

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

Field Lab – Equity Research Ferrari n.v. - Valuing Luxury
Exclusivity

Michele Goffredi -55908

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Abstract

This equity research review looks at Ferrari S.p.A. to help investors and stakeholders make decisions. The report summarises Ferrari's financial performance, competitive stance, strategic initiatives, and market prospects. We analyse sales patterns, profitability, and liquidity variables to determine Ferrari's financial health.

The paper also delves into Ferrari's competitive landscape, examining significant competitors as well as industry developments such as electric and hybrid vehicles. Ferrari's strategic initiatives, which include product innovation, market expansion, and sustainability efforts, are also assessed in order to determine the company's long-term growth potential and associated risks. Finally, in order to present a comprehensive perspective, we evaluate macroeconomic and industry specific issues, highlighting potential implications on Ferrari's future performance and stock price. This study is a helpful resource for individuals looking for a concise yet complete summary.

Keywords (up to four)

Ferrari N.V.

Luxury Automotive

Valuation

Finance

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This report is part of the ... report (annexed), developed by ... and ... and should be read as an integral part of it.

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I – INTRODUCTION

PRIMARY EXCHANGE

Ferrari is publicly traded in two different stock exchange, the New York Stock Exchange (NYSE), in US dollars, and the Euronext Milan, in Euros. The fact that the company is listed in two different markets, leads to differences in price of shares, due to the different market schedules and the EUR/USD exchange rate fluctuations. On the other hand, this share listing in different stock exchange, enhance Ferrari to have a higher visibility, while easing the access to capital.

OWNERSHIP STRUCTURE

While the primary shareholders may only possess a minority stake in terms of common share ownership, they have a major power when it comes to voting. This is due to Ferrari's 'Loyalty Voting Program'. Under this scheme, common shares don't inherently possess voting rights. However, shareholders who have held their common shares for more than three years are entitled to request a special voting share for each of their common shares. These special voting shares are non-transferable, and any common shares enrolled in the 'Loyalty Voting Program' must be withdrawn from the program prior to trading, which can limit the liquidity of these common shares.

II - COMPANY OVERVIEW

BUSINESS MODEL

Ferrari is focused on the luxury performance cars target market, defined as vehicles powered by engines producing more than 500 hp and selling at a retail price of more than Euro 150'000.

The company's brand representing exclusivity, innovation, state-of-the-art sporting performance, Italian design, and engineering heritage, is the main source of competitive advantage developed through the success of the Formula 1 racing team.

Scuderia Ferrari building on its excellence in technological innovation became the most successful racing team in the history of Formula 1, with a palmares of 242 Grand Prix races, 16 Constructors' World titles and 15 Drivers' World titles.

Although the most recent title has been gained in 2008, Ferrari is still considered one of the best performing team in the competition, obtaining the first place in the "Most Valuable Teams 2023" Forbes ranking, achieving a track-record of 16 constructors' championships awards, seven more than any other participant. This has been estimated examining the revenues of each brand present in the competition and its percentage of revenue that comes from the competitive world.¹

¹ Forbes. Ozanian, Mike. "Formula 1's Most Valuable Teams 2023." July 19, 2023. <https://www.forbes.com/sites/mikeozanian/2023/07/19/formula-1s-most-valuable-teams-2023/>.

Digital connection and personalization are currently gaining importance among the target market, pushing towards the development of reduction solutions from industry players that must adapt to changing market needs. Growing environmental concerns have resulted in tougher emissions rules and a surge in interest in hybrid and electric vehicles. Although the cost of electric vehicles and limited charging infrastructure now limit demand, developments in battery technology are likely to steadily enhance sales, particularly in the luxury sector. Due to their strategy of keeping lower levels compared to demand, a wide product portfolio, and regular new introductions, Ferrari's sales volumes have shown to be less volatile than those of competitors. Additionally, while other manufacturers suffered from materials shortages, this "low volume" strategy made it possible to overcome the challenge, by paying higher fees, to access the required materials.¹²

MAIN COMPETITORS OVERVIEW

Among the players of the industry, the peer group selected comprises: Bentley, Lamborghini, Maserati and McLaren, which are the most similar makers in terms of performances, product portfolios and focus on brand image.

- Aston Martin Lagonda Global Holdings PLC

The brand was created in the United Kingdom in 1913. It had a revenue of GBP 1,38 billion in 2022. The whole fleet counted 6'400 vehicles in 2022, increase of around 79% compared to previous year's production. The main reasons of the boost in production and consequent increase in sale are the new SUV produced by the firm, and the return of the brand into the Formula 1 world tour.

Regarding the electrification process, Aston Martin, similarly to Ferrari, is investing heavily to align with this requirement, both regarding electric vehicles and reduction in emissions along the manufacturing process. The main goals are: the first deliveries of the "Valhalla" (first fully electric vehicles) in 2024, followed by the introduction of a fully electric line of SUVs in 2025. Along these goals, the brand also aims to keep up with its commitment to the Science Based Targets initiative (SBTi) Net-Zero Standard. Furthermore, it is set to put a stronger effort to ensure sustainable practices along the design process, cutting non-recycled and high carbon materials (where possible) (Aston Martin Annual Report, 2022)¹³.

In addition to this, the company aims to increase safety trainings initiatives, to lower as much as possible harm and injuries of employees, as well as increasing inclusion and diversity. The main goal is to have at least 25% of women in leadership positions by 2025 and 30% by 2030 (Aston Martin Annual Report, 2022)¹⁴.

- Bentley

The brand, absolute synonym of extreme English luxury and performance, was founded in the United Kingdom in 1919. In its first years it became widely popular for the several wins at the 24 hours of Le Mans. In 2022 its revenue accounted for a revenue of Euros 3,38 billion, constantly increasing on a yearly basis (+19%) compared to 2021, also thanks to an increase in production (16'400 unites). About sales figures there has been a positive increase too, mainly driven (once again) by the always more popular SUV model, the Bentley "Bentayga",

¹² Financial Times. <https://www.ft.com/content/d7c28acf-9de6-4d1f-a897-a4455e445759>.

¹³ Aston Martin. "PowerPoint Presentation." [PowerPoint Presentation \(astonmartin.com\)](https://www.astonmartin.com)

¹⁴ Aston Martin. "PowerPoint Presentation." [PowerPoint Presentation \(astonmartin.com\)](https://www.astonmartin.com)

which is by far the most sold model of the whole products line, and accounted for around 42% of the sales. (Bentley 2022 annual report, 2022)¹⁵.

At the same time, also regarding electrification and sustainability, the firm is improving its commitment to sustainability, with the launch of a new electric model set in 2025, followed by a new electric vehicle each year. The objective of the firm is to have most of its fleet fully electric by 2030. On top of this, the commitment extends to its factories as well, with the plan of increasing the environmentally friendly procedures and operations of the factory in the United Kingdom, which already in 2020 has been certified as carbon neutral by the Carbon Trust. This made possible to set another objective of cutting the environmental impact of another 75% by 2025 (Bentley Press)¹⁶.

- Lamborghini

This widely known manufacturer has been founded by Ferruccio Lamborghini in 1948, firstly as a tractors manufacturer. Afterwards, in 1963, the first supercar was produced. The brand is nowadays owned by Volkswagen AG, but keeps its headquarter in Sant'Agata Bolognese, Italy. In 2022 the company accounted for a revenue of Euros 2.38 billion, with 9'233 units delivered (Lamborghini Financial Press)¹⁷. This recorded its best year ever, in terms of revenues. Similar to the above stated competitors, the model that strongly boosted the sales figures is the URUS, the SUV of the brand.

Also focusing on sustainability and commitment, the firm is similar to its competitors, with the new fully electric model set to come out at the end of 2026, which should be called Lanzador and should be an SUV (Lamborghini Press)¹⁸. Furthermore, the company has officially adopted 14 of the 17 SDG UN Goals, to make its production process more sustainable.

- Maserati

Maserati is an Italian brand founded in 1914, with the aim of producing high performance supercars. The brand is currently present in many endurance races. In 2022 it accounted a revenue of around Euros 2,32 billion and a production of 23'400 units (Stellantis Report, 2022)¹⁹. The most interesting fact about this brand comes from the fact that, compared to the before mentioned competitors, it is the first luxury supercar manufacturer to have already produced and sold a fully electric model. Furthermore, the company has a very settled and detailed electrification plan that includes an increase of electric vehicles in its fleet, by reaching a fully electric line of products in 2030 and strong investments in developing new ways of operating and producing vehicles, ensuring the least environmental impact possible (Maserati Press Release)²⁰. This electrification plan might have a strong impact on Ferrari, since all the combustion based of Maserati are currently supplied by Ferrari.

- McLaren

This is another widely known brand, thanks to its excellent performance and strong

¹⁵ Bentley Motors. "Bentley Celebrates Best Ever Financial Results in 2022." <https://www.bentleymotors.com/en/world-of-bentley/news/2023-news/bentley-financial-results-2022.html#:~:text=Bentley%20Motors%20today%20revealed%20record,1%20billion%20compared%20to%202018>.

¹⁶ Bentley Motors. "COMING THIS WAY: THE ELECTRIC BENTLEY". [Bentley Motors Website: World of Bentley: Beyond100: Coming this way: The Electric Bentley](https://www.bentleymotors.com/en/world-of-bentley/news/2023-news/bentley-financial-results-2022.html#:~:text=Bentley%20Motors%20today%20revealed%20record,1%20billion%20compared%20to%202018)

¹⁷ Lamborghini. "Financials." [Financials | Lamborghini.com](https://www.lamborghini.com/en/financials).

¹⁸ Lamborghini. "Lamborghini unveils the Lanzador-future electric emotion [Lamborghini unveils the Lanzador: future electric emotion](https://www.lamborghini.com/en/press-releases/2023/03/01/lamborghini-unveils-the-lanzador-future-electric-emotion)

¹⁹ Stellantis. "Financial Reports." <https://www.stellantis.com/en/investors/reporting/financial-reports>.

²⁰ Maserati. "Maserati Media" <https://www.media.maserati.com/en-ww/releases/1690>

predominance in the different competitions worldwide. The recent come back into the Formula 1 championship has been very beneficial for its popularity and sales. In 2022 the British brand, founded in 1963, accounted for a revenue of around Euros 700 million and a production of 2'188 units (McLaren Annual Report, 2022).

According to its CEO, the first electric vehicles, which is planned to have many features of F1 Cars, is set to be launched in 2030 (Auto Desk, 2023)²¹.

GEOGRAPHICAL SEGMENTATION OF COMPETITORS

Focusing on the geographical involvement it is relevant to see where the competitors position themselves on a global scale. As already mentioned, Ferrari's biggest markets are: America (Especially USA and Canada) and Europe. While the most growing markets are Middle East (UAE, Saudi Arabia) and APAC countries (China, India in particular). After covid-19, the sales of Supercars increase by around 50% in India, and the number is projected to continue this path (Doval, 2022)²²:

Aston Martin – Europe is its biggest market, constantly increasing. All other markets are well stable, with China increasing in the last year (2022).

Bentley – Americas is the biggest region, particularly USA and Canada. At the same time, it has been registered a strong increase in the APAC area, particularly in Japan and Middle Eastern regions (UAE, Saudi Arabia), but the biggest APAC market remains China (Bentley press release)²³.

Lamborghini – The biggest market is Americas (USA in particular), Europe and APAC (China mostly). The biggest growing markets are always in APAC (Middle east and India).

Maserati – Americas (USA in specific) is the biggest geographic area of sales, with and APAC (China specifically) strongly growing.

McLaren – Americas (USA in specific) is the biggest geographic area, followed by Europe (United Kingdom mostly), with and APAC (China and Middle easter countries) being the most emerging countries.

It is visible how the luxury supercar market is unified and how the expansions areas are very similar among all actors, therefore it is vital to continue investing in the right direction and deliver the best products possible, to gain a certain competitive advantage.

IV - FORECASTING

REVENUE DRIVERS AND GROWTH RATE

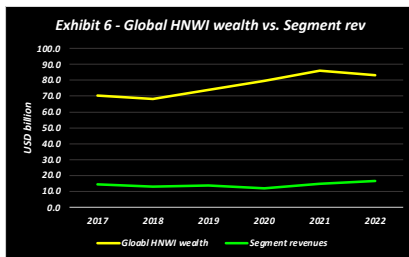
After having deeply analyzed the company's business model, centered on brand strength and luxury exclusivity, the main target segment identified, is the High-net-worth individuals (HNWI). Hence, it has been carried out a comparison between Ferrari's segment revenues performance and global HNWI wealth changes (Exhibit 6) over the estimation period 2018-2022²⁴. Following the analysis, a common

²¹ Hindustan Times. "An all-electric supercar? McLaren boss outlines the very real challenges." <https://auto.hindustantimes.com/auto/electric-vehicles/an-all-electric-supercar-mclaren-boss-outlines-the-very-real-challenges-41696488918313.html#:~:text=McLaren%20CEO%20Michael%20Leiters%20pegs,of%20segment%20and%20price%20points>.

²² Times of India. "Super-luxury car sales surge 50%, clock highest-ever growth in India." <https://timesofindia.indiatimes.com/auto/news/super-luxury-car-sales-surge-50-clock-highest-ever-growth-in-india/articleshow/96183327.cms>.

