A Work Project, presented as part of the requirements for the Award of a Master Degree in Finance from the NOVA – School of Business and Economics.

EQUITY RESEARCH ON FERRARI: AUTOMOTIVE IN THE SURFACE, LUXURY IN THE SOUL

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A Project carried out on the Master in Finance Program, under the supervision of:

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Abstract

This equity research project presents an in-depth examination of Ferrari, focusing on three key areas: company presentation, industry overview and competitive positioning, and historical financial analysis. The company presentation explores Ferrari's profile, business model, and key strengths. The industry overview and competitive positioning section compares Ferrari's position within the automotive and luxury sectors, highlighting its unique position as a luxury carmaker. Lastly, the historical financial analysis scrutinizes Ferrari's revenue, costs, and margins over recent years, providing valuable insights into its financial performance. Through this research, a compelling case emerges for Ferrari's untapped growth potential, solidifying its standing as a prominent player in the luxury automotive market.

Keywords

Ferrari, Automotive, Luxury, Valuation

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This report is part of the Ferrari N.V. Equity Research report (annexed), developed by Andrea La Serra and Andrea De Caro and should be read has an integral part of it.

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Company presentation

Figure 1: Ferrari Founder, Enzo Ferrai

Source: Company Website

Ferrari has a rich heritage that dates back to **1929** when Enzo Ferrari, a former Alfa Romeo driver, established Scuderia Ferrari as a racing team. The team took part in several important races such as **Formula 1**, since 1951 but it was not until 1947 that the company officially became a carmaker with the presentation of its first streetcar.

Over the years, Ferrari has become known as one of the most exclusive and iconic luxury car brands in the world (FINANCE, 2022) thanks in part to its successful participation in Formula 1 and its policy of limited production, which has fuelled its aura of exclusivity.

Fiat S.p.A. (now FCA, Fiat Chrysler Automobiles) bought half of Ferrari S.p.A. ownership in 1969, reaching then 90% stake in 1988 after the death Enzo Ferrari, leaving to his son Piero the remaining 10%. In 2016, Ferrari officially separated from FCA and successfully completed its IPO which led it to become an independent company under the ticker of RACE listed on both the NYSE and Italian stock exchange.

Figure 2: Ferrari CEO, Benedetto Vigna

Source: Company Website

The company has consistently produced excellent sporting and business outcomes over the years, and ownership changes have never been a drag on that success. After the step down of Sergio Marchionne due to ill health and of Louis Carey Camilleri due to personal reasons, **Benedetto Vigna** took over in charge as CEO of Ferrari in 2021. The positive performances in recent quarters are confirming the experience and competencies of the current management team.

Company Profile

Ferrari employs 4,919 people at its facilities: 4,606 in Maranello and 312 in the offices around the world. It has a **market capitalization** of **EUR 49.157 million**, 2022 **Net Revenues** of **EUR 5.095 million**, and a 7Y Revenues **CAGR** of **8,63%.** Through its network of chosen dealers, Ferrari delivers more than 10,000 automobiles globally. Participating in the F1 Championship has always provided the Company with a technological edge and the unmatched opportunity to incorporate the learned expertise into the creation of its road vehicles. Due to this, Ferrari was able to price their automobiles for a premium compared to other luxury automakers (7Y Average Price per car CAGR of 2,76%). The brand's cornerstones - Italian design, cutting-edge technology, innovation, and genuine exclusivity - are incorporated into every Ferrari vehicle.

Share Details

RACE has **181 953 498 issued common shares** as of December 31, 2022. Exor N.V., which holds **24.44%** of Ferrari's common shares and 36.25% of voting power, Piero Ferrari (**10.39%** of common shares and 15.43% of voting interest), BlackRock (**5.69%** of common shares) and T. Rowe Price Associates, Inc (**4.48%** of common shares) are the company's largest shareholders.

Moreover, Ferrari has a **'Loyalty Voting Structure".** Long-term shareholders of the company will get special voting shares in order to recognize their ownership of the common shares and to encourage stability among the shareholder base. Common share buyers who register their shares in the loyalty share register and hold them for three years might choose to take part in the loyalty voting program. (FERRARI, S.D.).

Ferrari's common shares are traded both on the **Euronext Milan** and on the **New York Stock Exchange** ("NYSE"). The dual listing enables the division of share trading between the two indexes, potentially resulting in a decrease in share liquidity and hindering the development of an active trading market for common shares in either or both markets. Additionally, this situation may contribute to price disparities between the exchanges.

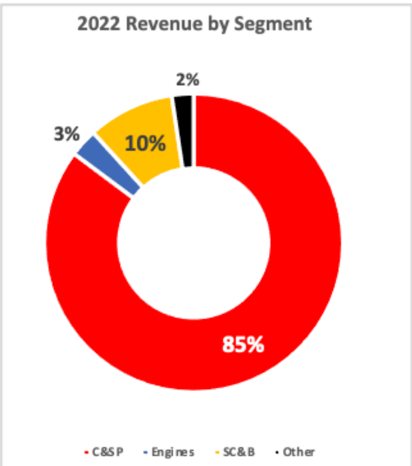


Table 1: Ferrari 2022 revenues breakdown by segment

Source: Company Data, Team estimates

Business Model

Following Ferrari annual report, its revenue streams are divided into four categories: (i) Cars and spare parts (85% of total 2022A revenue), (ii) Engines (3% of total 2022A revenue), (iii) Sponsorship, commercial and brand activities (9% of total 2022A revenue), and (iv) Other (2% of total 2022A revenue).

(i) Cars and spare parts ("C&SP"): Ferrari's core strength

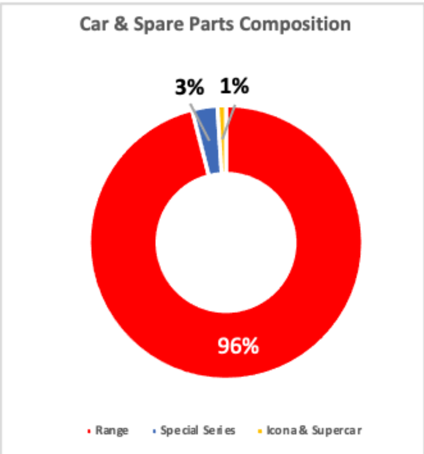
It includes the proceeds from the sale of each of RACE cars, customization services, and the distribution of spare parts to customers. The Company implements a production strategy that emphasizes limited quantities to maintain exclusivity and rarity. Indeed, the acquisition of a Ferrari necessitates clients to join waiting lists, whose duration depends on the model and regional market, which further boosts Ferrari's status as a premium brand. The portfolio of cars is segmented into three main categories: Range, Special Series and Iconic & Supercar.

(ii) Engines: a race coming to an end

Ferrari offers a a diverse range of product in its portfolio consisting of 3 version of engines: ICE (Internal Combustion Engine), Hybrid and soon the Full Electric engines. Moreover, it produces three variations of power units: V12, V8, and the V6. The V8 and V6 engines are also manufactured to a division of the FCA group, Maserati. This collaboration was initiated in 2003, and due to Ferrari's decision to prioritize in-house research and development investments, it will conclude in 2023. Additionally, this category encompasses the leasing of engines to other teams participating in Formula 1 racing.

(iii) Sponsorship, commercial and brand activities: Ferrari heritage and exclusivity

This segment refers to net revenue earned by Scuderia Ferrari (the Company's F1 racing team) through sponsorships agreements, Ferrari's share of the commercial revenues of the F1 World Championship and net revenues earned through the brand, which include merchandising, licensed theme parks and royalties. Thus, this business unit can be restated into two sub-categories for valuation purposes: *(a) F1 commercial revenues* and *(b) Ferrari brand revenues.*



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breakdown by pillar

Source: Company Data, Team estimates

(iv) Others

The Company's other revenue streams encompass various activities that support their racing operations, including financial services. Another contributing factor is the successful hosting of the 2022 Moto GP event at the Mugello racetrack, which saw a surge in attendance compared to the previous year. The increase in revenue for these activities was considerable in 2022.

Ferrari Design

Due to the importance of aerodynamics and aesthetics to Ferrari vehicles, the company established the **Ferrari Design Center** in 2010. This in-house facility, which spans 5.600 square meters and is located in Maranello, was completely renovated in 2018 and continues the company's longstanding tradition of research and innovation. Even non-car enthusiasts can appreciate the artistic quality of a Ferrari. The Design Center oversees all aspects of road automobile styling, including bodywork, external components, and interior trim. Ferrari is known for creating true **engineering masterpieces** because of its focus on defining and evolving the stylistic orientation of the brand and imprinting every new product with a futuristic and revolutionary vision.

Source: Company website

Ferrari Made in Italy

The fact that Ferrari has maintained its position at the forefront since its founding demonstrates not only that it has continually improved its capacity to understand and anticipate customers' tastes, but also that it is acutely aware of what Ferrari means to its customers. For this reason, a Ferrari begins to be "a Ferrari" from the point of purchase to delivery and customer service beyond the sale. The majority of production activities, including building engines, painting, and automobile assembly, take place in the Maranello facilities. In contrast to, for example, Aston Martin, whose engines are supplied by Daimler, RACE chooses to keep production in-house. Ferrari has an interest in creating unique technological know-how that could result in strategic advantages. However, for highly technical components (like brakes or transmissions), it depends on close collaborations developed with carefully chosen suppliers, with whom Ferrari retains a significant bargaining power (no supplier accounts for more than 10% of the total procurement costs).

Industry overview & Competitive positioning

Industry Overview

Ferrari operates in the “Luxury Performance Car Market”, a specific segment of the automotive industry. This market is one of the fastest-expanding segments in the global luxury market, that is projected to reach “USD 655.0 billion by 2027 which would exhibit a CAGR of 9,3% during this period” (insight, 2019). The growth of this market is driven by an increase in High-Net-Worth Individuals (HNWIs) and Ultra-High-Net-Worth Individuals (UHNWIs), who are the key customers in the market. The population of HNWIs has been growing, particularly in emerging economies like China, making the Luxury Performance Car Market highly attractive due to its high margins and growing demand from wealthy consumers globally.

Competitive Positioning

While Ferrari operates in the **Luxury Performance Car Market**, a sub-segment of the automotive industry, a deeper analysis of Ferrari's business model, products, profitability margins, clientele, and future ambitions suggests that it aligns more closely with a high-end luxury company rather than a traditional automaker.

Ferrari's core business is to produce and sell sport cars. At a first glance, the answer to the question "In which industrial sector does Ferrari operate?" should be straightforward: **"automotive" sector**. Nevertheless, we believe that defining its industrial sector is not that easy. Therefore, we compared Ferrari's margin with a pool of selected automotive and luxury companies.

