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Ferrari. NV

Italy | RACE.MI| Automotive & Luxury Industry

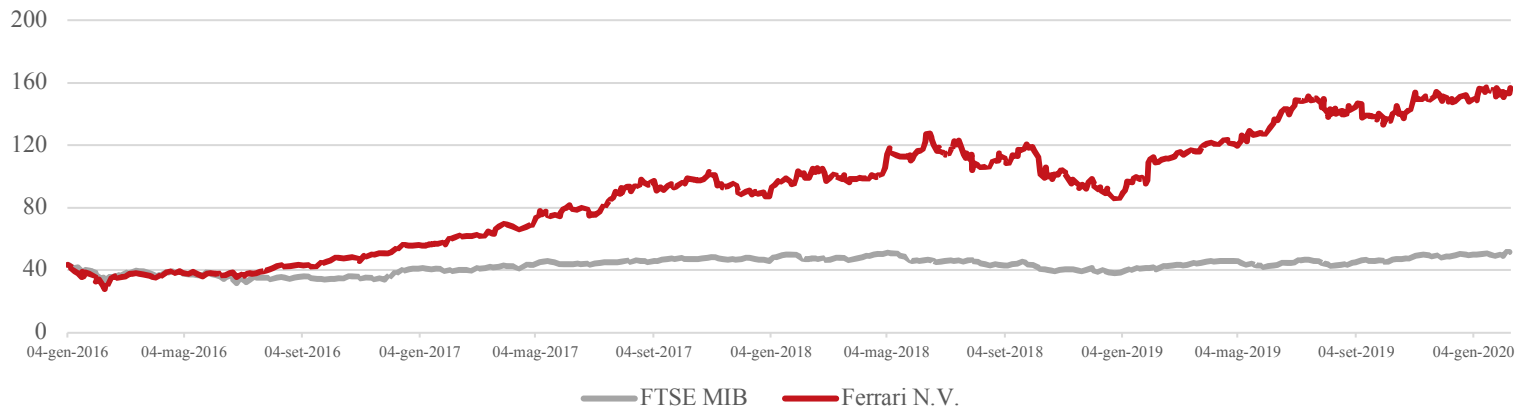
Highlights

Initial Coverage | 13th February 2018

SELL

Price: €158.65
Target price: €138.24
Downside: -12.9%
Dividend Yield: 0.6%
Listed on New York and Italian Stock Exchange
Ticker: RACE.MI

(€M)	Dec '20	Dec '21	Dec '22	Dec '23	Dec '24	Dec '25	Dec '26	Dec '27	Dec '28
Sales	**4,118**	**4,568**	**5,012**	**5,434**	**5,821**	**6,175**	**6,551**	**6,949**	**7,371**
EBITDA	**1,315**	**1,502**	**1,671**	**1,809**	**1,964**	**2,080**	**2,269**	**2,404**	**2,546**
margin	32%	33%	33%	33%	34%	34%	35%	35%	35%
EBIT	**938**	**1,085**	**1,210**	**1,314**	**1,433**	**1,511**	**1,670**	**1,773**	**1,883**
margin	23%	24%	24%	24%	25%	24%	25%	26%	26%
Net Profit	**729**	**841**	**936**	**1,017**	**1,108**	**1,168**	**1,288**	**1,367**	**1,452**
margin	18%	18%	19%	19%	19%	19%	20%	20%	20%



Market Data

Main Shareholders

EXOR N.V.	23.7%
MR. Ferrari	10.1%
Baillie Gifford & Co.	7.2%
T. Rowe Price Association Inc.	4.6%
The Vanguard Group	2.0%

Market Cap (€M)	**29,488**
Shares outstanding (M)	**185.87**
Free float	**61.7%**

Stock Data

52w H/L	**€159.6/€108.35**
Avg daily vol (3 Mo)	**427,018.4**

Key financials

	2020E	2021E	2022E
EPS	4.08	4.66	5.17
DPS	1.16	1.29	1.55
P/B	14.4	11.5	8.8
ROE	37.7%	34.4%	29.1%

Source: Factset, TR Eikon

We initiate our coverage of Ferrari N.V. (RACE.MI) with a **SELL** recommendation, assessing a €138.24 target price delivering a downside of 12,9% (considering 13th February closing price). We believe the market is overvaluing Ferrari. Ferrari is a solid company with stable growth but is exposed to certain considerable relevant risks, that will impact its potential of future growth.

Unique species

Ferrari has exhibited YoY sales growth of 10% in 2019, while throttling an exceptional EBITDA margin of 31% (against an average of 15% in automotive and luxury sector 24%). For the last four years, since the spin-off from FCA at end of 2015, Ferrari has EBIT YoY growth averaging 22%. They limit the number of cars sold to around 10,000 to remain an exclusive brand expanding their business model towards the luxury sector rather than automotive sector. This results in a peculiar positioning in continuum between the two sectors from which Ferrari emerges as a unique animal.

Uncertain Future

Even though the current position of the company appears to be solid, macroeconomic trends will hinder the future development of Ferrari. Shifts in automotive technology will lead to future uncertainty of its capability to convert from traditional to alternative engines and will decrease the perception of the Ferrari brand as technological Forerunner. Increasing environmental awareness of future generation will impact the customer base and image about Ferrari customers. The brand loyalty decreases in future generation and will reduce future profitability.

Target Price

Our target price of €138.24 is based on a multi-stage DCF valuation considering reduced future ROIC. The DCF Target price is then confirmed by conducting the multiples analysis based on EV/EBIT, EV/EBITDA and P/E of automotive and luxury sectors.

Investment Summary

1 Corporate
2 Market segments
4 Revenue generating divisions

The automotive industry experienced a growth until 2016 but the future is yet uncertain. The trend of switching to **electric cars**, **sustainability concerns**, the new **trade policies**, the increased competition and the recent rise of the pandemic risks have created quite an unstable situation for the future of the sector. On the other side, despite problematics such as **slowdown of economic growth** and the US protectionist and restrictive trade policies, the **luxury goods** sector performed **positively** during 2019. The domino effect of the increased proportion of generations Y and Z triggers **changes in consumer preferences**, thus requiring continuous adjustments to marketing strategies. The recent outbreak of the Coronavirus has affected both automotive and luxury industries. It may have a **double. whammy effect** in China, as the domestic spending is expected to decrease. However, Ferrari will be able to **geographically offset** potential drawbacks deriving from the situation in the region. The competitive environment of Ferrari is **unique**, sharing aspects of both automotive and luxury sectors. On the one hand, the rivalry with its competitors is high, even though not as harsh as the one that characterizes automotive markets. On the other hand, despite a **consolidated brand image**, a **potential threat** might be posed by **Tesla**. Regarding **potential substitutes**, Ferrari, representing a status symbol, cannot be replaced by other means of transport (as it instead happens to normal cars), but can be substituted by other luxury products and services.

Relevant Investment Risks

Some of the main risks the company might face concern (i) the **trends** in automotive and luxury industry, (ii) the **US-Europe relationship** especially after the restrictive trade policies approved by the Trump administration, (iii) **Italian political instability** that could negatively affect Ferrari since its production facilities are located in Italy and also (iv) the **Sustainability concerns** that are not just important issues to be dealt with but are turning also in social trends. There are also the **financial risks** such as the fluctuation of interest and forex rates, but Ferrari has adopted various policies in order to hedge them. In the short term an important risk is also the **Coronavirus,** which may cause a decrease in the sales from the region of China, Hong Kong and Taiwan. The new tendency of creating electric cars poses a potential risk and since the future of this technology is uncertain, it can both penalize or pay off handsomely to the pioneers.

Financial Data

Based on our financial analysis concerning Ferrari, we estimate a steady increase in the sales and in profitability driven by a continuous growth regarding the luxury industry. We expect **sales** to increase from €3,766m in 2019 to €7,371m in 2028, with **Gross Margin** equal to 64%. Ferrari's **EBIT** will increase to €1,882m in 2028, with **EBIT margin** corresponding to 25.5%. We predict a continuing free cash flow generation, foreseeing €1,220m available in 2028, and an increase in **EBITDA** to €2,472m in 2028. Net Income from continuing operations will grow from €699m in 2019 to €1,304m in 2028.

Valuation Target Price

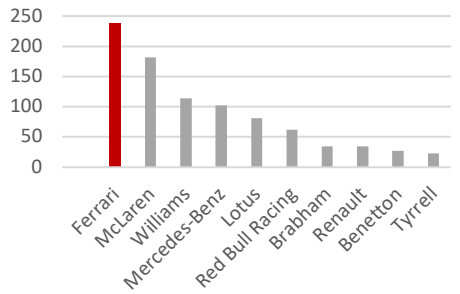
We foresee a target price of €138.24, leaving a downside of 12.9% on the 13th February 2020 closing price resulting in a Sell recommendation on the Ferrari N.V. share. We derived the target price from an organic business valuation through a three stage DCF valuation which is based on ROIC predictions. The Terminal value was computed as perpetuity growth with a growth rate of 2.5% applying it to the 2038 FCFF. We further conducted a multiple analysis using EV/EBIT, EV/EBITDA and P/E multiples of selected peers comparable to Ferrari's business model. The resulting mean of €120.14 confirms our recommendation to sell.

Business description

Company Introduction

Ferrari is one of the biggest **luxury car producers** worldwide. The prancing horse is not just a car, but it is a symbol of excellence and exclusivity. One unique characteristic of this company is its origin that is inextricably linked to its founder's life story.
It was founded in 1929 by **Enzo Ferrari** in Modena, an ancient Town in the Emilia-Romagna Region of northern Italy. It first was known with the name "Scuderia Ferrari" and functioned as the racing division for **Alfa Romeo**. In 1939 Ferrari left Alfa Romeo under the provision to not use the name Ferrari in association with races or racing cars for at least four years. Therefore, Enzo Ferrari changed the name to "Auto Avio Costruzioni" and started producing machine tools and aircraft accessories. After the war, in 1947 it produced its first car under the Ferrari marque, named "125 S". During the 50s Ferrari managed to win several titles in important **motor racing events**, thus establishing a worldwide known brand and tripling their sales up to 1960. In 1968 the "Scuderia Ferrari" managed to sign a **sponsorship** contract with **SHELL** that continues to this day. In 1969 Ferrari sold a 50% stake to Fiat in order to develop the industrial side of the business. In the following years Ferrari started to struggle in Formula 1 but sales still grew. In 1988 Enzo Ferrari passed away and Fiat took another 40% stake in Ferrari, while remaining 10% stayed in the hands of Enzo Ferrari's son, Piero Ferrari. Starting from 2000 until 2008 Ferrari managed to win **13 World titles**, six Driver titles and seven constructor titles. Furthermore, their new branding policy resulted in the **first Ferrari Store**

F1 manufactures by number of wins (2019)



Source: motorsport-total.com

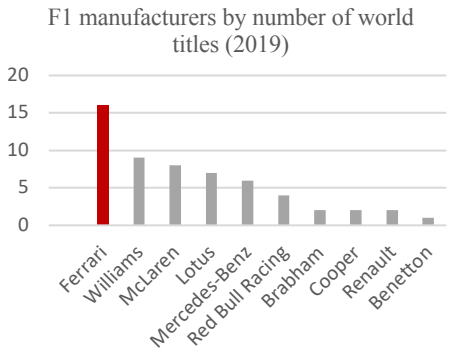
in Maranello followed by another 29 openings worldwide. Starting from 2010 Ferrari began to expand rapidly by investing in emerging markets such as the Middle East, China, Japan and the rest of Far East. In **2015** after Fiat merged with Chrysler, they spun Ferrari off offering 10% of its shares to the public at the New York stock exchange. From 2015 onwards, Ferrari remains one of the most successful luxury goods brands and is rarely considered as a pure car manufacturer. The business of Ferrari consists of four units: car production, racing division, engine production, sponsorship & brand activities.

Car production. Enzo Ferrari used to repeat: "The best Ferrari ever built is the next one". With this philosophy in mind, Ferrari operates its day to day activities, trying to implement in its cars the latest technologies and continuously innovating in order to produce the best performing models. The innovation starts from vehicles competing in the Formula 1 Championship, where, due to competition, Ferrari pushes its abilities to the limit. The same technologies are then applied to road cars. Until today they have mostly produced sport cars, with the addition of few models aimed at attracting car collectors. For 2021, the company has planned to start the production of the **Purosangue**, their first SUV. In addition, they had planned by 2022 to introduce **15 new car models**, 5 of which were already presented. Furthermore, they also plan to have by 2022, 60% of the models as **hybrid**. However, a **pure electric Ferrari** car is expected only after 2025.

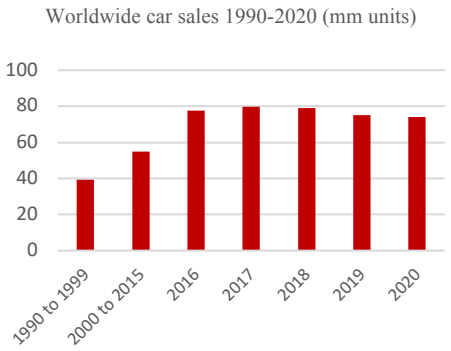
Racing division. The popularity of Ferrari is due to its successful participation in F1 competition. Indeed, the company was created as the racing division of Alfa Romeo and, in a short time span, it overshadowed its own mother company. It is the racing team with the **highest number of wins** and the **highest number of titles** in history and, despite its recent disappointing performances, its fan base is solid and devoted.

Engine production. Given the decision of Maserati to focus on electric vehicles, the contract between Ferrari and **Maserati** has not been renewed and is expected to end in 2022. The contract between the two firms was initially signed when they both were part of FCA. After 2022, Ferrari will not offer engines to any other auto manufacturer, and it will focus solely on its own cars. Despite Ferrari giving up a non-marginal business the company believes that this action will free human capital that will be employed in other business areas.

