

# CFA Institute Research Challenge Hosted by CFA Society Italy

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# The Pole Position Company

### What's it all about?

We initiated the coverage on Ferrari with a Buy rating and a Target Price of €172. Ferrari has always been one of the most recognized Italian luxury brand in the world, associated with power, speed, design, style, beauty and success. Founded by Enzo Ferrari in 1947 in Maranello, it produces top tier sports and racing cars. The competition segment originated in 1929, when Enzo Ferrari founded the *Scuderia Ferrari* in Modena that has been involved in Formula 1 since the first edition. Moreover, *Scuderia Ferrari* holds the record in the Formula 1 World Championship Title. Thanks to manifold characteristics, namely (i) the strengths of the brand, (ii) the resilience of its cash flows and revenues, (iii) its unique client base, (iv) its significant profitability and last but not least (v) its "vale upon volume" strategic approach, Ferrari is set to achieve compelling results in the foreseeable future. We believe that Ferrari currently trades at a discount to its fair value, which makes the manufacturing company an attractive long-term investment, even with the ongoing dramatic changes that are affecting both the luxury and the automotive industries.

### Team Draghi

## Buy

Target Price	€172
Current Price*	€154
Upside	+11%

<sup>\*</sup> The current price refers to the closing price on January 30, 2020. This is indeed the reference date of the overall Report

### Ferrari in 1 Minute

Italy | Auto Manufacturer | MCAP €29,267

### **Investment Summary**

### Ferrari, An Exclusivity Heritage Manufacturer

We issue a **Buy** recommendation on Ferrari N.V. (RACE.MI) based on a 1-year target price of €172.03. The latter offers a +11.42% upside from the company closing price of €154.4 on January 30, 2020. The latter is indeed the reference date of the overall Report.

### Outstanding valuation: expectations already beyond guidance

We are confident that Ferrari's stock will have a significant and consistent upside thanks to manifold characteristics. First of all, the premium valuation of the company is guaranteed by the strength of the brand, the pricing power, and the resilience of its cash flows and revenues. The demand for Ferrari's cars is clearly ahead of the offer, and, in fact, all cars are sold on a waiting list basis. This allows the Company to maintain a complete visibility on the cash flows and profits that will be generated in the following months, and, consequently, Ferrari is perceived by investors as a consistent defensive security. Moreover, we believe that the targets defined in the Strategic Plan for 2020 are achievable beyond their own bar: this mirrors how the company's approach is indeed conservative from this point of view, eventually leaving room for a further appreciation of the security.

### Signature mix: 360 degrees of the most exquisite luxury experience

We forecast that in the next few years Ferrari will increase its production volume: the latter comes from the building block that the Company is willing to (i) focus on the loyalty of current customers by meeting their ever growing demand, and (i) the desire to expand the customer base via entry level models. Furthermore, the spike in the price/mix and the penetration of the hybrid support a higher profitability as well. Specifically, we expect a 2023 EBITDA of €2.19Bn, i.e. 40.4% 2023F EBITDA Margin. Eventually, our estimates made on the EBITDA for 2022 exceed Ferrari's expectations and targets. On the flip of the coin, the non-car business will be renovated: half of the existing contracts will be substituted by new initiatives with exclusive luxury products and services (such as Ferrari's partnership with Giorgio Armani and Massimo Bottura), which will significantly contribute to the brand extension, name recognition and client's loyalty.

### Every car on road will be Electri... fying

Even though Ferrari's business is a Capital Intensive one and it is therefore encountering restrictions in terms of emissions and environmental regulations, the Company has indeed shown compelling Environmental, Social and Governance parameters. The latter significantly reduces the specific risk of the Company among institutional investors and have consequently a positive impact on Ferrari's risk premium. The expectation is therefore that these stringent parameters will have a positive future impact in terms of market valuation, even without a mid term goal of full electric powertrains like other peers in the automotive industry.

### **Market Data**

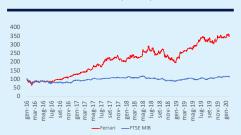
Bloomberg: RACE:IM	Reuters: RACE.MI
Market Cap (€ B)	29.26
Shares Out (MM)	249
Free Float	66%
Avg. Daily Volume 6M	470,435
YTD	76.77%
52 Weeks Low/High (€)	84.08 / 156.35
Beta (5Y - Monthly)	0.71
Current stock price	154,4€

Source: Reuters & Bloomberg. Current stock price on Jan 30, 2020

FY to 31/12 (€)	2016	2017	2018
Sales (MM)	3105.1	3416.9	3420.3
EBITDA Adj (MM)	946.1	1013.9	1110.3
EBIT Adj (MM)	698.4	753.3	821.5
Net Income (MM)	567.4	746.2	802.9
Enterprise Value	14,957	22,620	22,350
EV/EBITDA	15.81	22.31x	20.13x
EV/EBIT	21.42x	30.03x	27.2x
P/E	30.54x	32.43x	22.68x
EPS	2.16	3.25	4.16

Source: Reuters & Team computations

### Ferrari N.V. vs FTSE MIB (Rebased)





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# **Business Description**

### The Company Overview of a Leading Luxury Brand

Ferrari N.V. was officially founded in 1947 when the first racing car produced by Enzo Ferrari was released from the iconic Maranello factory. The company is now one of the world's leading luxury brand for designing, developing, manufacturing and selling state-of-the-art sports car. Ferrari offers warranty programs, financial supports, maintenance services, watches, apparels, earphones, caps, and other accessories as well. The company has extended its presence in over 62 markets through 167 dealers, spread across EMEA (Europe, Middle-East & Africa), Americas, APAC (Asia Pacific) and China (*Exhibit 1*). Ferrari has a significant track of successes, with its spearhead registered in 2019 when the Company sold 10,131 vehicles with revenues of €3,766 MM.

### **Throughout History of Successes**

Ferrari is named after Enzo Ferrari, a driver that founded his own racing team in 1924 and officially set up the company in 1939. The first racing car was produced in 1947 and, one year later, the first road one came into market. Thereafter, Ferrari started its competition in Formula 1 (1950) and in 30 years-time debuted within the GT segment, with a V8 engine and eventually with the F40, the first supercar ever released. Fiat S.p.A. (now listed under FCA, Fiat Chrysler Automobiles) acquired half of Ferrari S.p.A. ownership in 1969 and the stake became 90% in 1988 after the death of Ferrari's founder, leaving to his son Piero the remaining 10%. Another milestone of the Company's history was the launch of the Ferrari Enzo supercar in 2002, the significant renewal of the GT Space in 2008 and the launch of LaFerrari in 2013, when Ferrari was named as the world's most powerful brand by Brand Finance (the world's leading independent brand valuation and strategy consultancy). Two years later, Ferrari, officially separated from FCA and successfully completed its IPO on the NYSE (New York Stock Exchange) which was then spin-off on the Mercato Telematico Azionario in 2016 (MTA, stock exchange managed by Borsa Italiana S.p.A., part of London Stock Exchange Group).

### **The Luxury Car Product Range**

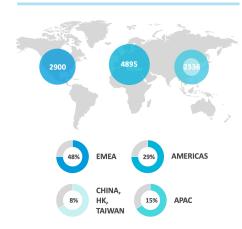
The road-car product offer of Ferrari is fourfold (*Exhibit 3*): the Sports range (with the 488 GTB, 488 Spider, 812 Superfast), the GT range (with the Ferrari Portofino, GTC4Lusso T, GTC4Lusso, Ferrari J50 and SP38), Special Series (with the 488 Pista and 488 Pista Spider) and Icona. The latter are able to serve a variety of clients with a throughout offer comprising enhanced technologies, personalized designs and state-of-the-art performances. Moreover, the competitive advantage of Ferrari is also given by a significant residual value, which eventually translates into both client loyalty and recurrent purchases.

### **Company Strategy to Generate Value: no Edges nor Limits**

**Principles for Growth**: Ferrari aims to enrich its product portfolio to target an-ever increasing customer base. Nonetheless, this is not at the expense of mass-production as the Company's efforts to maintain exclusivity and scarcity are mirrored by a low-volume production strategy. The actual principles to foster the strategy comprehends three main pillars (*Exhibit 4*): (i) performance, where the Company strives to always be the best performing car in its segment, (ii) comfort & versatility, i.e. the ease of driving experience and the board interface and (iii) the so-called driving emotions, with the car sound, acceleration and responsiveness.

**Innovation**: Ferrari aims to ensure innovation by leveraging: (i) its Formula 1 know-how, (ii) its powertrain and aerodynamic first-mover technologies and (iii) multiple and ever-growing synergies (namely brand image, marketing, visibility and technology transferred to all cars). To conclude, Ferrari aims to maintain and invest in its combustion engine technologies for the near future, but also drive towards hybrid powertrain to improve performances, satisfy costumer preferences and meet emission regulatory requirements.

### **Regional Markets - Unit Shipment** (Exhibit 1)



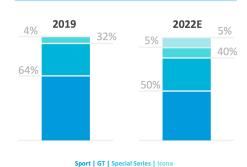
Source: Ferrari 2018 Annual Report (Team representation of vehicle sold in ground number and percentages)

### Historical Milestones (Exhibit 2)



Source: Ferrari 2018 Annual Report (Team representation)

### Product Range Actual vs Forecast (Exhibit 3)



Source: Ferrari 2018 Annual Report (Team representation)

### Company Strategy (Exhibit 4)



Source: Ferrari 2018 Annual Report (Team representation)



**Mid-Term Strategy**: Ferrari's mid-term strategy is based on four building blocks:

- I. Organic controlled growth, in terms of both turnover and margins, but maintaining exclusivity. Namely, you can't buy top tier Ferrari if you're not a loyal client as you need to be entitled which eventually allows Ferrari not to chase growth like others, but to control it.
- II. Ever-increasing industrial research and launch of new car models (including hybrids). Ferrari aims to launch 15 models across different segments between 2019 and 2022, with the goal of achieving 60% of hybrid mix in 2022 and a significant increase in the average retail price. Ferrari's has no plan to change its actual sales strategy (while maintaining a certain level of flexibility), which comprehends a network of authorized dealers (that is free to negotiate the price) without own dealership. The Company will target an ever-growing number of HNWI (High Net Worth Individual), but still preserving its exclusivity.
- III. Steady pursuit toward excellence in the road and racing sector. The focus of Ferrari is going to be on (i) human-machine interface, with new steering wheels, head-up display and infotainment systems to enhance the passenger's experience and (ii) autonomous driving, which will have a fundamental impact on the electronic architecture of Ferrari's car. Nonetheless, Ferrari has currently no plan to develop a full self-driving car, as it is in contrast with the Company experience concept to sell emotions, not mere vehicles.
- IV. Development of adjoining products' sales in the context of Ferrari's brand within the luxury sector. Ferrari aims to strengthen its brand identity through: (i) Ferrari DNA, a refined collection of Made-in-Italy products with a dedicated team and exclusive partnership (e.g. Giorgio Armani). (ii) Ferrari "Tifosi" Entertainment, i.e. increased competition in Ferrari E-games, development of events and Ferrari's museum (like Ferrari Theme Park) and last but not least (iii) car adjacencies for Ferrari car owners, with exclusive luxury products to complement the client experience (like the launch of Ferrari's Restaurant in 2020, with Michelin-Starred Chef Massimo Bottura). Ferrari's ultimate goal is to bring sales of Ferrari Brand products to weigh at least 10% of the total turnover over the next 7-10 years.

### **Production Process Overview**

Although the limited number of vehicles produced (respectively 9,251 and 1,0131 in 2018 and 2019), Ferrari's supply chain is significantly complex, with a manufacturing process that requires over 40,000 products from 750 suppliers. The plants were renovated between 2002 and 2012, with an estimated useful life of 20 years. Nonetheless, given the hybridization focus and the goal of enriching the product range, the Company is planning significant further investments in Plants, Machinery & Equipments. Unlike many low-volume peers, Ferrari operates its own foundry for the production of several engine components which takes multiple steps: (i) body assembly, (ii) painting, (iii) assembly line, (iv) personalization and road tests, (v) finishing and cleaning. Notably enough, Ferrari had still a relationship with the Maserati's brand. In fact, the former has been producing Maserati's engine since 2003, which in 2018 counted for 900 V8 turbo engines and 1500 V8 aspirated engines. This contract will potentially come to an end between 2021 and 2022 as stated by Ferrari itself, releasing the know-how and work force for the own Ferrari production.

### **From Production to Sales**

As conceivable from *Exhibit 6*, Ferrari's sales have regularly grown toward the last two decades, mirroring a consistent and resilient business. The building blocks of (i) maintaining low volumes compared to demand, (ii) have a significant variety of product choices for clients and eventually (iii) launch a greater number of releases compared to the homogeneous peers, have proven to be successful. In fact, Ferrari's sales volatility has been less significant than the competitors' one, fairly reacting to multiple shocks (*Exhibit 7*). Moreover, as discussed below, Ferrari's effort to be always on top of the market have guaranteed an assured customer based, with both value preservation and secondary market opportunities.

### Range Models: Latest Releases (Exhibit 5)

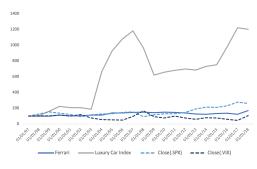
SPORT	2015	2016		
488 GTB				
488 SPIDER				
812 SUPERFAST			8	
F8 TRIBUTO				
GT	2015			

GT	2015			
CALIFORNIA T				
GTC4 LUSSO		8		
GTC4 LUSSO T				
PORTOFINO			8	

SPECIAL	2015		
F12TDF			
LAFERRARI APERTA			
488 PISTA			
488 PISTA SPIDER			300

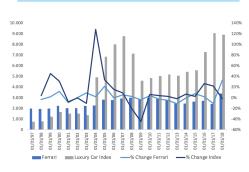
Source: Ferrari Company Presentation (Team representation)

### Luxury Manufacturer Car Sales (Exhibit 6)



Source: CarSalesBase Dataset (Team representation). Luxury Car Index refers to the total sum of sales of Aston Martin, Lamborghini, McLaren, Rolls Royce, Porsche, Audi and Mercedes (vehicles worth more than

### Luxury Manufacturer Car % Change (Exhibit 7)



Source: CarSalesBase Dataset (Team representation)



### **Formula 1 Activities**

Ferrari's brand and history is closely related to its Formula 1 Racing Team, Scuderia Ferrari, which represents the second revenue source of the company. The latter is currently the most successful Formula 1 Team in history with 238 Grand Prix wins, 16 Constructor World titles and 15 Drivers' World titles. Participating in Formula 1 is not only a marketing effort: in fact, it represents an endless source of technological and engineering innovations, which eventually creates synergies between the Formula racing and the road cars. On top of Ferrari's long-term Research & Development (R&D) efforts, Formula 1 strict FIA rules force the manufacturer to improve the technologies at the building block of its engines and cars. Therefore, this creates a virtuous cycle of technological and know-how transfer, from cuttingedge development for racing cars to road ones. Notably, the F1 contract has been revised, coming into force in 2021, heading towards more homogeneous prize distribution amongst the F1 team and a for the first time ever will have an impact as per financial rules. Eventually, Formula 1 allows Ferrari to promote its brand and technology to a global audience without relying on plain-vanilla advertising activities, and it is eventually fundamental to Ferrari's effort to capture more retail value and have the ancillary sources as a 10% of overall profitability in seven years.

### **Outstanding Properties to Complement Ferrari's Portfolio**

Ferrari has multiple intellectual properties, aimed to protect its brand reputation through the years, and physical ones. An ever-increasing number of registered designs and utility patent is owned by the Company, including 485 word and figurative trademarks, with a particular level of protection given by 4,000 applications in 140 countries for the ones presented in *Exhibit 12*. Moreover, the physical properties include the Maranello factory (entirely renovated between 2002 and 2012), the new Ferrari Design Centre (completed in 2018), the Mugello Racing Circuit, the Carrozzeria Scaglietti plant and two Museums with a total carrying value of property, plant and equipment of €850,550 thousand in 2018 EoY. Notably, these Museums (along with ongoing projects like the new signed Restaurant with Massimo Bottura), contribute significantly to the brand extension of Ferrari for the previously-exposed 10% of ancillary revenues sources.

### **SWOT Analysis: Failure Never an Option**

Ferrari has key strengths that has always fostered to achieve the compelling market position and brand recognition it owns right now. This, merged with the capability of embracing cutting-edge opportunities, makes the car maker one of its kind in this luxury auto industry. Nonetheless, there are inevitably sources of weaknesses and threats, but still it is Ferrari's ability to manage the latter that makes this brand unique.

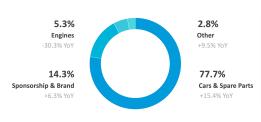
### Strengths:

Starting from the key *strengths*, the Company may count on: (i) a powerful and valuable brand, coming from Formula 1 successes as well, which attracts a solid customer base of HNWI, that receives an incomparable treatment (ii) an evergrowing offer of products, tailored to the clients' needs and preferences, (iii) a strong value chain that is controlled end-to-end via in-house design, engineering and production, (iv) a long-lasting value of vehicles over time, (v) high entry barriers which will be further discussed later on, and eventually (vi) an extremely valuable and diversified human capital.

### Weaknesses:

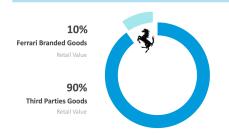
Ferrari's main weaknesses are instead its FX (Foreign Exchange) risk which dent the revenues in different currencies and the clients' buying propensity, along with a production concentration in Maranello (Italy).

### Ferrari Revenues Mix 2019 vs 2018 (Exhibit 8)



Source: Reuters (Team representation)

### Capture Retail Value Opportunity (Exhibit 9)



Source: Ferrari 2019 Presentation (Team representation)

### Capture Retail Value Opportunity (Exhibit 10)

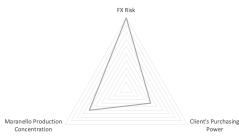


Source: Ferrari 2018 Annual Report (Team representation

### SWOT Radar Chart (Exhibit 11)



### Weaknesses





### **Opportunities:**

Regarding the Company's opportunities, they mainly derive from the industry trends (that will be discussed in the next chapter) and clients' preferences. (i) Firstly, Ferrari can exploit the ever-growing demand for personalized vehicles, with multiple programs that add customizable experiences to the clients. Moreover, (ii) the Company, given its significant R&D strengths, may win the race for the most powerful, adaptable and customer-enjoyable EV (Electric Vehicles), which according to Ferrari's CEO may become a reality in 2023. This gives to the Company the possibility to target different markets and reach multiple clients of disparate preferences, eventually increasing its volume produced and sold. Last but not least, (iii) the Company could increase its M&A propensity given the reduced leverage, still the management expressed no public interest in doing so.

### Threaths:

To conclude with the *threats*, Ferrari encounters a period of both external and internal pressures. The Maranello brand has to face the commercial U.S.-China trade war and the new Chinese Coronavirus, which could impact the sales in multiple countries in the short/mid run. Moreover, Ferrari is facing ever-growing changes in the emission regulations field, which sometimes foster and sometimes limit its capital expenditure toward different ends. Eventually, the Company needs also (i) to balance client's demand with the power of its exclusivity mission, (ii) solve the trade-off between internalization and externalization of processes and (iii) needs to enhance its Formula 1 pole positions so to increase the brand recognition and prideness in costumer's minds.

# Demand for Personalised Vehicles Ancillary Revenues Formula 1 Races Victories



Source: Ferrari 2018 Annual Report (Team elaboration)

## **Industry Overview & Outlook**

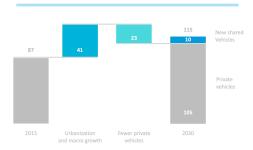
### The Overall Automotive Industry Future Trends

The key trends¹ related to the automotive industry are forecast to be (i) a shift towards markets and revenue pool, (ii) increased changes in the consumer mobility habits, (iii) the widespread of ground-breaking technologies and (iv) major competition and cooperation in the overall value chain. Overall, the shared mobility trend and multiple macroeconomic factors will impact vehicles unit sales that are forecast to grow but at a slower pace, from 3.6% of the last five years to approximately 2% by 2030. This is linked to the possibility that one out of ten cars will be a shared vehicles with fit-for-purpose mobility solutions (*Exhibit 14*). Moreover, growth will rely on emerging economies such as China and India and will be pushed by the medium-term reality that cars will take over the control from drivers.

### A cutting-edge "Eascy" Type of Mobility

The car of the next decade is going to be so-called eascy: electrified, autonomous, shared, connected and yearly updated. This results in a 40% mileage covered by autonomous vehicles by 2030², with a parallel pace development in E.U. and U.S. and a faster one in China. Therefore, this type of mobility will change significantly the habits of the consumer, that will eventually travel more kilometers, and of manufacturers as well (e.g. Exhibit 15). Future vehicles will be used more intensively and therefore they will be replaced sooner, effect partially offset by fewer accidents and less maintenance costs. Nonetheless, the manufacturers need to face the reality of sinking margins and ever-increasing R&D expenses for customer-oriented innovations, i.e. to capture the shift from traditional automobiles that represented a form of personal ownership with emotional ties, to digital preferences.

### Private vs Shared Vehicles (Exhibit 12)



Source: IHS Automotive (Team elaboration, millions of vehicles)

### Manufacturer & Suppliers Shift (Exhibit 13)



Source: Deloitte Electric Vehicles Outlook (Team elaboration)



### **Technological Widespread | From Hardware to Software**

The key-challenges that are currently limiting the introduction of Advanced Driver Assistance Systems (ADAS) and Fully Autonomous Vehicles (AVs) are pricing, consumer recognition and safety topics. The crucial transition will now be from the Level 3 standard NHTSA (National Highway Traffic Safety Administration), which allows the driver to take control in certain situations to the Level 4 NHTSA, which instead does not require any on-board intervention. This transition will likely be achieved thanks to further technological improvements and R&D investments, and will lead to a cutting-edge value offering for consumers with a 50% of vehicles being highly autonomous by 2030 and 15% fully autonomous. Therefore, this disruption trend and its complexity (as shown in *Exhibit 15 and 16*), requires new competencies, actions and way of thinking in order to face the competition of the market itself and the one coming from Start-Ups and Tech Giants, which with their data-richness, huge-capitals and R&D-intensity aspire to shape the future of mobility as well.

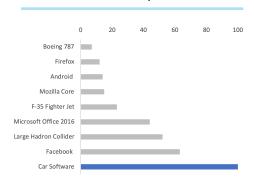
### **Electric Vehicles | Regulatory Volatility & Customer Demand**

The last decade has been noteworthy to create a landmark for Electric Vehicles (EVs, Exhibit 17), namely divided into Battery Electric Vehicles (BEV) and Plug-in Hybrid Vehicles (PHEV). EV deployment has accelerated thanks to (i) a positive environment created by policy and regulations, (ii) growing customer demand and habits and (iii) continued investments and innovations by Original Equipment Manufacturers (OEMs). The key purchasing barrier is represented by the cost-ofownership, until it will reach the par with the internal combustion engine (ICE) one. As a result, the share of EVs will grow exponentially. Moreover, the E.U. Council proposal of achieving a 21% reduction in CO<sub>2</sub> emission by 2021 and 37.5% by 2030, has target implications across the mobility industry. For instance, the PHEV and BEV market will merge into a 10% of the market share by 2025 and 22% by 2030. Moreover, financial incentives (namely government subsidies and VAT, tax exemptions) and city access restrictions (with multiple bans for gasoline and diesel vehicles) are key to make EVs more appealing and affordable to both private and business customers. On the flip of the coin, the EV transition is hitting margins significantly, with a downward trajectory that is expected to continue until an optimal level of production is achieved and battery prices fall below USD 100/KWh. The key factors are namely ever-growing tech expenditures, already-mentioned emission compliance, higher input costs and dilution from selling more EVs (Exhibit 18). To conclude, this shift needs to be matched by charging infrastructures, with the availability of fast chargers and their ability to recharge 80% of battery in 15 minutes.

### The shift toward EVs | Ferrari leading the R&D per Sales race

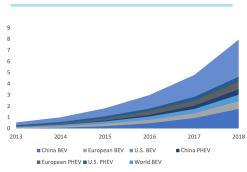
On one side, the threat from Tesla and other entrants is posing risks to EU automakers. On the flip of the coin, they may count on over €60 Bn net cash, which put them in a strong position to invest in new technologies, with EV losses that can be initially offset by profitable combustion-powered sales. The key threat posed to Tesla is represented by the Porsche Taycan BEV, which is set to take the pole position in electric-car performance. The latter is followed by (*Exhibit 19 & 20*) Mercedes, Audi and Jaguar for an exclusive-upper market, and from VW which stated it is ready to release 80 EV models by 2025 and 300 by 2030. Ferrari is currently leading the ratio of R&D to Sales. Daimler and BMW's R&D expenditures have doubled from 2007-2008 levels amid expanding model offer and new emission targets. VW's R&D budget is the third-largest in the world, behind Amazon and Alphabet. Overall, GM, Ford and FCA have committed to ramp-up R&D expenditures at USD 40 Bn combined, to fund the above-mentioned electric drivetrains development and progress on self-driving and driving-assistant systems.