(i) Automotive

We decided to benchmark Ferrari with seven automakers. Our choice was based on two main factors: *(i) producing high-end cars and/or (ii) participating to the FIA Formula One World Championship* (the only exceptions to this is represented by Volkswagen that cannot be considered entirely a luxury automaker but still it owns several high-end car brands, like Audi, Bentley, Lamborghini e Bugatti). We found seven listed automakers: Aston Martin, Volkswagen, McLaren, Renault, BMW, Tesla and Mercedes.

- *Aston Martin* is a prestigious British luxury car manufacturer specializing in high-performance sports cars and grand tourers. While sharing some similarities with Ferrari in the luxury segment and performance-oriented offerings, Aston Martin's financial performance and market presence differ from its Italian counterpart. One difference is in their business models. Ferrari has a unique and highly profitable approach with its low-volume production strategy, limited editions, and strong brand licensing activities. Aston Martin, on the other hand, has faced financial challenges in recent years and has focused on expanding its product portfolio and increasing production volumes.

- *Volkswagen* is a renowned automotive manufacturer operating in the global automotive industry. Unlike Ferrari, Volkswagen caters to a broader customer base with a wide range of vehicles, including sedans, SUVs, hatchbacks, and electric vehicles. Volkswagen has a strong emphasis on mass production and economies of scale, allowing them to offer competitive pricing and reach a larger market share.

- *McLaren* is a prominent automotive manufacturer known for producing high-performance sports cars and supercars. Similar to Ferrari, McLaren specializes in the production of luxury and high-end vehicles, with a strong focus on delivering exceptional performance and driving experiences. One key similarity between McLaren and Ferrari is their involvement in Formula 1. While Ferrari is known for its history in the sport, McLaren has also made significant contributions and achieved notable success in Formula 1 racing. This motorsport heritage is reflected in the design and engineering of their road cars, as McLaren leverages their racing expertise to deliver exceptional performance and handling dynamics.

- *Renault*, a prominent player in the automotive industry, distinguishes itself from Ferrari through its business model and market positioning. Renault operates as a mass-market automobile manufacturer, producing a wide range of vehicles targeting a broader customer base. One similarity between Ferrari and Renault lies in their involvement in Formula 1 racing. Both companies have a rich history in the sport and utilize Formula 1 as a platform to enhance their brand image, engage with fans, and showcase their engineering expertise, strengthening their position in the automotive industry.

- *BMW* is a German automotive company known for its luxury vehicles, motorcycles, and high-performance cars. The company's business model focuses on delivering premium vehicles that combine sophisticated design, cutting-edge technology, and exceptional driving performance. While sharing a similar focus on luxury and performance with Ferrari, BMW differentiates itself through its diverse product portfolio, including a broader SUVs and electric vehicles line-up.

- *Tesla* is an innovative American electric vehicle (EV) manufacturer that has revolutionized the automotive industry. Known for its cutting-edge technology, Tesla focuses on producing high-performance electric cars with long-range capabilities. While both Tesla and Ferrari operate in the automotive industry, their approaches differ significantly, with Tesla's emphasis on EVs and sustainable mobility, while Ferrari's focus remains on luxury performance cars powered by internal combustion engines. One key similarity is that both brands have built a strong reputation and a loyal customer base, and both have created aspirational brands that evoke a sense of luxury and exclusivity.

- *Mercedes-Benz*, a luxury automotive brand, is known for its commitment to craftsmanship, technological advancements, and a diverse range of high-quality vehicles. The company's business model focuses on producing a wide array of vehicles, from sedans to SUVs, with a blend of luxury and performance, offering customers various options to meet their preferences. Both companies have a rich motorsport heritage, with Mercedes-Benz's involvement in Formula 1.

Our findings shows that Ferrari differentiates itself from other automotive companies. Comparing its margins with selected automakers, Ferrari stands out with significantly higher profitability, owing to: *(i)* ***its low car volume policy*** *and (ii)* ***high starting selling price****.* RACE 51,3% and 48,0% Gross Margin in 2021 and 2022 respectively, are well above the automotive industry average of 22,7% and 16,8%. Even comparing ROA and ROE Ferrari stands out with a 13% ROA and 39% ROE in 2022 vs -0,15% and -8% respectively for the automotive industry.

(ii) Luxury

To select a pool of companies in the luxury goods industry, we searched for firms that have a close target clientele and a similar business approach (wating lists, brand exclusivity, few selected stores, “selling an experience, not a product”) as Ferrari. Our findings suggested us to choose six listed companies: LVMH, Burberry, Brunello Cucinelli, Prada, Ferragamo and Hermes.

- *LVMH* is a leading luxury goods conglomerate based in France. It owns a diverse portfolio of prestigious brands such as Louis Vuitton, Christian Dior, Moët & Chandon, and Hennessy. Its business model focuses on maintaining exclusivity, craftsmanship, and brand prestige, while targeting affluent customers globally. With Ferrari’s model, it shares the ability to leverage brand power, expand into new markets, and capitalize on the growing demand for luxury products.

- *Burberry* is a British luxury fashion house whose business model emphasizes the fusion of traditional craftsmanship with innovative design, attracting a wide range of customers. Burberry's success lies in its ability to balance classic British heritage with modern trends, utilizing digital marketing strategies to engage with a global audience. Both companies prioritize a fusion of traditional craftsmanship with modern design, targeting discerning customers who appreciate luxury and elegance.

- *Brunello Cucinelli* is an Italian luxury brand specializing in high-end clothing and accessories. The business model centers around creating timeless, understated luxury garments that appeal to sophisticated customers seeking both quality and socially responsible products which is shared which is highly shared with Ferrari’s business model.

- *Prada* is an Italian fashion house renowned for its avant-garde designs, iconic handbags, and luxury apparel. Prada's collaborations with renowned architects and designers reflect its commitment to artistic expression. Prada's avant-garde designs and collaborations resonate with fashion-forward consumers, similar to Ferrari's ability to anticipate and shape trends in the automotive world.

- *Salvatore Ferragamo* is an Italian luxury goods company specializing in a unique combination of artisanal craftsmanship, innovation, and elegance. The brand's commitment to Italian heritage, quality materials, and attention to details, positions it as a symbol of luxury and sophistication that can be considered very relatable to Ferrari.

- *Hermes* is a French luxury fashion and lifestyle brand. It cultivates an aura of exclusivity through limited production, meticulous attention to detail, and long-standing artisanal expertise. This, together with the brand's commitment to timeless elegance, coupled with a focus on customer experience and impeccable service, distinguishes it as a luxury brand known worldwide as Ferrari.

Ferrari 2022 EBITDA Margin of 34,8% and Net margin of 19,9% are surely more in line with the average of luxury companies: 32,9% and 14,4% respectively. This can be explained by three main factors belonging to the nature of RACE business: ***(i) strong pricing power**, **(ii) using a clients’ waiting list** and **(iii) volume scarcity to boost product exclusivity***.

Ultimately, Ferrari’s peculiarities make it difficult to collocate it into a specific industrial sector. Letting the number speaks, RACE profitability and margins are more closely related to the luxury goods industry. The way it operates through a waiting list system, a strong pricing power and low volume strategy also resemble luxury companies’ modus operand. However, it is worthy to mention that Ferrari manufactures, and it will keep manufacturing cars as its core business, thus it will still follow the trends and it will be subjected the developments of the Luxury Performance Cars industry (“LPCI”).

Growth Strategy

(i) High resonance of the brand: by carefully managing its growth, the company aims to preserve the brand's exclusivity and ensures best-in-class quality standards. Ferrari also fosters a sense of belonging among its customers, offering the chance to join a passionate community of like-minded enthusiasts. All with the goals of creating a loyal customer base that is invested in the brand and its values.

(ii) Exploiting opportunities and new market: the company is targeting markets such as China and Russia, where there is a growing number of high-net-worth-individuals, to pursue growth in existing and emerging markets. For it to be as smooth as possible it is expanding its sales presence and building its maintenance and repair services in these regions so that customers have access to the highest levels of quality and satisfaction, and it also supports the company's commitment to providing superior customer service. To support these initiatives, investing in hiring, coaching, and retaining skilled staff in management, technical, and marketing roles is crucial, and Ferrari is promising to do so.

(iii) Research and development: RACE has a long history of pushing the boundaries of automotive design and technology, and this commitment to innovation continues to drive the company's growth. It has been particularly focused in the development of hybrid technology and has invested heavily in research and development facilities and partnerships with leading universities and technology companies to continue producing high-performance cars while also meeting increasingly stringent emissions standards.

Fig 4: Ferrari Formula 1 team

Source: Company website

(iv) Racing excellence: Ferrari is the most successful Formula 1 Team in history. For the company, beside representing the second source of revenue of the company, their participation in races is a matter of prestige and identity as well as a way to showcase the technological capabilities of its cars. By participating in high-profile racing activities and leveraging its motorsport expertise to develop advanced driving programs, the company is able to reinforce its brand reputation for technological excellence and performance. Therefore, this perception of technological superiority in racing also supports the appeal of other Ferrari-branded luxury goods.

Trends

The Luxury Performance Cars industry ("LPCI") is facing evolving trends and challenges. One key challenge is the increasing focus on environmental concerns and tightening emission regulations. In response, the industry is investing heavily in developing hybrid and electric vehicles, as seen in Ferrari's models like the **SF90 Stradale** and the upcoming **Purosangue SUV**. Another trend is the evolving preferences of high-net-worth individuals, who seek luxury performance cars with advanced technology, exceptional design, and personalized experiences. To meet these evolving needs, companies like Ferrari are investing in research and development. Despite these challenges, the LPCI remains attractive due to its positive correlation with the global economy's performance and the expanding high-net-worth individual population, especially in emerging markets.

Porter 5 forces Analysis

In the Luxury Car Market, the bargaining power of suppliers and buyers and the threat of new entrant play a relatively minor role.

(i) Threat of new entrants: Ferrari operates in a highly specialized segment of the overall automotive industry. The barrier to entry is so high due to the significant investment required to develop high-performance vehicles, the complex supply chain, and the strong brand recognition needed to be competitive in the market.

(ii) Bargaining power of suppliers and buyers: it has a vertically integrated supply chain which reduces its reliance on external suppliers. In a similar way, Ferrari was able to construct and maintain a club of loyal customers, similarly to other LCMs.

(iii) Threat of substitutes: Although Ferrari produces high-performance cars that have few direct substitutes, there are several alternatives available to buyers. Nonetheless their quality in terms of performance, innovation and design represent the core of its brand differentiation.

(iv) Internal rivalry: the luxury performance car industry is highly concentrated, and competition is based on several factors, including brand recognition, product quality, design, and innovation. It does though face competition from other luxury car brand.

Historical Financial Analysis

Since its spin-off from the FCA Group in 2016, Ferrari has achieved remarkable success and notable milestones. Despite the 2020 Covid-19 Pandemic, the company between 2015 and 2022, witnessed a: *(i) CAGR of 8.1% in the number of cars shipped*, *(ii) CAGR of 8.6% in total revenues and (iii) experienced significant improvements in margins*, with gross margin reaching 48,01% and net margin 19,99% in 2022.

