

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

Field Lab – Equity research on Ferrari: Structure, Strategy and Trends, as part of the Equity research on Ferrari: Where red meets green. A manual shift for a sustainable Ferrari, and World

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Abstract

This thesis aims to conduct a detailed exhaustive examination of Ferrari's corporate profile, strategic framework, primary competitive strengths, prevailing industry trends influencing the organization, and key prospective risks. Crucially, the study emphasizes the influence of these factors on the company's performance and overall enterprise value. This thesis further entails the creation of a Ferrari valuation model, achieved through a comprehensive analysis of the company's business segments, the underlying value drivers, industry trends, discounted cash flows, and sensitivity assessments. The conclusive recommendation suggests a target price of € 350.25 per share by the conclusion of 2024, resulting in an anticipated overall return of 8.61%. Consequently, a HOLD recommendation is advised

Keywords

Ferrari
Strategy
Risks
Trends
Valuation
Compound annual growth rate
Share price

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Executive Summary



Source: Ferrari official logo 2023. Ferrari Official Website



Source: Ferrari F1-75 and 2023 season drivers, Charles Leclerc and Carlos Sainz. Ferrari Official Website



Source: Ferrari headquarters in Maranello, Italy



Source: Ferrari Museum in Modena, Italy



Source: Ferrari World in Abu Dhabi

Ferrari is strategically navigating the future with a keen emphasis on equilibrium. While it commits to a robust transition towards hybrid and electric models, coupled with a substantial expansion of its model lineup, the brand remains steadfast in preserving the distinctive driving experience inherent in its Internal Combustion Engine (ICE) cars. Maintaining an air of exclusivity is pivotal for Ferrari's continued success.

Looking ahead, Ferrari is poised to significantly broaden its portfolio, intending to unveil 15 new models from 2023 to 2026. This expansion will primarily be fueled by the introduction of electric vehicles, set to debut in 2025. The anticipated growth in the automotive industry over the next decade provides an opportune environment for Ferrari to diversify its offerings without compromising its low-volume strategy.

The engine segment, which has seen diminishing importance in recent years, is likely to maintain this trend in the future. The conclusion of the contract with Maserati in 2023 and increased competition in the industry contribute to this projection. Conversely, Ferrari's Sponsorship, Commercial, and Brand segment, dependent on the success of the F1 team, may experience sustained growth. Despite below-par performance in the last decade, Ferrari's brand value and the company's ambition to transition into a lifestyle brand are anticipated to drive expansion in this segment.

Ferrari's core operations are undergoing significant transformations throughout the explicit forecast period (2023-2030), precluding the attainment of a steady state.

The heart of the analysis lies in the valuation section, employing a robust DCF model. It provides a target price of €353.00 for 2024, supported by detailed forecasts of each business unit.

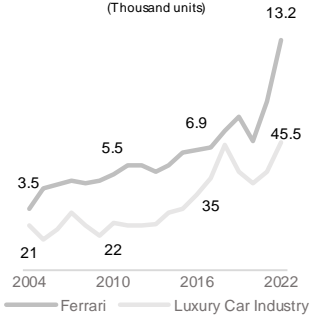
The macro-outlook highlights Ferrari's resilience against economic uncertainties, with an affluent customer base and inelastic demand. A detailed sensitivity analysis focuses on key inputs, while scenario analyses delve into potential upsides and downsides, painting a nuanced investment picture.

Investor consensus trends toward a HOLD recommendation, reflecting macroeconomic concerns and market multiples. Despite seemingly high earnings multiple, the analysis positions Ferrari with a modest upside, incorporating potential risks and strengths.

The researchers estimate a HOLD investment recommendation for Ferrari.

