.8%	-1.0%

Cost of hedging: 2.4%

sources: FactSet, team elaboration

Corporate Governance

20. ESG framework and methodology

We developed a framework to assess ESG performances by taking inspiration from some already existing ESG assessment methods (ISS "Governance Quality Score methodology", JP Morgan "ESG index", MSCI "ESG rating methodology"). The maximum attainable score is 300: a maximum of 100 point for each dimension (E, S and G). In order to evaluate *(i)* Environmental, *(ii)* Social and *(iii)* Governance practices of RACE, we considered several factors for each dimension. Specifically, for *(i)* Environmental practices, we considered impact on climate, waste generation and recycling, and natural resources consumption. For *(ii)* Social performances we checked the Company impact on employees, institutions and communities. Finally, to assess *(iii)* Governance we looked at its board structure, internal audit, remuneration policy and defence of shareholders' rights. For each of these factors we evaluated many parameters. Each parameter was assigned a score between 0 and 1. By averaging the points assigned to parameters, we obtained a score for each area, comprised between 0 and 1. Then, after having applied a weighted average to each factor, we got to a final score for each dimension (E, S and G), and we multiplied it by 100. As last step, we summed the score obtained for E, S and G dimensions, thus obtaining our final value, with a maximum score of 300.

		RACE	Avg. automotive	Avg. luxury
Environmental				
Impact on climate change	*CO_2 emissions [g/Revenues]*	26.8	20.0	6.3
	Energy consumption [MWh/Revenues]	134.4	74.3	23.3
	Energy from clean sources [%]	*13%*	*37%*	*37%*
	Compliance with emissions cap	✓	✗	n.a.
	Vehicles annual emissions [ton CO_2]	10,361	11,940,367	n.a.
Waste	*Waste generated [ton/Revenues]*	3.2	7.8	1.6
	Waste recycled [%]	*45.2%*	*89.4%*	*99.0%*
Natural resources consumption	*Water consumption [m^3/Revenues]*	195.5	93.6	109.1
	Intensive use of animal leather and fur	✗	✗	✓
Social				
Employees	*Gender mix [%]*	87% Men - 13% Women	83% Men - 16.8% Women	35% Men - 65% Women
	Gender pay-gap [%]	*0%*	*13.8%*	*1.7%*
	Employee training hours [h/year]	13.4h	27.5h	18.7h
	Safety [injury rate and certifications]	IR 1.6 - ISO 45001	IR 2.95	IR 4.315 - ISO 45001
	Employee turnover [%]	*4%*	*1.7%*	*4.4%*
Insitutions	*Tax transparency*	✓	✓	✓
	Law infringements	✗	Dieselgate	✗
Communities	*Code of conduct*	✓	✓	✓
	Workers with disability [%]	n.d.	n.d.	0.9%
	Charity initiatives	Occasionally	✓	✓
Governance				
Board structure	*How many directors serve on the board?*	10	18	13
	What percentage of the board is independent?	*70%*	*30%*	*51%*
	Is there separation between chairman & CEO ?	✓	✓	33% ✓ - 66% ✗
	Is the chairman independent?	✗	✗	✗
	Has the company identified a senior independent director or an independent Lead Director?	✓	33% ✓ - 66% ✗	33% ✓ - 66% ✗
	Are there audit, compensation, governance and sustainability committees?	✓	66% ✓ - 33% ✗	33% ✓ - 66% ✗
	Is the chair of the nominating committee indipendent?	✗	✗	✓
	Are there executives on the nominating committee?	✓	✗	✗
	What percentage of the nominating committee is independent?	67%	36.6%	92%
	Is the chair of the compensation committee indipendent?	✓	50% ✓ - 50% n.d.	✓
	Are there executives on the compensation committee?	✗	✗	✗
	What percentage of the compensation committee is independent?	67%	40%.	92%
	Is the chair of the audit committee indipendent?	✓	66% ✓ - 33% ✗	✓
	Are there executives on the audit committee?	✗	✗	✗
	What percentage of the audit committee is independent?	*100%*	*30%*	*76%*
	What percentage of the directors attended less than 75% of board and/or key committee meetings?	0%	6%	n.d.
	What is the proportion of women on the board?	*40%*	*28.6%*	*41%*
	What is the standard deviation of directors' age?	12	8.9	10.0
Remuneration policy	*Do directors participate in equity-based plans?*	✓	✓	33% ✓ - 66% ✗
	Do non-executive directors participate in performance related remuneration?	✗	✗	33% ✓ - 66% ✗
	Does the company disclose details of individual executives' or inside directors' remuneration?	✓	✓	✓
	What are the minimum vesting periods mandated in the plan documents for executives' restricted stock?	1y	4y	3y
	What proportion of the salary is subject to stock ownership requirements or guidelines for the CEO?	6x	33% three times - 66% n.d.	n.d.
	What proportion of the salary is subject to stock ownership requirements or guidelines for executives, excluding the CEO?	2x	33% two times - 66% n.d.	n.d.
	Did the company disclose a clawback or malus provision?	✓	33% ✓ - 66% n.d.	50% ✓ - 50% n.d.
Audit & Risk	*What percentage of the total fees are represented by non-audit fees?*	0	0	0
	Did the auditor issue an adverse opinion in the past year?	✗	✗	✗
	Has a regulator initiated enforcement action against the company in the past two years?	✗	✗	✗
	How many financial experts serve on the audit committee?	1	1	2
Shareholders interest	*Does the company have a slate ballot at its current shareholders' meeting?*	✗	✗	33% ✓ - 66% ✗
	Does the company have classes of stock with different voting rights?	✓	33% ✓ - 66% ✗	66% ✓ - 33% ✗
	Does the company maintain pre-emptive rights in the event of a takeover bid?	✓	✓	33% ✓ - 66% n.d.
	Are there ownership factors that affect takeover defenses?	✓	✓	66% ✓ - 33% n.d.
	Are there priority rights that affect takeover defenses?	✓	✓	66% ✓ - 33% n.d.