Revenues

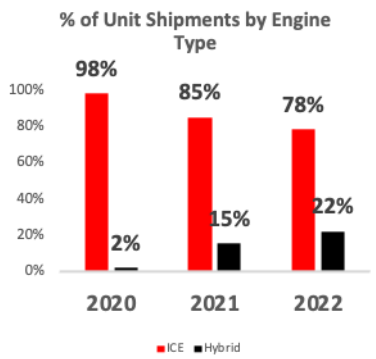

Table 3: YoY Car unit shipments by engines type

Source: Company Data, Team estimates

(i) Cars and spare parts (85.2% of revenues in 2022, 11.1% CAGR 2015-2022): volume effect. In the last 7 years, C&SP revenue growth was mainly driven by volume and personalization, with solid supplies of Range models (Portofino M, SF90 family and 296 GTB, which were in the ramp up phase). In contrast to other sections of the larger luxury market, a considerable part of the demand in the luxury performance car industry is influenced by the introduction of new products. Even in challenging market conditions, the introduction of new vehicles tends to boost sales volumes because the renewed and limited nature of a new product has the ability to generate and attract its own demand from customers. This is what we observed after the Covid-19 pandemic in 2020. In both 2021 and 2022, RACE witnessed a remarkable rebound, surpassing pre-pandemic levels from 2019 13,221 car shipped in 2022 vs 10,131 in 2019).

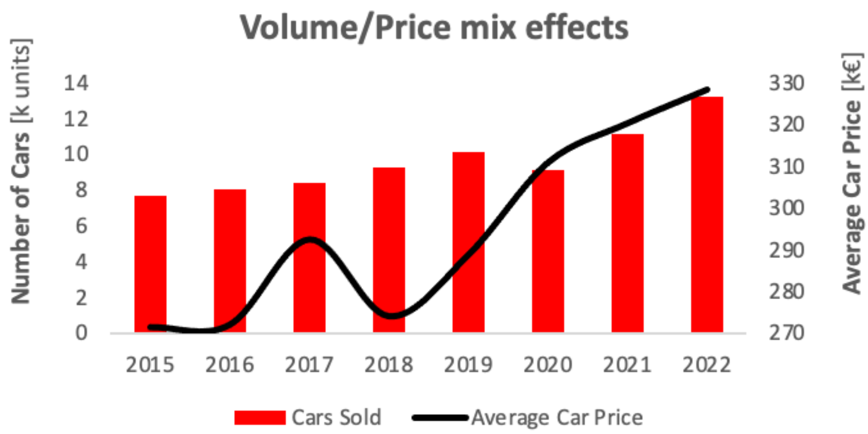

Table 4: Volume/Price mix effect

Source: Company Data, Team estimates

(ii) Engines (3.1% of revenues in 2022, -4.8% CAGR 2015-2022): volatile and uncertain future. Engine revenues have been volatile, given that the demand relies on the orders received from Maserati, which in turn, is influenced by Maserati's production volumes, car launches and expected sales. Ferrari multi-year agreement with Maserati started in 2003 will expire at the end of 2023 but, already since 2019, we see a decline in Engine revenues as a percentage of total RACE revenues.

(iii) Sponsorship, commercial and brand activities (9.4% of revenues in 2022, 1.2% CAGR 2015-2022): **F1 & lifestyle activities driving the segment**. The rise in performance was mainly due to an enhanced Formula 1 ranking compared to the previous year, as well as lifestyle-related endeavours, although this was partly balanced by reduced sponsorships.

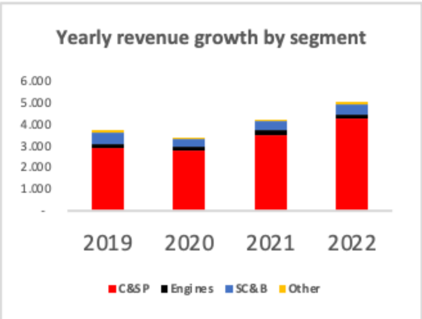

Table 5: Ferrari YoY revenue growth by segment

Source: Company Data, Team estimates

(iv) Others (2.4% of revenues in 2022, 0,7% CAGR 2015-2022): stable path over the years. Other revenues have had a linear path over the years accounting between 4% and 2.4% of Ferrari total revenues between 2015 and 2022. They experienced an increase between 2021 and 2022 (77.7€ million vs 119.9€ million), primarily related to racing, financial services activities and the Moto GP event held at the Mugello track which saw a complete public turnout in 2022.

Costs

The cost breakdown is very consistent over the years under consideration, with the cost of sales ranking as the most significant item, followed by the expenses related to R&D, S&G&A, and then Other expenses, which include expenditures related to, among other things, the upkeep of Maranello Circuit. Due to the boost in automobile manufacturing following the pandemic shock due to Covid-19 in 2020, the overall expenses have significantly increased in 2021 and then, in 2022.

Cost of Sales includes payments generated during the manufacturing and delivery of vehicles and parts, the sale of engines to Maserati and the rental of engines to other Formula 1 racing teams. Over the last three years, this caption experienced an increase mainly due to a greater number of cars shipments and an increase in industrial costs, coming in part from cost inflation (raw materials and energy, (Ferrari, s.d.)). It is worth noting that in 2021 the rise in Cost of Sales, compared to 2020, was also driven by the greater number of engines sold to Maserati, due to their increase in shipments.

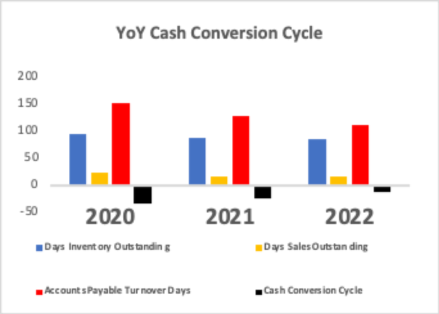

Table 6: YoY Cash conversion cycle evolution

Source: Company Data, Team estimates

Regarding *Research and development* expenses, it is possible to observe how, between 2019 and 2022, this caption has constantly increased as the company was trying to broad its product portfolio and was investing in the development of its F1 car given the change in the FIA F1 regulation for the future seasons. Moreover, it was preparing to launch the Ferrari Purosangue, the revolutionary new electric SUV, in the market in 2023.

Selling, general and administrative costs were not the main driver of RACE's costs over the last few years. Nevertheless, the increase between 2020 and 2021 and the even more accentuated rise between 2021 and 2022 is due to, as the company states in its Annual Report, "communication and marketing activities, lifestyle and corporate events." This shows the direction and the huge efforts the company is taking in creating a brand that goes beyond producing cars and participating in the F1 competition.

Margins & Returns

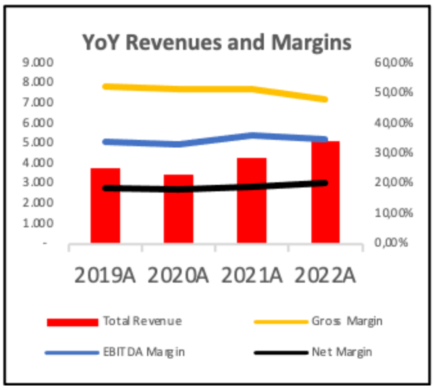

Table 7: YoY Revenues & Margins evolution

Source: Company Data, Team estimates

RACE 35.1% EBITDA and 24.1% EBIT have been quite stable over the last four years, with a slight decrease from 2021 to 2022 (35.8% vs 35.1% EBITDA and 25.2% vs 24.1% EBIT). This can be explained mainly by a decrease in the gross margin between the last two years, as Cost of Sales raised because of a higher cars volume, car personalization and product mix, as well as an increase in industrial costs, driven by cost inflation.

In particular, product mix drove the small decrease we observed in gross margin since 2019. Indeed, RACE introduced the Ferrari Monza SP1 and SP2 at the end of 2018, from which it highly benefited in the first two years. This strictly limited Icona model generates higher revenues and provides improved margins than those produced by Range or Special Series models. Therefore, they benefit the results generated in the period in which they are sold, in this case 2018 and 2019.

Ferrari's overall ROIC remained relatively stable over the three-year period. The core ROIC (lag=1) increased from 22.77% in 2020 to 25.12% in 2021 and slightly further to 28.22% in 2022. This indicates that Ferrari generated a positive return on its invested capital, although the growth rate was not significant. We can see that its evolution is mainly due to:

(i) Improved Operational Efficiency. In 2020, Ferrari implemented cost-saving measures, including a reduction in selling, general, and administrative expenses (SG&A). This reduction was motivated by the impact of the COVID-19 pandemic, which led many companies, including Ferrari, to implement cost-cutting initiatives to mitigate the financial effects of the crisis. With disruptions in the global economy and a decline in automotive sales, Ferrari have taken steps to streamline operations and reduce overhead costs to maintain profitability. Additionally, by optimizing SG&A expenses, the company aimed to enhance its cost structure and strengthen its financial performance. This involved streamlining processes, eliminating inefficiencies, renegotiating contracts with suppliers, and implementing productivity-enhancing measures.

(ii) Enhanced Capital Utilization. Ferrari's focus on enhanced capital utilization and asset efficiency can be attributed to various factors, including new car launches and product expansion. Introducing new car models (Ferrari Roma, Ferrari Purosangue) and variants allowed Ferrari to leverage its existing manufacturing capabilities and optimize the utilization of its production facilities and workforce. By expanding its product portfolio, Ferrari increased sales volume without significant increases in fixed costs, leading to improved assets turnover and capital efficiency.

FERRARI N.V

COMPANY REPORT

AUTOMOTIVE INDUSTRY

17 MAY 2023

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Equity Research: Ferrari

Ferrari: Unveiling the Unpriced Value of a Luxury Automaker

Our analysis on Ferrari N.V (RACE) concludes with a BUY suggestion and a target price of 357.34€, reflecting a 32% capital gain.

A Distinctive luxury Car Manufacturer

Ferrari stands out as a distinguished luxury automaker, known for its unique brand and business model. With a focus on superior customer care, technical innovation, and restricted supply through controlled waiting lists, RACE enjoys a trustworthy client base and consistently high demand. Its exceptional financial performance, characterized by strong margins and returns, underscores its luxury status within the industry.

Unlocking New Horizons Growth

Firstly, with a diverse portfolio of vehicles, including their first fully electric car set to debut in 2025 and the hybridization of their entire line-up, Ferrari is embracing sustainable mobility while retaining their iconic performance and luxury. Secondly, the company's expansion into the SUV segment with the Introduction of the Ferrari Purosangue positions them to capture a broader market and diversify revenue streams. Lastly, Ferrari's commitment to strengthening the brand showcases their ability to extend their influence beyond automotive excellence.