²³ Bentley Motors. "BENTLEY DELIVERS MORE CARS THAN EVER IN 2022." [Bentley News 2023 : BENTLEY DELIVERS MORE CARS THAN EVER IN 2022 \(bentleymedia.com\)](https://www.bentleymedia.com)

²⁴Capgemini. "World wealth report 2023" <https://www.capgemini.com/insights/research-library/world-wealth-report/>



trend has been unveiled, since comparable total revenues (segment), moved coherently with the fluctuations in HNWI wealth, showing an average lag of 3,26%. As a result, global HNWI wealth has been selected as the main driver in the revenue forecast.

Starting from the global HNWI wealth increase (23-27), forecasted at 38%²⁵, we derived the implied CAGR of 6.65%. After applying the lag rate of 3,26% to the forecasted data, it has been computed the CAGR of the automotive luxury segment resulting at 6,44%.

During the estimation period, Ferrari showed an average market share of 32,44%, which is estimated to reach 40% over the forecasted period, following the launch of the first SUV model, the Ferrari Purosangue. The units of this SUV are already sold out until, at least, 2026²⁶. This is projected to positively impact the firm's revenues, similarly to the case of Lamborghini, right after the launch of their first SUV, the URUS. This model strongly contributed to an increase in market share of 6,29% in 2022²⁷.

Combining the industry forecasts developed, with the estimated market share of Ferrari (40%), leveraging on the industry forecasts developed, it has been estimated Ferrari's revenue growth to outperform the market segment, at a rate of 6,97%.

WACC ESTIMATION

Observing the values from the estimation period (2018-2022) the D/V target has been assumed as 58%, below the past 5 years average of 63,31%, coherently with the increase in interest rates. The risk-free rate was estimated using the Germany 10 Years Government Bonds as benchmark. Beta equity has been computed through a 5 years (monthly) regression, between the excess return of Ferrari and the excess return on the market, computed assuming the S&P Europe 350 as the benchmark, given the primary location of the firm in Europe, as well as the listing in the Mercato Telematico Azionario of Milan.

After deriving beta unlevered (0,73) and beta debt (0,49), it has been computed cost of debt (3,48%) and cost of equity (4,96%), by adding to the current risk-free-rate (2,20%) the respective beta, multiplied by the market risk premium (2,61%).

Considering the firm's capital structure and marginal tax rate, the resulting Weighted Average Cost of Capital amounts to 4,10 %.

V – VALUATION

DCF MODEL

The first instrument employed to derive the equity value of the company is the Discounted Cash Flow (DCF) method.

- Forecasted financial statements (23-32)

After selecting a 5-year estimation period (2018-2022) Ferrari's Financial Statements have been analyzed to derive key financial metrics that has been used to build financial statements related to

²⁵ UBS. "Global Wealth Report 2023" <https://www.ubs.com/global/en/media/display-page-ndp/en-20230815-global-wealth-report-2023.html#:~:text=Over%20the%20next%20five%20years%2C%20we%20expect%20global%20wealth%20will,30%25%20to%20reach%20USD%20110%2C270.>

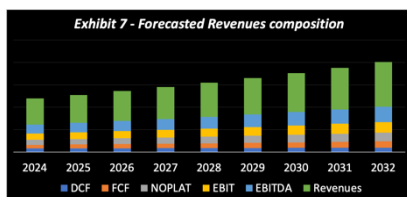
²⁶ Fox Business. "Ferrari's SUV Sold Out Until 2026." <https://www.foxbusiness.com/lifestyle/ferraris-suv-sold-out-until-2026.>

²⁷ Own estimate

the 10 years forecast period (2023-2032). The starting point has been the identification of the growth rate, applied to 2022 actual revenue, to derive the firm's future revenue's structure (23-32). Consequently, key margins resulting from gross profit (56,96%), SG&A expenses / Revenue (8,99%), R&D expenses / Revenue (13,82%), EBITDA margin (34,35%), D&A / PP&E (34,56%), net financial expenses / Revenue (1%), Income Tax Rate (20,06%).

Projected revenues have been used to compute the remaining captions, by applying the average margins calculated in the financial statement analysis of the estimation period.

The same approach has been undertaken to project the balance sheet captions for the estimated period. The asset turnover has been applied to the forecasted revenues, to derive the future total assets of each year. Starting from the capital structure, cash and cash equivalents (C&CE) have been estimated applying the C&CE / Sales to the projected revenues, to derive the cash caption. Assuming the debt to value target at 58% it has been projected the equity and net debt values Current assets have been estimated applying the cash ratio to the total assets, while inventory, receivables and payables have been computed applying the Days Sales Outstanding (DSO), Days Payables Outstanding (DPO) and the Days of Inventory Outstanding (DIO) to the forecasted future total sales. Property plant and equipment (PP&E), computed through PP&E / Revenues to account for the required increasing capacity to sustain revenue growth. The same procedure has been applied for the other accounts, that has been estimated through the financial statement analysis developed for the estimation period (2018-2022).



With the gathered input (WACC, forecasted FS and growth), a cash flow map has been built for the forecast period (2023-2032) to derive the net operating profit or loss after taxes NOPLAT (Exhibit 7).

After adding depreciation and amortization and subtracting the change in net working capital the free cash flows to the firm of the years 2023-2032 have been estimated.

The cash flows and the terminal value have been then discounted using the weighted average cost of capital and computed to derive the company's enterprise value, which has been used to arrive to the equity value, by subtracting net debt and non-controlling interests and adding the cash.

The estimate equity value as of December 2024 has been divided by the number of shares outstanding, to compute the target price of Euro 313,60, reflecting an upside potential of 9,19% if compared to the current price of Euro 287,20.

In addition, the total potential return, rises at 9,82%, considering the transaction with shareholders that will occur during the holding period.

To complete the overview, a sensitivity analysis has been developed, to capture the variability of the price for different combinations of WACC and Growth Rate (Exhibit 8).

Exhibit 8 - DCF Sensitivity analysis WACC-Growth rate

		WACC				
		3.27%	3.68%	4.09%	4.50%	4.91%
Growth	8.31%	€ 577.81	€ 435.05	€ 348.61	€ 290.68	€ 249.16
	7.62%	€ 550.21	€ 414.55	€ 332.41	€ 277.35	€ 237.88
	6.92%	€ 523.42	€ 394.65	€ 316.67	€ 264.41	€ 226.94
	6.23%	€ 497.82	€ 375.63	€ 301.63	€ 252.02	€ 216.46
	5.54%	€ 473.35	€ 357.44	€ 287.25	€ 240.18	€ 206.45
		€ 313.60				

Source: Excel scenario manager

MULTIPLES VALUATION

To complete the company valuation process, a multiple analysis has been performed, with the aim of drawing a complete overview of how the stock of Ferrari is perceived by the market, when benchmarked against comparable companies.

Given the nature of the company it has been chosen to collect peers from both the high-end automotive industry and the luxury industry at its whole (Exhibit 9 to 12).

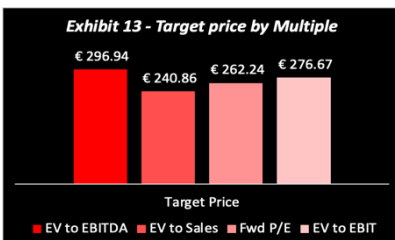
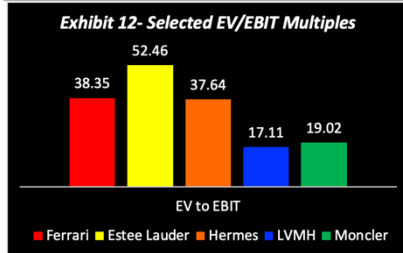
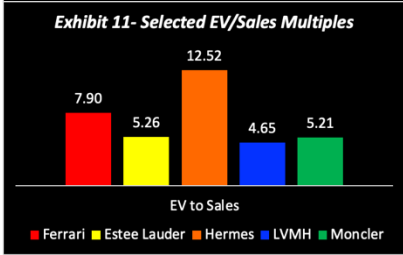
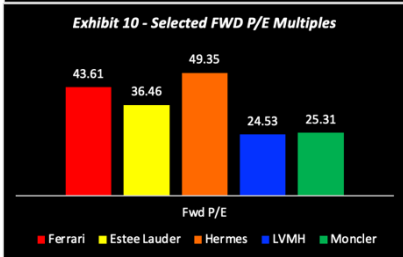
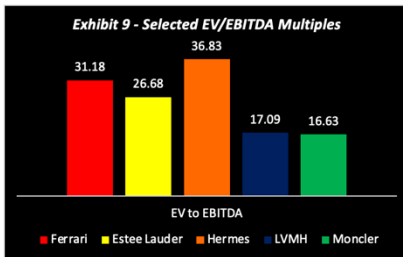
On one hand listed companies from the automotive sector do not really fit the comparison with Ferrari as the firm's target market is only reflected to the limited higher tier of the product portfolios in most competitors' offering. The main issue encountered is related to the fact that the most fitting comparable of Ferrari (Lamborghini, McLaren, Maserati etc.) are not publicly, either owned by other automotive groups (see Lamborghini owned by Volkswagen). To overcome this problematic, and make the valuation as real as possible, it has been decided to also include car manufacturers (see Mercedes), that do not only produce luxury supercars, but that have at least one of them in their portfolio.

On the other hand, luxury goods industry, despite offering totally dissimilar products, are linked by the key role played by the brand, in building exclusivity and attractiveness, which are at the base of the value creation process. The comparable selected resulted as the following values: EV/EBITDA 26,86x (Ferrari: 31,18x), forward price earnings 36,78x (Ferrari: 43.61x), EV/Sales 7,48x (Ferrari: 7,90x), EV/EBIT 35,74x (Ferrari: 38,35x).

The multiples have been then applied respectively to Ferrari Forward EBITDA, Sales, Earnings per Share (EPS) and EBIT, to estimate Ferrari's enterprise value. The target price has been calculated dividing the equity value estimated with the enterprise value to equity bridging over the number of shares outstanding. The respective resulting target prices (Exhibit 13) are:

- Euros 296,96 (EV/EBITDA Valuation)
- Euros 240,87 (EV/Sales Valuation)
- Euros 262,24 (P/E Valuation)
- Euros 276,69 (EV/EBIT Valuation)

To complete the overview, a sensitivity analysis has been developed, to capture the variability of the price to different future results of respectively EBITDA, Sales, EPS and EBIT (Exhibit 14 to 16).



EBITDA	€	Target Price	Expected capital gain
		€	%
1,800,857	€	267.25	-6.95%
1,900,905	€	282.10	-1.78%
2,000,952	€	296.94	3.39%
2,101,000	€	311.79	8.56%
2,201,048	€	326.64	13.73%

Sales	€	Target Price	Expected capital gain
		€	%
5,242,728	€	218.77	-23.52%
5,533,991	€	228.82	-20.33%
5,825,254	€	240.86	-16.14%
6,116,516	€	252.90	-11.94%
6,407,779	€	264.94	-7.75%

Exhibit 16 - Target Price Sensitivity to Changes in EPS

		Target Price	Expected capital gain
		€	
EPS	6.42	€ 236.01	-17.82%
	6.77	€ 249.13	-13.26%
	7.13	€ 262.24	-8.69%
	7.49	€ 275.35	-4.13%
	7.84	€ 288.46	0.44%
			€ 276.67

Exhibit 17 - Target Price Sensitivity to Changes in EBIT

		Target Price	Expected capital gain
		€	
EBIT	1,260,865,583	€ 249.01	-13.30%
	1,330,813,671	€ 262.24	-8.48%
	1,400,961,716	€ 276.67	-3.67%
	1,471,009,851	€ 290.51	1.15%
	1,541,057,931	€ 304.34	5.97%
			€ 276.67

VALUATION SUMMARY AND RECOMMENDATION

To conclude, after having deeply analyzed Ferrari's valuation, performed combining the Discounted Cash Flow (DCF) approach, complemented by an analysis of the market multiples derived from comparable companies, it has been possible to outline a clear result (Exhibit 18 and 19).

Exhibit 18 - Valuation summary

Approach	Min	Max	Range	Estimate
DCF (Growth)	€ 287.25	€ 348.61	€ 61.37	€ 313.60
DCF (WACC)	€ 226.94	€ 523.42	€ 296.49	€ 313.60
EV/EBITDA	€ 267.25	€ 326.64	€ 59.39	€ 296.94
EV/Sales	€ 216.77	€ 264.94	€ 48.17	€ 240.86
P/E	€ 236.01	€ 288.46	€ 52.45	€ 262.24
EV/EBIT	€ 249.01	€ 304.34	€ 55.33	€ 276.67

The DCF model conclusions lead to a target price of Euro 313,60 for Ferrari, indicating an upside potential of 9,19% compared to its current price of Euro 287,20, unveiling how the firm is trading at a price that is not reflecting the company's intrinsic value derived from its fundamentals.

