CFA Institute Research Challenge

Hosted in

CFA Society Italy

SP5 Team

Initiation of coverage: 14th Feb 2020

BUY

Price:	€159.7
Target Price:	**€197.1**
Upside:	**23%**
Dividend Yield:	0.7%

Market Data

Main Shareholder

Exor N.V.	23.91%
Piero Ferrari	10.17%
BlackRock Inc	9.03%
Baillie Gifford & Co	7.31%
Treasury shares	4.73%
Other	44.85%

Listed on: MTA, NYSE

Index component: MSCI Pan Euro, FTSE Italia All-Share, FTSE MIB, Stoxx 600 Automobiles & Parts, STOXX Europe Mid 200 EUR, FTSE Italia All-Share Consumer Goods, FTSE Italy All Share Automobiles and Parts

ISIN: NL0011585146

Bloomberg: **RACE.IM**

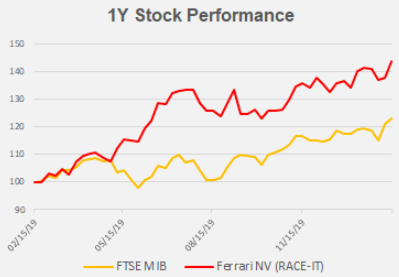
Reuters: **RACE.MI**

	2020	2021	2022	2023
EPS	4,15	4,77	5,54	6,40
P/E	38,52x	33,46x	28,82x	24,96x
Price to Book	18,37x	13,28x	11,49x	8,70x
EV/Sales	8,95x	8,14x	7,36x	6,63x
EV/EBITDA	24,92x	21,36x	18,28x	15,62x
EV/EBIT	35,20x	30,70x	26,70x	23,16x
ROE	0,48	0,40	0,40	0,35
ROIC	0,45	0,45	0,70	3,09

52-week range: €108.95 – €160.60
1Y stock return: 45.56%
30 days average volume: 517,230mln

Stock Data

Performance	1m	3m	12m
Absolute	1,77%	1,60%	36,68%
Relative	0,60%	2,65%	25,35%



FERRARI N.V.

€ mln	2019A	2020E	2021E	2022E	2023E	2024E
Revenues	3.766	4.124	4.536	5.012	5.564	6.204
EBITDA	**1.269**	**1.481**	**1.729**	**2.020**	**2.363**	**2.774**
Margin	*33,70%*	*35,92%*	*38,11%*	*40,29%*	*42,48%*	*44,72%*
EBIT	**917**	**1.049**	**1.202**	**1.383**	**1.594**	**1.843**
Margin	*24,36%*	*25,43%*	*26,51%*	*27,58%*	*28,65%*	*29,70%*
Net Income	**699**	**772**	**888**	**1.031**	**1.191**	**1.387**
Margin	*18,57%*	*18,71%*	*19,58%*	*20,58%*	*21,41%*	*22,36%*
EPS	**3,76**	**4,15**	**4,77**	**5,54**	**6,40**	**7,46**
P/E	*42,50x*	*38,52x*	*33,46x*	*28,82x*	*24,96x*	*21,43x*
EV/EBITDA	29,09x	24,92x	21,36x	18,28x	15,62x	13,30x
Net Debt	254	224	-190	-598	-1.646	-2.660

"The Ferrari is a dream - people dream of owning this special vehicle and for most people it will remain a dream apart from for those lucky few "(Enzo Ferrari)

We initiate our coverage on Ferrari NV with a **BUY recommendation**, assessing a **€197.1 Target Price**, implying a **23% potential upside** from its current stock price (€159.7 per share, closing price on 14th February 2020). In our opinion the market has not yet fully appreciated: **(i) the business impact of the current strategic plan**, which will see the introduction of ten new models by 2022; **(ii) the unique strategy** based on **exclusivity** and accurate **customer selection**, which allows the Company to manage the order-book and the **waiting-list**; **(iii) the resilience and the stable growth** experienced in the past years which we expect will persist in the foreseeable future; **(iv) the growth in the addressable market**, due to the low percentage of potential clients currently served (0.05% of potential clients HNWI).

The glorious legacy: past excellence, not just in racing

Since the IPO, Ferrari strategy has allowed the company to exhibit **high margins** (EBIT 24.4% 2019), **cash flow generation** (FCFF of €407mln 2019) and **returns** (ROE 48.1% 2019). In the past five years Ferrari growth (+7.2% CAGR on Revenues 2015A-2019) has been driven by: **(i) absolute leadership position** in the Luxury Performance Car Market; **(ii) attraction and retention of talents** in different business areas both managerial and technical; **(iii)** heritage, positioning and **strength of the brand**; **(iv) great pricing power** and ability to manage the orders; **(v)** cutting-edge **design** and award-winning **engine** of Ferrari cars.

A rampant future

Ferrari's growth will be sustained by: (i) the unveiling of **new type of models**, in order to meet new clients' taste and allow the entrance in new markets; (ii) the renewed strategy, aimed to **improve personalization** options in order to sell more high-margin vehicles such as limited editions, one-offs and *Icona* concept models ("Monza SP1" & "Monza SP2"); (iii) the meticulous **policy on the image of the Company**, to protect and enhance the brand value; (iv) **controlled growth**, in order to preserve the exclusivity and uniqueness of Ferrari cars and (v) sustainable and responsible **development of the brand**.

Financials

According to our analysis, Ferrari's business potential leads to an encouraging **advance of revenues** and **profitability**. Total Revenues will grow at **+10.5% CAGR 2019A-2024E** reaching €6.2bn 2024E driven by new models that will be introduced and the improved margin of the cars sold. Revenues growth is not offset by the costs increase, thanks to the improvement of the premium for Ferrari cars, leading to a 2024E Gross Margin of 68% from 61% of 2019A. The **EBIT will grow** to € 1.8bn in 2024E (+15% CAGR 2019A-2024E) reaching a **margin** on Revenues of **29.7% 2024E**. The steady **decline in ROE** (34.5% 2024E, decreasing from 48.2% 2019A) is substantially driven by the **financial leverage reduction** (1.92x in 2024E from 3.72x in 2019A). The high operating cash generation potential of the firm (€ 2.2bn CFO 2024E, +76% from 2019) will contribute to maintain a stable **CFO/NI (165% 2024E)**. We expect **EPS to increase** from €4.2 in 2018A to €7.5 in 2024E (+14.7% CAGR 2019A-2024E).

Valuation

Our **Target Price of €197.1** is the result of the absolute leadership position in the Luxury Performance Cars Market. Ferrari is **not a conventional company**: while some of its characteristics belong to the **automotive industry** for products and expenses (i.e. CAPEX), margins and premia applied are more aligned to those of the **luxury industry**. For its uniqueness, in our opinion the most appropriate method of valuation is the Discounted Cash Flow: as such we implemented a **three-stage DCF** to take into account an initial strong growth period followed by a more stable one. In order to model the duality of Ferrari, we supported our **BUY recommendation** by comparing the result of our DCF with a **Multiples Analysis** (MA), in which we considered a sample represented for **70% by the Luxury** industry and for the remaining **30% by Automotive** names. We found a TP consistent with the results of the DCF model, confirming our BUY recommendation. We stressed some of the most important variables with a **sensitivity analysis**: in particular, Terminal Value Growth Rate, WACC, Beta and Terminal Value-Enterprise Value ratio. Furthermore, we assessed a **scenario analysis** considering Bull case and Bear case showing confidence about our BUY recommendation.

Investment Summary

Ferrari: a luxury company that incidentally produces cars

We initiate our coverage on Ferrari NV with a **BUY recommendation**, assessing a **€197.1 Target Price**, implying a **23% potential upside** from its current stock price (€ 159.7 per share closing price on 14th February 2020). Our investment recommendation is based on: **(i)** its **powerful brand** (with an estimated value of €27bn, 94% of the current Market Cap), which allows Ferrari to be **resilient** during economic recession periods; **(ii) product differentiation** (15 new models in 2019-22), which allows the Company to reach new clients in key regions and new markets (China, Russia), with **Revenues** expected to growth at **10.75% CAGR 2020E-2024E**; **(iii) controlled growth**, pursuing its **low volume** strategy through a **waiting list approach**; **(iv) product personalization**, which enhances the customers' perception of exclusivity.

Ferrari is a dream

Ferrari was born from the **dream of Enzo Ferrari** and its **passion** for performance cars. With a €28.5bn Market Cap and €3.7bn in Net Revenues in 2019, Ferrari operates in the **Luxury Performance Car Market**, populated by manufacturers who produce two-door cars powered by 500hp engines, with a retail price in excess of **€150,000** (including VAT). Ferrari's **core business** is the **design**, the **engineering**, the **production** and the sale of luxury performance sports cars. Ferrari cars are **handcrafted in Maranello** and are distributed entirely through a **network of selected dealers**. In particular, the business is characterized by **Sport** and **Gran Turismo (GT) cars**, unique in terms of **quality, performance** and **brand power** since its foundation. What differentiates Ferrari from most of its peers is its ability to pursue **innovation**, in a segment of the automotive industry where the **combustion engine** is still the customer's core attraction. The Company has shown a **strong revenues growth** over the last few years (+7.2% CAGR 2016-2019), **high margins** (EBIT 24.4% 2019), **cash flow generation** (FCFF of €211.5mln 2017E) and **returns** (ROE 48.2% 2019). This was possible thanks to: **(i)** increase in the car and spare parts business (+7.8% CAGR 2016-2018); **(ii)** internalization strategy through direct entrance in new markets and consolidation in existing ones; **(iii)** improvement of the product portfolio diversification.

Drivers for growth

Ferrari's intention is to **broaden its product portfolio** to target a larger customer base while continuing to pursue a **low volume production strategy** in order to maintain a reputation for **exclusivity and scarcity**. In order to enhance and protect the value and the exclusivity of the brand, Ferrari's growth drivers are represented by: **(i)** improvement in the performance of combustion engines as well as the use of **hybrid** technology to meet new Clients' tastes, recent industry trends and environmental-friendly regulations; **(ii)** product diversification, through the introduction of 10 new models in 2020-2022; **(iii) brand strength preservation**, through the long waiting lists strategy, which enhances the perception of **uniqueness** (i.e., management's philosophy is to produce 'one less car than is required by the reference market'); **(iv)** customers' car **personalization**; **(v) success of Ferrari racing team**, where the participation in races may be perceived by clients as a demonstration of the technological capabilities of Ferrari cars which also supports the appeal of other Ferrari-branded luxury good.

Relevant risks

Macro environment and consumer sentiment: A potential change in the global GDP outlook and in luxury consumer confidence could have a negative impact on the company's top-line performance and expansion strategy.
Forex Risks: The largest portion of Ferrari's capital and operating expenses are denominated in EUR while the majority of revenues are denominated in currencies other than EUR. A strengthen of EUR would negatively impact the Revenues. In 2018, the Total Revenues amount exposed to FX risk was 49% (mainly in USD) of the Company's turnover.
Risk related to the Brand Image: All Company's activities are based on the prestige and identity of the Ferrari's brand, which in our estimates has a value of about €27bn (~ 94% of the Market Cap), and a power score of 93 on a scale of 100. Any damage to the image of the "Cavallino Rampante" could adversely affect the operating and financial outcomes.

Financial highlights

According to our analysis, Ferrari's business potential lead to a promising growth of revenues and profitability. Total **Revenues will grow at a 10.5% CAGR 2019-2024E**, reaching **€6.2bn in 2024**, driven by the expansion of the mix with the introduction of new models and the strategy of the Company aimed to sell more one-offs, limited editions and special series cars in which the **marginality is higher** (see *Appendix 3*). **EBIT** will reach €1.8bn in 2024E **(+15% CAGR 2019-2024E)**, for a margin on revenues of **30% 2024E**. The steady **decline in ROE** (48.2% 2019, 34.6% in 2024E) is mainly driven by the **leverage reduction** (D/E 27% 2024E). The high operating cash generation potential of the firm (2.3bn CFO 2024E, +75.7% from 2019) comes with the **Net Income** growth, keeping constant the **CFO/NI** (165%) following our estimates. We expect **diluted EPS to increase** from €3.8 in 2019 to €7.5 in 2024E **(+14.7% CAGR 2019-2024E)**.

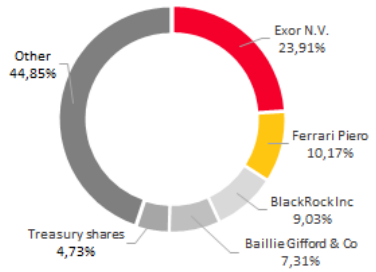
Valuation

The **Target Price** resulting from our valuation is **€197.1**, which implies a **23% potential upside** from the actual market price and supports our **BUY recommendation**. To determine Ferrari's fundamental value, we implemented a **three-stage DCF** to take into account an initial strong growth period followed by a more mature one. To underpin our BUY recommendation, we contrasted our DCF-based valuation with a **relative valuation** of Ferrari's historical multiples, estimating a **28x P/E** and a **19.5x EV/EBITDA** fair value. In order to confirm our recommendation, we also take into consideration **bull and bear scenarios**. The Company's guidance states it is not in their intentions to consider M&A scenarios for the upcoming business plan. We evaluated the possibility of a **reengineering of the financial structure**, estimating the **optimal level of WACC**, which should maximize the **value for shareholders**. We then conclude stressing some key variables of our model by performing a **sensitivity analysis** on WACC, Beta, and TV growth rate.

Exhibit 1
Target price

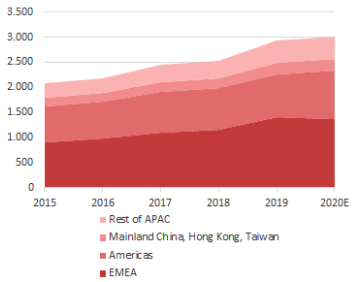
Source: Team Estimates

Exhibit 2
Shareholder Structure as February 14th 2020



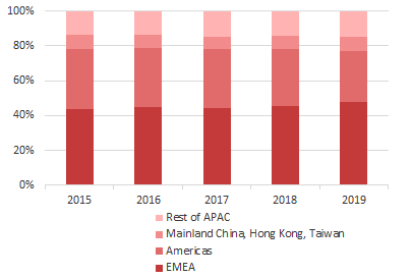
Source: Company Data, Factset

Exhibit 3
Revenues breakdown by Geographic Area



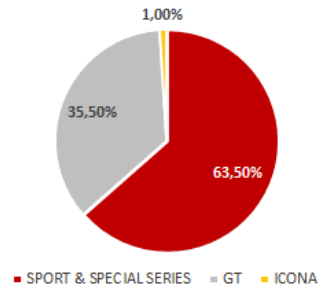
Source: Company Data, Team Estimates

Exhibit 4
Shipments breakdown by Geographic Area



Source: Company Data

Exhibit 5
Company Segments in 2019



Source: Company Data

Exhibit 6
Point of Sale

Americas	EMEA	China, Hong Kong, Taiwan	Rest of APAC
52 POS	90 POS	22 POS	26 POS
USA 40 POS	*Northern Europe* 18 POS	*China* 18 POS	*North East Asia* 11 POS
Canada 5 POS	*Central Europe* 20 POS	*Taiwan* 3 POS	*South East Asia* 6 POS
Latin America 7 POS	*East West Europe & Africa* 25 POS	*Hong Kong* 1 POS	*Australasia* 9 POS
	Southern Europe 16 POS		
	Middle East 11 POS		

Source: Company Data

Business Description

Ferrari is an **Italian based multinational automotive company** founded in **1939** by **Enzo Ferrari** initially under the name "Auto Avio Costruzioni". Officially, the first Ferrari car (125s) was born in **1947**. Ferrari N.V. was incorporated as a public limited liability company (naamloze vennootschap) under the laws of the Netherlands on September 4, 2015 and listed, under the ticker symbol **RACE**, on the Italian Stock Exchange (**MTA**) on January 4, 2016 after the **separation with the FCA Group.** The official seat is in **Amsterdam**, Netherlands, and the corporate address and principal place of business is located at **Maranello**, Italy. Ferrari is mainly controlled by **Exor NV** and **Piero Ferrari** (respectively by 23.91% and 10.17%, see *Exhibit 2*), which **jointly hold the majority voting power**. In 2019 it has reached a **Market Cap** of **€30bn** and €3.7bn in Revenues primarily through its sports and GT cars, the main Company's business.

Company Presentation

Ferrari is not a traditional car maker, as stated by Sergio Marchionne in 2014 "*Ferrari is a luxury brand that incidentally produces cars*", it shows substantial differences with the other traditional automotive companies. Ferrari's core business is the **design**, the **engineering**, the **production** and the sale of **luxury performance sport cars**, in particular they focus on **two-door car** powered by **500hp engines** and with a retail price in excess of **€150,000** including VAT. Given this target Ferrari represents an extremely **niche** manufacturer. What differentiates Ferrari from most of its peers is its ability to pursue **innovation**, in a segment of the automotive industry where the **combustion engine** is still the customer's core attraction. While Ferrari is successfully introducing new product lines to embrace the **sustainability** issue and to keep up with new trends, innovation in the pursuit of performance combined with an **ultra-modern car design**, allows Ferrari to **stand out among its competitors**. The comparison with powerful brands such as **Hermès** and **Brunello Cucinelli** is worthwhile. The latter is a high-luxury clothes producer, which uses state of the art **craftmanship** to make apparels that are recognisable with his brand. Just as Cucinelli, like Enzo Ferrari, has followed his **dream** becoming an innovator in his sector, with the idea of producing coloured cashmere (as such, valued as the the "King of cashmere"), Ferrari continuously innovates, **winning every year since 2010 the Best Performance Engine Award** and several **Design awards**, strengthening its already powerful brand. The extraordinary level of improvement, achieved in **safety measures** and **hybridisation** contributes to the enhancement of **brand perception**. We can notice that if we look at Ferrari, Hermés and Cucinelli main valuation multiples, they are **aligned and above all their peers'**. While we **underline that the scarcity** of the goods produced is typical of the luxury industry in general, we think Ferrari stands out for its brand strength (see *Appendix 1*). In our view, the only comparable that has such a high niche positioning is **Hermès**, due to its **waiting list approach**. Following a **low volume strategy**, long waiting lists enable companies to **manage shipments**, in order to enhance the **perception of exclusivity** and preventing a slowdown during economic recession. Ferrari stands out even from luxury car makers such as Aston Martin, Bentley and Lamborghini, as we can see from its margin historical series, because of its **resilience during crisis periods**.

Business Segments

Ferrari operates mainly in two business areas**: Sport** cars **and GT** cars (see *Exhibit 5*).

- **Sport cars**, based on know-how developed from its **F1 activities**, Ferrari is one of the best luxury sport car maker in the world, offering five models equipped with both **V8** and **V12** engines, with a global **Market Share** in Luxury Performance Car Market of **17%**. Ferrari's sport cars are characterized by **compact bodies**, a **design** guided by **performance** and **aerodynamics**, and benefit from **technologies** initially developed for their Formula 1 single-seaters, with a **medium price of €300,000** (see *Appendix 2*). The Company favours performance over comfort, seeking to provide the driver with an immediate response and **superior handling**, leveraging state of the art vehicle **dynamics** components and controls. In the sport car class, Ferrari, at present, offers five models:

1. **812 Superfast**: equipped with V12 engine and 800 HP, launched in March 2017.
2. **F8 Tributo**: equipped with V8 engine and 720 HP, launched in February 2019.
3. **SF90 Stradale**: equipped with V8 engine and 780 HP, launched in May 2019.
4. **812 GTS**: equipped with V12 engine and 800 HP, launched in September 2019.
5. **F8 Spider**: equipped with V8 engine and 780 HP, launched in September 2019.

In addition of these five models, Ferrari actually produces two other special series sport cars, Ferrari 488 Pista and Ferrari 488 Pista Spider, provided both with V8 engines and addressed to Ferrari devoted customers.

- **GT cars**, these cars are **more accessible** (in term of price, on **average €217,000**) and allow potential clients to enter into the "**Ferrari family**". While still maintaining the **performance** expected from a Ferrari car, these cars present a **higher focus on comfort** and life quality on-board, characterized by more refined interiors. This segment represents 36% of Company's shipments in 2019. Even though they are born to increase quality and comfort driving, Ferrari GT cars maintain the performance expected from a Ferrari car. Ferrari offers, at present, four models in this GT segment:

1. **GTC4 Lusso**: equipped with V12 engine and 690 HP, launched in February 2015.
2. **GTC4 Lusso** T: equipped with V8 engine and 610 HP, launched in February 2015.
3. **Portofino**: equipped with V8 engine and 600 HP, launched in September 2017.
4. **Roma**: equipped with V8 engine and 620 HP, launched in November 2019.

Furthermore, Ferrari offers two other car segments, representing less than 1% of Revenues in 2019, which are dedicated solely to Ferrari loyalty owners:

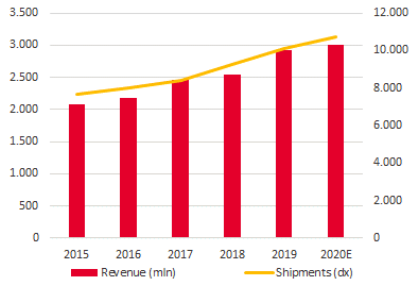
1. **Icona cars**, representing 50' years style Monza SP1 and Monza SP2.
2. **Hypercars**, the first Ferrari **hybrid** model unveiled in 2014 "LaFerrari" and the update "LaFerrari Aperta" in 2016.

In addition, within **2022**, the Company will enter in **SUV market** with **Ferrari "Purosangue"**, the first ever SUV in Ferrari history, in order to tap into new market and improve Revenues.

Distribution Network

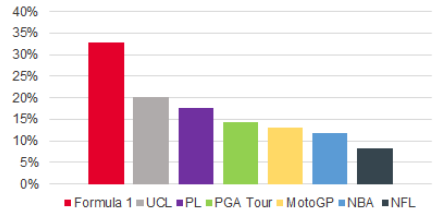
Ferrari cars are **handcrafted in Maranello** and are distributed entirely through a **network of selected dealers**. The Company **acts as importer** with its **regional subsidiaries** then sells the cars to dealers for resale to end clients. The **sale of parts** for current and past models and after-sale services is also assigned to the same dealers' network (see *Exhibit 6*). At the end of 2018, the network was composed by **167 dealers in 190 points of sale** distributed as follows: **Americas**: 52 POS (U.S.A. 40 POS, Canada 5 POS, Latin America 7 POS); **EMEA**: 90 POS (Northern Europe 18 POS, Central Europe 20 POS, East West Europe & Africa 25 POS, Southern Europe 16 POS, Middle East 11 POS); **China, Hong Kong, Taiwan**: 22 POS (China 18 POS, Taiwan 3 POS, Hong Kong 1 POS); **Rest of APAC**: 26 POS (North East Asia 11 POS, South East Asia 6 POS, Australasia 9 POS).