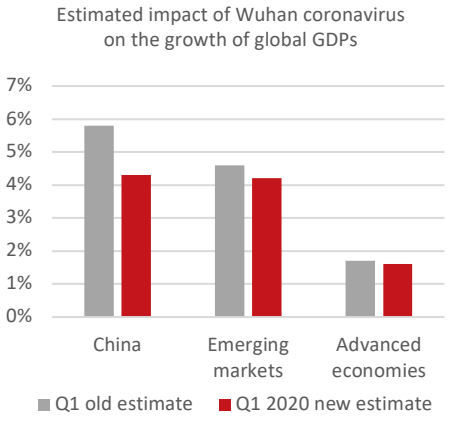
Sponsorship & Brand. With Ferrari focusing on sponsorships, brand deals and new experiences for costumers (such as the Ferrari World Abu Dhabi), brand activities are expected to grow up to **10% of Total Revenues** in the next 7 to 10 years. The strength of its brand allows Ferrari to market a range of products that aren't necessarily the primary goods sold by the company, but still make up a relevant part of revenues Ferrari the strategy of inclusivity and exclusivity large fan base through merchandising and exclusivity only a small number of customers can afford their luxury sport cars Thanks to this strategy Ferrari was recently awarded as the **world's strongest brand** for by Brand Finance Global 500 (source: Brande Finance Global 500).



Source: motorsport-total.com



Source: ScotiaBank – Figure 3



Source: Deutsche Bank – Figure 4

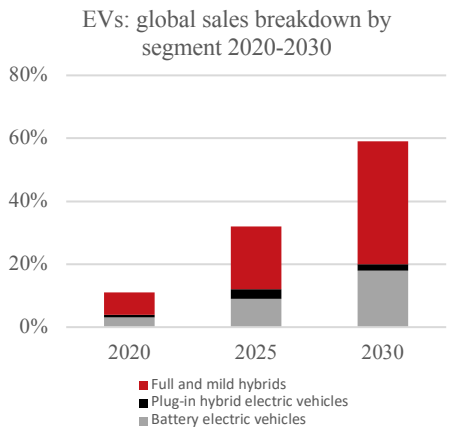
Industry Overview and Competitive Positioning

Industry Overview

Ferrari is more than just a car manufacturer. Owning a Ferrari is a lifestyle decision, a symbol of exclusivity, wealth and luxury. Therefore, we have divided its operating industry sectors into two branches: the automotive and luxury industry.

Automotive Industry

After a sustained period of growth during the 1990 to 2016, the automotive industry is not expected to grow in 2020. Over the last years, the number of cars sold worldwide averaged around **78 million units** annually (Source: ScotiaBank, Fig. 3). For our analysis we identified as peers those car manufacturers that share similar characteristics when it comes to the performances of their products, the area they operate in, and the price range at which their cars are sold. These are Volkswagen Group, Tesla, Daimler, and BWM. As **macroeconomics factors** shape and determine market demand, some relevant trends that could impact the automotive industry include:



Source: JPMorgan – Figure 5

Source: Bain & Co – Figure 6

Source: McKinsey – Figure 7

1.**GDP growth**. World GDP is expected to grow by roughly **3.4% in 2020** (Source: IMF) driven, mostly, by an expected 4.6% GDP growth in emerging markets, with China (which accounted for 9% sales of Ferrari in FY2018) growing **5.8%**. On the other hand, advanced economies are expected to grow by a mere 1.7%. However, the recent pandemic outbreak in China **lowered the Q1 estimates**, hence setting back global forecasts by 0.2%. Therefore, China's Q1 GDP growth is expected to be 1.5% lower (source: Deutsche Bank, Chart 4).

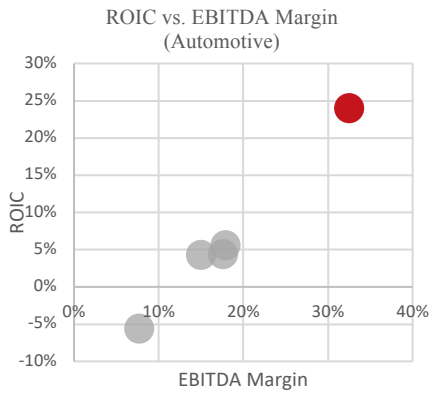
2.**Rising economic uncertainties**. The continued uncertainty caused by **Brexit** and **trade tensions** between US, EU, and China are likely to keep affecting the wider automotive sector. However, it is unlikely material for Ferrari given the more rigid elasticity of demand that characterizes these types of goods.

3.**Environmental concerns**. In the last years there has been a marked shift of consumers' preferences towards eco-friendlier goods. Such impact has been particularly relevant in the automotive industry. **New CO2 emission standards** and increasing fines could represent a challenge for high-performance car manufacturers.

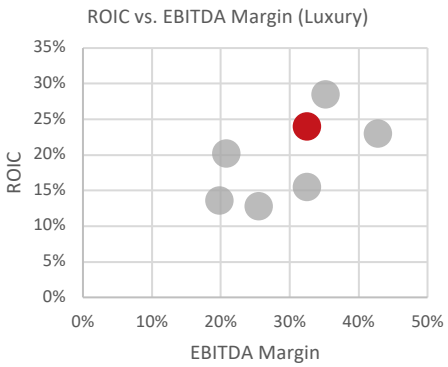
4.**Electrification**. More car manufactures are switching from combustion engines to electric ones. It is expected that by 2030 EVs and HEVs will account for almost 70% of all vehicle sales (source: JPMorgan, Chart 5). Within the aggregate automotive industry, companies have different business models and end products. Therefore, not all of them are influenced in the same way by macroeconomic cycles and Ferrari is an example of a less cyclical business. The **recent outbreak** of the Coronavirus has obliged many car manufacturers, especially those who have invested heavily in China such as VW, Daimler, GM etc. to close their facilities in the region. The lock down has severed their global supply chain. This sector is particularly exposed to this risk since the virus originated in Wuhan, one of China's "car manufacturing cities".

Luxury Industry

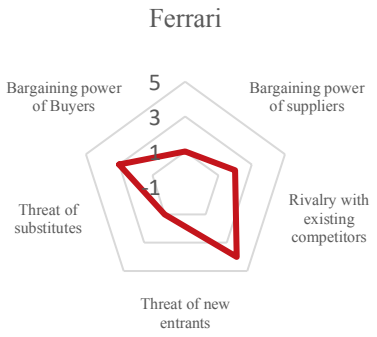
Ferrari's peers in the luxury industry are well-known companies like LVMH, Kering, Burberry, Hermes, Moncler and Richemont. In the last years, the luxury industry has experienced **considerable changes** in terms of **customer segments and priorities**, **technological advances** and growing importance of new emerging markets. As shown in Chart 6, there has been a continuous growth from 1996 to 2009, when it decreased due to the financial crisis but then it quickly resumed reaching an annual YoY CAGR of 5% in 2010-2019. Concerning the changes in customer segments, luxury brands have already started to build long-term relationships with **Generations Z and Y**, the clients of tomorrow. In 2018 they accounted for almost **1/3 of sales of luxury goods in the world** and this share is expected to grow further in the future. However, this expansion poses a challenge to luxury brands related to consumer preferences that now tend to be more individualized, highly differentiated and less loyal to brands, thus requiring continuous adjustments to marketing strategies. Due to the rapid evolvement of social media platforms, many luxury brands have started to create their social media strategies, collaborating with influencers and bloggers, who help promote the brand. In addition, luxury purchases are also affected by **sustainability concerns** (See Appendix 3). Another indicator signaling changes within the industry is the **increased participation of customers from Asia**, especially mainland China. Since 2000, the number of Chinese consumers has grown faster than that of any other region and today, they **lead the consumption of luxury goods** both in Asia and abroad (Chart 7). A useful variable to assess the future of the luxury market is "global wealth". According to the 2019 global wealth report from Credit Suisse, **global wealth** today is 70% higher than a decade ago and it is expected to further increase over the next five years, partially thanks to emerging economies like China. This is evidenced also by **a decreasing Gini index** (See Appendix 18), hence meaning that the global wealth gaps have narrowed over the last decade. Recently, the sector has suffered a **big hit** with the **spread of the Coronavirus** in China. As a result, the industry's conglomerates such as LVMH, Kering and Richemont, but also brands like Hermès and Burberry, are **particularly exposed** to a drop-off in Chinese demand. By far, shares in LVMH are down 4%, Kering is down 8% and Burberry dropped 9%. Although it is hard to foresee the immediate impact of the virus in the luxury sector, driven by past data related to the SARS virus of 2003, RBC analysts estimate that a **10% drop in Chinese consumption** in the first half of the year would translate into a **2% reduction in luxury companies'** revenues, and a hit to annual profits of up to 4 %.



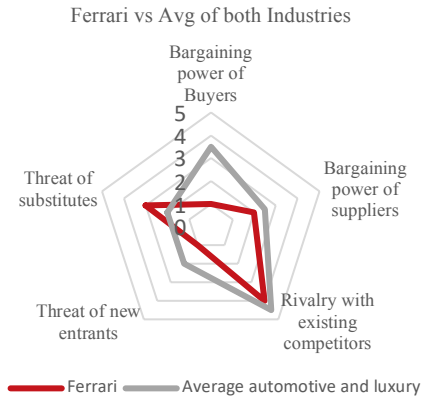
Source: Companies data, Team elaboration – Figure 8



Source: Companies data, Team elaboration – Figure 9



Source: Team elaboration – Figure 10



Source: Team elaboration – Figure 11

Competitive financial analysis

Using 2018 as a reference year, Ferrari is the most profitable player among its competitors in the automotive industry (Fig. 8) in terms of **EBITDA margin** (32.5%) while it ranks 2nd in the luxury industry (Fig. 9) behind Moncler. This is due to Ferrari's ability to set a higher mark-up thanks to its loyal customer base and leading brand image. Ferrari ranks 1st in terms of **ROIC** (24% in 2018) that is four times higher than that of its closest automotive peer (BMW) and above average in the luxury sector. Additionally, Ferrari ranks 2nd when it comes to **cash-to-cash cycle** with 66 days. Furthermore, despite the minimal revenue growth (0.1% in 2018), the company has had an exceptional year generating profitability for shareholders with a **ROE** of 73.80% in 2018. Ferrari also records a more than favorable **quick ratio** (1.73 in 2018) when compared to its peers showing good ability at meeting short-term liabilities with its most liquid assets. Finally, the **D/E ratio** is lower than the average of the automotive industry and the highest in the luxury industry. This is reasonable given the manufacturing nature of the company.

Porter's 5 Forces analysis

From our general Porter's 5 Forces analysis of both sectors, automotive and luxury (See Appendix 1), we concluded that Ferrari shared **characteristics of both sectors**. Therefore, it is better to place Ferrari somewhere in the continuum between automotive and luxury. As defined by its top management the brand is a ***"unique animal"***. Therefore, the simple average of the automotive and luxury competitive environment, showed in the graph below, would be misleading too. Ferrari shares aspects of the both sectors and is not simply in the middle of them. The 5 forces resulting from this complex competitive environment are the following:

Bargaining power of Buyers: 1. The relationship Ferrari has with its customers is even more stable than the ones observable in the luxury environment. Indeed, Ferrari is one of the only companies in the world to use a **waiting list** for his final clients (another one being Hermes, a luxury company taken as a peer in this analysis). This makes its price strategy nearer to luxury market than to automotive one. **Buyers' bargaining power** is nearly absent.

Bargaining power of suppliers: 2. The volume of the orders Ferrari makes to its suppliers is surely more important than the orders that can be observed in most luxury firms, but still not comparable to the ones of the automotive sector. Therefore, the power of suppliers is limited.

Rivalry with existing competitors: 4 Firms producing sportive cars, even though less numerous than the ones populating the whole automotive sector, represent a **major threat** in Ferrari's environment. The continuous research for better performances and more captivating designs is a common trait shared by all the competitors of this field, Ferrari included, and makes it challenging.

Threat of new entrants: 1. While for low and medium range cars the main obstacle for new entrants are economies of scale, with high tier cars the ***mission impossible*** for newcomers is represented by the strength of the already existing brands. Regarding this feature, Ferrari resembles more a luxury brand than an automotive one and the threat of new entrants is very low. An exception to this situation is Tesla that, thanks to its eco-sustainability, was able to build a strong luxury brand in a short period of time. However, we do believe this success is difficult to be repeated for other firms entering the luxury sector.

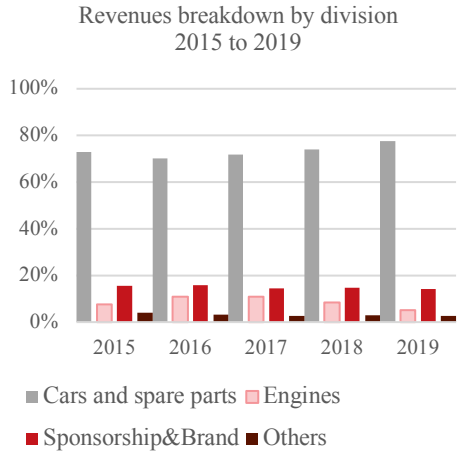
Threat of substitutes: 3. Being a sportive car as well as a luxury item, **substitutes** are not irrelevant for Ferrari. While new entrants in luxury cars sector are to be excluded, substitutes may come from new luxury products and from new exclusive services. As reported by The Economist, producers of very expensive cars identify themselves as luxury-goods' firms that try to present their products as more exclusive as possible, and Ferrari is no exception. High net worth individuals buy these cars for entertainment, not for transport, and see them as a **status symbol** that displays their wealth. Therefore, threats to Ferrari's performance come not only from competition among luxury car manufactures, but also from external substitutes offering luxury products and services.