The Multiples approach, by evaluating Ferrari against market comparable provides an alternative perspective. This model, varies relevantly, according to the peer group selected. Especially in the case of Ferrari, it is hard to have a perfectly suitable group of multiples, as the most fitting companies are, either not listed, or owned by other manufacturers. Moreover, the business model combined with sales figures and earnings of Ferrari, appear to be closer to firms operating in the luxury products sectors. To conclude, to have the most complete peer group possible, it has been decided to evaluate the firm against competitors in both automotive and luxury products industry. According to the automotive one, it has been defined a specific portion of the market, which includes brand that have at least one supercar in their portfolio, to make the comparison as realistic as possible. On the other hand, the competitors identified in the "competitors' analysis" section, has been employed to create an accurate benchmark when referring to organizational structure, units sold, revenue and geographical segments of expansion and financial statement analysis.

Overall following this approach Ferrari appears to be overpriced based on three out of the four multiples taken into account. This does not necessarily mean that the company is overvalued, the market could be pricing differently its unique operational characteristics, matching with the luxury automotive makers, combined with its ability of maintaining an extremely attractive Brand.

The DCF method appears to be more reliable given the specificities of the company, offering an intrinsic valuation, able to capture Ferrari's true potential and growth prospects.

Due to the several inconsistencies that characterize the multiple valuations, while the first approach is tailored to Ferrari's projected cashflows and operations, giving a more customized valuation, that better reflect the firm's unique position in the market.

Based on the above, we recommend a **BUY** on Ferrari, with a target price of Euro 313,60 representing a 9,19% upside potential, compared to the current price of 287,20, which increases to 9.82% considering the transactions with shareholders expected to occur during the trading period.

FERRARI N.V.

LUXURY AUTOMOTIVE SECTOR

STUDENT: MICHELE GOFFREDI & ANDREA ZUMPANO

COMPANY REPORT

20 DECEMBER 2023

55908 @novasbe.pt 53061@novasbe.pt

Ferrari N.V. Equity Research

“Born of the spirit of racing, Ferrari epitomises the power of a lifelong passion and the beauty of limitless human achievement, creating timeless icons for a changing world”

Relevant Heritage

The long history of successes in the Formula 1 championship and in the other endurance races, made Ferrari the most successful manufacturer in the world contributing to increasing its brand awareness worldwide. Leveraging on its heritage, Ferrari presents itself as “the dream car” of many passionate customers. When car enthusiasts buy a Ferrari, they purchase the finest Italian quality combined with the status symbol associated with it.

Electrification process

The advent of the disruptive Electric Vehicles technology is heavily affecting the whole automotive industry. Several makers already added EVs to the product portfolio. Ferrari is planning to launch its first Electric model in 2025 to adapt to the changing industry and regulations (see EU regulation to stop production of combustion-based cars by 2030), in addition to the hybrid plug-in models already in production. The electrification process will contribute to a strong reshape of the industry, which will impact all the segments including the supercars. The competitive racing environment will be equally affected, as witnessed by the raising attention gained by Formula E.

Company snapshot

Ferrari is a car manufacturer founded by Enzo Ferrari in 1929, with the aim of racing Alfa Romeo. The headquarter is in Maranello, Italy. The brand became one of the most successful and iconic in the world. The product portfolio includes regular models and special editions, such as “LaFerrari” launched to celebrate the 70th anniversary of the brand. The firm is currently publicly traded in both the NYSE and the Borsa Italiana.

Recommendation: BUY

Price Target FY24: 313,60 €

Price (as of Nov20-Dec-23) 287,20 €

Reuters: Yahoo Finance

52-week range (€) 209,88 – 372,42

Market Cap (€b) 62,94

Outstanding Shares (m) 180,51

Source: Yahoo Finance



Source: Ferrari N.V.

(Values in € billion)	2022 A	2023 E	2024 F
Revenues	5,10	5,45	5,83
EBITDA	1,77	1,87	2,00
Net Profit (€m)	0,94	1,04	1,07
YoY rev Growth	19,3%	6,92%	6,92%
EBITDA margin	34,8%	34,4%	34,4%

Source: own projections

THIS REPORT WAS PREPARED EXCLUSIVELY FOR ACADEMIC PURPOSES BY MICHELE GOFFREDI AND ANDREA ZUMPANO, MASTER'S 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)

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I – INTRODUCTION

SHARE DETAILS

On the 4th of January 2016 Ferrari launched its IPO in the Mercato Telematico Azionario (Euronext Milan), following the first division of ownership in 2015, with the IPO on the NYSE.

As of 31st December 2022, the share capital of Ferrari was 2,573 thousand, divided in 193'923'499 common shares and 63'349'112 voting shares, all with a nominal value of Euros 0,01 per share. Market capitalization Euros 52,92 billion and public float Euros 122,04 million.¹

At the same date, Ferrari owned 11'970'001 common shares and 5'199 special voting shares. In comparison, in 2021, had approximately 184'151'000 issued common shares. The main shareholders are Exor N.V. (24,44%), Piero Ferrari Trust (10,39%), BlackRock Inc. (5,69%) and T. Rowe Price Associates, Inc (4,48%). In addition to this, a big portion of shares (around d 55%) are owned by other public shareholders.

OWNERSHIP STRUCTURE

While the primary shareholders may only possess a minority stake in terms of common share ownership, they have a major power when it comes to voting. This is due to Ferrari's 'Loyalty Voting Program'. Under this scheme, common shares don't inherently possess voting rights. However, shareholders who have held their common shares for more than three years are entitled to request a special voting share for each of their common shares. These special voting shares are non-transferable, and any common shares enrolled in the 'Loyalty Voting Program' must be withdrawn from the program prior to trading, which can limit the liquidity of these common shares.

PRIMARY EXCHANGE

Ferrari is publicly traded in two different stock exchange, the New York Stock Exchange (NYSE), in US dollars, and the Euronext Milan, in Euros. The fact that the company is listed in two different markets, leads to differences in price of shares, due to the different market schedules and the EUR/USD exchange rate fluctuations. On the other hand, this share listing in different stock exchange, enhance Ferrari to have a higher visibility, while easing the access to capital.

¹ Yahoo! Finance. "Ferrari N.V. (RACE) Stock Price, News, Quote & History." December 20, 2023. <https://finance.yahoo.com/quote/RACE/>.

II - COMPANY OVERVIEW

HISTORY OF THE BRAND

Ferrari is a car manufacturing company, founded by Enzo Ferrari in 1939, in Maranello, Italy. In 1947, the firm made its first debut into the racing world, and through significant investments during the years, became one of the most competitive manufacturers. As Ferrari's founder said, the biggest challenge is the one against time², and the company works hard, to keep up with current trends and deliver to customers a product that is worth of the strong legacy that the horse has. As a result, Ferrari focuses on competing in all the major championships of Formula 1 and endurance, which represent a key pillar of its core business strategy along with strongly investing in the development of commercial supercars.

As mentioned above, the headquarter was and still is, Maranello. There, during the years there have been many developments, and today, it gained attractiveness among visitors and cars enthusiasts, who come from all over the world, to see where the most famous brand, produces its vehicles. The factory has been transformed to a flagship environment focused on delivering the Ferrari's experience. Today is possible to visit part of the Ferrari production site, the museum, and have a real-life driving experience with the Ferrari simulator. Furthermore, it is also present a private circuit, where the latest models are tested and developed.

In addition, it is worth mentioning a few names and car models that contributed to the greatness of Ferrari. In the Formula 1 championships, drivers such as Nikki Lauda and Michael Schumacher broke records with more than hundred races wins. Iconic car models made the history of the company and of the super car industry, such as the 125 S (first ever model of Ferrari), the Ferrari Enzo (in celebration of the founder), the Ferrari Testarossa (icon of the '80s and used in many movies) and the more recent LaFerrari (first Ferrari with hybrid engine and 1'000 hp).

BUSINESS MODEL

Ferrari is focused on the luxury performance cars target market, defined as vehicles powered by engines producing more than 500 hp and selling at a retail price of more than Euro 150'000.

² Ferrari Official Website. "History." <https://www.ferrari.com/en-EN/history>.

The company's brand representing exclusivity, innovation, state-of-the-art sporting performance, Italian design, and engineering heritage, is the main source of competitive advantage developed through the success of the Formula 1 racing team. Scuderia Ferrari building on its excellence in technological innovation became the most successful racing team in the history of Formula 1, with a palmares of 242 Grand Prix races, 16 Constructors' World titles and 15 Drivers' World titles.

Although the most recent title has been gained in 2008, Ferrari is still considered one of the best performing team in the competition, obtaining the first place in the "Most Valuable Teams 2023" Forbes ranking, achieving a track-record of 16 constructors' championships awards, seven more than any other participant. This has been estimated examining the revenues of each brand present in the competition and its percentage of revenue that comes from the competitive world.³

The strategy pursued granted strong results in terms of brand awareness, witnessed by the award of "world's strongest luxury and premium brand" based on the Brand Strength Index (BSI) computed by Brand Finance for the "Luxury and premium 50" 2023 ranking on the relative strength of brands, that confirmed the position held since 2019.⁴ The index is built on the three core pillars that represent the whole 'Brand Value Chain': Brand Inputs (marketing investment), Brand Equity (perception of the brand among stakeholders) and Brand Performance (price and volume premium measures).

Leveraging on its brand strength the company developed a low volume production strategy, to characterize exclusivity and scarcity through the application of waiting lists, that allowed the firm to apply significant premium prices with respect to competitors.

The firm competes to maintain its leading position in the luxury performance sports car market, operating in over 60 markets worldwide through a network of 177 authorized dealers, based on a strategy of controlled growth, with regular new model introductions, while at the same time pursuing excellence in racing to enhance a protect the brand value, successfully exploited to brand licensing to selected luxury producers and retailers⁵, as declared by the CEO: *"We are a brand that is not looking for volume. The client is giving a value to our cars because they are unique, because they are limited, because they are exclusive we could make more, but that doesn't make sense. We will offend our clients."*⁶

³ Forbes. Ozanian, Mike. "Formula 1's Most Valuable Teams 2023." July 19, 2023. <https://www.forbes.com/sites/mikeozanian/2023/07/19/formula-1s-most-valuable-teams-2023/>.

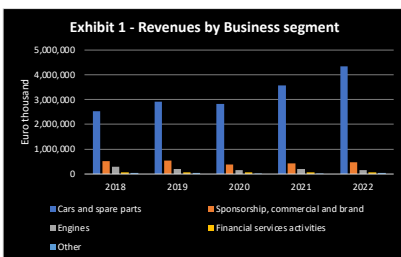
⁴ Brandirectory. "Luxury and Premium 50." <https://brandirectory.com/rankings/luxury-and-premium/>.

⁵ Ferrari NV. "Annual Report 2022." https://cdn.ferrari.com/cms/network/media/pdf/Annual_Report_Ferrari_NV_2022_13.04.2023_Web.pdf.

⁶ CNBC. "Ferrari CEO says nearly a third of new buyers are under 40, even as wait lists grow." <https://www.cnbc.com/2023/08/22/ferrari-ceo-benedetto-new-buyers-under-40.html>

In addition, to highlight the innovative and up to date business model of the company, on a corporate social responsibility aspect, Ferrari aims at reducing environmental footprint, ensure the well and effective functioning of the governance and risk management departments, as well as a strong eye on employees’ wellbeing⁷. In 2021, the firm has won the “Top Employer Italia” award, as the best companies to work in⁸. at the end of 2022, the CEO Benedetto Vigna issued bonuses of EUR 13’500 to 5’000 employees, after their outstanding performances, that brought to break sales records⁹.

PRODUCT OFFERING SEGMENTATION



Cars and spare parts (avg. 80,52%)¹⁰: this represents the biggest source of revenue for Ferrari, counting for an average of 80,52% of the total revenues taking into account the years 2018-2022. The reason why this segment is the key driver of Ferrari’s revenue is the high customization level of its products.

As of 2023, the main models offered for the base line are:

- Ferrari Purosangue: Newest model of the portfolio and first SUV
- Ferrari 296 GTB and GTS (Spider Version)
- Ferrari F8 Triturbo and Spider
- 2023 Ferrari Roma Stradale and Spider
- 2023 Ferrari Portofino M

While the special series commercialised are:

- Ferrari SF90 Stradale and Spider
- Ferrari 812 Competizione
- Daytona SP3

Sponsorship, commercial and brands (avg. 11,96%)¹¹: one big value of Ferrari is that it can count on its strong legacy, which makes easier and not very necessary the advertising processes. Therefore, Ferrari does not invest massive amounts into these practices. It is noticeable that the revenues coming from this segment still rose in the last years, mainly thanks to an improvement in the Formula 1 championship and other external initiatives that the drivers took part in (e.g; Formula 1 series on Netflix “Drive to Survive”).

Engines (avg. 5,08%)¹²: this segment is very dependent on suppliers and external deals that the company makes with other cars manufacturers. To give an example, there has been a negative fluctuation in the last few years since the deal with Maserati is close to expiration (end of 2023).

⁷ Ferrari Corporate. "Sustainability Strategy." <https://www.ferrari.com/en-EN/sustainability-strategy>.
⁸ Ferrari Corporate. "Ferrari Retains 'Top Employer Italia' Award." [Ferrari retains 'Top Employer Italia' Award](#)
⁹ Bloomberg. "Ferrari Pays Out €13,500 Bonuses to Workers After Banner Year." [Ferrari Pays Out €13,500 Bonuses to Workers After Banner Year - Bloomberg](#)
¹⁰ Own calculation
¹¹ Own calculation
¹² Own calculation

Financial services activities (1,57%)¹³: it includes different services to clients, which can decide how they want to purchase their automobiles. Each payment method adds up interests to the customers, which result into gains for the company.