Exhibit 7
Revenue vs Shipments



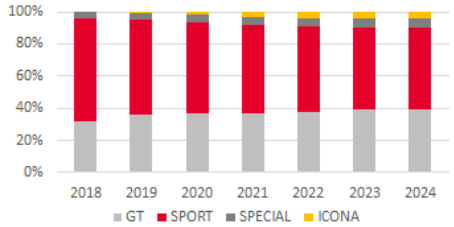
Source: Company Data, Team Estimates

Exhibit 8
Social media growth in 2019



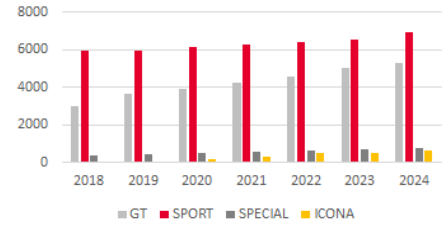
Source: Livewire sports

Exhibit 9
Past-Future Product Mix



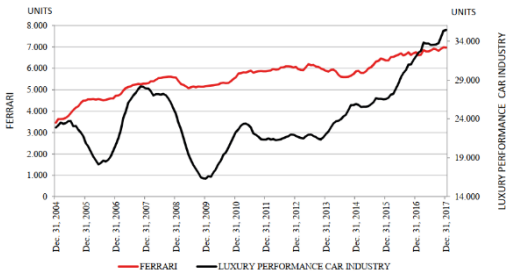
Source: Team Estimates

Exhibit 10
Shipments breakdown by Segments



Source: Team Estimates

Exhibit 11
Luxury Performance Car Market



Source: Company Data

The **largest dealer** represents approximately **2.3% of sales**, and the 15 largest dealers represent 22% of sales (at December 31, 2018). Ferrari dealers' selection process is based on **criteria** such as reputation, financial solidity and proven track records. While **Ferrari provides a suggested or maximum price** for the cars, the dealers are free to negotiate prices and financing conditions. The Company manages **dealers' training process** with Ferrari Academy for sales, after-sales and technical activities then monitors to collect and observe **data** about profitability and financial health to ensure the highest standards of client's experience.

Future Growth Strategy

Ferrari's intention is to **broaden its product portfolio** to target a **larger customer base** while continuing to pursue a **low volume production strategy** in order to maintain a reputation for **exclusivity** and **scarcity**. In order to promote this reputation, the Company **manages the production volumes** and delivery waiting lists. The strategy is focused on maintaining the leading position in the luxury performance car market, enhancing and protecting the value and the exclusivity of the Ferrari **brand** through the following policies:

• **Controlled growth**: "*We will always sell one less Ferrari than the market wants, that is a policy that we will never change*" (Enzo Ferrari), (see *Exhibit 7*). Ferrari's plan is to pursue growth in existing and emerging markets through Sales expansion, maintenance and repair services internationally. The Company intends to increase the brand value with the promotion of high performance cars and lifestyle in connection with side activities for existing and potential clients. Ferrari's strategy requires to maintain the highest levels of quality and satisfaction of both its management and clients, to recruit, train and retain skilled management, technical and marketing staffs.

• **Regular introductions of new models and technical enhancements**: During the period **2019-2022** Ferrari will introduce **15 new models**, included the Icona limited editions, in the GT segment, the "Purosangue" (SUV style model), and a new line of cars powered by **V6 engines** (see *Exhibit 9, Appendix 3*). Moreover, Ferrari's R&D is intended to improve performance of combustion engines as well as the use of **hybrid technology** in its cars to meet new clients' tastes, recent industry trends and environmental-friendly regulations. Since 2013, when hybrid engines have been introduced in Formula 1 cars, Ferrari developed his own engine and manages to transfer its technology in their road vehicles. The first Ferrari with hybrid technology "La Ferrari" had been unveiled in 2013, the following is the "SF90 Stradale" introduced in 2019.

• **Racing excellence**: The Company is focused on **marketing and promoting its excellence** by taking part in racing activities, in particular with **Scuderia Ferrari** which participate in the **Formula 1 World Championship**, the most followed annual motor-sport series in the World (see *Exhibit 8*). The prestige, identity, and appeal of the Ferrari brand is linked to the continued success of the Ferrari team. The participation in races may be perceived by clients as a **demonstration of the technological capabilities** of Ferrari cars which also supports the appeal of other Ferrari-branded luxury goods.

• **Growth in adjacent luxury and lifestyle categories**: Ferrari's objective of maintaining and improving its brand perception is based also in **licensing to top partners** a series of **franchised or directly managed stores**. Ferrari enters into agreements with licensees for the design, development and production of Ferrari branded products. After customer surveys and researches, the Company announced the participation exclusively in categories aligned with the brand's values: as such, it will **reduce the current licensing** agreements by some 50% and eliminate some 30% of products in order to enhance the perception of exclusivity of its brand. This strategy will rely on three pillars:

a) **The Brand Extension Pillar**, which includes selected apparel products and accessories, in line with style and quality of Ferrari. The long-term manufacturing agreement with the Italian stylist **Giorgio Armani** to manufacture the products belongs to this pillar.
b) **The Entertainment Pillar**, is aimed to engage younger fans in the racing values and history, with Abu Dhabi and Barcelona **theme parks**, and Maranello and Modena **museums**, with a focus on driving simulation activities.
c) **The Car Adjacencies Pillar**, that targets the most important customers with limited editions and one-offs artefacts to symbolize the **craftsmanship** and innovation spirit of Ferrari cars.

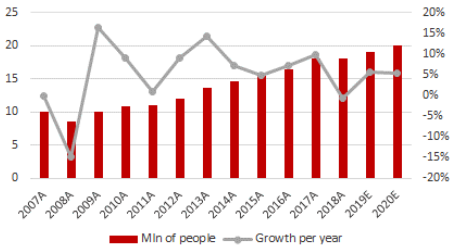
Ferrari aims to provide an enhanced experience for all the customers and prospective clients who visit the Maranello facility. The first step in the direction is the creation of a restaurant, planned in late 2020, in collaboration with the world-famous, Michelin-rated chef, **Massimo Bottura**.

Industry Overview and Competitive Positioning

Luxury Performance Car Market

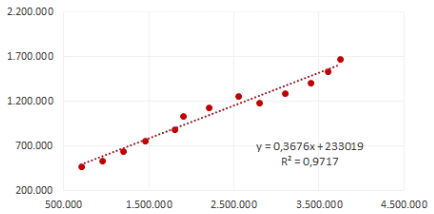
It is not easy to place Ferrari in a defined industry. It is evident that Ferrari shares some luxury names' features, focusing on the **intangible value of its brand heritage**, but we cannot ignore the fact that Ferrari produces high performance cars: **customers' loyalty** is mainly driven by the **high technology** and **quality** of the cars produced, even though the **brand value** plays a key role in commanding sales. Hence, Ferrari belongs to a specific segment of the automotive industry: the **Luxury Performance Car Market**, which includes manufacturers that sell annually no more than **10,000 units** with an average selling price of at least **USD 150,000**, such as Aston Martin, Bentley and Lamborghini. A greater brand value resulting from our valuation brings us to give more relevance to the highest end of the Luxury Car market. The latter, with an estimated **value of €495bn** in 2018, was one of the **fastest-expanding segments** in the global luxury market, growing approximately **5% YoY** (see *Exhibit 11*). The segment experienced over **22% CAGR** from **2012 to 2016**. The growth is mainly driven by an **increase of High Net Worth Individuals** ("HNWIs"), the key customer in the market. The population of HNWIs has grown by **9.6%** between 2016 and 2017, reaching **18.1 mln** globally, boosted by global economic growth and wealth creation, particularly in some **emerging economies**. Specifically, the growth of **HNWIs in China** has been both significant and consistent in the last five years (**9.7% CAGR**). Since we are considering a segment of the automotive industry, we cannot ignore the growing space that the **environmental issue** is taking. The adoption of stringent **emissions targets** by regulators, combined with a consumer preference to conserve fuel for economic and environmental reasons, has driven growth in the demand for both **hybrid and electric vehicles**. Cost is currently a limiting factor in the demand for electric vehicles but advancements in battery technology are expected to close the gap with conventional internal combustion powertrains over the coming years. Automotive industry is strongly influenced by factors such as innovation and regulation about environment. Ferrari is constantly monitoring the evolution of **autonomous driving technologies** including sensors and artificial intelligence and will include these elements in line with Ferrari driving experience but stated that is not

Exhibit 12
HNWI global population



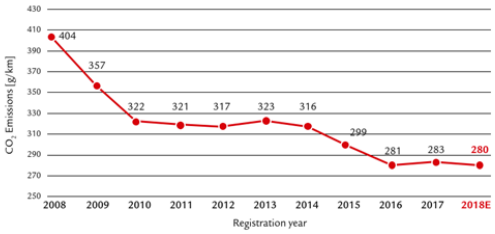
Source: Capgemini

Exhibit 13
HNWI-China linear regression



Source: Team Estimates

Exhibit 14
Average Specific CO_2 Emissions

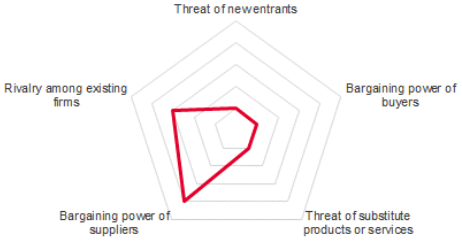


Source: Company Data

Exhibit 15
Car personalization

Source: Company Data

Exhibit 16
Porter Five Forces



Source: Team Estimates

interested in developing any driver-less vehicle. About Electric Vehicles, Ferrari said that a completely electric Ferrari will not be available until 2025. Although, even if there is no interest in this new technology, Ferrari is concerned about the current state of the environment and declared that in **2022** the **60%** of their mix will be **hybrid powered**. The Company introduced hybrid technology in F1 in 2013 and since that moment their hypercar "LaFerrari" (launched in 2013) and the "SF90 Stradale" (launched in 2019) are two example of this innovation transferred to road cars.

Macro Trends

HNWI (High-Net-Worth-Individual) and HENRY (High-Earner-Not-Rich-Yet): A **HNWI** owns around **$1mln** in liquid financial assets, while **HENRYs** are individuals which have significant **discretionary income** and a strong chance of being wealthy in the future. HENRYs represent the top 20% of households in terms of income, earning anywhere between $100,000 and $250,000 a year. Because they earn more than the middle class does, HENRYs have more **spending power** and could afford purchases that are more expensive. For established markets (such as Luxury Performance Cars market) HENRYs hold the key to potential growth, becoming potential customers in mature markets. HNWIs grew a slightest 0.3%, in 2018, since 2010 they have grown at an annual rate of **8.7%** (see *Exhibit 12*). In 2018, **61.2%** of the global HNWI population lived in **USA**, **Japan**, **Germany** and **China**. In the same year, these four countries represented about half of Ferrari's shipments, so they represent key markets for the Company's Sales. We think that HNWIs and HENRYs growth trends is fundamental for **Ferrari's future Sales target**.

China represented **8%** of Ferrari's cars shipments in 2019. Since China's economy is among the fastest growing globally, we think that Ferrari's business there can improve, in particular for the adoption of hybrid models and the "Purosangue", beyond the presence of HNWI. Due to stricter regulation on car emission, though, the business growth in China we think will be related to **hybrid models adoption**, a segment where Ferrari is gradually introducing its technology. Moreover, the SUV "**Purosangue**" unveil within 2022 will have a great impact on shipments to China, where this type of cars is largely used. Lastly, **China's HNWI population** grew in the last five years at an average 9.7%, compared with a global rate growth of 5.6% in the same period. The correlation between HWNI China population and Luxury cars Sales as a whole in the county is shown in *Exhibit 13*.

Hybrid cars & CO_2 emissions: in recent years, more stringent rules have been issued due to ecological, fuel saving and noise emission concerns. Ferrari benefits from a **derogation** both in **Europe** and in **USA** of the existing emissions requirement thanks to the status of SVM (Small Volume Manufacturer). We think that the trend towards low emissions targets might affect Ferrari's car manufacturing and the Company business as a whole, due to high **CO_2 emissions** of his internal combustion engine cars. However, Ferrari is gradually but rapidly introducing hybrid technology (such as LaFerrari and LaFerrari Aperta) backed by high R&D efforts, and expect to have **60%** of its product line in **hybrid models** within 2022.

Micro Trends

Cars personalization: every car exit from **Maranello** is personalized, at different level. From one-off cars to basic personalization program, the Company have "**Tailor Made Center**" and "**Atelier**" in Maranello, New York and Shanghai, where Ferrari's client can customize every car model (see *Exhibit 15*).

Competitive Analysis

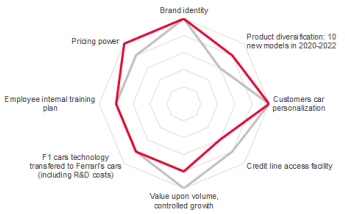
Competitive Drivers

Carrying out the **Porter's five forces analysis** and the **SWOT** for Ferrari business, we define the factors that shape the competitive landscape (see *Appendix 5, 6*). Ferrari is one of the most famous brands all around the world and covers every car that they produce with a unique aura of exclusivity. In the luxury performance car industry, where the competition is intense, Ferrari faces **few big firms** that have similar characteristics and, sometimes, larger financial resources (as part of wider automotive groups). This leads to **fierce competition** where growth drivers are represented by **(i)** the emotional driving experience, **(ii)** uniqueness benefits that come up from owning a luxury car, **(iii)** the high level of product personalization, **(iv)** the ability to reduce the huge cost structure, **(v)** the capacity to integrate hybrid and electric technology without disturbing the driving experience, **(vi)** capacity to reduce the CO2 emissions and **(vii)** credibility in selling these cars at premium. The **high degree of concentration** is strengthened by the **high barriers to entry** that makes very difficult for a new company to start any business in the luxury performance car industry. Especially for Ferrari, customers tend to buy the brand over the car's performance and overspend on the products in order to enjoy a higher luxury experience. For these reasons, beyond the luxury car producers such as Aston Martin, Lamborghini and Porsche, other competitors may be identified in the proper luxury industry like Hermes and Brunello Cucinelli, which have very similar characteristics (exclusivity, craftsmanship, excellence, power of the brand, high quality of raw materials). Essentially, Ferrari differs from those luxury companies only for the Capital Expenditures, which are, obviously, higher for a car producer than for an apparel manufacturer.

Competitive Advantages

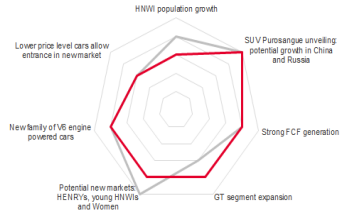
The real advantage that Ferrari sets in front of primary competitors is the **enormous power of its brand identity**). The famous "**Cavallino Rampante**" has kept its luxury and exclusivity positioning through time and is a trademark of **quality** and **performance** all around the world. The latest partnerships that Ferrari has signed with **Giorgio Armani** (fashion) and **Massimo Bottura** (haute cuisine) follows the Company's strategy to enhance even more the **perception of exclusivity** and "**Made in Italy**" excellence. Ferrari with its **hand-crafted** cars has revolutionized all the automotive industry and racing world becoming a landmark, almost a **"dream"**, for many people all around the globe. Its **brand** for the second consecutive year was **awarded as the strongest in the world** according to *Brand Finance*. Following our estimates, we compute **Ferrari's brand value** considering the difference between **Ferrari and BMW's** latest 12M P/S, multiplied by Ferrari FY2019 Sales. We have chosen BMW instead of other mass-market car producer because we think that the analysis should be maintained inside the sub-sample of luxury car producer. We estimate a **brand value** of **€27bn**, that is **94% of Ferrari's free float market capitalization**, thus highlighting how important is the Company philosophy, strategy, craftsmanship and history of successes. On the other side, this also shows how important is for Ferrari to maintain its results, either financially as well as in racing competitions. Any disappointment relative to expectation may, in fact, negatively affect the Company's brand value and, consequently, its market price. In order to measure **Ferrari's Brand Strength**, we also computed an **index** which includes **seven parameters** (see *Appendix 1*), getting a score of **93 out of 100**. In addition, Ferrari has an important tool that some other competitors do not have: the stage of the Formula 1 World Championship that improve the visibility and the awareness of its brand (as far as the racing results are positive). This leads more **enthusiasm** and **passion** for everything concerning the Ferrari style, which positively affect, among other things, its operative and financial outcomes.

Exhibit 17
SWOT Analysis: Strengths



Source: Team Estimates

Exhibit 18
SWOT Analysis: Opportunities



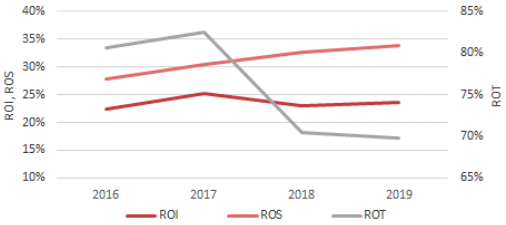
Source: Team Estimates

Exhibit 19
Competitive Financial Analysis

Company name	Sales	Gross Margin	EBIT Margin	EBITDA Margin	SG&A Expense	ROA	ROE	Working Capital Turnover	Dividend Payout Ratio	Total Debt / Total Equity
BMW	96.822,5	22,6%	9,1%	13,8%	14.041,2	4,1%	11,8%	7,72x	37,0	150,0%
Ford Motor	137.653,0	9,2%	4,6%	7,7%	-	2,0%	14,1%	7,36x	34,2	442,2%
Daimler	166.083,0	20,6%	7,3%	10,6%	22.483,8	3,9%	12,4%	7,07x	53,9	224,1%
Aston Martin Lagonda Global Holdings	1.219,5	43,3%	13,0%	22,8%	311,3	2,1%	9,0%	-	-	654,5%
Ferrari	3.443,7	53,8%	24,1%	32,4%	969,3	15,0%	46,9%	4,76x	17,1	142,9%
Average	*100.444,5*	*24,0%*	*8,5%*	*13,7%*	*12.278,8*	*3,0%*	*11,8%*	*7,38x*	*41,7*	*367,7%*
Median	*117.237,8*	*21,6%*	*8,2%*	*12,2%*	*14.041,3*	*3,0%*	*12,1%*	*7,36x*	*37,0*	*333,1%*

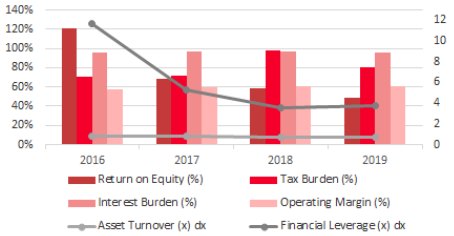
Source: Factset (2018)

Exhibit 20
ROI, ROS, ROT evolution



Source: Team Estimates

Exhibit 21
ROE DuPont Analysis



Source: Team Estimates

Control over the product offer and its distribution

Ferrari controls all the production phases that take place in Italy, in **Maranello** and **Modena**, then sells its cars to dealers and, finally, its products reach the final clients. The distribution network is fundamental in order to maintain high standard levels that fit perfectly the Ferrari brand exclusivity. As a result, the **190 sales points**, widespread globally, are in the most of cases exclusively Ferrari store; if the dealers have others branded car to sell, Company requires that Ferrari cars represent the largest amount of collection shown. Dealers provide also the **after-sales services** in order to ensure to the clients a **continuous enjoyment of the car and experience**; Ferrari supplies all the replacement parts both for the current and older models in order to maintain a high product level and safety standards. The strategic plan of **retention of clients** comprehend the **7 Year Maintenance Program**, which covers the first seven years of car's life. After the seventh year, the car can be included in the **Main Power Coverage Program** up to the car's 15th year of life. Between the 10th and 20th year of life, Ferrari provides its customers, in addition to standard maintenance items, also certain specific maintenance kits (**Ferrari Premium**) to preserve car performance and safety systems. After the 20th year, if the cars followed all the maintenance programs will automatically obtain the **Ferrari Classiche certification**. Moreover, Ferrari organizes several specific **events for the customers** such as driving experiences (*Esperienza Ferrari* and *Corse Clienti*) and special invitations to preview of new models or world premiere. Furthermore, only the loyal Ferrari customers are allowed to purchase the special series models, the track cars and the one-off. The effectiveness of these loyalty programs is underlined by the fact that in 2018, the **65% of new cars were sold to Ferrari owners**.

Competitive financial analysis

Positioning map (see *Appendix 13*) shows Ferrari's **competitive advantages** against its competitors, also including unlisted companies. Conversely, the table below (see *Exhibit 19*) shows the most important **listed competitors**, in this case considering just firms belonging to the **automotive** industry, because of the comparable cost structure. On financials, Ferrari has a significantly **higher EBITDA level** than the average of the segment; this is due to the very **high gross margin** held by the company, the highest among listed competitors. On the other hand, Ferrari has the **lowest level of Debt/Equity**, considering its book value, and a **high retention rate**, implying a **low Dividend Pay-out Ratio** compared to the average of the industry, due to a large share of profits being reinvested in the Company, in order to stimulate the growth. For all these reasons, Ferrari has a higher probability of handing out larger dividends than its competitors in the future.

Financial Analysis

Past Performance Analysis

Revenues and Geographical Expansion

During the last 3 years, Ferrari's Revenues grew by **6.2% 3Y CAGR** reaching €3,420mln in 2018, from €2,854mln in 2015. Revenues' growth in this period was driven by:

1. Increase in in **cars and spare parts Net Revenues**, that reached €2,535mln (**7.8% 2Y CAGR**) at 74.1% of Total Revenues in 2018 (+4.1% compared to 2016);
2. A €18mln increase in **sponsorship, commercial and brand Net Revenues** (+3.6% compared to 2015);

The strong and consistent growth was partially offset by a €54mln decrease in engines net revenues caused by a decrease in the number of engines shipped to **Maserati**. The increase in Net Revenues from the range of standard models and special series cars and spare parts was driven by the **growth in all four geographical regions** where the Company is present. The greatest growth rate in the period was achieved in **EMEA** (+€234mln, +6.4%) and **Americas** (+€70mln, +0.1%).