Financial Analysis

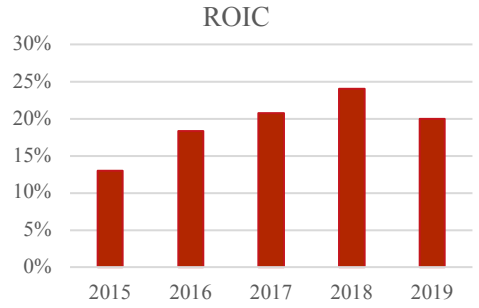
The historical analysis starts from 2015, when Ferrari's spun off from Fiat Spa, took place and we carried out a 10-year period future analysis of the years 2019-2028.

Historical analysis

After the spin-off in 2015 Ferrari managed to have a **high increase in revenues** (7.71% 2015-2019 revenues CARG) and **outstanding margins** (24.36% EBIT 2019 margin). Most of the revenues come from the sale of cars and spare parts that account in average for 73% of total revenues. Around 15% comes from sponsorships and brand activities, circa 9% from the sale of engines, with major client Maserati and the rest comes from other activities. Furthermore, their **ROE is much higher** (73.8% ROE 2018) compared to an industry average of 11.9%. But not everything is perfect, their **debt to equity level was at 1.43** in 2018 compared to the industry average of 0.86, so there is still room for improvement.



Source: Team elaboration – Figure 12



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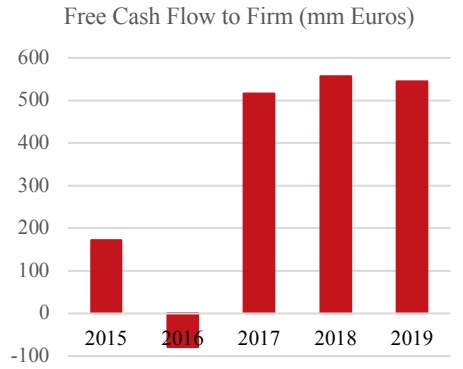
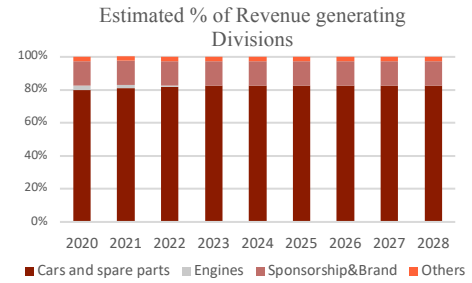


Source: Team elaboration – Figure 14



Source: Team elaboration – Figure 15

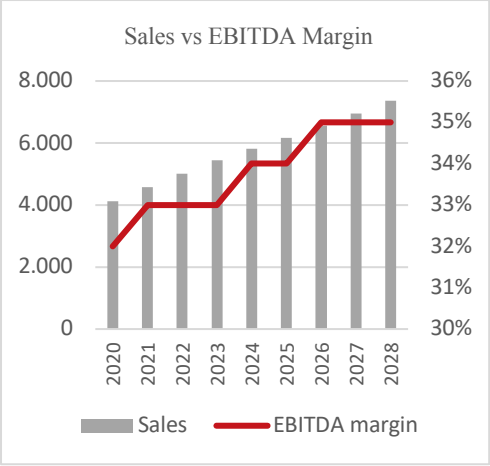
Margins & Returns: Ferrari's outstanding 24.36% **EBIT margin** in 2019, was supported by the ability of the management to boost sales by increasing **the average selling price** (2% CARG Selling Price 2015-2019) and to lower **COGS** to Sales (42.9% - 40.2% COGS to Sales 2015 – 2019). The EBIT Margin was at its lowest in 2015 (15.6% EBIT margin 2015) but quickly surpassed the 20% hurdle in 2017 (22.7% EBIT margin 2017) and resulted last year with nearly 25% margin (24.4% EBIT margin 2019). These increases were possible due to a **higher number of cars sol**d (7.644 - 10.131 cars from 2015-2019) and an increase in the average sales price per car (€271k – €293k from 2015-2019) as well as an **optimization in COGS** (42.9% - 40.2% COGS to Sales 2015–2019). Since 2015 Ferrari's **ROIC** was constantly growing from 15.5% in 2015 to 32.6% in 2018. In 2019 it went down to 25.6% due to the Italian "patent box" regime that led to a more favorable effective income tax rate of 2% in 2018. This increased again in 2019, hence leading to a decrease in Net Income for 2019. But Ferrari still adds value by maximizing its debt and equity capital. **Debt to equity** level of 1.4 in 2018 leaves room for improvement because after the spin-off Ferrari had to decrease it considerably. In 2016, the company had a debt to equity level of 5.6, which compared to the industry average of 0.9, is excessively high. They managed to lower it to 1.4 in 2018, however these numbers could be further reduced.

Future analysis

Revenue forecasting: In our analysis for the future years we assume initial growth rates for the four revenue generating divisions. For **car and spare parts**, we assume an initial growth rate of 8% starting from 2020. The assumptions relevant for the calculation of the growth rate have been divided into positive and negative (see Appendix 8). In order to reach the initial rate of 8%, we start with a base of 6.9% that is the average of the growth rates from 2015 to 2019. Despite the situation in **China, Hong Kong and Taiwan** seems prosperous with the share of revenues from the region reaching 8.3% of total revenues (see Appendix 19), the outbreak of the **Coronavirus** might bring potential risks to Ferrari. Even though in a recent interview, Mr. Camilleri stated that the company will be able to offset potential drawbacks geographically i.e. by giving preference to sales in regions with a stronger demand, we still expect the sales in the region to be affected. Another element we consider important is the **world's economy** in 2020. According to the Economist, the situation in the early part of the year seems gloomy with negative interest rates on overnight deposits and with decreased yields on ten-year bonds below short-term interest rates. Additionally, many financial analysts expect that the **trade war** between America and China may never be resolved, especially after the approval of the Currency rule that also affects the US-EU relationship. However, monetary policies such as economic stimulus by fiscal means (tax cuts and increased spending, funded by borrowing) could be a possible solution. Accounting also for the **increased competition** from other luxury brands such as Bentley, Mercedes-Maybach, Rolls Royce and McLaren a slight decrease in the growth rate can be expected. However, this potential decrease can be offset by other factors such as: the introduction of the 10 new models planned for the next 3 years, among which the SUV with which the company aims to conquer markets such as Russia and China. Furthermore, sales in Russia increased by 8% in the first three-quarters of 2019 and Ferrari seems to be prospering in Saudi Arabia. According to the company's general manager for the **Middle east**, the luxury car business in the region has always been good and outselling most other regions in proportion to its population size, advantaged also by the abundance of cheap fuel. So, we expect that these positive indicators will provide for a further increase in sales and will be able to offset the potential decrease from the above-mentioned situation. Taking all into consideration, we assume a growth rate of 8%, expected to continue until 2022. Then we expect it to phase out gradually, given that Mr. Camilleri announced a future decrease in the introduction of new models after 2022. As a result, for the next 4 years (2025-2028) we have a constant growth of 2%. We make these cautious calculations based on the company's goal to maintain **low volumes** in order to conserve the exclusivity of the brand. Therefore, in our analysis we put a limit to the number of cars sold. However, we assume that the price will increase by 2.5% until 2024 and after it by 4% per year.

Engines. According to the recent quarterly statements, the decrease in revenues in 2019 was mostly due to the **ending contract** with Maserati. In its statements of 2018, Ferrari mentioned that almost 70% of the daily production is for Maserati. Referring to Louis Camilleri's interviews during the announcement of 2019's first quarter's earnings call, it was confirmed that eventually, between 2021 and 2022, Ferrari will no longer supply engines to Maserati. Furthermore, it has no future plans in supplying engines to other automakers. So, we assume that revenues from engines will phase out until 2022, decreasing by 38% (more than in 2019) and then will go down to 0 (the contract term ends).

Sponsorship and brand activities. We assume that these revenues will remain constant at 14.5% of the total revenues for the next years, since the company has planned specific future brand activities in order to promote the brand image and offer to its clients a better Ferrari experience.



Source: Companies data, Team elaboration – Fig. 16

Other activities: Given that it is not specified what is included in Others, we assume it will be a constant percentage of sales (2,75%).

To conclude, our forecasted revenues might be slightly different from those made available by professional analysts. This is due to our cautious approach in determining the plausible growth rates. Afterall, it is more important to manage the downside, since the upside will take care of itself. Further quantitative explanations and all our assumptions can be found in the Appendix.

Margins & Returns: Due to the growth in Revenues, Ferrari's EBITDA is expected to grow at 8.61% 2020E-2028E CAGR, resulting in an **improvement in EBITDA margin** over the years (from 31.24% in 2019 to 34.54% in 2028E) and confirming one of the best values for a car-producing company (14.6% industry average in 2018 according to TR Eikon). Regarding COGS, Ferrari is going to reduce it as already done in the last years. Their cost efficiency increases the EBITDA margin. The introduction of an SUV as well as the introduction of electric cars by 2025 will increase **PP&E** expenses over the years. **ROIC** will set around 25% till 2022 and then it will increase to circa 30% till 2028 because of a higher average price per car which increases Net Income but will not increase debt or equity. Ferrari's ability to produce **generous FCFFs** will further accelerate in 2020E-2028E: FCFF will grow at 11.46% 2020E-2028E CAGR feeding Ferraris liquidity. Ferrari will decrease their debt level and increase their Equity level following that the **debt to equity ratio** will decrease over the years and will reach industry average of 0.86 in 2024E.

Valuation

in €M	
Sum Discounted FCF	11,918
Discounted TV	14,970
Terminal Value Growth	2.5%
Enterprise Value	26,887
Nebt Debt Capital	1,192
Minority Interest	5.1
Equity Value	25,695
Shares Outstanding (in million)	185.9
Price	138.24

Valuation

We foresee a target price of €138.24, exhibiting a downside of 12.86% on the 13th February closing price.

We derived the target price from an organic business valuation through a three stage DCF valuation. We further conducted a multiple analysis using EV/EBIT multiple of selected peers. The resulting mean of €120.14 supports our DCF outcome and the recommendation to sell.

DCF Method

Risk free rate	Rf	**0.10%**	30-year German Government Bond
Equity risk Premium	MP	**5.97%**	Equity Premium weighted on geographical exposure
Beta	**ß**	**0.83**	Beta 3Y weekly,
Cost of equity	Re		Capital Asset Pricing Model $Re = Rf + \beta * Mrp$
Cost of debt	Rd	**0.40%**	YTM outstanding Bond (2023)
Tax rate	Tc	**27.90%**	Combination of Italian IRAP and IRES

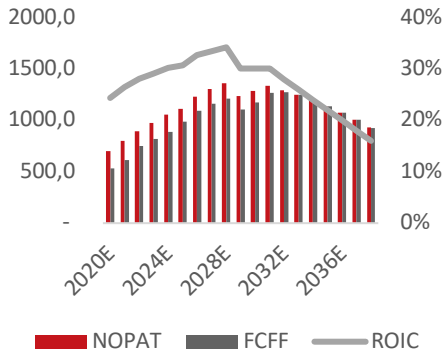
Complete explanation in the Appendix page 18

We calculated a year-end target price of **€138.24** in our DCF valuation. We evaluated the organic business creation through a three-stage phase that is aligned with the planned future business activities of Ferrari ending in a Terminal Value estimation.

Stage I: Considers the Forecasted FCFC resulting from the forecasted Financial statement of the Financial Analysis Part.

Stage II: We calculated a **fade out stage** of 10 years to prevent an overestimation of the Terminal Value. The ROIC will decrease due to higher competition and growing importance of alternative engine technology. The Depreciation and Amortization will converge with Capex over time.

Stage III: We calculated the **Terminal Value as a perpetuity with growth**, with a growth rate of **2.5%**, reflecting the current and future growth of Ultra Rich worldwide. Ferrari has repeatedly communicated that they want to focus on Ultra Rich Individuals in the future as their main customers. From 2018 to 2023 the number of Ultra Rich individuals is expected to increase by 4% on average worldwide (Source: Knight Frank Wealth report 2019). We estimated that the long-term growth of these individuals will decrease to 2.5%. The Terminal Value was calculated with the FCFF of 2038. (Sensitivity Analysis in Appendix 10).



Source: Team elaboration – Fig. 17

Multiples Analysis

We conducted a relative valuation analysis considering peers companies comparable to Ferrari mainly in terms of profit margins, geographic exposure and those targeting high net worth customers. Taking into consideration the dualistic nature of the company, we run two parallel multiple analyses: one for the automotive and another for luxury sector. Given the different structure of the sectors, we have concluded that the most appropriate one was EV/EBIT. The results we got confirm our target price, both for luxury and automotive peers. In automotive, we have selected Tesla Inc, Bayerische Motoren Werke AG, Daimler AG, Volkswagen AG, Fiat Chrysler Automobiles NV, Renault, Aston Martin Lagonda Global Holdings PLC (integrating the industry overview peers, the most comparable ones, with other companies still close to Ferrari features). Since the sample was relatively small, we decided

Company Name	EV / EBIT
Tesla Inc	67.07
Renault SA	20.28
Bayerische Motoren Werke AG	19.07
Aston Martin	61.44
Daimler AG	22.40
Volkswagen AG	13.36
Fiat Chrysler Automobiles NV	2.7
Average	**29.47**
Resulting price	**€139.00**

Source: Companies data, Team elaboration

Company Name	EV / EBIT
LVMH	18.46
Kering SA	15.97
Burberry Group PLC	18.90
Richemont SA	17.90
Hermes	30.63
Moncler SpA	18.65
EssilorLuxottica SA	24.48
Tod's	116.90
Hugo Boss	12.79
Salvatore Ferragamo	22.72
Average	**29.74**
Resulting price	**€140.31**

Source: Companies data, Team elaboration

Investment Risks
Fundamental shifts in industry sectors
Luxury goods demand volatility
Macroeconomic risks • Brexit • US-recent trade policies • Italian political instability
Risks from tax regulations
Pandemic risks
Financial Risks
exchange rates fluctuations
interest rates fluctuations
Liquidity Risk
Corporate Governance risk
Sustainability
Formula 1 Team's performance.
Credit Risk
Low volume strategy

to take the average EV/EBIT value of 29.47x, therefore the target price is equal to 139.00€. For the luxury industry, we have added to our peer's pool Essilor Luxottica, Tod's, Salvatore Ferragamo and Hugo Boss and obtained an average EV/EBIT of 29.74x resulting in a target price of €140.31. Furthermore, due to the role played by depreciation in the automotive industry but not in the luxury sector, we have decided to verify our results with two different multiples for the two group of peers. The most immediate being EV/EBITDA, particularly helpful to analyze results of automotive peers before depreciation. The results (see Appendix 15), even if heavily sensible to the use of average (Resulting price €112.49) rather than median (Resulting price €45.19), confirm the fact that Ferrari is overpriced if considered as part of the automotive sector.