Company description

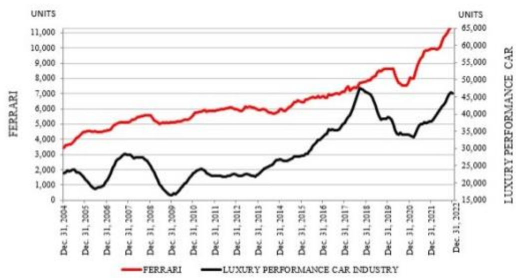
Ferrari, founded in 1947, is an iconic luxury automotive company renowned for its high-performance sports cars. Combining exquisite design, cutting-edge technology, and a rich racing heritage, Ferrari crafts exceptional vehicles that embody passion, precision, and unrivalled driving experiences.

Recommendation:	**BUY**
Price Target FY23:	**357,34 €**
Price (as of 17-May-23)	**270,80 €**

Bloomberg

52-week range (€)	167.45 – 295.67
Market Cap (€m)	49.157B
Outstanding Shares (m)	181.953

Source: Bloomberg



Source: Annual Report, SeekingAlpha

(Values in € millions)	2022	2023E	2024F
Revenues	5.095,3	6.332,6	7.190,8
Gross Profit	2.446,3	3.158,9	3.511,0
EBITDA	1.773,6	2.000,4	2.188,6
Total Comprehensive Income	1.012,2	1.250,7	1.319,7
P/E	49.48	51.99	49.27

Source: Annual Report and Team Estimates

THIS REPORT WAS PREPARED EXCLUSIVELY FOR ACADEMIC PURPOSES BY ANDREA LA SERRA AND ANDREA DE CARO, MASTER IN FINANCE STUDENTS OF THE NOVA SCHOOL OF BUSINESS AND ECONOMICS. THE REPORT WAS SUPERVISED BY A NOVA SBE FACULTY MEMBER, ACTING IN A MERE ACADEMIC CAPACITY, WHO REVIEWED THE VALUATION METHODOLOGY AND THE FINANCIAL MODEL. (PLEASE REFER TO THE DISCLOSURES AND DISCLAIMERS AT END OF THE DOCUMENT)

Group part

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Company presentation

Figure 1: Ferrari Founder, Enzo Ferrai

Source: Company Website

Ferrari has a rich heritage that dates back to **1929** when Enzo Ferrari, a former Alfa Romeo driver, established Scuderia Ferrari as a racing team. The team took part in several important races such as **Formula 1**, since 1951 but it was not until 1947 that the company officially became a carmaker with the presentation of its first streetcar.

Over the years, Ferrari has become known as one of the most exclusive and iconic luxury car brands in the world (FINANCE, 2022) thanks in part to its successful participation in Formula 1 and its policy of limited production, which has fuelled its aura of exclusivity.

Fiat S.p.A. (now FCA, Fiat Chrysler Automobiles) bought half of Ferrari S.p.A. ownership in 1969, reaching then 90% stake in 1988 after the death Enzo Ferrari, leaving to his son Piero the remaining 10%. In 2016, Ferrari officially separated from FCA and successfully completed its IPO which led it to become an independent company under the ticker of RACE listed on both the NYSE and Italian stock exchange.

Figure 2: Ferrari CEO, Benedetto Vigna

Source: Company Website

The company has consistently produced excellent sporting and business outcomes over the years, and ownership changes have never been a drag on that success. After the step down of Sergio Marchionne due to ill health and of Louis Carey Camilleri due to personal reasons, **Benedetto Vigna** took over in charge as CEO of Ferrari in 2021. The positive performances in recent quarters are confirming the experience and competencies of the current management team.

Company Profile

Ferrari employs 4,919 people at its facilities: 4,606 in Maranello and 312 in the offices around the world. It has a **market capitalization** of **EUR 49.157 million**, 2022 **Net Revenues** of **EUR 5.095 million**, and a 7Y Revenues **CAGR** of **8,63%.** Through its network of chosen dealers, Ferrari delivers more than 10,000 automobiles globally. Participating in the F1 Championship has always provided the Company with a technological edge and the unmatched opportunity to incorporate the learned expertise into the creation of its road vehicles. Due to this, Ferrari was able to price their automobiles for a premium compared to other luxury automakers (7Y Average Price per car CAGR of 2,76%). The brand's cornerstones - Italian design, cutting-edge technology, innovation, and genuine exclusivity - are incorporated into every Ferrari vehicle.

Share Details

RACE has **181 953 498 issued common shares** as of December 31, 2022. Exor N.V., which holds **24.44%** of Ferrari's common shares and 36.25% of voting power, Piero Ferrari (**10.39%** of common shares and 15.43% of voting interest), BlackRock (**5.69%** of common shares) and T. Rowe Price Associates, Inc (**4.48%** of common shares) are the company's largest shareholders.

Moreover, Ferrari has a **'Loyalty Voting Structure".** Long-term shareholders of the company will get special voting shares in order to recognize their ownership of the common shares and to encourage stability among the shareholder base. Common share buyers who register their shares in the loyalty share register and hold them for three years might choose to take part in the loyalty voting program. (FERRARI, S.D.).

Ferrari's common shares are traded both on the **Euronext Milan** and on the **New York Stock Exchange** ("NYSE"). The dual listing enables the division of share trading between the two indexes, potentially resulting in a decrease in share liquidity and hindering the development of an active trading market for common shares in either or both markets. Additionally, this situation may contribute to price disparities between the exchanges.

Business Model

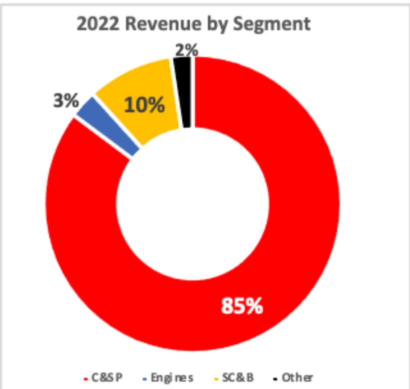

Table 1: Ferrari 2022 revenues breakdown by segment

Source: Company Data, Team estimates

Following Ferrari annual report, its revenue streams are divided into four categories: (i) Cars and spare parts (85% of total 2022A revenue), (ii) Engines (3% of total 2022A revenue), (iii) Sponsorship, commercial and brand activities (9% of total 2022A revenue), and (iv) Other (2% of total 2022A revenue).

(i) Cars and spare parts ("C&SP"): Ferrari's core strength

It includes the proceeds from the sale of each of RACE cars, customization services, and the distribution of spare parts to customers. The Company implements a production strategy that emphasizes limited quantities to maintain exclusivity and rarity. Indeed, the acquisition of a Ferrari necessitates clients to join waiting lists, whose duration depends on the model and regional market, which further boosts Ferrari's status as a premium brand. The portfolio of cars is segmented into three main categories: Range, Special Series and Iconic & Supercar.

(ii) Engines: a race coming to an end

Ferrari offers a a diverse range of product in its portfolio consisting of 3 version of engines: ICE (Internal Combustion Engine), Hybrid and soon the Full Electric engines. Moreover, it produces three variations of power units: V12, V8, and the V6. The V8 and V6 engines are also manufactured to a division of the FCA group, Maserati. This collaboration was initiated in 2003, and due to Ferrari's decision to prioritize in-house research and development investments, it will conclude in 2023. Additionally, this category encompasses the leasing of engines to other teams participating in Formula 1 racing.

(iii) Sponsorship, commercial and brand activities: Ferrari heritage and exclusivity

This segment refers to net revenue earned by Scuderia Ferrari (the Company's F1 racing team) through sponsorships agreements, Ferrari's share of the commercial revenues of the F1 World Championship and net revenues earned through the brand, which include merchandising, licensed theme parks and royalties. Thus, this business unit can be restated into two sub-categories for valuation purposes: *(a) F1 commercial revenues* and *(b) Ferrari brand revenues.*

(iv) Others

The Company's other revenue streams encompass various activities that support their racing operations, including financial services. Another contributing factor is the successful hosting of the 2022 Moto GP event at the Mugello racetrack, which saw a surge in attendance compared to the previous year. The increase in revenue for these activities was considerable in 2022.

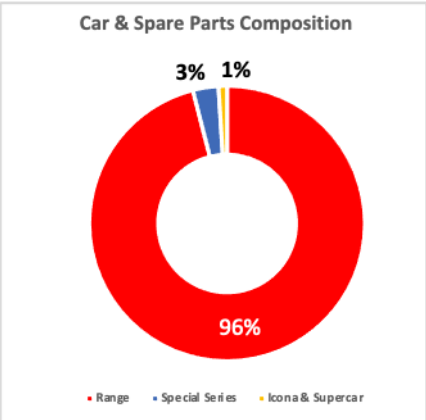

Table 2: Ferrari 2022 C&SP breakdown by pillar

Source: Company Data, Team estimates

Ferrari Design

Due to the importance of aerodynamics and aesthetics to Ferrari vehicles, the company established the **Ferrari Design Center** in 2010. This in-house facility, which spans 5.600 square meters and is located in Maranello, was completely renovated in 2018 and continues the company's longstanding tradition of research and innovation. Even non-car enthusiasts can appreciate the artistic quality of a Ferrari. The Design Center oversees all aspects of road automobile styling, including bodywork, external components, and interior trim. Ferrari is known for creating true **engineering masterpieces** because of its focus on defining and evolving the stylistic orientation of the brand and imprinting every new product with a futuristic and revolutionary vision.

Source: Company website

Ferrari Made in Italy

The fact that Ferrari has maintained its position at the forefront since its founding demonstrates not only that it has continually improved its capacity to understand and anticipate customers' tastes, but also that it is acutely aware of what Ferrari means to its customers. For this reason, a Ferrari begins to be "a Ferrari" from the point of purchase to delivery and customer service beyond the sale. The majority of production activities, including building engines, painting, and automobile assembly, take place in the Maranello facilities. In contrast to, for example, Aston Martin, whose engines are supplied by Daimler, RACE chooses to keep production in-house. Ferrari has an interest in creating unique technological know-how that could result in strategic advantages. However, for highly technical components (like brakes or transmissions), it depends on close collaborations developed with carefully chosen suppliers, with whom Ferrari retains a significant bargaining power (no supplier accounts for more than 10% of the total procurement costs).

Industry overview & Competitive positioning

Industry Overview

Ferrari operates in the “Luxury Performance Car Market”, a specific segment of the automotive industry. This market is one of the fastest-expanding segments in the global luxury market, that is projected to reach “USD 655.0 billion by 2027 which would exhibit a CAGR of 9,3% during this period” (insight, 2019). The growth of this market is driven by an increase in High-Net-Worth Individuals (HNWIs) and Ultra-High-Net-Worth Individuals (UHNWIs), who are the key customers in the market. The population of HNWIs has been growing, particularly in emerging economies like China, making the Luxury Performance Car Market highly attractive due to its high margins and growing demand from wealthy consumers globally.