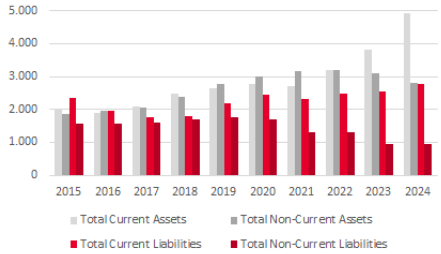
Margin & Operative Structure

Gross Margin increased from **47.5%** in 2015 to **52.5%** (+3.4% 3Y CAGR) in 2018, mainly due to the increase of Revenues from the sales of cars and parts. EBIT increased **55.2%** from 2015 (€444.3mln) to 2018 (€826.5mln) mainly driven by a reduction of SG&A costs and other net expenses. **ROS** increased from **10.2%** in 2015 to **23%** in 2018 as the cost-control strategy adopted by the Company coincided with the increase in Net Revenues.

Return & Cash Flows

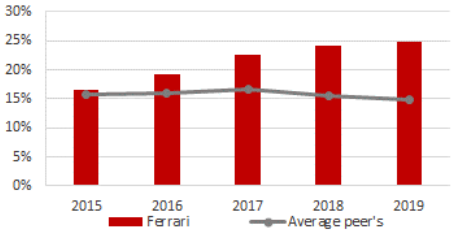
Returns: As shown in the *Exhibit 21*, thanks to **DuPont Analysis**, Ferrari experienced a **decrease in ROE** in the years 2016-2019, from **121%** to **43%**. This was mainly the result of the values stabilization process because of the separation from FCA Group. In our opinion, ROE's reduction from such high levels is the result of the decline of the **Financial Leverage**, measured as **Asset on Equity**, which strongly **decreased** from **11.9x** to **2.9x** in the period 2016-2019, as well as the result of a slight decline in **efficiency** measured by the Asset Turnover, calculated as Revenues on Asset, from **0.73x** to **0.66x** in the same period. While the **Interest Burden** remained relatively **stable** with an average of 96.1%, in the same period the **Tax Burden increased strongly**, from **70.4%** to **97.9%** (+39%). **Operating Margin** peaked in 2018 at 52.5%, with an **average** of **51.3%** during the period, without any significant volatility in the metric. In summary, the positive effects of a growing Operating Margin and Tax Burden on ROE have been offset by the decline of the Financial Leverage and the Asset Turnover. As shown in *Exhibit 20*, Ferrari's **ROI** increased sequentially from 2015 to 2017, when it peaked at **18.8%,** then decreasing slightly to the level of 16% in 2019. The **tendency** on **ROS** had been **positive** over the period, increasing from **15.9%** to **24.5%**, mainly driven by an increase in Ferrari's profitability, which is the result of a reduction of Operating Expenses. The positive effect of ROS on ROI had been offset by the **trend** of **ROT**, which **decreased** from **73.6%** in 2015 to **65.5%** in 2019, as consequence of the rise of Total Assets over the period.

Exhibit 22
Capital Structure



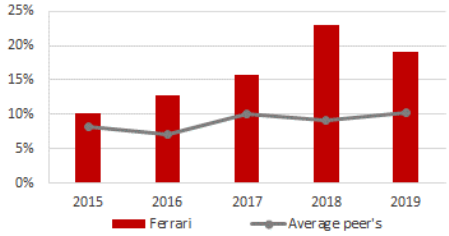
Source: Team Estimates

Exhibit 23
EBIT Margin



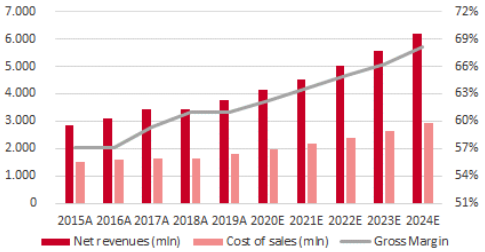
Source: Team Estimates

Exhibit 24
Net Margin



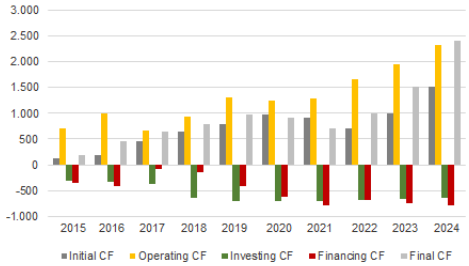
Source: Company Data

Exhibit 25
Gross Margin evolution



Source: Team Estimates

Exhibit 26
Cash Flow composition



Source: Team Estimates

Cash Flows: Ferrari's **CFO** grew from **€707mln** in 2015 to **€934mln** in 2018 (**+9.7% 3Y CAGR**) driven mainly by EBT growth and working capital management (see *Appendix 9*). During the years, the cash flow generation allowed Ferrari to:

1. **Increase the CAPEX**, investing mainly in PP&E, which increased from €626mln to €850mln (+8.3% 3Y CAGR) and in Intangibles Assets, which grew from €307mln to €645mln (**+22.1% 3Y CAGR**),
2. **Distribute cash to shareholders**, maintaining an average **pay-out ratio of 20%** and pursue a policy of shares repurchase.

Capital Structure Analysis

Between 2016 and 2018 Ferrari's ratio of **Current Asset to Total Asset** increased from **49%** to **51%** (+4%) mainly due to the faster growth of Current Assets than non-current (14.7% and 10%). During the same period, the ratio of **Non-Current Liabilities to Total Liabilities** increased from **44%** to **48%** (+9%). **Debt decreased** from €2.3bn in 2015 to €1,9bn in 2018 (**-14.7%**) after the repayment of the liabilities connected to the completion of the spin-off from FCA Group. The **Debt Ratio** (defined as Total Liabilities to Total Assets) decreased from 91.4% in 2016 to 72.1% (**-21.1%**) in 2018, as **Total Asset grew +12.3% 2Y CAGR** while **Total Liabilities decreased -0.3% 2YCAGR** (see *Exhibit 22*).

Future Performance Analysis

Revenues Analysis

Controlled growth to enhance and maintain the **strong brand identity**, introduction of new model to meet new clients' needs, entrance in **new markets**, management of the order and waiting list and a very low percentage of potential clients currently served lead us to foresee a high double-digit growth from 2021. 2020 will see a lower **growth at 9.50%**, a number in line with past growth rates of Revenues but, probably, a number that better reflects the negative impact resulting from the region "Mainland China, Hong Kong, Taiwan", mainly due to Coronavirus outbreak and social protests in the Special Administrative Region (see *Appendix 8*). We expect Revenues to grow at a **CAGR 2020E-2031E of c.a. 9.4%** from €4.1bn to €11.1bn, mainly driven by the **expansion of the product mix** with the introduction of new models and the strategy of the Company aimed to sell more one-offs, limited editions and special series cars, which command higher margins (see *Exhibit 3*). The **EBIT Margin** will improve from 24.3% in 2019 to 29.7% in 2024, an **increase of 540 bps** thanks to the constructive impact of the **decreasing** trend on the **CAPEX** with a focus on the reduction on expense due to D&A.

Methodology

In order to build our model, we directly **estimated sales from each segment** (Sport Cars, GT, Special Series, Icona) focusing on the periods FY2020-FY2022 and FY2023-FY2024. We estimated the growth in **vehicles sold** at **6% CAGR 6Y**, from 10,131 of 2019 to 13,558 in 2024. In our opinion, the key aspect will be the type of cars sold: we assume that Ferrari will **deliver a greater number of high-margin-vehicles**. According to our assumptions, the introduction of the SUV model "Purosangue" expected in 2022 will have a strong impact on sales because it will attract a completely new type of clients to the "Ferrari Family" and will open business opportunities in new Regions such as Russia while improving the presence in China. Moreover, we assume that in **2022** the product mix will be **60% hybrid-powered** determining a completely renewed Company under stricter emission regulations while maintaining its strong identity, based on excellent driving experience.

2020E-2022E: our short-term estimates are based on the analysis of past performances and on the assessment of the Company stated strategic actions: **(i)** the **renewed focus on the GT segment**. In 2020, Ferrari will unveil two new models and in our opinion these will soon substitute the "GTC4 Lusso" and the "GTC4 Lusso T" that are near the end of their life cycle. Furthermore, the segment welcomed the new Ferrari "Roma" characterized by a more elegant design which is completely in line with the strategy, i.e. to introduce new cars to meet different client's tastes such as **women** and **young-HNWI**; **(ii)** the introduction of the "Purosangue"; **(iii)** improved performance in the Sport Car segment through the constant introduction of **new technologies** developed in F1, such as the **hybrid** technology which, in our opinion will be almost totally dedicated to enhance the **driving experience**, eliminating any turbo-lag, and allowing the *Ferraristi* to drive their vehicles in situations in which a powerful engine sound might cause trouble; **(iv) improved personalization** options, which commands a higher margin per car sold.

Because of the aforementioned reasons, we modelled the **revenues at rising rates**, from 9.5% expected growth in 2020 to 11.5% in 2024, in order to reflect the broader range of new clients served and the entrance in new markets (e.g. Russia, India).

2023E-2024E: we elaborated mid-term estimates taking in consideration the **new strategy for the enrichment of the Ferrari's brand value**. The definition of the three brand pillars is aimed to establish the identity of the company in the long-term, but in our opinion we will be able to see the effect already in 2023. Assuring a choice of the Ferrari's branded **products coherent with the core values of the Company** (e.g. Exclusivity, Excellence and Made in Italy) will boost the opinion and the perception of the brand, allowing the Company to maintain and improve the premium commanded by its products. We modelled this unique and peculiar strategy estimating rising growth rates for Revenues, with the highest rate of growth (13%) expected for the last year of the analysed period.

Costs and Margin

Gross Margin and Operating Margin: During the period 2019-2024 Gross margin will increase from 60.9% to 67.6%, driven by growth of Net Revenues and consolidation of Cost of Sales (see *Exhibit 25*), in result of cars shipment's and margin-per-car increasing. Operating Margin will move in the same direction, due to Operating Profit increase of an average 17.1% YoY.

EBITDA and EBIT: **EBITDA Margin** will grow from 33.7% in 2019 to **44.7%** in **2024** while **EBIT Margin** will rise by 21.9% (from 24.3% in 2019 to **29.7%** in **2024**), driven by the increase on Gross Margin. During the same period, Operating Costs on Net Revenues will decrease from 66.4% in 2019 to 55.3% in 2024.

Net Margin: Net Profit had a lower bound in 2019 due to Patent Box benefits ending. From 2020 the Net Margin restarts its increasing, at annual rate YoY of 20.46%. In **2024 Net Profit** will be **€1.4bn**, reaching 22.4% Net Margin (the same ratio of 2018). In our model, we assumed fixed Tax Rate at 24%, based on Italian law.

Cash flows: In our model, we assume a **decreasing Financial Debt** at annual rate of **11.5%**, primarily due to bonds repayments in 2021 and 2023. Capital expenditure (CAPEX) had its top level on 2018 and 2019 and in the following years (2020-2024) will have a shrinking trend (accordingly to D&A movement) at annual rate YoY of 2%. **Net Cash Flow** will grow from €941mln in 2019 to **€2.3bn** in **2024**, thanks to **CAPEX decreasing** and Net Revenues increasing (10.5% YoY growth rate in the same period) (see *Exhibit 26*).

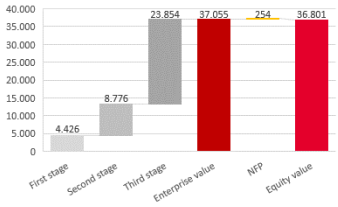
Valuation

Exhibit 27
DCF Model

DCF MODEL (€ mln)				STAGE 1			
		2019	2020E	2021E	2022E	2023E	2024E
Period			1	2	3	4	5
Total Revenues		3.766	4.124	4.536	5.012	5.564	6.204
Revenues growth (%)		*10,1%*	*9,5%*	*10,0%*	*10,5%*	*11,0%*	*11,5%*
EBIT		917	1.049	1.202	1.383	1.594	1.843
EBIT margin (%)		*24,4%*	*25%*	*27%*	*28%*	*29%*	*30%*
Tax rate		24%	**24%**	**24%**	**24%**	**24%**	**24%**
NOPAT		697	**797**	**914**	**1.051**	**1.211**	**1.400**
D&A		352	**433**	**526**	**637**	**770**	**932**
Change in NWC		67	57	65	74	85	97
Capital expenditures		-709	**-701**	**-696**	**-683**	**-664**	**-642**
Unlevered FCFF		407	**585**	**809**	**1.079**	**1.401**	**1.788**
WACC			*7,4%*	*7,4%*	*7,4%*	*7,4%*	*7,4%*
Discounted FCFF			545	701	871	1.054	1.252
Stage FCFF				**4.424**			
TV growth rate		2%					
Stage 3		**23.738**					
Enterprise Value		**36.925**					
NFP		254					
Equity Value		**36.671**					
Shares Outstanding (mlr		186					
TARGET PRICE		**€ 197,10**					

Source: Team Estimates

Exhibit 28
DCF Bridge Analysis



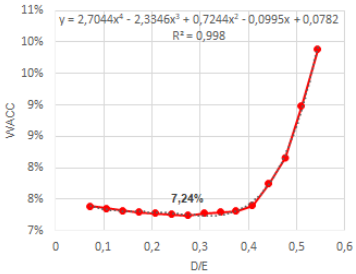
Source: Team Estimates

Exhibit 29
WACC assumptions

WACC = 7.38%		
Risk Free Rate (Rf)	**1.91%**	Average return of Italian BTP 10Y, monthly timing for the last 5Y
Equity Risk Premium (ERP)	**6.03%**	Average ERP computed with FTSEItaliaAllShare Index and FTSEItaliaAllShare Earning yield
Beta (β)	**0.97**	Computed with a linear regression between Ferrari's stock price weekly returns and weekly returns of a Luxury Index composed by Ferrari's peers
Cost of Equity (ke)	**7.80%**	Capital Asset Pricing Model: Rf + β ∗ EquityRiskPremium
Cost of Debt (kd)	**2.24%**	Average between Net Financial Expenses/Financial Debt and Interest Coverage Ratio-Rating method
Tax Rate (t)	**24.0%**	Tax rate under Italian law

Source: Team Estimates

Exhibit 30
Financial Structure re-engineering



Source: Team Estimates

Exhibit 31
Multiple Analysis

LUXURY		
2016	**Price to Earnings**	**EV/EBITDA**
Ferrari	27,03x	13,49x
Median	21,87x	12,07x
Median + IQR	29,71x	16,79x
Market Premium	-9%	12%
2017	**Price to Earnings**	**EV/EBITDA**
Ferrari	31,43x	21,67x
Median	26,92x	14,00x
Median + IQR	32,67x	18,68x
Market Premium	-4%	16%
2018	**Price to Earnings**	**EV/EBITDA**
Ferrari	25,60x	19,61x
Median	22,24x	10,96x
Median + IQR	28,84x	14,60x
Market Premium	-11%	34%
Average Median + IRQ Value	30,41x	16,69x
Average Market Premium	-8,01%	20,71%
FAIR VALUE	**27,97x**	**20,15x**
Average forecasted EPS, EBITDA	5,66	2.073.463
Target price for each multiple	158,43	223,14
Target Price (Luxury)	**190,78**	
Net Debt	254.182	
# of shares	186.052	
Equity Market Value (Luxury)	**35.495.764**	

Source: Team Estimates

The TP resulting from our valuation is **€197.1** which implies a **23%** potential upside from the actual market price and supports our **BUY** recommendation. To determine Ferrari's fundamental value we implemented a **three-stage DCF** to take into account an **initial strong growth period** followed by a more mature one. To sustain our BUY recommendation, we contrasted our DCF-based valuation with a **Multiples Analysis** (MA). We then conclude stressing some key variables of our model by performing a **sensitivity analysis** on WACC, beta, and terminal growth rate.

DCF Model

We decided to calculate the company's value through a **three-stage DCF Model** based on its own fundamentals (see *Exhibit 28*). In the **first phase (2020E -2024E)**, we considered a high **revenue growth rate**, starting at **9.5% in 2020E** to reach **11.5% in 2024E** (see *Exhibit 27*). We estimated these rates based on the product line-up expansion that Ferrari started in 2019. The growth rate at 9.5% for 2020E follows Ferrari's guidance and takes into account a slight effect that the Coronavirus infection could potentially have on Ferrari sales causing delays, but not actual cancellation given how Ferrari manages its waiting list. For the **second phase**, from **2025E to 2031E** we assume a **stable growth rate of 8.7%** and a constant **EBIT margin** from 2025E to 2031E at **30%**. We conducted a **WACC** computation assuming that it will be constant during the several phases: in fact, for the foreseeable future, the Company has no interest or need in changing its capital structure given the **high solvency ratio** and ability to generate cash (even if we have gone through a valuation of the potential most efficient capital structure that could imply a leverage up to 30% in terms of D/E ratio (see *Appendix 16*). Our WACC key assumptions are represented in the *Exhibit 29*. In order to calculate the cost of equity we estimated the **Equity Risk Premium** using different approaches (historical and earning yield) and comparing the resulting values. Then we computed the average between the two values obtained (3.97% and 8.0%) finding the **ERP value of 6%** which is the one we used for our valuation. About **Cost of Debt** we decided to use the average between the one obtained with the Company's financial statements (1.96%) and the other obtained adding a spread linked to the rating of Ferrari to the risk free rate (2.54%). The value resulting is **2.24%**. We obtained the **Risk Free Rate** computing the average return on the Italian BTP 10years of the last 5 years, obtaining a value of **1.91%** (see *Appendix 15*). Regarding the **Terminal Value** (TV), as Ferrari constantly outperforms the market, showing high solidity of its business (i.e., maintaining and improving its high margins, e.g., EBITDA margin constantly above 25%), we compute the perpetuity formula for the third stage with a **long-term growth rate of 2%**, which is a representative value of the growth rate of the economies in which Ferrari operates (Source: IMF World Economic Outlook).

Re-leveraging opportunities: We compute the **optimal capital structure composition** that Ferrari could use in the future to minimize the WACC, therefore increasing the EV (see *Exhibit 30*). In particular, we **raise D/E**; the Regression **Beta** (**0.97**) was **un-levered** (**0.92**) and then **re-levered** according to the new capital structure, implying an increasing cost of equity. Interest expenses reach a higher level, determining a **lower interest coverage ratio** which downgrades the credit rating. As a consequence, the cost of debt, computed as the sum of the risk free plus the spread, gets higher (see Exhibit 29). We estimated an **optimal 7.24% WACC** corresponding to a **0.27x D/E ratio**. Nevertheless, we assumed Ferrari will maintain the current capital structure in the future considering the little improvement of TP subsequent to the re-leveraging opportunity and the historical D/E downward trend, confirmed by recent management guidance.

Multiple Analysis

Peers selection: The only listed company which belongs to the same Ferrari's segment is **Aston Martin**; however, Ferrari is more similar to luxury peers such as **Hermès** and **Brunello Cucinelli** in terms of market performance, with whom it shares a strong and powerful brand. Hence, given the difficulty in selecting close peers and to carefully consider the specific features of the Company we used: **(i)** a sample of stocks comprising all the **luxury peers** (which contributes for **70%** to th e computation of our target price); **(ii)** a restricted sample of stocks comprising the (non-ultra) **luxury car producer s** (which contributes for **30%** to our calculations).

Methodology: Considering the peculiarity of the Company, we take into consideration two different historical multiples: one related to the asset side (**EV/EBITDA**) and the other one to the earning power (**P/E**), just to **minimize any distortion** that may result using just one approach. In particular, EV/EBITDA multiple is not affected by different pricing policies, productive efficiency and financial policies. To evaluate Ferrari's Market Value, from the historical series of the aforementioned comparables' multiples, we consider **the highest value**, calculated as the sum of median plus the interquartile range (see *Exhibit 31*). We consider the highest value for each peer, because we strongly believe that **Ferrari**'s strategy, with carefully controlled growth and very high margins, **deserves a very high premium against comparable companies**, whose value is differently perceived by both their customers and the market. We then consider the premium that the market assigned each year to Ferrari relative to the highest level that we have calculated, that represents how much Ferrari multiples differ from the peers' ones. Afterwards, we compute the average value of the premiums and multiply it to the peer's average median plus interquartile range, finding what we assume it should be its **fair value**. We obtain the Equity Market Value multiplying the **average balance sheet's values from our forecasted period** (2020E-2024E) to the fair value of the multiple. To conclude, after repeating this process for each multiple, we calculate the average of all Equity Market Values computed.

Multiples Analysis Target Price From our analysis, we calculated the following multiples values: **28x P/E** and **20.1x EV/EBITDA**, considering the **Luxury** peers' sample; **28.4x P/E** and **19.5x EV/EBITDA**, considering the restricted **automotive** sample. Through this approach, we derive an Equity Market Value of €35.4bn which implies a **TP** of **€190.1**, i.e., a potential upside of 19% and a **BUY** recommendation, consistent with the one resulting from our DCF model (see *Appendix 14*).