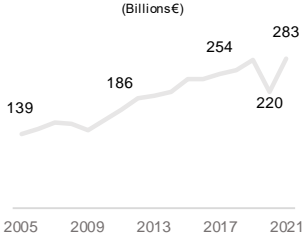
The Pinnacle of the Automotive Industry

Chart 1
Units sold, Ferraris vs Luxury Car industry
(Thousand units)



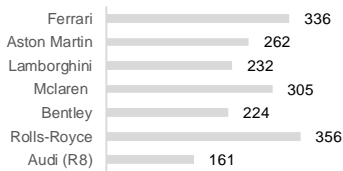
Source: Ferrari annual reports

Chart 2
Global personal luxury goods market
(Billions€)



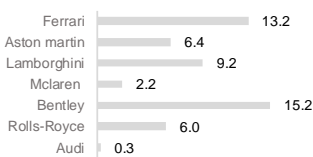
Source: Ferrari 2022 annual report

Chart 3
Average Price per car
(Thousands€)



Source: Ferrari 2022 annual report

Chart 4
Units shipped in 2022
(Thousand units)



Source: Ferrari 2022 annual report

Ferrari strategically positions itself within the luxury automotive sector, delineating its target demographic as enthusiasts of high-performance vehicles boasting engines surpassing 500 horsepower, and commanding retail prices exceeding € 150 Thousand. Analogous to other facets of the broader luxury market, the Luxury Automotive Industry is distinguished by a commitment to quality and exclusivity, factors that contribute to elevated price points and profit margins. Historically, the luxury car market has demonstrated growth trajectories closely mirroring those observed in the overall luxury market, and Ferrari has shown to be less volatile than its competitors (Chart 1). While entities within the luxury industry generally exhibit resilience during economic downturns (the pandemic forced the industry demand to values below the ones observed in 2016, but a swift recovery allowed the industry to beat pre-pandemic results), as exemplified by the V-shaped recovery post the COVID-19 pandemic (Chart 2), they do remain susceptible to future macroeconomic conditions, shifts in economic confidence, and future expectations. Notwithstanding these challenges, the luxury car industry has exhibited robust market performance¹, as evidenced by the double-digit profit margins within the segment². Notably, some of the most exclusive luxury brands witnessed average EBIT (Earnings Before Interest and Taxes) increases ranging from 20 to 35 percent between 2016 and 2021³. This stands in stark contrast to the modest single-digit margins characteristic of the mass market in recent years⁴.

Competition

The luxury car market features a relatively small number of competitors, including major groups like BMW, Volkswagen, Stellantis NV, GM, among others. Independent manufacturers such as Ferrari, McLaren, and Aston Martin also provide competition. Historically, this market has consisted of two dominant sectors: entry-level cars (GT category), and sports cars that extends to the hypercar category with a track-focused build. To align with modern trends, sports utility vehicles (SUVs) have been introduced to the luxury car market. Ferrari, while a late entrant⁵, had the SUVs reach their first customers earlier this year, which have eroded some of the GT car's market share⁶.

¹ D'Arpizio, C., Levato, F., Gault, C., Montgolfier, J. de, & Jaroudi, L. (2022, January 23). *From surging recovery to elegant advance: The Evolving Future of Luxury*. Bain. <https://www.bain.com/insights/from-surging-recovery-to-elegant-advance-the-evolving-future-of-luxury/>

² Guan, M., & Middleton, S. (2022, July 8). *Five trends shaping Tomorrow's luxury-car market*. McKinsey & Company. <https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/five-trends-shaping-tomorrows-luxury-car-market>

³ Guan, M., & Middleton, S. (2022, July 8). *Five trends shaping Tomorrow's luxury-car market*. McKinsey & Company. <https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/five-trends-shaping-tomorrows-luxury-car-market>

⁴ Guan, M., & Middleton, S. (2022, July 8). *Five trends shaping Tomorrow's luxury-car market*. McKinsey & Company. <https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/five-trends-shaping-tomorrows-luxury-car-market>

⁵ Lauer, A. (2023, May 8). Ferrari's SUV bet has paid off, and then some. InsideHook. <https://www.insidehook.com/autos/ferrari-purosangue-suv-bet-paid>

⁶ Automotive News Europe. (2023, May 5). Ferrari boosts earnings as wealthy pay more; Purosangue orders reopened. Automotive News Europe. <https://europe.autonews.com/automakers/ferrari-q1-results-earning-rise-27-wealthy-pay-more>