sources: company data, team elaboration

21. Board of directors

Full Name	Offices	Independent	In charge since	N° of other offices	Committees			Background
					Control & Risk	Remuneration	Governance & Sustainability	
John Elkann	Executive Chairman	✗	21/07/2018	5			✓ Chairman	• Degree in Engineering (Politecnico di Torino) • Industrial Management (Automotive)
Louis Camilleri	Chief Executive Officer	✗	21/07/2018	1				• Degree in Business Administration (HEC, Lausanne) • Industrial Management
Piero Ferrari	Vice Chairman and Non Executive Director	✗	08/06/1988	3		✓		• Automotive Sport Manager
Sergio Duca	Senior Non Executive Director	✓	21/10/2015	4	✓ Chairman			• Degree in Business Economics (Università Bocconi) • Audit, Business Consultancy
Delphine Arnault	Non Executive Director	✓	15/04/2016	1				• Degree in Buiness Administration (EDHEC, London School of Ecnomic • Industrial Management (Luxury), Business Consultancy
Giuseppina Capalbo	Non Executive Director	✓	21/10/2015	2	✓	✓ Chairman	✓	• Degree in Law and Business Economics (Università La Sapienza di Roma • Commercial&Financial law advisor
Eddy Cue	Non Executive Director	✓	21/10/2015	1		✓	✓	• Degree in Computer Science and Economics (Duke University) • Industrial Management (IT & entertainment)
Maria Patrizia Grieco	Non Executive Director	✓	15/04/2016	4	✓			• Degree in Law (Università La Statale di Milano) • Industrial Management (IT), Business Consultancy
Adam Keswick	Non Executive Director	✓	15/04/2016	7				• Degree in Arts (Eton College, Edinburgh College of Art) • Industrial Management (Real Estate, Hotel, Food Retail)
Elena Zambon	Non Executive Director	✓	21/10/2015	5				• Degree in Business Administration (Univerità Bocconi) • Industrial Management (Pharmaceutical)