AUTOMOTIVE		
2016	**Price to Earnings**	**EV/EBITDA**
Ferrari	27,03x	13,49x
Median	7,87x	3,31x
Median +IQR	10,47x	4,78x
Market Premium	158%	183%
2017	**Price to Earnings**	**EV/EBITDA**
Ferrari	31,43x	21,67x
Median	7,37x	3,16x
Median +IQR	9,06x	4,24x
Market Premium	247%	411%
2018	**Price to Earnings**	**EV/EBITDA**
Ferrari	25,60x	19,61x
Median	5,96x	2,35x
Median +IQR	7,50x	7,81x
Market Premium	241%	151%
Average Median + IQR Value	9,01x	5,61x
Average Market Premium	215,51%	248,20%
FAIR VALUE	**28,42x**	**19,53x**
Average forecasted EPS, EBITDA	5,66	2.073.463
Target price for each multiple	160,99	216,27
Target Price (Automotive)	**188,63**	
Net Debt	254.182	
# of shares	186.052	
Equity Market Value (Automotive)	**35.094.738**	
Target price	**190,14**	
Equity value	**35.375.456,3**	

Source: Team Estimates

Conclusion We use a Multiples Analysis **to test and confirm** the recommendation resulting from our DCF model, which is, from our point of view, the most appropriate valuation model for the Company. Hence, we can state that Ferrari has been trading at **higher multiples** compared to the highest ones for both the automotive and luxury peers. We believe **these multiples are justified by Ferrari's brand strength** (which has a great impact on its market value, see *Appendix 1*), attitude to **innovation**, outstanding margins and results achieved by the management that have resulted in an improvement in profitability in a contest of a carefully and strategically **controlled growth** in Revenues, all trends which we deem will persist in the long term.

Scenario Analysis

All the assumptions on TV growth rate, cost of capital, cost of debt and beta are kept constant with respect to our Base Case.

Bull scenario: we forecast **higher top line growth starting at 11%** with an **increase** of **0.5% YoY** topping at **13%** driven by **(i)** Higher shipment numbers; **(ii)** Greater market response on new cars like the "Purosangue"; **(iii)** Higher margins (**EBIT margin 33%**); **(iv)** Higher R&D expenses supported by positive results in F1 competition which also enhance the brand awareness.

Bear scenario: we forecast **lower top line growth at 8% in 2020E** with an **increase** of **0.1% YoY** driven by **(i)** Impact of a slowdown of the Chinese economy due to the Coronavirus infection; **(ii)** Lost of brand identity due to a product mix not well perceived by the market; **(iii)** Lower margins (**EBIT margin 26%**); **(iv)** Higher R&D expenses not supported by satisfying F1 results.

Results and Conclusions - Our two scenarios provide a **range** of **–13%** and **+43%** with respect to current market price and –30% and +16% to our base case estimates. Considering the range of prices deriving from our projected scenarios, **our analysis confirms our BUY recommendation** (see *Appendix 16*).

Exhibit 32

WACC Sensitivity Analysis

TV growth rate \ WACC	5,38%	5,88%	6,38%	6,88%	7,38%	7,88%	8,38%	8,88%	9,38%
0,5%	253,49	225,89	203,12	184,03	167,81	153,88	141,80	131,23	121,92
0,8%	265,42	235,15	210,44	189,91	172,60	157,83	145,08	133,98	124,25
1,1%	279,02	245,58	218,60	196,41	177,85	162,12	148,63	136,94	126,74
1,4%	294,68	257,40	227,74	203,61	183,62	166,81	152,48	140,14	129,41
1,7%	312,89	270,92	238,05	211,65	190,01	171,95	156,68	143,61	132,30
2,0%	334,34	286,53	249,78	220,68	197,10	177,62	161,28	147,38	135,42
2,3%	359,97	304,76	263,23	230,90	205,04	183,90	166,32	151,49	138,81
2,6%	391,13	326,33	278,82	242,55	213,97	190,89	171,90	155,99	142,50
2,9%	429,83	352,24	297,10	255,95	224,09	198,73	178,08	160,95	146,53
3,2%	479,20	383,95	318,83	271,54	235,68	207,57	184,98	166,43	150,95
3,5%	544,33	423,67	345,08	289,90	249,05	217,63	192,72	172,52	155,82

Source: Team Estimates

Sensitivity Analysis

To properly evaluate the company, we stress some of the key variables on which our DCF model is based. We made three different tests in order to take into account several options. **First** (see *Exhibit 32*), we test scenarios where economic conditions affecting the **WACC** computation and the **TV growth rate** could improve or worsen our result. Our **BUY** recommendation still holds, with almost **70%** of the cases resulting in **fair values at least 10% above** the current price. There are roughly 20% of cases where the recommendation shifts to HOLD (fair values between -/+10%) or eventually 9% to SELL (fair values below -10% the current price). The latter is quite an extreme scenario, requiring a TV growth rate of 0.5% and a WACC of 9.4%, i.e., the debt portion of the capital structure should be increased to at least 45% in terms of D/E ratio, implying a below-Investment Grade rating for the Company. In addition, we tested **how our TP reacts to different beta** values in multiple TV growth rate scenarios. Results are again encouraging, with **81% of the instances still supporting a BUY** recommendation. At last, we stressed the **Terminal Value over the Enterprise Value ratio** to better understand how it reacts to the TV growth rate and the Beta. We found that the proportion **floats around the 65%** in most of the cases, exceeding the 70% only in 20%of the instances and never exceeding the 80% (see *Appendix 16*).

Investment risks

MACRO	**[M1] REGULATORY** *(Likelihood 2/5, Impact 3/5)*: Regulation on taxes, vehicle safety, pollutant emission and performance characteristics are particularly important in the context in which Ferrari operates. The imposition of new regulations to the Company may result in the adoption of more stringent standards, which could entail higher costs for conforming the production process or products. Although Ferrari is an Italian-based Company, it operates globally and, as such, it is subject also to foreign governments regulations and requirements: Ferrari must therefore manage the impact on its cost related to the compliance with different regulations globally. As a SVM (Small Volume Manufacturer), the Company has some derogations on the emission requirements considering that the current European legislation limits fleet average greenhouse gas emissions for new cars. Losing this favourable status, following an increase in units sold represents a risk that may have a significant effect on the way in which Ferrari operates. The average specific CO2 emissions [g/km] of Ferrari fleet passed from 404 in 2008 to 283 in 2017; the target for 2020 is 270 (downside of 15% compared to 2014, when the CO2 emissions were 316). As for the tax regulation, the "Patent Box" that the Company signed with Italian fiscal authorities may expire and result in a higher tax rate in the following fiscal years.
	[M2] MACRO ENVIRONMENT AND CONSUMER SENTIMENT *(Likelihood 2/5, Impact 3/5)*: A decline in the general economic conditions and/or in the demand for luxury goods could adversely affect Ferrari's activity. Most part of total shipments are delivered to EMEA and Americas (approximately 78.1% in 2018): a downturn in these economies may potentially have negative consequences on the Company's financial results. Moreover, during recessions, social acceptability of luxury purchases may decrease and higher taxes may more likely be imposed on luxury goods, including Ferrari's cars. Ferrari is experiencing an increasing exposure in emerging Asia (in particular in China), driven by growth in personal income and wealth: the Company faces other risks, like different consumer behaviours and tastes, which could force Ferrari in designing new models that may be unsuccessful. Intensifying competition from other luxury car producers, seeking to enter these markets, could have negative effects on Ferrari's business (Ferrari's market share in Mainland China, Hong Kong and Taiwan is close to 27% of total luxury performance car industry). In addition, in order to be consistent with the automotive industry trends, Ferrari is expanding the hybrid technology on the road cars with the complex goal of not affecting the Ferrari Brand identity and cars' performances. Any failure or significant change in the drivers' experience could negatively affect the Company. Recently has come up a new menace that could adversely affect the result of Ferrari. Although the Company has declared that they are able to offset all the weakness that could eventually arise from the Coronavirus, it is plausible to asses that the operating and financial results from Asia may be affected but eventually the consequences will manifest in shipments delays and, however, Ferrari is perfectly able to manage the waiting list in order to reduce the financial effects. Regarding all the risks that could come from Asia, Ferrari is more worried about the Hong Kong situation where the recent protests are jeopardizing the markets.
STRATEGIC	**[S1] RISKS RELATED TO THE BRAND IMAGE** *(Likelihood 2/5, Impact 5/5)*: Ferrari is one of the world's leading luxury brands. All Company's activities are based on the prestige, awareness and identity of its brand. Preserving and developing its brand image is a fundamental factor that could, with no doubts, drive its growth. Perception and recognition of the brand depends on many factors such as technology, performance, appeal of cars and design. The strategic plan 2019-2022 introduces 15 new models (which is the first time for Ferrari over such a short time period) and the consistency with Ferrari identity could not be ensured. The hybrid and electric technology, that Ferrari is trying to develop, also could negatively affect the brand perception and the driving experience. In addition, the brand image is highly dependent on the "Scuderia Ferrari" results in the Formula 1 World Championship, which is the most important marketing tool and an important source of technological innovation for the Company. If the success in the racing activities is discontinuous, the appeal, exclusivity and brand image of Ferrari may suffer. Sufficient attention must also be given to the reputation and appeal of the dealers, which Ferrari carefully selects but over which they have no direct control.

	[S2] GENERIC COMPETITION *(Likelihood 2/5, Impact 3/5)*: The Luxury Performance Car Market is very concentrated and dominated by few big well-known brands. Some of them are part of larger cars-producer groups, which could imply greater financial resources and bargaining power with suppliers. The Ferrari's policy of maintaining low shipments volume in order to safeguard identity and exclusivity of the cars may represents a risk in this context. The intention of maintaining exclusivity limits the potential sales growth and profitability. The strategy to avoid that threat is based on a strong brand image, focus on client relationships, close contact with dealers and all the universe of personalization services represented by "Atelier" and "Tailor Made". In mature markets like EMEA and United States, the competition has increased recently, which may potentially translate in high pricing pressure and reduction of marginality. In Emerging Markets, the main risk is represented by established competitors while the challenge is finding and meeting tastes of a completely different client base.
	[S3] RISK CONNECTED WITH THE DISTRIBUTION NETWORK *(Likelihood 1/5, Impact 4/5)*: Reputation and awareness of Ferrari depends in part by reliability of dealers and franchising partners who provide the entire Ferrari-branded products. The Company does not own the dealers (167 operating in 190 point of sales) but sells the cars to them for re-selling to final clients. If the dealers fail in providing sales or quality services suitable to Ferrari standards, the Company's image may be damaged. In any case, dealers are wisely selected directly by Ferrari, in order to maintain identity and prestige of the brand. For this reason dealers' turnover is quite low, because of the strength of the franchise and selection processes.
OPERATIONAL	**[O1] MANUFACTURING FACILITIES** *(Likelihood 2/5, Impact 4/5)*: Headquarter and all the production and operative cycle to produce the cars and assemble the engines (including those supplied to Maserati) take place only in the two manufacturing facilities in Maranello and Modena. There is a high dependence on these production plants so any disruption in the activity that may arise for any reason (including the potential seismic activity that affects the Emilia Romagna region) could impact the entire manufacturing chain, causing delays in shipments or reducing the ability to produce sufficient cars to meet the demand. Nonetheless, moving off the entire manufacturing buildings may also affect the perception of the brand that Ferrari has created during the decades.
	[O2] RAW MATERIALS AND SUPPLIERS RELATIONSHIP *(Likelihood 2/5, Impact 3/5)*: As a car producer, Ferrari needs several raw materials, parts and systems that are provided by a limited number of suppliers, some of which are single-source suppliers. As a result, Ferrari is dependent on them and any interruption in their activities may damage Ferrari's operating process. Obviously, Ferrari may find new suppliers as substitutes but this process would be expensive in terms of time and energies and, consequently, may negatively affect its financial results.
	[O3] MANAGEMENT AND RETENTION OF TALENT *(Likelihood 2/5, Impact 4/5)*: Ferrari's success is strictly related to the ability of the senior management, in particular of the Chairman (Mr. Elkann) and the CEO (Mr. Camilleri), to effectively manage and control all the Company's areas and activities. To mitigate this risk, it would be important to distribute managing responsibilities from these two key figures and adopt and develop visible succession plans. In addition, for Ferrari it is fundamental to attract and retain skilled talents in any area in which the Company operates. Regarding the Formula 1 World Championship, this translate into recruiting top drivers and engineering talents to maintain a very high supporters' enthusiasm (a key source of its highly valued brand image) as well as to continuously enhance all mechanical aspects that are transferred to its road cars. Any failure in this area may negatively affect Ferrari's brand.
FINANCIAL	**[F1] FOREX RISK** *(Likelihood 3/5, Impact 3/5)*: Ferrari operates in several markets all around the world and is exposed to risks resulting from fluctuations of currencies and interest rates. In 2018, Net Revenues exposed to this risk amounted to the equivalent of 49% of the Group's turnover (the ratio is pretty stable as it was 51% in 2017). The largest portion of Ferrari's capital and operating expenses are denominated in Euro while the majority of revenues are denominated in currencies other than Euro. The Company is constantly increasing its exposure to foreign markets and FX risks: financial derivative instruments are used as a hedge. These hedging strategies cover between 50% and 90% of certain exposures subject to foreign currency exchange risk for up to twelve months. The exposure mainly come from operations denominated in USD, GBP, CNY, JPY, AUD and CHF. Obviously, the largest amount of commercial activities is subjected to the EUR/USD exchange rate (about 57% of total currency risk from commercial activity) and in case the USD depreciates against the Euro, the expectation is that it would adversely impact the revenues. In particular, an appreciation of 2% of the EUR/USD exchange rate would decrease the Revenues by 0.3% and the Gross Profit by 12.3% (see *Appendix 12*). Volatility in exchange rates may also affect the purchasing power and wealth of it clients, impacting negatively volumes sold and pricing.
	[F2] CREDIT RISK *(Likelihood 1/5, Impact 2/5)*: Although Ferrari does not have a significant concentrations of trade receivables or other current financial assets that could represents a high risk, the Company is subject to the risk of insolvency of dealers or retail clients. To mitigate this risk, receivables from clients or dealers financing are generally secured by collaterals on cars, personal guarantees or other kind of guarantees. Furthermore, credit approval policies are applied to dealers and retail clients. The adopted financial policy provides a limitation on concentration of financial assets up to 20% of the total with a single counterpart.
	[F3] SOLVENCY RISK AND CAPITAL STRUCTURE *(Likelihood 1/5, Impact 2/5)*: Ferrari has a high solvency ratio due to a solid capital structure adopted in the last 5 years (average 15.7% Debt/Equity ratio, computed on market values). The constant ability to generate positive cash flows over time allows the Company to progressively reduce its dependence on debt and to maintain great flexibility in the context of highly volatile markets. Moreover, Ferrari does not have any long-term credit lines and claims a liquidity position among credit institutions in order to easily manage the working capital. The volatility of the interest rates on debt is alleviated by the fact that only 37% of total debt bears floating interest rates and, in any case, the Company has stipulated agreements on interest rate caps.

Corporate Governance

Exhibit 33
Board of Directors composition

Member	Office
John Elkann	Chairman and Non-Executive Director
Louis C. Camilleri	Chief Executive Officer and Executive Director
Piero Ferrari	Vice Chairman and Non-Executive Director
Sergio Duca	Senior Non-Executive Director
Delphine Arnault	Non-Executive Director
Giuseppina Capaldo	Non-Executive Director
Eddy Cue	Non-Executive Director
Lapo Elkann	Non-Executive Director
Amedeo Felisa	Non-Executive Director
Maria Patrizia Grieco	Non-Executive Director
Adam Keswick	Non-Executive Director
Elena Zambon	Non-Executive Director

Source: Company Data

Exhibit 34
BoD by gender

Source: Company Data

Exhibit 35
Average age BoD

Source: Company Data

Ferrari N.V. is a public limited liability Company, incorporated under the laws of the Netherlands. Ferrari adopts a ***Code of Conduct*** which applies to all of the employees. It represents a set of values, adhered and promoted by the Company and it is a **pillar of the governance system** and the decision-making processes (see *Appendix 18*). Ferrari's BoD is composed by one executive director (**Mr. Camilleri, CEO**) and eleven non-executives. The BoD has also appointed three internal committee: **(i)** an **Audit Committee**, **(ii)** a **Governance and Sustainability Committee**, and **(iii)** a **Compensation Committee** whose assist and advise the Board of Directors. Ferrari's remuneration policy is approved by the shareholders of the Company and the compensation for the executive directors is determined by the BoD. The compensation structure aims to **attracts, retains and motivates qualified executives**. Includes a **fixed component** and a **variable component** based on both short-term and long-term performances, in addition directors may be entitled to conventional non-monetary **fringe benefits**. Whereas remuneration of non-executive directors is fixed and does not include a variable component based on performance. On February 26th, 2019, the BoD approved a new **equity incentive plan** for 2019-2021. A combination of **PSUs** (performance share units) and **RSUs** (restricted share units), which each represent the right to receive one Ferrari common share, will be awarded to the Chairman and the Chief Executive Officer of the Company as well as to members of the SMT and other key members of the Group (any Awards granted to Executive Directors will require the prior approval of the general meeting of shareholders of the Company).Officer of the Company as well as to members of the SMT and other key members of the Group (any Awards granted to Executive Directors will require the prior approval of the general meeting of shareholders of the Company).

Corporate Social Responsibility

Ferrari has adopted the COSO Framework (Committee of Sponsoring Organizations of the Treadway Commission) as the foundation of its enterprise risk management (ERM). Ferrari's commitment to sustainability exemplify in two programmes. The first started in 1990, is called "Formula Uomo" and is focused on the design and the building of a functional and ergonomic workspace environment through technological advancement. The second is based on the reduction of the carbon footprint, hence reducing the pollution emissions throughout the improvement of the efficiency in the cars, in the production process and in all Ferrari's facilities (see *Appendix 19*).

Appendix – Table

1. **Brand Strength**
2. **Ferrari vs Competitors**
3. **Product Mix**
4. **Social Media Analysis**
5. **Porter Five Forces Analysis**
6. **SWOT Analysis**
7. **Balance Sheet**
8. **Income Statement**
9. **Cash Flow Statement**
10. **Financial Ratios**
11. **Altman Z-Score**
12. **Forex Sensitivity**
13. **Multiples and Peers Analysis**
14. **Relative Valuation**
15. **WACC Computation**

    Risk-free rate estimates
    Beta
    Cost of equity
    Cost of debt
    WACC

16. **DCF Model**

    Scenario Analysis
    Sensitivity Analysis
    Financial Structure re-engineering

17. **Investment Risks**
18. **Corporate Governance**

    Standard Ethics Italian Index

19. **Corporate Social Responsibility**

1. Brand Strength

Parameter	Description	Ferrari	Maximum
Leadership	Brand positioning in the market, as the ability to influence the market. This parameter can be measured by the market share owned by Ferrari in its competitive environment.	22	25
Stability	Consumer loyalty, which allows the brand to strive for leadership.	14	15
Reference Market	Conditions of stability of the overall demand, in order to consider more vulnerable those brands subject to sudden changes in the reference market.	10	10
Internationalism	Level of brand diffusion in other markets, in addition to the local one.	24	25
Trend	Brand ability to guarantee long-term development for the company, e.g., by adapting to consumers' needs , exploiting the potential for brand extension.	10	10
Support	Investments in marketing, to ensure brand's consolidation and development.	8	10
Defensibility	Exclusivity of its use and legal defensibility, prerequisite for defence against competition.	5	5
Total		**93**	**100**

2. Ferrari vs Competitors

SPORT CARS	Horse Power	Max Torque (Nm)	Engine	Fuel	0-100km/h (sec)	Starting price (€)
Ferrari						
812 Superfast	800	718	V12	Petrol	2.9	300,81
812 GTS	800	718	V12	Petrol	2.9	336
FS90 Stradale	780+220	800	V8	Hybrid	2.5	430
F8 Tributo	720	770	V8	Petrol	2.9	236
F8 Spider	720	770	V8	Petrol	2.9	262
488 Pista	720	770	V8	Petrol	2.8	209,049
488 Pista Spider	720	770	V8	Petrol	2.8	326,4
Icona SP1-SP2	810	719	V12	Petrol	2.9	450
LaFerrari	963	900	V12	Hybrid	<3	1,221,575
Aston Martin						
DB11	630	700	V12	Petrol	3.7	218,611
DBS	715	900	V12	Petrol	3.6	279
Rapide AMR	595	630	V12	Petrol	4.4	205
Valkyrie	1176	900	V12	Hybrid	n.d.	2,800,000
Vantage	503	625	V12	Petrol	4	203,585
Audi						
R8	540	430	V10	Petrol	3.7	154,75
Bugatti						
Chiron	1500	1600	V16	Petrol	2.5	2,500,000
Veyron	1001	1250	V16	Petrol	2.5	1,400,000
Ford						
GT	656	745	V6	Petrol	<3	550
Honda						
NSX	573	550	V6	Hybrid	<3	201
Lamborghini						
Aventador	740	690	V12	Petrol	2.8	343,762
Huracàn	580	540	V10	Petrol	3.4	183,201
McLaren						
540	533	540	V8	Petrol	3.5	165
570	562	601	V8	Petrol	3.2	195,5
600	592	620	V8	Petrol	2.9	236
720	710	770	V8	Petrol	2.9	267
P1	737+179	980	V8	Hybrid	3	920
Pagani						
Huayra	730	1000	V12	Petrol	3.3	1,288,320
Porsche						
911 GT3 RS	520	470	V6	Petrol	3.2	201,378
Tycan Turbo	670	850	n.a.	Electric	3.2	159,338
GT CARS	**Horse Power**	**Max Torque (Nm)**	**Engine**	**Fuel**	**0-100km/h (sec)**	**Starting price (€)**
Ferrari						
GTC4 Lusso	690	760	V12	Petrol	3.4	236,525
GTC4 Lusso T	610	760	V8	Petrol	3.5	236,525
Portofino	600	760	V8	Petrol	3.5	198,061
Roma	620	760	V8	Petrol	3.4	200
Aston Martin						
DBX	542	700	V8	Petrol	4.5	193,5
Bentley						
Bentayga	608	900	V12	Hybrid	4.1	182,55
Continental GT	635	900	V12	Petrol	3.7	210,5
Flying Spur	626	900	V12	Petrol	3.7	256,821
Mulsanne	506	1020	V8	Petrol	5.3	304,683
Lamborghini						
Urus	650	850	V8	Petrol	3.6	208
Mercedes						
G63 AMG	585	850	V8	Petrol	4.5	162,404
S63	612	900	V8	Petrol	3.6	178,67
S Maybach 650	630	1000	V12	Petrol	4.7	212,9
Rolls-Royce						
Cullinan	563	627	V12	Petrol	6.7	270,833
Dawn	571	820	V12	Petrol	5	355
Ghost	570	780	V12	Petrol	5	275
Phantom	563	663	V12	Petrol	5	375
Wraith	632	800	V12	Petrol	4.6	300

The Table above offers a snapshot about the relevant specifics of most of the car producers which we assume to be Ferrari's competitors. The analysis divided in the two segments where Ferrari operates. The analysis gives evidence of the superior performance of Ferrari and underlines that its products are the reflection of a long history of excellence, remarkable design, outstanding driving experience and superior technical characteristics.