Trend over the estimation period (Exhibit 1): Over the estimation period (2018-2022) a shift towards the core business has been observed, as the weight of the “Cars and spare parts” segment grew from 74.12% of the total revenues to 85,21%, while the contribution of “Engines” decreased by more than 50% passing from 8,32% to 3,05%. The reduction is connected to the low performance of Maserati, sole counterpart of an exclusive contract of supply whit Ferrari, causing a fixed low demand over the period analyzed. The agreement will expire next year freeing Ferrari in the search of alternative business partners. Considering the composition of the revenues by line of business during the observation period (2018-2022) Ferrari Strategy seems to shift towards Cars and spare parts as the main segment, given the constant reduction of the weights of the other line of business in the period considered.

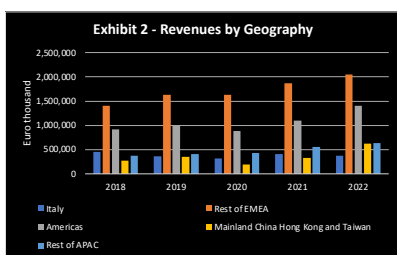
GEOGRAPHICAL SEGMENTATION

EMEA: is the largest market for Ferrari. Here, the brand started implementing its “low volume” strategy, which consists in delivering a smaller portion of products in Europe, creating different waiting lists to access certain cars, resulting in a strong increase in value and requests for these automobiles. Italy, Germany, France, Switzerland are the top five countries in Europe for Ferrari, and they account for about 30% of Ferrari’s sales¹⁴.

Americas: the company started exporting cars to the US in 1954 and it quickly expanded. Nowadays, it represents the second biggest market (avg. 34%) for Ferrari. Since it is a very luxury brand, its market share numbers are not comparable to other US and European brands¹⁵.

China, Hong Kong, and Taiwan: in this region, Ferrari started selling many cars, since 2014, thanks to the rapid economic expansion of China. On the other hand, in the last few years, it is encountering some issues related to the several anti-pollution policies that the country put into action. Nevertheless, China remains a big milestone for Ferrari, and its biggest market in the Asian continent¹⁶.

Rest of APAC: this is the smallest market for Ferrari, but it registered a constant upward growth in the last years, with an increase of 18,53% between 2021 and 2022¹⁷.



¹³ Own calculation

¹⁴ Ferrari NV. "Annual Report 2022." https://cdn.ferrari.com/cms/network/media/pdf/Annual_Report_Ferrari_NV_2022_13.04.2023_Web.pdf.

¹⁵ Ferrari NV. "FY 2022 Results Presentation." https://cdn.ferrari.com/cms/network/media/pdf/2023_02_02%20-%20Ferrari%20-%20FY%202022%20Results%20Presentation.pdf?_q=1'y4qil3*_ga*MzI2ODc3NiAuMTY1MDM5ODA4OQ..*_ga_JM1HT9B412*MTY3NTQxMTU2MS4zLjEUMTY3NTQxMjA5NS4wLiAuMA.

¹⁶ Bloomberg. "Ferrari Hits China Milestone With Over a Quarter of Sales to Women." https://www.bloomberg.com/news/articles/2023-08-09/ferrari-hits-china-milestone-with-over-a-quarter-of-sales-to-women?in_source=embedded-checkout-banner

¹⁷ Ferrari NV. "FY 2022 Results Presentation." https://cdn.ferrari.com/cms/network/media/pdf/2023_02_02%20-%20Ferrari%20-%20FY%202022%20Results%20Presentation.pdf?_q=1'y4qil3*_ga*MzI2ODc3NiAuMTY1MDM5ODA4OQ..*_ga_JM1HT9B412*MTY3NTQxMTU2MS4zLjEUMTY3NTQxMjA5NS4wLiAuMA.

Some of the rarest Ferrari's are now located in UAE and this country represents one of the fastest growing markets, together with India.

Trend over the estimation period (Exhibit 2): Over the period analyzed the weight of “EMEA” and “Americas” remained constant confirming the areas as respectively the first and second market by size for the company, despite a roughly 50% decrease in “Italy” which passed from 13,14% to 7,46%, while the emerging segments “Rest of APAC” and “Mainland China Hong Kong and Taiwan”, which were accounting for respectively 10,92% and 8,02% of the revenues in 2018 registered a moderate growth achieving 12,57% and 12,20%.

III - INDUSTRY OVERVIEW AND COMPETITIVE POSITIONING

COMPETITIVE LANDSCAPE

The luxury performance automotive market has historically mirrored the broader luxury sector's growth trends and is influenced by global macroeconomic conditions. Ferrari's presence in the luxury segment is key to the brand's relevance and heritage. Ferrari operates deliberately in selected luxury and leisure areas to support long-term growth while preserving the brand's legacy.

Despite being focused on the core business of automobiles manufacturing, the company announced its fashion collection in 2021, following different partnerships in the years after (see Ray-Ban and Moncler collaborations). The sector's main peculiarity is to leverage on customers' emotions, which consequently lead to purchasing decisions. The changing trends and stakeholders shaping the landscape, have a strong impact on Ferrari's products, which need to be quickly adapted to the current demand, to maintain its sales and reputation.

The COVID-19 pandemic created difficulties in 2020, but the luxury performance automobile market recovered in 2021 and 2022. In the post Covid-19, the brand has been able to expand its production capacity, rebalancing the years of lower sales (due to covid restrictions) and still perform well above expectations in 2021.

Despite global bottlenecks, such as supply chain interruptions, the semiconductor crisis, geopolitical conflicts, and rising prices, the market's performance in 2021 and 2022 was greatly affected by competitors' updated product offers, as demand in this industry is significantly impacted by the introduction of new products, which can quickly attract excitement and bring shifts in market share composition.

Digital connection and personalization are currently gaining importance among the target market, pushing towards the development of reduction solutions from industry

players that must adapt to changing market needs. Growing environmental concerns have resulted in tougher emissions rules and a surge in interest in hybrid and electric vehicles. Although the cost of electric vehicles and limited charging infrastructure now limit demand, developments in battery technology are likely to steadily enhance sales, particularly in the luxury sector. Due to their strategy of keeping lower levels compared to demand, a wide product portfolio, and regular new introductions, Ferrari's sales volumes have shown to be less volatile than those of competitors. Additionally, while other manufacturers suffered from materials shortages, this "low volume" strategy made it possible to overcome the challenge, by paying higher fees, to access the required materials.¹⁸

INDUSTRY ANALYSIS

Ferrari competes in the automotive industry, being mainly involved in the Luxury automotive segment. The production cycle involves a high number of parties, starting from investments in Research and Development of the product, to ensure on-edge technology, the consequent manufacturing, the marketing, sale, and post-sale services. The industry is considered to have a turnover of around USD 3 billion¹⁹. To better identify the specific segment of the market that Ferrari has, it is important to focus on the niche of the "luxury automotive". This niche is impacted by different trends and features compared to the rest of the industry, given the specific target customer.

INDUSTRY TRENDS

The automotive industry has been developing for decades, but it is only in the last five years that we assist to an actual beginning of disruption across the whole industry. The electrification and increasing interconnectivity, are two elements that are being widely implemented and represent the biggest area of investments of all cars makers. Despite observing some companies (e.g. Tesla), with the role of pioneers in the production of electric vehicles, in the last few years also other better-known firms shifted their producing in this direction. To focus on Ferrari and its competitors, the Italian company appears to be lagging against competitors, when it comes to the electrification process. The firm delivered the first hybrid models in 2022, but a fully electric car is expected only by 2025.

- Connectivity

"Luxury vehicle customers want more than just a car: over 30 percent desire exclusivity and an experience ecosystem."²⁰

¹⁸ Financial Times. <https://www.ft.com/content/d7c28acf-9de6-4d1f-a897-a4455e445759>.

¹⁹ Statista. "Automotive Industry." <https://www.statista.com/topics/1487/automotive-industry/#topicOverview>.

²⁰ McKinsey & Company. "Revolution of Luxury Vehicles: How Customer Preferences Are Changing the Luxury Vehicle Market." <https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/revolution-of-luxury-vehicles-how-customer-preferences-are-changing-the-luxury-vehicle-market>.

When analysing a development inside the automotive industry it is imperative to analyse the connectivity aspect in the vehicles. By connectivity it is intended all the new technological advancement that concern connectivity between cars, other electronic devices, and self-driving cars. According to a study by McKinsey, around 69% of buyers are willing to choose cars that have high interconnectivity technologies, compared to traditional cars²¹. At the same time, it is also worth mentioning that when it comes specifically to self-driving cars, there are brands (see Tesla) that have advanced technologies, while other major brands added features to their premium models (such as a vehicle that self-drives itself out of a garage, or that parks itself autonomously), but are still far from producing a fully self-driving car. This is also due to different road regulations, where self-driving cars are still not completely legalized.

Overall, connectivity is seen as extremely positive in most cases. Ferrari, in its latest reports made clear how big portion of investments are directed to R&D related to interconnectivity, as it is believed that the luxury cars market will experience an always increasing demand of personalization and digital connections. It has also been detected that different degrees of connectivity depend on local markets' requirements.²²

On the other hand, when it comes to supercars, it is important to divide connectivity and self-driving vehicles. Majority of brands that produces only high performances cars, are extremely favorable to connectivity, but are completely against self-driving cars. To bring an example, Ferrari's CEO Benedetto Vigna, stated many times that "Ferrari is not interested in self-driving technology"²³. This probably derives from the main idea that Ferrari is a sport car and one of its core values is to give the best driving experience possible to its consumers.

- Electrification

"Of luxury internal combustion engine (ICE) vehicle owners, 44% percent are ready to switch to pure Evs."²⁴

As mentioned above, this is one of the major disruptions in the car industry. In the latest years, sales of electric vehicles (Evs), more than doubled. In 2022, Evs sales exceeded 10 million unites, compared to the 6,6 million of 2021 and representing around 14% of all new cars sold²⁵. Geographically, China is the biggest market for Evs, and it represents around 59% of the global market, followed by United States and Europe. Moreover, in 2022 there has been strong increases in other smaller markets (India had

²¹ McKinsey & Company. "How do consumers perceive in-car connectivity and digital services?" [How do consumers perceive in-car connectivity and digital services?](https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/how-do-consumers-perceive-in-car-connectivity-and-digital-services) | McKinsey

²² Ferrari NV. "Annual Report 2022." https://cdn.ferrari.com/cms/network/media/pdf/Annual_Report_Ferrari_NV_2022_13.04.2023_Web.pdf.

²³ Business Insider. "Ferrari Doesn't Care About Autonomous Vehicles, CEO Says." <https://www.businessinsider.com/ferrari-ceo-says-company-not-interested-in-autonomous-vehicles-2023-7>.

²⁴ McKinsey & Company. "Bevolution of Luxury Vehicles: How Customer Preferences Are Changing the Luxury Vehicle Market." <https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/bevolution-of-luxury-vehicles-how-customer-preferences-are-changing-the-luxury-vehicle-market>.

²⁵ International Energy Agency (IEA). "Global EV Outlook 2022 – Analysis." [Executive summary – Global EV Outlook 2022 – Analysis](https://www.iea.org/reports/global-ev-outlook-2022) - IEA

a growth of 223% and New Zealand of around 151%, comparing to 2021). It is vital to mention that these sales are also boosted by the strong policies that governments of different countries are putting in place to enhance the electrification process. To give an example, in the EU have been implemented fiscal incentives for electric cars, as well as the tightening of total CO2 emissions²⁶. Similarly, in the USA, "The Biden-Harris Administration is releasing an EV Charging Action Plan to outline steps federal agencies are taking to support developing and deploying chargers in American communities across the country. The initial focus will be building a convenient, reliable public charging network that can build public confidence, with a focus on filling gaps in rural, disadvantaged, and hard-to-reach locations."²⁷

Despite the strong increases mentioned above, is important to consider two main points that could represent an issue in the electrification process, which are the supply of charging stations and the perception that consumers have about electric vehicles.

The charging process of an EV could take place at home, or at a charging station point. The main problematic of the home charge is that there would be the need to have an electric system that is able to bear both the charging of the vehicle and the well-functioning of all the houses' equipment, which is unrealistic for most households worldwide. Therefore, the most practical solution is to go to a charging station. Nowadays, the available charging stations are not able to satisfy the current volume of electric vehicles, and in many cases the charging points are not widely present among different territories. To help this issue, the European Union is planning major build-out of EV-charging stations. If the sales of Evs will keep the current trend, Europe will need around 3,4 million charging stations by 2030, to satisfy the demand²⁸. To give a more specific idea, in Europe in 2022, the International Energy Association, "has recommended a ratio of 10 Evs to 1 charging connection at a European level"²⁹. At the end of 2022, Norway which is the country in Europe with more Evs registered a ratio of 34 charging stations per EV³⁰.