### Software Lines of Code Required (Exhibit 14)



Source: McKinsey Center for Future Mobility (Team elaboration, data in Millions of lines of code)

### Electric Car Deployment (Exhibit 15)



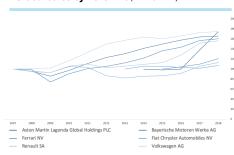
Source: IEA (Team elaboration, data in Millions,

### EBIT-Margin Trajectories (Exhibit 16)

MANUFACTURER	2017	EBIT MARGIN	EBIT MARGIN TARGET					
MANOTACTORER	2017	2018	2019E	2020E	2021E			
AUDI	8.5%	8.7%	7 – 8.5%	9 - 11%	8.7%			
BMW	9.2%	12.5%	4.5 - 6.5%					
FERRARI	22.6%	20.9%	25%	24%	38% EBITDA			
MERCEDES	9.4%	7.5%	3 – 5%	>4%	>6%			
RENAULT	6.6%	12.3%	5%	5%	>7%			
PEUGETT	PEUGETT 6.4%		4.5%	>Auto Avg	>Auto Avg			
VW	7,4%	7.3%	6.6 - 7.5%	6.5 - 7.5%	6%			

Source: Bloomberg (Team elaboration, data updated December 2019)

### Global Sales by EU OEMs (Exhibit 17)



Source: Bloomberg Data (Team elaboration, data in Units Rebased)



### **High Luxury Car Outlook**

Since 2008, the spend on high luxury vehicles (HLS) has grown faster than the spend in any other luxury goods, with an estimated market value of €495 Bn in 2018. An ever-increasing luxury vehicles offer, a shift in consumer preferences from sedan to SUVs and an incremented disposable income with more HNWI (*Exhibit 21*) than ever, have propelled the demand for luxury cars worldwide. The global luxury car market is expected to register a CAGR of about 5.83% during the period 2019 - 2024, with revenues of USD 5 Bn. This is fueled by the launch of electric variants which comprehend smart mobility technologies such as AV, personal voice assistance and retina recognition. The main established HLS markets include Europe, North America and Japan, which benefit from a significant amount of HNWIs, advanced infrastructure and brand reputation, while developing markets can count on Russia, India and China. Reading these considerations, the investors must keep in mind that an uncertainty in the economic cycle, specifically with a potential recession in the upcoming two years, may reduce significantly the consumer's willingness to buy HLS cars.

### **Automakers Bypassing Cars for Muscles**

A growing trend is represented by the client's propensity to buy luxury SUVs, which is forecast to grow by 30% between 2019 and 2030³. Pickup trucks, crossover and SUVs are higher-margin vehicles currently benefitted by a significant momentum, especially in the U.S.. The number has strongly shifted from cars to trucks, offsetting the impact of decreasing car volumes growth and boosting retail revenues by 79%. Multiple automotive manufacturer are exploring the SUVs and truck segment, amid the competition with Tesla new-edgy truck release. The astonishing number of orders received mirrors the interest of the overall public in this new technologies and the need to foster new consumer habits. The latter has been furtherly embraced in the luxury segment by multiple automakers, namely Bentley, Rolls-Royce, Lamborghini, Maserati, Porsche, Aston Martin and Jaguar. Moreover, a lack of profitability and limited competitive pressure has currently delayed a marriage between the three most popular light-truck segments, which represent more than a third of U.S. unit sales, and the so-called pluggable drivetrains, which currently are less than 2%.

### **Trade Impact**

i) United States: the Import tariff is expected to raise from the current 2.5% to 25% (Source: Bloomberg) in 6 months. Among others, the above-mentioned increase is expected to hit in particular the sport-car segment: given their high price point, the increase will conceivably be entirely shifted to the consumer. This will give a hedge to US and Japanese brands, since they are more competitively priced, especially in the SUV segment. Within the European car marker, BMW, Daimler and Volkswagen are characterized by the highest level of US production concerning automobiles, SUVs and also heavy trucks. Prolonged tariffs threat could lead automakers to shift the production to cheapest location, with dangerous effects regarding the Capital Expenditures thought for R&D.

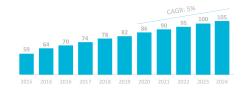
*ii) China*: despite the first US-China trade deal, the production located in United States might be potentially harmed by the reintroduction of Chinese incremental tariffs on US-made vehicles equal to 25%. In 2018 BMW, Daimler, Toyota and VW were responsible for the 70% of passenger vehicles import in China, and this panorama is also significantly growing for exotic and luxury vehicles. For what concerns European luxury brands, they have benefited from the 2018 Chinese tariff reduction (from 25% to 15%), that led to a decrease of their price point. Moreover, the premium segment is expected to increase its 2019 sales in China, since the production is entirely located in EU, thus the danger of a Chinese retaliation against US-made cars is avoided.

### Summary EU Automaker (Exhibit 18)

MANUFACTURER	REVENUE 2019	EBIT 2019	NET DEBT/ CASH 2019	CAPEX 2018	R&D 2018	
BMW	98,430	7,802	-17,961	7,777	6,890	134,682
DAIMLER	171,606	11,749	-16,300	7,534	9,107	298,465
RENAULT	56,900	3,573	-3,702	2,745	3,516	183,002
vw	244,009	17,179	-19,400	13,729	13,640	664,496
PEUGEOT	75,909	5,769	-9,098	2,510	3,914	196,885
FERRARI	3,766	917	340	638	527	3,851

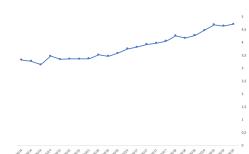
Source: McKinsey Center for Future Mobility & Bloomberg data (Team elaboration, data in Millions updated in 2019)

### **Evolution of HNWI** (Exhibit 19)



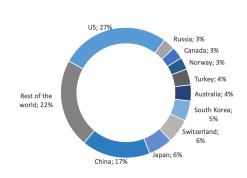
Source: World Wealth Report 2018 (Team elaboration, data USD Trillions; HNWI represents individuals with assets USD 1-50 MM)

### Auto Loan Delinquent (Over 90D) (Exhibit 20)



Source: Bloomberg (Team elaboration, data updated December 2019 in percentage)

### Destination of EU Vehicles Export (Exhibit 21)



Source: Bloomberg Data (Team elaboration)



*iii) United Kingdom*: Brexit is estimated to lead to a possible 10% tariffs on UK auto imports, as well as a weaken of the pound that will affect the purchasing power of the British consumers. The threaten arising from a no-deal endangers €27 Bn of annual sales and 6% EBIT of German automakers. The combined imports from Germany and France amount to the 54% (€33 Bn) of estimated UK annual auto purchases, against a 16% market share of domestic production. Comparing the effects of US tariffs increase and a no-deal Brexit, the latter scares mostly European carmakers: the cars exported from EU to US amounted to 640,000 units (estimated €22 Bn of revenues) in 2018, while just the German production shipped to UK amounted to 850,000 vehicles (estimated €27 Bn of revenues). Including French and Italian owned brands, the amount of vehicles shipped to UK is 1.4 Million, with an estimate sales value of €35 Bn.

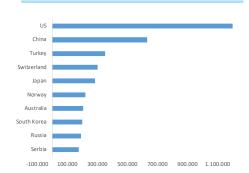
### **FX Exposure**

The past years have been characterized by extensive currencies hedging, with favourable average sterling and dollar rates. Daimler (Source: Bloomberg Intelligence) expects that the strength of the Euro would cause a 0.5-1 Billions of headwinds across multiple currencies and BMW has already increased its hedging to €500 MM. Moreover, FCA is expected not to be impacted from future changes, given its Chrysler USD business. The threats arising from the FX exposure will harm mostly firms like Ferrari, since it hedges 12 months in advance for its largest market. BMW, Daimler, Ferrari and VW thanks to their size and capability to hedge the key currencies, are expected to limit the impact of sterling weakness, while other companies are expected to face immediate pressure, given their unhedged position in euro-sterling estimated in 5.8 billions of revenue in 2018.

### Potential Porsche IPO & Lamborghini Spin-Off

Ferrari's valuation has already inspired Aston Martin market debut and innovative ways to showcase the merge between technology and hidden luxury are attracting interesting multiples, compared to plain-vanilla automakers. Softbank has already invested USD 2.25 Bn for 20% of GM Cruise Automation unit and the race toward value creation for automakers' tech division has surged with the BMW and Daimler partnership for mobility-services businesses. Bloomberg estimates a €100 Bn valuation for Porsche AG in case VW would opt for its IPO, with a 15% EV/EBITDA discount to Ferrari. On this note, a Lamborghini IPO could achieve similar luxury multiples, valuing the automaker at €8.3 Bn on the wake of its new-released URUS SUV that has almost double the Company 2019 EBITDA compared to the 2015 figure. Moreover, the latter is focused on limited special series, a similar strategy to Ferrari which trades at luxury-goods 2020 multiple of 19.2x EV/EBITDA and with Lamborghini that employee just 40% of Ferrari's total workforce. This would further stimulate the market, adding capitals, transparency and competition for the previously mentioned future trends.

### Vehicles Exported from EU (Exhibit 22)



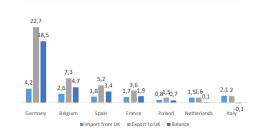
Source: European Automobile Manufacturers Association, ACEA (Team elaboration)

### Passenger Cars by Segment in EU (Exhibit 23)



Source: European Automobile Manufacturers Association, ACEA (Team elaboration)

# Import & Export of Vehicles, Parts and Accessories from/to UK (Exhibit 24)



Source: European Automobile Manufacturers Association, ACEA (Team

### Ferrari vs Porsche vs Lamborghini Valuation (Exhibit 25)

		Ferra	ri N.V		Porsche AG			Lamborghini				
	2017	2018	2019	2020E	2017			2020E	2017	2018		
Units sold	8398	9251	10133	10722	246375	256000	264704	306527	4156	6621	7575	8075
Revenue (€M)	3.417 €	3.420 €	3.767€	4.102 €	21.674 €	23.668€	24.326 €	27.606 €	933 €	1.316 €	1.508 €	1.651€
Revenue/Unit (€M)	292.451€	274.050 €	295.125€	305.802 €	87.972 €	92.453€	91.898€	90.060 €	224.495 €	198.762€	199.073€	204.413 €
EBIT (€M)	775 €	827€	958€	1.083 €	4.003 €	4.110€	4.135 €	4.831€	141€	145€	268€	329€
EBIT Margin	22,68%	24,18%	25,43%	26,40%	18,47%	17,37%	17,00%	17,50%	15,11%	11,02%	17,77%	19,93%
Adj. EBITDA (€M)	1.036 €	1.115 €	1.275€	1.417€	6.279 €	6.677€	6.856€	7.824 €	245 €	351€	478 €	539 €
EBITDA Margin	30,32%	32,60%	33,85%	34,55%	28,97%	28,21%	28,18%	28,34%	26,26%	26,67%	31,70%	32,65%
Depreciation (€M)	261€	289€	318€	334 €	2.276 €	2.567€	2.721€	2.993 €	104 €	205 €	210€	210€
Market Cap (€M)	15.493 €	18.832€	26.793€	26.793 €	-	-	130.812€	149.439€	-	8.587 €	10.183€	8.264 €
Net Cash/Debt (€M)	473 €	370 €	200€	200 €	3.067 €	2.635 €	2.635 €	2.635 €	-	-	-	-
Minorities (€M)	5 €	5€	7 €	5€	-	-	-	-	-	-	-	-
EV (€M)	16.057€	27.453€	27.266€	27.266 €	-	-	131.969€	150.596 €	-	8.622€	10.218€	8.299 €
EV / EBITDA (x)	15,5	24,6	21,4	19,2	-	-	19,3	19,3	-	24,6	21,4	15,4



### **Environmental, Social & Governance**

### The Board of Directors

Ferrari has adopted a code of governance that follows the Dutch standards, i.e. the country of domicile. The BoD, which is fully responsible for the company's strategy, is currently composed by twelve members (eight men and four women), one executive and the other non-executive. L. C. Camilleri replaced as executive S. Marchionne in 2018. A. Felisa is the former CEO (2016) and member of BoD, G. Capaldo is member of the Governance & Sustainability Commitee (2018), P. Ferrari and E. Cue are members of the Compensation Committee (2018) and S. Duca is the chairman of the audit committee. The independents supervise the action of the executives and the evolution of the company's business, including the implementation of the strategy and the creation of value in the medium and long term. The Governance & Sustainability Commitee assists and advises the BoD on the periodic, i.e. annual, assessment of the performance of individual, executive and non-executive directors, along with ethical (as gender diversity) policy controls. In addition, this committee evaluates the work of the Audit and the Compensation ones. To conclude, the BoD meetings are key in order to discuss several building blocks of Ferrari, such as the group strategy, the reporting and financial results, sustainability, acquisitions and divestments, technological development, executive compensation, risk management, human resources, legal and compliance and the remuneration policy.

### **Shareholder Composition**

Ferrari shareholding composition aims to create stability both in the concept of a widely-held company and with the framework of effective decision-making power. Exor N.V. has the majority of Ferrari's stake with its 23.7% that counts for approximately 33.6% of voting power in the Company and Piero Ferrari that holds 10.1% of common shares with 15% of voting rights. The two signed an agreement which states a pre-emption right in favor of the former and right of first offer in case of common shares transfer for the latter. The remaining 66% is represented by a free float where the TOP100, TOP50 and TOP10 investors control respectively the 72%, 67% and 60% of these outstanding shares. Among the latter is worth mentioning: Baillie Gifford & Co. (7.23%), T. Rowe Price Associates, Inc (4.60%), The Vanguard Group, Inc. (2%), CPP Investment Board (1.41%), AKO Capital LLP (1.36%), D1 Capital Partners L.P. (1.34%), Winslow Capital Management, LLC (1.16%) and Melvin Capital Management LP (1.08%). Notably enough, 128 MM of outstanding shares are divided between the Netherlands (44 MM), the U.S. (41 MM), the U.K. (22 MM) and Italy (21 MM).

### A Strong Management in Pole Position

John Philip Elkann, grandson of Gianni Agnelli, chairman and CEO of Exor N.V. (a holding company controlled by the Agnelli family) has been appointed from July 2018 as chairman of Ferrari after the untimely health issues of Sergio Marchionne. Following J.P. Elkann on the line there is Piero Ferrari, co-chairman and the only remaining son of Enzo Ferrari, and Louis Camilleri, Chief Executive Officer from 2018. Mr Camilleri has a throughout history of successes in covering C-level positions in multiple industries, from Kraft Foods to Philip Morris. Different Chief-officers follows the former, with a clear diversification in terms of coverage and operating supervision. The role of co-chairmen held by Mr Ferrari fosters the link between the heritage of the company and its actual and future positioning. The position of CEO played by Mr Camilleri ensures the technical knowledge necessary to push forward the company and face the actual challenges that are revolutionizing the automotive industry. Different Chief-officers follows the former, with a clear diversification in terms of coverage and operating supervision.

The BoD Composition (Exhibit 26)

FEATURES		REMUNERATION COMMITEE	AUDIT COMMITEE	
JOHN ELKANN	×	X	×	
LOUIS C. CAMILLERI	~	×	×	×
PIERO FERRARI	$\times$	<b>~</b>	×	×
DELPHINE ARNAULT	×	×	×	×
GIUSEPPINA CAPALDO	×	×	~	
EDWARD CUE	$\times$	<b>~</b>	X	X
SERGIO DUCA	×	×	~	<b>~</b>
LAPO ELKANN	×	×	×	×
AMEDEO FELISA	$\times$	$\times$	×	×
MARIA PATRIZIA GRECO	X	×	<b>~</b>	×
ADAM KESWIC	×	×	$\times$	×
ELENA ZAMBON	×		X	×

Source: Ferrari 2018 Annual Report (Team elaboration)

### Kev-Shareholders (Exhibit 27)



Source: Reuters Data (Team representation). For detailed information about the Institutional shareholders please see Appendix 2

### Management Chart (Exhibit 28)



Source: Ferrari 2018 Annual Report (Team representation)



### The Code of Conduct

Ferrari's code of conduct complies with multinational standards to ensure high levels of integrity and to sustain different cultural, regional and minorities. The latter is approved by the BoD and it is applicable to all Ferrari's members. The company firmly prohibits and condemns conduct such as corruption, bribery and whistleblowing<sup>4</sup> which would result in serious damage to Ferrari's image.

### Ferrari's People

The Human Capital is a paramount building block for Ferrari to maintain its position as a global leader in the luxury car segment. As a result, the company organises Graduate Programs to identify prospect talents to onboard and multiple activities to foster the consistent and periodic development of the workforce. The company organizes meetings with several universities as well as many Graduate Programs and graduate projects such as the "Ferrari F1 Engineering Academy" to discover the best talents. The training is carried out with tailor-made programs in order to motivate the talents and guide them in their career. In this way, business continuity is ensured through the transfer of expertise. By 2018, Ferrari had 3851 employees, 110 of whom were executives. An incentive plan is placed for the entire staff and the work environment is completely built on the idea of obtaining the best performance possible from the staff: among others, many investments took place to increase the green areas in the plants, restaurants, noise reduction tools, lights optimisations and more. Ferrari launched in the same year the MBA Ferrari corporate executive in collaboration with the Bologna Business School and multiple programs like the ones in "cyber security" and "data collect and protection" were offered, increasing the total number of training hours increased by 45%. To conclude, Ferrari's Maranello and Modena plants focus on accident prevention and safety: periodically, a health and safety audit process is held in compliance with the Ferrari health and safety management system. In 2018 there were no fatal accidents.

### **Sustainability for a Better Future**

The greatest efforts in terms of environmental achievements are linked to maintaining high manufacturing efficiencies and reducing polluting emissions. The monitoring of the plants is entrusted to a team that reports directly to the Chief Technological Officer (CTO). At the moment, 13% of the plants' energy requirements come from renewable resources, namely solar panels and the lighting system has been replaced with the new LED technology. Moreover, a significant focus is paid to the management of waste, with several initiatives such as the reuse of excess aluminum and the processing of waste by business partners in circular economy perspective. The vehicles production process is water intensive, so an innovative cooling system with re-circulation of water has been developed. The water resources come from nearby municipalities and utilities. The water produced by particular industrial processes are treated with break-through instruments before being re-introduced into the public system. The vehicles produced must be compliant with regional, national and local regulations: notably, with regard to the emissions, the company benefits from the qualification of being a Small Volume Manufacturer and this applies in all jurisdictions in which Ferrari sells its product. In 2012, a 27% reduction in emissions was achieved compared to 2002. The new target is to reduce the fleet's CO2 emissions by 15% in 2020. As conceivable by Exhibit 32, Ferrari is significantly capital intensive, but has a strong ability to retain talents and design an efficient remuneration policy compared to the selected peers5.

### Internal Programs & Initiatives (Exhibit 29)

INTERNAL PROGRAMS	TRAINING	HEALTH	FAMILY	SECURITY
SCUOLA DEI MESTIERI	<b>~</b>			
FORMULA UOMO		<b>~</b>	<b>~</b>	<b>~</b>
FORMULA ESTATE JUNIOR			<b>~</b>	
PIT STOP & POLE POSITION	<b>~</b>			
FORMULA BENESSERE		~	~	

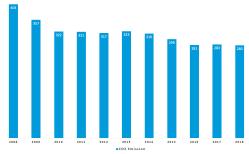
Source: Ferrari 2018 Annual Report (Team elaboration)

### Employees per Gender 2018 (Exhibit 30)

EMPLOYEE CATEGORY	MALE	FEMALE	TOTAL
SENIOR MANAGERS	90%	10%	110
MIDDLES & PROFESSIONALS	85.9%	14.1%	545
WHITE COLLARS	78.3%	21.7%	1146
WORKERS	92%	8%	2050
OVERALL	87%	13%	3851

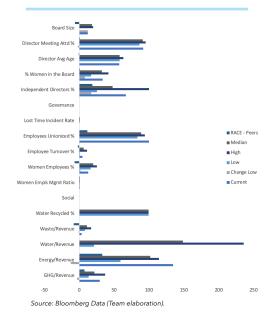
Source: Ferrari 2018 Annual Report (Team elaboration)

### CO<sub>2</sub> Emissions per Vehicle (Exhibit 31)



Source: Ferrari 2018 Annual Report (Team elaboration)

### ESG Parameters - Ferrari & Peers (Exhibit 32)



<sup>&</sup>lt;sup>4</sup> The Company complies with the new 2017 Italian whistleblowing regulation which is supervised by the Audit, HR and Legal department.

<sup>&</sup>lt;sup>5</sup>The peer for this specific analysis have been selected from Ferrari identification in its 2018 Annual Report and are LVMH, Ferragamo, Richemont, Hermes, Moncler, Brunello Cucinelli, and Burberry



# **Financial Analysis**

### **Historical Perspective: a Company that Never Settles**

Ferrari key revenues' components, i.e. the 77%, is represented by the sales of cars and spare parts (Exhibit 10), the rest namely being engines, sponsorship and brands and other. The Compound Average Growth Rate (CAGR) for the 2014-2018 has been 4.36%. As conceivable from Exhibit 37, Ferrari generated increasing Revenues in the last 5 years; nonetheless, it's important to notice that the revenues have indeed remained quite stable between 2017 and 2018. Despite the latter, the EBITDA Margin in 2018 is still greater than the one of 2017, as well as the net income. This could mainly be attributed to the 2018 new tax regime (patent box) by Ferrari. The revenues variation gives a quick guidance on future trends, and helps to make informed decisions regarding the business strategy. Moreover the Return on Equity (ROE), is used to verify the rate of return on risk capital. The indicator can be considered as a summary of the overall cost effectiveness, evaluating how the management has been able to administrate its own resources to increase Ferrari's profits. For this reason, the indicator gives a first idea of the profitability of the company: it's possible to notice that Ferrari has an impressive ROE, around 60%. Subsequently, we carried out the calculation of the debt to equity ratios of the company. Specifically, we can appreciate that Ferrari presents coefficients slightly above the level defined by the theory (except for the 2015, in which the ratio is around -90,4). Thanks to the analysis, we are therefore able to get a first idea about what was the strategy adopted by Ferrari, in terms of consistency with the positioning in relation to external pressures.

Values in €M	2014	2015	2016	2017	2018	2019
Total Revenues	2.762,36	2.853,88	3.105,55	3.416,89	3.420,32	3.766,59
EBIT	389,67	443,67	594,66	774,90	826,74	917,55
CAGR		13,9%	23,5%	25,8%	20,7%	18,7%
% on Rev	14,1%	15,5%	19,1%	22,7%	24,2%	24,4%
EBITDA	678,65	718,43	842,13	1.035,51	1.115,49	1.270,06
CAGR		5,9%	11,4%	15,1%	13,2%	13,4%
% on Rev	24,6%	25,2%	27,1%	30,3%	32,6%	33,7%
Net Income	261,57	287,17	398,34	534,88	784,91	699,16
CAGR		9,8%	23,4%	26,9%	31,6%	21,7%
% on Rev	9,5%	10,1%	12,8%	15,7%	22,9%	18,6%

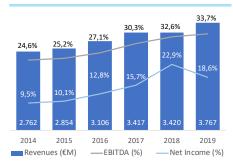
# The boolean relationship between pricing-mix and volume growth: will Ferrari truly become a luxury brand?

Ferrari's average price on total shipments has decreased both in 2015 (-1,4%) and 2018 (-7,3%). This phenomena has been partially offset by an increase of +6.6% in 2019. Overall we believe that the pricing power was untapped in the past, since: (i) higher shipments contribution, (ii) lower pricing contribution compared to luxury pricing growth.

### • The number of shipments have weighted more than the price on revenues

Car and spare parts revenues increased steadily year on year from 2014 to 2019, with the exception of 2018. In fact, in 2018 Ferrari registered a positive increase in Range and Special cars' revenues, but it was €100M lower than 2017 change, worsened by a €66M reduction in Hypercars and Limited cars' revenues. However, the overall 2014-2019 cumulated growth in cars and spare parts revenues is mostly attributable to a positive shipments contribution than price. Considering a log computed cumulated increase of 44,2% from 2014 to 2019 in cars' revenues, a 33,4% change is attributable to shipments contribution, while just 10,7% to price contribution. It corresponds to 6,9% CAGR in terms of shipments and 2,2% CAGR in terms of average price, between 2014 and 2019.