The first part, Sport cars, includes the most performing models of the competitors. It includes also the hyper-car "LaFerrari" and its most famous and relevant competitors such as the McLaren "P1" and the Aston Martin "Valkyrie".

The second part represents the GT segment. This Table compares also models ready for launch, like SUV models, indicated in different colours as Ferrari will launch the ""Purosangue"" in 2022.

Ferrari established itself as the most famous and successful Luxury high performance producer in the World thanks to the excellent quality of its engines and the extraordinary design of the cars. Its achievements are testified by the winning of awards such as "Best Engine of the year" for the last 20 years and the "Red Dot Design Award" for multiple models, such as the new "SF90Stradale" and "Roma".

In order to highlight the extraordinary capabilities of Ferrari cars it is sufficient to notice the immense horse power generated from their in-house created engine, which is translated in the best acceleration time (0-100km/h) compared to any of its competitors but Bugatti. In fact, Bugatti has the distinctive characteristics of manufacturing only few cars per year (e.g., 28 in 2019) powered by very powerful V16 engines.

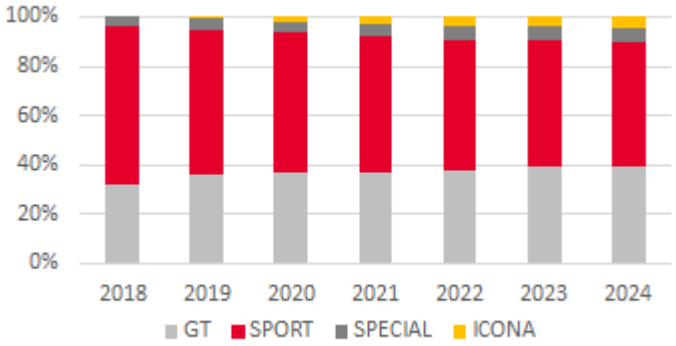
In the GT segment Ferrari produces the best performing cars for the category. "Ferraristi" (drivers of Ferrari's cars) enjoy performances which are superior even to some of the vehicles included in the supercar list, while more comfortable.

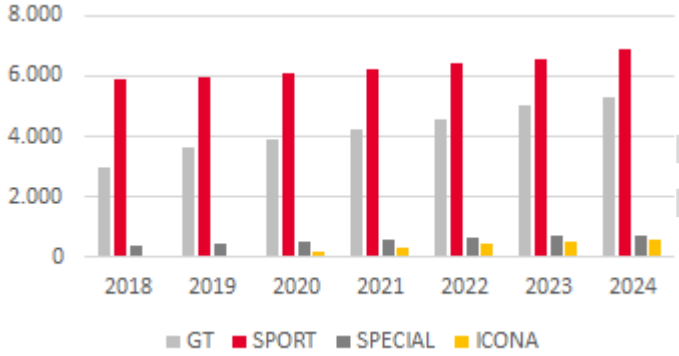
Ferrari's strategy, based on enhancing and retaining value of its brand, translates in delivering less cars than ordered with the final effect of a high retention of value. Some models such as the Ferrari "LaFerrari" or the newly available "Icona" segment are intended to be sold just to a limited number of very loyal clients. These cars will obtain a future revaluation as collectables given their uniqueness. In general, every Ferrari enjoys a low depreciation thanks to initiatives such as the "Ferrari approved certified pre-owned program" which ensures to new owners good conditions of the car and guarantees to the seller a higher retention of the value.

3. Product Mix

We estimated the evolution of Ferrari's product mix through an historical analysis combined with Ferrari's guidance for 2022E. We took into account shipments data from 2018A and 2019A and we forecasted the years from 2020E to 2024E. The key factors to take into account are: i) the strong growth of the GT segment in spite of the Sport segment; ii) the introduction of the Icona series; iii) a slight increase in the Special series shipments. According to our estimates the most important area to focus on is the GT and it will grow at 1.6% CAGR (2019A-2024E) reaching 39% of the total shipments in 2024E. The new Icona series and the One-off, while being very niche, are probably the ones that demand higher profitability, hence the ones that justify the extraordinary margins (e.g. EBIT% 30% in 2024E) in our forecasts. In addition, we used this new product mix to compute a revenues breakdown by segment for each year from 2018A to 2020E, considering that the portion of cars and spare parts attributable to the Total Revenues was 74% in 2018A, 77% in 2019A, and based on our assumptions will be on average 80% from 2020E to 2024E. At last we assessed a shipment breakdown by segment to have a better representation of our estimate about the shipment increase (6% CAGR 2020E-2024E).

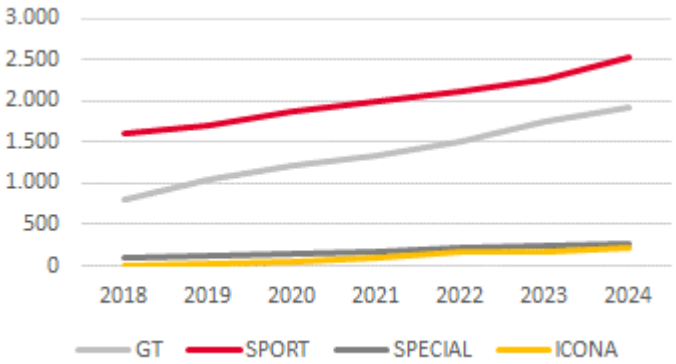
SEGMENT PRODUCT MIX	2018	2019	2020	2021	2022	2023	2024
GT	32,0%	36,0%	36,6%	37,2%	37,8%	39,3%	39,0%
SPORT	64,0%	59,0%	56,9%	54,9%	53,0%	51,2%	51,0%
SPECIAL	4,0%	4,5%	4,7%	5,0%	5,3%	5,6%	5,5%
ICONA	0,0%	0,5%	1,7%	2,9%	3,9%	4,0%	4,5%
	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%





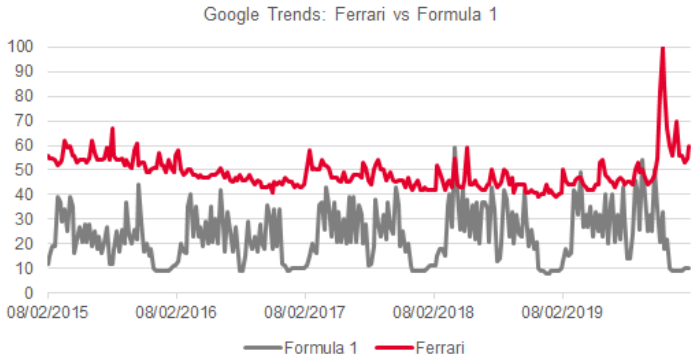
SHIPMENTS BREAKDOWN	2018	2019	2020	2021	2022	2023	2024
# cars							
GT	2960	3647	3928	4231	4558	5024	5287
SPORT	5921	5977	6114	6254	6397	6544	6914
SPECIAL	370	456	510	570	637	712	746
ICONA	0	51	187	328	475	511	610
TOT #	9251	10131	10739	11383	12066	12790	13558

REVENUES BREAKDOWN							
€mln	2018	2019	2020	2021	2022	2023	2024
Tot Rev %	*74%*	*77%*	*80%*	*80%*	*80%*	*80%*	*80%*
GT	810	1.044	1.207	1.349	1.515	1.748	1.936
SPORT	1.620	1.711	1.878	1.994	2.126	2.277	2.531
SPECIAL	101	130	157	182	212	248	273
ICONA	0	14	57	105	158	178	223
Cars&Spares Rev	2.531	2.900	3.299	3.629	4.010	4.451	4.963

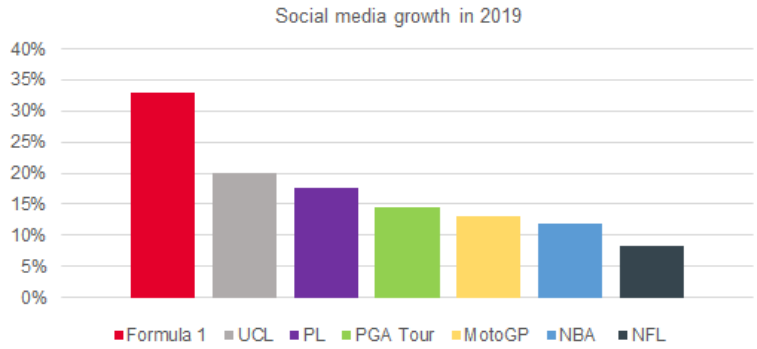


4. Social Media Analysis

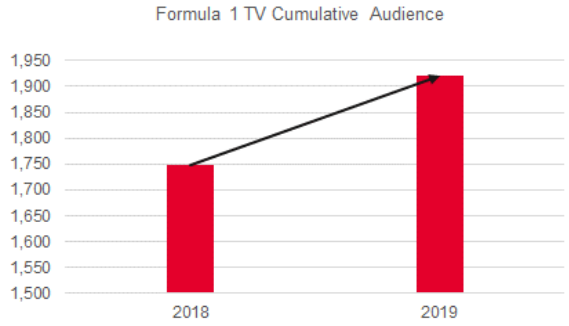
In order to give an overall analysis about Ferrari we decided to examine the social media context and the Google Trends on the main important Company's aspects. We asserted several times that the Formula 1 World Championship is the most significant tool of the Ferrari's marketing strategies. Using the Google searches results, we plotted a graph that demonstrate that the term Ferrari is more popular than Formula 1 and probably, sometimes, all the image of the Formula 1 is identified or at least associated with Ferrari. Ferrari and Formula 1 were considered as generic terms search.



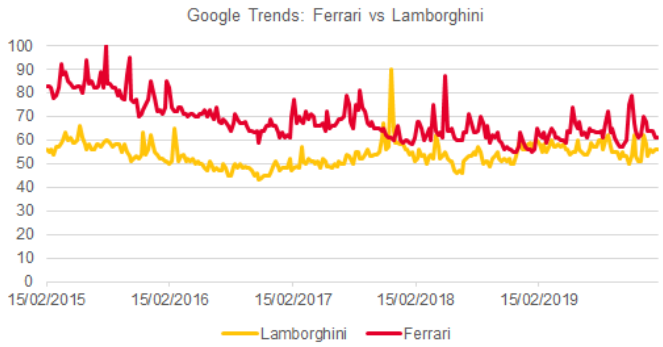
Besides, it useful to take a look on the social media growth of the Formula 1 World Championship over others main sport competitions. Formula 1 in 2019 has undergone the highest growth (+32.9%) reaching 24.9mln followers on the main four platforms (Facebook, Instagram, Twitter and YouTube).

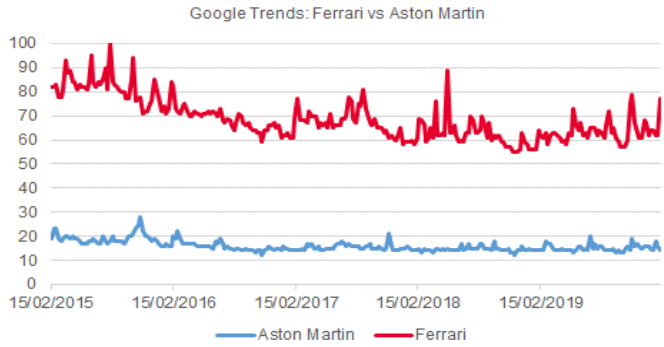


In addition, compared with 2018, the total global cumulative TV audience increased by 9% in 2019 (1.9bn, the highest since 2012). Ferrari's great attention into the racing world improves the brand's visibility and identity; the fact that the Formula 1 World Championship has grown its popularity year by year, especially in the context of social media, positively affects Ferrari's perception.



We conducted a second test on the Google users' interest to Ferrari and its primary competitors (considered as a Car Manufacturers not a generic search terms). As is shown in the charts, is easy to prove that Ferrari has quite more searches on Google than Lamborghini and Aston Martin. This supports our assumptions on the brand power and on the ability of Ferrari to effectively manage the strong heritage of the "Cavallino Rampante".





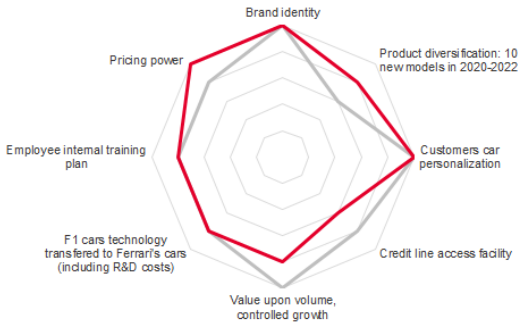
4. Porter Five Forces Analysis

Threat of new entrants	In the luxury high-performance car industry barriers to entrance are very high: in fact, clients do not buy just a product but the prestigious brand itself. As such, it is fairly difficult to build economies of scale in order to reduce the fixed costs. The huge amount of Capex makes challenging for any company to start a business in this sector. In particular, the product differentiation is the most important aspect as it is not possible to standardize hand-crafted products. Moreover, auto-sector's regulations and governments policies requirements represent strict and costly constraints to be fulfilled. Consequently, we deem the threats of new entrants as very low. In addition, Ferrari can reduce further this threat by continuously innovating, enhancing and differentiating its strategy in order to maintain a very strong brand identification.	
Bargaining power of Suppliers	In the luxury high-performance car industry, most part of a company, especially Ferrari's, depend on their supply chain. In the case of Ferrari, many suppliers are "single source suppliers" and failures to fulfil the orders (in term of standard level, appropriate quality or time shipment), may result in disruptions of the Company's activity. The Company sources raw materials from a limited number of suppliers and the price of those materials is not stable over time. Several key components, like transmissions, brakes, safety system, batteries and electronic parts are sourced externally, so Ferrari is dependent to suppliers that they cannot directly control, as regarding the financial stability. If some problems arise, Ferrari should not have problems to substitute or modify its supply chain, even if this can prove costly and may force the Company to reshape the design of its products. A disruption in the supply chain could lead to delays in production and shipments of cars, which can affect Ferrari's brand reputation. For particular components that include high-specialized technology, exclusivity manufacturing or unique production it will be more challenging to substitute the supplier. For these reasons, we estimate that the bargaining power of suppliers is a medium threat to the Company that can become high in rare cases. Normally the switching costs from a supplier to another for Ferrari are not large; the Company can nonetheless reduce this threat by developing strong and close relationship with every supplier in order to maintain long lasting agreement.	
Bargaining power of Buyers	The specific segment where Ferrari operates is very concentrated and populated by few companies that makes competition among them a key factor of growth, driven by exclusivity and differentiation of the products offered. In this landscape, buyers do not have much control over products' prices due to the scarcity of companies to choose from. Moreover, exclusivity is a key factor driver that characterizes specific products as unique; high differentiation implies also that buyers are rarely able to find good alternatives to some specific product. One aspect that should not to be underestimated though is that demand for luxury goods is volatile and may decline sharply in a short period of time. If a new car design does not meet final consumers' tastes, the brand position of the Company may suffer; in fact, the buyers in this industry, especially with the Ferrari cars, purchase the products for their appearance as well as their performances. Individuals who buys a Ferrari car, does not want to buy simply a car, instead they want to buy a "Ferrari" and benefit from the golden perception that the Ferrari brand produces. We therefore assume that there are no significant threats to the Company from the bargaining power of buyers. In any case, Ferrari can reduce this threat, developing a high brand loyalty and building a unique and very differentiated product range.	
Threat of substitute Products or Services	There are very few substitutes available in the industry in which Ferrari operates that makes this threat probably the weaker among the Porter's 5. Individuals purchase Ferrari's cars for the high-level of quality standard, performances, comfort, experience and, mostly, appearance. Ferrari has a unique ability to condense all these factors into a single product that represents an excellence within the luxury high-performance car industry. This implies that costumers are less likely to switch to another substitute product. Huge part of the past company's policies was focused on building a high brand loyalty that could satisfy the needs and the tastes of each client (driven by high product's customization and personalization). For all these reasons, we deem the threat arising from substitute products as almost irrelevant.	
Rivalry among existing firms	As we will specify in our report, the luxury high-performance car industry is very concentrated, dominated by few players, many of which are large sized companies with an ample market share. As such, competition is high and intense and firms within this sector have all the goal of gaining a stronger position and become the market leader. Ferrari's brand is one of the most famous and recognized globally and, all else being equal, its prestige plays an essential role in its sales and marketing activities. Exclusivity of the brand is a key factor that the Company wants to preserve in order to give the impression of uniqueness. The Company strategy leads to highly differentiated products, really "unique" and, in some cases, very expensive. As a result, it is difficult for the firms within the industry to win and gain loyal customers of other competing companies. Relative to the costs structure, usually firms that operate in the automotive industry have huge fixed costs that require operating at full capacity. Ferrari, instead, is not interested in fulfilling its production capacity, but is engaged with the manufactory of unique and excellent cars that can be sold with large margins, at premium; given this goal, economies of scale are of no interest. As strategies among existing firms in the industry, at large, are much differentiated, it could be hard identify the direct competitors, also in reference to the type of industry considered, since the producer specialized in the pure luxury and apparel segment are likely to be considered as competitors. For all these reasons, the rivalry among existing firms represents a medium threat. In order to reduce the rivalry risk, Ferrari should differentiate as much as possible its products, maintain a high-level brand image and reputation.	

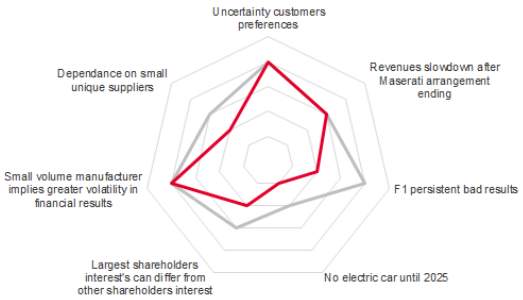
6. SWOT Analysis

We evaluate the four areas of SWOT Analysis associating for each elements a score from 1 to 5.
In particular, in Ferrari's points section we analyse the Company's positioning in terms of ability to leverage strengths and opportunities and suffer from weaknesses and threats.
In Effect on Returns (EoR) we want to show how the relative item should be addressed by the Company. A higher score on EoR means that the company should keep exploiting its strength/opportunity or undertake measure to reduce its weaknesses or exposure to future threats. A lower score imply the item has lower importance in generating returns and should not be given more strategic importance. Effect on Returns are assigned based on an overall assessment of Ferrari's characteristics.

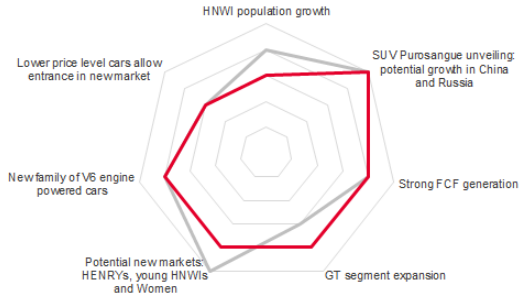
Strengths	Points	Effect on Returns
Brand identity	5	5
Product diversification: 10 new models in 2020-2022	3	4
Customers car personalization	5	5
Credit line access facility	4	3
Value upon volume: controlled growth	5	4
F1 cars technology transferred to Ferrari's cars (including R&D costs)	4	4
Employee internal training plan	4	4
Pricing power	4	5



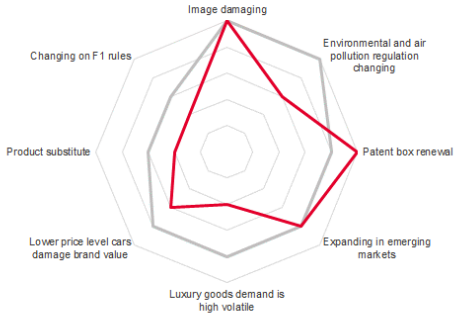
Weaknesses	Points	Effect on Returns
Uncertainty customers preferences	4	4
Revenues slowdown after Maserati arrangement ending	3	3
F1 persistent bad results	4	2
No electric car until 2025	2	1
Largest shareholders interests can differ from other shareholders interests	3	2
Small volume manufacturer implies greater volatility in financial results	4	4
Dependence on small unique suppliers	3	2



Opportunities	Points	Effect on Returns
HNWI population growth	4	3
SUV "Purosangue" unveiling: potential growth in China and Russia	5	5
Strong FCF generation	4	4
GT segment expansion	3	4
Potential new markets: HENRYs, young HNWIs and Women	5	4
New family of V6 engine powered cars	4	4
Lower price level cars allow entry in unexplored markets	3	3



Threats	Points	Effect on Returns
Image damaging	5	5
Environmental and air pollution regulation changing	5	3
Patent box renewal	4	5
Expanding in emerging markets	4	4
Luxury goods demand is high volatile	4	2
Lower price level cars damage brand value	4	3
Product substitute	3	2
Changing on F1 rules	3	2