Competitive Positioning

While Ferrari operates in the **Luxury Performance Car Market**, a sub-segment of the automotive industry, a deeper analysis of Ferrari's business model, products, profitability margins, clientele, and future ambitions suggests that it aligns more closely with a high-end luxury company rather than a traditional automaker.

Ferrari’s core business is to produce and sell sport cars. At a first glance, the answer to the question “In which industrial sector does Ferrari operate?” should be straightforward: **“automotive” sector**. Nevertheless, we believe that defining its industrial sector is not that easy. Therefore, we compared Ferrari’s margin with a pool of selected automotive and luxury companies.

(i) Automotive

We decided to benchmark Ferrari with seven automakers. Our choice was based on two main factors: *(i) producing high-end cars and/or (ii) participating to the FIA Formula One World Championship* (the only exceptions to this is represented by Volkswagen that cannot be considered entirely a luxury automaker but still it owns several high-end car brands, like Audi, Bentley, Lamborghini e Bugatti). We found seven listed automakers: Aston Martin, Volkswagen, McLaren, Renault, BMW, Tesla and Mercedes.

- *Aston Martin* is a prestigious British luxury car manufacturer specializing in high-performance sports cars and grand tourers. While sharing some similarities with Ferrari in the luxury segment and performance-oriented offerings, Aston Martin's financial performance and market presence differ from its Italian counterpart. One difference is in their business models. Ferrari has a unique and highly profitable approach with its low-volume production strategy, limited editions, and strong brand licensing activities. Aston Martin, on the other hand, has faced financial challenges in recent years and has focused on expanding its product portfolio and increasing production volumes.

- *Volkswagen* is a renowned automotive manufacturer operating in the global automotive industry. Unlike Ferrari, Volkswagen caters to a broader customer base with a wide range of vehicles, including sedans, SUVs, hatchbacks, and electric vehicles. Volkswagen has a strong emphasis on mass production and economies of scale, allowing them to offer competitive pricing and reach a larger market share.

- *McLaren* is a prominent automotive manufacturer known for producing high-performance sports cars and supercars. Similar to Ferrari, McLaren specializes in the production of luxury and high-end vehicles, with a strong focus on delivering exceptional performance and driving experiences. One key similarity between McLaren and Ferrari is their involvement in Formula 1. While Ferrari is known for its history in the sport, McLaren has also made significant contributions and achieved notable success in Formula 1 racing. This motorsport heritage is reflected in the design and engineering of their road cars, as McLaren leverages their racing expertise to deliver exceptional performance and handling dynamics.

- *Renault*, a prominent player in the automotive industry, distinguishes itself from Ferrari through its business model and market positioning. Renault operates as a mass-market automobile manufacturer, producing a wide range of vehicles targeting a broader customer base. One similarity between Ferrari and Renault lies in their involvement in Formula 1 racing. Both companies have a rich history in the sport and utilize Formula 1 as a platform to enhance their brand image, engage with fans, and showcase their engineering expertise, strengthening their position in the automotive industry.

- *BMW* is a German automotive company known for its luxury vehicles, motorcycles, and high-performance cars. The company's business model focuses on delivering premium vehicles that combine sophisticated design, cutting-edge technology, and exceptional driving performance. While sharing a similar focus on luxury and performance with Ferrari, BMW differentiates itself through its diverse product portfolio, including a broader SUVs and electric vehicles line-up.

- *Tesla* is an innovative American electric vehicle (EV) manufacturer that has revolutionized the automotive industry. Known for its cutting-edge technology, Tesla focuses on producing high-performance electric cars with long-range capabilities. While both Tesla and Ferrari operate in the automotive industry, their approaches differ significantly, with Tesla's emphasis on EVs and sustainable mobility, while Ferrari's focus remains on luxury performance cars powered by internal combustion engines. One key similarity is that both brands have built a strong reputation and a loyal customer base, and both have created aspirational brands that evoke a sense of luxury and exclusivity.

- *Mercedes-Benz*, a luxury automotive brand, is known for its commitment to craftsmanship, technological advancements, and a diverse range of high-quality vehicles. The company's business model focuses on producing a wide array of vehicles, from sedans to SUVs, with a blend of luxury and performance, offering customers various options to meet their preferences. Both companies have a rich motorsport heritage, with Mercedes-Benz's involvement in Formula 1.

Our findings shows that Ferrari differentiates itself from other automotive companies. Comparing its margins with selected automakers, Ferrari stands out with significantly higher profitability, owing to: *(i)* ***its low car volume policy*** *and (ii)* ***high starting selling price****.* RACE 51,3% and 48,0% Gross Margin in 2021 and 2022 respectively, are well above the automotive industry average of 22,7% and 16,8%. Even comparing ROA and ROE Ferrari stands out with a 13% ROA and 39% ROE in 2022 vs -0,15% and -8% respectively for the automotive industry.

(ii) Luxury

To select a pool of companies in the luxury goods industry, we searched for firms that have a close target clientele and a similar business approach (wating lists, brand exclusivity, few selected stores, “selling an experience, not a product”) as Ferrari. Our findings suggested us to choose six listed companies: LVMH, Burberry, Brunello Cucinelli, Prada, Ferragamo and Hermes.

- *LVMH* is a leading luxury goods conglomerate based in France. It owns a diverse portfolio of prestigious brands such as Louis Vuitton, Christian Dior, Moët & Chandon, and Hennessy. Its business model focuses on maintaining exclusivity, craftsmanship, and brand prestige, while targeting affluent customers globally. With Ferrari’s model, it shares the ability to leverage brand power, expand into new markets, and capitalize on the growing demand for luxury products.

- *Burberry* is a British luxury fashion house whose business model emphasizes the fusion of traditional craftsmanship with innovative design, attracting a wide range of customers. Burberry's success lies in its ability to balance classic British heritage with modern trends, utilizing digital marketing strategies to engage with a global audience. Both companies prioritize a fusion of traditional craftsmanship with modern design, targeting discerning customers who appreciate luxury and elegance.

- *Brunello Cucinelli* is an Italian luxury brand specializing in high-end clothing and accessories. The business model centers around creating timeless, understated luxury garments that appeal to sophisticated customers seeking both quality and socially responsible products which is shared which is highly shared with Ferrari’s business model.

- *Prada* is an Italian fashion house renowned for its avant-garde designs, iconic handbags, and luxury apparel. Prada's collaborations with renowned architects and designers reflect its commitment to artistic expression. Prada's avant-garde designs and collaborations resonate with fashion-forward consumers, similar to Ferrari's ability to anticipate and shape trends in the automotive world.

- *Salvatore Ferragamo* is an Italian luxury goods company specializing in a unique combination of artisanal craftsmanship, innovation, and elegance. The brand's commitment to Italian heritage, quality materials, and attention to details, positions it as a symbol of luxury and sophistication that can be considered very relatable to Ferrari.

- *Hermes* is a French luxury fashion and lifestyle brand. It cultivates an aura of exclusivity through limited production, meticulous attention to detail, and long-standing artisanal expertise. This, together with the brand's commitment to timeless elegance, coupled with a focus on customer experience and impeccable service, distinguishes it as a luxury brand known worldwide as Ferrari.

Ferrari 2022 EBITDA Margin of 34,8% and Net margin of 19,9% are surely more in line with the average of luxury companies: 32,9% and 14,4% respectively. This can be explained by three main factors belonging to the nature of RACE business: ***(i) strong pricing power**, **(ii) using a clients’ waiting list** and **(iii) volume scarcity to boost product exclusivity***.

Ultimately, Ferrari’s peculiarities make it difficult to collocate it into a specific industrial sector. Letting the number speaks, RACE profitability and margins are more closely related to the luxury goods industry. The way it operates through a waiting list system, a strong pricing power and low volume strategy also resemble luxury companies’ modus operand. However, it is worthy to mention that Ferrari manufactures, and it will keep manufacturing cars as its core business, thus it will still follow the trends and it will be subjected the developments of the Luxury Performance Cars industry (“LPCI”).

Growth Strategy

(i) High resonance of the brand: by carefully managing its growth, the company aims to preserve the brand's exclusivity and ensures best-in-class quality standards. Ferrari also fosters a sense of belonging among its customers, offering the chance to join a passionate community of like-minded enthusiasts. All with the goals of creating a loyal customer base that is invested in the brand and its values.

(ii) Exploiting opportunities and new market: the company is targeting markets such as China and Russia, where there is a growing number of high-net-worth-individuals, to pursue growth in existing and emerging markets. For it to be as smooth as possible it is expanding its sales presence and building its maintenance and repair services in these regions so that customers have access to the highest levels of quality and satisfaction, and it also supports the company's commitment to providing superior customer service. To support these initiatives, investing in hiring, coaching, and retaining skilled staff in management, technical, and marketing roles is crucial, and Ferrari is promising to do so.

(iii) Research and development: RACE has a long history of pushing the boundaries of automotive design and technology, and this commitment to innovation continues to drive the company's growth. It has been particularly focused in the development of hybrid technology and has invested heavily in research and development facilities and partnerships with leading universities and technology companies to continue producing high-performance cars while also meeting increasingly stringent emissions standards.

Fig 4: Ferrari Formula 1 team

Source: Company website

(iv) Racing excellence: Ferrari is the most successful Formula 1 Team in history. For the company, beside representing the second source of revenue of the company, their participation in races is a matter of prestige and identity as well as a way to showcase the technological capabilities of its cars. By participating in high-profile racing activities and leveraging its motorsport expertise to develop advanced driving programs, the company is able to reinforce its brand reputation for technological excellence and performance. Therefore, this perception of technological superiority in racing also supports the appeal of other Ferrari-branded luxury goods.

Trends

The Luxury Performance Cars industry (“LPCI”) is facing evolving trends and challenges. One key challenge is the increasing focus on environmental concerns and tightening emission regulations. In response, the industry is investing heavily in developing hybrid and electric vehicles, as seen in Ferrari's models like the **SF90 Stradale** and the upcoming **Purosangue SUV**. Another trend is the evolving preferences of high-net-worth individuals, who seek luxury performance cars with advanced technology, exceptional design, and personalized experiences. To meet these evolving needs, companies like Ferrari are investing in research and development. Despite these challenges, the LPCI remains attractive due to its positive correlation with the global economy's performance and the expanding high-net-worth individual population, especially in emerging markets.

Porter 5 forces Analysis

In the Luxury Car Market, the bargaining power of suppliers and buyers and the threat of new entrant play a relatively minor role.

(i) Threat of new entrants: Ferrari operates in a highly specialized segment of the overall automotive industry. The barrier to entry is so high due to the significant investment required to develop high-performance vehicles, the complex supply chain, and the strong brand recognition needed to be competitive in the market.

(ii) Bargaining power of suppliers and buyers: it has a vertically integrated supply chain which reduces its reliance on external suppliers. In a similar way, Ferrari was able to construct and maintain a club of loyal customers, similarly to other LCMs.