**Revenues, EBITDA and Net Income Margin** (Exhibit 33)



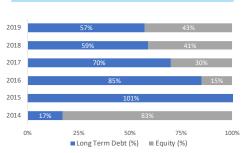
Source: Reuters data (Team representation)

**Basic EPS Including Extraordinary Items** (Exhibit 34)



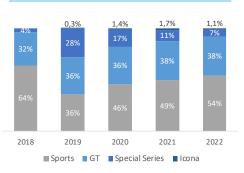
Source: Reuters data (Team representation

Debt / Equity Percentage (Exhibit 35)



Source: Reuters data (Team representation)

### Shipment by pillars (Exhibit 36)



Source: Team estimates from Ferrari's historical data and comments



# • Ferrari still not able to reach the pricing power contribution encompassed by other luxury brands

Ferrari has not been able to exploit the pricing power as other luxury brand did. Although we estimate a 2,2% 2014-2019 CAGR in average price and a 3,3% 2014-2019 increase in weighted average price on total shipments, it's still far from the pricing power embedded into luxury goods. For instance, if we consider Hermes' Kelly and Birky bags (excluding Longue Wallet but including Pochette and Mini) and other products priced less than €10K, we are able to appreciate an average price increase from 2014 to 2018 of 6,7% CAGR. For product priced between €10K and €20K, the CAGR was 12,8%, and 2,4% for product priced more than €20K. If we focus for instance on the most iconic Hermes bag, the 2014-2018 growth in price would be 6,2% CAGR for 28 Kelly, 4,2% CAGR for 32 Kelly and 5,2% for 35 Kelly.

### • Is a New Year price-mix Resolution on its way from 2020?

We expect Ferrari to exploit a greater pricing power from 2020 onward, in particular taking into consideration (i) the 15 new models that will be launched in the 2019-22 period, as they will be well balanced across different segments, and (ii) the positive impact in terms of price-mix thanks to the introduction of hybrids. In fact, the company is going to enrich the new entrants in order to attract new customers and also the upper chain to retain its brand exclusivity. Our estimation suggests how price vs shipments contribution varies year on year in the period 2014-2019, but that it will be more steady from 2020 onward, with a positive pricemix effect over a decreasing shipments contribution. From 2018 to 2022 we estimate a CAGR growth in Range and Special cars' revenues (including the Icona from 4Q 2019) of 13%. We estimate a log computed price contribution of 4,3%, 6,3% and 6,8% for 2020, 2021 and 2022, and a shipments contribution respectively of 5,7%, 5,3% and 5,1% considering the 2022 estimated target of c. 11.900 shipments. We calculate that price-mix in terms of above-mentioned contribution on Range and Special cars' revenues (including Icona) increases from 2020 to 2022 accounts respectively for 43%, 53% and 57%, reaching a peak in 2022, while it accounted for c. 24% in the period 2014-2019. From 2021, more than a half of change in Cars' and Spare parts revenues will be therefore attributable to to pricemix power exploited by Ferrari.

# • Personalization: because the desire of everyone remains of not being any one

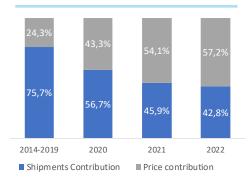
With its four pillars, Personalization Program, Special Equipment, Tailor Made and One-Off, Ferrari has always offered personalized cars tailored to the expectations of the clients. This is particularly important in an ever-growing competitive sector, where loyalty is a premium not easily achievable. We estimate that personalization would count for 19% of total revenues on average in the period between 2019-2022, reaching 24% of total revenues driven by car and spare parts by 2022. It represented 14% on average in the period between 2014 and 2018, and accounting for 16% in 2018, i.e. c. €410M of cars and spare parts revenues. The average personalization per car will increase from ~€44,190/car in 2018 to ~€62,000/car for the period between 2019 and 2022.

### Price Hermes products comparison (Exhibit 37)



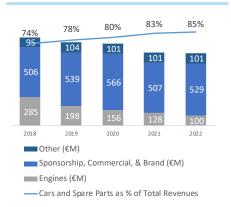
Source: Team estimates from Hermes historical data

### Price vs shipments % portion (Exhibit 38)



Source: Team estimates from Ferrari's historical data and comments

### Revenues breakdown (Exhibit 39)



Source: Team estimates from Ferrari's historical data and comments

# 20% average impact of personalization between 2019-2022



# • Retain brand exclusivity while leveraging portfolio expansion: Ferrari's response to the mass-effect dilemma

Ferrari's product pipeline will offer 15 new models between 2019-2022, well balanced across different segments in order to broadly leverage from the price-mix strategies. The portfolio improvement is a key part of the segmentation strategy that will play a significant role in the price architecture as well. Along with the SF90 Stradale and 812 GTS that will help boost the price range itself, the Maranello car manufacturer strategy seems to be headed towards a client base expansion through entry-level models such as Portofino and Roma. The goal is to be able to attract new customers and therefore increase significantly the odds to turn them into loyal Ferrari's buyer, who will then shift to upper grade models.

The binomial between customer expansion and exclusivity has been well studied among multiple luxury brands: Hermes, Gucci and LVMH have struggled with the introduction of lower-end products that can be perceived by HNWI representable of their social status. Nonetheless, they've consistently solved the equation by allowing just a certain number of customer to experience the ultra high-end gems. Therefore, Ferrari's strategy to introduce different models at the higher end of its portfolio in order to retain the historical exclusivity that has always distinguished the brand, seems more than appropriate. Ferrari has not yet disclosed any information about new hypercars launch before the end of the 2022. Although in our valuation the Icona line would count slightly less than 2% on total shipments, we estimate a contribution of 8% to cars and spare parts revenues by 2021. The GT segment expansion is offering untapped opportunities, targeting 40% of total shipments in 2022, while accounting for just 32% in 2018. Moreover, the sport cars are expected to account for more than 50%, while in 2018 the segment represented 64%.

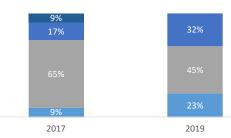
### What's in for Ferrari in the new Maserati and F1 agreements?

There are two main agreements whose pending future could have a fundamental impact on Ferrari's revenues: (i) Maserati and Formula 1. We estimate that the result is going to be an all-new release of labor force that will eventually increase margins and on the other side, a cutting-edge sporty fair play will push the automakers to an all new level of competitiveness, which will account for innovative and ground-breaking technologies.

### • Pulling the Maserati's plug will give Ferrari a wireless technology

The agreement with Maserati, signed in December 2014, prescribed the supply of V8 (Turbo and Aspired) and V6 engines. They accounted from 70% to 80% of total engines' revenues, in the 2015-2018 time lag. Unlike the V8s, that are manufactured and assembled according to the same production processes adopted for the V8s equipped on Ferrari's cars, the V6s required a dedicated assembly facility with a much higher level of industrialization and a make-or-buy strategy that rely on outsourcing the vast majority of components. Between 2015-2018, each Ferrari's employee working for the Maserati project contributed on average for €940K Maserati engines revenues, while Ferrari workers in production processes contributed on average for €1.48M in cars & spare parts revenues. Based on the low margin provided by this share of business, we evaluate that the agreement termination expected for 2021-2022, can count for c. 14.5% of car & spare parts revenues by 2021, if we assume an internal redeployment. In this scenario, each one of 250 engineers employed in Maserati's engines production processes could contribute for €500M revenues from 2021 (€2M unitary contribution), as they could represents an internal workforce to support the model mix strategy improvements. In fact, Ferrari's production is characterised by highly skilled engineers that, unlike traditional and mass-car manufacturers, represent the main asset in Ferrari manufacturing and production processes.

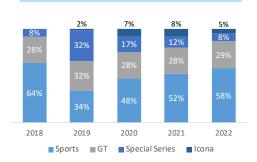
#### Model Diversification (Exhibit 40)



■ Shift towards entry level models ■ Stay about the same
■ Shift towards high-end models ■ Don't know

Source: UBS Evidence Lab (2019)

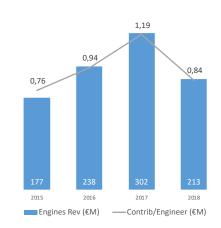
### Revenues by pillars (Exhibit 41)



Source: Team estimates from Ferrari's historical data and comments. Note that Sports in 2018 include LaFerrari Aperta; Icona shipments starting from 4Q 2019-

# Release labor-force and increased competitiveness through technological race

### Maserati Engineers Contribution (Exhibit 42)



Source: team representation of Ferrari's statements



### • The F1 engines will win even if Ferrari's team won't

The part of engines' revenues not related to Maserati's business can be attributable to Formula 1 power units rental that accounted for c. 20-30% of Engine's revenues in the period between 2015-2018, while from 2021-2022 it will conceivably represent almost the entire share of Engines' revenues. The amount is significantly influenced by the number of Formula 1 racing teams that each year are under power units rental agreement with Ferrari. The revenues increase in 2016 as a result of renting power units to three Formula 1 teams for the 2016 season compared with two Formula 1 teams for the 2015 season. Although in 2017 the net revenues from engines renting to Formula 1 racing teams decreased due to the termination of the rental agreement with one of the team, the average unit revenues per team increased on average from 2015 to 2018 by 70%, accounting for € 35M/team.

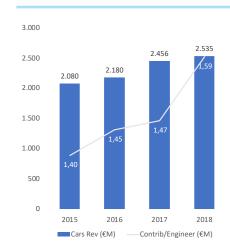
In our assessment, according to the expected number of racing team supplied from 2020-2022, we estimate that the revenues coming from F1 rental engines will count for 2,2% of total revenues by 2021 and 75% of engines's revenues (in 2015 was respectively 1.5% and 19%). Opposed to what could be conceivable, note that the spike to the 75% figure derives not just from an increase in unit margin from F1 rental engines, but also from the termination of the Maserati contract. In fact, we have considered that Ferrari would keep benefitting from growing unit F1 rental engines' revenues thanks to an increase in unit margins as per technological advances, despite a decrease in the number of team supplied.

### • Will a new F1 engagement mean

The Formula 1 business has generated around \$1.8bn in revenues per year from 2015 to 2018, representing the starting point to define the amount distributed to the racing teams participating at the Championship. The profit distribution structure is composed by the first 50% (prize money fund) that goes to teams and the second half that is up to F1 Group and shareholders. The amount distributed to the racing teams is divided into both a portion equally split between 10 teams and a portion based on the constructors' championship standing ended. In addition, the most successful F1 teams (first of all Ferrari's) can also benefit from another fixed portion. This is the reason why the Concord agreement reserves a prime treatment for Ferrari in terms F1 revenues distribution. In fact, Ferrari benefits from a fixed share (Long Standing Team – LST payment) unrelated from the performance share that grants Ferrari the largest chunk of F1 revenues despite the actual constructors' championship line up and that by itself is worth more than some team's entire prize revenues.

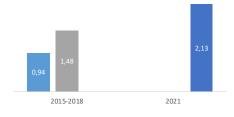
For instance, in 2016 the total Ferrari prize was \$209M, divided as follow: LST payments of \$90M, the line-up-based was \$77M due to 3rd place 2016 ranking, and the equally split payment was \$42M. In 2017, 2018, 2019 this figures remained quite unchanged from 2016, except for the line-up based payment that was higher thanks to the 2nd position on line up (previous year), with a total prize on average accounting for \$245M. Our estimation led to the same consideration also for the 2020 money prize. The new F1 agreement under Liberty's plan from 2021 will imply the prize fund to be more closely linked to where each team finishes in the constructor's championship, in order to reduce the gap between each racing team. It will have an impact on Ferrari revenues, resizing the LST payment. For the years 2021-2022 the fixed payment will be \$50M, on average \$40M lower than the previous LST payment. Overall, under the new agreement we estimate an average decrease in net revenues of c.€65M for the period 2021-2022, compared to 2020 in which Ferrari will benefit from 2019 2nd place ranking. Eventually, it will account on average for c. -1,4% on total revenues each years.

### Ferrari-only Engineers Contribution (Exhibit 43)



Source: Reuters, Bloomberg & Ferrari's Annual Report data

# Ferrari vs Maserati Engineers Contribution (Exhibit 44)



■ Avg 2015-2018 Maserati's engineers contribution (€M)

■ Avg 2015-2018 Ferrari's engineers contribution (€M)

■ 2021 Maserati's engineers contribution (€M)

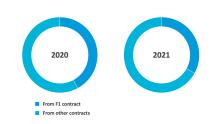
Source: Reuters, Bloomberg & Ferrari's Annual Report data and team estimates

### **Revenues split from F1 contract** (Exhibit 45)



Source: Ferrari historical data, team estimates

### F1 contract vs other revenues (Exhibit 46)





### Ferrari's spearhead: Research & Development

First of all, it is fundamental to define that Ferrari's R&D are (i) *capitalized* for what concerns core business and cars, and (ii) *expensed* for F1.

The financial rules represent one of the key pillars of the ground-breaking 2021 Formula 1 regulation, which magnitude gains particular importance due to the fact that it has been the first time in the Formula 1 championship's history that such rules have been enshrined. In fact, the new plan will introduce a cap in the F1 budget available for each team set at \$175M (c. €156M) that covers the expenditure related to the car's performance. In the budget are therefore not included:

- I. The marketing costs, which Ferrari has always stated to be its implicit saving seen the significant contribution of F1 indirect advertising, along with the fees of the drivers, the one of the three highest paid members of the team and the bonuses
- II. Cost of factories and other properties, along with the cost of buying a customer engine supply deal, flights, hotel and other amenities

Since currently the amount spent is widely variable among F1 teams, we expect that due to the 2021 cap imposed, Ferrari could opt for increasing the 2020 budget. In 2018 the budget was set at €469M (10% higher than the previous year) and we estimate it could overcome the €520M in 2020 in order to exploit the ultimate chance to invest for reducing the gap against Mercedes, after they have won the sixth championship title in a row. Ferrari could afford these investments both from an infrastructure and cash flow point of view.

For these reasons we expect a decrease in terms of R&D expenses from 2021, which will eventually help pushing the EBIT higher over the 25% target for 2022. At the same time, due to the cap that will take place from 2021, we expect that Ferrari could shift an amount that they used to spend in F1 to capitalized R&D costs, which are not related to F1 activities. In fact we assumed a spike in R&D capitalization in 2020 due to model mix improvement during next 4 years, followed by a normalization to in next years tracking the estimated CAPEX trend. We estimate that it will reach a 9,3% ratio on revenues in 2020, while normalizing in 2022 to 7% on revenues (for comparison, in 2017 it was 5.4%).

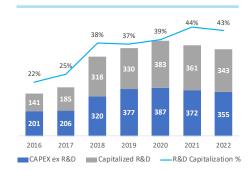
In our analysis capitalization would be key from 2020, both for offsetting the higher R&D required by the Purosangue SUV, the hybridization process and for benefitting in terms of margin from a lower level of R&D expensed (i.e. implied positive benefit due to F1 cap budget that will force Ferrari to lower R&D expense). We estimate an increment in the R&D capitalization ratio (on total R&D costs) over the next years, with a level of 37% in 2019 compared to 38% in 2018, followed by a slight increase in 2020 in which the capitalized R&D more than offset the expected spike in F1 R&D expense. Capitalized R&D will weight more in the following two years due to the significant decrease in in F1 R&D expenses (under the new agreement), reaching a 43% ratio by 2022. In our analysis, based on the 2018 results, a hypothetical increase of 500bp in the R&D capitalized ratio (i.e. to 42.6%) would increase the EBIT margin by 125bps equal to c. €43M, while the same hypothetical spike, based on our 2022 forecast (i.e. 47,6% R&D capitalized ratio), would lead to just 83 bps (€40M) benefit in EBIT margin. It implies a benefit by 2022 in terms of R&D expense cost-saving, which would have a lower impact on margins by 2022.

### Capitalised R&D (Exhibit 47)



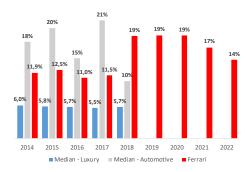
Source: Reuters data and Team forecast (Team representation)

### CAPEX vs Capitalised R&D (Exhibit 48)



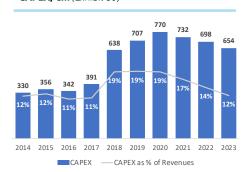
Source: Reuters data and Team forecast (Team representation)

### CAPEX as a % of Sales (Exhibit 49)



Source: Reuters data and Team forecast (Team representation)

### CAPEX, €M (Exhibit 50)



Source: Reuters data and Team forecast (Team representation)



### **Capital Expenditures**

We considered a median CAPEX on Sales ratio for the luxury peers (i.e, Kering, Hermes, LVMH, Richemont), which remained steady from 2014 to 2018 at 6%. This value is significantly lower than the median of the automotive peers (Aston Martin, Tesla, Rolls Royce, Audi). The latter was never less than 15% and on average three times higher than luxury CAPEX in the period 2014-2018. Although Ferrari's aim is to be compared to luxury names, its CAPEX level is undoubtedly a key differentiator since on average it has been two times higher from 2014 to 2018. Moreover, Ferrari has targeted €3.6Bn CAPEX from 2018 to 2022. In our view, although CAPEX represents an important "barrier to entry", typical of the automotive sector, they could potentially threaten considerably Ferrari's cash flow generation, for the previously exposed considerations related to technological needs and R&D expenses for innovations. The CAPEX is expected to reach a peak of 19% ratio on revenues in 2019 and 2020, narrowing the distance from Aston Martin and Rolls Royce higher spenders automakers among the peers' sample considered, which had a 2014-2018 average CAPEX on sales ratio respectively of 31% and 27%. The key driver that will favor the ramp up will be the investments into hydridisation in order to meet the 60% hybrid mix target in 2022. It will eventually moderate thereafter, normalizing in 2023 to the 12% ratio on Sales, in line with 2014-2017 average (11,7%).

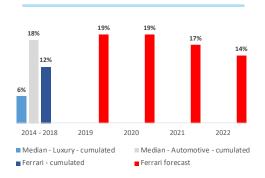
### Renegotiations & changes in the debt structure

The 2500 million debt related to the 2015 capital renewal consists of (i) a bridge loan of 500 million, (ii) a term loan of 1500 million and (iii) a revolving line of 500 million. In 2016 the bridge loan was replaced by the 2023 bond while the term loan was renegotiated thanks to an early repayment programme and the issue of the 2021 bond for a nominal amount of 700 million. In 2017 the revolving line remained undrawn as it was no longer necessary. In 2019 Ferrari issued bonds for 300 million in two tranches, 150 million with maturity 2029 and another 150 million with maturity 2031. Over the years, Ferrari has renewed its debt by acting on several aspects. It has lowered the cost in terms of financial charges taking advantage of the current interest rate situation and has optimized the debt profile with progressive issues of a relatively low amount. As of 2019, the long-term debt structure has an optimized profile: lower charges in relative terms and maturities spread over time.

### The asset evolution in response to growth

The turnover of Ferrari is constantly growing and for this reason we have forecasted that the value of the inventories to continue to follow the trend of the recent years. If an intensive business capital is growing then the total inventories will have to grow accordingly to support the growth of deliveries and business in general. By entering successful new businesses to diversify the sources of revenue, we have forecasted a steady growth in goodwill that will reach a value of €885,15 million in 2023. We have forecast that the growth of tangible and intangible assets will be slower from 2021 onwards due to a stable CAPEX dynamic and consistent with a period without spikes in investments.

### CAPEX on Sales % - 2014-2018 cumulated vs Ferrari forecast (Exhibit 51)



Source: Reuters data and Team forecast (Team representation)

# Net debt on equity and LT debt on equity (Exhibit 52)



Source: Team representation on historical data and team forecast

# Equity multiplier as a function of total assets (Exhibit 53)



Source: Team representation on historical data and team forecast



### Liabilities & equity changes: new independent ways

The retained earnings that make up the equity are negatively impacted by the €1.5Bn buyback plan with a time horizon up to 2022; in addition, Ferrari aims to increase the shareholders' remuneration through the increment of dividends, eventually to reach a payout ratio of 30%. During the 2019, an amount of 387 millions in shares has been repurchased from the market (with a positive benefit in terms of share price) and Ferrari collected part of the advance payments for the Monza SP1 and Monza SP2 cars. These advances are one of the reasons for the strong cash generation in 2019 and it is the building block why we have forecast a spike in the relative customer advances from 2019 onwards. In addition, the accounts payable were expected to grow until 2023 due to the increase in turnover of special and generally high standing cars. To conclude, in 2017 and 2018, the maximum amount of securizations eligible with annual useful life was increased of 150 million. We forecast that this process will continue in the coming years in order to support the growth of the business with a strong optimization in the timing of cash availability. Ferrari is progressively aiming to be less dependent on the banking system.

### **Working Capital**

The evolution of the accounts payable and customer advances had a strong positive impact on working capital (WC) dynamics in 2019 of almost 200 million. Based on the change in working capital structure in 2019, we forecast a generally positive trend until 2023. Moreover, we estimated that Ferrari is going to improve just in the long run its working capital capabilities: by eliminating excessive WC which will eventually improve the ROIC by 30 bps on average (Source: PwC, Working Capital Report 2019/20). Also, the Automotive sector has experienced the largest deterioration in performance in the past year. This has been driven by an increase in DSO of 8 days, with median of 61 DSO, 59 DIO and 64 DPO.

### An enviable EBITDA trend

Based on what has been said about the evolution of the Capital Expenditures, the Conversion Ratio of EBITDA in the transition periods is greater than 60%. In the periods near the peak of Capital Expenditures (2020), the Ratio drops to almost 45%. For this reason, the dynamic of the Conversion Ratio values depends, on the one hand, on a Capital Expenditures which tends to flatten in the years after 2020 and, on the other hand, derives instead from a positive evolution of EBITDA thanks to a favorable price mix ratio.

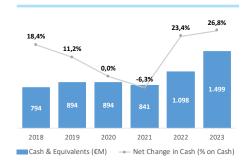
The positive trend in EBITDA translates into strong covenants against third-party contributions. If we exclude 2014 and 2015, which were affected by an extraordinary capital restructuring operation, Ferrari's net debt coverage decreases progressively from year to year.

### Customer advances in € (Exhibit 54)



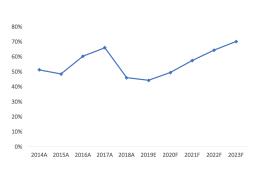
Source: Team representation on historical data and team forecast

#### Cash evolution in € (Exhibit 55)



Source: Team representation on historical data and team forecast

### Conversion Cycle (Exhibit 56)



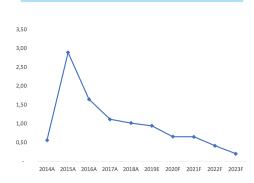
Source: Team representation on historical data and team forecast



In relation to these aspects, we have predicted that by 2023 Ferrari will reach a liability coverage ratio of less than 50%, considering the total amount of cash and equivalents. In conclusion, taking into account the total liquidity in place, Ferrari will need to carry out financing activities in order to offset its debts.

The positive trend in net profit is the result of a sharp increase in overall profitability (EBITDA & EBIT). The trend in net profit appears flat in the period 2018-2019 due to the accounting effect of the tax benefit cumulated by the Patent Box of €141 mln relating to several years. The profit, net of this extraordinary item, is in constant growth; as a result, we have forecasted that the net profit in 2022 will exceed €1 Bn. Ferrari's payout policy for the following years has been revised upwards, expecting to reach a payment of at least 30%. This policy will lead Ferrari to distribute a total dividend in 2022 of over €300 mln, and, at the same time, is accompanied by the recent announcement of a buy-back of €1500 mln to be completed by 2022. The ultimate purpose of Ferrari is to achieve an overall increase in shareholder sremuneration in terms of both dividend yield and capital gain yield, which will have an overall positive impact on the return required by the stockholders.

### Net Debt on EBITDA (Exhibit 57)



Source: Team representation on historical data and team forecast

### **Discounted Cash Flow**

### Why you should ramp up the Ferrari's stake in your portfolio

With the DCF analysis we foresee a target year end implied price of €172, that allows the investor to bear an upside potential of 11,42% as per 30th January 2020 analysis. Firstly, we started from the estimation of the prospective flows for the forecast years (i.e. 2020 - 2023), and then we discounted the value back in order to achieve our price of €172 per share, deriving from an overall €32.609 M Equity Value. In particular, we believe our four year DCF Analysis supports a €33.614 M valuation in terms Enterprise Value (EV), based on several assumptions that are now going to be furtherly detailed. This results in a BUY recommendation for Ferrari NV and it is consistent with a Montecarlo simulation (where the most frequent number of observations are set between €128 and €178) and a multiple peer analysis that is extensively discussed in the next chapter.