Using EV/EBITDA also with luxury peers would be misleading: Ferrari, even being similar to luxury firms, still has plants and equipment used in the automotive industry. Therefore, ignoring its depreciation (as EV/EBITDA would do) is not appropriate. For this reason, to get a second target price also from luxury peers, we decided to use the P/E ratio. In this case (see Appendix 15), the difference between the value we got through average (Resulting price €166.29) and median (Resulting price €117.57) is less wide. While the upper side (i.e. the price obtained using average) barely reaches the actual market price, the downside (the price obtained using median) is far lower than the actual quotation. This is in line with our DCF analysis, highlighting that Ferrari is overvalued with respect to the peers we selected.

Investment Risks

Based on the structure and organization of Ferrari's business, we identified several potential risks. The main ones are presented below, while the rest is presented in the Appendix.

Investment risks

Risk of fundamental shifts in industry sectors:

This risk concerns the challenge in the company's **ability to identify** and recognize **new trends**. For example, in the luxury industry the **generational change** in future customers will require **new marketing and communication strategies**, such as a deeper presence on social media and other online platforms. Historically, Ferrari has shown its ability in recognizing and exploiting new consumer preferences by launching car models that seek **to attract all types of customer**s, not only pure sports cars' fans. For example, with the new Ferrari Roma, it targets also art collectors. A potential risk in the automotive industry might relate to the current trend of adopting electric engines. As highlighted by the company, **a fully electric model** will **not be ready until after 2025**. The reason for this is because the battery technology requires more development. Instead, for the foreseeable future, the company will focus on hybrid vehicles. On the one hand, this new trend of electric cars can advantage first movers but, on the other hand, it can give greater possibilities to fast followers, especially since the future success of such technology is not yet certain.

Luxury goods demand volatility:

The demand for these goods depends mostly **on macroeconomic factors** that affect consumer spending. Fig. 18 shows a good situation for the **global luxury car market** size that keeps on increasing from 2010. Referring to the data in 2019 Credit Suisse's Global Wealth Report, a decreasing Gini index (Appendix 16) shows that there is **less inequality** than in past years: people are therefore improving their wealth situation. 2019 was a record year for Ferrari concerning the number of cars sold, reaching more than 10,000. In addition, all its operating regions, except for the Americas, that decreased from 32.4% in 2018 to 28.6% in 2019 (See Appendix 19) experienced an increase in sales.

Macroeconomic risks: Brexit:

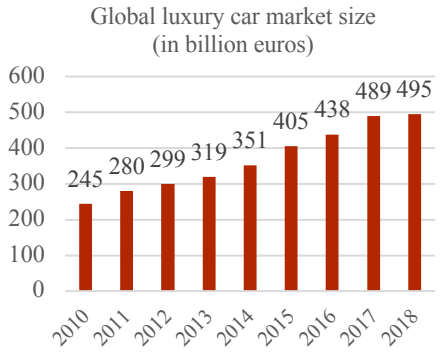
According to the company's PR team, Brexit will **not be a material issue** since UK only accounts for a small portion of revenues, most of which derive from the sale of spare parts. The only possible issue could concern the legal aspect and other regulatory complexities that are not yet known. As far as the financial aspects are concerned, as highlighted by the company, they will pass the burden to the customers by pricing at a higher point.

US-trade policies: **Trade tariffs & Currency Rule:**

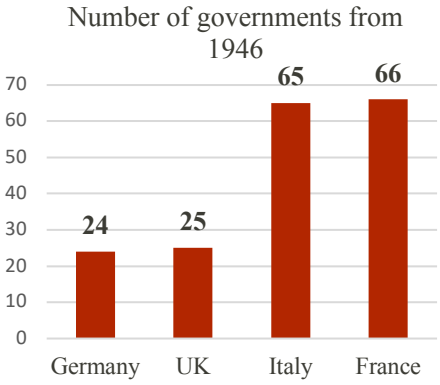
A possible issue may arise due **to protectionist US policies on trade and tariffs**, for example discouraging the import of cars produced abroad. If higher tariffs and duties will be levied by the US, initially Ferrari will only allocate part of the increase in pricing to customers and dealers and bear itself part of the cost, the precise amount of which is not yet known. A potential risk may also arise from the **Currency Rule**, adopted by the Trump administration. This is a tool to levy tariffs on countries that are believed to be undervaluing their currency, in order to make their exports cheaper and obtain a competitive advantage with respect to American-produced goods. Together with the imposed trade tariffs, **trade tensions** are expected to **increase** between the US and countries such as China, Japan and the EU (source: foreignpolicy.com).

Political instability in Italy:

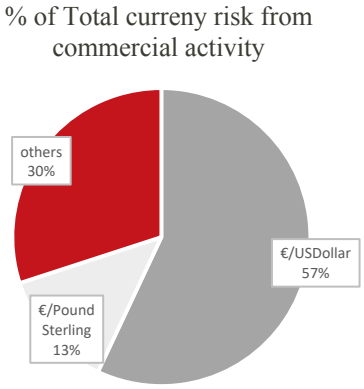
Despite its headquarters being in the Netherlands, its production facilities are in Italy, thus Ferrari is still affected by the **unstable Italian political situation** (Fig.19) that was described as a "flawed democracy" by the Economic Intelligence Unit. Due to this instability, the legal



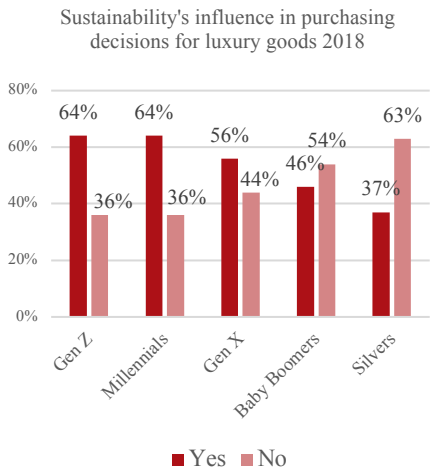
Source: Bain & Co—Fig. 18



Source: Team elaboration Fig. 19



Source: Team elaboration Fig. 20



Source: Bain & Co – Fig. 21

system is negatively affected with laws changing every time the government does. The recent approval of the "Decreto Dignità" has **reinforced employment policies** with respect to the previous one, thus making it **more difficult** and less flexible for companies to change its working force. The probability of Italy leaving the EU seems low, although the main political party's leader, Matteo Salvini, has an opposing approach towards EU's regulations, especially the ones concerning budget constraint and immigration policy.

Risk from tax regulations:

A very important fiscal instrument for Ferrari in Italy is the **"The Italian Patent Box"** regime. It provides **a tax relief** for a five-year period. According to data from the company's financial statements, the estimated tax benefit for the three-year period 2015-2017 is approximately equal to Euro 139 million. The risk, though, is related to the possibility of re-obtaining this benefit, that will depend on the tax legislation.

Pandemic risks:

Potential threat is the **Coronavirus** in China. Concerning the **automotive sector**, companies like Volkswagen, Daimler, GM, Renault etc. have **closed their factories** and others have begun pulling foreign staff from the production plants located in areas hit by virus. The automotive industry **is particularly exposed** to the threat, because the virus originated in Wuhan, where some of the biggest car manufacturing facilities are located. China is also the global manufacturing base for electric motors, transmissions, and other components for electric cars. Furthermore, in a recent interview, FIAT warned of the effects of the virus also in plants in Europe, due to **the critical situation of certain car parts' suppliers** in China. Even though shipments to Mainland China, Hong Kong and Taiwan were up by 20.3% with respect to 2018, still these account for only 8.25% of the total shipments for 2019. As Louis Camilleri declared in a recent interview, **Ferrari** will be able to **offset the drawbacks geographically** by speeding up deliveries in countries where the demand is stronger (source: Camilleri's interview, The Olympia). Concerning the **luxury sector**, Chinese consumers account for over a third of all global purchases. Even though, according to analysts, it is **difficult to foresee the impact** of the virus in this sector, it is likely that the demand for luxury cars in the region will be weakened soon.

Financial Risks:

Fluctuations in foreign currency exchange rates:

Ferrari's international activities expose the company to **foreign exchange risks**. The risks arise from the different geographical distribution of manufacturing activities with respect to commercial activities. As a result, cash inflows from sales are different from the ones from purchases or production activities. For example, Ferrari incurs a large portion of their capital and operating expenses in Euro while receiving most cash inflows in other currencies. Fig. 20 shows the situation of such risk. The company seeks to manage it through hedging activities. This requires hedging a portion of the projected cash flows from trading activities and orders acquired in progress in foreign currencies. The Group has also foreseen the possibility to use derivatives in order to manage exposures to foreign exchange rates.

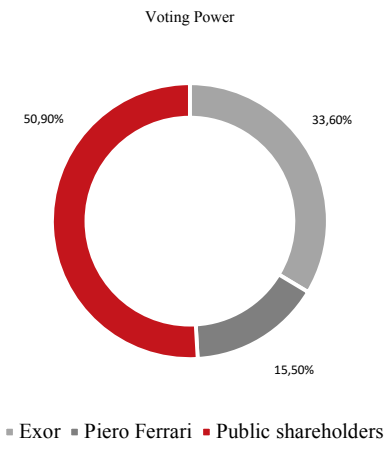
Fluctuations of the interest rates: Changes in market interest rates may have the effect of either increasing or decreasing the Group's net profit/(loss). Approximately 40 percent of the Group's total debt bears floating interest rates. Ferrari enters in interest rate caps as requested by certain of its securitization agreements. Interest expenses for 2018 account for 3% of Net profit. In comparison to past years these have come decreasing from 6.9% in 2016 and to 5.4% in 2017.

Corporate Governance risk: With **Ferrari and FCA** sharing **common shareholders and management** and due to their past and ongoing relationship, a possible governance risk could arise. More specifically, despite the spin-off, there are still overlaps among the directors and officers of Ferrari, FCA and Exor. Such individuals are John Elkann, Giuseppina Capaldo, Maria Grieco and many others. Conflicts of interest may arise when these individuals are faced with decisions that could have different implications for Ferrari and FCA or Ferrari-Exor.

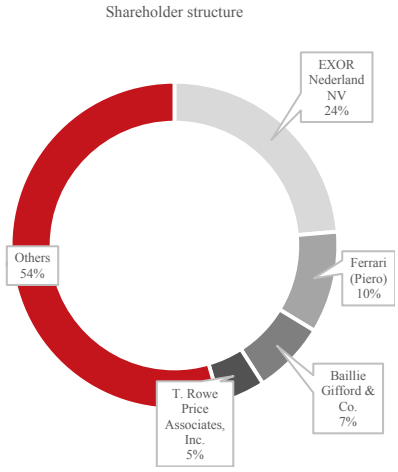
Finally, FCA creditors may hold Ferrari liable for certain FCA obligations. According to Dutch laws, Ferrari may continue to be liable for certain obligations of the demerging company present at the time of the demerger (information taken by Ferrari's financial statements 2018).

Sustainability: More and more customers are driven by sustainability concerns when making their purchases, especially among generation Z and Y (Figure 21). This can pose a threat to Ferrari, since its clients are wealthy people who aim to be part of the latest trends and Ferrari is not universally perceived as an environmentally friendly company. For example, a potential competitor might be Tesla, perceived as both luxurious and ecofriendly. However, according to its sustainability report, Ferrari managed to reduce the CO2 emissions of its European fleet by 27% from 2007 to 2012. It also plans to reduce emissions for its entire car range by 15% with respect to the levels in 2014, until 2020. According to an interview of the company's CEO, it is the company's goal to reach carbon neutrality. They believe this to be

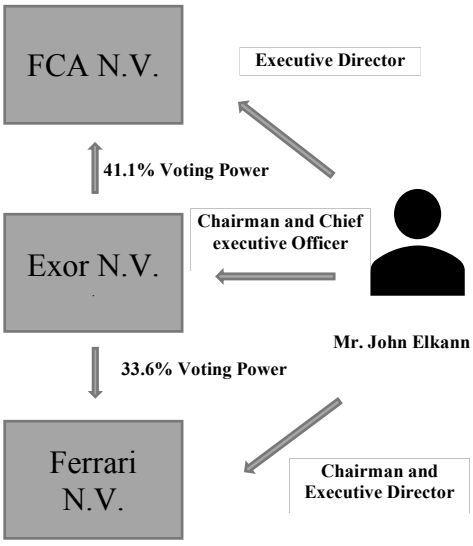
possible, given the small number of cars they produce. However, achieving carbon neutrality will require additional resources and innovation.



Source: Ferrari company information – Fig. 22



Source: Ferrari company information – Fig. 23



Corporate Governance

Governance:

Ferrari N.V. is a company organized under the laws of the Netherlands and qualifies as a foreign private issuer under the NYSE listing standards. Therefore, it must apply the **Dutch governance code** and certain **NYSE governance standards**. Ferrari applies the Dutch Governance Code and certain NYSE governance standards except for the following best practice provisions:

- **2.1.7 (iii)** more than one member of the supervisory board directly or indirectly holds more than 10% of the shares of Ferrari
- **2.2.4** Ferrari does not have a retirement schedule
- **4.1.8** the members of the of the board do not attend the general shareholder meeting
- **5.1.4** former executive Director Mr. Sergio Duca serves as Chairman of the Audit committee
- **5.1.4** Mr. John Elkann as executive Director serves in the compensation committee

(For detailed information see Appendix 21).