sources: company information, LinkedIn, team elaboration

22. Top managers

Executive role	Name	In charge since	Background
Chief Executive Officer	Louis Camilleri	2018	• Chairman of Philip Morris International • Chairman and CEO of PMI • CEO of Altria Group • CEO of Kraft Foods International • Degree in Economics and Business Administration (HEC, Lausanne)
Chief Marketing Officer	Enrico Galliera	2010	• Market Europe and Export Director of Barilla • Degree in economics and political science (University of Parma)
Chief Technology Officer	Michael Hugo Leiters	2014	• Head of SUV division at Porsche • Engineering diploma and engineering doctorate (RWTH, Aachen)
Chief Design Officer	Flavio Manzoni	2010	• Director of Creative Design at the Volkswagen Group • Head of Design for Lancia, Fiat and LCV at Fiat Group • Degree in architecture (University of Florence)
Chief Financial Officer	Antonio Picca Piccon	2018	• CFO in Ariston Thermo Group • CFO of Iveco Group • CEO of FCA Bank (now FGA Capital) • MPhil in Economics (University of Cambridge) • Economics and Business Administration (University of Turin)
Chief Manufacturing Officer	Vincenzo Regazzoni	2015	• Head of Technologies and Infrastructure at Ferrari • Head of Process/Product Technologies Ferrari • Head of Production at Maserati • Degree in Mechanical Engineering (Tor Vergata University in Rome)
Chief Brand Diversification Officer	Nicola Boari	2018	• Head of Product Marketing and Market Intelligence of Ferrari • Product marketing director at Indesit Company • Manager at Boston Consulting Group • Master in Finance and Economics (London School of Economics) • PhD in Economics (University of Ancona) • Degree in finance and economics from the University of Bologna
Team Principal Scuderia Ferrari	Mattia Binotto	2017	• Chief Technical Officer of Scuderia Ferrari • Chief Operating Officer Power Unit of Scuderia Ferrari • Deputy Director, Engine and Electronics • Masters in Motor Vehicle Engineering (University of Modena) • Degree in Mechanical Engineering (Lausanne Polytechnic)

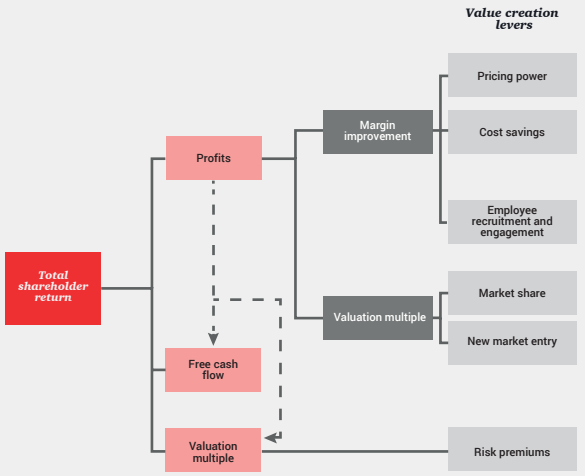
sources: company information, LinkedIn, team elaboration

23. The role of sustainability

Some evidences from a BCG-MIT Sloan School of Management research *(BCG-MIT Sloan School of Management, "The sustainability initiative")* show which is the path through which sustainability generates value for shareholders. By investing in sustainability, managers can positively impact some key value drivers for the Company, as illustrated by the value creation map.

Among the value drivers impacted by sustainability efforts, those relevant for RACE are:
Pricing power: investments in sustainability lead to an increase in brand strength, which in turn enhances pricing power.
Cost savings: being sustainable leads to cost reduction by means of: *(i)* greater operational efficiencies, *(ii)* more efficient use of resources, *(iii)* supply chain optimization and *(iv)* lower costs and taxes.
Employee recruitment and engagement: a more sustainable RACE can benefit from: *(i)* enhanced ability to attract, retain and motivate employees, and *(ii)* greater employee productivity.
Risk premium: a lower perceived risk and higher premium is driven by: *(i)* lower market, balance-sheet and operational risks, *(ii)* lower cost of capital and *(iii)* greater access to capital, financing and insurance.
We do not think that **market share** represents a value driver, since RACE is not focused on volume, and also **new market entry** is not appropriate for RACE, since the Company is already present worldwide and it is currently focused on further penetrating some countries, especially China.

Sustainability efforts could influence all the levers that companies use to create value



source: BCG-MIT Sloan School of Management, "The sustainability initiative"