These concerns related to the supply of charging points lead to the other factor to be considered, which is the perception of consumers. According to a survey made by Deloitte, where sample of 24'000 people of different ages and countries was interviewed, the major concerns are related to the high prices of Evs, the power and resistance of the batteries and the lack in charging stations. Therefore, to conclude on this, the sales are on a positive trend, but it might take still a while until the electrification process will become widely spread, and a lot will depend on government intervention in terms of policies and investment in infrastructures.

²⁶ IEA. "Policies to Promote Electric Vehicles Deployment". [Policies to promote electric vehicle deployment – Global EV Outlook 2021 – Analysis - IEA](#)

²⁷ The White House. "The Biden-Harris Electric Vehicle Charging Action Plan." [FACT SHEET: The Biden-Harris Electric Vehicle Charging Action Plan | The White House](#)

²⁸ IEA. "Ratio of public chargers per EV stock by country, 2020". [Ratio of public chargers per EV stock by country, 2020 – Charts – Data & Statistics - IEA](#)

²⁹ EVAdoption. "What Is The 'Minimum Acceptable' Ratio Of EVs to Charging Stations?" [What Is The "Minimum Acceptable" Ratio Of EVs to Charging Stations? | EVAdoption](#)

³⁰ Statista. "EVs per charging point worldwide by country." [EVs per charging point worldwide by country | Statista](#)

As mentioned before, Ferrari does not produce any Evs yet, the first is planned to be launched in 2025, but it is still not clear if it will be a sport car or an SUV. On the other hand, Ferrari it is not totally far from electric engines, as it already produces plug-in cars, which have combustion engine as well as a relatively small battery. It produces two models which are the SF90 (also available in Spider option) Stradale and the 296 GTB (also available in convertible). Both models have a range of drive in electric of around 25 km, therefore most of the times they are to be driven with both combustion and electric engine combined.

This similar trend is followed by Aston Martin (might launch the first fully electric car in 2024), Rolls-Royce (it is in process of designing the first fully electric model: Spectre) and, Lamborghini, which may produce an electric car around 2027.

MAIN COMPETITORS OVERVIEW

Among the players of the industry, the peer group selected comprises: Bentley, Lamborghini, Maserati and McLaren, which are the most similar makers in terms of performances, product portfolios and focus on brand image.

- Aston Martin Lagonda Global Holdings PLC

The brand was created in the United Kingdom in 1913. It had a revenue of GBP 1,38 billion in 2022. The whole fleet counted 6'400 vehicles in 2022, increase of around 79% compared to previous year's production. The main reasons of the boost in production and consequent increase in sale are the new SUV produced by the firm, and the return of the brand into the Formula 1 world tour.

Regarding the electrification process, Aston Martin, similarly to Ferrari, is investing heavily to align with this requirement, both regarding electric vehicles and reduction in emissions along the manufacturing process. The main goals are: the first deliveries of the "Valhalla" (first fully electric vehicles) in 2024, followed by the introduction of a fully electric line of SUVs in 2025.

Along these goals, the brand also aims to keep up with its commitment to the Science Based Targets initiative (SBTi) Net-Zero Standard. Furthermore, it is set to put a stronger effort to ensure sustainable practices along the design process, cutting non-recycled and high carbon materials (where possible) (Aston Martin Annual Report, 2022)³¹.

In addition to this, the company aims to increase safety trainings initiatives, to lower as much as possible harm and injuries of employees, as well as increasing inclusion and diversity. The main goal is to have at least 25% of women in leadership positions by 2025 and 30% by 2030 (Aston Martin Annual Report, 2022)³².

³¹ Aston Martin. "PowerPoint Presentation." [PowerPoint Presentation \(astonmartin.com\)](#)
³² Aston Martin. "PowerPoint Presentation." [PowerPoint Presentation \(astonmartin.com\)](#)

- Bentley

The brand, absolute synonym of extreme English luxury and performance, was founded in the United Kingdom in 1919. In its first years it became widely popular for the several wins at the 24 hours of Le Mans. In 2022 its revenue accounted for a revenue of Euros 3,38 billion, constantly increasing on a yearly basis (+19%) compared to 2021, also thanks to an increase in production (16'400 unites). About sales figures there has been a positive increase too, mainly driven (once again) by the always more popular SUV model, the Bentley "Bentayga", which is by far the most sold model of the whole products line, and accounted for around 42% of the sales. (Bentley 2022 annual report, 2022)³³.

At the same time, also regarding electrification and sustainability, the firm is improving its commitment to sustainability, with the launch of a new electric model set in 2025, followed by a new electric vehicle each year. The objective of the firm is to have most of its fleet fully electric by 2030. On top of this, the commitment extends to its factories as well, with the plan of increasing the environmentally friendly procedures and operations of the factory in the United Kingdom, which already in 2020 has been certified as carbon neutral by the Carbon Trust. This made possible to set another objective of cutting the environmental impact of another 75% by 2025 (Bentley Press)³⁴.

- Lamborghini

This widely known manufacturer has been founded by Ferruccio Lamborghini in 1948, firstly as a tractors manufacturer. Afterwards, in 1963, the first supercar was produced. The brand is nowadays owned by Vlokswagen AG, but keeps its headquarter in Sant'Agata Bolognese, Italy. In 2022 the company accounted for a revenue of Euros 2.38 billion, with 9'233 units delivered (Lamborghini Financial Press)³⁵. This recorded its best year ever, in terms of revenues. Similary to the above stated competitors, the model that strongly boosted the sales figures is the URUS, the SUV of the brand.

Also focusing on sustainability and commitment, the firm is similar to its competitors, with the new fully electric model set to come out at the end of 2026, which should be called Lanzador and should be an SUV (Lamborghini Press)³⁶. Furthermore, the company has officially adopted 14 of the 17 SDG UN Goals, to make it production process more sustainable.

³³ Bentley Motors. "Bentley Celebrates Best Ever Financial Results in 2022." <https://www.bentleymotors.com/en/world-of-bentley/news/2023-news/bentley-financial-results-2022.html#:~:text=Bentley%20Motors%20today%20revealed%20record,1%20billion%20compared%20to%202018.>

³⁴ Bentley Motors. "COMING THIS WAY: THE ELECTRIC BENTLEY". Bentley Motors Website: World of Bentley: Beyond100: Coming this way: The Electric Bentley

³⁵ Lamborghini. "Financials." [Financials | Lamborghini.com](https://www.lamborghini.com/en/financials).

³⁶ Lamborghini. "Lamborghini unveils the lanzador-future electric emotion" [Lamborghini unveils the Lanzador: future electric emotion](https://www.lamborghini.com/en/unveils-the-lanzador-future-electric-emotion)

- Maserati

Maserati is an Italian brand founded in 1914, with the aim of producing high performance supercars. The brand is currently present in many endurance races. In 2022 it accounted a revenue of around Euros 2,32 billion and a production of 23'400 units (Stellantis Report, 2022)³⁷. The most interesting fact about this brand comes from the fact that, compared to the before mentioned competitors, it is the first luxury supercar manufacture to have already produced and sold a fully electric model. Furthermore, the company has a very settled and detailed electrification plan that includes an increase of electric vehicles in its fleet, by reaching a fully electric line of products in 2030 and strong investments in developing new ways of operating and producing vehicles, ensuring the least environmental impact possible (Maserati Press Release)³⁸. This electrification plan might have a strong impact on Ferrari, since all the combustion based of Maserati are currently supplied by Ferrari.

- McLaren

This is another widely known brand, thanks to its excellent performance and strong predominance in the different competitions worldwide. The recent come back into the Formula 1 championship has been very beneficial for its popularity and sales. In 2022 the British brand, founded in 1963, accounted for a revenue of around Euros 700 million and a production of 2'188 units (McLaren Annual Report, 2022). According to its CEO, the first electric vehicles, which is planned to have many features of F1 Cars, is set to be launched in 2030 (Auto Desk, 2023)³⁹.

GEOGRAPHICAL SEGMENTATION OF COMPETITORS

Focusing on the geographical involvement it is relevant to see where the competitors position themselves on a global scale. As already mentioned, Ferrari's biggest markets are: America (Especially USA and Canada) and Europe. While the most growing markets are Middle East (UAE, Saudi Arabia) and APAC countries (China, India in particular). After covid-19, the sales of Supercars increase by around 50% in India, and the number is projected to continue this path (Doval, 2022)⁴⁰:

Aston Martin – Europe is its biggest market, constantly increasing. All other markets are well stable, with China increasing in the last year (2022).

³⁷ Stellantis. "Financial Reports." <https://www.stellantis.com/en/investors/reporting/financial-reports>.

³⁸ Maserati. "Maserati Media" <https://www.media.maserati.com/en-ww/releases/1690>

³⁹ Hindustan Times. "An all-electric supercar? McLaren boss outlines the very real challenges." <https://auto.hindustantimes.com/auto/electric-vehicles/an-all-electric-supercar-mclaren-boss-outlines-the-very-real-challenges-41696488918313.html#:~:text=McLaren%20CEO%20Michael%20Leiters%20pegs,of%20segment%20and%20price%20points>.

⁴⁰ Times of India. "Super-luxury car sales surge 50%, clock highest-ever growth in India." <https://timesofindia.indiatimes.com/auto/news/super-luxury-car-sales-surge-50-clock-highest-ever-growth-in-india/articleshow/96183327.cms>.

Bentley – Americas is the biggest region, particularly USA and Canada. At the same time, it has been registered a strong increase in the APAC area, particularly in Japan and Middle Eastern regions (UAE, Saudi Arabia), but the biggest APAC market remains China (Bentley press release)⁴¹.

Lamborghini – The biggest market is Americas (USA in particular), Europe and APAC (China mostly). The biggest growing markets are always in APAC (Middle east and India).

Maserati – Americas (USA in specific) is the biggest geographic area of sales, with and APAC (China specifically) strongly growing.

McLaren – Americas (USA in specific) is the biggest geographic area, followed by Europe (United Kingdom mostly), with and APAC (China and Middle eastern countries) being the most emerging countries.

It is visible how the luxury supercar market is unified and how the expansions areas are very similar among all actors, therefore it is vital to continue investing in the right direction and deliver the best products possible, to gain a certain competitive advantage.

SWOT ANALYSIS

To better understand Ferrari’s position in the market, and its operations as a whole, it has been decided to undertake a SWOT analysis, to clarify the strong points and opportunities of the company, as well as eventual drawbacks and potential threats that could arise. To begin:

- Strengths

First of all, Ferrari has been awarded by Brand Finance 500 as the “world’s strongest brand with a rating of AAA+”⁴². Furthermore, the company as a whole owns a very diversified range of products, which allows it to be present in different segments of markets. It has very strong presence into the apparel market, jewellery (including eyewear) and cosmetics, signing different deals with pioneers in the industry, to mention one, the deal with Luxottica, to produce and sell an eyewear line (Essilor Luxottica press, 2022)⁴³. Moreover, the other strong value of Ferrari is the high level of brand loyalty and status symbol that each customer feels. Having a Ferrari does not only mean having a car that performs well above average, but it means to have a

⁴¹ Bentley Motors. "BENTLEY DELIVERS MORE CARS THAN EVER IN 2022." [Bentley News 2023 : BENTLEY DELIVERS MORE CARS THAN EVER IN 2022 \(bentleymedia.com\)](https://www.bentleymedia.com/news/bentley-delivers-more-cars-than-ever-in-2022)

⁴² Brand Finance. "Brand Finance Report, 2022." <https://static.brandirectory.com/reports/brand-finance-luxury-and-premium-50-2022-preview.pdf>.

⁴³ Essilor Luxottica. "Accordo di Licenza con Ferrari." <https://www.essilorluxottica.com/it/area-stampa/comunicati-stampa/accordo-di-licenza-con-ferrari/>.

vehicle that made the history of this sector. Finally, it is important to mention, that Ferrari has access to extraordinary financial resources and know-how that make possible to be always at the top of the industry when it comes to research and development. With the upcoming SUV (the Purosangue), which has been made available to order at the beginning of 2023, the brand registered an increase in sales of up to 24% in Q1 2023 (Ruggiero, 2023)⁴⁴. Moreover, the strong presence that Ferrari has in the different championships, especially in the Formula 1, is a big boost to its image. The Ferrari team in Formula 1 is the most valuable (around USD 3,9 billion) and is the one that receives most gains from the competition (Ozarian, Knight, 2023)⁴⁵. This is not only made possible through its performances, but also thanks to the strong feeling on identity that all the fans feel when seeing a Scuderia Ferrari. "A long legacy of victories, technological innovations and defining style, transcends the automotive industry and is the foundation of Ferrari's brand image"⁴⁶.

- Weaknesses

When analysing potential weaknesses, it could be identified as such, the low number of vehicles available, which are usually not able to satisfy the demand. On the other hand, this is not considered to be a weakness by Ferrari. As the VP of the company Enrico Galliera (Sergeev, 2019) said: "Ferrari focuses on exclusivity, and sometimes this means making customers wait for their car – to dream about their car"⁴⁷. In addition to this, another weakness is the ability to build new dealers in new geographical areas. This is due to the fact that the company does not own many actual showrooms where to sell cars, but majority of dealers are third parties that sell cars after taking agreements with Ferrari. Therefore, there could be issues related to the maintenance of high-quality standards, as well as difficulty to find suitable dealers in specific geographic areas.