BUY Recommendation 11,4% potential upside with an implied share price of €172

### Ferrari's margins breakdown (Exhibit 58)

	2019	2020	2021	2022	2023
Total Revenues	3.766,59	4.101,78	4.419,35	4.876,65	5.429,00
Growth Rate (%)	10,10%	8,90%	7,70%	10,30%	11,30%
EBITDA	1.270,06	1.526,28	1.728,03	1.967,08	2.193,93
EBITDA Margin (%)	33,70%	37,20%	39,10%	40,30%	40,40%
EBIT	917,55	1.061,06	1.186,26	1.359,57	1.565,15
EBIT Margin (%)	24,40%	25,90%	26,80%	27,90%	28,80%
EBT	875,55	1.038,39	1.163,59	1.336,89	1.542,47
EBT Margin (%)	23,20%	25,30%	26,30%	27,40%	28,40%



Provision for Income Taxes	-176,3	-241,24	-270,32	-310,59	-336,46
Effective Tax rate (%)	20,10%	23,20%	23,20%	23,20%	21,80%
Depreciation/Depletion	352,5	465,22	541,77	607,51	628,78
∆ Working Capital	254,24	46,48	-118,1	27,85	30,99
Cash From Operating Activities	1.306,00	1.308,85	1.316,93	1.661,67	1.865,78
CAPEX	-707	-769,57	-732,45	-698,24	-653,5
Free Cash Flow to Firm	599	539,28	584,48	963,43	1.212,28

Source: Historical data from Ferrari's data and team estimates

### **Weighted Average Cost of Capital**

We have arrived at a Weighted Average Cost of Capital (WACC) of 6,59% for Ferrari. A detailed breakdown of our WACC assumptions is presented in the table on the right. Overall we found the cost of equity to be 12,21%, while the cost of debt (pre taxes) is 1,68%. This resulted with a risk-free rate of 1,28% and a tax rate of 23,23% forecast for 2020 onwards.

### **Cost of Equity**

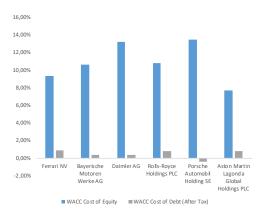
Our analysis considers that the most reliable way to estimate Ferrari's cost of equity is by questioning what would be the most consistent equity risk premium required by a potential Ferrari's investor. This concept was carried out by the building block that estimating Ferrari's cost of equity through its reference Beta (4Y weekly computed) against FTSE MIB index would have led to a biased estimation and a lack in terms of statistical power. In fact, the regression showed a R² value significantly lower than the threshold set as sufficiently significant (0.60). This fact testifies how the variance of the Ferrari's stock returns could be mainly explained by the firm-specific risk rather than the market/systemic risk.

In particular, we've also discarded the hypothesis to compute the cost of equity starting from a pooled Beta value which would have taken into account a weighted average Ferrari's peers Beta estimation of both automotive tier and luxury one. The main reasons are related to the following key points: (i) it would not be consistent to consider the betas of comparable companies if they are included into different indeces, as it would not comply with the conceptual framework of considering the same investment portfolio for beta calculation. (ii) A lack of goodness of the beta estimate fit, as the R² resulting from each peers' beta regression (4Y weekly) with its country reference index was not significant from a statistical point of view (in each cases < 0.60). As mentioned before, this fact testifies once again how the variance of the majority of peers' stock returns considered embedded more idiosyncratic risk rather than systemic. These considerations led us to put aside the estimation of the cost of equity through the traditional CAPM model.

### Market Data

Risk Free (Includ. Ferrari's Country Risk Premium)	1,28%
Ferrari's Credit Spread	0,39%
Effective Tax Rate (2020F)	23,23%
Debt to Equity Ratio (2020F)	1,06
Ferrari's Implied Risk Premium	10,93%
Cost of Equity	12,21%
Cost of Debt (pre taxes)	1,68%
WACC	6,59%
Growth Rate	3,23%

### Cost of Equity & Debt (Exhibit 59)



Source: Bloomberg data, Team estimates (Team representation)



Therefore, we carried out a different approach which is not bounded by a market sensitivity coefficient, but it starts from the estimation of the implied risk premium required by a potential Ferrari's investor. Specifically, we've taken into consideration both the automotive sector and the luxury sector. We have computed the CAGR for each peer in order to obtain a Compounded Annual Rate of Return over last 10Y stock prices time series (shorter ones if not available). Therefore, we've normalized the Annual Rate of Return for each peers by computing the Unlevered return: this allows us to eliminate the additional risk from each firm's capital structure (and effective tax rate) and eventually to visualise the pure business risk. Consequently, by subtracting a consistent risk free component for each peers (based on both each reference market and historical perspective), we have defined an Unlevered Implied Risk Premium. Each of the latter was then weighted by each peer's Market Cap (€ converted), in order to obtain a weighted average Ferrari's risk premium. Finally, this average was re-levered based on Ferrari's capital structure, taking into account (i) Ferrari's Debt to Equity Ratio 2020E (1,06) and (ii) the effective tax rate 2020E (23,23%). In this way we were able to obtain a 10,93% equity risk premia that would be consistent with the one demanded by a potential Ferrari investors, which along with a suitable risk free rate, led us to an overall Cost of Equity of 12,21%.

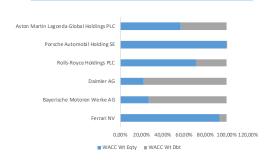
### **Risk Free**

For the definition of an appropriate risk free rate required for cost of equity and cost of debt, we have distinguished between two different components: (i) the reference risk free rate set equal to the 10Y Italy interest rate, adjusted by (ii) a country risk premium, which take into consideration Ferrari's exposure to each different countries in terms of shares of annual sales. For the computation of the latter we weighted each country'a spread against the 10Y Italy interest rate by the percentage of Ferrari's sales made in the considered country. We obtained a country risk premia equal to 0,33%, while the overall risk free rate estimated is equal 1,28%.

### **Cost of Debt**

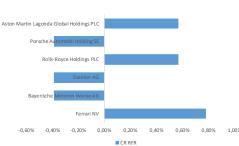
It was computed by adding the estimated 0,40% Ferrari's credit spread to the sum of risk free rate as described above. The former is defined by computing the outstanding amount-weighted-average credit spread, considering the credit spread applied both in 2016 and 2017 over its reference maturity Italy interest rate (respectively 7Y and 4Y maturity), at the issuance date of respectively the 03/2023 and 01/2021 bonds. The pre tax cost of debt estimated is equal to 1,68%.

### Weight of Equity & Debt (Exhibit 60)



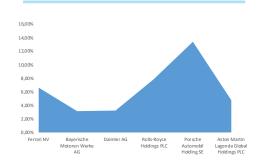
Source: Bloomberg data, Team estimates (Team representation)

### CR RFR (Exhibit 61)



Source: Bloomberg data, Team estimates (Team representation)

### WACC comparison (Exhibit 62)



Source: Bloomberg data, Team estimates (Team representation)



### **Terminal Value**

Our Growth Rate assumption for the computation of the Terminal Value is based on the estimation of a long term Ferrari's business growth. It relies on expected Revenues, which is Ferrari's most appropriate measure that have showed the highest level of linearity, consistent with the concept of stable and sound perpetuity Ferrari's growth in the long run. Our approach is based on the determination of a decay factor, in order to simulate a decreasing long run growth time series. Specifically, the decay factor estimation has been performed using the average of coefficients, computed as ratios between growth rate at time T and T-1 in the period 2018-2023. The decay factor was applied starting from the 2023F Ferrari's Revenues growth rates and so forth, up to a defined floor threshold at which the simulated growth rate approaches to zero, in order to get a long run growth rate

1-yr fw Implied Ferrari's Price - Sensitivity Analysis - Baseline Scenario

		Growth Rate					
		1,73%	2,23%	2,73%	3,23%	3,73%	4,23%
	5,09%	177 €	207 €	250 €	316 €	431 €	682 €
	5,59%	153 €	175 €	205 €	248 €	313 €	427 €
	6,09%	135 €	152 €	174 €	203 €	245 €	310 €
WACC	6,59%	120 €	134 €	150 €	172 €	201 €	243 €
×	7,09%	109 €	119 €	132 €	149 €	170 €	199 €
	7,59%	99 €	108 €	118 €	131 €	148 €	169 €
	8,09%	91 €	98 €	107 €	117 €	130 €	146 €
	8,59%	83 €	90 €	97 €	106 €	116 €	129 €

1-yr fw Implied Ferrari's Return (as of 31.01.2020 Closing Price) - Sensitivity Analysis - Baseline Scenario

		Growth Rate					
		1,73%	2,23%	2,73%	3,23%	3,73%	4,23%
	5,09%	15%	34%	62%	105%	179%	341%
	5,59%	-1%	14%	33%	60%	103%	177%
	6,09%	-13%	-2%	12%	32%	59%	101%
WACC	6,59%	-22%	-13%	-3%	11%	30%	57%
×	7,09%	-30%	-23%	-14%	-4%	10%	29%
	7,59%	-36%	-30%	-23%	-15%	-4%	9%
	8,09%	-41%	-37%	-31%	-24%	-16%	-5%
	8,59%	-46%	-42%	-37%	-32%	-25%	-17%

The growth rate obtained through this computation is coherent with the Long Term Growth Rate (LTGR) group panel considered, including Hermes (3,1%), Moncler (3,4%), Kering (2,8%) and Brunello Cucinelli (4,2%). The peers data have been obtained by the findings of EY in their publication "Tailoring the Luxury Experience: the Luxury and Cosmetic Financial FactBook 2019 Edition".



### **Stress Test Scenario Analysis**

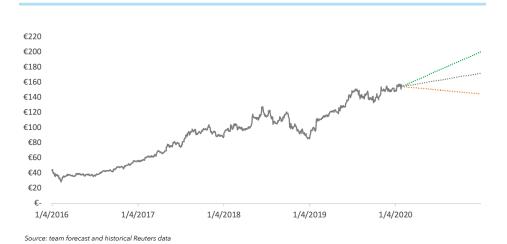
Once defined the 2020F target price we assessed the confidence in our valuation stressing the starting line in the DCF analysis through the simulation of two different scenarios, other than the baseline one, previously defined. The simulation is performed testing the potential impact on Ferrari's revenues caused by two best effort basis stress scenario (adverse and most favorable one). The adverse scenario implies -2% decrease in the YoY change (log computed) both in price contribution and shipments contribution to 2020-2023 changes in Cars' and Spare parts Revenues, while the most favorable one assumes an +2% increase in the YoY change of both components. Discounting back the strip of adverse (favorable) scenario stressed future cash flows, we obtain a €-5.162M (€+5.372M) change in Equity Value from baseline scenario, which corresponds to a -15,83% (+14,15%) in 2020F implied price, compared to baseline scenario. The net implied return would be -6,22% (+29,78%) on the current Ferrari's trading price, as of 30.01.2020.

Note that "2020E and 2022E Adjusted EPS diluted calculated using the diluted number of shares at June 30, 2018, assuming no further shares buyback", as reported in Ferrari's "Company Presentation Investor Meetings December 2019"

Value in € M, if not differently specified	Adverse	Baseline	Favorable
Enterprise Value	28452,29	33614,03	38986,43
Net Debt Incl. Pref.Stock & Min.Interest	1005,34	1005,34	1005,34
Equity Value	27446,95	32608,7	37981,1
# Shares diluted	189,551	189,551	189,551
Implied Price per Share	144,8	172,03	200,37
Return on 30.01.2020 Price	-6,22%	11,42%	29,78%

Moreover, we represented the implied share price with three key scenarios:

### Stock Price | Scenario Analysis (Exhibit 63)



Price (in €)	Equity Value		
200,37	37981,1	<u>Upside</u>	29,78%
172,03	32608,7	<u>Base</u>	11,42%
144,80	27446,95	<u>Downside</u>	-6,22%

Fundamentals | Scenario Analysis (Exhibit 64)

	Scenario Simulation (YoY Change 2020 to 20					
	Shipments Contrib. to Cars' &	Price Contrib. to Cars' &				
	Spare parts Revenues	Spare parts Revenues	Resulting Cars' and Spare parts Revenues (€ M)			
	Change - Drift %	Change - Drift %	2020	2021	2022	2023
Adverse 2020-2023	-2,00%	-2,00%	3.150,25	3.539,41	3.984,69	4.436,01
Baseline 2020-2023	0,00%	0,00%	3.278,81	3.683,85	4.147,31	4.617,05
Favorable 2020-2023	2,00%	2,00%	3.412,62	3.834,19	4.316,56	4.805,47



### **Relative Valuation**

Regarding the valuation with multiples of comparable companies, we took into consideration both EV/EBITDA and P/E, dividing the analysis into two different steps: (i) a preventive valuation in order to assess whether Ferrari could be valued according to luxury multiples or automotive multiples (*Value Map Method*), (ii) and the traditional Multiple Valuation, which relied on 2020F consensus multiples for luxury tier peers.

### **Value Map Method**

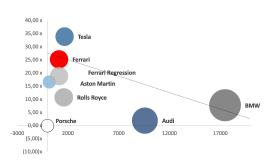
The approach based on the Value Map is to be meant as a sort of 2019 backward analysis, which allows us to track Ferrari's multiple by comparing its EBITDA (Earnings) value with that of comparable companies. The analysis was carried out for both the Automotive and Luxury sectors, including most relevant Ferrari's peers. In this scenario, the values of multiples taken as a reference are a median of the multiples time series of each company for the Latest Year (LY - 2019). The latter represented the building block to assess a value that would be capable of encompass the variations occurred during the entire year. Therefore, to create the Value Map, we calculated the median of EV/EBITDA (P/E) values of the reference peers, which were then used, together with the EBITDA (Earnings) value, in order to build a Scatter Diagram. Subsequently, we were able to plot a regression line in order to predict the implied value of Ferrari's multiple, based on the current value of Ferrari's EBITDA (Earnings) as per LFY. The Value Map represents the first stage of our multiples evaluation, which confirmed what emerged from the previous comparison's analysis with the peers, on the basis of which we are able to establish, with a specific degree of confidence, that Ferrari is closer to the luxury sector companies in terms of valuation.

### **Multiples Valuation**

We've approached the valuation in terms of what we believe the market will pay for €2.194M Ferrari's EBITDA by 2023 and then we discounted that value back to achieve our 2020 target price. In particular, we valued Ferrari at an EV/EBITDA multiple of 18,46x, given by an Enterprise Value of €40.514 M by 2023. Eventually, we discounted back by using a WACC of 6,59% as stated in previous analysis, which leaves a target price for Ferrari of €171,17 (+10,86% upside of 30.01.2020 closing price). The 18,46x valuation multiple was performed by computing the average between 2020 forward consensus Hermès' EV/EBITDA (24.05x) and other luxury peers considered (12.88x). Although the 2019 multiples stemmed from the Value Map allowed us to define the luxury tier as the closest to Ferrari's multiple, only Hermes showed a median EV/EBITDA (25,09x) in line with Ferrari's one (25,21x). The two companies' multiples are far greater than other peers, as the tier median multiple excluding Ferrari and Hermes is 14,99 for 2019, while the average 2020 forward consensus value is 12,88x. The Ferrari's consensus estimated EV/EBITDA for 2020 is 18,31x, lower than Hermes one (24,05).

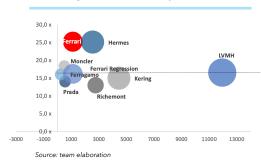
Values in € M, if not differently specified	Valuation		
Blended Hermès/Luxury EV/EBITDA	18.46x		
2023F EBITDA	2193.93		
Enterprise Value (as of 31/12/2023)	40150.44		
Net Industrial Debt (2019)	1200.22		
Equity Value (as of 31/12/2023)	32446,.2		
Target Price (€)	171.17		

### Value Map EV/EBITDA - Automotive (Exhibit 65)



Source: team elaborati

### Value Map EV/EBITDA - Luxury (Exhibit 66)

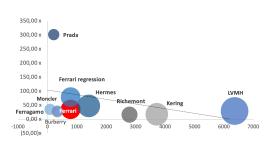


Value Map P/E - Automotive (Exhibit 67)



Source: team elaboration

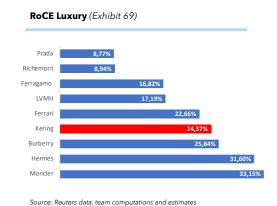
Value Map P/E - Luxury (Exhibit 68)



Source: team elaboration



Company	EV/EBITDA FW - 2020	020 Median - 2019			
Kering	12,85x	14,99x			
LVMH	12,96x	16,55x			
Hermes	24,05x	25,09x			
Richemont	11,63x	13,02x			
Prada	14,62x	14,04x			
Ferragamo	11,47x	16,03x			
Burberry	10,29x	12,48x			
Moncler	16,35x	18,38x			
Average	14,28x	16,32x			



### Bags vs Cars: two sides of the same coin?

Below the key reason why we believe Ferrari deserves a premium valuation:

- Visibility Premium: the demand for Ferrari's cars is clearly ahead of the offer, and, in fact, all cars are sold on the waiting list. This misalignment determines the fact that Ferrari has a complete visibility on the cash flows and profits that will be generated in the following months, and, consequently, Ferrari is perceived by investors as a more defensive security.
- **Pricing Power**: in the 2019 Brand Finance Global 500 list, Ferrari was ranked #1 as the strongest brand in the world, ahead of names such as McDonalds, Rolex, Coca Cola.
- Unique Client Base: Ferrari's management team has repeatedly specified that the primary objective of the company is to pursue a so-called controlled growth, i.e. an emphasis on value upon volume. At the same time, this objective is consistent with the desire of the company to expand the customer base, focusing on customer loyalty.

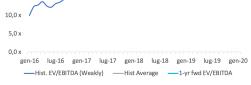
### • High Profitability

Ferrari is currently trading on 19,8x 1-yr fwd EV/EBITDA (based on 30.01.2020 closing price). This is slightly above than the historical average of 19,1x, however we believe a higher valuation is sustainable and foreseen due to the key points mentioned above. We also appreciate that Ferrari's shares closing price have never been traded below the historical long-term average during 2019 (as of 30.01.2020), showing an incredible upward trend that we believe to be maintained in next year, especially thanks to Ferrari's attitude to focus on creating value upon value, from which could be more and more benefit in next years.

A topic that is increasingly debated concerns in particular the comparison between Ferrari and Hermes, since Hermes is the highest-valued luxury stock at 47x (P/E) and 25.2x (EV/EBITDA) (2019 mean), and for this reason represents a sort of benchmark for the Maranello car manufacturer. Therefore, Hermes is Ferrari's closest peer from a valuation perspective.

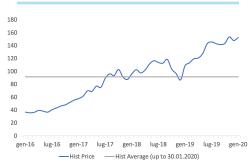
# 30,0 x 25,0 x 20,0 x

Historical vs Forward EV/EBITDA (Exhibit 70)



Source: Reuters data, team computations and estimates

### Historical Price (Exhibit 70)



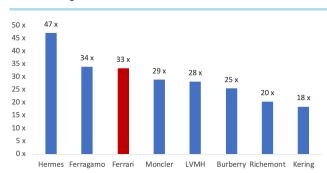
Source: Reuters data, team computations and estimates



### **Price Earnings**

As widely discussed above, the analysis carried out on the reference peers, both for the luxury sector and for the automotive sector, has shown how Ferrari is closer to the luxury companies. Specifically, we have seen how Hermès represents a sort of reference benchmark for Ferrari, which the Maranello company intends to inspire itself to further increase the strength of its brand. Graphically, we can observe how Ferrari's EV/EBITDA values in the last 4 years tend to converge with those of Hermès, unlike what happens for the Price Earnings. For this reason, from a valuation perspective, we believe that EV/EBITDA is a much more reliable metric than Price Earnings for direct comparison between the two companies.

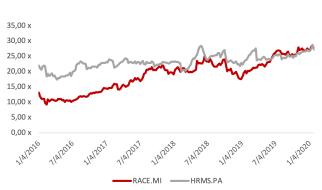
### Price-Earnings 2019 (Exhibit 71)



Source: Team elaboration on company data

### , ,

**EV/EBITDA Ferrari vs Hermes** (Exhibit 73)



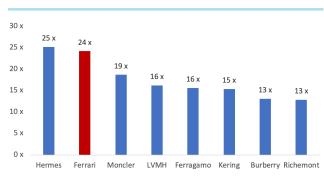
Source: Team elaboration on company data and estimates

### **EV/EBITDA - Ferrari vs Mean (Hermes&Average)** (Exhibit 75)



Source: Team elaboration on company data and estimates

EV/EBITDA 2019 (Exhibit 72)



Source: Team elaboration on company data

### EV/EBITDA 2019 (Exhibit 74)



Source: Team elaboration on company data and estimates

P/E - Ferrari vs Mean (Hermes&Average) (Exhibit 76)



Source: Team elaboration on company data and estimates

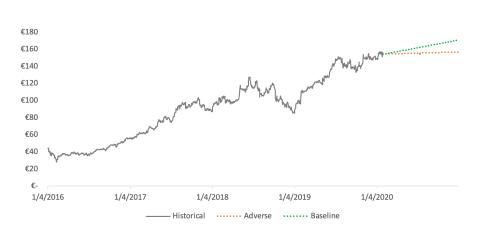


### **Stressed Scenario**

We asses our 1-yr estimation stressing forecasted EBITDA, taking into consideration the negative impact and the consequences that could have the luxury's sector downturn, due to the potential crisis affecting Chinese demand for luxury goods. In our adverse scenario aimed to assess Ferrari's profitability in terms of a -30% shrink in revenues coming from Brands and Sponsorship activities. The simulation led to the resulted reported in the table below. The adverse scenario implies a -8% decrease in 12/23F EBITDA from baseline, which correspond to a €-3.260M change in 12/23F Enterprise Value, led to a discounted 1-yr Enterprise Value of €30.760M (compared to €33.452M from baseline case). The implied EV/EBITDA 1-yr fw would fall to 20,2x from 21,9x of baseline valuation, while the implied share price would drop by -8,30%, decreasing to a 1-yr target price value of €156,97 (compared to €171,17 estimated in baseline), which would represent just 1,67% appreciation respect to the current market price (as of 30.01.2020).

Value in € M, if not differently specified	Adverse	Baseline
EBITDA 12/23F	2.017,40	2.193,93
Enterprise Value 12/23F	37.250,91	40.510,44
Enterprise Value 1-yr at (12/20)	30.760,09	33.451,65
Equity Value 1-yr (at 12/30)	29.754,75	32.446,32
Implied EV/EBITDA 1-yr fwd	20,2 x	21,9 x
# Shares diluted (*)	189,551	189,551
Implied Price per Share	156,97 €	171,17 €
Return on 30.01.2020 Price	1,67%	10,86%

### Stock Price | Scenario Analysis (Exhibit 77)



Price	EBITDA	Implied 1Y EV/ EBITDA	// Upside	
171,17 €	2193,93	21,9x	10,86%	
156,97 €	2017,40	20,2x	1,67%	

### EV/EBITDA Valuation - Results

EBITDA 12/23F	2.193,93
EV/EBITDA	18,5 x
Enterprise Value 12/23F	40.510,44
Enterprise Value 1-yr at (12/20)	33.451,65
Equity Value 1-yr (at 12/30)	32.446,32
Implied Price	171,17€
Return on 30.01.2020 Price	10,86%
# Shares diluted	189,551
WACC	6,59%

### P/E Valuation Results

Net Income 12/23F	1.205,39
P/E	33,7 x
Equity Value 12/23F	40.570,25
Equity Value 1-yr (at 12/30)	33.501,04
Implied Price	176,74 €
Return on 30.01.2020 Price	14,47%
# Shares diluted	189,551
WACC	6,59%

Implied 1-yr fw mulltipl es	2020	2021	2022	2023
EV/ Sales	6,9 x	7,3 x	7,8 x	8,2 x
EV/ EBIT	26,6 x	28,2 x	30,1 x	31,5 x
EV/ EBITD A	18,5 x	19,6 x	20,9 x	21,9 x
P/E	33,7 x	35,4 x	38,1 x	42,1 x

Implied current mulltiples	2020
EV/Sales	7,4 x
EV/EBIT	28,5 x
EV/EBITDA	19,8 x
P/E	36,7 x

Based on 30.01.2020 closing price, Ferrari is currently trading at "X' times 2020F estimated Sales/EBITDA/EBIT (or Earnings) in 1 year (i.e. as of 31.12.2020)



### **Risk Assessment**

# Strategic: increasing expenses in R&D due to budget constraints in F1 Championship

From 2021 onwards the Federation will peg the budget for the teams competing in Formula 1 Championship to \$175 Million. The average Ferrari annual budget for F1 amounts to €422 Million (Avg 2014-2018). The company is expected to increase its budget for 2020 competition in order to fill the gap with Mercedes and extend its hedge with the other teams. Since Ferrari exploits the know-how achieved in F1 in order to design and improve its vehicles, the expenses in R&D are expected to increase to triple between 2020 and 2021, from €99 Million to €290.