(iii) Threat of substitutes: Although Ferrari produces high-performance cars that have few direct substitutes, there are several alternatives available to buyers. Nonetheless their quality in terms of performance, innovation and design represent the core of its brand differentiation.

(iv) Internal rivalry: the luxury performance car industry is highly concentrated, and competition is based on several factors, including brand recognition, product quality, design, and innovation. It does though face competition from other luxury car brand.

Historical Financial Analysis

Since its spin-off from the FCA Group in 2016, Ferrari has achieved remarkable success and notable milestones. Despite the 2020 Covid-19 Pandemic, the company between 2015 and 2022, witnessed a: *(i) CAGR of 8.1% in the number of cars shipped*, *(ii) CAGR of 8.6% in total revenues and (iii) experienced significant improvements in margins*, with gross margin reaching 48,01% and net margin 19,99% in 2022.

Revenues

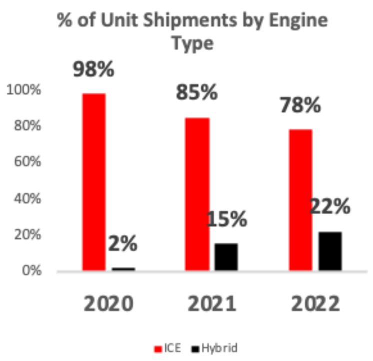

Table 3: YoY Car unit shipments by engines type

Source: Company Data, Team estimates

(i) Cars and spare parts (85.2% of revenues in 2022, 11.1% CAGR 2015-2022): volume effect. In the last 7 years, C&SP revenue growth was mainly driven by volume and personalization, with solid supplies of Range models (Portofino M, SF90 family and 296 GTB, which were in the ramp up phase). In contrast to other sections of the larger luxury market, a considerable part of the demand in the luxury performance car industry is influenced by the introduction of new products. Even in challenging market conditions, the introduction of new vehicles tends to boost sales volumes because the renewed and limited nature of a new product has the ability to generate and attract its own demand from customers. This is what we observed after the Covid-19 pandemic in 2020. In both 2021 and 2022, RACE witnessed a remarkable rebound, surpassing pre-pandemic levels from 2019 13,221 car shipped in 2022 vs 10,131 in 2019).

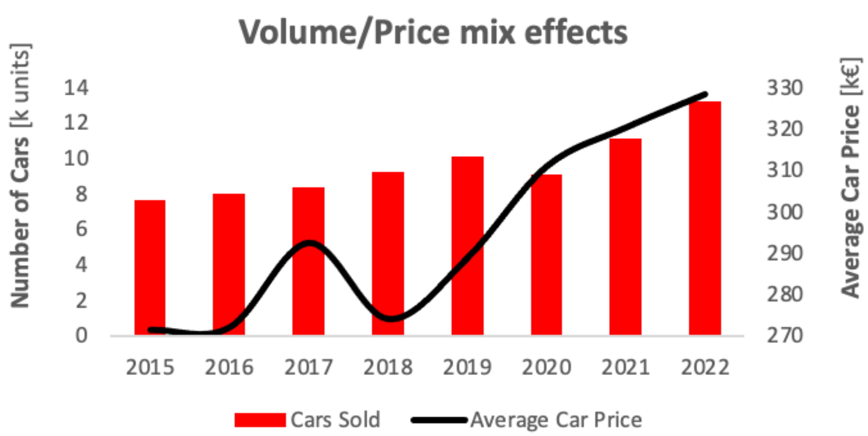

Table 4: Volume/Price mix effect

Source: Company Data, Team estimates

(ii) Engines (3.1% of revenues in 2022, -4.8% CAGR 2015-2022): volatile and uncertain future. Engine revenues have been volatile, given that the demand relies on the orders received from Maserati, which in turn, is influenced by Maserati's production volumes, car launches and expected sales. Ferrari multi-year agreement with Maserati started in 2003 will expire at the end of 2023 but, already since 2019, we see a decline in Engine revenues as a percentage of total RACE revenues.

(iii) Sponsorship, commercial and brand activities (9.4% of revenues in 2022, 1.2% CAGR 2015-2022): **F1 & lifestyle activities driving the segment**. The rise in performance was mainly due to an enhanced Formula 1 ranking compared to the previous year, as well as lifestyle-related endeavours, although this was partly balanced by reduced sponsorships.

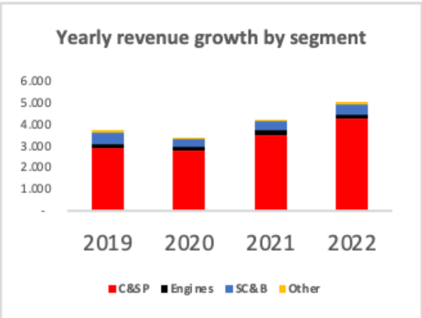

Table 5: Ferrari YoY revenue growth by segment

Source: Company Data, Team estimates

(iv) Others (2.4% of revenues in 2022, 0,7% CAGR 2015-2022): stable path over the years. Other revenues have had a linear path over the years accounting between 4% and 2.4% of Ferrari total revenues between 2015 and 2022. They experienced an increase between 2021 and 2022 (77.7€ million vs 119.9€ million), primarily related to racing, financial services activities and the Moto GP event held at the Mugello track which saw a complete public turnout in 2022.

Costs

The cost breakdown is very consistent over the years under consideration, with the cost of sales ranking as the most significant item, followed by the expenses related to R&D, S&G&A, and then Other expenses, which include expenditures related to, among other things, the upkeep of Maranello Circuit. Due to the boost in automobile manufacturing following the pandemic shock due to Covid-19 in 2020, the overall expenses have significantly increased in 2021 and then, in 2022.

Cost of Sales includes payments generated during the manufacturing and delivery of vehicles and parts, the sale of engines to Maserati and the rental of engines to other Formula 1 racing teams. Over the last three years, this caption experienced an increase mainly due to a greater number of cars shipments and an increase in industrial costs, coming in part from cost inflation (raw materials and energy, (Ferrari, s.d.)). It is worth noting that in 2021 the rise in Cost of Sales, compared to 2020, was also driven by the greater number of engines sold to Maserati, due to their increase in shipments.

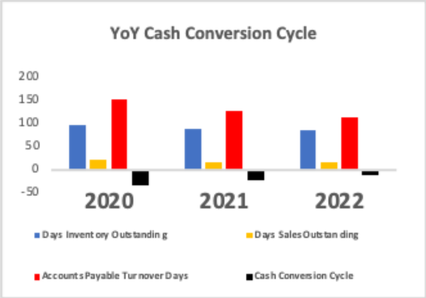

Table 6: YoY Cash conversion cycle evolution

Source: Company Data, Team estimates

Regarding *Research and development* expenses, it is possible to observe how, between 2019 and 2022, this caption has constantly increased as the company was trying to broad its product portfolio and was investing in the development of its F1 car given the change in the FIA F1 regulation for the future seasons. Moreover, it was preparing to launch the Ferrari Purosangue, the revolutionary new electric SUV, in the market in 2023.

Selling, general and administrative costs were not the main driver of RACE's costs over the last few years. Nevertheless, the increase between 2020 and 2021 and the even more accentuated rise between 2021 and 2022 is due to, as the company states in its Annual Report, "communication and marketing activities, lifestyle and corporate events." This shows the direction and the huge efforts the company is taking in creating a brand that goes beyond producing cars and participating in the F1 competition.

Margins & Returns

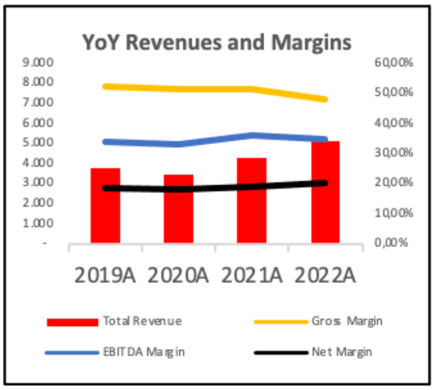

Table 7: YoY Revenues & Margins evolution

Source: Company Data, Team estimates

RACE 35.1% EBITDA and 24.1% EBIT have been quite stable over the last four years, with a slight decrease from 2021 to 2022 (35.8% vs 35.1% EBITDA and 25.2% vs 24.1% EBIT). This can be explained mainly by a decrease in the gross margin between the last two years, as Cost of Sales raised because of a higher cars volume, car personalization and product mix, as well as an increase in industrial costs, driven by cost inflation.

In particular, product mix drove the small decrease we observed in gross margin since 2019. Indeed, RACE introduced the Ferrari Monza SP1 and SP2 at the end of 2018, from which it highly benefited in the first two years. This strictly limited Icona model generates higher revenues and provides improved margins than those produced by Range or Special Series models. Therefore, they benefit the results generated in the period in which they are sold, in this case 2018 and 2019.

Ferrari's overall ROIC remained relatively stable over the three-year period. The core ROIC (lag=1) increased from 22.77% in 2020 to 25.12% in 2021 and slightly further to 28.22% in 2022. This indicates that Ferrari generated a positive return on its invested capital, although the growth rate was not significant. We can see that its evolution is mainly due to:

(i) Improved Operational Efficiency. In 2020, Ferrari implemented cost-saving measures, including a reduction in selling, general, and administrative expenses

(SG&A). This reduction was motivated by the impact of the COVID-19 pandemic, which led many companies, including Ferrari, to implement cost-cutting initiatives to mitigate the financial effects of the crisis. With disruptions in the global economy and a decline in automotive sales, Ferrari have taken steps to streamline operations and reduce overhead costs to maintain profitability. Additionally, by optimizing SG&A expenses, the company aimed to enhance its cost structure and strengthen its financial performance. This involved streamlining processes, eliminating inefficiencies, renegotiating contracts with suppliers, and implementing productivity-enhancing measures.

(ii) Enhanced Capital Utilization. Ferrari's focus on enhanced capital utilization and asset efficiency can be attributed to various factors, including new car launches and product expansion. Introducing new car models (Ferrari Roma, Ferrari Purosangue) and variants allowed Ferrari to leverage its existing manufacturing capabilities and optimize the utilization of its production facilities and workforce. By expanding its product portfolio, Ferrari increased sales volume without significant increases in fixed costs, leading to improved assets turnover and capital efficiency.

Forecast

In the short-term (2023-2026), we expected Ferrari financial performance to be primarily affected by: **(i) 15 cars launches, in line with RACE 2022-2026 strategic plan**, **(ii) higher contribution of hybrid models (60% in 2026, management strategic plan), (iii) end of the engine supply with Maserati**. In the long term (2027-2029), RACE performance will be mainly determined by **its development in the luxury EV market** (Capital markets day, s.d.).