- Opportunities

The main opportunities come from the newly developed technologies, exploring new markets, and widen the products portfolio. The biggest technological advancement is represented by electric engines. Ferrari already experienced some hybrid vehicles (Ferrari SF90 Stradale), but a fully electric one is yet to arrive (probably scheduled for 2025). Delivering the best possible electric supercar, would make Ferrari gain an extraordinary competitive advantage.

Furthermore, another strong opportunity is an expansion in different developing markets. To give an example, further implementations of infrastructures to affirm brand

⁴⁴ Fortune Italia. "Boom di vendite per la Purosangue, utili Ferrari record +24% nel primo trimestre." <https://www.fortuneitalia.com/2023/05/04/boom-di-vendite-per-la-purosangue-utili-ferrari-record-24-nel-primo-trimestre/>.

⁴⁵ Forbes. "Formula 1's Most Valuable Brands in 2023". <https://www.forbes.com/sites/mikeozanian/2023/07/19/formula-1s-most-valuable-brands-2023/?sh=fdbeae82adbf>

⁴⁶ Ferrari NV. "Annual Report 2022." https://cdn.ferrari.com/cms/network/media/pdf/Annual_Report_Ferrari_NV_2022_13.04.2023_Web.pdf.

⁴⁷ Motor1. "Ferrari Keeps Sales Low." <https://www.motor1.com/news/371014/ferrari-keep-sales-low/>.

image in countries like India, where sales are projected to increase exponentially, could be a strong added value. The Ferrari world in Abu Dhabi (First Ferrari theme park) generates a revenue of around Euros 700 million and is a great way to spread Ferrari's culture and brand (UAE Minister of Economy press)⁴⁸. The same could be done in India, which is a market where multiple supercars brands are trying to take the lead. In the last years, Ferrari registered sales of less than 300 vehicles a year in the whole country, but this number is projected to grow. Ferrari believes that the most important aspect so far is not establish the brand image and name, the sales will increase accordingly afterwards. Since 2015, the number of vehicles sold in India kept growing and this is projected to continue⁴⁹.

Lastly, focusing on expanding the production line, having seen the high demand for SUVs, Ferrari developed for different years an exclusive SUV vehicle, which was launched on the market in the first quarter of 2023. Third Bridge Analysts say that the new Purosangue (Ferrari SUV) is expected to boost revenues and have the most significant increase of the last 12 years⁵⁰. As mentioned, multiple times in the Ferrari's Annual report (2022), it is vital to preserve and enhance the value of the brand, developing and nurturing close relationships with customers and collectors⁵¹.

- Threats

The main threats for Ferrari come from competitors and different governmental regulations. Policymakers in several countries worldwide started paying strong attention to emissions that cars generate, therefore Ferrari, when developing a new engine, it must make sure that it stays within the emissions limit and cannot produce more than a certain number of engines, that combined, exceed the emissions limit. The always stricter government policies can represent a big obstacle to bear in mind, during the development of new models.

Another pillar is represented by competitors, which have been identified in: Lamborghini, Aston Martin, Bentley and McLaren. Nowadays the differences between these brands are minimal in terms of performance, that is why, to gain a competitive advantage it is imperative to invest in R&D and in growing brand loyalty. To give an example, Maserati already launched different electric supercars, which are part of a specific electrification plan that the company settled in 2021, with specific goals for the years to come. Maserati's electrification process includes different line of products, from sport cars to SUVs and could represent a strong competitive advantage in the supercars' sector (Maserati Press, 2022)⁵². This could be a strong threat for Ferrari, as

⁴⁸ Ministry of Education - United Arab Emirates. "Ferrari World." <https://www.moec.gov.ae/en/-/ferrari-world>

⁴⁹ Economic Times. "Ferrari Aims for a Steady Presence in India." <https://auto.economictimes.indiatimes.com/news/ferrari-aims-for-a-steady-presence-in-india/65822575?redirect=1>.

⁵⁰ Forbes. Winton, Neil. "Ferrari Expects Higher Profits Again While New Purosangue Will Broaden Its Appeal." <https://www.forbes.com/sites/neilwinton/2023/02/06/ferrari-expects-higher-profits-again-while-new-purosangue-will-broaden-its-appeal/?sh=7d86f54253b9>.

⁵¹ Ferrari NV. "Annual Report 2022." https://cdn.ferrari.com/cms/network/media/pdf/Annual_Report_Ferrari_NV_2022_13.04.2023_Web.pdf.

⁵² Maserati. "Risultati 2021: piano elettrico." <https://www.maserati.com/ch/it/news/risultati-2021-piano-elettrico>.

it might find itself in an uncomfortable position in the “race” to maintain competitive advantage. To conclude this part, it is important to further remark how strong Ferrari is as a brand. This is the key to its success and possible increase in revenues. Competitors are all tight with Ferrari in terms of innovations and financial stability, but the strength that Ferrari has in its brand is what could make it possible to overcome any upcoming difficult.

IV. COMPANY ANALYSIS

CAPITAL STRUCTURE

Following the Financial Statement Analysis developed, it has been observed an average debt to assets ratio, over the estimation period, (2018-2022) of 0.57, well below the average of the defined segment, which accounts for 0.78. This indicator is of particular importance because it shows that the company mainly finances itself through debt (Exhibit 3).

PROFITABILITY

Ferrari is one of the most profitable companies in the industry. For the period analyzed (2018-2022), its revenue increased from Euros 3.4 billion to Euros 5.1 billion, achieving an average YoY revenue growth rate of 8.96%, against the peer group average of 7.19%.

In addition to the YoY revenue growth rate, other valuable indicators, to have a clear understanding of the company’s profitability are the ROA and ROE (Exhibit 4). The first one represents the return on assets, which accounted for an average of 12.60% (18-22), noticeably higher than the comparable average of -4.97%. The only company that outperforms Ferrari in this indicator is Bentley, presenting an average ROA of 13.49%. Similar results were obtained examining the ROE of the same period frame, which accounted for an average of 42.58%, compared to a median of 5.60% of the peer group.

To further analyze the actual profit margins, the ROE can be decomposed into a net profit margin of 19,42%, asset turnover 0,65% and equity multiplier of 3,37%. These data can be helpful to show how the results are mainly driven by the company’s ability to achieve strong margins, witnessed by a net profit margin that outperforms all the selected comparables, which combined with a debt prevalent capital structure, minimizes the impact of a slower asset turnover (0,65% against peer group average 0.845). The main reason of the low asset turnover is the pursuit of the “low volume” strategy implemented by Ferrari, aimed at preserving its brand exclusivity and value.

Exhibit 3- Capital structure evolution (2023-2032)

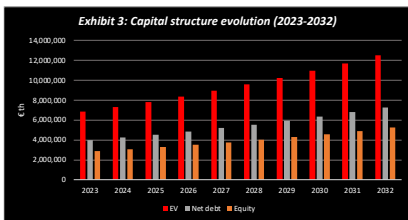
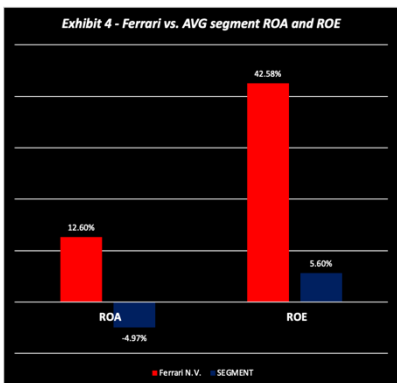
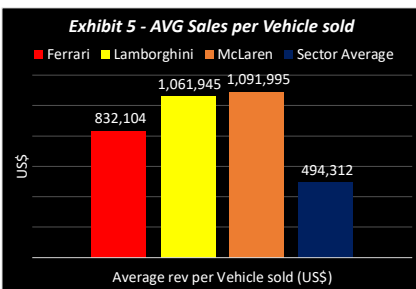


Exhibit 4 - Ferrari vs. AVG segment ROA and ROE





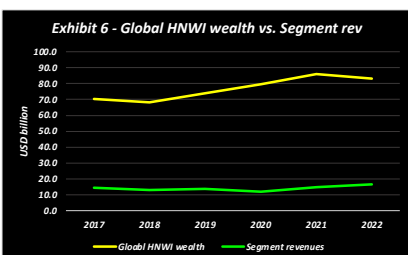
The success of the low volume strategy is confirmed when observing the Average sales per vehicle sold (Exhibit 5) achieved by Ferrari over the estimation period (2018-2022) of 832'104 dollars against a sector average of 494'312 dollars, only Lamborghini and McLaren have reached a higher number, witnessing how Ferrari is able to charge a premium price considerably higher than its peers in the Luxury Automotive segment.

LIQUIDITY

The average current ratio of the automotive industry for the time-period 2018-22 is estimated at 1.32, while the one of Ferrari has been estimated at 1,42. It is worth mentioning the quick ratio or acid test. This represents the assets that can be converted in cash in a short period of usually 3-months (90 days). Ferrari's average quick ratio was 1,20, while the average of the industry was 1,09, moreover the cash ratio of Ferrari was 0,53 against 0,14 of the industry.

V - FORECASTING

REVENUE DRIVERS AND GROWTH RATE



After having deeply analyzed the company's business model, centered on brand strength and luxury exclusivity, the main target segment identified, is the High-net-worth individuals (HNWI). Hence, it has been carried out a comparison between Ferrari's segment revenues performance and global HNWI wealth changes (Exhibit 6) over the estimation period 2018-2022⁵³. Following the analysis, a common trend has been unveiled, since comparable total revenues (segment), moved coherently with the fluctuations in HNWI wealth, showing an average lag of 3,26%. As a result, global HNWI wealth has been selected as the main driver in the revenue forecast.

Starting from the global HNWI wealth increase (23-27), forecasted at 38%⁵⁴, we derived the implied CAGR of 6.65%. After applying the lag rate of 3,26% to the forecasted data, it has been computed the CAGR of the automotive luxury segment resulting at 6,44%.

During the estimation period, Ferrari showed an average market share of 32,44%, which is estimated to reach 40% over the forecasted period, following the launch of the first SUV model, the Ferrari Purosangue. The units of this SUV are already sold out until, at least, 2026⁵⁵. This is projected to positively impact the firm's revenues, similarly to the case of Lamborghini, right after the launch of their first SUV, the URUS. This model strongly contributed to an increase in market share of 6,29% in 2022⁵⁶.

⁵³Capegemini. "World wealth report 2023" <https://www.capegemini.com/insights/research-library/world-wealth-report/>
⁵⁴UBS. "Global Wealth Report 2023" <https://www.ubs.com/global/en/media/display-page-ndp/en-20230815-global-wealth-report-2023.html#:~:text=Over%20the%20next%20five%20years%2C%20we%20expect%20global%20wealth%20will,30%25%20to%20reach%20USD%20110%2C270.>
⁵⁵Fox Business. "Ferrari's SUV Sold Out Until 2026." <https://www.foxbusiness.com/lifestyle/ferraris-suv-sold-out-until-2026.>
⁵⁶Own estimate

Combining the industry forecasts developed, with the estimated market share of Ferrari (40%), leveraging on the industry forecasts developed, it has been estimated Ferrari's revenue growth to outperform the market segment, at a rate of 6,97%.

WACC ESTIMATION

Observing the values from the estimation period (2018-2022) the D/V target has been assumed as 58%, below the past 5 years average of 63,31%, coherently with the increase in interest rates. The risk-free rate was estimated using the Germany 10 Years Government Bonds as benchmark. Beta equity has been computed through a 5 years (monthly) regression, between the excess return of Ferrari and the excess return on the market, computed assuming the S&P Europe 350 as the benchmark, given the primary location of the firm in Europe, as well as the listing in the Mercato Telematico Azionario of Milan.

After deriving beta unlevered (0,73) and beta debt (0,49), it has been computed cost of debt (3,48%) and cost of equity (4,96%), by adding to the current risk-free-rate (2,20%) the respective beta, multiplied by the market risk premium (2,61%).

Considering the firm's capital structure and marginal tax rate, the resulting Weighted Average Cost of Capital amounts to 4,10 %.

VI – VALUATION

DCF MODEL

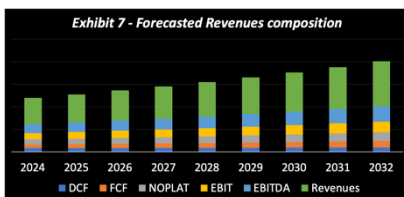
The first instrument employed to derive the equity value of the company is the Discounted Cash Flow (DCF) method.

- Forecasted financial statements (23-32)

After selecting a 5-year estimation period (2018-2022) Ferrari's Financial Statements have been analyzed to derive key financial metrics that has been used to build financial statements related to the 10 years forecast period (2023-2032). The starting point has been the identification of the growth rate, applied to 2022 actual revenue, to derive the firm's future revenue's structure (23-32). Consequently, key margins resulting from gross profit (56,96%), SG&A expenses / Revenue (8,99%), R&D expenses / Revenue (13,82%), EBITDA margin (34,35%), D&A / PP&E (34,56%), net financial expenses / Revenue (1%), Income Tax Rate (20,06%).

Projected revenues have been used to compute the remaining captions, by applying the average margins calculated in the financial statement analysis of the estimation period.