Conflict of interest:

The Chairman Mr. John Elkann is Chairman and Chief executive Officer of Exor N.V. which holds 23.7% of Ferraris shares and has 33.6% voting power in Ferrari as well as 29% of FCA shares and 41.1% voting power in FCA. Mr. John Elkann serves as Executive Director for FCA leading to **potential conflict of interest** between Ferrari, **Exor**, **FCA** and related companies. Mr. Piero Ferrari, who serves as Vice Chairman, has control over **COXA S.p.A** and **HPE s.r.l.**, which are currently in business relationships with Ferrari.

Ownership:

During the **spin-off** from FCA in 2015, **FCA**, **Mr. Piero Ferrari** and **FCA shareholders** holding special voting shares in FCA received special voting shares of Ferrari. Ferrari has established a **loyalty voting program**, which is aimed at rewarding shareholders, who have maintained their shares for a long time and is used to encourage a stable shareholder base. The program grants long term (3 years continuously) shareholders the option to receive special voting shares. However, it may reduce the liquidity of common share price. Furthermore, it may make it difficult for shareholders to acquire a controlling interest in Ferrari, change the company's management or strategy. On the other side, this is related to a legal issue, since the tax treatment of this program is unclear under US/Italian tax law.

Remuneration: Ferrari's remuneration package for Board members and senior management team members consists of a **fixed portion**, **short- and long-term incentives** as well as **non-monetary benefits**, which shall secure the alignment of investors, management and company interests. (see Appendix 22).

Human Capital:

The management of Ferrari is staffed with managers that have experience in the automotive sector as well as in international companies, but CEO Louis C. Camilleri has no previous experience in the automotive industry. There are still many connections to the FCA Group. The following positions are staffed with former FCA employees: Chief Financial Officer, Chief Design Officer, Chief Manufacturing Officer, General Counsel (see Appendix 21).

Social and Environmental responsibilities:

Concerning social responsibility, the company considers its **clients and employees** two of the main **pillars** of its business. One of its main objectives is to **maximize the experience of its clients** throughout their period of interaction with the company, so from first contact, through purchasing decision process, to waiting-time management and ownership. It further tries to nurture this relationship by organizing various events among which driving events aimed at allowing clients to experience the emotion of driving a Ferrari, and to foster client loyalty. On the other side, they have launched the "**Formula Benessere**" program, aimed at providing preventative healthcare to employees and their children in various medical areas as well as other additional fringe benefits. In addition, the company organizes training and talent development programs to protect and pass on the strategic know how of Ferrari. Concerning environmental responsibility, Ferrari encourages the adoption of sustainable practices also among its suppliers and dealers. In its Code of Conduct is foreseen that the selection of its suppliers is based also their adherence to social, ethical and environmental principles. Other **environmental efforts** concern maximizing efficiencies in the manufacturing processes and the **reduction of polluting emissions**. Since the cars are perceived as collectibles and the number of the ones demolished per year is scarce, most of the environmental impact comes from the production cycle. They foresee a **reduction by 15% of CO2** emissions by 2020 on their entire fleet through innovations in areas such as turbochargers, engine downsizing, transmission, electric steering and hybrid technologies. In the Appendix 23 we provide a graph showing the reduction in CO2 emissions, especially significant after 2015 thanks to the introduction of the start & stop technology.

APPENDIX

Table of Contents

INDUSTRY ANALYSIS & COMPETITIVE POSITIONING

1. Porter's 5 forces

Porter's 5 forces model is one of the best known and most used method to analyze the competitive environment and, in the case of Ferrari, it has given to our analysis a very useful insight on the real nature of the company. We first looked at Ferrari as a component of the automotive sector: the results of the intensity of the different forces, ordered on a scale from 1 (very low intensity) to 5 (very high intensity) were as follows:

Porter's 5 Forces	AUTOMOTIVE INDUSTRY
Bargaining power of Buyers: 5	The automotive sector appears to be particularly fragmented: with competition among the different car manufacturers very high, customers have a high bargaining power.
Bargaining power of suppliers: 2	Given the size of their orders, manufacturers have a consistent bargaining power over suppliers.
Rivalry with existing competitors: 5	In the automotive industry, both the price segments and the available models are numerous. Furthermore, the extras that can be added to personalize the final product are also abundant. This may lead to think that differentiation could reduce pressure on producers. On the contrary, competition is higher than ever, due to a decreasing trend in global sales of cars: several companies are facing problems of excess capacity and have already announced layoffs. Coronavirus epidemy poses an additional threat: China is one of the only flourishing markets for cars and the effects of the emergency on its economy may be disruptive, causing a shrink in sales also in this region and further increasing the competition in the sector.
Threat of new entrants: 2	The difficult situation of the sector discourages potential entrants and the economies of scale needed to be competitive is a big hurdle for them. New challenges related to the production of electric and autonomous cars may offer a chance to both established tech companies and to start-ups to enter the sector. Tesla is the best example of these new possible competitors, having reached and surpassed, in his relatively short history, the market capitalization of long-standing manufactures like Volkswagen.
Threat of substitutes: 3	In developed countries alternative means of transport are getting traction along the rise of environmental awareness. Plans to reduce the prices of public transportation are spreading through Europe and an important player as Deutsche Bahn has already started to act, reducing the price of tickets by 10%. However, this trend is absent in developing countries where the increasing wealth of population allow more people to buy a car making it a status symbol, still preferred over substitutes.

The preceding analysis and considerations are only partially relevant to Ferrari. Considering the price, the performance and exclusivity of its products, it is more appropriate to include the company within the luxury sector rather than the automotive industry. The Porter 5 forces model applied to the luxury sector gives the following scenario:

Porter's 5 Forces	LUXURY INDUSTRY
Bargaining power of Buyers: 2	The demand for luxury products is inelastic and buyers of luxury goods are price taker. As such, their bargaining power is low and companies in this industry can charge premium prices. The only leverage buyers have is to switch to other luxury items: still, this reaction to a price premium is less likely than in other sectors.
Bargaining power of suppliers: 3	Suppliers of luxury companies have a moderate power that largely depends on how the resources they supply contribute to the luxury content of the final product.
Rivalry with existing competitors: 4	The offer for luxury goods is differentiated and the firms in the industry need to invest huge amounts of capital in marketing and brand-awareness to present their products as exclusive status symbols. Competition is therefore intense but not played on the price level.
Threat of new entrants: 2	Existing brands can enjoy a strong brand recognition that is difficult to match for potential entrants in the short term
Threat of substitutes: 1	Luxury items represent status symbols for high net worth individuals and, to satisfy this need, they cannot be easily substituted with alternative or lower price items.

Bargaining power of Buyers: 2	The demand for luxury products is inelastic and buyers of luxury goods are price taker. As such, their bargaining power is low and companies in this industry can charge premium prices. The only leverage buyers have is to switch to other luxury items: still, this reaction to a price premium is less likely than in other sectors.
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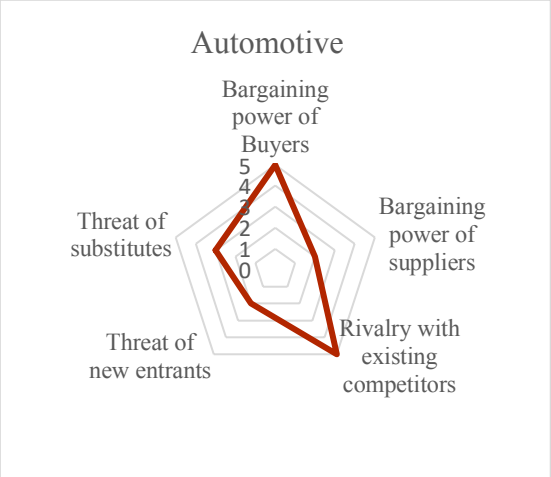
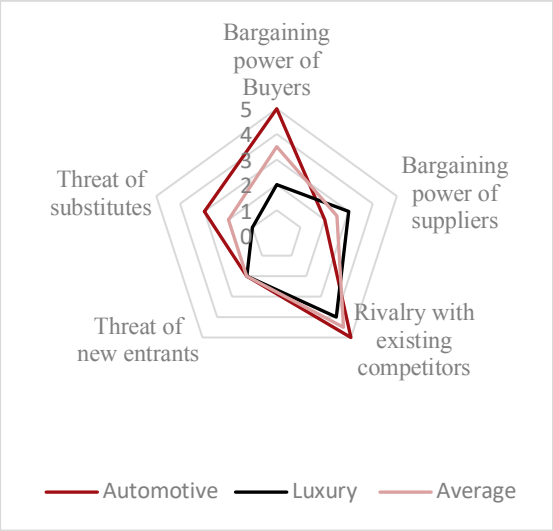




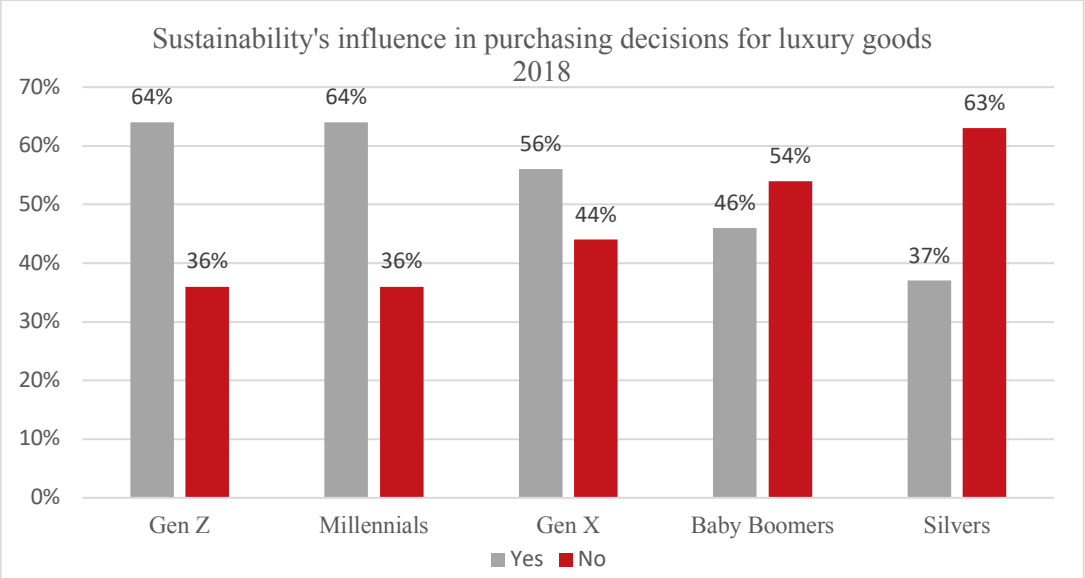
2. Competitive analysis

2018A	Revenues (€M)	Growth	EBITDA Margin	NET DEBT/EBITDA	D/E	ROIC	ROE	Quick Ratio	Cash Cycle (Days)
Ferrari N.V.	**3,420**	**0.1%**	**32.5%**	**1.03**	**1.43**	**24.00%**	**73.80%**	**1.73**	**66**
VW	235,849	2.7%	17.6%	3.02	1.63	4.40%	10.70%	0.82	157
Tesla	21,461	82.5%	7.7%	4.62	2.43	-5.60%	-21.30%	0.52	8
Daimler	167,362	2.0%	15.0%	4.5	2.24	4.30%	11.30%	0.94	173
BMW	97,480	-0.8%	17.9%	4.66	1.81	5.60%	12.90%	0.99	162

Mean		**14.3%**	**17.8%**	**3.33**	**1.59**	**6.8%**	**16.6%**	**1.02**	**103**
Median		**1.1%**	**16.9%**	**3.76**	**1.72**	**5.0%**	**11.6%**	**0.97**	**112**
Ferrari N.V.	**3,420**	**0.1%**	**32.5%**	**1.03**	**1.43**	**24.00%**	**73.80%**	**1.73**	**66**
LVMH	46,826	9.8%	25.5%	0.55	0.34	12.8%	20.7%	0.66	197
Kering	13,665	26.3%	32.5%	0.51	0.4	15.5%	24.1%	0.66	197
Burberry	2,720	0.5%	20.8%	-	0.03	20.2%	23.6%	1.79	132
Hermes	5,966	7.5%	42.8%	-	0.21	23.0%	26.7%	2.34	136
Moncler	1,420	19.0%	35.2%	-	0.09	28.5%	33.4%	1.94	-2
Richemont	13,989	27.0%	19.8%	-	0.42	13.6%	17.6%	1.76	408
Mean		**15.0%**	**29.9%**	**0.53**	**0.25**	**19.7%**	**24.4%**	**1.53**	**178**
Median		**14.4%**	**32.5%**	**0.53**	**0.28**	**20.2%**	**24.1%**	**1.78**	**166**

Source: TR Eikon

3. Sustainability's influence in purchases of luxury goods



Source: BCG

FINANCIAL ANALYSIS

4. Income statement reclassified

(€ M)	2015A	2016A	2017A	2018A	2019A
Sales	**2,854.36**	**3,105.08**	**3,416.89**	**3,420.32**	**3,766.00**
COGS	-1,224.04	-1,331.97	-1,390.26	-1,334.17	-1,513.93
Gross Profit	**1,630.32**	**1,773.11**	**2,026.63**	**2,086.16**	**2,252.07**
SG&A Expense	-338.62	-295.24	-329.06	-327.34	-376.60
R&D	-561.58	-613.63	-657.11	-643.04	-699.00
EBITDA	**730.12**	**864.24**	**1,040.46**	**1,115.78**	**1,176.47**
Depreciation & Amortization	-274.76	-247.72	-260.60	-288.74	-342.00