7. Balance Sheet

(€ millions)	2016	2017	2018	2019	2020E	2021E	2022E	2023E	2024E
ASSETS									
Goodwill	785,2	785,2	785,2	785,2	785,2	785,2	785,2	785,2	785,2
Intangible assets	354,4	440,5	645,8	875,1	790,5	853,7	870,8	831,6	723,5
Property, plant and equipment	669,3	710,3	850,6	978,1	1.331,4	1.437,9	1.466,7	1.400,7	1.218,6
Investments and other financial assets	33,9	30,0	32,1	58,7	57,1	55,6	54,1	52,6	51,2
Deferred tax assets	119,4	94,1	60,7	61,8	44,1	31,4	22,4	16,0	11,4
Total non-current assets	**1.962,2**	**2.060,0**	**2.374,4**	**2.758,8**	**3.008,2**	**3.163,8**	**3.199,2**	**3.086,1**	**2.789,9**
Inventories	324,0	393,8	391,1	424,0	448,0	475,5	506,2	540,5	577,6
Trade receivables	244,0	239,4	211,4	264,2	289,3	318,2	351,6	390,3	435,2
Receivables from financing activities	790,4	732,9	878,5	911,2	957,9	1.043,3	1.176,7	1.292,8	1.441,5
Current tax receivables	1,3	6,1	128,2	-31,4	9,9	10,3	10,2	12,0	14,3
Other current assets	53,7	45,4	64,3	103,3	110,5	118,3	126,6	135,4	144,9
Current financial assets	16,3	15,7	10,2	32,9	26,0	20,6	16,2	12,8	10,2
Deposit in FCA Group	-	-	-	-	-	-	-	-	-
Cash and cash equivalents	457,8	647,7	793,7	898,0	915,3	734,6	1.003,5	1.431,7	2.297,5
Total current assets	**1.887,5**	**2.081,1**	**2.477,3**	**2.602,2**	**2.757,0**	**2.720,8**	**3.191,1**	**3.815,5**	**4.921,2**
TOTAL ASSETS	**3.849,6**	**4.141,1**	**4.851,7**	**5.361,3**	**5.765,2**	**5.884,7**	**6.390,2**	**6.901,6**	**7.711,1**
EQUITY AND LIABILITIES									
Majority interests	325,0	778,7	1.348,7	1.448,3	1.615,0	2.233,7	2.581,3	3.410,9	4.006,2
Non-controlling interests	4,8	5,3	5,1	2,9	2,4	3,0	3,4	4,1	4,6
TOTAL EQUITY	**329,8**	**783,9**	**1.353,8**	**1.451,2**	**1.617,4**	**2.236,7**	**2.584,7**	**3.415,0**	**4.010,8**
Employee benefits	1,9	1,5	1,3	2,6	2,0	2,0	2,2	2,3	2,5
Provisions	215,2	197,4	182,5	204,6	225,2	232,1	246,6	264,9	284,2
Deferred tax liabilities	2,6	1,1	24,6	17,9	13,4	15,6	15,1	15,5	14,9
Debt	399,9	312,2	352,4	511,4	506,3	378,9	375,1	249,0	246,5
Other liabilities	644,3	615,6	576,4	723,4	803,1	883,4	976,1	1.083,5	1.208,1
Other financial liabilities	39,6	1,4	11,3	49,6	54,3	59,8	66,0	73,3	81,7
Trade payables	614,9	607,5	653,8	648,2	682,9	722,0	765,5	813,6	865,4
Current tax payables	41,6	29,2	7,6	2,0	159,6	36,8	45,2	50,4	61,9
Total Current Liabilities	**1.960,1**	**1.765,9**	**1.810,0**	**2.159,7**	**2.446,9**	**2.330,8**	**2.491,9**	**2.552,6**	**2.765,3**
Employee benefits	89,1	82,6	85,3	123,3	96,6	100,4	107,6	114,2	121,5
Deferred tax liabilities	10,5	9,9	14,5	33,7	25,3	29,5	28,5	29,3	28,1
Debt	1.448,2	1.494,0	1.574,8	1.578,6	1.562,8	1.169,5	1.157,8	768,6	760,9
Other liabilities	11,9	4,8	13,4	14,8	16,2	17,9	19,7	21,9	24,4
Total Non-Current Liabilities	**1.559,7**	**1.591,3**	**1.687,9**	**1.750,4**	**1.700,9**	**1.317,2**	**1.313,7**	**934,0**	**935,0**
TOTAL LIABILITIES	**3.519,8**	**3.357,2**	**3.497,9**	**3.910,1**	**4.147,8**	**3.648,0**	**3.805,6**	**3.486,6**	**3.700,3**
TOTAL EQUITY AND LIABILITIES	**3.849,6**	**4.141,1**	**4.851,7**	**5.361,3**	**5.765,2**	**5.884,7**	**6.390,2**	**6.901,6**	**7.711,1**

8. Income Statement

(€ millions)	2016	2017	2018	2019	2020E	2021E	2022E	2023E	2024E
Net revenues	3.105,1	3.416,9	3.420,3	3.766,0	4.123,8	4.536,1	5.012,4	5.563,8	6.203,6
Growth (%)	*8,8%*	*10,0%*	*0,1%*	*10,1%*	*9,5%*	*10,0%*	*10,5%*	*11,0%*	*11,5%*
Cost of sales	1.332,0	1.390,3	1.334,2	1.471,3	1.554,7	1.650,0	1.756,7	1.875,6	2.004,4
% on sales	*42,9%*	*40,7%*	*39,0%*	*39,1%*	*37,7%*	*36,4%*	*35,0%*	*33,7%*	*32,3%*
SG&A costs	295,2	329,1	327,3	321,3	334,2	347,6	361,5	375,9	391,0
R&D costs	613,6	657,1	643,0	699,0	747,9	804,0	868,3	942,2	1.027,0
Other expenses, net	24,5	6,9	3,2	8,6	8,8	8,9	9,1	9,3	9,5
Result from investments	3,1	2,4	2,7	3,4	3,2	3,0	2,8	2,6	2,4
EBITDA	**842,8**	**1.036,0**	**1.115,3**	**1.269,2**	**1.481,4**	**1.728,6**	**2.019,6**	**2.363,4**	**2.774,3**
D&A	247,7	260,6	288,7	352,0	432,6	526,1	637,1	769,5	931,7
EBIT	**595,1**	**775,4**	**826,5**	**917,2**	**1.048,7**	**1.202,4**	**1.382,5**	**1.593,9**	**1.842,6**
% on sales	*19,2%*	*22,7%*	*24,2%*	*24,4%*	*25,4%*	*26,5%*	*27,6%*	*28,6%*	*29,7%*
Net financial expenses	27,7	29,3	23,6	42,0	33,5	33,8	25,5	26,8	17,5
Profit before taxes	**567,4**	**746,2**	**802,9**	**875,2**	**1.015,2**	**1.168,7**	**1.357,0**	**1.567,1**	**1.825,1**
Income tax expenses	167,6	208,8	16,3	176,0	243,6	280,5	325,7	376,1	438,0
Tax rate	29,5%	28,0%	2,0%	20,1%	24,0%	24,0%	24,0%	24,0%	24,0%
Net profit	**399,7**	**537,4**	**786,6**	**699,2**	**771,6**	**888,2**	**1.031,4**	**1.191,0**	**1.387,1**
Net profit attributable to:									
Owners of the parent	398,8	535,4	784,7	696,4	769,1	885,2	1.028,0	1.186,9	1.382,5
Non-controlling interests	1,0	2,0	1,9	2,9	2,4	3,0	3,4	4,1	4,6

9. Cash Flow Statement

(€ millions)	2016	2017	2018	2019	2020E	2021E	2022E	2023E	2024E
Cash at beginning of the year	**182,8**	**457,8**	**647,7**	**793,7**	**898,0**	**915,3**	**734,6**	**1.003,5**	**1.431,7**
Cash flows from operating section:									
Profit before taxes	567,4	746,2	802,9	875,2	1.015,2	1.168,7	1.357,0	1.567,1	1.825,1
Amortization and depreciation	247,7	260,6	288,7	352,0	432,6	526,1	637,1	769,5	931,7
Change in inventories	-33,2	-88,5	-4,6	-32,9	-24,0	-27,5	-30,7	-34,3	-37,1
Change in trade payables	106,2	29,3	40,3	-5,6	34,7	39,2	43,4	48,1	51,8
Change in trade/financing receivables	315,7	-45,9	-80,5	-85,5	-71,8	-114,3	-166,8	-154,7	-193,7
Income tax paid	-252,0	-215,5	-87,7	-176,0	-243,6	-280,5	-325,7	-376,1	-438,0
Other non-cash expenses/(income)	53,6	-23,5	-25,1	379,3	188,6	-19,3	124,3	136,8	156,4
Total cash flows from operating section	**1.005,3**	**662,8**	**934,0**	**1.306,5**	**1.331,7**	**1.292,4**	**1.638,7**	**1.956,4**	**2.296,2**
Cash flows used in investing section:									
Investments in tangible/intangible assets	-342,0	-391,4	-638,3	-717,6	-705,9	-702,2	-688,0	-667,5	-644,0
Proceeds from sale of assets and liabilities	21,5	12,0	1,4	8,8	4,5	6,3	5,1	3,1	2,5
Total cash flows from investing section	**-320,5**	**-379,4**	**-636,9**	**-708,8**	**-701,4**	**-695,9**	**-682,9**	**-664,3**	**-641,5**
Cash flows used in financing section:									
Net flows from bonds, securitization	-247,4	40,0	94,7	119,6	-20,9	-520,7	-15,5	-515,3	-10,2
Net change in other debt	-194,8	-12,3	-10,6	-11,0	13,2	12,4	12,1	12,1	12,5
Dividend Distribution	-104,1	-121,2	-135,1	-212,6	-233,9	-269,4	-312,8	-361,4	-420,7
Net change in deposits in FCA Group	135,1	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Acquisition of non-controlling interest	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Change in equity	1,4	0,0	0,0	-2,3	-0,4	0,5	0,4	0,8	0,5
Share repurchases	0,0	0,0	-100,1	-387,0	-371,0	0,0	-371,0	0,0	-371,0
Total cash flows from financing section	**-409,8**	**-93,4**	**-151,1**	**-493,3**	**-613,0**	**-777,2**	**-686,8**	**-863,9**	**-788,9**
Cash at end of the year	**457,8**	**647,7**	**793,7**	**898,0**	**915,3**	**734,6**	**1.003,5**	**1.431,7**	**2.297,5**

10. Financial Ratios

	2016	2017	2018	2019	2020E	2021E	2022E	2023E	2024E
ROE	121,2%	68,6%	58,1%	48,2%	47,7%	39,7%	39,9%	34,9%	34,6%
ROI	21,9%	25,0%	23,0%	23,5%	25,7%	29,4%	31,6%	34,2%	36,0%
ROA	10,4%	13,0%	16,2%	12,9%	13,4%	15,1%	16,1%	17,3%	18,0%
ROS	27,0%	30,2%	32,5%	33,6%	35,8%	38,0%	40,2%	42,4%	44,7%
ROD	1,5%	1,6%	1,2%	2,0%	1,6%	2,1%	1,6%	2,5%	1,6%
ROTE	114,6%	117,2%	100,0%	100,6%	98,4%	106,8%	105,9%	105,3%	100,0%
ROCE	0,3	0,3	0,3	0,3	0,3	0,3	0,4	0,4	0,4
ROIC (inc. gdw)	0,3	0,5	0,7	0,5	0,4	0,4	0,7	3,1	-0,8
ROIC (ex. gdw)	0,5	1,9	4,9	1,2	0,8	0,7	1,5	-3,1	-0,6
Tax rate	29,5%	28,0%	2,0%	20,1%	24,0%	24,0%	24,0%	24,0%	24,0%
Asset turnover	0,8	0,8	0,7	0,7	0,7	0,8	0,8	0,8	0,8
Capex/D&A	1,3	1,5	2,2	2,0	1,6	1,3	1,1	0,9	0,7
Interest coverage ratio	21,5	26,5	35,1	21,8	31,3	35,6	54,3	59,5	105,3
Payout ratio	0,2	0,2	0,2	0,2	0,2	0,2	0,1	0,1	0,1
Rentention	0,8	0,8	0,8	0,8	0,8	0,8	0,9	0,9	0,9
Sustainable growth rate	94,8%	53,2%	48,2%	39,0%	39,5%	33,7%	34,7%	31,0%	31,3%
Retained Earnings	312,8	417,4	653,2	565,8	638,1	754,8	897,9	1057,6	1253,6
Quick ratio	0,4	0,5	0,6	0,6	0,5	0,5	0,6	0,7	1,0
Debt ratio	0,9	0,8	0,7	0,7	0,7	0,6	0,6	0,5	0,5
Financial Leverage	11,7	5,3	3,6	3,7	3,6	2,6	2,5	2,0	1,9

11. Altman Z-Score

As credit-strength test, to assess the likelihood of bankruptcy, we calculated the Altman Z-Score. In this model, if the resulting value is greater than 2.99, the firm has a minor probability of filing insolvency. If the result is between 2.99 and 1.81 the firm has a moderate probability. Finally, if the Z-value is below 1.81, the firm has a very high probability of reaching the stage of bankruptcy.
The formula used is based on five financial ratios multiplied by five coefficients: (1.2 x A) + (1.4 x B) + (3.3 x C) + (0.6 x D) + (0.999 x E); with

A = Working Capital / Total Assets
B = Retained Earnings / Total Assets
C = Earnings Before Interest and Tax Payment / Total Assets
D = Equity's Market Value / Total Assets
E = Total Net Revenues / Total Assets

	2015	2016	2017	2018	2019
Working Capital to Total Assets	-0,083	-0,019	0,076	0,138	0,076
Retained Earnings to Total Assets	0,075	0,081	0,101	0,135	0,106
EBIT to Total Assets	0,115	0,155	0,187	0,170	0,172
Equity's Market Value to Total Assets	2,177	2,656	4,041	4,662	7,433
Total Net Revenues to Total Assets	0,737	0,807	0,825	0,705	0,707
Altman Z-score	**2,425**	**3,001**	**4,100**	**4,417**	**5,975**
Average			**3,964**		

The results show as Ferrari has a solid credit quality and maintained very high values of Altman Z-Score for all the years analysed, thus is implausible that the company will suffer a credit quality deterioration in the foreseeable future.

12. Forex Sensitivity

Ferrari's main exposure in foreign currencies come from the USD; for this reason, we plotted a sensitivity table on the Forex Analysis. Considering that the Revenues from United States are 12.6% of Total Revenues, we stressed the EUR/USD exchange rate in order to understand the differences in Revenues, Cost of Sales and Gross Profit. We considered variations between +8%/-8% taking as reference the average EUR/USD in 2018 (1.1810$ = 1€).

EURUSD	1,08652	1,11014	1,13376	1,15738	1,181	1,20462	1,22824	1,25186	1,27548
Revenues EUR	**3.457,5**	**3.447,5**	**3.438,0**	**3.428,8**	**3.420,0**	**3.411,6**	**3.403,4**	**3.395,6**	**3.388,1**
Local Revenues EUR	**468,4**	**458,4**	**448,9**	**439,7**	**430,9**	**422,5**	**414,3**	**406,5**	**399,0**
Local revenues USD	508,9	508,9	508,9	508,9	508,9	508,9	508,9	508,9	508,9
Cost of sales EUR	182,7	178,8	175,1	171,5	168,1	164,8	161,6	158,6	155,6
Gross Profit	**1.857,1**	**1.851,1**	**1.845,2**	**1.839,7**	**2.086,0**	**1.829,1**	**1.824,2**	**1.819,4**	**1.814,8**
%change Revenues	*1,096%*	*0,804%*	*0,525%*	*0,257%*	*0%*	*-0,247%*	*-0,485%*	*-0,713%*	*-0,933%*
%change Gross Profit	*-10,97%*	*-11,26%*	*-11,54%*	*-11,81%*	*0%*	*-12,31%*	*-12,55%*	*-12,78%*	*-13,00%*

13. Peers

Brand	Remarks
Sport Segment	
Aston Martin	The British car maker is one of Ferrari main competitors because of its broad range of high performance cars offered. Although the products may be similar in terms of performance, Ferarri is characterized by a longer racing history and heritage which ensure an higher brand value and, therefore, an higher average price: Ferrari €271,000 against the €175,000 of Aston Martin.
Audi	Audi's cars range are not comparable to Ferrari's, selling at lower prices and showing weaker performances. Audi R8 and cars belonging to the RS series are the only model which shows comparable characteristics, even if are not able to offer the same driving performance. The main differences between the two car producers are their brand strength, the exclusivity (in 2019 Ferrari shipped 10,313 cars while Audi production is c.a. 2mln cars) and the performances.
Bugatti	The French house is characterized by selling unique models powered by outstanding engines. In fact, Bugatti portfolio is composed by two cars both powered by a V16 engine capable of more than 1,000hp. The similarity with Ferrari are represented by the low number of vehicles shipped every year, the high level of personalization offered by both automakers, the top-end quality of materials and engineering, the performances (less than 3 seconds of acceleration 0-100km/h of top-performances Ferrari cars are comparable to the 2.5 second of both Bugatti) and the enrichment of products' with limited editions and one-offs. The participation of Ferrari in F1, assuring a high visibility, brand recognisability world-wide and the brand strength is what differentiates Ferrari form Bugatti.
Lamborghini	Lamborghini is the closest competitor of Ferrari. It is an Italian brand controlled by the VW Group through the Audi subsidiary, which produces high-level luxury sports cars. The perception of the Lamborghini products is similar to that of Ferrari but the latter has probably more brand power and aura of exclusivity. In terms of volume sold and price per car they are also quite alike.
McLaren	McLaren, as Ferrari, produces a low number of high-performance cars and participate in the F1 championship. One of the last cars produced, the McLaren *Elva* is similar to the Ferrari Monza, both took the "*Barchetta*" and adapted to the 2020 engineering and technologies. Even the hypercars of both houses (Ferrari *"LaFerrari"* and McLaren *"P1"*) are similar in technologies such as adaptive aerodynamics and performances. Although we thought at the British manufacturer as the most direct competitor, Ferrari's longer history, strong brand and prestige commands a higher premiums paid by Ferrari buyers, in fact considering just the range cars, the average price for a Ferrari sport car is €271,000 while for a McLaren sport car is €215,000.
Pagani	Based near the Ferrari's Modena production facility, Italian manufacturer Pagani realizes just three models: *"Zonda", "Huayra"* and its roadster version. What differentiates this automaker is the level of personalization offered to customers: every Pagani produced is a one-off, hand-made entirely in line with the client desires. Mr. Horacio Pagani is considered one of the most skilled carbon fibre manufacturer and his cars are powered by AMG engines, this is an important difference with Ferrari which entirely produces his engines in house with its own foundry. Important differences are the presence of Ferrari in F1 and the correlated brand recognisability and the number of cars manufactured every year (lower for Pagani which assure a major uniqueness of its cars). Furthermore, Pagani focus is on creating unique vehicles while Ferrari's cares about the whole driving experience.
Porsche	Porsche's cars range show weaker performances than Ferrari's. The companies are similar because both invest in their participation in racing events, even if in different ones. While Ferrari's only participation is in F1, Porsche cars compete in multiple motor events including the 24 hours of Le Mans. Only the top performance Porsches shows comparable results with Ferrari. The biggest difference is that Ferrari prefers exclusivity over volume while Porsche seems less concerned with it; Ferrari, with just 10,131 shipments (2019) is focused on obtaining higher margins.
GT segment	
Bentley	Bentley is focused on the realization of luxury vehicles identifiable for the high level of comfort and the powerful engines. Cars produced by Bentley are chosen because of their comfortability, while Ferrari's GT cars are chosen for the driving experience. While Bentleys are focused on the comfort of the passenger, Ferraris offer an outstanding experience for the driver.
Mercedes	The German manufacturer is one of the most known car producer world-wide. It produces the AMG segment cars, which are the high-performance versions of their cars range, including the comfortable class S enriched with more powerful engine. Moreover, Maybach versions of Mercedes cars are highly-personalized, luxurious, more powerful and comfortable. Only the AMG segment and the Maybach personalization command higher prices, therefore can be considered in line with prices for Ferrari GT cars.
Rolls-Royce	Considered one of the renowned British cars producer, Rolls-Royce is the car chosen by the most prominent and influential people in the world to travel in higher-level of comfort. They show enviable engine performances but, as in the case of Bentley, those cars are chosen more for the focus on passengers comfort, while Ferrari GT cars are built to offer a top driver's impression.