The same approach has been undertaken to project the balance sheet captions for the estimated period. The asset turnover has been applied to the forecasted revenues, to derive the future total assets of each year. Starting from the capital structure, cash and cash equivalents (C&CE) have been estimated applying the C&CE / Sales to the projected revenues, to derive the cash caption. Assuming the debt to value target at 58% it has been projected the equity and net debt values Current assets have been estimated applying the cash ratio to the total assets, while inventory, receivables and payables have been computed applying the Days Sales Outstanding (DSO), Days Payables Outstanding (DPO) and the Days of Inventory Outstanding (DIO) to the forecasted future total sales. Property plant and equipment (PP&E), computed through PP&E / Revenues to account for the required increasing capacity to sustain revenue growth. The same procedure has been applied for the other accounts, that has been estimated through the financial statement analysis developed for the estimation period (2018-2022).



With the gathered input (WACC, forecasted FS and growth), a cash flow map has been built for the forecast period (2023-2032) to derive the net operating profit or loss after taxes NOPLAT (Exhibit 7).

After adding depreciation and amortization and subtracting the change in net working capital the free cash flows to the firm of the years 2023-2032 have been estimated.

The cash flows and the terminal value have been then discounted using the weighted average cost of capital and computed to derive the company’s enterprise value, which has been used to arrive to the equity value, by subtracting net debt and non-controlling interests and adding the cash.

The estimate equity value as of December 2024 has been divided by the number of shares outstanding, to compute the target price of Euro 313,60, reflecting an upside potential of 9,19% if compared to the current price of Euro 287,20.

In addition, the total potential return, rises at 9,82%, considering the transaction with shareholders that will occur during the holding period.

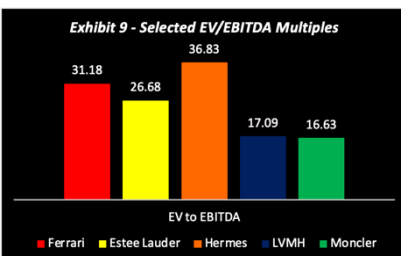
To complete the overview, a sensitivity analysis has been developed, to capture the variability of the price for different combinations of WACC and Growth Rate (Exhibit 8).

Exhibit 8 - DCF Sensitivity analysis WACC-Growth rate

		WACC					
		€ 313.60	3.27%	3.68%	4.09%	4.50%	4.91%
Growth	8.31%	€ 577.81	€ 435.05	€ 348.61	€ 290.68	€ 249.16	
	7.62%	€ 550.21	€ 414.55	€ 332.41	€ 277.35	€ 237.88	
	6.92%	€ 523.42	€ 394.65	€ 316.67	€ 264.41	€ 226.94	
	6.23%	€ 497.82	€ 375.63	€ 301.63	€ 252.02	€ 216.46	
	5.54%	€ 473.35	€ 357.44	€ 287.25	€ 240.18	€ 206.45	

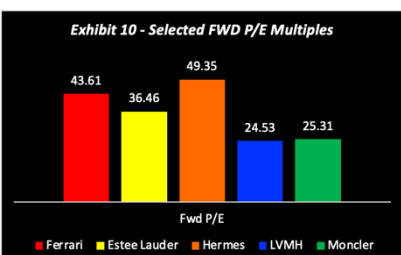
Source: Excel scenario manager

MULTIPLES VALUATION

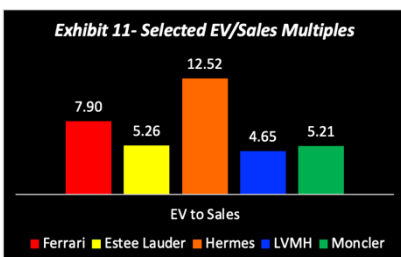


To complete the company valuation process, a multiple analysis has been performed, with the aim of drawing a complete overview of how the stock of Ferrari is perceived by the market, when benchmarked against comparable companies.

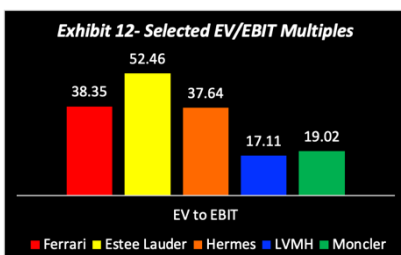
Given the nature of the company it has been chosen to collect peers from both the high-end automotive industry and the luxury industry at its whole (Exhibit 9 to 12).



On one hand listed companies from the automotive sector do not really fit the comparison with Ferrari as the firm’s target market is only reflected to the limited higher tier of the product portfolios in most competitors’ offering. The main issue encountered is related to the fact that the most fitting comparable of Ferrari (Lamborghini, McLaren, Maserati etc.) are not publicly, either owned by other automotive groups (see Lamborghini owned by Volkswagen). To overcome this problematic, and make the valuation as real as possible, it has been decided to also include car manufacturers (see Mercedes), that do not only produce luxury supercars, but that have at least one of them in their portfolio.

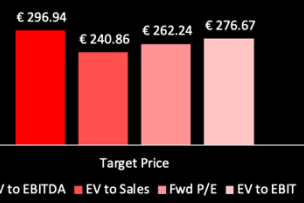


On the other hand, luxury goods industry, despite offering totally dissimilar products, are linked by the key role played by the brand, in building exclusivity and attractiveness, which are at the base of the value creation process. The comparable selected resulted as the following values: EV/EBITDA 26,86x (Ferrari: 31,18x), forward price earnings 36,78x (Ferrari: 43.61x), EV/Sales 7,48x (Ferrari: 7,90x), EV/EBIT 35,74x (Ferrari: 38,35x).



The multiples have been then applied respectively to Ferrari Forward EBITDA, Sales, Earnings per Share (EPS) and EBIT, to estimate Ferrari’s enterprise value. The target price has been calculated dividing the equity value estimated with the enterprise value to equity bridging over the number of shares outstanding. The respective resulting target prices (Exhibit 13) are:

Exhibit 13 - Target price by Multiple



- Euros 296,96 (EV/EBITDA Valuation)
- Euros 240,87 (EV/Sales Valuation)
- Euros 262,24 (P/E Valuation)
- Euros 276,69 (EV/EBIT Valuation)

To complete the overview, a sensitivity analysis has been developed, to capture the variability of the price to different future results of respectively EBITDA, Sales, EPS and EBIT (Exhibit 14 to 16).

Exhibit 14 - Target Price Sensitivity to Changes in EBITDA

		Target Price	Expected capital gain
		€	
EBITDA	1,800,857	€ 267.25	-6.95%
	1,900,905	€ 282.10	-1.78%
	2,000,952	€ 296.94	3.39%
	2,101,000	€ 311.79	8.56%
	2,201,048	€ 326.64	13.73%
			€ 296.94

Exhibit 15 - Target Price Sensitivity to Changes in Sales

		Target Price	Expected capital gain
		€	
Sales	5,242,728	€ 216.77	-24.52%
	5,533,991	€ 228.82	-20.33%
	5,825,254	€ 240.86	-16.14%
	6,116,516	€ 252.90	-11.94%
	6,407,779	€ 264.94	-7.75%
			€ 240.86

Exhibit 16 - Target Price Sensitivity to Changes in EPS

		Target Price	Expected capital gain
		€	
EPS	6.42	€ 238.01	-17.82%
	6.77	€ 249.13	-13.26%
	7.13	€ 262.24	-8.69%
	7.49	€ 275.35	-4.13%
	7.84	€ 288.46	0.44%
			€ 262.24

Exhibit 17 - Target Price Sensitivity to Changes in EBIT

		Target Price	Expected capital gain
		€	
EBIT	1260865.583	€ 249.01	-13.30%
	1,330,913.67	€ 262.84	-8.48%
	1,400,961.76	€ 276.67	-3.67%
	1,471,009.85	€ 290.51	1.15%
	1,541,057.93	€ 304.34	5.97%
			€ 276.67

VALUATION SUMMARY AND RECOMMENDATION

To conclude, after having deeply analyzed Ferrari's valuation, performed combining the Discounted Cash Flow (DCF) approach, complemented by an analysis of the market multiples derived from comparable companies, it has been possible to outline a clear result (Exhibit 18 and 19).

Exhibit 18 - Valuation summary

Approach	Min	Max	Range	Estimate
DCF (Growth)	€ 287.25	€ 348.61	€ 61.37	€ 313.60
DCF (WACC)	€ 226.94	€ 523.42	€ 296.49	€ 313.60
EV/EBITDA	€ 267.25	€ 326.64	€ 59.39	€ 296.94
EV/Sales	€ 216.77	€ 264.94	€ 48.17	€ 240.86
P/E	€ 236.01	€ 288.46	€ 52.45	€ 262.24
EV/EBIT	€ 249.01	€ 304.34	€ 55.33	€ 276.67

The DCF model conclusions lead to a target price of Euro 313,60 for Ferrari, indicating an upside potential of 9,19% compared to its current price of Euro 287,20, unveiling how the firm is trading at a price that is not reflecting the company’s intrinsic value derived from its fundamentals.

The Multiples approach, by evaluating Ferrari against market comparable provides an alternative perspective. This model, varies relevantly, according to the peer group selected. Especially in the case of Ferrari, it is hard to have a perfectly suitable group of multiples, as the most fitting companies are, either not listed, or owned by other manufacturers. Moreover, the business model combined with sales figures and earnings of Ferrari, appear to be closer to firms operating in the luxury products sectors. To conclude, to have the most complete peer group possible, it has been decided to evaluate the firm against competitors in both automotive and luxury products industry. According to the automotive one, it has been defined a specific portion of the market, which includes brand that have at least one supercar in their portfolio, to make the comparison as realistic as possible. On the other hand, the competitors identified in the “competitors’ analysis” section, has been employed to create an accurate benchmark when referring to organizational structure, units sold, revenue and geographical segments of expansion and financial statement analysis.

Overall following this approach Ferrari appears to be overpriced based on three out of the four multiples taken into account. This does not necessarily mean that the company is overvalued, the market could be pricing differently its unique operational characteristics, matching with the luxury automotive makers, combined with its ability of maintaining an extremely attractive Brand.

The DCF method appears to be more reliable given the specificities of the company, offering an intrinsic valuation, able to capture Ferrari's true potential and growth prospects.

Due to the several inconsistencies that characterize the multiple valuations, while the first approach is tailored to Ferrari Ferrari's projected cashflows and operations, giving a more customized valuation, that better reflect the firm's unique position in the market.

Based on the above, we recommend a **BUY** on Ferrari, with a target price of Euro 313,60 representing a 9,19% upside potential, compared to the current price of 287,20, which increases to 9.82% considering the transactions with shareholders expected to occur during the trading period.

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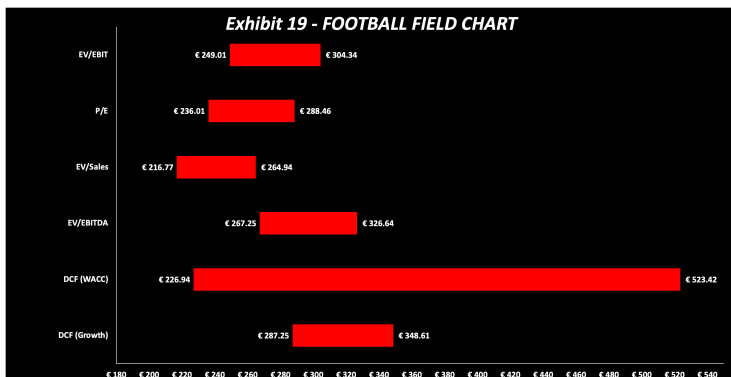
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VIII – APPENDIX 1: FINANCIAL STATEMENTS

Exhibit 19 - FOOTBALL FIELD CHART



Income Statement

(€ thousand)	2018	2019	2020	2021	2022
Revenues					
Cars and spare parts	2,535,245	2,925,721	2,835,170	3,573,119	4,341,482
Sponsorship, commercial and brand	505,701	538,238	390,002	430,579	478,499
Engines	284,548	198,308	150,855	189,432	155,342
Financial services activities	52,702	68,906	65,078	55,043	69,389
Other	42,127	37,862	37,862	18,085	22,721
Tot.	3,420,321	3,768,615	3,459,790	4,270,894	5,095,254
COGS	(1,449,348)	(1,592,983)	(1,440,241)	(1,819,096)	(2,360,458)
Gross profit	1,970,973	2,175,632	2,019,549	2,451,798	2,734,796
SG&A costs	(327,341)	(343,179)	(336,126)	(348,024)	(427,974)
R&D costs	(527,847)	(559,582)	(526,831)	(573,632)	(517,842)
Other expenses	(0,530)	(1,469)	(13,828)	1335	(15,373)
EBITDA	1,115,255	1,269,392	1,142,764	1,531,477	1,773,607
D&A	(288,748)	(351,946)	(426,637)	(455,989)	(546,225)
EBIT	826,507	917,446	716,127	1,075,488	1,227,382
Net financial expenses	(23,563)	(42,082)	(49,082)	(83,257)	(49,616)
Profit before taxes	802,944	875,364	667,035	1,042,231	1,177,766
Income tax expense	(16,317)	(176,656)	(58,155)	(208,035)	(238,472)
Net income	786,627	698,708	608,880	833,136	939,294