Revenues

Cars & Spare Parts: Ferrari main contributor

To project RACE main source of revenues, we used a **bottom-up** approach. Revenues were not influenced by external factors (top-down approach) as we firmly believe that sales are primarily determined by Ferrari's decisions and production, rather than solely relying on customer demand. Ferrari could potentially increase cars volume and meet all its clients demand but it is intentionally avoiding so. This is in line with RACE strategic planning announced in June 2022 ("*controlled growth through waiting lists*" (Capital markets day, s.d.)): *"maintaining the leading position in the luxury performance sports car market, while enhancing and protecting the value and exclusivity of the Ferrari brand."*

Therefore, we forecasted C&SP revenues based on two main value drivers: **volume** and **price**.

(i) Volume: repetitive patterns over the years. We analysed the launch dates, lifecycles and Ferrari current line-up for all car models, and we integrated this information with management guidance for short-medium term. Data shows repetitive patterns in terms of car presentation and lifecycle: each year car portfolio has always been composed by around 12/15 cars. New launches usually either improve actual models or replace a model arrived at the end of its series-production, thus the overall car number in the line-up remains quite stable.

Ferrari currently holds a portfolio of 13 cars divided in 10 Range models, 2 Special Series models and 1 Icona & Supercar model and we believe this figure will not differ significantly. As mentioned in the Capital Markets Day in June 2022, it plans that Icona and Supercar will represent less than 5% of total volumes and Special Series around 10%. We projected volume growth by car category remaining within this percentages because we also believe Range type will bring the higher contribution to the overall C&SP revenues.

(ii) Price: shift to a higher starting point. C&SP revenues will also be driven by the shift from ICE to Hybrid engines, given the higher premium charged for hybrid engine cars. RACE already saw an increase in Hybrid engines (22% in 2022 vs 15% in 2021) and this trend will continue in line with Ferrari plan to have 60% of its engines hybrid/full electric by 2026. The higher premium charged for cars with this engine type has already been taken into account starting from 2020 (indeed, the average car price rose from 289k to 311k from 2019 to 2020 and kept growing reaching 328k in 2022), thus we just applied price inflation to the current car prices to counterbalance current cost inflation.

Thus, our estimations suggest that the majority of the increase in C&SP revenues will happen in the **long term** with a sharp grow between 2026 and 2029 given the: **(i) introduction of the first full electric vehicle in 2025 which will benefit company's revenue in the following years,** (**ii) increase in shipments** (+**9%** CAGR from 2026 to 2029). This means C&SP revenues will grow at a CAGR of **14,07%** between 2026 and 2029, reaching a value of **EUR 12.661mn** by 2029.

Engines: end of an era

To forecast this segment, we took into consideration 3 main value drivers: **(i) Maserati number of cars sold and its average growth rate**, **(ii) the end of Maserati-Ferrari engine supply agreement** and **(iii) the number of F1 races during a season.**

The main factor to project this segment is certainly the conclusion of the multi-year agreement to deliver V6 engines to Maserati at the end of 2023. Excluding 2020, revenues from this business unit already experienced a decrease from 2019 to 2021 and from 2021 to 2022. This pattern is going to be even stronger in future years. From 2023 onward, this segment will only be composed of RACE engine rentals to other F1 teams and we do not have enough information to believe Ferrari will reach an agreement to supply its engines to other car makers in the near future.

Maserati saw a slight decrease in shipments between 2022 and 2021 (23,404 vs 24,269 units) and we believe they will experience a small increase in 2023 mainly coming from the new Maserati GranTurismo, the first EV from any high-end Italian brand.

Therefore, we believe Engines revenues to have an increase in 2023 mainly due to the grew in the number of cars sold by Maserati. Afterwards, we projected revenues from this business unit based on the expected calendar of F1 races. Given that Ferrari earns based on the rental of engines to other F1 teams, its revenues increase if the number of races in the calendar increases, as well as the opposite. The current guidance plans a maximum of 25 official races per season. In our forecast, we also considered the number of pre-season testing given that Ferrari engines would be rented even in this occasions. We believe a maximum of 27 races will be reached in 2026 and will be kept constant in the next years.

Therefore, our estimates suggest a CAGR of 1,9% between the 2022-2029 period for the engine segment.

Sponsorship, Commercial and Brand

F1 commercial revenues: Ferrari Heritage. It comprises sponsorship agreements for Scuderia Ferrari and RACE share of FIA Formula One World Championship commercial revenues. We expect revenues coming from this segment to also be driven by the prospected F1 calendar. A higher number of races will benefit sponsorship agreement of each team and, particularly, of "top"

F1 teams. Ferrari, as the longest and most successful running team, will benefit from the increased number of races and will further increase its share of revenues coming from this segment.

Our findings show a CAGR of 2,32% between 2022 and 2029 period for the Sponsorship, commercial and brand segment.

Others

To gauge the performance of this segment, we have utilized as indicator the ratio between these revenues and the revenues generated from the Cars and Spare Parts segment. Given that most of these revenues are related to the financing activities of Ferrari's clients, we do not think that the path for these revenues will change substantially in the next years. Thus, going forward, we expect this ratio to remain relatively stable, indicating that the performance of this sector will align with the growth rate observed in the Cars and Spare Parts segment.

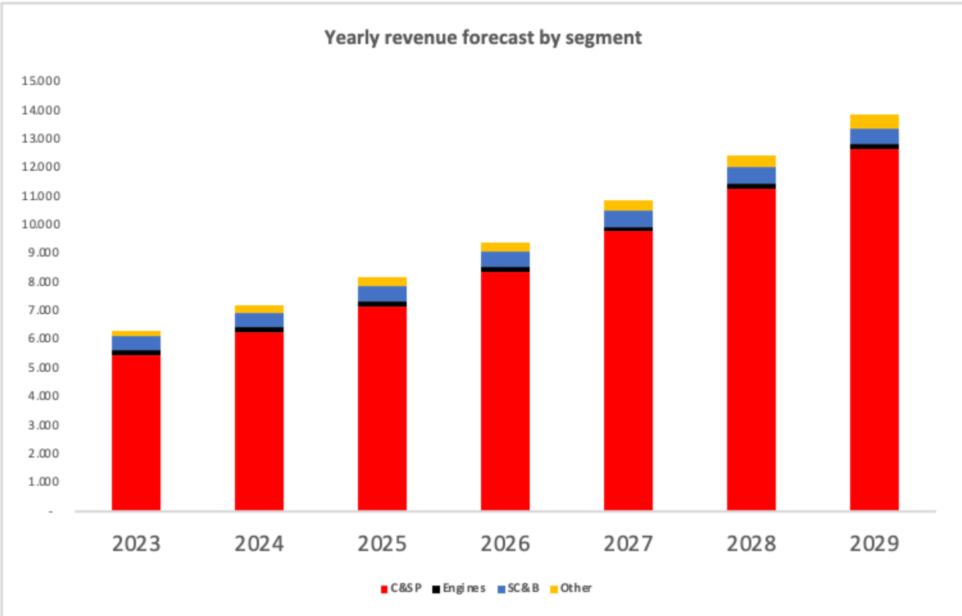

Table 8: YoY Revenues Forecast by segment

Source: Company Data, Team estimates

Costs & Margins

We expect Cost of Sales to keep increasing until 2026, like they did from 2020 to 2021 and from 2021 and 2022. Our assumption is based on the fact the Ferrari plans to broad its car line-up given its 2022-2026 strategic planning announced during the Capital Markets Days in June 2022. Company's intention to electrify and diversify its model line will require the company to develop new manufacturing facilities and adjust to new procedures. Therefore, RACE's **cost of sales** will reach a peak of **51,6% as a percentage of Total Revenues in 2026.** Afterwards, we project them reverting to a cost structure pre-Pandemic year, benefiting from an already acquired know-how on the electrification process and a developed product mix.

Our assumptions will generate a drop in the Gross Margin reaching its low in 2026 with 48,4%, to then climb once more, hitting 51,4% in 2029.

SG&A is expected to slowly grow 0,25% each year until 2026 starting from its historical weight on Total Revenues. We think that there will be no big development in the upcoming years but still Ferrari will need to keep adapting to the new digitalization's trends and marketing and lifestyle activities. We believe RACE already did the big step in creating and promoting its brand through Marketing activities, so we are not expecting a big rise in the following years.

Research and Development (R&D) has proved to be a big contributor to the overall cost structure of Ferrari in the past years. Our research demonstrates that it will keep play an important role until 2026. The introduction of the company's first full electric car in 2025, the renewed Formula 1 rules, and the objective to reach approximately a 60% of hybrid and full electric engines offering out of total engine produced by 2026, led us to forecast this caption growing as a percentage of Revenues at an yearly rate of 1% until 2026. We anticipate this weight to return to historical average values in 2029, totalling a weight on the Total Revenues of 18,6%.

Based on our projections, all the margins will experience a small decrease in the first four years of the forecast, hitting their low in 2026, and will then grow reaching approximately their previous levels in 2029.

Gross Margin will experience a reduction up until a 48,4% in 2026. It will then grow to a 2029 51,4%, surpassing 2022 48% level. Net Margin will hit its low in 2026 with 15,6% and then will increase to 18,7% in 2029. Finally, Core Operational Margin, after decreasing to 15% in 2026, will touch 17,9% in 2029.

Ultimately, it is worth noting how Ferrari's margins, even in their lowest point in 2026 due to the innovations expected in the following years, will stay well above the average of the automotive industry, resembling more closely the average of the luxury goods companies.

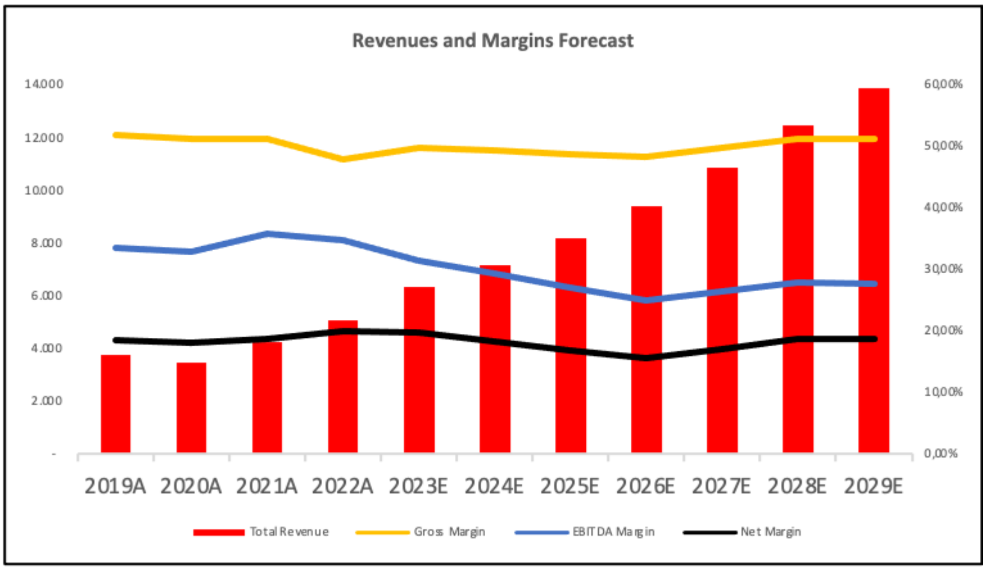

Table 9: YoY Revenues & Margins forecast

Source: Company Data, Team estimates

Valuation

Following our valuation model, we were able to forecast a year-end **target price** of **EUR 357,34** which would suggest the investors to obtain a **32% upside** on 16th March 2023 closing price of EUR 270,80. This model was thought to be conducted with the aim to obtain an as comprehensive evaluation of Ferrari's value as possible. As such, we employed both the DCF model, to capture the intrinsic value of the company based on its expected cash flow, and the relative valuation, to provide insight into how the market values RACE relative to its comparable, to finally forecast the target price as an average of the price's ranges obtained. We believe that this helped us reduce the inconsistencies and mitigate potential biases or limitations of each of the individual approaches, which may come from the sensitivity to input variables and difficulty in determining an appropriate discount rate on one side and from the sensitivity to the market sentiment and overreliance on historical data on the other side. Hence, we proceeded with this thought with the aim to increase the robustness of our estimates and the confidence of investors in the validity of our findings.