Source: Team Elaboration

Company name	EBIT Margin	EBITDA Margin	Net Margin FY1	Net Margin FY2	EV/SALES FY1	EV/SALES FY2	Price to Earnings	Earnings per Share FY1	Earnings per Share FY2
LVMH Moet Hennessy Louis Vuitton	20,0%	29,5%	14,5%	14,1%	4,35x	4,00x	29,10x	14,23	16,57
Hermes International	34,1%	37,9%	22,8%	22,7%	7,89x	7,14x	37,30x	12,78	13,97
Brunello Cucinelli	12,9%	17,5%	9,2%	9,2%	3,70x	3,34x	40,85x	0,74	0,82
Prada	14,4%	21,4%	9,3%	10,4%	2,21x	2,03x	23,96x	0,12	0,14
EssilorLuxottica	17,5%	23,7%	11,7%	12,1%	6,40x	5,92x	29,16x	3,76	4,45
Kering	29,2%	32,9%	20,9%	21,0%	3,83x	3,33x	17,92x	22,18	25,43
Christian Dior	21,9%	26,4%	5,9%	6,1%	1,32x	1,16x	21,62x	15,21	16,76
Burberry Group	16,6%	21,8%	11,9%	12,8%	2,29x	2,20x	20,76x	0,92	0,97
TODS	9,6%	14,6%	6,4%	6,8%	1,44x	1,38x	22,86x	1,81	1,97
Cie Financiere Richemont	16,7%	21,8%	21,7%	12,8%	2,13x	1,93x	18,42x	3,04	3,39
HUGO BOSS	12,8%	18,2%	8,7%	9,3%	1,37x	1,29x	15,46x	3,49	3,92
Salvatore Ferragamo	12,4%	17,0%	8,0%	8,9%	2,08x	1,98x	27,70x	0,64	0,74
Moncler	30,4%	34,4%	22,1%	21,6%	4,92x	4,18x	23,55x	1,23	1,38
BMW	9,3%	14,4%	7,1%	7,1%	0,32x	0,31x	6,75x	10,48	10,72
Daimler	7,6%	10,9%	4,9%	5,3%	0,21x	0,20x	5,96x	7,71	8,39
Aston Martin Lagonda Global Holdings	14,7%	24,5%	3,5%	9,1%	2,98x	2,56x	69,68x	0,19	0,50
Ferrari	**24,0%**	**33,3%**	**20,0%**	**18,2%**	**6,36x**	**5,93x**	**25,60x**	**3,39**	**3,48**
Average	*17,3%*	*22,5%*	*11,6%*	*11,7%*	*2,87x*	*2,60x*	*25,46x*	*5,62*	*6,24*
Median	*14,7%*	*21,8%*	*9,2%*	*9,3%*	*2,21x*	*2,03x*	*22,86x*	*3,04*	*3,39*

Source: Factset (2018)

Company name	EV/EBITDA FY1	EV/EBITDA FY2	EBITDA Margin FY1	EBITDA Margin FY2	EV/EBIT FY1	EV/EBIT FY2
LVMH Moet Hennessy Louis Vuitton	16,71x	14,42x	25,8%	27,7%	20,15x	18,46x
Hermes International	20,74x	18,85x	38,1%	37,9%	23,11x	20,93x
Brunello Cucinelli	21,21x	19,05x	17,4%	17,5%	28,96x	25,86x
Prada	11,13x	9,51x	19,8%	21,4%	17,37x	14,12x
EssilorLuxottica	26,32x	24,98x	24,3%	23,7%	35,38x	33,82x
Kering	11,86x	10,10x	32,3%	32,9%	13,39x	11,37x
Christian Dior	5,03x	4,39x	26,2%	26,4%	6,08x	5,29x
Burberry Group	10,78x	10,08x	21,3%	21,8%	14,07x	13,20x
TODS	10,17x	9,49x	14,2%	14,6%	15,68x	14,39x
Cie Financiere Richemont	10,18x	8,85x	20,9%	21,8%	13,65x	11,53x
HUGO BOSS	7,87x	7,13x	17,4%	18,2%	11,41x	10,13x
Salvatore Ferragamo	12,84x	11,59x	16,2%	17,0%	18,02x	15,96x
Moncler	14,43x	12,14x	34,1%	34,4%	16,37x	13,74x
BMW	2,35x	2,14x	13,8%	14,4%	3,55x	3,32x
Daimler	1,95x	1,85x	10,6%	10,9%	2,83x	2,66x
Aston Martin Lagonda Global Holdings	13,06x	10,45x	22,8%	24,5%	22,96x	17,38x
Ferrari	**19,61x**	**17,82x**	**32,4%**	**33,3%**	**26,43x**	**24,66x**
Average	*12,00x*	*10,71x*	*22,2%*	*22,5%*	*16,19x*	*14,25x*
Median	*11,13x*	*10,08x*	*21,1%*	*21,8%*	*15,68x*	*13,74x*

Source: Factset (2018)

Company name	Sales	Gross Margin	EBIT Margin	EBITDA Margin	SG&A Expense	ROA	ROE	Working Capital Turnover	Dividend Payout Ratio	Total Debt / Total Equity
LVMH Moet Hennessy Louis Vuitton	53.670,0	66,2%	20,0%	29,5%	21.221,0	20,8%	20,8%	6,97x	39,6	34,1%
Hermes International	5.958,1	69,5%	34,2%	38,1%	1.771,0	18,6%	24,5%	1,78x	77,8	1,1%
Brunello Cucinelli	555,0	65,7%	12,8%	17,4%	268,3	10,7%	17,5%	3,92x	36,2	32,1%
Prada	3.232,3	72,8%	12,7%	19,8%	1.913,0	6,2%	10,0%	2,64x	215,4	34,9%
EssilorLuxottica	7.472,4	69,3%	18,1%	24,3%	3.837,0	8,1%	11,9%	13,95x	42,0	33,1%
Kering	13.590,9	75,2%	28,6%	32,3%	2.080,0	13,6%	24,5%	9,96x	42,3	43,4%
Christian Dior	46.654,0	66,5%	21,6%	26,2%	21.223,0	3,5%	19,1%	3,64x	40,1	97,1%
Burberry Group	3.035,3	68,5%	16,3%	21,3%	1.431,0	14,6%	24,1%	2,76x	57,7	1,6%
TODS	949,3	71,2%	9,2%	14,2%	198,4	3,9%	5,4%	2,90x	98,3	25,0%
Cie Financiere Richemont	13.772,9	62,4%	15,6%	20,9%	5.247,0	11,0%	10,8%	0,80x	34,1	49,4%
HUGO BOSS	2.780,7	65,4%	12,0%	17,4%	1.469,7	13,6%	24,9%	5,38x	77,4	17,7%
Salvatore Ferragamo	1.366,8	63,8%	11,6%	16,2%	581,4	9,3%	14,0%	2,78x	72,6	4,9%
Moncler	1.406,0	75,4%	30,1%	34,1%	556,6	19,8%	26,8%	2,70x	21,2	9,0%
BMW	96.822,5	22,6%	9,1%	13,8%	14.041,2	4,1%	11,8%	7,72x	37,0	150,0%
Daimler	166.083,0	20,6%	7,3%	10,6%	22.483,8	3,9%	12,4%	7,07x	53,9	224,1%
Aston Martin Lagonda Global Holdings	1.219,5	43,3%	13,0%	22,8%	311,3	2,1%	9,0%	-	-	654,5%
Ferrari	**3.443,7**	**53,8%**	**24,1%**	**32,4%**	**969,3**	**15,0%**	**46,9%**	**4,76x**	**17,1**	**142,9%**
Average	24.326,6	60,8%	16,8%	22,0%	8.043,8	9,5%	16,5%	5,00x	63,0	88,2%
Median	3.232,3	66,5%	13,0%	20,9%	1.913,0	9,3%	14,0%	3,64x	42,3	33,6%

Source: Factset (2018)

14. Relative Valuation

To support our DCF model, we perform an assessment based on stock market multiples. For its niche production and high margins Ferrari doesn't have any direct listed competitor, hence we consider a sample of stocks comprising the luxury peers included in our Luxury Index and a restricted sample of stocks comprising the (non-ultra) luxury car producers. We decided not to consider industry's multiples because the automotive industry by and large includes companies not related with Ferrari. We focus on two different historical multiples: one related to the asset side and the other one to the earning power, just to minimize any distortion that may result using just one approach. Calculating in each year (from 2016 to 2018) the highest value of the competitors' multiples (as the sum of the median plus the interquartile range), we observe how Ferrari has greater multiples, demonstrating that Ferrari's strategy, with carefully controlled growth and very high margins, deserves a very high premium against comparable companies, whose value is differently perceived by both their customers and the market. This observation highlights the importance of Ferrari's brand strength, kept carefully through targeted investments. So, as shown in the following table, for each multiple we calculate the average market premium for the period considered (2016-2018) and add it to the average values of Ferrari's multiples, estimating its fair value. To compute Ferrari's Market Value for each multiple we consider the average of the estimated Financial statements' values for Ferrari in the next 5 years (2020E-2024E). Both multiples considered are equally weighted.

2016	Price to Earnings FY1	EV/EBITDA FY1
Automotive companies:		
Aston Martin Lagonda	-	-
BMW	8,68x	3,17x
Ford Motor	6,69x	2,69x
Daimler	8,53x	3,44x
Renault	6,91x	3,59x
Honda Motor	11,76x	8,51x
General Motors	5,78x	2,52x
Toyota Motor	12,33x	5,70x
Volkswagen Vz	7,21x	1,57x
Ferrari	**27,03x**	**13,49x**
Average	8,49x	3,90x
Median	7,87x	3,31x
Luxury companies:		
Brunello Cucinelli	38,65x	18,78x
Moncler	21,87x	12,27x
Burberry Group	19,70x	10,16x
Cie Financiere Richemont	29,61x	14,88x
Christian Dior	21,07x	4,73x
Kering	20,21x	13,96x
Hermes International	36,73x	20,54x
Prada	27,47x	12,07x
Salvatore Ferragamo	21,86x	11,55x
HUGO BOSS	20,71x	9,02x
Ralph Lauren A	16,43x	7,42x
TODS	24,91x	11,85x
EssilorLuxottica	28,55x	15,08x
Ferrari	**27,03x**	**13,49x**
Average	25,21x	12,49x
Median	21,87x	12,07x

2017	Price to Earnings FY1	EV/EBITDA FY1
Automotive companies:		
Aston Martin Lagonda	-	-
BMW	7,78x	2,81x
Ford Motor	6,86x	3,25x
Daimler	7,70x	3,10x
Renault	5,38x	3,22x
Honda Motor	10,54x	9,10x
General Motors	6,52x	2,85x
Toyota Motor	10,95x	5,93x
Volkswagen Vz	7,03x	1,93x
Ferrari	**31,43x**	**21,67x**
Average	7,84x	4,02x
Median	7,37x	3,16x
Luxury companies:		
Brunello Cucinelli	39,07x	21,50x
Moncler	27,07x	16,06x
Burberry Group	22,00x	11,36x
Cie Financiere Richemont	25,03x	14,00x
Christian Dior	26,92x	5,81x
Kering	23,58x	16,04x
Hermes International	39,13x	21,23x
Prada	30,09x	12,89x
Salvatore Ferragamo	26,93x	14,24x
HUGO BOSS	19,64x	10,06x
Ralph Lauren A	18,46x	7,90x
TODS	26,69x	12,52x
EssilorLuxottica	29,33x	15,57x
Ferrari	**31,43x**	**21,67x**
Average	27,23x	13,78x
Median	26,92x	14,00x

2018	Price to Earnings FY1	EV/EBITDA FY1
Automotive companies:		
Aston Martin Lagonda	69,68x	13,06x
BMW	6,75x	2,35x
Ford Motor	5,87x	1,76x
Daimler	5,96x	1,95x
Renault	3,78x	1,89x
Honda Motor	7,11x	7,35x
General Motors	5,42x	3,10x
Toyota Motor	7,89x	9,26x
Volkswagen Vz	5,57x	1,35x
Ferrari	**25,60x**	**19,61x**
Average	6,04x	3,63x
Median	5,91x	2,15x
Luxury companies:		
Brunello Cucinelli	40,85x	21,21x
Moncler	23,55x	14,43x
Burberry Group	20,76x	10,78x
Cie Financiere Richemont	18,42x	10,18x
Christian Dior	21,62x	5,03x
Kering	17,92x	11,86x
Hermes International	37,30x	20,74x
Prada	23,96x	11,13x
Salvatore Ferragamo	27,70x	12,84x
HUGO BOSS	15,46x	7,87x
Ralph Lauren A	14,99x	7,16x
TODS	22,86x	10,17x
EssilorLuxottica	29,16x	26,32x
Ferrari	**25,60x**	**19,61x**
Average	27,45x	13,06x
Median	23,21x	11,50x

We think that the Target Price obtained from relative valuation (€190.1, 3.88% lower than our DCF base case and implying a 19% potential upside) provides a fair valuation of the company. In fact, we believe these multiples to be justified by Ferrari's Brand Strength (which has a great impact on its market value, see Appendix), attitude to innovation, outstanding margins and results achieved by the management that have obtained an improvement in profitability in a contest of a carefully and strategically controlled growth in Revenues, all trends which we deem will persist in the long term.

AUTOMOTIVE	Price to Earnings	EV/EBITDA
Average Median + IQR Value	9,01x	5,61x
Average Market Premium	215,51%	248,20%
FAIR VALUE	**28,42**	**19,53**
Target price for each multiple	160,99	216,27
Target Price (Automotive)	**188,63**	
Net Debt	254.182	
# of shares	186.052	
Equity Market Value (Automotive)	35.094.738	
Average forecasted EPS, EBITDA	5,66	2.073.463

LUXURY	Price to Earnings	EV/EBITDA
Average Median + IRQ Value	30,41x	16,69x
Average Market Premium	-8,01%	20,71%
FAIR VALUE	**27,97**	**20,15**
Target price for each multiple	158,43	223,14
Target Price (Luxury)	**190,78**	
Net Debt	254.182	
# of shares	186.052	
Equity Market Value (Luxury)	35.495.764	
Average forecasted EPS, EBITDA	5,66	2.073.463

Target price
190,14

Equity value
35.375.456

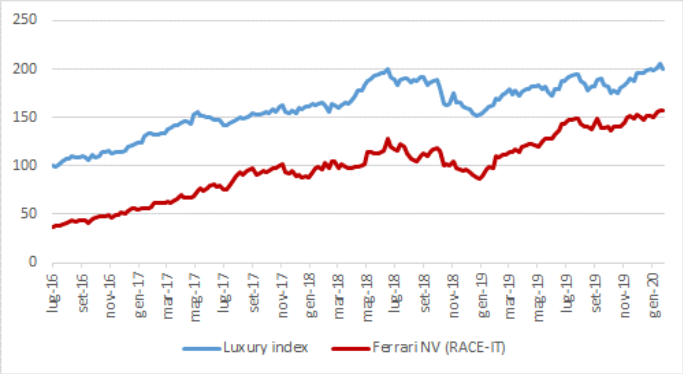
15. WACC Computation

Risk-free rate estimates

We estimated the risk free rate by taking the average of the yield of the Italian 10years BTP for the last 5 years. We considered monthly observations in order to find a synthetic value aiming to capture the trend of the rate. The value we obtained is 1.91%.

Beta

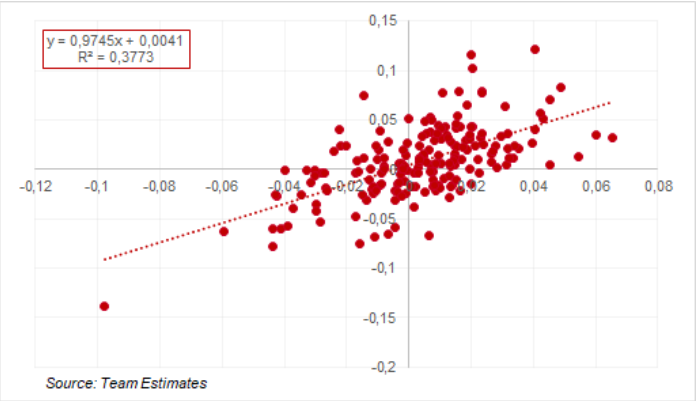
In order to compute Ferrari's Beta we made several regressions, against its market, i.e., the FTSE Italia All Share Index and the FTSE MIB; we also created a proprietary Luxury Index built as an equally weighted Index composed by 14 brands present in the Luxury Industry. The brands included in our index are shown in the Table below.



BLOOMBERG TICKER	NAME	1Y PERFORMANCE
BC:IM	Brunello Cucinelli	0.17%
MON:IM	Moncler	15,66%
BRBY:LN	Burberry Group	6,26%
CFRS:SW	Cie Financiere Richemont	11,78%
CDI:FP	Christian Dior	27,41%
KER:FP	Kering	28,10%
RMS:FP	Hermes International	31,62%
1913:HK	Prada	1,62%
SFER:IM	Salvatore Ferragamo	-7,11%
BOSS:GR	HUGO BOSS	-26,25%
RL:US	Ralph Lauren A	-1,61%
TOD:IM	TODS	-8,84%
EL:IM	EssilorLuxottica	28.94%

Source: Bloomberg

As shown in the graph above, Ferrari presents a good correlation with our index, confirming our choice to give a greater weight to the luxury peers in the Multiples valuation method. We made some attempts using a regression model between % var. of Ferrari's stocks and the % var. of FTSE MIB, FTSE Italia All-Share and the Luxury Index. The coefficients of determination that we find are shown in table below.



Source: Team Estimates

INDEX	REGRESSION LINE	BETA	R^2
Luxury Index	y = 0,9745x + 0,0041	**0,9745**	0,3773
FTSE Italia All-Share	y = 0,9035x + 0,1119	**0,9035**	0,3763
FTSE MIB	y = 0,8593x + 0,1152	**0,8593**	0,3739

Source: Our Estimates

From our findings, highlighted in table above, Beta varies in a range between 0.86 and 0.97. We think that those numbers, below 1, are consistent with the strategy of the Company and past performance demonstrated through its financials: in fact, Ferrari enjoys lower volatility while maintaining very high margins; and this is true either comparing the Company with the market or with the Luxury segment itself. From the low end of our Betas' range to the upper value, there would be a difference of about 0.4% on the final Cost of Equity. We decided to use the top range of our estimates (0.97) because Ferrari is a mid-cap whose volatility is higher than larger firms with a strong market resilience such as Hermès. We also assume that our Luxury Index is the most appropriate to valuate Ferrari since its proximity to the unit, considering that we want to obtain a cost of equity that is as close as possible to the expected returns for the shareholders.

Cost of equity

Equity Risk Premium: In order to calculate the cost of equity we estimated the Equity Risk Premium. We did it using different approach and compared the resulting values. (1) Following historical ERP approach we firstly obtained the average return on FTSE All-Share Italy which yielded 5.88%. Secondly we obtained the risk free rate as average of the rate of Italian BTP 10y for the last 5 years with weekly observation finding a value of 1.91%. We then subtract the risk free from the return of the stock index finding an ERP value of **3.97%**. (2) Not trusting a unique value of ERP we decided to use another approach: we computed Italian ERP by founding the reciprocal of the average P/E of the index FTSE Italy All-Share (10.004) which is 9.9% and by subtracting the risk free rate we had a value of **8.086%**.
We finally computed the average between the two values obtained with the alternatives methods (3.97% and 8.0%) finding the ERP value of 6% which is the one we used for our valuation.
Considering a Risk-free rate of 1.91%, an Equity Risk Premium of 6.03% and a Beta Levered equal to 0.97 we compute a **Cost of Equity** amounted to **7.8%** using the Capital Asset Pricing Model formula.

Cost of debt

We computed the cost of debt using the ratio of Net Financial Expenses over Financial Debt (Debt + Other Financial Liabilities), from the Company's financial statements, resulting in a value of **1.96%**. In order to craft a more thorough analysis we decided to compare this value with the one obtained using a different approach. We estimated the alternative cost of debt starting by the values of Interest Coverage Ratio for Ferrari which in 2019 had a value of 21.84. Companies in developed markets with a capitalization bigger than 5bn USD and Interest Coverage Ratio bigger than 8.5 has a AAA rating which commands a spread for the cost of debt of these companies equal to 0.63% (*Source: Factset*). We then computed the average of the rate of the Italian BTP 10y of the last five years, the result is a risk free rate of 1.91%. By adding the spread, we founded a cost of debt for Ferrari which amounts to **2.54%**.

Interest coverage ratio (ICR)	21,84
Rating for Ferrari	AAA
Spread for AAA Companies	0,63%
Average BTP Italy 10y	1,91%
Pre-tax cost of debt with rating	**2,54%**

The Cost of Debt we used in the valuation model is the average of the two values which equals to **2.24%**.

WACC

Taking into account a 7.8% of Cost of Equity and a 2.24% Cost of Debt, resulting from our analysis, and a 24% of tax rate, we compute a 2020E WACC of 7.36%. Considering the predictability of Ferrari's capital structure and tax rate during the forecasted years, we maintained a stable WACC for each year.
We maintained Beta stable at the value that we compute with our regression model since, in theory, the long-term Beta of all companies tend to value of 1. Since we think that in the coming years Ferrari will be stable in growth we think that this value of Beta may be suitable for the Company during the next five years.

16. DCF Model

DCF MODEL (€ mln)		STAGE 1					STAGE 2						
	2019	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E
Period		1	2	3	4	5	6	7	8	9	10	11	12
Total Revenues	3.766	4.124	4.536	5.012	5.564	6.204	6.743	7.330	7.968	8.661	9.414	10.234	11.124
Revenues growth (%)	*10,1%*	*9,5%*	*10,0%*	*10,5%*	*11,0%*	*11,5%*	*8,7%*	*8,7%*	*8,7%*	*8,7%*	*8,7%*	*8,7%*	*8,7%*
EBIT	917	1.049	1.202	1.383	1.594	1.843	2.023	2.199	2.390	2.598	2.824	3.070	3.337
EBIT margin (%)	*24,4%*	*25%*	*27%*	*28%*	*29%*	*30%*	*30%*	*30%*	*30%*	*30%*	*30%*	*30%*	*30%*
Tax rate	24%	**24%**	**24%**	**24%**	**24%**	**24%**	**24%**	**24%**	**24%**	**24%**	**24%**	**24%**	**24%**
NOPAT	697	**797**	**914**	**1.051**	**1.211**	**1.400**	**1.537**	**1.671**	**1.817**	**1.975**	**2.146**	**2.333**	**2.536**
D&A	352	**433**	**526**	**637**	**770**	**932**	**946**	**960**	**974**	**989**	**1.004**	**1.019**	**1.034**
Accounts receivable	-53	**-25**	**-29**	**-33**	**-39**	**-45**	**-46**	**-46**	**-47**	**-48**	**-48**	**-49**	**-50**
Inventories	-33	**-24**	**-27**	**-31**	**-34**	**-37**	**-38**	**-38**	**-39**	**-39**	**-40**	**-41**	**-41**
Accounts payable	-6	**35**	**39**	**43**	**48**	**52**	**53**	**53**	**54**	**55**	**56**	**57**	**58**
Accrued expenses	158	**71**	**82**	**95**	**110**	**127**	**129**	**131**	**133**	**135**	**137**	**139**	**141**
Capital expenditures	-709	**-701**	**-696**	**-683**	**-664**	**-642**	**-654**	**-667**	**-681**	**-694**	**-708**	**-722**	**-737**
Unlevered FCFF	407	**585**	**809**	**1.079**	**1.401**	**1.788**	**1.927**	**2.064**	**2.212**	**2.372**	**2.546**	**2.736**	**2.941**
WACC		*7,4%*	*7,4%*	*7,4%*	*7,4%*	*7,4%*	*7,4%*	*7,4%*	*7,4%*	*7,4%*	*7,4%*	*7,4%*	*7,4%*
Discounted FCFF		545	701	871	1.054	1.252	1.257	1.254	1.251	1.250	1.250	1.250	1.252
Stage FCFF			**4.424**							**8.764**			
TV growth rate	*2%*												
Stage 3	**23.738**												
Enterprise Value	**36.925**												
NFP	254												
Equity Value	**36.671**												
Shares Outstanding (mlr	186												
TARGET PRICE	**€ 197,10**												

Scenario Analysis

All the assumptions on TV growth rate, cost of capital, cost of debt and beta are kept constant with respect to our Base Case. Results and Conclusions - Our two scenarios provide a range of –13% and +43% with respect to current market price and –30% and +16% to our base case estimates. Considering the range of prices deriving from our projected scenarios, our analysis confirms our BUY recommendation.