Other Operating Expense	-11.03	-24.50	-6.86	-3.19	0.00
EBIT	**444.33**	**592.02**	**773.00**	**823.85**	**834.47**
Nonoperating Income - Net	-10.15	-27.72	-29.26	-23.56	42.00
Pretax Income	**434.18**	**564.30**	**743.74**	**800.29**	**876.47**
Income Taxes	-144.12	-167.63	-208.76	-16.32	-177.02
Results from Investments	0.00	3.06	2.43	2.67	0.00
Net Profit (Reported)	**290.06**	**399.73**	**537.41**	**786.64**	**699.45**
Minority Interest Expense	2.92	0.82	1.67		
Net Profit	**292.983**	**400.552**	**539.076**	**786.635**	**699.449**
Common Shares Outstanding	188.923	188.923	188.951	188.606	186.767
Diluted Shares Outstanding	188.923	188.946	189.759	189.394	187.535
EPS (Basic)	1.54	2.12	2.84	4.17	3.74
EPS (Fully diluted)	1.54	2.12	2.83	4.15	3.73

(€ M)	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E
Sales	**4,118.19**	**4,567.97**	**5,011.95**	**5,434.31**	**5,821.23**	**6,175.16**	**6,550.61**	**6,948.89**	**7,371.38**
COGS	-1,606.09	-1,735.83	-1,879.48	-2,037.87	-2,153.86	-2,284.81	-2,358.22	-2,501.60	-2,653.70
Gross Profit	**2,512.10**	**2,832.14**	**3,132.47**	**3,396.44**	**3,667.37**	**3,890.35**	**4,192.39**	**4,447.29**	**4,717.68**
SG&A Expense	-411.82	-456.80	-501.20	-543.43	-582.12	-617.52	-655.06	-694.89	-737.14
R&D	-784.96	-872.98	-960.33	-1,043.97	-1,121.22	-1,192.47	-1,268.25	-1,348.84	-1,434.53
EBITDA	**1,315.32**	**1,502.37**	**1,670.94**	**1,809.04**	**1,964.04**	**2,080.36**	**2,269.08**	**2,403.56**	**2,546.02**
Depreciation & Amortization	-377.31	-416.88	-461.28	-494.77	-530.72	-569.32	-598.95	-630.22	-663.21
Other Operating Expense	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EBIT	**938.01**	**1,085.49**	**1,209.67**	**1,314.27**	**1,433.31**	**1,511.05**	**1,670.13**	**1,773.35**	**1,882.81**
Nonoperating Income- Net	41.18	45.68	50.12	54.34	58.21	61.75	65.51	69.49	73.71
Pretax Income	**979.19**	**1,131.17**	**1,259.79**	**1,368.61**	**1,491.52**	**1,572.80**	**1,735.63**	**1,842.84**	**1,956.52**
Income Taxes	-250.21	-290.11	-323.51	-351.52	-383.65	-404.35	-447.69	-475.38	-504.74
Results from Investements	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net Profit (Reported)	**728.97**	**841.06**	**936.27**	**1,017.09**	**1,107.87**	**1,168.44**	**1,287.94**	**1,367.46**	**1,451.78**
Minority Interest Expense									
Net Profit	**728.973**	**841.061**	**936.272**	**1,017.091**	**1,107.871**	**1,168.444**	**1,287.945**	**1,367.460**	**1,451.785**
Common Shares Outstanding	186.767	186.767	186.767	186.767	186.767	186.767	186.767	186.767	186.767
Diluted Shares Outstanding	187.535	187.535	187.535	187.535	187.535	187.535	187.535	187.535	187.535
EPS (Basic)	3.46	4.01	4.48	4.86	5.31	5.59	6.19	6.58	6.98
EPS (Fully diluted)	3.45	4.00	4.46	4.84	5.29	5.57	6.17	6.55	6.96

5. Cash Flow Statement Reclassified & Balance Sheet

(€ M)	2015A	2016A	2017A	2018A	2019E
EBIT	**444.33**	**595.08**	**775.43**	**826.51**	**834.33**
D&A	274.76	247.72	260.60	288.74	342.00
Gross operating CF	**719.09**	**842.80**	**1,036.03**	**1,115.25**	**1,176.33**
Tax expense	-144.12	-167.63	-208.76	-16.32	-177.02
Net operating CF	**574.97**	**675.17**	**827.27**	**1,098.94**	**999.31**
Change in NWC	-56.40	-416.69	76.72	92.86	52.55
CF from operating cycle	**518.57**	**258.48**	**903.99**	**1,191.79**	**1,051.86**
CAPEX	-345.9	-337.5	-387.6	-634.4	-506.4
FCF to firm	**172.69**	**-78.98**	**516.35**	**557.42**	**545.48**

(€ M)	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E
EBIT	**938.01**	**1,085.49**	**1,209.67**	**1,314.27**	**1,433.31**	**1,511.05**	**1,670.13**	**1,773.35**	**1,882.81**
D&A	377.31	416.88	461.28	494.77	530.72	569.32	598.95	630.22	663.21
Gross operating CF	**1,315.32**	**1,502.37**	**1,670.94**	**1,809.04**	**1,964.04**	**2,080.36**	**2,269.08**	**2,403.56**	**2,546.02**
Tax expense	-250.21	-290.11	-323.51	-351.52	-383.65	-404.35	-447.69	-475.38	-504.74
Net operating CF	**1,065.10**	**1,212.26**	**1,347.43**	**1,457.52**	**1,580.38**	**1,676.01**	**1,821.39**	**1,928.19**	**2,041.28**
Change in NWC	-5.09	-3.77	-4.17	-4.60	-3.37	-3.81	-2.13	-4.17	-4.42
CF from operating cycle	**1,060.02**	**1,208.49**	**1,343.26**	**1,452.92**	**1,577.01**	**1,672.20**	**1,819.26**	**1,924.02**	**2,036.86**
CAPEX	-547.6	-607.7	-606.6	-650.8	-698.1	-699.5	-736.3	-775.2	-816.3
FCF to firm	**512.43**	**600.79**	**736.62**	**802.16**	**878.89**	**972.73**	**1,082.92**	**1,148.78**	**1,220.54**

Balance Sheet

(€ M)	2015A	2016A	2017A	2018A	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E
Assets														
Property, Plant & Equipment (Gross)	626,130	669,283	710,260	850,550	905,836	964,715	1,027,422	1,094,204	1,165,327	1,241,073	1,321,743	1,407,657	1,499,154	1,596,599
Goodwill	787,178	785,182	785,182	785,182	785,182	785,182	785,182	785,182	785,182	785,182	785,182	785,182	785,182	785,182
Intangible Assets	307,810	354,394	440,456	645,797	742,667	854,067	982,177	1,060,751	1,145,611	1,237,260	1,286,750	1,338,220	1,391,749	1,447,419
Investments and other financial assets	11,836	33,935	30,038	32,134	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
Deferred Tax Assets	122,622	119,357	94,091	60,744	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000
Total non-current assets	**1,855,576**	**1,962,151**	**2,060,027**	**2,374,407**	**2,523,684**	**2,693,964**	**2,884,780**	**3,030,137**	**3,186,120**	**3,353,515**	**3,483,675**	**3,621,059**	**3,766,085**	**3,919,200**
Inventories	295,436	323,998	393,765	391,064	373,283	418,934	452,774	490,244	531,557	561,812	595,970	615,118	652,517	692,190
days of Inventory	88	89	103	107	95	95	95	95	95	95	95	95	95	95
Trade Receivables	158,165	243,977	239,410	211,399	227,241	255,032	275,633	298,443	323,593	342,011	362,805	374,462	397,229	421,381
days of Receivables	47	67	63	58	58	58	58	58	58	58	58	58	58	58
Receivables from financing activities	1,173,825	790,377	732,947	878,496	960,018	960,018	960,018	960,018	960,018	960,018	960,018	960,018	960,018	960,018
Current Tax Receivables	15,369	1,321	6,125	128,234	6,458	6,458	6,458	6,458	6,458	6,458	6,458	6,458	6,458	6,458
Other Current Assets	46,477	53,729	45,441	64,295	52,399	52,399	52,399	52,399	52,399	52,399	52,399	52,399	52,399	52,399
Current Financial Assets	8,626	16,276	15,683	10,174	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Deposits in FCA Group	139,172													
Cash and Cash equivalents	182,753	457,784	647,706	793,664	898,000	929,430	961,960	995,629	1,030,476	1,066,542	1,114,537	1,164,691	1,217,102	1,271,872
Total current Assets	**2,019,823**	**1,887,462**	**2,081,077**	**2,477,326**	**2,529,399**	**2,634,270**	**2,721,241**	**2,815,190**	**2,916,501**	**3,001,240**	**3,104,187**	**3,185,146**	**3,297,724**	**3,416,318**
Total Assets	**3,875,399**	**3,849,613**	**4,141,104**	**4,851,733**	**5,053,084**	**5,328,234**	**5,606,021**	**5,845,327**	**6,102,621**	**6,354,755**	**6,587,862**	**6,806,205**	**7,063,809**	**7,335,518**
(€ M)	2015A	2016A	2017A	2018A	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E
Equity & Liabilities										2,290,398	2,477,619	2,657,495	2,846,833	3,045,200
Equity attributable to owners	-25,123	324,995	778,678	1,348,722	1,413,075	1,609,698	1,829,275	2,004,125	2,190,353	2,390,444	2,564,793	2,750,197	2,943,468	3,146,933
Non-controlling interests	5,720	4,810	5,258	5,117	5,920	5,920	5,920	5,920	5,920	5,920	5,920	5,920	5,920	5,920
Total equity	**-19,403**	**329,805**	**783,936**	**1,353,839**	**1,418,995**	**1,615,618**	**1,835,195**	**2,010,045**	**2,196,273**	**2,396,364**	**2,570,713**	**2,756,117**	**2,949,388**	**3,152,853**
Employee benefits	78,373	91,024	84,159	86,575	83,389	83,389	83,389	83,389	83,389	83,389	83,389	83,389	83,389	83,389
Provisions	141,847	215,227	197,392	182,539	174,356	174,356	174,356	174,356	174,356	174,356	174,356	174,356	174,356	174,356
Deferred tax liabilities	23,345	13,111	10,977	39,142	21,637	21,637	21,637	21,637	21,637	21,637	21,637	21,637	21,637	21,637
Debt total	2,260,390	1,848,041	1,806,181	1,927,167	2,090,000	2,090,000	2,090,000	2,090,000	2,090,000	2,090,000	2,090,000	2,090,000	2,090,000	2,090,000
Other liabilities	654,784	656,275	620,350	589,743	569,743	569,743	569,743	569,743	569,743	569,743	569,743	569,743	569,743	569,743
Other financial liabilities	103,332	39,638	1,444	11,342	17,475	17,475	17,475	17,475	17,475	17,475	17,475	17,475	17,475	17,475
Trade payables	507,499	614,888	607,505	653,751	642,111	720,638	778,849	843,305	914,370	966,413	1,025,171	1,058,110	1,122,443	1,190,688
days of payables	151	168	159	179	164	164	164	164	164	164	164	164	164	164
Current tax payables	125,232	41,595	29,160	7,635	35,378	35,378	35,378	35,378	35,378	35,378	35,378	35,378	35,378	35,378
Total liabilities	**3,894,802**	**3,519,799**	**3,357,168**	**3,497,894**	**3,634,089**	**3,712,616**	**3,770,826**	**3,835,282**	**3,906,348**	**3,958,391**	**4,017,149**	**4,050,087**	**4,114,420**	**4,182,665**
Total equity and liabilities	**3,875,399**	**3,849,604**	**4,141,104**	**4,851,733**	**5,053,084**	**5,328,234**	**5,606,021**	**5,845,327**	**6,102,621**	**6,354,755**	**6,587,862**	**6,806,205**	**7,063,809**	**7,335,518**

6. CAPEX

(€ M)	2015A	2016A	2017A	2018A	2019E	2020E
PP&E	626,130	669,283	710,260	850,550	905,836	964,715
Growth Rate	7.00%	6.89%	6.12%	19.75%	6.50%	6.50%
Depreciation	144,290.00	129,620	143,480	156,380	188,100	200,327
Capex PP&E	**185,235**	**172,773**	**184,457**	**296,670**	**255,612**	**259,206**
Intangible Assets	307,810	354,394	440,456	645,797	742,667	854,067
Growth Rate	16.04%	15.13%	24.28%	46.62%	15.00%	15.00%
Amortization	118,100	118,100	117,120	132,360	153,900	176,985
Capex Intangible Assets	**160,648**	**164,684**	**203,182**	**337,701**	**250,770**	**288,385**
Capex Total	**345,883**	**337,457**	**387,639**	**634,371**	**506,382**	**547,591**

(€ M)	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E
PP&E	1,027,422	1,094,204	1,165,327	1,241,073	1,321,743	1,407,657	1,499,154	1,596,599
Growth Rate	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%
Depreciation	213,348	227,215	241,984	257,713	274,465	292,305	311,305	331,539
Capex PP&E	**276,054**	**293,998**	**313,108**	**333,460**	**355,134**	**378,218**	**402,802**	**428,985**
Intangible Assets	982,177	1,060,751	1,145,611	1,237,260	1,286,750	1,338,220	1,391,749	1,447,419
Growth Rate	15.00%	8.00%	8.00%	8.00%	4.00%	4.00%	4.00%	4.00%
Amortization	203,533	234,063	252,788	273,011	294,852	306,646	318,911	331,668
Capex Intangible Assets	**331,643**	**312,637**	**337,648**	**364,660**	**344,342**	**358,116**	**372,440**	**387,338**
Capex Total	**607,697**	**606,635**	**650,755**	**698,119**	**699,476**	**736,334**	**775,243**	**816,322**

7. Net Working Capital

(€ M)	2015A	2016A	2017A	2018A	2019E	2020E
Inventories (a)	295,436	323,998	393,765	391,064	373,283	418,934
Trade Receivables (b)	158,165	243,977	239,410	211,399	227,241	255,032
Receivables from financing activities	1,173,825	790,377	732,947	878,496	960,018	960,018
Payables	507,499	614,888	607,505	653,751	642,111	720,638
Deferred income	268,452	273,069	274,186	271,817	264,412	264,412
Advances and security deposit	194,364	229,975	167,293	145,394	191,473	191,473
Net Working Capital	**657,111**	**240,420**	**317,138**	**409,997**	**462,546**	**457,460**
Change in NWC	-56,400	-416,691	76,718	92,859	52,549	-5,086

…cont. NWC

(€ M)	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E
Inventories	452,774	490,244	531,557	561,812	595,970	615,118	652,517	692,190
Trade Receivables	275,633	298,443	323,593	342,011	362,805	374,462	397,229	421,381
Receivables from financing activities	960,018	960,018	960,018	960,018	960,018	960,018	960,018	960,018
Payables	778,849	843,305	914,370	966,413	1,025,171	1,058,110	1,122,443	1,190,688
Deferred income	264,412	264,412	264,412	264,412	264,412	264,412	264,412	264,412
Advances and security deposits	191,473	191,473	191,473	191,473	191,473	191,473	191,473	191,473
Net Working Capital	**453,690**	**449,516**	**444,913**	**441,542**	**437,737**	**435,604**	**431,437**	**427,017**

Change in NWC	-3,770	-4,175	-4,603	-3,371	-3,806	-2,133	-4,167	-4,420

8. Revenue forecast:

Assumptions considered:

Positive

1. The introduction of the SUV.
2. Increase of sales in Russia in the ¾ of 2019 by 8%.
3. 10 new models left to announce until 2022.
4. Advantaging situation of Ferrari sales in Saudi Arabia.
5. Low volume strategy.