Weighted Average Cost of Capital

Cost of equity

Instead of relying solely on the conventional method of running a regression of returns against a market index, we have chosen to employ a **bottom-up beta** estimation method. As such, we were able to address key challenges associated with regression betas that we considered particularly significant for our model. These include the reflection of the firm's business composition and average financial leverage over the period of the regression rather than its current compensation and the consistent trend to exhibit a considerable standard error, as outlined by Aswath Damodaran. To overcome these limitations, we estimated the levered beta of the selected publicly traded companies and computed the average. Subsequently, we unlevered this average beta by considering the average debt-to-equity ratio of the selected firms, resulting in the unlevered beta which finally was re-levered by incorporating Ferrari's market debt-to-equity. We obtained a bottom-up beta of **1,19x**. Comparing this approach to relying solely on a single regression beta, we are confident to have reduced the standard error associated with normal beta estimation while also allowing for adjustment in case of change in Ferrari's business composition and financial leverage.

As of **market rate of return**, again, we relied on public evidence regarding the trustworthiness of the equity risk premium of the prior year as predictor of the following period. We so considered a significant time frame and incorporated the performance of the broader market to capture a representative measure of the market rate of return. Based on the above, we estimated an annualized return of **6,01%** on the historical average of the Italian stock market return over the last 8 years.

Finally, we obtained a **risk-free rate** of **4,12%** considering the 10 years Italian government bond yield as the most appropriate.

We so reached a **cost of equity** of **6,46%** calculated using the CAPM approach.

Cost of debt

When estimating the cost of debt for Ferrari, we encountered limitations with traditional approaches such as looking up the yield to maturity on a straight bond or relying on the interest rate of a specific bond issued by the company. These were indeed not considered optimal due to the lack of widely traded long-term bonds and the short-term nature of Ferrari's bond.

In light of these challenges, we turned to Aswath Damodaran's guidance on estimating the cost of debt. According to Damodaran, the cost of debt represents the current borrowing rate that incorporates both the default risk of the firm and prevailing interest rates in the market.

To estimate the synthetic rating for Ferrari and its corresponding cost of debt, we utilized the interest coverage ratio as a proxy for the firm's financial characteristics. The **interest coverage ratio** was calculated by dividing earnings before interest and taxes (EBIT) by interest expenses and we obtained a value of **24,74.** From here we obtained the **additional risk** due to the rating which was found to be **0,25%** and added this to the risk-free rate to obtain a **cost of debt** equal to **4,4%.**

Additionally, we obtained the total book value of debt and broke it down to determine the weighted average years to maturity of the debt. By incorporating the interest expenses and cost of debt, we calculated the **market value of debt**, which amounted to **EUR 2.673.** By employing this methodology, we aimed to capture the cost of debt for Ferrari, accounting for the firm's financial health and market interest rates, to enable a more accurate assessment of its overall cost of capital.

WACC

By integrating the cost of equity, cost of debt, and tax rate, we arrived at a weighted average cost of capital (**WACC**) of **6.32%**. The weights were calculated using market value of debt and equity. This represents the average rate of return required by both debt and equity investors for financing a company's operations and it also reflects our appropriate discount rate for obtaining the present value of future cash flows of the company.

Discounted Cash Flow

The result of the WACC has been used to discount the Core Free Cash Flow, which we have projected for a 7-year period until 2029. We then computed the Terminal Value using a perpetuity formula with WACC and Growth Rate in the denominator. The growth rate was derived from the **Fisher Method** which uses the long-term GDP growth rate in Italy and the inflation forecast for Italy. We obtained a **growth rate** of **3,94%.**

Combining the sum of the present value of the Core free Cash Flow with the present value of the terminal value, gives us an Enterprise Value of EUR 83.199,58 million. After subtracting the Net Adjustments, consisting of subtracting Debt and Minority Interest and adding Cash and Marketable securities and Equity investments, we obtained an equity value for Ferrari of EUR 82.984,81million.

Afterwards, dividing the Equity Value by the number of shares outstanding, we reached an **equity value per share** of **EUR 456,08**.

Multiple analysis

The evidence already widely discussed in the above competitive positioning chapter strongly underlines the closer resemblance of Ferrari to the luxury industry than to the automotive industry, both in terms of market performance and brand recognition. Following this reasoning, we decided to entirely focus on comparable companies that operates in the luxury industry to perform our analysis.

Three different historical multiples were taken into consideration mainly due to the relevance and common usage in the industry and to reduce any distortion that may arise from just using one approach: (i) **P/E** that captures company's growth prospects and risk profile, (ii) **EV/EBITDA** and (iii) **EV/Revenue** that are employed to assess the ability to generate cash and operational performance. Therefore, we aimed to capture different aspects of Ferrari's valuation, including its earnings potential, operational efficiency, and market positioning within the luxury industry.

Taking the average of these multiples across comparable companies helps mitigate the impact of any outliers and provides a more representative valuation estimate. We proceeded to discount it with a discount rate of 10% as an adjustment for non-comparable factors in the other businesses, and multiply by the respective company financials to obtain the enterprise value and subsequently the equity value by subtracting the net debt. While these choices align with common industry practices, it's important to note that multiple analysis provides a snapshot of a valuation but may not capture all intrinsic factors impacting a company's value.

From the analysis, the following multiple ratios were obtained: (i) **59,2x P/E** that corresponds to an equity value of EUR 74.063,41 (ii) **23,7x EV/EBITDA** that corresponds to an equity value of EUR 47.112,50, (iii) **8,2x EV/Revenue** that corresponds to an equity value of EUR 51.960,26.

Combined Valuation

To integrate the multiple valuation and DCF valuation models, we employed a methodology that involved taking an average of the range of prices obtained from each model. As far as the discounted cash flow model, we conducted a what if analysis by adjusting the discount rate used in the DCF model, resulting in a range of values corresponding to a WACC that was 0,5% lower and 0,5% higher than the base case. Similarly, for the multiple valuation, we changed the values obtained by reducing and increasing them by 10%.

By averaging these ranges out, we obtained the final valuation range of EUR 307,68 to EUR 407,00. From here, the **equity value per share** was calculated to be **EUR 357,34** and this represents the target estimated value per share of Ferrari we obtained taking into account both the DCF and the market-based valuation.

The **enterprise value per share** of **EUR 358,7** was derived by adjusting for the net debt.

To present the ranges of values obtained, we employed a football field graph showcasing the low and high ends of the valuation spectrum. This graphical representation allowed for a visual understanding of the potential range of prices to provide a clearer perspective on the possible valuation outcomes and from where they are derived.

Investment Risk

While Ferrari holds promising prospects for the future, it is essential to acknowledge the challenges that lie ahead.

Dependence on Luxury Performance Car Market: Ferrari's business is primarily focused on the luxury performance car market, which is subject to cyclical trends and economic conditions. Fluctuations in consumer preferences, global economic downturns, or changes in consumer purchasing power could impact the demand for high-end luxury cars, including Ferrari's vehicles.

Global Economic Factors: Ferrari's financial performance is influenced by macroeconomic factors such as GDP growth, interest rates, exchange rates, and geopolitical events. Economic recessions or slowdowns in key markets, particularly in regions where Ferrari has a significant presence, could lead to reduced demand for luxury cars and affect the company's sales and profitability.

Intense Competition: The luxury automotive industry is highly competitive, with established players and emerging brands contending for market share. Ferrari faces competition from other luxury car manufacturers, as well as high-performance divisions of mainstream automakers. Intense competition may impact Ferrari's ability to maintain or increase its market share and pricing power.

Product Dependence and Innovation: Ferrari's success relies heavily on its ability to develop and introduce new and innovative products that meet customer expectations and regulatory requirements. Failure to anticipate market trends, adapt to changing consumer preferences, or deliver technologically advanced and environmentally friendly vehicles could result in decreased demand or loss of market share.

Supply Chain Risks: Ferrari's operations depend on a complex global supply chain for sourcing components and raw materials. Disruptions in the supply chain, such as delays, quality issues, or increased costs, could impact production schedules, product quality, and profitability. Additionally, reliance on specific suppliers for critical components may expose Ferrari to supplier-related risks.

Regulatory and Environmental Compliance: The automotive industry is subject to various regulations and emission standards imposed by governments worldwide. Changes in regulations, such as stricter emission requirements or shifts towards electric mobility, could necessitate significant investments in research and development, production processes, and infrastructure, potentially affecting Ferrari's costs and competitive position.

Conclusion and Recommendation

After conducting an extensive analysis of Ferrari's financials, market trends, and industry benchmarks, we believe to have designed a valuation model that takes into account multiple factors that could potentially impact the company's performance in the future. Our approach has been both pragmatic and cautious, ensuring that the results obtained from the model reflect a high degree of accuracy and reliability.

Based on our analysis, we are confident in Ferrari's ability to meet the forecasted targets within the given period. However, we acknowledge that there are potential risks involved, as already discussed above that might affect the company's ability to maintain its high-quality standards.

It is important to note that the accuracy of our model is heavily dependent on the assumptions made during the analysis. While we have taken great care to ensure that these assumptions are realistic and well-supported, there is always a level of uncertainty involved in any forecast.

Overall, after taking into account all the potential risks and uncertainties, we are confident in our recommendation to buy Ferrari's shares. The company's strong brand equity, dedicated customer base, and commitment to delivering high-quality products place it well for continued success. Ferrari's focus on innovation, technological advancements, and expansion in both existing and new markets further strengthens its growth potential. We strongly believe that the company has a strong competitive position in the luxury car market and has the potential to continue delivering strong financial performance in the coming years.

In summary, our valuation model and target price of EUR 357,34 make us reiterate our buy recommendation, indicating a potential 32% upside based on the closing price of EUR 270,80 on 16th March 2023.

(Appendix and reference at the end of the Report)