DCF MODEL - BULL CASE													
(€ mln)		STAGE 1					STAGE 2						
	2019	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E
Period		1	2	3	4	5	6	7	8	9	10	11	12
Total Revenues	3.766	4.180	4.661	5.220	5.873	6.636	7.214	7.841	8.523	9.265	10.071	10.947	11.900
Revenues growth (%)	*10,1%*	*11,0%*	*11,5%*	*12,0%*	*12,5%*	*13,0%*	*8,7%*	*8,7%*	*8,7%*	*8,7%*	*8,7%*	*8,7%*	*8,7%*
EBIT	917	1.095	1.309	1.562	1.864	2.223	2.381	2.588	2.813	3.057	3.323	3.613	3.927
EBIT margin (%)	*24,4%*	*26%*	*28%*	*30%*	*32%*	*33%*	*33%*	*33%*	*33%*	*33%*	*33%*	*33%*	*33%*
Tax rate	**24%**	**24%**	**24%**	**24%**	**24%**	**24%**	**24%**	**24%**	**24%**	**24%**	**24%**	**24%**	**24%**
NOPAT	**697**	**832**	**995**	**1.187**	**1.417**	**1.690**	**1.809**	**1.967**	**2.138**	**2.324**	**2.526**	**2.746**	**2.984**
D&A	352	433	526	637	770	932	946	960	974	989	1.004	1.019	1.034
Accounts receivable	-53	-29	-34	-39	-46	-54	-54	-55	-56	-57	-58	-59	-59
Inventories	-33	-24	-27	-31	-34	-37	-38	-38	-39	-39	-40	-41	-41
Accounts payable	-6	36	39	43	48	52	53	53	54	55	56	57	58
Accrued expenses	158	82	96	111	130	152	154	156	159	161	163	166	168
Capital expenditures	-709	-701	-696	-683	-664	-642	-654	-667	-681	-694	-708	-722	-737
Unlevered FCFF	**407**	**629**	**899**	**1.226**	**1.619**	**2.093**	**2.215**	**2.375**	**2.549**	**2.738**	**2.943**	**3.165**	**3.407**
WACC		*7,4%*	*7,4%*	*7,4%*	*7,4%*	*7,4%*	*7,4%*	*7,4%*	*7,4%*	*7,4%*	*7,4%*	*7,4%*	*7,4%*
Discounted FCFF		585	779	990	1.218	1.466	1.445	1.443	1.442	1.443	1.444	1.447	1.450
Stage FCFF			**5.039**							**10.114**			
TV growth rate	*2%*												
Stage 3	**27.498**												
Enterprise Value	**42.651**												
NFP	254												
Equity Value	**42.397**												
Shares Outstanding (mlr	186												
TARGET PRICE	**€ 227,88**												

DCF MODEL - BEAR CASE													
(€ mln)		STAGE 1					STAGE 2						
	2019	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E
Period		1	2	3	4	5	6	7	8	9	10	11	12
Total Revenues	3.766	4.067	4.405	4.784	5.209	5.689	5.973	6.272	6.585	6.915	7.260	7.623	8.005
Revenues growth (%)	*10,1%*	*8,0%*	*8,3%*	*8,6%*	*8,9%*	*9,2%*	*5,0%*	*5,0%*	*5,0%*	*5,0%*	*5,0%*	*5,0%*	*5,0%*
EBIT	917	1.000	1.100	1.216	1.351	1.508	1.553	1.631	1.712	1.798	1.888	1.982	2.081
EBIT margin (%)	*24,4%*	*24,6%*	*25,0%*	*25,4%*	*25,9%*	*26,5%*	*26,0%*	*26,0%*	*26,0%*	*26,0%*	*26,0%*	*26,0%*	*26,0%*
Tax rate	*24%*	*24%*	*24%*	*24%*	*24%*	*24%*	*24%*	*24%*	*24%*	*24%*	*24%*	*24%*	*24%*
NOPAT	697	**760**	**836**	**924**	**1.027**	**1.146**	**1.180**	**1.239**	**1.301**	**1.366**	**1.435**	**1.506**	**1.582**
D&A	352	433	526	637	770	932	946	960	974	989	1.004	1.019	1.034
Accounts receivable	-53	-21	-24	-27	-30	-34	-34	-35	-35	-36	-36	-37	-37
Inventories	-33	-19	-19	-18	-17	-14	-14	-14	-14	-14	-15	-15	-15
Accounts payable	-6	29	29	28	26	23	23	23	24	24	24	25	25
Accrued expenses	158	60	67	75	85	95	97	98	100	101	103	104	106
Capital expenditures	-709	-701	-696	-683	-664	-642	-654	-667	-681	-694	-708	-722	-737
Unlevered FCFF	407	**541**	**720**	**937**	**1.196**	**1.507**	**1.543**	**1.604**	**1.669**	**1.736**	**1.806**	**1.880**	**1.957**
WACC		*7,4%*	*7,4%*	*7,4%*	*7,4%*	*7,4%*	*7,4%*	*7,4%*	*7,4%*	*7,4%*	*7,4%*	*7,4%*	*7,4%*
Discounted FCFF		504	624	757	900	1.055	1.007	975	944	915	886	859	833
Stage FCFF			**3.840**							**6.418**			
TV growth rate	*2%*												
Stage 3	**15.797**												
Enterprise Value	**26.055**												
NFP	254												
Equity Value	**25.801**												
Shares Outstanding (mlr	186												
TARGET PRICE	**€ 138,68**												

Sensitivity Analysis

We made three different tests in order to take into account several options. First, we test how WACC and TV growth rate could improve or worsen our result. Our BUY recommendation still holds, with almost 70% of the cases resulting in fair values at least 10% above the current price. In addition, we tested how our TP reacts to different beta values in multiple TV growth rate scenarios, 81% of the instances still supporting a BUY recommendation. At last, we stressed the Terminal Value over the Enterprise Value, the proportion floats around the 65% in most of the cases, exceeding the 70% only in 20%of the instances and never exceeding the 80%.

TV growth rate \ WACC	5,38%	5,88%	6,38%	6,88%	7,38%	7,88%	8,38%	8,88%	9,38%
0,5%	253,49	225,89	203,12	184,03	167,81	153,88	141,80	131,23	121,92
0,8%	265,42	235,15	210,44	189,91	172,60	157,83	145,08	133,98	124,25
1,1%	279,02	245,58	218,60	196,41	177,85	162,12	148,63	136,94	126,74
1,4%	294,68	257,40	227,74	203,61	183,62	166,81	152,48	140,14	129,41
1,7%	312,89	270,92	238,05	211,65	190,01	171,95	156,68	143,61	132,30
2,0%	334,34	286,53	249,78	220,68	**197,10**	177,62	161,28	147,38	135,42
2,3%	359,97	304,76	263,23	230,90	205,04	183,90	166,32	151,49	138,81
2,6%	391,13	326,33	278,82	242,55	213,97	190,89	171,90	155,99	142,50
2,9%	429,83	352,24	297,10	255,95	224,09	198,73	178,08	160,95	146,53
3,2%	479,20	383,95	318,83	271,54	235,68	207,57	184,98	166,43	150,95
3,5%	544,33	423,67	345,08	289,90	249,05	217,63	192,72	172,52	155,82

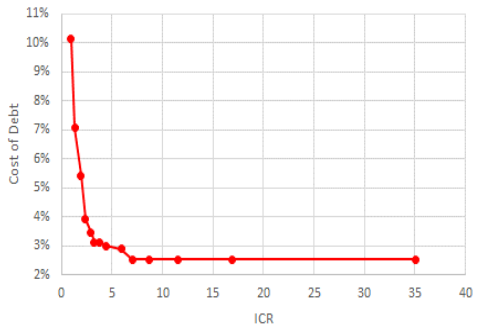
TV growth rate \ BETA	0,77	0,82	0,87	0,92	0,97	1,02	1,07	1,12	1,17
0,5%	208,43	196,80	186,24	176,62	167,81	159,73	152,28	145,40	139,03
0,8%	216,18	203,63	192,28	181,99	172,60	164,01	156,13	148,87	142,16
1,1%	224,84	211,21	198,96	187,89	177,85	168,69	160,32	152,63	145,55
1,4%	234,57	219,68	206,38	194,42	183,62	173,82	164,89	156,72	149,23
1,7%	245,58	229,20	214,67	201,68	190,01	179,47	169,90	161,19	153,23
2,0%	258,15	239,99	223,99	209,78	**197,10**	185,71	175,42	166,09	157,59
2,3%	272,62	252,30	234,54	218,91	205,04	192,65	181,53	171,49	162,38
2,6%	289,47	266,48	246,60	229,25	213,97	200,42	188,32	177,46	167,66
2,9%	309,33	283,01	260,51	241,07	224,09	209,16	195,92	184,11	173,50
3,2%	333,10	302,51	276,73	254,70	235,68	219,08	204,48	191,55	180,00
3,5%	362,04	325,87	295,88	270,61	249,05	230,43	214,20	199,93	187,29

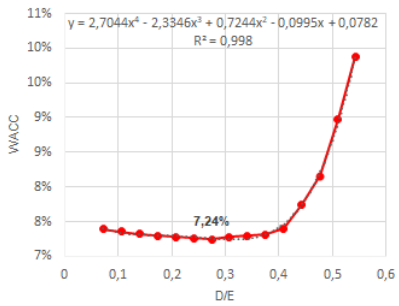
TV growth rate \ BETA	0,77	0,82	0,87	0,92	0,97	1,02	1,07	1,12	1,17
0,5%	64%	62%	61%	59%	58%	57%	56%	54%	53%
0,8%	65%	63%	62%	61%	59%	58%	57%	55%	54%
1,1%	66%	65%	63%	62%	60%	59%	58%	56%	55%
1,4%	68%	66%	65%	63%	62%	60%	59%	58%	56%
1,7%	69%	67%	66%	64%	63%	62%	60%	59%	57%
2,0%	71%	69%	67%	66%	**64%**	63%	61%	60%	59%
2,3%	72%	70%	69%	67%	66%	64%	63%	61%	60%
2,6%	74%	72%	70%	69%	67%	66%	64%	63%	61%
2,9%	75%	74%	72%	70%	69%	67%	65%	64%	62%
3,2%	77%	75%	74%	72%	70%	68%	67%	65%	64%
3,5%	79%	77%	75%	73%	72%	70%	68%	67%	65%

Financial Structure re-engineering

We estimated an optimal 7.24% WACC corresponding to a 0.27x D/E ratio. We assumed Ferrari will maintain the current capital structure in the future considering the little improvement of TP subsequent to the re-leveraging opportunity.

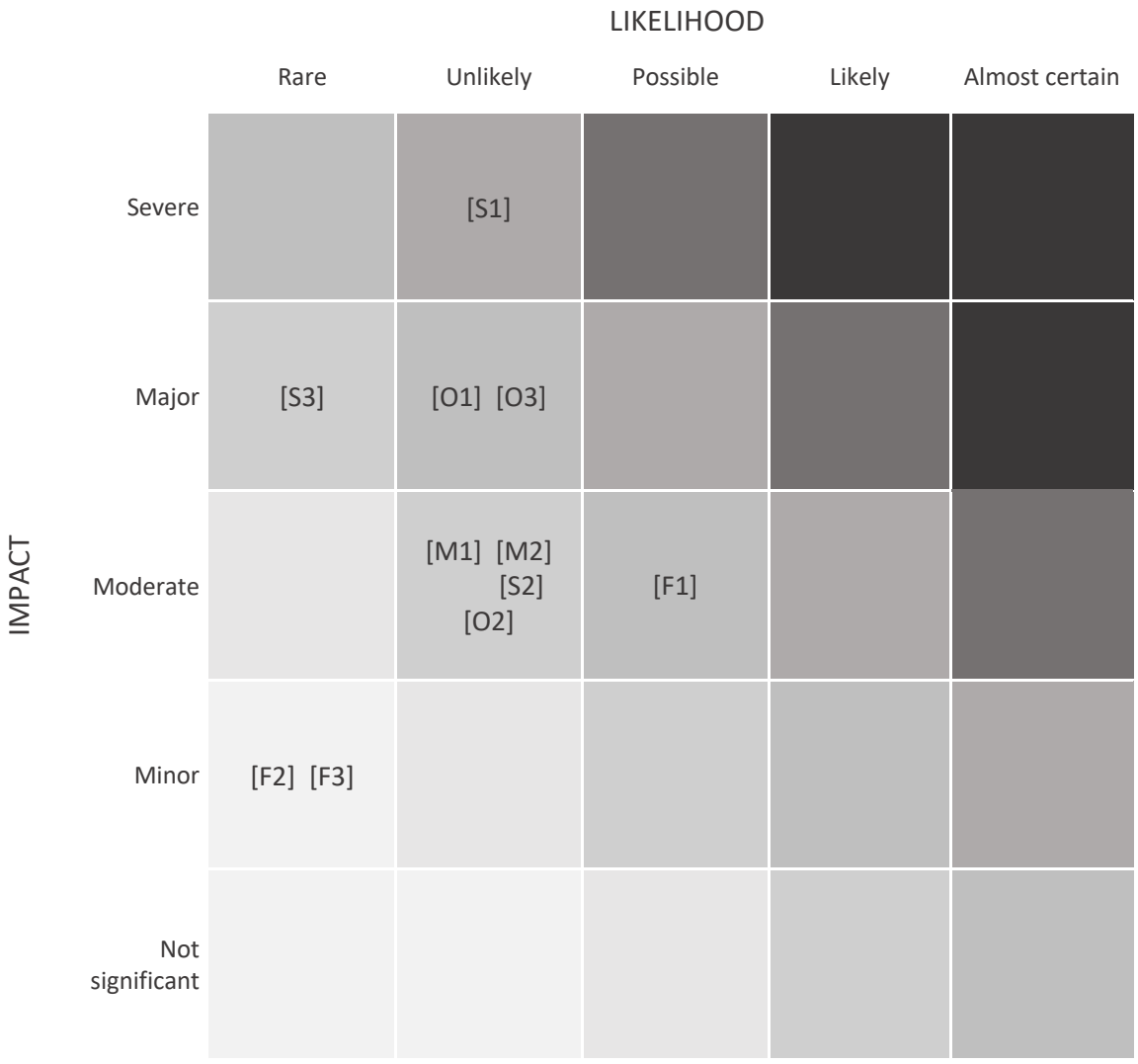
D/E	ICR	Risk Free	Spread (bps)	Rating	Tax Rate	Kd	Beta re-levered	Risk premium	Ke	WACC
7,20%	35,08	1,91%	63	Aaa/AAA	24%	0,03	0,97	0,06	0,08	7,39%
10,56%	16,88	1,91%	63	Aaa/AAA	24%	0,03	1,00	0,06	0,08	7,36%
13,93%	11,50	1,91%	63	Aaa/AAA	24%	0,03	1,02	0,06	0,08	7,32%
17,29%	8,72	1,91%	63	Aaa/AAA	24%	0,03	1,05	0,06	0,08	7,30%
20,66%	7,03	1,91%	78	Aa2/AA	24%	0,03	1,07	0,06	0,08	7,28%
24,02%	5,88	1,91%	98	A1/A+	24%	0,03	1,09	0,06	0,08	7,26%
27,39%	4,45	1,91%	108	A2/A	24%	0,03	1,12	0,06	0,09	**7,24%**
30,75%	3,77	1,91%	122	A3/A-	24%	0,03	1,14	0,06	0,09	7,28%
34,12%	3,21	1,91%	122	A3/A-	24%	0,03	1,16	0,06	0,09	7,30%
37,48%	2,89	1,91%	156	Baa2/BBB	24%	0,03	1,19	0,06	0,09	7,32%
40,84%	2,37	1,91%	200	Ba1/BB+	24%	0,04	1,21	0,06	0,09	7,40%
44,21%	1,93	1,91%	351	B1/B+	24%	0,05	1,23	0,06	0,09	7,75%
47,57%	1,29	1,91%	515	B3/B-	24%	0,07	1,26	0,06	0,09	8,16%
50,94%	0,92	1,91%	820	Caa/CCC	24%	0,10	1,28	0,06	0,10	8,98%
54,30%	0,60	1,91%	1134	C2/C	24%	0,13	1,31	0,06	0,10	9,88%
57,67%	0,43	1,91%	1134	C2/C	24%	0,13	1,33	0,06	0,10	9,98%





17. Investment Risks

Category		Risks	Appetite	Response Plans
Macro	[M1]	Regulatory	Zero tolerance	Total compliance with local and general laws and regulations.
	[M2]	Macro Environment and Consumer sentiment		Closely monitoring all market developments and continuously reviewing the countries in which Ferrari does business and their geo-political events.
Strategic	[S1]	Brand image	Zero tolerance	Selective licensees of the Ferrari brand, monitor and maximize residual values of Ferrari cars, selective franchising partners.
	[S2]	Generic competition	Moderate	Support residual values with the financing of pre-owned cars, focus on client relationships, including Maranello Experience, selected participation for new model launches and Ferrari clubs, close contact with dealers and clients programs, personalization services (Atelier and Tailor Made).
	[S3]	Distribution Network		Dealer score card, selective process of partership
Operational	[O1]	Manifacturing facilieties	Moderate	Investments in the last 15 years to reduce the effect of possible damage from earthquakes, insurance coverage.
	[O2]	Raw materials and suppliers relationship		Identifying alternative suppliers, high quality reputable suppliers assessed through the "Supplier Risk Committee".
	[O3]	Management and retention of talent		Preparing current successful employees for future key positions, improving talent development program for key resources, succession and retention plans, training.
Financials	[F1]	Forex	Low	Foreign exchange hedging instruments in line with the Company's risk management policy.
	[F2]	Credit		Credit approval policies applied to dealers and retail clients. Personal guarantees and security of the vehicle.
	[F3]	Solvency and Capital structure		Pursuing the current strategy aimed to keep high solvency rates and solid capital structure



18. Corporate Governance

Board of Directors							
Member	**Office**	**Gender**	**Indipendent**	**Audit Committee**	**Governance and Sustainability Committee**	**Compensation Committee**	**Attendance**
John Elkann	*Chairman and Non-Executive Director*	Male			x	x	3/3
Louis C. Camilleri	*Chief Executive Officer and Executive Director*	Male				x	3/3
Piero Ferrari	*Vice Chairman and Non-Executive Director*	Male	x*		x	x	3/3
Sergio Duca	*Senior Non-Executive Director*	Male	x	x (Chairman)	x		3/3
Delphine Arnault	*Non-Executive Director*	Female	x				2/3
Giuseppina Capaldo	*Non-Executive Director*	Female	x	x			3/3
Eddy Cue	*Non-Executive Director*	Male	x		x	x	2/3
Lapo Elkann	*Non-Executive Director*	Male					2/3
Amedeo Felisa	*Non-Executive Director*	Male					3/3
Maria Patrizia Grieco	*Non-Executive Director*	Female	x	x			3/3
Adam Keswick	*Non-Executive Director*	Male	x				3/3
Elena Zambon	*Non-Executive Director*	Female	x			x	3/3

*Under NYSE Regulations

Code of Conduct	
Principles	**Categories**
Protecting our workforce	Mantaining a fair and secure workplace Ensuring health and safety
Conducting Business	Sustainably purchasing goods or services Transacting business legally Engaging in sustainable practices
Interacting with external parties	Avoiding conflict of interest Supporting comunities
Managing assets and information	Communicating effectively Protecting asset Mantaining appropriate records

Standard Ethics Italian Index

Ferrari belongs to the Standard Ethics Italian Index launched the on 1st of January 2014 by the independent rating agency "Standard Ethics". Standard Ethics Indices are a benchmark to measure, over time, the appreciation in financial markets of the principles and guidelines from the European Union, the OECD and the United Nations on sustainability, corporate governance and corporate social responsibility issues. The 40 major Italian listed companies, weighting them according to the Standard Ethics Rating (SER) sustainability score and rebalanced monthly, compose it. The index wants to offer an alternative to benchmark indices that are typically weighted by float-adjusted market capitalisation. On 1st October 2018 the Agency upgraded its rating of Ferrari from E to E+ and still today the grade is the same. The press release declared:

"The new business plan takes into account some environmental strategies and, during the two-year period 2016-2018, improvements have been registered in corporate governance documents (such as the Code of Ethics) and in extra-financial reporting. The new composition of the Board of Directors gives the Italian luxury sports car manufacturer a more independent structure and a new CEO exclusively dedicated to the management of Ferrari, significantly improving governance and reducing the number of cross directorship. The long-term view on Ferrari's Rating is positive"

Even though the score remains quite low, in our opinion this upgrade represents an added value for the Company, and anticipate potentials for a better compliance in the future.

EEE	EEE-	EE+	EE	EE-	E+	E	E-	F
Full	Excellent	Very strong	Strong	Adequate	Non-compliant	Low	Very Low	Lowest level

Investment Grade	Lower Investment Grade	Non-investment Grade

19. Corporate Social Responsibility

Whistleblowing Reporting			
2018			
Category	**Reports received**	**Total Reports closed***	**Reports in which a violation was confirmed**
Conducting business	13	13	6
Interacting with external parties	4	4	2
Managing assets and information	3	2	0
Protecting workforce	8	12	3
Total	**28**	**31**	**11**
*including 5WB received in 2017			
2017			
Category	**Reports received**	**Total Reports closed**	**Reports in which a violation was confirmed**
Conducting business	3	3	3
Interacting with external parties	6	6	2
Managing assets and information	2	1	0
Protecting workforce	11	8	1
Total	**22**	**18**	**6**

Employees				
	2015	**2016**	**2017**	**2018**
White Collar	1304	1407	1531	1691
Italy	*1143*	*1216*	*1358*	*1517*
Rest of the world	*161*	*191*	*173*	*174*
Blue Collar	1607	1751	1757	2050
Italy	*1604*	*1748*	*1754*	*2047*
Rest of the world	*3*	*3*	*3*	*3*
Executives	87	90	92	110
Total	**2998**	**3248**	**3380**	**3851**
Shipments	7664	8014	8398	9251
Average number of employees	2954	3115	3336	3651

Percentage of Employees per Employee category by gender									
Employment category	**2016**			**2017**			**2018**		
	Male	*Female*	***Total***	*Male*	*Female*	***Total***	*Male*	*Female*	***Total***
Senior Mangers	94,5%	5,5%	**90**	93,50%	6,50%	**92**	90,0%	10,0%	**110**
Middle Managers and Professionals	91,3%	8,7%	**392**	90,50%	9,50%	**422**	85,9%	14,1%	**545**
White Collars	79,8%	20,2%	**1015**	78,60%	21,40%	**1109**	78,3%	21,7%	**1146**
Workers	92,6%	7,4%	**1751**	92,50%	7,50%	**1757**	92,0%	8,0%	**2050**
Total	88,5%	11,5%	**3248**	87,70%	12,30%	**3380**	87,0%	13,0%	**3851**

Disclosures:

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