### **Strategic & Reputational**

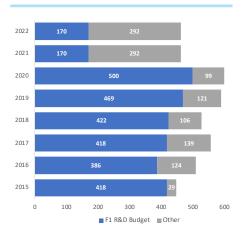
Ferrari is expected to release three models every year in the following five years, replacing the old ones in GT and sport ranges, while others will allow the company to enter in new segments as Purosangue for the SUV. Furthermore, the company is expected to develop and apply new technologies in upcoming models. The design of future models represents a key factor in the evolution of the brand, as such it must take into account the following opportunities and threats:

- I. SR1: the implementation of hybrid and electric vehicles might disrupt the image of the brand, since the company is known and appreciated for the features of its unique combustion engines. In order to deal with this risk, the company could offer hybrid plug-in as optional, in order to please the whole customer base.
- II. **SR2**: the increase in production volumes may negatively affect the perception of the brand, filling the gap with minor and less exclusive (in terms of number of vehicles sold) luxury automotive brands (i.e. Porsche, Lamborghini and Rolls Royce).
- III. **SR3**: the new models should take into account the changing needs of actual and future clients. Asia-Pacific region is characterized by the highest percentage amount of High Net Worth Individuals on the overall population, furthermore the average age of HNWI is decreasing in the region. On average APAC contributes for the 13.18% of the vehicles sold and the 11.68% of the revenue; given the above-mentioned characteristics, the potential market share is set to increase in the following years. In order to increase its presence in the region and the visibility of the brand the company should diversify its marketing investment out from Formula1 (since it already exploits all F1 events in the region Bahrain, China, Australia, Singapore, Japan)

### **Strategic & Compliance**

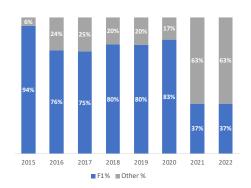
In the past years, major international institutions have pushed to increase the commitment of the developed countries in decreasing the level of emissions. As a result, the changes in regulation have significantly affected the automotive industry among others. Several countries are promoting the shift to hybrid and electric vehicles through economical incentives, while in the following years they might discourage the purchase of cars that exploits combustion engines through sanctions and taxes on the final purchaser. The evolving regulation represents one of the key risks posed to Ferrari business, since it will affect the features of the vehicles as well as the consumption habits of the customers in the future.

### Ferrari vs Others F1 R&D Budget (Exhibit 78)



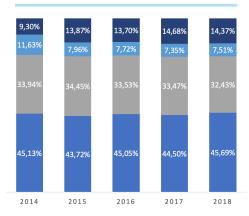
Source: Ferrari data from annual report & Team Estimates (Team representation)

### Ferrari vs Others F1 R&D Budget % (Exhibit 79)



Source: Ferrari data from annual report & Team Estimates (Team representation)

### Customer base by region (Exhibit 80)



Source: Ferrari data from annual report (Team representation)



### **Operational**

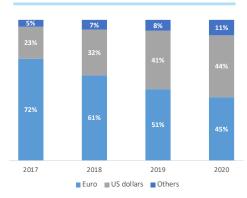
The entire production depends on the facility located in Maranello, if it would become unavailable for any given reason as a calamity (seismic activity level 2 moderate risk), the production may slow or even be stopped.

### **Financial**

Ferrari is exposed to two types of financial risks: the major source is given by its exposure to shifts of the cross rate between currencies, while the second is given by interest rates, especially LIBOR rate since its revolving lines of credit are pegged to it. Both the asset classes are affected by macroeconomic events as the trade war and sources of uncertainty such as Brexit outcome (FBO). The repercussions of the above-mentioned factors could affect directly the company and indirectly impacting in the purchasing power of the clients or through the adoptions of duties (escalation of the trade war FTW) on the shipments.

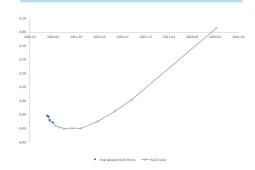
- I. F1 | Forex: focusing on the currency risk, Ferrari is mainly exposed to Euro, because most of the sales (45% in 2019) and revenues (roughly 40%) come from EMEA, furthermore the production takes place in Italy and all the costs are denominated in Euros. The second biggest exposure is in USD (estimated in 41% in 2019), even if the average of vehicles sold in US stands of 33% of the sales. Furthermore the percentage of USD on the overall currency exposure is characterized by a positive trend. The residual exposure amounts at less than 10% of the total, and is mainly constituted by Pound Sterling, Australian, Canadian and Honk Kong Dollars. Even if Ferrari hedges its position in foreign currencies within a time horizon of 1 year (with both Forward, SWAPs and structured derivatives in order to reduce this uncertainty), macroeconomic shifts and other major events may cause changes in the cross rates of great magnitude. Our view, Bloomberg forecast and strategists opinion is that the Euro will appreciate against the USD in 2020 (reaching a \$1.18-1.20 rate), therefore Ferrari's strategy to underwrite derivatives products with a Strike price lower that \$1.1150 will pay off.
- II. **F2 | Interest Rates**: Ferrari is exposed to shifts in interest rates because of the structure of its debt. The main constituent is given by bonds with an expiration between 1-4 year and a weight on the overall debt close to 58% of the overall debt, and securitizations with an expiration between one and four years and a weight of 35%. The bonds are divided as follow: one with expiration in January 2021 with a notional of 700 Million Euros with a fixed coupon of 0.25%, the other wit expiration in March 2023 with a notional of 500 Million Euros and a fixed coupon of 1.5%. The shift in interest rate is not likely to affect this kind of financial instruments, since the rate is fixed. The revolving securitizations weight for roughly 600 Million Euros and are pegged to the Libor plus a spread that ranges between 002065-120 basis points. Since the short term financing of the company is linked to floating interest rate, a sudden shift of the latter may cause an increase cost for the company. Nonetheless, we believe that the high level of liquid financial resources of the company will prevent a liquidity crisis.

### **Currency Exposure** (Exhibit 81)



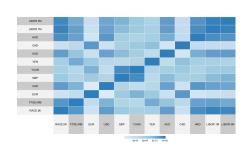
Source: Ferrari data from annual report & Team Estimates (Team representation)

# **Yield curve term structure & interpolation** (Exhibit 82)



Source: Team representation on Bloomberg data

# Correlation between the stock price of Ferrari and the main Currencies and Interest Rates (Exhibit 83)



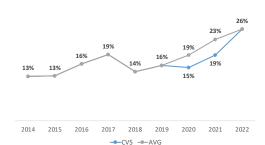
Source: Bloomberg & FRED data (Team representation using R-Studio) For a detailed view please refer to appendix 11



### Wuhan Coronavirus (2019-nCoV)

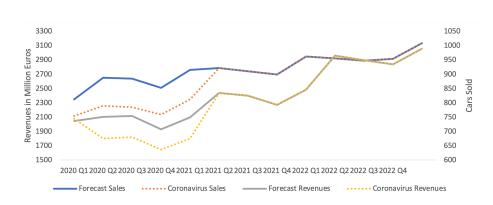
The epidemic started in China on January 2020, known with the name of Coronavirus (2019-nCoV), will affect the sales in the country, in Asia or worldwide depending on the result of the outbreak and the ability of the Chinese government to contain the spread of the virus. Epidemics like SARS in 2003, have changed the consumption habits of Chinese people, forcing them to defer the purchase of new cars as well as affecting the sales of luxury products. In order to gauge the potential impact of the outbreak of the virus, two scenarios have been computed: the first is called average scenario and shows the quarter sales and revenues assuming that the virus will not spread significantly (i.e. like a SARS scenario) across the world and that it will not affect the sales significantly. The second one named coronavirus assumes a global outbreak associated with a slower growth in both sales and revenues for 2020 and a recover from Q1 2021. Both the scenarios have been computed for the overall world and China specifically.

#### Cash Conversion (Exhibit 84)



Source: Reuters actual data & Team Estimates

### Coronavirus impact on sales (Exhibit 85)

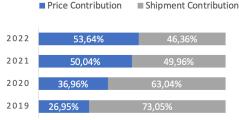


Source: Team Estimates

- I. **World**: the result would be a drop in sales equal to 15% for 2020 associated with a decrease in revenues of 10%. The reason behind a smaller drop in revenues lays in the price vs shipment contribution: through customization of the vehicles Ferrari can increase the revenues per car, thus a decrease in volumes is associated with a thinner decrease in revenues. The recover has been assumed to start in Q1 2021, reaching with a full recover in the next quarter.
- II. **China**: for what concerns China, the fall in sales has been estimated equal to 20% since it is the epicenter of the infection and it may affect the purchasing habits of the customers as well as the shipments to the country. Furthermore, the Chinese revenues are strictly correlated with the volumes, thus the drop in volumes is associated with a decrease in sales of the same magnitude. Focusing on the sales, in the past years they have been characterized by a slow but persistent decrease, that has been assumed to persist in the average scenario, and worsen in the coronavirus scenario.

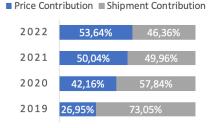
In order to gauge the potential decrease in profits related to a shorten in Chinese sales, it has been computed a cash conversion ratio [(EBITDA-CAPEX)/Revenues], estimating as worst case scenario a drop of Chinese sales equal to 50% in 2020 and 75% in 2021. The sudden shift of the volumes would lead to a decrease in of cash generation capability equal to 20% in both 2020 and 2021.

### Price vs shipments | Avg Scenario (Exhibit 86)



Source: Reuters actual data & Team Estimates

### Price vs shipments | CVS Scenario (Exhibit 87)



Source: Reuters actual data & Team Estimates

# **Appendix 1**

### Ferrari's valuable car product portfolio

As stated several time, Ferrari's key strength is luxury differentiation: in fact, the manufacturing company is able to attract multiple customers by providing entry level models and then by adding different layers of luxury and performance, along with the fundamental building block of exclusivity. This represents Ferrari's response to the mass-effect dilemma and it will play a significant role in the price architecture as well.

Segments	Product	lmage	Target clients	Average Price	Objective/proposal	Unicum	Materials and technical solutions	Winning aspects	Points
Sport range	812 Superfast		Mostly Ferrari customers who already use a car equipped with V12. The majority of ferrari customers look first at the performance of the car. In addition, this car meets the need for more mileage with V12 cars.	€ 300.000,00	The 812 Superfast becomes the most powerful and high-performance road-going Ferrari ever, excluding limited and special editions.	This car brings to the road the know-how and experience of ferrair natured in racing. The car is even more performing than the F12.	The 799 horsepower VI2 that reaches 8900 rpm is combined with electric power steering; the elaborate body design is functional to aerodynamics.	Balanced architecture for the most powerful series Ferrari of all time. Wide personalization options	4,7
	F8 Tributo		The Ferrari F8 Tribute has been specially designed for lovers of sporty and emotional driving: base customers with a strong sporting aptitude	€ 236.000,00	This is the highest performing V8 car ever, a celebration of the V8 line and heritage of Ferrari.	Its V8 is currently engine of the year. This car is a tribute to the ferrari tradition for such engines, a 44 year long history started from the 308 GTB.	720 hp V8 with 3990 cc cubage, high thermal efficiency and CO2 emissions 2 grams lower than 488 GTB. Automatic transmission with 7-speed launch control and s-duct air intakes.	Most V8 powerful engine, the highest performance possible for base level drivers.	4,6
	SF90 Stradale		The target customers of the SF90 Road are not dissimilar to those of the F8 tribute.  The goal of this car is to get the hybrid into the heart of Ferrari's typical customer.	€ 475.000,00	It introduce the hybrid technology in the standard production. This car introduce higher standards for V8 car and the future design of Ferrari cars as well	First standard Ferrari with PHEW: technology endothermic motor technology integrated with three electric motors, design projected to the future	V8 engine with cubature of 3990, three electric motors that develop 162 Kw, 8-speed automatic gearbox developed ad hoc and used later in other models; a top speed of 340 km/h. Internal cockpit inspired by the aeronautical world.	This car introduce the hybridization respecting the Ferrari DNA, an opportunity to push further the performance and technology in the standard cars.	4,5
	812 GTS		Mostly Ferrari customers who already use a car equipped with V12. It completes the offer of V12 cars with an open solution	€ 336.000,00	This car aims to reintroduce a tradition interrupted about 50 years ago and continued only by one off machines: the V12 open supercars.	The Ferrari 812 gts has the most powerful V12 spider currently on the market, also takes up the winning tradition of V12 spiders.	The 799 horsepower V12 that reaches 8900 rpm is combined with electric power steering; the elaborate body design is functional to aerodynamics. Some open solution are taken from the LaFerrari Aperta.	it goes far beyond a simple derivation as it can bring the characteristics of the 812 superfast in open car. it makes a V12 spider as standard before only one-off and hypercar	4,2
	F8 Spider		The potential clients are about the same of F8 tributo; this car wants to complete the V8 road car offer with an open one.	€ 262.000,00	The highest performance ever for a V8 car, a celebration with a plus. The open version of V8 heritage of Ferrari.	The V8 is the one used in the F8 tributo. It's the open version tribute of a story long 44 years.	RHT folding hard roof. 720 hp V8 with 3990 cc cubage, high thermal efficiency and CO2 emissions 2 grams lower than 488 GTB. Automatic transmission with 7-speed launch control and s-duct air intakes.	most V8 powerful engine, the highest performance possible for base level drivers, it's the open version of F8 tributo	4,5
	Roma		New potential ferrari customers, already owners of cars such as sedans and coupes. In the 30-plus age bracket.	€ 220.000,00	The concept of Dolce Vita becomes a car. Elegance is the main point, the first real Ferrari for the evening.	Innovation and stylistic break, the car is a tribute to the eternal city	2+seats coupé with central-front engine. This cal has a 620 horsepower V8 engine, 8-speed transmission. Dual Cockpit car environment.	2019 most beautiful car, opening to a new customer base. Developing future clients.	4,7
	GTC4Lusso		The ferrari customers with family, or with different needs from a sport car driver.	€ 270.060,00	The GTC4 is the car for 4 people designed by Ferrari. Its aim is to satisfy different needs from those of a classic sports car. It is like the Ferrari of the "family".		Dual cockpit dashboard design, leather interior designed according to the concept of sporty luxury with 800 litre boot. This car has a 689 hp V12 engine.	it succeeds in bringing ferrari values and tradition into a less sporting context, consistent with a family context of 4 people, where luxury carries more weight than sportiness.	4,1
GTrange	GTC4Lusso T		The ferrari customers with different needs from a sport car driver.	€ 253.300,00	This car is the dynamic version of the GTC 4 luxury, a more appealing declination of everyday luxury sport.	Ferrari sport-luxury designed for family without giving up the essence of a real ferrari.	Dual cockpit dashboard design, leather interior designed according to the concept of sporty luxury with 800 litre boot. 610 hp V8 engine.	As the GTC4 lusso it brings ferrari values in a different context. This car is designed for long-distance driving.	
	Portofino		All ferrari customers, as well as potential customers who meet the ferrari parameters. This car is also designed for a younger public.	€ 198.000,00	is the most accessible of Ferraris. It replaces the Ferrari California, evolves its style but aims to be a classic.	It's a coherent evolution of the successful Ferrari California. It brings to the future an all time classic car.	3.9 V8 supercharged 600 hp, leather interiors with various customization options. 2-22 configuration and aluminium roof foldable in 14 sec.	The possibilities of customization of the Ferrari Portofino are really numerous and is a very versatile car for all occasions. It's a classic car	4,6
Special series	488 Pista		It's a car designed for the track, therefore it is aimed at the most affectionate customers: those who love sports and track driving the most.	€ 300.000,00	Radical performance improvement of the Ferrari 488. Innovation and performance without compromise.	The increase of 50 hp compared to the 488 is the highest ever for a special series compared to the basic model. Its V8 is an absolute benchmark for the market.	Essential interiors inspired by racing, handcrafted work and massive use of carbon fibre. Racing style exterior livery and a 720 hp V8 engine.	successful representation of a racing car, a pure blood ferrari able to bring strong emotion to racers.	4,7
	488 Pista Spider		It's a car designed for the track, therefore it is aimed at the most affectionate customers: those who love sports and track driving the most.	€ 330.000,00	Radical performance improvement of the Ferrari 488 spider. Innovation and performance without compromise.	Its V8 engine is an absolute benchmark for the market like the 488 speciale.	The mechanics are the same as on the 488 Pista, the interior and exterior follow the same racing philosophy.	the spider version of the 488 speciale is able to bring strong emotion despite weighing more than 100 kg from the closed version.	4,6
	Ferrari Monza SP1	<b>3</b>	The customer base for this limited series cars is very limited.  We are talking about the most loyal and passionate clients. The criteria are very strict.	€ 1.600.000,00	A new concept, called 'lcon', aims to bring forward a new lineage of special limited edition cars.these cars want to be the highest representation of Ferrari's know-how.	Ferrari reopens the thread of the most evocative cars in its history, creating a new segment of special limited series cars.	the interior design is based on the cockpit of the pilot and the ergonomics of the cockpit, the solutions adopted are ad hoc and peculiar. the engine is an 810 hp V12, the most powerful ever.	limited edition of 499 pieces, timeless design and performance beyond the market average. This is not just a simple car, but also a unique collector's item.	4,9
ICONA	Ferrari Monza SP2		The customer base for this limited series cars is very limited. We are taikling about the most loyal and passionate clients. The criteria are very strict.	€ 1.600.000,00	A new concept, called 'lcon', aims to bring forward a new lineage of special limited edition cars.these cars want to be the highest representation of Ferrari's know-how.	Ferrari reopens the thread of the most evocative cars in its history, creating a new segment of special limited series cars	the interior design is based on the cockpit of the pilot and the ergonomics of the cockpit, the solutions adopted are ad hoc and peculiar. the engine is an 810 hp V12, the most powerful ever. 2 seats instead of one	limited edition of 499 pieces, timeless design and performance beyond the market average. This is not just a simple car, but also a unique collector's item.	4,9

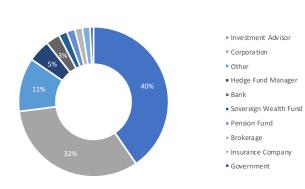


# **Appendix 2**

### **Ownership Composition**

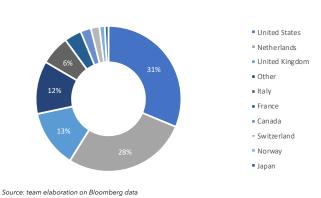
Ferrari's ownership composition is diversified across multiple countries and types of investors: 64% is owned by the two main categories of investment advisors and corporations, with Exor NV, Blackrock Inc and Baillie Gifford & Co that can count on 40.97% of the shares. The interest for Ferrari abroad is widely testified by the fact that 27.13% of shares belong to U.S. investors, 24% to Netherland ones and 11% to UK.

### **Key institution types** (Exhibit 88)

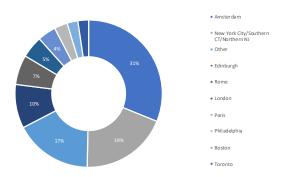


Source: team elaboration on Bloomberg data

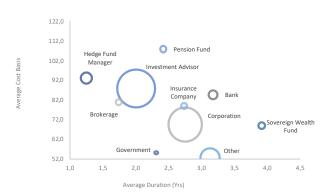
### Ownership per country (Exhibit 90)



Ownership per city (Exhibit 92)

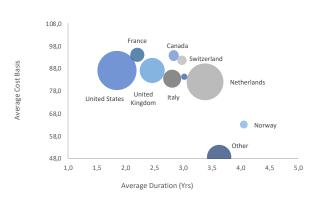


### **Top institution types based on Duration and Cost Basis** (Exhibit 89)



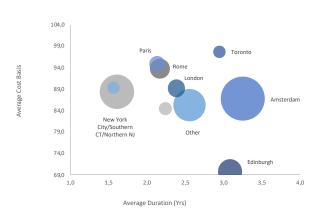
Source: team elaboration on Bloomberg data

### Ownership per country based on Duration and Cost Basis (Exhibit 91)



Source: team elaboration on Bloomberg data

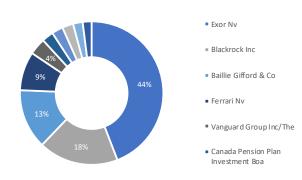
### Ownership per city based on Duration and Cost Basis (Exhibit 93)



Source: team elaboration on Bloomberg data



### Ownership per top institutions (Exhibit 94)



Source: team elaboration on Bloomberg data

Ownership per insiders (Exhibit 96)

# # Ferrari Piero Camilleri Louis Carey Arnault Delphine Cue Eduardo H Keswick Adam Zambon Elena ELKANN LAPO

### Source: team elaboration on Bloomberg data

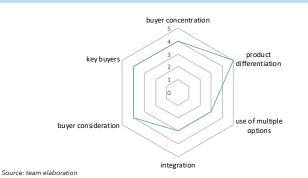
# **Appendix 3**

# **Porter's Five Forces Analysis**

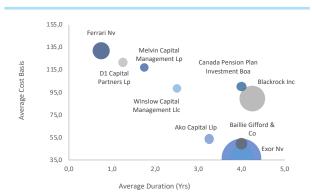
The overall competitive arena (Exhibit 98)



Buyers power (Exhibit 100)

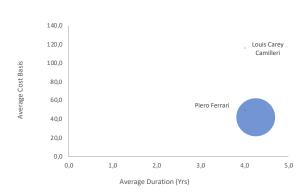


# Ownership per top institutions based on Duration and Cost Basis (Exhibit 95)



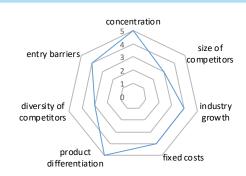
Source: team elaboration on Bloomberg data

### Ownership per insiders based on Duration and Cost Basis (Exhibit 97)



Source: team elaboration on Bloomberg data

# Internal rivalry (Exhibit 99)



# Key threats from new entrants (Exhibit 101)



Source: team elaboration



# Porter Five Forces Analysis (cont)

Port	er 5 forces	Sport range & Granturismo (V6 and V8 cars)	V12 & Top tier cars				
	Concentration	The three German players BMW, Audi and Mercedes-Benz account for approximately 70% share (C4 index > 0,5) of the global luxury car market. Mercedes-Benz is the global leader. Players like Ferrari and Lamborghini are lower volume producer.	The market is highly concentrated with Ferrari, Lamborghini & porsche accounting for more than the 50% (C4 index > 0,5) of market share.  Several secondary producers cover the rest of the demand.				
	Size of competitors	BMW, Audi and Mercedes Benz are the biggest player. Mercedes-Benz dominated the luxury car market, with a market share of approximately 16%, followed by BMW.	Lamborghini and Ferrari accounted the most in the market, Ferrari alone is above the 20% of total market in several geographic area like Asia & Hong Kong. Lamborghini is massively increasing its market share thanks to Lamborghini Urus.				
	Industry growth	The luxury car market will register a CAGR of about 5.83% during the period 2019-2024; growth will be very different geographically, also because of the US tariff policy.  Henry customers can potentially fuel the overall market growth.	The global Supercar market is expected to reach 84-kilo units in the end of 2025; the 80% of the market is related to non-convertible supercars.				
Internal rivalry	Fixed costs	The luxury car market is capital intensive, but thanks to the luxury nature of goods is partialy cyclical and deeply influenced by China and US market. Potentially high fixed costs impact the EBITDA margin.	Supercar market is capital intensive.  Thanks to the unique nature of goods has not been touched by the financial crisis. Outsourcing level is low and this impact positively EBITDA margin.				
	Product differentiation	We haven't reached market maturity yet. Differentiation of products is given primarly by customization services and value added options related to comfort and perception.	To be successfull in this market segment performance are the key. Customization services are substituted by made to measure service able to make goods unique and hardly replaceable.				
	Diversity of competitors	Depending on the geographical area, different products can be offered with different customisation options.  Pricing can be very different from country to country. Competitive advantage is to be sought through investment in R&D and the development of a valuable sales network.	Depending on the geographical area, different special series can be proposed in order to meet tradition and customer tastes. R&D is vital to find a competitive advantage, while the network is partly owned and partly entrusted to highly qualified retailers. In this sense Ferrari has developed "Atelier Ferrari"				
	Entry barriers	Expertize, know-how and the necessity of strong investments in R&D are the main barriers to entry.  Ferrari has the advantage of possessing a unique heritage and almost entirely in-house production.  A strong brand is vital to stay on the market.					
	Buyer concentration	Buyer geographical concentration is set to increase in the future, with China and US accounting the most. The overall number of HNWI is increasing worldwide. China is going to become the principal source of Buyer; Ferrari has an high standing position in China so isn't affected by the concentration process.	China and US are increasing their weights in the market but overall concentration is not high. In the future China will increase its weight. Ferrari in the last years has developed strong image and consideration among chinese buyers.				
	Product differentiation	Buyers in the entry luxury segment look at customization services, image and brand; performance and heritage are important but personalization makes the car unique	In the supercar segment performance is the key feature, in this sense buyers power is strong. The final decision depends on the car performance and in second stance on the possibility to transform the car in a unique item.				
Buyers power	Use of multiple options	The presence of many brands and cars with sometimes similar technical characteristics make it easy for buyers to change brands. Competition in the suv and sedan segment has lowered customers' average switching costs. Ferrari aims to build long-term relationships with new customers.	In the supercar segment it is more difficult to change seller mainly because the products have peculiarities and technique difficult to replicate. Here buyers usually have long term relationships of emotional and affective nature. Ferrari builds its customer base rigorously and consistently.				
	Integration	Vertical integration and exclusive distribution agreements are frequent enough to maintain constant contact with the customer and accompany him in his future growth.  Often the customer contact points are owned so as to have adequate feedback and control over the result.	The main buyers are high-profile retailers who often address their customers with varied proposals. Major brands such as Ferrari. in order to have direct contact with the customer have started to eliminate buyers with proprietary structures.				
	Buyer consideration	When strong relationships with customers are formed, their importance to buyers increase dramatically. The customization makes the product difficult to be replaced with potential substitude in the short term.	The weight of buyers for high standing supercars decreases significantly, especially as manufacturers such as Ferrari and Lamborghini cultivate ad hoc relationships with major customers.				
	Key buyers	No buyer has a relative weight that is noticeably higher than the others, the best are those able to offer services and availability to a type of clientele that is becoming younger and more demanding.  The need for customization is progressively increasing the weight of direct sales channels. Ferrari has strict criteria to develop the buyer park, the criteria are both financial and non financial					