Source: Ferrari N.V. Annual Reports 2022-2018

Income Statement projections

(€ thousand)	Actual	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Revenues	1,138,294	1,458,041	1,528,824	1,598,814	1,668,804	1,738,794	1,808,784	1,878,774	1,948,764	2,018,754	2,088,744
COGS	(2,360,458)	(2,344,895)	(2,507,358)	(2,690,983)	(2,866,589)	(3,056,098)	(3,277,289)	(3,504,200)	(3,746,825)	(4,006,248)	(4,283,834)
Gross profit	2,284,796	3,103,386	3,337,897	3,557,871	3,785,252	4,058,899	4,388,113	4,658,899	4,989,837	5,309,322	5,688,297
SG&A expenses	(427,974)	(489,724)	(523,632)	(559,867)	(598,653)	(640,102)	(684,422)	(731,810)	(782,439)	(836,697)	(894,586)
R&D expenses	(117,852)	(153,036)	(165,175)	(169,533)	(169,533)	(169,533)	(169,533)	(169,533)	(169,533)	(169,533)	(169,533)
Other expenses	(6,378)	1,000	1,863	2,963	4,602	6,906	9,906	13,906	17,906	21,906	25,906
EBITDA	1,778,607	1,871,381	2,000,962	2,139,495	2,287,630	2,445,021	2,611,380	2,796,484	2,999,086	3,197,115	3,418,478
D&A	(56,225)	(61,138)	(66,051)	(70,964)	(75,877)	(80,790)	(85,703)	(90,616)	(95,529)	(100,442)	(105,355)
EBIT	1,227,382	1,310,243	1,400,962	1,497,562	1,609,678	1,712,576	1,831,152	1,957,897	2,093,562	2,238,452	2,393,439
Net financial expenses	(69,616)	(64,230)	(57,971)	(51,655)	(45,299)	(38,893)	(32,437)	(25,931)	(19,425)	(12,919)	(6,413)
Profit before taxes	1,177,766	1,266,007	1,342,971	1,435,956	1,535,379	1,641,686	1,753,534	1,876,891	2,006,844	2,145,794	2,294,966
Income tax expense	(28,412)	(251,883)	(242,430)	(238,891)	(235,022)	(231,369)	(227,716)	(224,063)	(220,410)	(216,757)	(213,104)
Net income	1,149,354	1,014,124	1,100,541	1,197,065	1,300,357	1,410,317	1,525,818	1,652,828	1,786,434	1,929,037	2,081,862

Source: Own estimate

Balance Sheet

(€ thousand)	2018	2019	2020	2021	2022
Assets					
Goodwill	785,182	785,182	785,182	785,182	785,182
Intangible assets	645,797	837,938	979,290	1,138,173	1,307,388
Property, plant and equipment	850,550	1,069,652	1,226,630	1,353,165	1,457,825
Investments and other financial assets	32,124	38,716	42,841	54,509	59,594
Deferred tax assets	80,744	73,893	159,221	169,757	200,392
Total non-current assets	2,374,407	2,805,171	3,186,164	3,498,786	3,813,311
Inventories	391,064	420,051	460,617	540,575	674,862
Trade receivables	211,399	231,439	184,260	185,000	232,414
Receivables from financing activities	878,496	986,448	939,607	1,143,968	1,399,987
Current tax receivables	128,234	21,078	12,438	14,206	16,054
Other current assets	64,295	92,830	76,471	122,224	153,183
Current financial assets	10,174	11,409	40,084	13,500	87,301
Cash and cash equivalents	793,664	897,946	1,362,406	1,344,146	1,388,901
Total current assets	2,477,326	2,641,201	3,075,883	3,363,719	3,952,512
Total assets	4,851,733	5,446,372	6,262,047	6,863,505	7,765,823
Equity					
Equity attributable to owners of the parent	1,348,722	1,487,288	1,785,186	2,205,898	2,592,857
Non-controlling interests	5,117	5,998	4,018	5,518	9,630
Total equity	1,353,839	1,493,286	1,789,204	2,211,416	2,602,487
Employee benefits	86,575	88,116	59,985	101,200	110,807
Provisions	192,539	165,572	155,335	150,868	180,694
Deferred tax liabilities	33,149	82,208	119,474	95,370	126,507
Long term debt	1,574,758	1,668,414	1,835,517	2,113,992	1,839,386
Total non-current liabilities	1,987,011	2,004,310	2,164,311	2,461,933	2,256,384
Short term debt	352,408	421,323	889,228	516,119	979,393
Other liabilities	589,743	800,015	687,482	726,775	958,025
Other financial liabilities	11,342	14,791	2,140	36,520	19,893
Trade payables	653,751	711,539	713,807	797,832	902,968
Current tax payables	7,635	7,106	15,895	112,910	59,563
Total current liabilities	1,614,880	1,954,774	2,308,532	2,190,156	2,912,942
Total liabilities	3,497,891	3,959,084	4,472,843	4,652,089	5,169,326
Total equity and liabilities	4,851,733	5,446,372	6,262,047	6,863,505	7,765,823

Source: Ferrari N.V. Annual Reports 2022-2018

Balance Sheet

(€ thousand)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Assets											
Goodwill	785,182	785,182	785,182	785,182	785,182	785,182	785,182	785,182	785,182	785,182	785,182
Intangible assets	1,307,388	#####	1,418,344	1,516,548	1,621,561	1,733,825	1,853,872	1,982,231	2,119,477	2,266,226	2,423,135
Property, plant and equipment	1,457,825	#####	1,736,095	1,856,299	1,984,826	2,122,252	2,269,193	2,426,308	2,594,301	2,773,926	2,965,988
Investments and other financial assets	262,816	#####	516,632	862,686	762,000	834,870	913,369	1,032,792	1,193,880	1,283,254	1,437,161
Total non-current assets	3,813,511	#####	4,455,253	4,763,727	5,093,359	5,446,228	5,823,316	6,225,512	6,657,655	7,118,388	7,611,467
Inventories	674,862	674,588	721,295	771,236	824,635	881,731	942,781	1,008,058	1,077,854	1,152,482	1,232,276
Receivables	1,648,465	#####	1,915,152	2,047,754	2,189,537	2,341,136	2,503,233	2,676,552	2,861,872	3,060,023	3,271,584
Cash and cash equivalents	1,388,201	#####	1,691,109	1,838,198	1,933,395	2,087,260	2,210,935	2,363,437	2,527,077	2,702,046	2,889,133
Other current assets	240,484	226,145	241,802	258,544	276,446	295,586	316,052	337,935	361,333	386,351	413,101
Total current assets	3,952,512	#####	4,569,358	4,885,732	5,224,012	5,585,714	5,972,459	6,385,882	6,828,136	7,300,905	7,806,407
Total assets	7,765,823	#####	9,024,610	9,649,459	10,317,371	11,031,942	11,795,775	12,612,494	13,485,791	14,419,492	15,417,873
Total equity	2,692,437	#####	3,099,071	3,293,330	3,521,254	3,785,167	4,093,869	4,434,894	4,802,647	5,201,327	5,632,071
Of which Non-controlling interest	6,630	9,364	10,013	10,708	11,447	12,240	13,067	13,993	14,962	15,998	17,106
Total non-current liabilities	2,250,394	#####	2,731,357	2,920,471	3,122,679	3,338,688	3,570,067	3,817,253	4,081,553	4,364,152	4,666,519
Payables	951,631	#####	1,167,811	1,248,668	1,335,123	1,427,655	1,526,407	1,632,093	1,745,096	1,865,824	1,995,117
Other current liabilities	1,851,411	#####	2,045,327	2,186,991	2,338,414	2,500,322	2,673,440	2,858,544	3,056,465	3,288,089	3,494,366
Total current liabilities	2,912,942	#####	3,413,183	3,435,658	3,673,537	3,927,687	4,199,847	4,496,637	4,801,561	5,134,013	5,489,484
Total liabilities	5,163,336	#####	5,944,540	6,358,129	6,796,217	7,266,375	7,769,914	8,307,890	8,883,114	9,498,166	10,155,002
Total equity and liabilities	7,765,823	#####	9,024,610	9,649,459	10,317,371	11,031,942	11,795,775	12,612,494	13,485,791	14,419,492	15,417,873

Source: own estimate

Cash Flows Statement

(€ thousand)	2018	2019	2020	2021	2022
Cash and cash equivalents at the beginning of the year	647,708	793,654	897,946	1,266,408	1,344,146
Cash flows from operating activities					
Profit before taxes	802,944	875,364	667,035	1,042,231	1,177,766
Amortisation and depreciation	288,748	351,946	426,637	455,989	546,225
Provision accounts	15,573	14,253	25,805	30,284	72,831
Result from investments	(2,665)	(3,522)	(4,647)	(6,898)	(6,175)
Net finance costs	23,563	42,082	49,092	33,257	49,616
Other non-cash expenses, net	33,012	38,563	39,073	23,941	46,653
Net gains on disposal of property, plant and equipment and intangible assets	(2,293)	424			
Change in inventories	(4,638)	(40,627)	(67,797)	(81,209)	(153,890)
Change in trade receivables	26,890	(22,077)	44,477	1,771	(48,400)
Change in trade payables	40,317	53,840	8,594	72,568	103,981
Change in receivables from financing activities	(107,353)	(76,694)	(69,376)	(122,746)	(187,890)
Change in other operating assets and liabilities	(93,013)	145,547	(137,313)	(23,840)	140,008
Finance income received	2,857	3,274	2,103	1,879	5,158
Finance costs paid	(13,966)	(42,600)	(54,427)	(29,202)	(37,351)
Income tax paid	(87,745)	(33,480)	(9,051)	(109,001)	(304,692)
Total cash flows from operating activities	934,041	1,306,093	838,211	1,282,726	1,403,340
Cash flows used in investing activities					
Investments in property, plant and equipment	(300,794)	(352,154)	(357,018)	(352,918)	(347,725)
Investments in intangible assets	(337,542)	(353,458)	(351,978)	(384,827)	(456,894)
Investments in joint ventures	1,389	4,539	989	4,405	597
Proceeds from the sale of property, plant and equipment and intangible assets	(898,944)	(701,079)	(708,027)	(732,739)	(805,408)
Total cash flows used in investing activities	(1,435,891)	(1,397,542)	(1,356,024)	(1,465,079)	(1,599,320)
Cash flows used in/ from financing activities					
Proceeds from securitizations, net of repayments	94,709	92,173	44,126	71,444	148,100
Net change in other debt	(7,988)	12,222	10,091	(6,027)	11,241
Repayment of lease liabilities	-	(3,898)	(30,035)	(21,852)	(18,500)
Net change in borrowings to banks and other financial institutions	(3,584)	(3,516)	(1,740)	121,385	(46,091)
Repayment of bonds and notes	-	(315,395)	-	(500,000)	-
Proceeds from bonds and notes	-	598,316	640,073	149,495	-
Dividends paid to owners of the parent	(133,095)	(132,954)	(201,100)	(160,101)	(240,529)
Dividends paid to noncontrolling interests	(2,040)	(2,120)	(2,229)	(1,354)	(2,286)
Share repurchases	(100,093)	(386,749)	(129,793)	(230,899)	(396,522)
Total cash flows (used in)/ from financing activities	(152,091)	(501,529)	(339,683)	(579,672)	(553,560)
Transmission exchange differences	85	741	(5,407)	11,424	583
Total change in cash and cash equivalents	145,888	104,282	484,460	(13,900)	44,795
Cash and cash equivalents at the end of the year	793,654	897,946	1,382,406	1,244,146	1,389,901

Source: Ferrari N.V. Annual Reports 2018-2019

Projections Cash Flows Statement 2022-2032

(€ thousand)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Cash and cash equivalents at the beginning of the year	1,344,146	1,388,901	1,581,691	1,691,109	1,868,198	1,933,395	2,067,280	2,216,393	2,383,437	2,527,077	2,702,046
Total cash flows from operating activities	1,403,340	1,688,258	1,900,058	2,031,815	2,172,291	2,322,686	2,483,504	2,655,456	2,839,317	3,035,907	3,246,108
Total cash flows used in investing activities	(925,458)	(1,052,410)	(1,119,563)	(1,202,818)	(1,301,425)	(1,406,380)	(1,527,900)	(1,676,468)	(1,792,545)	(1,916,657)	(2,049,393)
Total cash flows used in financing activities	(553,550)	(369,629)	(420,912)	(450,655)	(481,216)	(514,535)	(550,160)	(588,232)	(628,882)	(672,532)	(719,097)
Total change in cash and cash equivalents	44,795	167,100	100,207	117,989	125,199	133,885	143,134	153,044	163,691	174,971	187,665
Cash and cash equivalents at the end of the year	1,388,901	1,581,691	1,691,109	1,868,198	1,933,395	2,067,280	2,216,393	2,383,437	2,527,077	2,702,046	2,889,133

Source: own estimate

IX - APPENDIX 2: Disclosures and Disclaimers

Report Recommendations

Buy	Expected total return (including expected capital gains and expected dividend yield) of more than 10% over a 12-month period.
Hold	Expected total return (including expected capital gains and expected dividend yield) between 0% and 10% over a 12-month period.
Sell	Expected negative total return (including expected capital gains and expected dividend yield) over a 12-month period.

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