Negative

1. Coronavirus.
2. Slowdown of the presentation of new models in the future.
3. Increasing competition in the luxury market.
4. Currency rule.
5. Economic situation in 2020.

(€ M)	2015A	2016A	2017A	2018A	2019A
Earnings Quality Score	98	97	68	62	
Total Revenue	**2,854**	**3,105**	**3,417**	**3,420**	**3,766**
	3.33%	8.79%	10.05%	0.09%	10.12%
Number of cars sold	7644	8014	8398	9251	10131
% growth in number of cars sold	5.36%	4.84%	4.79%	10.16%	9.51%
Average sales price	0.271	0.272	0.279	0.286	0.293
Revenue from Cars and spare parts	2080	2180	2456	2535	2926.00
% of Total Revenues	72.88%	70.21%	71.88%	74.12%	77.70%
Revenues from Engines	219	338	373	284	198.00
% of Total Revenues	7.67%	10.89%	10.92%	8.30%	5.3%
Sponsorship & brand activities	441.00	488.00	494.00	506.00	538.00
% of Total Revenues	15.45%	15.72%	14.46%	14.80%	14.3%
others	114.00	99.00	94.00	95.00	104.00
% of Total Revenues	3.99%	3.19%	2.75%	2.78%	2.76%

(€ M)	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028
Total Revenue	4,118	4,568	5,012	5,434	5,821	6,175	6,551	6,949	7,371
	9.35%	10.92%	9.72%	8.43%	7.12%	6.08%	6.08%	6.08%	6.08%
Number of cars sold	10941	12036	12998	13908	14326	14612	14904	15202	15507
% growth in number of cars sold	8.00%	10.00%	8.00%	7.00%	3.00%	2.00%	2.00%	2.00%	2.00%
Average sales price	0.300	0.308	0.315	0.323	0.336	0.350	0.364	0.378	0.393
Revenue from Cars and spare parts	3285.04	3703.88	4100.20	4496.89	4817.07	5109.95	5420.63	5750.21	6099.82
% of total Revenues	79.77%	81.08%	81.81%	82.75%	82.75%	82.75%	82.75%	82.75%	82.75%
Revenues from Engines	122.76	76.11	47.19	0.00	0.00	0.00	0.00	0.00	0.00
% of total Revenues	3.0%	1.7%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Sponsorship & brand activities	597.14	662.36	726.73	787.97	844.08	895.40	949.84	1007.59	1068.85
% of total Revenues	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%
others	113.25	125.62	137.83	149.44	160.08	169.82	180.14	191.09	202.71
% of Total sales	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%

VALUATION

9. DCF

€M	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E	2034E	2035E	2036E	2037E	2038E
Average CE	2,870	3,034	3,180	3,338	3,483	3,614	3,752	3,897	3,971	4,124	4,283	4,449	4,620	4,799	4,984	5,176	5,376	5,583	5,807
ROIC	24%	26%	28%	29%	30%	31%	33%	33%	34%	30%	30%	30%	28%	26%	24%	22%	20%	18%	16%
NOPAT	699	801	893	971	1,053	1,110	1,227	1,303	1,358	1,237	1,285	1,335	1,294	1,248	1,196	1,139	1,075	1,005	929
%Change		14.62%	11.50%	8.73%	8.34%	5.49%	10.53%	6.21%	4.15%	-8.86%	3.86%	3.86%	-3.07%	-3.56%	-4.13%	-4.80%	-5.58%	-6.53%	-7.56%
Depreciation and amortization	377	417	461	495	531	569	599	630	663	716	774	843	919	955	975	984	994	994	994
- Change NWC	(5.1)	(3.8)	(4.2)	(4.6)	(3.4)	(3.8)	(2.1)	(4.2)	(4.4)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
CAPEX	548	608	607	651	698	699	736	775	816	849	883	909	937	955	975	984	994	994	994
FCFF	534	614	752	820	888	984	1,092	1,163	1,209	1,103	1,174	1,266	1,274	1,246	1,194	1,137	1,073	1,003	927
%Growth		15%	22%	9%	8%	11%	11%	6%	4%	-9%	6%	8%	1%	-2%	-4%	-5%	-6%	-7%	-8%
WACC	4.97%	4.97%	4.97%	4.97%	4.97%	4.97%	4.97%	4.97%	4.97%	4.97%	4.97%	4.97%	4.97%	4.97%	4.97%	4.97%	4.97%	4.97%	4.97%
Discount factor	1.0	0.9	0.9	0.8	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4
Discounted FCF	509	557	650	675	697	736	778	789	781	679	689	708	678	632	577	523	471	419	369
Sum Discounted FCF	11,918																		
Discounted Terminal Value	14,970																		
Enterprise Value	26,887																		
Nebt Debt Capital	1,192																		
Minority Interest	5.1																		
Equity Value	25,695																		
Shares Outstanding (in million)	185.9																		
Price	138.24																		

Beta \ MRP	5.00%	5.50%	5.97%	6.50%	7.00%
0.70	439.55	309.16	242.76	196.06	166.29
0.80	274.72	212.50	175.70	147.30	127.97
0.90	201.23	162.77	138.24	118.31	104.22
1.00	159.41	132.29	114.19	98.98	87.94
1.10	132.29	111.59	97.34	85.09	76.02

Beta \ Terminal Value Growth	2.00%	2.25%	2.50%	2.75%	3.00%
0.70	194.74	215.02	242.76	283.04	346.81
0.80	151.84	162.39	175.70	193.03	216.52
0.90	124.60	130.79	138.24	147.39	158.86
1.00	105.67	109.60	114.19	119.60	126.10
1.10	91.70	94.34	97.34	100.80	104.82

10. Sensitivity Analysis Patent Box

We calculated that the patent box increases the ROIC by 2.9% every year and executed a sensitivity analysis depending on whether the patent box regime will be renewed every 5 years.

Patent box extention	no future patent box	2020-25	2026-30	2031-35	2035-38
Target Price	**€ 138.24**	€ 140.62	€ 142.64	€ 144.55	€ 145.28

11. WACC Computation

WACC assumptions		
Risk Free Rate (Rf)	0.104%	30-year German Government bond yield
Market Premium (MP)	5.97%	Implied Market Premium weighted on geographical exposure
Cost of Equity (Ke)	6,41%	Capital Asset Pricing Model: Ke= Rf+ β * MP.
Beta (ß)	0.90	Linear Regression of Ferrari's historical returns against S&P Global Luxury Goods Index and NASDAQ OMX Global Automobile Index considering 3 years weekly data
Cost of Debt (kd)	0.40%	YTM of outstanding Bond
Tax rate	27.90%	Italina IRAP and IRES

12. Market Premium

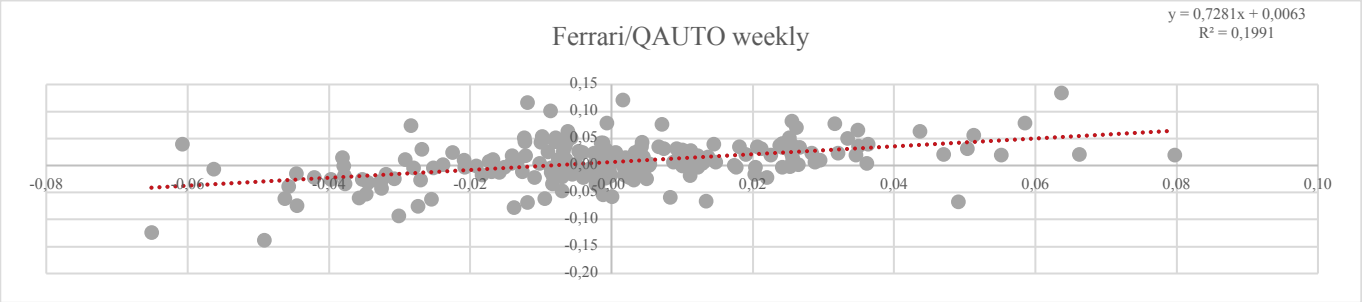
We computed the market premium as weighted average of market risk premium (source: Damodaran) on Ferrari's geographical exposure (in terms of number of cars sold in 2018).

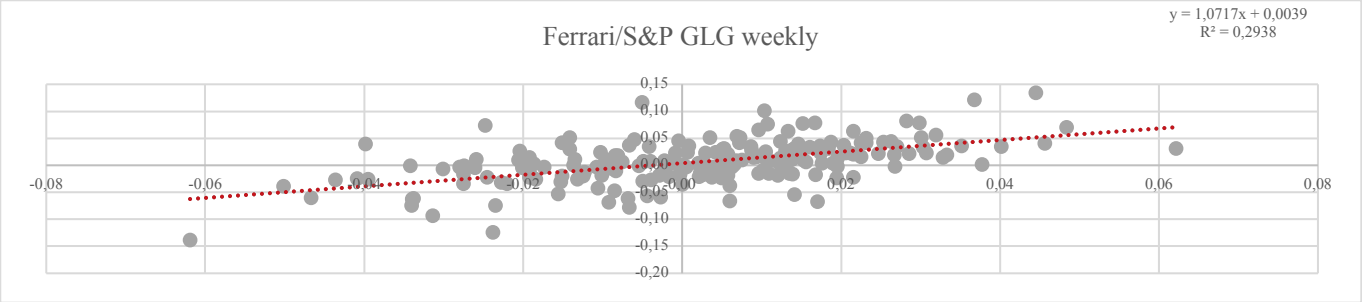
Region	Cars sold 2018	%	Market Premium
UK	981	10.60%	5.69%
Germany	803	8.70%	5.20%
Italy	479	5.20%	7.37%
France	399	4.30%	5.69%
Switzerland	380	4.10%	5.20%
Middle East	326	3.50%	8.62%
Other EMEA	859	9.30%	6.66%
Total EMEA	4,227	45.70%	

Americas	3,000	32.40%	5.61%
Mainland China, Hong Kong and Taiwan	695	7.50%	5.89%
Rest of APAC	1,329	14.40%	6.18%
Total	**9,251**	**100.00%**	**5.97%**

13. Beta

We estimate the Beta using the average of a weekly price regression between the % var of Ferrari share price and the % var of the NASDAQ OMX Global Automobile Index (QAUTO) and a weekly price regression of the %var of Ferraris share price and the %var of S&P Global Luxury Goods index. In our opinion, estimating Beta using regression is the right way to define beta, since Ferrari is a unique company and thus it is difficult to identify similar and comparable competitors.





Index	Beta	Correlation	R^2
NASDAQ OMX Global Automotive Index (QAUTO)	0.73	0.45	0.20
S&P Global Luxury Goods Index	1.07	0.54	0.29
Mean	**0.90**		

14. Cost of Debt

To derive at the cost of debt for Ferrari, we calculated the YTM of 0.41% for the outstanding Bond with Maturity in March 2023.

15. Multiples

Company Name	EV / EBITDA
Tesla Inc	69.67
Renault SA	7.56
Bayerische Motoren Werke AG	9.4
Aston Martin	21.07
Daimler AG	7.48
Volkswagen AG	5.28
Fiat Chrysler Automobiles NV	1.45
Median	**7.56**
Average	**17.42**
Resulting price (median)	**45.19**
Resulting price (average)	**112.49**

Company Name	P/E
LVMH	29.61
Kering SA	34.51
Burberry Group PLC	23.37
Richemont SA	28.4
Hermes	51.33
Moncler SpA	27.38
EssilorLuxottica SA	43.29
Tod's	157.12
Hugo boss	14.27
Salvatore Ferragamo	32.91
Median	**31.26**
Average	**44.22**
Resulting price (median)	**117.57**
Resulting price (average)	**166.29**

INVESTMENT RISKS

16. Other risks:

Formula 1 Team's performance. The Ferrari's F1 Team is key to the company's marketing strategy, as it represent X% of revenues and these are highly dependent on sponsorships. According to the company, attaining a better performance requires investing in R&D and to attract better crew members. Although the racing team has had its up and downs after 2010, many long-term sponsors continue to support it, such as Shell (since 1996), Magneti Marelli, Pirelli etc.

Credit Risk: In order to reduce this risk, dealers and retail clients are subject to a very thorough evaluation of their creditworthiness. Additionally, it is company's practice to obtain financial guarantees against risks associated with credit granted for the purchase of cars and parts. These guarantees are strengthened, where possible, by retaining title on cars subject to financing agreement.