# Porter Five Forces Analysis (cont)

	Supplier concentration	For finished and semi-finished goods, market concentration is low players like Ferrari apply strict cont	due to cost structure and natural tendence to oligopoly.  In mainly because these type of goods are produced internally and froi on suppliers with also the use of the arms as well.				
	Product differentiation	Product differentiation can be high but is linked to the specific request and needs of car producer.  Quality among similar product is related to intangible aspects like worker skills and know-how					
	Supplier size	Suppliers size can change in the case of raw materials, here we find the biggest players. For finished and semi-finished goods the size is influenced mainly by the scale of their clients.					
Suppliers power	Industry dependence	The luxury car market is partially cyclical, which is why suppliers of raw materials are sensitive to market fluctuations. On the other hand, there is less dependence on semi-finished and finished products. This is due to highly internalised production and because orders for these goods are already discontinuous.	The strong demand for customization and the production times of supercars stabilize the production plans of suppliers, which thanks to this have little visibility on possible fluctuations in the upstream market, especially with regard to finished products.				
	Potential integration	In order to have full co M&A operations with high level sup	to internalize key production processes.  ntrol over the end result,  pliers are possible and cost-effective.				
		Alternatively, long-term In the entry-luxury sector, economies of scale are still a profit					
	Scale economy	driver. True economies of scale comes from the modularity of architectures that can justify increases in price and customer perception at the same time, in the face of costs that become semi-fixed.	In the higher end of the market, economies of scale are lost, as are most modular architectures. Ad hoc projects and customization lead to a production process similar to "made to measure".				
	Switching cost	What keeps switching costs high in this sector a re customization and after-sales services.  On the technical side there are many players that can enter the market with value proposals.	The switching costs for the top end of the market are very high thanks to loyalty programs that reward long-term customers.  After-sales services and customization are offered ad hoc and customer affection is very high.  On the technical side, the solutions are unique and designed for a limited number of products.				
New entrants	Sapital requirements	The industry is capital intensive, so investments in tangible assets are high.  The investments in intangibles are also high and equally important.  Building and maintaining a strong brand is of paramount importance.  For Ferrari, intangibles are key assets.					
threat	Expertise	Expertise is of paramount importance.  First of all for technical solutions in the field of motorisation, secondly technologies and techniques are required for interior design and detailing.	The cars with the highest added value need a work organization different from the production chain.  Automation generates value only if it assists highly qualified personnel, close to the figure of the craftsman.  Ferrari at this juncture promotes the passage of knowledge through the "masters".				
	Distribution channels	The access to distribution channels can be seen as a barrier to entry.  The relationship with customers is fundamental for both manufacturers and retailers, in this sense  it is difficult to fit into such an emotional-relational network.					
	Cost management	economies of scale associated with	cost advantages. One example is the n advertising and branding activities; ecomes a powerful barrier to entry.				
	Legal and reguatory barriers	At the regulatory level, what most protects incu	mbents are patents on technologies and names.				
	Market share maintenance	improvements, both increment	d enhancement of the brand. Loyalty programmes and technical al and radical, are fundamental. ending on the brand, as in the case of Ferrari.				
Substitutes' threats	Number of substitutes	The high tier electric cars can be potential substitute, no other option can represents a real substitute due the technical and emotional features related to the products.	There is no real substitute product, hybrid and electric technology will arrive in a less abrupt way in this market segment. Some players are already in the middle of the hybridization process.				
	Price	In some cases the price may still play a role, but personalization and complementary products can reduce its weight	The price is not considered a key success variable, customers are interested in the characteristics of the product and what makes it unique				
	Quality	Electric cars can have higher peak performances and are less expensive in terms of maintenance costs. On the other hand the emotional component continues to be strong.	There are currently no substitute products with higher quality. The emotional component is essential, while hybridization offers even higher peak performances. In this sense, Ferrari has already presented its standard hybrid: the SF90 Stradale				



# Ferrari's Personalization Program

With its four pillars, Ferrari has always offered personalized cars tailored to the expectations of the clients. This is particularly important in an ever-growing competitive sector, where loyalty is a premium not easily achievable. Under the concept of personalization, there is indeed an highly skilled team of Ferrari's employees dedicated to make the client product feel unique and trying to exploit the best synergies between production, Ferrari's values and the ability to satisfy every customer demand.

	Ferrari personalization program
Why?	In the past years,owners had huge freedom of choice in terms of the fabrics, leathers, woods, colours and finishes of their cars, resulting in genuinely one-off creations coherent with their individual desires and tastes.
Now	Nowadays Ferrari offers its customers a wide range of programmes to make every car a unique piece of art tailored according to personal taste, using in the first place the Configurator tool
Where?	Online with the dedicated configurator. The client is able to see the first glimpse of what will come at the end of process. Next in Ferrari's Atelier.
Contents	The configurator has as object paintwork, wheel & callipers, bodywork elements and exhaust pipes. The configurator has the function to give a reliable anticipation of the future work, it's not binding.
Segments	The segments covered by the customization program are sportrange, granturismo and special editions (488 pista & 488 pista spider).

Made to measure services (after personalization)							
where?	Key places in k	ey markets: Shangai, Maranello and recen	itly New York.				
The Atelier	The Atelier Ferrari is a special studio where the clients can make their Ferraris even more unique and adherent to their personal tastes.						
About the space	The space is designed to put the client at the centre of attention.  The Atelier is an exclusive and sophisticated space where the guests  can create their bespoke car.						
Personalizations programs	Scuderia collection	Classica collection	Inedita collection				
Program philosophy and content	Racing has always been an essential part of Ferrari's DNA, this collection is a tribute to it with a series of exclusive materials like Kevlar®, hi-tech microfibres and carbon-fibre trims	The Classica collection gives a modern twist on the styling features of Maranello's GT segment. Elegant colours, chrome details and vintage leathers, wool, cashmere and corduroy combined with the latest materials and production techniques.	Inedita introduces an element of experimentation and innovation in terms of materials, style and colours. A distinctive proposal that shows off materials such as denim,tailored fabrics and hi-tech solutions.				
Segments	GT, sport-range, special series	Mainly GT	Designed for Icona & One-off				
Price impact	Customization and made to measure services can push the final price of the car up to 50% from the list original price, fueling profitability thanks to the leverage effect of price on gross margin.						



# Ferrari's Personalization Program (Cont)

### What is most valuable for customers?

For most new HNWI members (30 years and older) the price-performance ratio is very important when buying a luxury car.

In second place follows the identification with the brand and the individuality it brings with it.

The branding and pricing activity must be absolutely consistent with the customer's expectations.

The customers in the luxury car industry are changing. In terms of age, there is a boom in the 30-35 age group; tastes are increasingly personal, the brand is no longer enough as the car becomes an extension of itself.

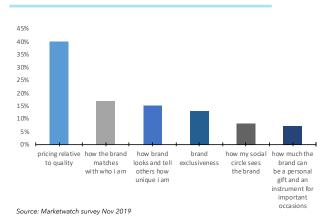
Ferrari has understood this and is investing heavily in customization services creating real boutiques.

Most valuable reasons	Importance %	Rank
Pricing relative to quality	40%	1st
How the brand matches with who i am	17%	2nd
How brand looks and tell others how unique i am	15%	3rd
Brand exclusiveness	13%	4th
How my social circle see the brand	8%	5th
How much the brand can be a personal gift and an instrument for important occasions	7%	6th

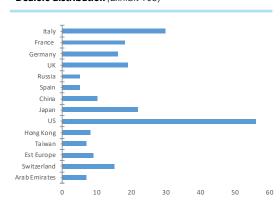
	Ferrari perception in some key areas
India	Top 3 with Audi, Mercedes, BMW and Porsche
Singapore	Top 5 with Audi, Mercedes, BMW and Porsche
Malaysia	Top 3 with Audi, Mercedes, BMW and Porsche
Hong Kong	Top 2 with Audi, Mercedes, BMW and Porsche
Indonesia	Top 2 with Audi, Mercedes, BMW and Porsche
China	Top 5 with Audi, Mercedes, BMW and Porsche. In China Ferrari is ascending

	Ferrari dealers
Strict criteria	Ferrari apply strict criteria to select new dealers. This criteria are also used in the monitoring activity on the actual ones.  The criteria are both financial and non financial: working capital discipline and Know-How as well.  Existing network and dedication are also very important.
Typology	High standing multibrand, showrooms and dealers with an exclusive mandatory. We must consider the Maranello headquarters, the second-hand resellers, Ferrari Ateliers and the 3 Tailoring House as well.
Geographical distribution	There are about 56 dealers in the US, 22 in Japan; 8 in Hong Kong and 7 in Taiwan. Other 10 are located in China while 5 are in Russia. In europe we can find the biggest portion of dealer: about 124 dealers are located between Italy, Germany, France and Est Europe.
Trend	Ferrari tends to keep the number of dealers constant, rather it prefers to support the development of pre-existing ones.  New entrants must, however, comply with various parameters of a tangible and intangible nature, often stringent and binding.

# Key reasons to buy a luxury car | Survey (Exhibit 102)



# Dealers distribution (Exhibit 103)



Source: team elaboration on data from Ferrari's official website



# **Ferrari's Share Price & Management Changes**

After the changes in management last year, along with the initial uncertainty about whether the new management would be able to adopt the strategy planned until 2022, we can say that the actual management inspires greater confidence in the execution of the strategy itself. Specifically, we show below the evolution of the share price over time, in conjunction with the change in the management. Graphically, it's possible to notice that the unexpected passing away of the former CEO Sergio Marchionne caused a drop in the price of the stock. Ferrari's shares underwent a sharp reduction in value after the new CEO Louis Camilleri defined the 2022 targets as "aspirational"; however, since then management has shown strong execution and the following earnings publications have been used as drivers for the subsequent revaluation of the security. With growth and profitability appearing to accelerate in the second half of 2019 (and in particular in the fourth quarter), we believe that the valuation can hold up to current levels.

### Share price vs Management changes (Exhibit 104)



### Source: team elaboration on Reuters & Bloomberg data

# **Appendix 6**Properties & Plants

With 672 thousand square meters, the Maranello factory represents Ferrari's main manufacturing facility, located near Modena. On top of production and development, Maranello is the HQ of the corporate offices, the new Formula 1 Racing Team building and the brand new Ferrari Design Centre. Near this building there is also a 3km Fiorano truck, which hosts the Formula 1 logistic offices as well.

Ferrari has a presence in Tuscany as well, with the Mugello circuit (Florence). To conclude, the company owns a second plant in Modena itself, the so-called Carrozzeria Scaglietti, where they manufacture aluminum bodyworks for regular range, special series and prototype car. The total carrying value of Property, Plants and Equipments was €850,550 thousand in 2018 EoY.









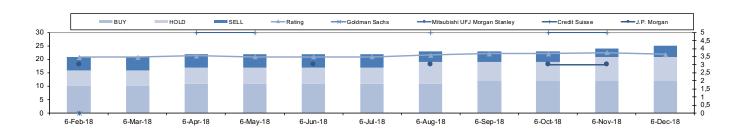


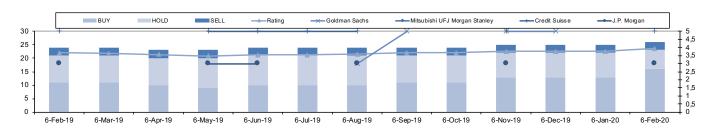
# **Analyst Estimates & Historical Recommendations**

Through its sound record of providing precise, prompt and accurate information, along with an outstanding ability to increase the production, sales and customer base, the analyst estimates and recommendations of Ferrari look promising, with a mean of 3.7 out of 5. Moreover, historically the company was able to outperform its peers in terms of consistency in increasing its outlook and estimates.

Analyst Estimates									
Broker	Analyst	Recommendation	Recommendation in number	Condition	Target PX	Target Date	Date	BARR	1Yr Return
Morgan Stanley	Adam Jonas	Overwt/Cautious	5	Maintain	168,17	12 month	6-Feb-20	5	18,93
Societe Generale	Stephen Reitman	buy	5	Maintain	179,07	12 month	5-Feb-20	8	7,08
Mediobanca SpA	Andrea Balloni	neutral	3	Maintain	149	12 month	5-Feb-20	10	0
Banca IMI	Monica Bosio	add	4	Maintain	180	Not Provided	5-Feb-20	3	24,2
J.P. Morgan	Ryan Brinkman	neutral	3	Maintain	143,62	9 month	5-Feb-20	10	0
Equita SIM SpA	Martino Deambroggi	hold	3	Maintain	145	Not Provided	5-Feb-20	6	11,73
Banca Akros (ESN)	Gabriele Gambarova	accumulate	4	Maintain	190	12 month	5-Feb-20	9	1,38
Intermonte	Gianluca Bertuzzo	outperform	5	Maintain	180	Not Provided	5-Feb-20		
Kepler Cheuvreux	Thomas Besson	buy	5	Maintain	175	Not Provided	5-Feb-20	11	-1,73
Morningstar, Inc	Richard Hilgert	sell	1	Maintain	95	12 month	5-Feb-20	12	-32,99
Redburn (Europe) Limited	Charles Coldicott	neutral	3	Maintain		Not Provided	5-Feb-20		
Fidentiis Equities	Renato Gargiulo	buy	5	Maintain		Not Provided	5-Feb-20		
Invest Securities SA	Jean-Louis Sempe	buy	5	Maintain	174	12 month	5-Feb-20	2	32,99
Credit Suisse	Michael Binetti	outperform	5	Maintain	185,74	Not Provided	4-Feb-20	2	32,99
Jefferies	Philippe Houchois	hold	3	Maintain	131,38	Not Provided	4-Feb-20	10	0
UBI Banca	Massimo Vecchio	buy	5	Maintain	180	12 month	4-Feb-20		
Exane BNP Paribas	Stuart Pearson	underperform	1	Maintain	98	Not Provided	4-Feb-20	13	-37,71
Consumer Edge Research	Derek Glynn	overweight	5	Maintain	165	12 month	4-Feb-20	2	32,99
Day by Day	Valerie Gastaldy	buy	5	Maintain	176,6	3 month	3-Feb-20	2	32,99
Bernstein	Max Warburton	market perform	3	Maintain	130	Not Provided	15-Jan-20	10	0
William O'Neil & Co Incorporated	Derek Higa	buy	5	Maintain		Not Provided	14-Jan-20		
MainFirst Bank AG	Adam Hull	sell	1	Maintain	80	Not Provided	10-Dec-19	12	-32,99
Goldman Sachs	George Galliers	buy	5	Maintain	171,56	12 month	2-Dec-19		
HSBC	Giulio Pescatore	hold	3	Maintain	135	Not Provided	8-Sep-19	7	7,26
ISS-EVA	Anthony Campagna	underweight	1	Maintain		Not Provided	6-Aug-19	12	-32,99

# Ferrari historical recommendations (Exhibit 105)



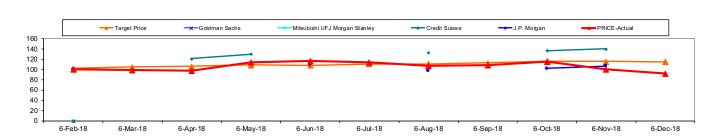


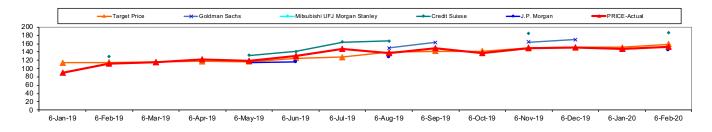
Source: team elaboration on Bloomberg data



# **Analyst Estimates & Historical Recommendations (cont)**

Ferrari historical recommendations (cont) (Exhibit 106)





Source: team elaboration on Bloomberg data

# **Appendix 8**

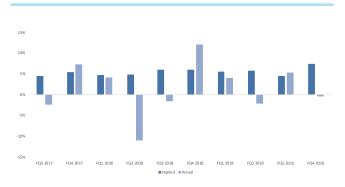
# **Implied One Day Price % Move**

The implied price move is computed by using ATM options implied volatilities, with the assumption that the standard deviation is normally distributed. The calculation requires to list the market expiries before a previously defined event date and solve two linear system to find the implied one day volatility and then the implied one day price move.

Announ	cement	Option Expirations		Option Implied Volatility		1 Day	Move
Period	Date	1 <sup>st</sup> Month	2 <sup>nd</sup> Month	1 <sup>st</sup> Month	2 <sup>nd</sup> Month	Implied	Actual
Q3 2017	20171102	11/10/2017	11/17/2017	40,30%	34,52%	4,46%	-2,41%
Q4 2017	20180201	02/09/2018	02/16/2018	45,11%	37,32%	5,35%	7,27%
Q1 2018	20180503	05/11/2018	05/18/2018	41,19%	34,89%	4,67%	4,12%
Q2 2018	20180801	08/10/2018	08/17/2018	39,61%	33,98%	4,81%	-11,02%
Q3 2018	20181105	11/09/2018	11/16/2018	60,06%	47,86%	5,99%	-1,63%
Q4 2018	20190131	02/08/2019	02/15/2019	48,80%	39,45%	6,02%	12,08%
Q1 2019	20190507	05/17/2019	05/24/2019	40,22%	33,97%	5,52%	4,06%
Q2 2019	20190802	08/09/2019	08/16/2019	50,06%	39,62%	5,70%	-2,16%
Q3 2019	20191104	11/08/2019	11/15/2019	44,42%	34,80%	4,53%	5,34%
Q4 2019	20200204	02/14/2020	02/21/2020	44,40%	34,99%	7,37%	-0,39%

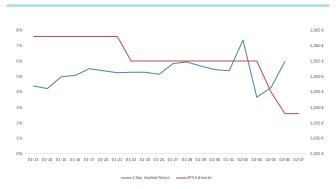


# Historical Quaterly Implied vs. Actual 1 Day % Price Move (Exhibit 107)



Source: team elaboration on Reuters & Bloomberg data

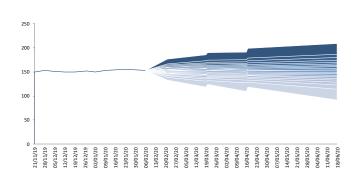
# Historical Quarter Implied 1 Day % Price Move & EPS Estimate (Exhibit 108)



Source: team elaboration on Reuters & Bloomberg data

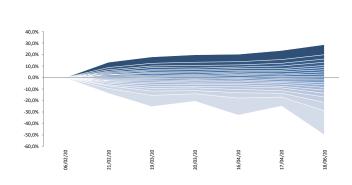
# **Montecarlo Implied Price & Returns Distributions Implied from Active Options**

### Implied price distribution (Exhibit 109)



Source: team elaboration on Reuters & Bloomberg data

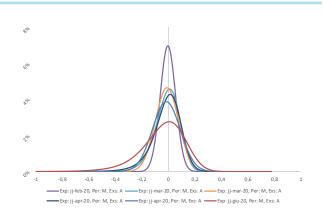
## LN returns distribution (Exhibit 110)



Source: team elaboration on Reuters & Bloomberg data

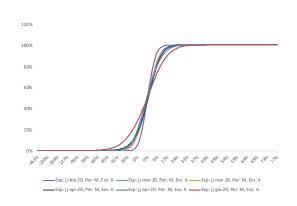
# **Implied One Day Price % Move (cont)**

### Return probability density function (Exhibit 111)



Source: team elaboration on Reuters & Bloomberg data

### Return probability cumulative density function (sigmoid) (Exhibit 112)



Source: team elaboration on Reuters & Bloomberg data



# **Board of Directors Composition**

Ferrari has adopted a code of governance that follows the Dutch standards, i.e. the country of domicile. These standards contain principles and best practices that govern the relationship of the Board of Directors with the other committees and the shareholders' meetings. The BoD currently has 12 members, one executive and the other non-executives. Louis Carey Camilleri moved from non-executive to executive for the purpose of replacing Sergio Marchionne in 2018. The BoD is fully responsible for the company's strategy and it is composed by eight independent directors in accordance with the Dutch law, but for the NYSE rules Piero Ferrari can also be considered independent. The independents supervise the action of the executives and the evolution of the company's business, including the implementation of the strategy and the creation of value in the medium & long term.

Based on the assessment process completed, we believe that the internal control of the company and the group are effective in their task and its report provides sufficient clarification and information on any shortcomings in the effectiveness of risk management and other control systems. The risk management and control systems have been designed in order to guarantee an adequate level of confidence that the accounting records do not show oversights in relation to the financial reports.

	BoD composition and roles in a glimpse							
	Executive	No executive	Remuneration commitee	Audit Commitee	Sustainability & Governance commitee	Indipendent		
John elkann	no	yes	no	no	yes	no		
Louis C. Camilleri	yes	no	no	no	no	no		
Piero Ferrari	no	yes	yes	no	no	no		
Delphine Arnault	no	yes	no	no	no	yes		
Giuseppina Capaldo	no	yes	no	yes	yes	yes		
Edward Cue	no	yes	yes	no	no	yes		
Sergio Duca	no	yes	no	yes (chairman)	yes	yes		
Lapo Elkann	no	yes	no	no	no	no		
Amedeo Felisa	no	yes	no	no	no	yes		
Maria Patrizia	no	yes	no	yes	no	yes		
Adam Keswik	no	yes	no	no	no	yes		
Elena Zambon	no	yes	yes	no	no	yes		



# **Corporate Governance Evaluation**

The objective of a scorecard is to deliver an extensive and complete picture about the Corporate Governance quality. It is a throughout methodology for listed company and it presented two key features:

- P questions: these can be fulfilled with public & external informations like company's publications and website.
- E-questions that can be met through evaluation and judgement of the information coming from an active discussion process with the company.

Through this approach, it is possible to gain an overall picture of the strengths and weaknesses of the company's corporate governance. The total score is the aggregated value of the two types of valuation.

Key sections	Total points	E	Р
Shareolders & General meetings	7.00	5.00	2.00
management board	14.00	5.50	8.50
Supervisory board	28.00	14.00	14.00
Transparency & Governance	10.50	5.00	5.50
Reporting & Audit	10.50	5.50	5.00
Total	70.00	35.00	35.00

The total score for Ferrari	Points	Max points	%
Shareolders & General meetings	6.50	7.00	93%
Management board	12.50	14.00	89%
Supervisory board	25.00	28.00	89%
Transparency & Governance	9.50	10.50	90%
Reporting & Audit	9.00	10.50	86%
Total	63.00	70.00	90%

CG assessment   Key results				
Commitment to Environmental, Social, and Governance	The company and its stakeholders demonstrate a strong commitment to quality corporate governance, with a particular focus on social and environment governance procedures.			
Structure and Functioning of the Board of Directors	The board of directors is qualified and adequately structured to oversee the strategy, management, and performance of the company.  This is done in accordance with the indications on gender representation and diversity of competences, which are varied and complementary.			
Control Environment	The company's internal control system, internal audit function, risk management system and compliance function are adequate to guarantee the company's assets, effectiveness of operations, accuracy in reporting, and compliance. The control sistem respect the most recent ERM & Coso Framework.			
Disclosure and Transparency	The company's financial and nonfinancial documents gives a full representation of all material events related to shareolders & stakeholders			
Treatment of Minority Shareholders	The minority shareholders on the board are adequately represented, their role is taken into account during the corporate governance processes.			
Governance of Stakeholder Engagement	The company is not just a simple hub of contracts and interests, but a firm which understands the importance of spreading and sharing objectives throughout the organization.			