Table 1
Customer loyalty by leading brands

Brand	Current Year Loyalty	YOY Change
Ferrari	71%	5%
Aston martin	57%	18%
Lamborghini	38%	-21%
McLaren	49%	-4%
Bentley	58%	0%
Rolls-Royce	43%	-1%
Audi	54%	-3%
Porsche	55%	-5%

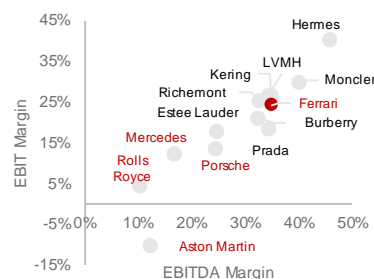
Source: CarEdge 2021

Table 2
EV Models developed by Ferrari's Peers

Brand	Launch	Model
Ferrari	2025	Undisclosed
Aston martin	2025	Undisclosed
Lamborghini	2028	Lazandor (SUV)
McLaren	N/A	N/A
Bentley	2026	Bentayga
Rolls-Royce	2023	Spectre
BMW	N/A	N/A
Porsche	2024	Macan (SUV)

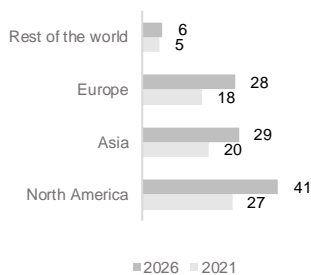
Source: Ferrari, Aston Martin, Lamborghini, McLaren Bentley Rolls-Royce, Porsche communications

Chart 5
Competitor margins



Source: Equity research valuation model

Chart 6
High net worth individuals
(€ Thousands)



Source: McKinsey, "Five trends shaping Tomorrow's luxury-car market"

The luxury car market features a relatively small number of competitors, including major groups like BMW, Volkswagen, Stellantis NV, GM, among others. Independent manufacturers such as Ferrari, McLaren, and Aston Martin also provide competition. Historically, this market has consisted of two dominant sectors: entry-level cars (GT category), and sports cars that extend to the hypercar category with a track-focused build. To align with modern trends, sports utility vehicles (SUVs) have been introduced to the luxury car market. Ferrari, despite being a late entrant⁷, had the SUVs reach their first customers earlier this year, which has eroded some of the GT car's market share⁸.

As of 2021 (Table 1), Ferrari leads the scale in customer retention, with its peers averaging 53% in customer loyalty. New competitors are more formidable in the luxury and sports electric vehicle market, which most companies are exploring, but have not yet launched their first models (Table 2). A prime example is the RIMAC group, which recently partnered with Bugatti to shape the future of hypercars and electric automobiles⁹.

Chart 3 and 4 illustrate Ferrari's position in relation to its closest rivals, with a robust combination of units and average price per car shipped. In the Sports category, Ferrari's closest competitors include Aston Martin, Lamborghini, McLaren, and Audi with its ending performance model¹⁰, the Audi R8. In the Range category, which includes cars like the Ferrari Portofino, Roma, and the recently introduced Purosangue, Ferrari competes directly with companies such as Rolls-Royce, Bentley, Porsche, Aston Martin, and Mercedes.

Undergoing a gradual transformation from being a sole manufacturer to positioning itself as a symbol of prestige and luxury, Ferrari benchmarks against well-established players such as Hermes, LVMH, and Burberry. However, it contends with significant margin pressures, primarily stemming from costs related to raw materials, R&D, specialized human capital, and infrastructure and equipment capital expenditures (CAPEX). These contribute to a growing gap between Ferrari and the current market leaders, as evident in the shift from earnings before interest, taxes, depreciation, and amortization (EBITDA, x-axis of Chart 5) to the operating profit margin (EBIT, y-axis of Chart 5).