Low volume strategy: This is a deliberate strategy to undersupply its market demands and in Ferrari's case this is not to be considered a material risk. On the contrary, it helps the brand maintain exclusivity, a very essential element for the brand's image as highlighted by the company. In addition, it makes the company highly resistant to declines during recessions and ensures the predictability and resiliency of its business model. A possible element that may affect finances is the acceptance of new car models. Since it takes many years and expenses from the development to the production and to the launching phase of a new Ferrari, if one car is not well-accepted, they won't be able to replace the lost revenue in a short time. However, for only 2019-2022 the company has predicted 15 new launches and the 5 new cars presented in 2019 were very appreciated by its clients. So, this is more a choice of the company to control growth rather than a difficulty in its ability to continue growing. Moreover, producing less than the market demand means longer waiting lists and vehicles that sell at the advertised price instead of with the discounts common in the mass market.

Liquidity Risk

The company manages its liquidity risk by monitoring cash flows and keeping an adequate level of funds at its disposal. The main funding operations and investments in cash and marketable securities of the company are centrally managed by the treasury department with the aim of ensuring efficient management of the Group's liquidity. In order to reduce this risk, the treasury department has adopted the various policies like centralizing liquidity management using cash pooling arrangement diversifying sources of funding etc. Ferrari's current ratio for 2018 was 2.06, while that of the automotive industry is 1.01, thus meaning the company can cover its short-term liabilities

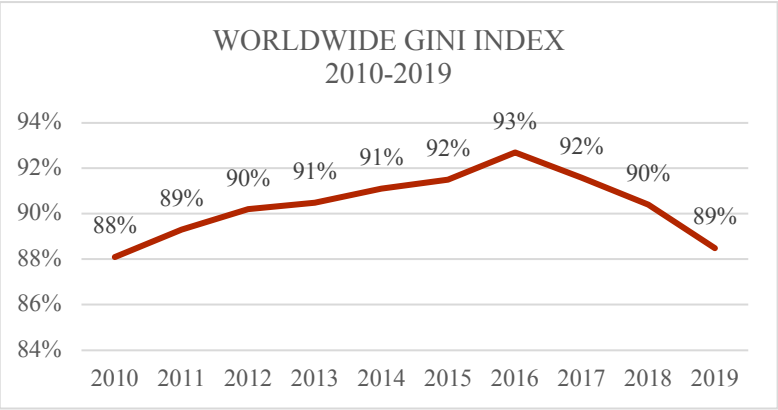
17. Risk Likelihood Matrix

Risks
1. Fundamental shifts in industry sectors
2. Advances in high performance car industry
3. Luxury goods demand volatility
4. Macro-risks: Brexit, Italian political Instability, US trade policies.
5. Interest & currency rates fluctuation
6. Corporate governance risks
7. Liquidity risk
8. Competition
9. Credit risk
10. (SARS) Coronavirus risk

Likelyhood \ Impact	Negligible	Minor	Moderate	Significant	Severe
Very likely				**R1; R2; R10**	
Likely		**R8**	**R6**	**R4; R5**	
Possible			**R3**		
Unlikely		**R7; R9**			
Very unlikely					

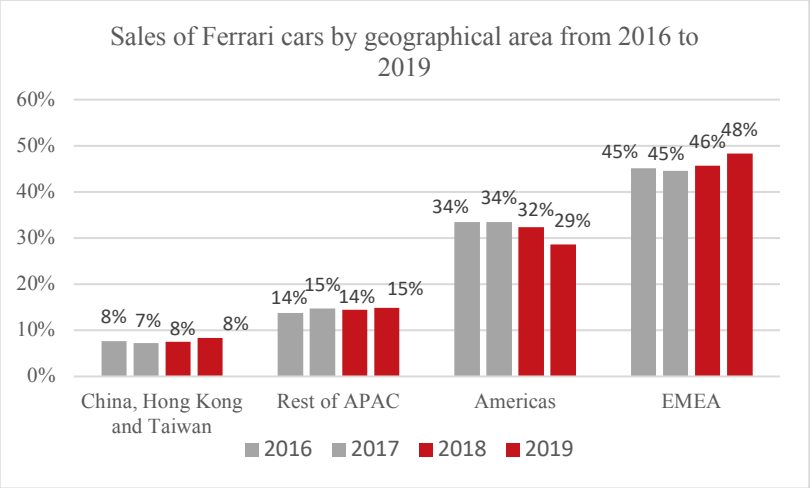
Source: Team Elaboration

18. Gini Index Graph



Source: Credit Suisse Global Wealth Report 2019

19. Breakdown of Ferrari's Revenues by geographical area



Source: Team Elaboration, Ferrari's financial statements 2018

CORPORATE GOVERNANCE

20. Best practice provision

Best Practice Provision	Ferrari
Best practice provision 2.1.7(iii) of the Dutch Corporate Governance Code: for each shareholder, or group of affiliated shareholders, who directly or indirectly hold more than ten percent of the shares in the company, there is at most one supervisory board member who can be considered to be affiliated with or representing them as stipulated in best practice provision 2.1.8, sections vi. and vii.	Board Chairman Mr. John Elkann also serves as chairman and chief executive officer of Exor N.V. and thus is affiliated with a shareholder which holds more than 10% of the company's shares. Since our non-executive Director Mr. John Elkann also serves as chairman and chief executive officer of Exor N.V., Mr. John Elkann is affiliated with a shareholder holding more than 10% of the shares in the Company. Given the family ties between Mr. Lapo Elkann and Mr. John Elkann, the Company has two non-executive Directors affiliated with a shareholder holding more than 10% of the shares.
Best practice provision 2.2.4 of the Dutch Corporate Governance Code: The supervisory board should also draw up a retirement schedule in order to avoid, as much as possible, supervisory board members retiring simultaneously. The retirement schedule should be published on the company's website.	The Company does not have a retirement schedule as referred to in best practice provision 2.2.4 of the Dutch Corporate Governance Code. As the Company is listed on the NYSE, the Company also follows certain common U.S. governance practices, one of which is the reappointment of our Directors at each annual general meeting of shareholders. In light of this term of office, the Company does not have a retirement schedule in place.

Best practice provision 4.1.8 of the Dutch Corporate Governance Code: Management board and supervisory board members nominated for appointment should attend the general meeting at which votes will be cast on their nomination	practice only the Chairman, the Chief Executive Officer and the Vice-Chairman will therefore be present at the general meeting. Since, pursuant to Article 14.3 of the Articles of Association, the term of office of Directors is approximately one year, such period expiring on the day the first annual general meeting of shareholders of the Company is held in the following calendar year, all members of the Board of Directors are nominated for (re)appointment each year
Best practice provision 5.1.4 of the Dutch Corporate Governance Code: Neither the audit committee nor the remuneration committee can be chaired by the chairman of the management board or by a former executive director of the company.	Senior Non-Executive Director, Mr. Sergio Duca, is also the Chairperson of the Audit Committee, which is not in line with best practice provision 5.1.4 of the Dutch Corporate Governance Code.
Best practice provision 5.1.4 of the Dutch Corporate Governance Code: The committees referred to in best practice 2.3.2 should be comprised exclusively of nonexecutive directors	Mr. John Elkann was appointed executive Director at the annual general shareholder meeting on 12th April 2019 and is currently serving on the compensation committee which does not comply with the best practice provision of the Dutch corporate governance code.

21. Structure

Name	Position	Annual fee	Other compensation	Total
John Elkann	Board Chairman	79,554 €	13,025 €	92,579 €
Piero Ferrari	Vice Chairman	68,149 €	12,397 €	80,546 €
Louis C. Camilleri	Director	270,412 €		270,412 €
Sergio Duca	Senior Non-Executive Director	94,890 €		94,890 €
Delphine Arnault	Non-Executive Director	63,889 €		63,889 €
Giuseppina Capaldo	Non-Executive Director	73,781 €		73,781 €
Eddy Cue	Non-Executive Director	68,149 €		68,149 €
Lapo Elkmann	Non-Executive Director	63,889 €		63,889 €
Amedeo Felisa	Non-Executive Director	63,889 €		63,889 €
Maria Patrizia Grieco	Non-Executive Director	72,408 €		72,408 €
Adam Keswick	Non-Executive Director	63,889 €		63,889 €
Elena Zambon	Non-Executive Director	72,030 €		72,030 €

Name	*role*	*previous Carrier*
LOUIS C. CAMILLERI 	• Chief Executive Officer at Ferrari since **July 2018** • Chairman of the Board of Philip Morris International Inc	**March 2008- May 2013** Chairman and Chief Executive Officer of Philip Morris International Inc. **April 2011-March 2019** Board of Directors of América Móvil, S.A.B. de C.V. **2009-2011** Board of Telmex International SAB **2001-2008** CEO and Chairman of Altria Group, Inc. (formerly Philip Morris Companies, Inc.) **2001-2007** Director Kraft Foods & Kraft's Chairman (from 2002) **1995** CEO and President Kraft Foods **1978-2008**

		Senior Vice President & CEO of Altria, active in subsidiaries of Altria in various capacities
ANTONIO PICCA PICCON 	Chief Financial Officer since **July 2018**	**November 2014-2018** CFO in Ariston Thermo Group **1999-2014** CFO of Iveco Group, CEO of Fiat Group Automobiles Capital Group, Treasurer and Head of Financial Services for FCA, Board of Directors of Ferrari, Fiat Group Automobiles, Magneti Marelli, Maserati and Teksid Carrier **starting** in the Sanpaolo IMI group
MICHELE ANTONIAZZI 	Chief Human Resources Officer since **April 2016**	**2012- April 2016** Senior roles in Magneti Marelli, CHRO Automotive Lighting Business Marelli (2012) **2009-2012** Human Resources Director of the Suspension Systems business line at Magneti Marelli **2006-2012** Head of Organizational Development for the Sector Magneti Marelli
NICOLA BOARI 	Chief Brand Diversification Officer since **September 2018**	**2004-2010** Product marketing Director, responsible for product development at Indesit **1998-2004** Manager Boston Consulting Group
ENRICO GALLIERA 	Chief Marketing and Commercial Officer since **April 2010**	**1990-2010** Europe and export market unit director, director of customer business development for Europe, general manager for South West Europe and trade marketing director for Italy & other multiple positions at Barilla S.p.A
MICHAEL HUGO LEITERS 	Chief Technology Officer since **January 2014**	**2000-2013** Head of the SUV product line in 2010 at Porsche AG; multiple positions **1996-2000** Engineer and manager at the Institut for productiontechnology in Aachen, Germany
FLAVIO MANZONI 	Chief Design Officer since **2010**	**2007-2010** Director of Creative Design at the Volkswagen Group **2001-2006** Fiat Group as Head of Design for Lancia, Fiat and LCV
JANE REEVE 	Chief Communication Officer since **May 2019**	Board positions in international communication groups including TBWA, Wunderman, Interbrand **2014-2015** CEO of the Italian Fashion Council **2010-2013** Chairman and CEO from J. Walter Thomson Italy **2016-2019** Regional Director Europe & Chairman of J. Walter Thomson Italy **2003-2010** CEO at RMG Connect
VINCENZO REGAZZONI	Chief Manufacturing Officer since **March 2015**	**2010-2015** Head of Technologies and Infrastructure at Maserati and Ferrari **2003-2010**

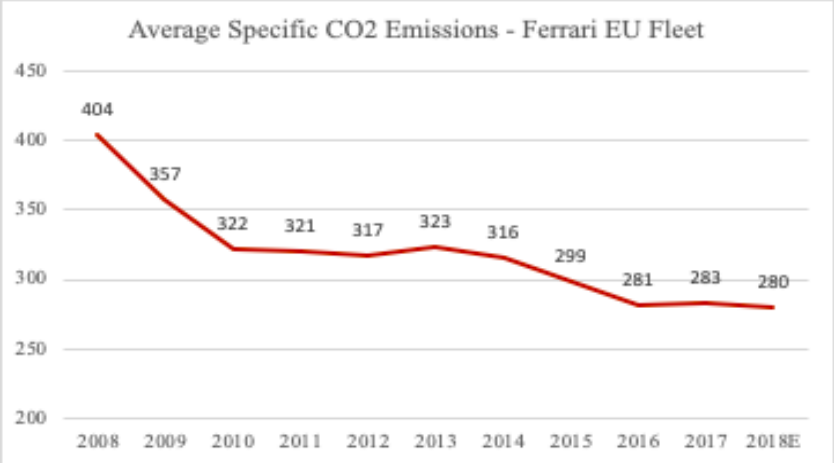
		Head of Process/Product Technologies at Maserati and Ferrari
CARLO DANEO 	• General Counsel since **July 2015** • Board of Directors Ferrari North America since **Feb. 2017** • Member of Supervisory Body **(August 2015)** and Data Protection **(2018)**	**2008-2015** Senior Vice President and Legal Counsel in Finance and Financial Services of FCA **2003-2015** General Counsel in Fiat Chrysler Finance S.p.A. **1995-2003** United Nations, legal profession in law firms with experience in the Corporate Finance and Capital Markets areas.
MATTIA BINOTTO 	Managing Director Gestione Sportiva and Team Principal Scuderia Ferrari since **January 2019**	**October 2016** Chief Technical Officer of Scuderia Ferrari **October 2013** Chief Operating Officer, Power Unit **2004-2009** Race Engine Engineer, Chief Engineer, Head of Engine at Ferrari

22. Incentives table

	CEO	Non-Executive directors	SMT
Fixed	500,000 €	75,000 €	dependent on position, experience and responsibilities held
Short term	no short-term incentives in 2018	/	Variable incentive percentage of fixed remuneration
Long term	Equity incentive plan	/	Variable incentive percentage of fixed remuneration
Non-monetary benefits	Benefits such as personal use of aircraft, company cars, drivers, security, medical insurance, tax preparation, financial counseling		

CEO	Fixed	Long term
Louis C. Camilleri 09/07/2018-12/31/2018	270,412 €	17.108 awards granted, Fair value of 80.32-112.99€ (each)

23. CO2 emissions decrease



Source: Company information

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