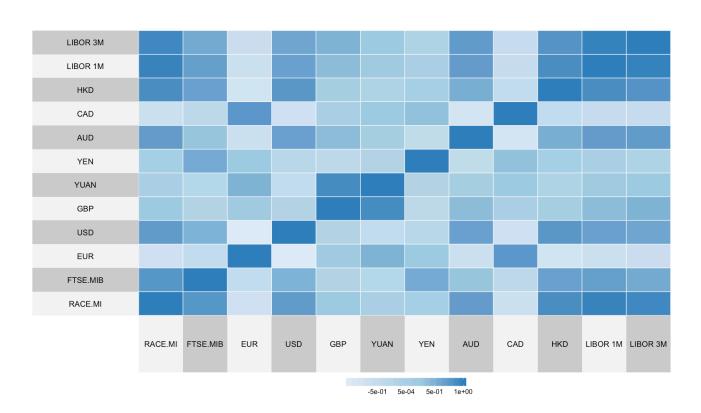
# **Corporate Governance Evaluation (cont)**

		The corporate governance in Ferrari				
	Composition	The board includes 8 men and 4 women for the purposes of gender representation, the board is also composed in such a way as to be able to rely on multiple points of view.  The board is made up of 8 independent directors in accordance with Dutch law.				
The BoD  Mission		Supervises and addresses the actions of the executives and the evolution of the company's business, including the implementation of the strategy and the creation of value in the medium to long term. The BoD must act as a centre of conflict resolution between all stakeholders.				
	Audit commitee	The audit commitee advises and assists the BoD about risk management guidelines, compliance, key conflict, taxation and ICT implementation.				
The commitees	Remuneration commitee	The compensation committee is responsible for and assists the BoD in defining the total BoD compensation, non monetary benefits, the executive remuneration structure. It also discuss the best practices about remuneration policy				
Go	Government & sustainability commitee	Governance & sustainability committee has among its functions the full evaluation of the BoD, the definition of elegible criteria for the executives and the BoD.  It also controls the implementation of sustainability standard and the development of corporate strategy.				
STM	SMT supports the CEO in implementing strategic choices and for vital industrial issues.  Some SMT members such as CHRO may attend BoD meetings.					
Code of conduct	Ferrari's code of conduct complies with multinational standards to ensure high levels of personal integrity.  Principles are pursued that are consistent with the personal and business sphere, and also  comply with different cultural, regional and/or minority realities.  The practices guide daily behaviour and are consistent with the principles of the code of conduct.					
Sustainability	Ferrari's objective is to create an environment oriented towards sustainability, which must permeate all levels of society. This requires adequate risk management, a key asset for achieving the long-term objectives of the business plan.  In this sense, the ERM is being updated to make it consistent with the latest COSO standards.					
Remuneration	The remuneration policy is applied to both executive and non-executive directors, as  well as to the SMT team.  Remuneration consists of a fixed part, a short-term variable and a long-term remuneration linked to the achievement of company targets.					
Ferrari's people	Human capital is of paramount importance for ferrari, as a key tool for maintaining its position as a global leader in the luxury sports car sector.  As a result, the company organizes Graduate Programs to identify talent. Succession planning programs are carefully maintained. Many activities and programs are organized for the development of workers, teambuilding and technical skills. Example are the programs "pit stop" and "pole position".					
ESG success	As far as environmental sustainability is concerned, the greatest efforts are linked to maintaining high manufacturing efficiency and reducing polluting emissions. The monitoring of the plants is entrusted to a team that reports directly to the CTO. The cars produced by Ferrari have a low total cost of disposal. The company has been committed since 2001 to the sustainability of its activities and in 2016 it was renewed the ISO certification					



# **Risk Assessment**

I. Correlation between the stock price of Ferrari and the main Currencies and Interest Rates



II. Key risks matrix & impact

# **RISKS**

		Mass Production	R&D Hybrid Engines
Probability		Regulation Trade War Interest Rates Currencies	Client Needs
	BREXIT Consequences		Operational
		Impact	



### **Ansoff's Matrix**

# Key takeaways:

- I. Ferrari Roma has potentially started a new cycle in car production. The impact of this new course may hold very positive surprises in the future.
- II. Diversification is one of the key tools that Ferrari can use in the foreseeable future to develop its brand and increase revenues with complementary products. We believe that positive surprises from the diversification process are very likely to happen.

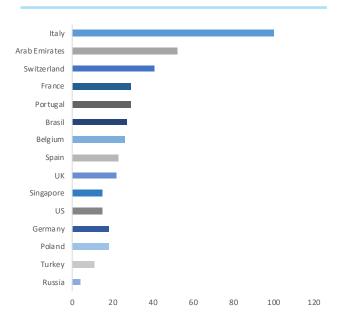
	Product /Servic				
	Current	New			
	Product Development	Market Penetration			
Market/ Customers	After a 2019 characterised by the launch of numerous models, Ferrari will focus on consolidating its product range. There will be many cars to be industrialized from 2020 onwards; the focus will therefore shift to the renewal of the one-off segment, Icona and the completion of the hybridization process.	The ferrari penetration index among HNWI is even lower than that of the major luxury peers such as LVMH and Hermes. In the future, ferrari will be able to concentrate on increasing its penetration among this type of consumers, considering that the total number of HNWI and UHNWI at global level is forecast to grow steadily.			
	With the launch of the new Ferrari Roma, new scenarios have opened up for the customer base. Ferrari is developing a young and dynamic customer segment that is interested to performance but focused to elegance and aesthetics: the era of the Ferrari "evening" rather than racing cars is coming. The impact of this new type of cars will begin to be seen in late 2020.	The potential of the Ferrari brand is very high.  Many are the initiatives being launched that can allow the Ferrari brand to grow and develop all-round, so as to become a real lifestyle brand in the future.  Ferrari has the means to exploit a potential that is still partly unexpressed, see the recent entry into the catering business.			
	Market Development	Diversification			

# **Appendix 13**

### Ferrari's Web Researches Impact Analysis

I. Evidence of a home bias: the results are partially distorted by a home bias effect, which is often found in decision-making processes. In relative terms the largest number of researches comes from Italy. In the Arab Emirates and Switzerland the percentage of research is high, in fact here Ferrari has a good market penetration. From the data it emerges that in the United States Ferrari has room to further increase its visibility, this aspect may indicate a market penetration capacity not yet fully exploited.

# Web researches on Ferrari's brand per country (Exhibit 113)

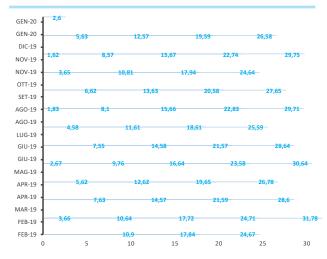


Source: team elaboration on Google data



II. Assessment of new product launches: we used google trend to verify the actual presence of a peak of Ferrari searches in relation with the period of product launch. Several studies show that there is a positive correlation between web activity and the commercial success of a new product. The spikes are frequent in the period around the end of November 2019 or in correspondence with the official launch of Ferrari Roma. Also around April there are peaks of interest attributable to the launch of the Ferrari F8 tribute.

### Web researches on Ferrari's brand per country (Exhibit 114)



Source: team elaboration on Google data

# **Appendix 14**

### **Altman Z-score Analysis**

The Altman's Z-score analysis investigates a company's financial health and the likelihood of bankruptcy. The relative formula is a synthetic indicator of this state of health: a value below 1.80 indicates a company that is likely to end up bankrupt, while a value close or above 3.00 indicates a company that is unlikely to meet a definitive credit event. The relative closed formula is as follows: 1.2\*X1 + 1.4\*X2 + 3.3\*X3 + 0.6\*X4 + 1.0\*X5.

Altman Z score Analysis							
Input variables	2015	2016	2017	2018	2019		
Current Assets	2019,82	1887,45	2081,08	2477,33	2648,50		
Current Liabilities	1208,16	1276,33	1214,21	1203,65	1425,92		
Total Liabilities	3900,52	3524,61	3362,43	3503,01	3857,14		
Total Assets	3875,40	3849,60	4141,10	4851,73	5378,74		
Retained Earnings	-12,13	302,34	746,34	1319,48	1495,78		
Revenues	2853,88	3105,55	3416,89	3420,32	3766,59		
Operating Income	443,67	594,66	774,90	826,74	917,74		
Working Capital	480,25	136,13	202,47	469,03	214,92		
Market Capitalization	8283,11	10063,93	18091,32	17525,11	28401,83		
Derived Variables	2015	2016	2017	2018	2019		
X1: Working Capital/Total Assets	0,12	0,04	0,05	0,10	0,04		
X2: Retained Earnings/Total Assets	-0,01	0,16	0,36	0,53	0,56		
X3: Ebit/Total Assets	0,11	0,15	0,19	0,17	0,17		
X4: Market cap/Total Liabilities	2,12	2,86	5,38	5,00	7,36		
X5: Revenues /Total Assets	0,74	0,81	0,83	0,70	0,70		
		Output					
Altman Z Score	2,53	3,30	5,23	5,13	6,52		

The z test analytically demonstrates Ferrari's high credit and financial standing, which from 2016 onwards is well above the safety threshold. In 2015, on the other hand, was affected by a one-off capital restructuring event which is mirrored by the Z-score itself.



# **Beneish's M Score Analysis**

Created by Professor Messod Beneish, the M-Score is a mathematical model that uses eight financial ratios to identify whether a company has manipulated its earnings. The variables are constructed from the company's financial statements and eventually the model computes a score to describe the degree to which the earnings have been manipulated. A score below 2.22 (absolute value) is a good sign that the company is not likely to manipulate earnings. Ferrari from 2016 is always below the threshold of 2.22.

The formula for the 8 variables model is the following:
-4,84+ 0,92\*DSRI + 0,528\*GMI + 0,404\*AQI+ 0,892\*SGI + 0,115\*DEPI + 0,172\*SGAI+ 0,327\*LVGI+ 4,679\*TATA

			В	eneish's M sco	re ar	nalysis				
Input variables		2015		2016		2017		2018		2019
Net Sales	€	2.853,88	€	3.105,55	€	3.416,89	€	3.420,32	€	3.766,59
Cost of goods sold	€	1.499,00	€	1.580,00	€	1.651,00	€	1.623,00	€	1.791,19
Net Receivables	€	1.372,99	€	1.056,85	€	994,93	€	1.245,86	€	1.180,74
Current Assets	€	2.019,82	€	1.887,45	€	2.081,08	€	2.477,33	€	2.648,50
Property Plant & Equipment	€	626,13	€	669,28	€	710,26	€	850,55	€	1.004,16
Depreciation	€	159,90	€	143,41	€	143,48	€	156,39	€	165,71
Total Assets	€	3.875,40	€	3.849,60	€	4.141,10	€	4.851,73	€	5.378,74
SGA expenses	€	232,16	€	240,62	€	253,94	€	266,90	€	274,78
Net Income	€	307,17	€	423,34	€	534,88	€	642,91	€	699,16
Cash Flow from Operations	€	615,14	€	991,55	€	727,02	€	808,81	€	1.306,00
Current Liabilities	€	1.208,16	€	1.276,33	€	1.214,21	€	1.203,65	€	1.425,92
Long Term Debt	€	2.260,39	€	1.848,04	€	1.806,18	€	1.927,17	€	2.090,00
Working Capital - Cash - Depreciations	€	8.283,11	€	10.063,93	€	18.091,32	€	17.525,11	€	28.401,83

Variables to calculate M score	2016	2017	2018	2019
DSRI	0,77	0,94	1,25	0,95
GMI	1,13	1,16	1,02	1,10
AQI	1,05	1,04	1,13	1,13
SGI	1,09	1,10	1,00	1,10
DEPI	0,90	1,00	1,09	1,06
SGAI	1,04	1,06	1,05	1,03
LVGI	0,91	0,89	0,89	0,99
TATA	-0,12	-0,14	-0,10	-0,16

		Output		
M score	-2,13	-2,04	-1,67	-2,06



# **Master Design Management Process Flow in Ferrari NV**

The Ferrari design process is much more throughout and longer than a classic entry luxury car manufacturer like mass-like competitors. At Ferrari, design is about idea, prototyping and engineering, whereas for higher volume manufacturers, design stops at the idea. All the actors in all phases of the design process are managed and adjusted in order to have visibility on the result. In spite of the other car manufacturers here we see a type of organization not "mechanical" but organic.

# Corporate/ Group/ Project Management:

Creativity and Design Thinking permeates human resources, financial services and information systems. The organisational structure and all company functions are design and finished product oriented.

# Design & Concept:

In this phase there is is the conception and design of functionality and aesthetics at the operations level, the design phase is followed by R&D and product development.

### R&D:

The new product is developed in this phase. Prototyping is carried out during this phase. Know-how in this phase is the key variable and technology acts as a support to the developer: man is at the centre of the process.

# Manufacturing & Process engineering:

Production & engineering is a complex process as it concerns not only the tools and technology best suited to the production process, but also the organization of work and the choice of tasks and roles of the operators. In reality automation at Ferrari is reduced, this is a necessary and sufficient condition to produce products with high added value.

### Logistic:

This phase concerns the physical distribution of the product from the production site. Time management is fundamental.

### Branding, Sales & Marketing:

In this phase the sales process and after sales services are managed. The services are of fundamental importance for the development and maintenance of customers. The feedback obtained is part of the product design process and feeds into a virtuous circle.

# Main takeaways:

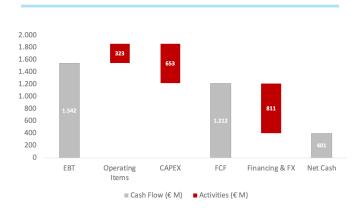
- I. Inside Ferrari is designed: the idea, the prototype and the R&D process, the production process and industrialization of the product. In other players in the automotive sector such as Porsche, design process is only about the idea and the related innovation.
- II. The design of the production chain makes Ferrari agile and quick to respond to change and innovation. The modularity of the architectures allows the launch of new valuable products at total manageable costs.



# **Ferrari Cash Flow Generation and Projections**

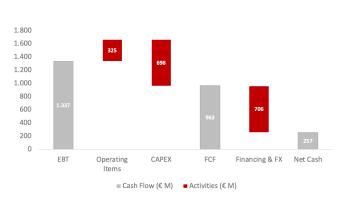
€ millions	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Net Income Before Taxes (EBT)	398,3	434,3	567,4	746,2	802,9	875,6	1.038,40	1.163,60	1.336,90	1.542,50
Operating Items (Non cash & Taxes)	27,9	273,1	437,9	-83,4	131,1	430,4	270,5	153,3	324,8	323,3
Cash from Operating Activities	426,2	707,4	1.005,30	662,8	934	1.306,00	1.308,80	1.316,90	1.661,70	1.865,80
Cash from Investing Activities	-289,8	-317	-320,5	-379,4	-636,9	-707	-769,6	-732,5	-698,2	-653,5
Free Cash Flow (FCF)	136,4	390,4	684,8	283,4	297,1	599	539,3	584,5	963,4	1.212,30
Cash from Financing Activities & FX	-115,8	-341,8	-409,8	-93,5	-151,1	-498,9	-539,3	-637,6	-706,1	-811
Net Change in Cash	20,6	48,6	275	189,9	146	100,1	0	-53,1	257,4	401,3
Net Cash - Beginning Balance	113,8	134,3	182,8	457,8	647,7	793,7	893,8	893,8	840,7	1.098,00
Net Cash - Ending Balance	134,3	182,8	457,8	647,7	793,7	893,8	893,8	840,7	1.098,00	1.499,30

# Cash Flow Generation - 2023 (Exhibit 115)



Source: Team elaboration

Cash Flow Generation - 2022 (Exhibit 116)



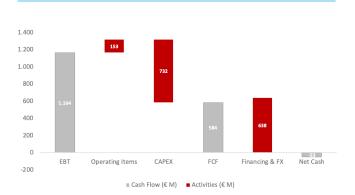
Source: Team elaboration



# **Appendix 17 (Cont)**

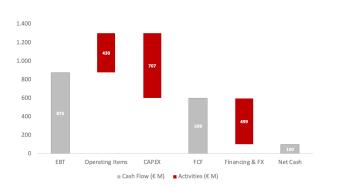
# **Ferrari Cash Flow Generation and Projections**

### Cash Flow Generation - 2021 (Exhibit 117)



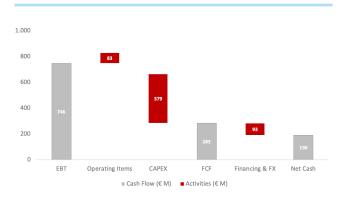
Source: Team elaboration

### Cash Flow Generation - 2019 (Exhibit 119)

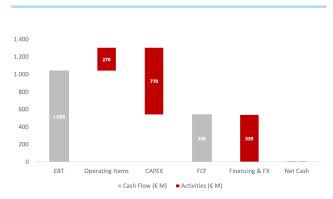


Source: Team elaboration

# Cash Flow Generation - 2017 (Exhibit 121)

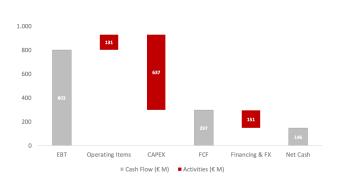


### Cash Flow Generation - 2020 (Exhibit 118)



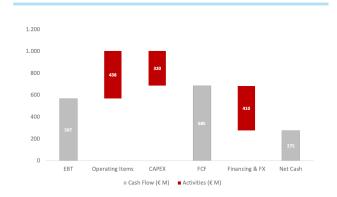
Source: Team elaboration

### Cash Flow Generation - 2018 (Exhibit 120)



Source: Team elaboration

# Cash Flow Generation - 2016 (Exhibit 122)



Source: Team elaboration Source: Team elaboration 54

# Peers Breakdown: is Ferrari really homogeneous with anything among car manufacturers?

### **Aston Martin**

Aston Martin is a modern, exclusive sports car brand with a unique heritage instantly recognised around the world. Founded in 1913 by Lionel Martin and Robert Bamford, Aston Martin is acknowledged as an iconic global brand synonymous with style, luxury, performance and exclusivity. The British marque fuses the latest technology, time honored craftsmanship and graceful styling to produce a range of critically acclaimed sports cars. After celebrating its 100th birthday in 2013, Aston Martin is looking firmly forward to its next century plan of "Power, Beauty and Soul".

# **Rolls Royce**

The London-based company, most famously linked to its former luxury car division, is one of the world's top manufacturers of high-power gas turbine engines for the aviation industry. Rolls-Royce has gained prominence in this cutting-edge global market through its development of proprietary technology that allows a single-engine model to be adapted in order to build more powerful, and more economical, aircraft engines. It provides power utilities and independent operators with innovative solutions to their electrical generation, transmission and distribution needs and serve customers in industrial, marine and nuclear engineering markets.

### **Audi AG**

Audi AG is a Germany-based developer and producer of automobiles. The Company operates through two segments: Audi Automotive and Ducati Motorcycles. The Automotive segment manufactures passenger cars and sports cars through the brands Lamborghini and Audi, including the models A1, A3, A4, A4, A5, A6, A7, A8, Q2, Q3, Q5, Q7, TT, R8 and the fully electric Audi E-Tron. The Motorcycles segment produces motorcycles through the Ducati brand. The Company is a subsidiary of Volkswagen AG and operates production facilities in Europe, the Americas and Asia.

# Tesla, Inc.

Tesla, Inc. engages in the design, development, manufacture, and sale of fully electric vehicles, energy generation and storage systems. It also provides vehicle service centers, supercharger station, and self-driving capability. The company operates through Automotive, and Energy Generation and Storage segments. The Automotive segment includes the design, development, manufacture and sale of electric vehicles.

The Energy Generation and Storage segment includes the design, manufacture, installation, sale, and lease of stationary energy storage products and solar energy systems, and sale of electricity generated by its solar energy systems to customers. It develops energy storage products for use in homes, commercial facilities and utility sites.

### **Porsche**

Porsche Automobil Holding SE is a Germany-based holding company engaged in the automobile manufacture industry. The Company is engaged in the holding and managing of its investments in Volkswagen AG, through which the Company manages twelve motor brands from seven European countries: Volkswagen Passenger Cars, Audi, SEAT, Skoda, Bentley, Bugatti, Lamborghini, Porsche, Ducati, Volkswagen Commercial Vehicles, Scania and MAN. In addition, the Company is also active in parts distribution, after sales and invests in the automotive value chain, this comprises the spectrum of basic technologies geared to supporting the development and production process through to vehicle- and mobility-related services.

# **Appendix 18 (Cont)**

# Peers Breakdown: is Ferrari really homogeneous with anything among car manufacturers?

### **BMW AG**

Bayerische Motoren Werke AG engages in the manufacture and sale of automobiles and motorcycles. It operates through the following business segments: Automotive, Motorcycles, Financial Services, and Other Entities. The Automotive segment develops, manufactures, assembles, and sells cars and off-road vehicles, under the following brands: BMW, MINI, and Rolls-Royce, as well as spare parts and accessories. The Motorcycles segment focuses on the premium segment. The Financial Services segment offers credit financing, leasing and other services to retail customers. The Other Entities segment includes holding and group financing activities. The company was founded on March 6, 1916 and is headquartered in Munich, Germany.

# **Appendix 19**

# Luxury Peers Breakdown: where does the Maranello company stand among luxury brands?

# **Moncler**

Moncler is the eponymous company famous for its duvets, as can be seen from the data, all the financial and asset parameters are growing, this is consistent with strong internal growth thanks to the customs clearance of the brand as a manufacturer of duvets only. Profitability is strongly growing as is cash generation, which makes future M&A plans as well as financing for new internal growth initiatives possible. In 2018, the Moncler GENIUS project was launched, with this initiative the expansion of the product beyond its natural boundaries is on its way to maturation.

# Salvatore Ferragamo SpA

Salvatore Ferragamo S.p.A. has been synonymous with Italian luxury for more than three-quarters of a century. The Florence-based, family-owned company continues to produce the shoes that once earned it the nickname "Shoemaker to the Stars," but also designs, produces, and distributes a full range of men's and women's clothing and accessories. In addition, Ferragamo sells its own branded perfume lines, and, in a partnership with another Italian company, Luxottica, a range of Ferragamo-branded eyeglasses. Nevertheless, shoes remain at the heart of the Ferragamo empire.

# **Hermes**

Known as 'one of the world's most elegant businesses,' Hermès International S.A. is a manufacturer and marketer of upscale luggage, apparel, and accessories. From a 19th-century foundation in leather goods, the company (pronounced 'air-may') diversified into silk goods, ready-to-wear clothing, and perfume. Its ongoing dedication to family ownership and management, impeccable craftsmanship, and careful protection of the brand's mystique set Hermès apart from many of its French luxury goods compatriots. With or without the venerable trademark, Hermès products are distinguished by their uncompromising quality, a concept summarized in a family credo: 'Que l'utile soit beau' ('That the useful be beautiful').

# **Appendix 19 (Cont)**

### **LVMH**

LVMH Moët Hennessy - Louis Vuitton is the world's largest luxury conglomerate with revenue of more than €46 billion (\$52 billion) in 2018. Founded by Bernard Arnault in 1987, the company's portfolio encompasses six sectors: wines and spirits, watches and jewelry, selective retailing, perfumes and cosmetics, and fashion and leather goods, and others. The group operates 4,590 stores and employs over 156,000 people. Present in over 70 countries, LVMH has consistently acted as a pioneer in new and emerging markets, and is arguably the most international luxury conglomerate.

# Luxury Peers Breakdown: where does the Maranello company stand among luxury brands?

### Kering

Kering SA is a France-based luxury group. It owns a portfolio of fashion brands, such as Saint Laurent, Gucci, Bottega Veneta, Alexander McQueen, Balenciaga, Boucheron, Brioni, Pomellato, Qeelin and Ulysse Nardin, among others. The Group manufactures and sell, mostly through managed retail stores, a wide range of products, including leather goods, apparel, accessories, footwear, watches and jewelry, among others, for man, woman and child. The Group is active globally. Gucci's successful turnaround launched the Kering Group in terms of turnover and profitability, making it LVMH's main competitor.

# **Richemont SA**

Compagnie Financière Richemont SA, also known as Richemont, is a Switzerland-based luxury goods holding company founded in 1988 by South African businessman Johann Rupert. Through its various subsidiaries, Richemont produces and sells jewelry, watches, leather goods, pens, firearms, clothing and accessories: it's one of the main players in the "hard luxury" sector. The company has also dabbled in businesses outside of the luxury sphere, including stakes in French television company Canal+ and U.S. catalog company Hanover Direct, but continues to focus its attention on the luxury market.

### **Burberry Group**

Burberry Group Plc operates as a holding company, manufactures, designs and distributes apparels and accessories under the Burberry brand. It operates through the following segments: Retail and Wholesale, and Licensing. The Retail and Wholesale segment sells luxury goods through Burberry mainline stores, concessions, outlets, and digital commerce, as well as Burberry franchisees and department stores. The Licensing segment channel offers global licenses of fragrances, eyewear, timepieces and European children's wear. The company was founded by Thomas Burberry in 1856 and is headquartered in London, the United Kingdom.

# **Prada SpA**

Prada SpA operates as a holding company, which engages in the manufacture and distribution of luxury goods. Its products include leather goods, handbags, footwear, apparel, accessories, eyewear, and fragrances. Its brands include Miu Miu, Church's, Cas Shoe, and Pasticceria Marchesi. The company was founded by Mario Prada in 1913 and is headquartered in Milan, Italy. In recent years Prada has undergone a major restructuring plan that has brought it back to growth in 2019.

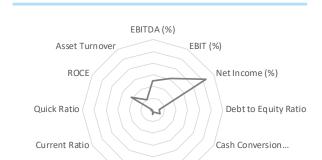


# Eventually, is Ferrari conceivable among luxury or automotive peers? An empiric approach

In order to test whether Ferrari could be more comparable to luxury sector rather than automotive, we approach the issue from a quantitative point of view. We therefore chose 12 significant key measures, 3 regarding profitability (Operating Income - EBIT - Margin, EBITDA Margin, Net Income Margin), 4 regarding balance sheet structure (Debt to Equity Ratio, Current Ratio, Quick Ratio, Asset Turnover), 4 regarding cash flows statements (Cash Conversion Ratio, EBITDA on CAPEX, CAPEX on Sales, CAPEX on D&A) and Return on Capital Employed (ROCE). We build a specific scoring function to empirically justify what was conceivable from a preemptive judgmental analysis. We relied on the Mean Square Error (MSE), computed as the average of the squares of the errors - that is, the 2014-2018 average squared difference between each Ferrari's measure and the relative median measure of the peers's tier. The same approach is performed both for luxury tier and automotive peers, in order to assess whether luxury or automotive is closer to Ferrari, for each one of the considered measure (on 5 FY time series). Based on our scoring output we appreciate that 10 ratios out the 12 analyzed, i.e. in the 83% of the cases, Ferrari proved to be closer to luxury sector than automotive.

	Percentage scoring on total		
	LUX	AUTO	
# Score	10	2	
% Score	83%	17%	

	Scoring
EBITDA Margin	LUX
Operating Income Margin	LUX
Net Income Margin	LUX
Debt to Equity Ratio	АИТО
Cash Conversion Ratio	LUX
EBITDA/CAPEX	AUTO
CAPEX/Sales	LUX
CAPEX/D&A	LUX
Current Ratio	LUX
Quick Ratio	LUX
Return on Capital Employed (ROCE)	LUX
Asset Turnover	LUX



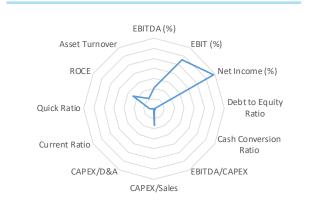
CAPEX/Sales

EBITDA/CAPEX



CAPEX/D&A

Delta Auto vs Ferrari (Exhibit 123)

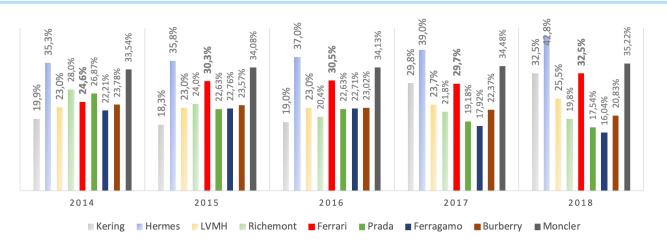


Source: Team elaboration and estimates. Note that the graphs are not immediately comparable as they refer to different order of magnitude



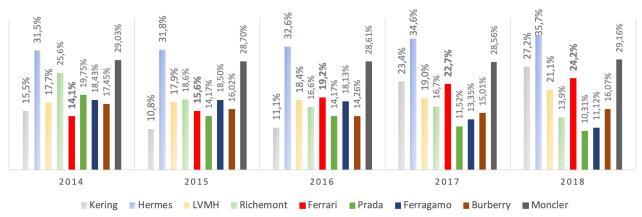
# Eventually, is Ferrari conceivable among luxury or automotive peers? A graphical approach

EBITDA Margin % - Luxury (Exhibit 125)



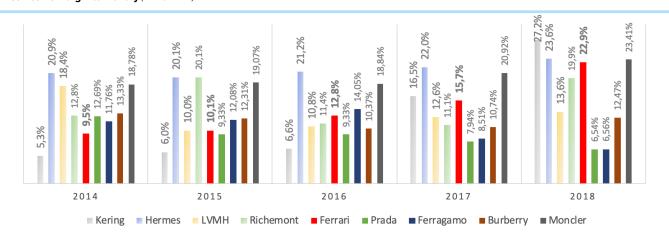
Source: Team elaboration from Reuters & Bloomberg data

EBIT Margin % - Luxury (Exhibit 126)



Source: Team elaboration from Reuters & Bloomberg data

Net income Margin % - Luxury (Exhibit 127)





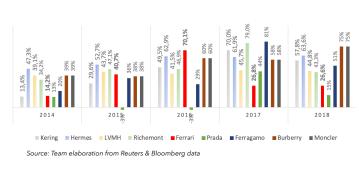
# **Appendix 21 (Cont)**

# Eventually, is Ferrari conceivable among luxury or automotive peers? A graphical approach

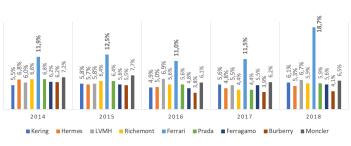
Debt/Equity 2018 - Auto (Exhibit 128)



Cash conversion ratio - Luxury (Exhibit 129)

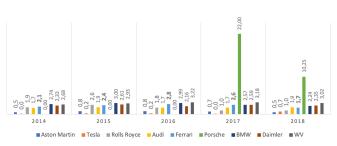


**CAPEX on sales - Luxury** (Exhibit 131)



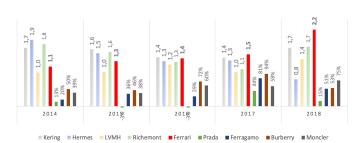
Source: Team elaboration from Reuters & Bloomberg data

Ebitda/CAPEX - auto (Exhibit 130)



Source: Team elaboration from Reuters & Bloomberg data

# CAPEX/D&A - Luxury (Exhibit 132)



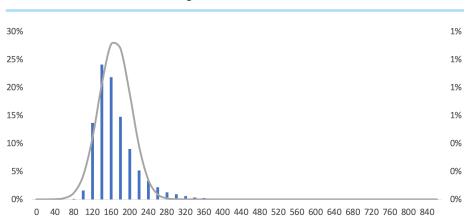
Source: Team elaboration from Reuters & Bloomberg data



# **Montecarlo Simulation**

It has been performed a Monte Carlo simulation in order to assess the sensitivity of the model to variations of the assumptions. The tested variables are Growth Rate and WACC, assumed to be respectively equal to 3.23% and 6.6% in the main scenario. The above-mentioned variables impact on the present value of Terminal Value and the Implied Enterprise Value, affecting the overall result represented by the Fair Value per Share. In order to stress the WACC and Growth Rate variables, we have computed a normal distribution for both of them, characterized by the parameters depicted in the table 1 and eventually obtaining the distributions showed in table 2. The simulation is composed by 100.000 trials. The final result, depicted by Chart 1 and described by the table 3 and 4, consists in the distribution of the Fair Value per share. The latter has been obtained by varying the WACC and Growth rate. As described by the chart and confirmed by the quantiles, the 50% of the observations are encompassed between 128.39 and 178.15.

Monte Carlo simulation for Ferrari's Target Price - Values in € (Exhibit 133)



Source: Team elaboration from Reuters & Bloomberg data, team estimates using R Studio

	WACC	WACC	6,59%
Trials	100000	Growth Rate	3,23%
min max avg sd	0.027491 0.111729 0.065912 0.010168	Trials Min Max Avg Sd	100000 0 865 168 35
(	Growth Rate	Skewness	110
Trials	100000	Kurtosis	12351
min	-0.03227	Quartil	es
max	0.055802	Quartile 2 Quartile 5	128 149
max avg	0.055802 0.009921	Quartile 2 Quartile 5 Quartile 7	

# **Profitability & Margins Breakdown**

Values in €M	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total Revenue	2.762,30	2.853,88	3.105,55	3.416,89	3.420,32	3.766,59	4.101,78	4.419,35	4.876,65	5.429,00
Gross Profit	1.256,30	1.354,88	1.525,55	1.765,89	1.797,32	1.975,40	2.187,60	2.252,15	2.486,43	2.877,00
CAGR		7,8%	10,2%	12,0%	9,4%	9,5%	9,7%	8,7%	8,9%	9,6%
% on Rev	45,5%	47,5%	49,1%	51,7%	52,5%	52,4%	53,3%	51,0%	51,0%	53,0%
EBIT	389,67	443,67	594,66	774,90	826,74	917,55	1.061,06	1.186,26	1.359,57	1.565,15
CAGR		13,9%	23,5%	25,8%	20,7%	18,7%	18,2%	17,2%	16,9%	16,7%
% on Rev	14,1%	15,5%	19,1%	22,7%	24,2%	24,4%	25,9%	26,8%	27,9%	28,8%
EBITDA	678,65	718,43	842,13	1.035,51	1.115,49	1.270,06	1.526,28	1.728,03	1.967,08	2.193,93
CAGR		5,9%	11,4%	15,1%	13,2%	13,4%	14,5%	14,3%	14,2%	13,9%
% on Rev	24,6%	25,2%	27,1%	30,3%	32,6%	33,7%	37,2%	39,1%	40,3%	40,4%
EBT	398,44	433,52	566,93	745,64	803,18	875,55	1.038,39	1.163,59	1.336,89	1.542,47
CAGR		8,8%	19,3%	23,2%	19,2%	17,1%	17,3%	16,5%	16,3%	16,2%
% on Rev	14,4%	15,2%	18,3%	21,8%	23,5%	23,2%	25,3%	26,3%	27,4%	28,4%
Net Income	261,57	287,17	398,34	534,88	784,91	699,16	796,52	892,64	1.025,68	1.205,39
CAGR		9,8%	23,4%	26,9%	31,6%	21,7%	20,4%	19,2%	18,6%	18,5%
% on Rev	9,5%	10,1%	12,8%	15,7%	22,9%	18,6%	19,4%	20,2%	21,0%	22,2%



# **Key Indicators Breakdown**

	2014A	2015A	2016A	2017A	2018A	2019E	2020F	2021F	2022F	2023F	
Du-pont Analysis											
EBITDA Margin (%)	24,57	25,17	27,12	30,31	32,61	33,72	37,21	39,10	40,34	40,41	
Operating Margin (%)	14,11	15,55	19,15	22,68	24,17	24,36	25,87	26,84	27,88	28,83	
Net Margin (%)	9,47	10,06	12,83	15,65	22,95	18,56	19,42	20,20	21,03	22,20	
Asset Turnover (x)	-	0,67	0,80	0,86	0,76	0,74	0,75	0,77	0,81	0,84	
Return on Equity (%)	10,59	-	122,57	68,69	58,20	44,81	44,53	42,64	42,40	41,89	
Return on Assets (%)	5,64	7,41	10,35	12,92	16,18	13,00	14,20	15,30	16,42	17,95	
Return on Capital Employed (%)	13,33	16,63	23,11	26,48	22,66	23,21	25,82	27,13	28,99	30,64	
Liquidity Indica	tors										
Current Ratio (x)	1,65	1,67	1,48	1,71	2,06	1,86	1,72	1,78	1,88	2,10	
Quick Ratio (x)	0,90	1,26	1,17	1,34	1,57	1,41	1,35	1,36	1,46	1,68	
Leverage											
Debt to Equity Ratio (x)	0,21	-	5,69	2,32	1,43	1,34	1,06	0,94	0,79	0,67	
Net Debt to Equity Ratio (x)	0,16	-	4,27	1,49	0,84	0,77	0,56	0,54	0,34	0,16	
Other Indicators	S										
Cash Conversion Ratio (%)	5,54	34,20	78,17	36,37	18,63	47,16	35,33	33,82	48,98	55,26	
EBITDA/ CAPEX (x)	2,06	2,02	2,46	2,65	1,75	1,80	1,98	2,36	2,82	3,36	
Free Cash Flow/Sales (x)	0,01	0,09	0,21	0,11	0,06	0,16	0,13	0,13	0,20	0,22	
CAPEX/D&A (x)	1,14	1,30	1,38	1,50	2,21	2,01	1,65	1,35	1,15	1,04	
Shareholder Inc	dicators										
EPS	1,38	1,52	2,11	2,82	4,14	3,72	4,20	4,71	5,41	6,36	
EPS Growth (%)		9,80%	38,70%	33,70%	47,03%	-10,20%	12,91%	12,07%	14,90%	17,52%	



# **Income Statement**

	2014A	2015A	2016A	2017A	2018A	2019E	2020F	2021F	2022F	2023F
Revenues	2.762,36	2.853,88	3.105,55	3.416,89	3.420,32	3.766,59	4.101,78	4.419,35	4.876,65	5.429,00
Cost of Sales	1.506,00	1.499,00	1.580,00	1.651,00	1.623,00	1.791,19	1.914,18	2.167,19	2.390,23	2.552,00
<b>Gross Profit</b>	1.256,36	1.354,88	1.525,55	1.765,89	1.797,32	1.975,40	2.187,60	2.252,15	2.486,43	2.877,00
Selling, General and Administrative Costs	300,09	338,63	295,24	329,07	327,34	361,76	388,98	416,28	453,32	503,32
R&D Costs	415,00	446,73	509,84	556,62	527,85	559,00	599,24	461,35	461,35	553,62
Amortization R&D Capitalized	125,50	114,86	104,31	100,50	115,19	140,00	138,66	169,89	186,28	223,54
Result from Investments	-	-	-3,00	-2,00	-3,00	-3,41	-3,41	-2,85	-2,85	-3,14
Other Expenses, Net	26,10	11,00	24,50	6,80	3,20	0,50	3,06	21,22	28,76	34,51
Total Operating Expense	2.372,69	2.410,21	2.510,89	2.641,99	2.593,58	2.849,04	3.040,72	3.233,08	3.517,08	3.863,85
EBIT	389,67	443,67	594,66	774,90	826,74	917,55	1.061,06	1.186,26	1.359,57	1.565,15
EBIT Margin (%)	14,1%	15,5%	19,1%	22,7%	24,2%	24,4%	25,9%	26,8%	27,9%	28,8%
EBITDA	678,65	718,43	842,13	1.035,51	1.115,49	1.270,06	1.526,28	1.728,03	1.967,08	2.193,93
EBITDA Margin (%)	24,6%	25,2%	27,1%	30,3%	32,6%	33,7%	37,2%	39,1%	40,3%	40,4%
Interest Inc. (Exp.),Net-Non- Op., Total	8,77	-10,15	-27,73	-29,26	-23,56	-42,00	-22,68	-22,68	-22,68	-22,68
EBT	398,44	433,52	566,93	745,64	803,18	875,55	1.038,39	1.163,59	1.336,89	1.542,47
Provision for Income Taxes	133,22	144,12	167,64	213,41	16,32	176,30	241,24	270,32	310,59	336,46
Net Income After Taxes	265,22	289,40	399,30	532,24	786,86	699,25	797,15	893,26	1.026,31	1.206,01
Minority Interest	-3,64	-2,24	-0,96	-2,00	-1,95	-1,25	-1,79	-1,79	-1,79	-1,79
Net Income Before Extra Items	261,57	287,17	398,34	530,23	784,91	698,00	795,36	891,48	1.024,52	1.204,23
Total Extraordinary Items	-	-	-	4,65	-	1,16	1,16	1,16	1,16	1,16
Net Income	261,57	287,17	398,34	534,88	784,91	699,16	796,52	892,64	1.025,68	1.205,39



# **Balance Sheet**

	2014A	2015A	2016A	2017A	2018A	2019E	2020F	2021F	2022F	2023F
Assets (€ thousands)										
Cash and Short Term Investments	135,02	189,48	465,22	653,43	798,07	896,87	897,64	844,21	1.101,29	1.502,75
Total Receivables, Net	1.448,07	1.372,99	1.056,85	994,93	1.245,86	1.180,74	1.168,49	1.206,63	1.227,63	1.245,84
Total Inventory	296,01	295,44	324,00	393,77	391,06	417,08	445,92	477,84	513,09	529,85
Other Current Assets, Total	951,37	141,94	9,77	10,97	6,57	110,93	7,91	13,50	9,10	35,36
Total Current Assets	2.844,66	2.019,82	1.887,45	2.081,08	2.477,33	2.648,63	2.571,71	2.604,43	2.926,01	3.371,78
Property/Plant/ Equipment, Total - Net	585,19	626,13	669,28	710,26	850,55	1.004,16	1.123,67	1.212,25	1.265,03	1.300,00
Intangibles, Net	265,26	307,81	354,39	440,46	645,80	895,40	936,96	1.041,98	1.113,90	1.120,00
Long Term Investments	36,89	0,98	21,97	30,04	32,13	33,08	34,76	36,49	38,28	35,65
Other Long Term Assets, Total	122,26	133,48	131,32	94,09	60,74	12,03	115,30	77,39	18,43	2,07
Total Assets	4.641,43	3.875,40	3.849,60	4.141,10	4.851,73	5.378,49	5.607,59	5.832,73	6.246,82	6.714,69
Liabilities (€ thousand	le)									
Accounts Payable	535,71	507,50	614,89	607,51	653,75	688,62	776,01	748,63	794,88	793,17
Accrued Expenses	127,59	112,61	116,81	136,07	125,05	138,86	119,43	104,36	134,64	138,86
Current Port. of LT Debt/Capital Leases	491,32	-	-	-	-	-	-	-	-	-
Other Current liabilities, Total	564,39	588,05	544,64	470,64	424,85	598,56	602,42	607,33	627,56	674,07
Total Current Liabilities	1.719,01	1.208,16	1.276,33	1.214,21	1.203,65	1.426,05	1.497,85	1.460,32	1.557,07	1.606,11
Total Long Term Debt	18,90	2.260,39	1.848,04	1.806,18	1.927,17	2.090,00	1.898,20	1.968,28	1.916,09	1.942,19
Total Debt Deferred Income Tax	510,22 21,61	2.260,39 23,35	1.848,04 13,11	1.806,18 10,98	1.927,17 39,14	2.090,00 37,41	1.898,20 27,18	1.968,28 25,04	1.916,09 42,57	1.942,19 42,57
Minority Interest	8,70	5,72	4,81	5,26	5,12	7,09	4,78	5,37	4,62	7,09
Other Liabilities, Total	403,60	402,91	382,32	325,80	327,94	257,73	391,03	280,30	307,14	239,10
Total Liabilities	2.171,81	3.900,52	3.524,61	3.362,43	3.503,01	3.818,27	3.819,04	3.739,31	3.827,50	3.837,05
Shareholders Equity (	€ thousand	ls)								
Common Stock, Total	3,78	3,78	2,50	2,50	2,50	3,01	3,01	3,01	3,01	3,01
Other Equity, Total  Total Equity	-37,77 <b>2.469,62</b>	-16,77 <b>-25,12</b>	20,16 <b>325,00</b>	29,83 <b>778,68</b>	26,74 <b>1.348,72</b>	22,81 <b>1.560,21</b>	37,18 <b>1.788,55</b>	40,03 <b>2.093,42</b>	41,27 <b>2.419,33</b>	24,57 <b>2.877,64</b>
Total Liabilities &										
Shareholders' Equity	4.641,43	3.875,40	3.849,60	4.141,10	4.851,73	5.378,49	5.607,59	5.832,73	6.246,82	6.714,69
No Policio										
Net Debt Incl. Pref.Stock & Min.Interest	383,89	2.076,63	1.387,63	1.158,01	1.134,21	1.200,22	1.005,34	1.129,44	819,43	446,52
Cash and Short Term Investments	135,02	189,48	465,22	653,43	798,07	896,87	897,64	844,21	1.101,29	1.502,75
Total Debt	510,22	2.260,39	1.848,04		1.927,17	2.090,00		1.968,28		1.942,19
Redeemable	_	_	_	_	_	_	_	_	_	- -
Preferred Stock, Total Preferred Stock - Non										
Redeemable, Net	- 0.70	- - 70	4.04	- - 00	- - 10	7.00	4.70		4.00	7.00
Minority Interest	8,70	5,72	4,81	5,26	5,12	7,09	4,78	5,37	4,62	7,09



# **Cash Flow Statement**

	2014A	2015A	2016A	2017A	2018A	2019E	2020F	2021F	2022F	2023F
Net Income Before Taxes	398,23	434,17	567,35	746,16	802,94	875,55	1.038,39	1.163,59	1.336,89	1.542,47
Depreciation/ Depletion	288,98	274,76	247,72	260,61	288,75	352,50	465,22	541,77	607,51	628,78
Change in Working Capital	(380,03)	50,33	344,12	(66,34)	(266,57)	254,24	46,48	(118,10)	27,85	30,99
Provision for Income Taxes	(133,22)	(144,12)	(167,64)	(213,41)	(16,32)	(176,30)	(241,24)	(270,32)	(310,59)	(336,46)
Operating Cash Flow	426,07	615,14	991,55	727,02	808,81	1.306,00	1.308,85	1.316,93	1.661,67	1.865,78
Capital Expenditures	(330,00)	(369,47)	(333,30)	(350,41)	(601,03)	(707,00)	(769,57)	(732,45)	(698,24)	(653,50)
Other Investments	(37,63)	29,92	(21,70)	(6,36)	(0,78)	0,39	(2,45)	(1,44)	(1,51)	2,46
Investing Cash Flow	(289,78)	(339,54)	(355,00)	(356,77)	(601,81)	(706,61)	(772,01)	(733,89)	(699,75)	(651,03)
Total Long Term Debt	18,90	2.260,39	1.848,04	1.806,18	1.927,17	2.090,00	1.898,20	1.968,28	1.916,09	1.942,19
Other Liabilities, Total	403,60	402,91	382,32	325,80	327,94	257,73	391,03	280,30	307,14	239,10
Other Current Assets, Total	951,37	141,94	9,77	10,97	6,57	110,93	7,91	13,50	9,10	35,36
Change in Total Equity		(2.782,56)	(48,64)	(81,71)	(214,63)	(487,67)	(568,18)	(587,77)	(699,77)	(747,08)
Financing Cash Flow	(121,62)	(224,89)	(360,56)	(182,97)	(59,09)	(499,17)	(536,20)	(635,56)	(703,94)	(812,82)
Minority Interest	8,70	5,72	4,81	5,26	5,12	7,09	4,78	5,37	4,62	7,09
Net Change in Cash	20,49	48,47	275,03	189,92	145,96	100,13	0,01	(53,14)	257,35	401,30
Free Cash Flow	37,63	245,68	658,25	376,61	207,77	599,00	539,28	584,48	963,43	1.212,28



Discounted Cash Flow Computation												
	2018	2019	2020	2021	2022	2023						
Total Revenues	3.420,32	3.766,59	4.101,78	4.419,35	4.876,65	5.429,00						
Growth Rate (%)		10,1%	8,9%	7,7%	10,3%	11,3%						
EBITDA		1.270,06	1.526,28	1.728,03	1.967,08	2.193,93						
EBITDA Margin (%)		33,7%	37,2%	39,1%	40,3%	40,4%						
EBIT		917,55	1.061,06	1.186,26	1.359,57	1.565,15						
EBIT Margin (%)		24,4%	25,9%	26,8%	27,9%	28,8%						
EBT		875,55	1.038,39	1.163,59	1.336,89	1.542,47						
EBT Margin (%)		23,2%	25,3%	26,3%	27,4%	28,4%						
Provision for Income Taxes		(176,30)	(241,24)	(270,32)	(310,59)	(336,46)						
Effective Tax rate (%)		20,1%	23,2%	23,2%	23,2%	21,8%						
Depreciation/ Depletion		352,50	465,22	541,77	607,51	628,78						
∆ Working Capital		254,24	46,48	(118,10)	27,85	30,99						
Cash From Operating Activities		1.306,00	1.308,85	1.316,93	1.661,67	1.865,78						
CAPEX		(707,00)	(769,57)	(732,45)	(698,24)	(653,50)						
Free Cash Flow to Firm		599,00	539,28	584,48	963,43	1.212,28						
Assumption		Rate	Value in € M	Adverse	Baseline	Favorable						
Risk Free (Includ. Ferrari's Country Risk Premium)		1,28%	Enterprise Value	28.452,29	33.614,03	38.986,43						
Ferrari's Credit Spread		0,39%	Net Debt									
Tax Rate		23,23%	Incl. Pref.Stock &	1.005,34	1.005,34	1.005,34						
Debt to Equity Ratio		1,06	Min.Interest									
Ferrari's Implied Risk Premium		10,93%	Equity Value	27.446,95	32.608,70	37.981,10						
Cost of Equity		12,21%	# Shares diluted (*)	189,551	189,551	189,551						
Cost of Debt (Pre taxes	s)	1,68%	Implied Price per	144,80 €	172,03 €	200,37 €						
WACC		6,59%	Share Return on									
Growth Rate		3,23%	30.01.2020 Price	-6,22%	11,42%	29,78%						

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