Trends

Increased number of High and Ultra-High-Net-Worth Individuals

(HNWI/UHNWI): The robust expansion of the industry is primarily fueled by the

⁷ Lauer, A. (2023, May 8). Ferrari's SUV bet has paid off, and then some. InsideHook. <https://www.insidehook.com/autos/ferrari-purosangue-suv-bet-paid>

⁸ Automotive News Europe. (2023, May 5). Ferrari boosts earnings as wealthy pay more; Purosangue orders reopened. Automotive News Europe. <https://europe.autonews.com/automakers/ferrari-q1-results-earning-rise-27-wealthy-pay-more>

⁹ Rimac Automobili and Bugatti begin operating under new company: Bugatti Rimac - Rimac Automobili. (2021, November 2). Rimac Automobili. <https://www.rimac-automobili.com/media/press-releases/rimac-automobili-and-bugatti-begin-operating-under-new-company/>

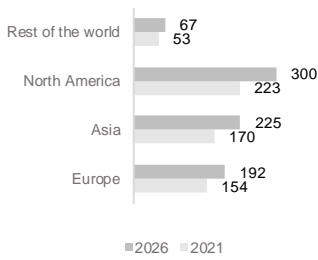
¹⁰ Audi has announced that 2023 is the year ending the R8 era. The sports model which will replace it only has a forecasted launch year of 2029, and it will be an EV (RNEXT). Kacher, G. (2022, October 3). Audi's next R8 will be an EV called RNEXT: Sources. Car And Driver. <https://www.caranddriver.com/news/a41293886/audi-rnext-ev-details/>

rising numbers of High-Net-Worth Individuals (HNWI) and Ultra-High-Net-Worth Individuals (UHNWI). Projections indicate a global growth rate of 5%, with particularly significant expansion in China and other Asia-Pacific regions (Chart 6 and 7). These affluent individuals are poised to play a pivotal role in propelling the luxury automotive sector forward, given their substantial purchasing influence and a penchant for showcasing status through the acquisition of high-end goods.

Increased demand driven by Asian countries: In our analysis, we have identified Mainland China, Hong Kong, and Taiwan as the regions exhibiting the most significant 5-year Compound Annual Growth Rate (CAGR) for Ferrari sales, registering an impressive 17.43%, in contrast to the leading EMEA region's 7.11%. Between 2020 and 2022, Ferrari's sales increased by 4,102 units. The Asian regions played a pivotal role, contributing 1,840 units during this period, constituting over 44% of the total growth in units sold (Chart 8). According to McKinsey¹¹, China is poised to emerge as the fastest-growing luxury car market by 2031, projecting a substantial 14% annual growth. This trajectory is substantiated by China's remarkable increase in the number of UHNWIs, a key demographic in this market. China's UHNWI segment has experienced one of the most substantial growth rates globally in recent years, with a notable 6% increase from 2020 to 2021. Beyond China, the entire Asian region is forecasted to undergo a remarkable 33% growth in UHNWIs between 2021 and 2026, representing the most substantial growth globally. Based on our team's comprehensive analysis and the discerned growth patterns in these regions, we anticipate heightened demand driven by Asian countries (as seen in Chart 9).

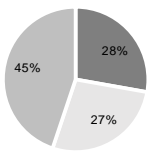
Younger buyers: Bain's report¹² underscores the profound influence of Generation Z and Generation Alpha on the global luxury market, projecting that these demographics will collectively constitute a third of the market by the decade's end, displaying a growth rate three times swifter than other generational cohorts (Chart 10)¹³. This forecast is substantiated by discernible demographic trends, where individuals under 40 years old, including Gen Z, already account for more than one-fifth of the UHNWI population (predominant consumers in the luxury market)¹⁴. Compellingly, the collaboration of Gen Y and Gen Z accounted for the entirety of the luxury market's growth last year¹⁵. Ferrari, in alignment with this shift, reported a parallel trend, asserting a rejuvenation of its client base with

Chart 7
Ultra-high net worth individuals (€ Thousands)



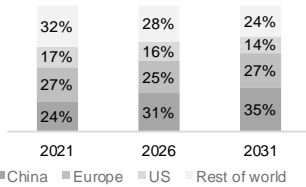
Source: McKinsey report Five trends shaping Tomorrow's luxury-car market

Chart 8
YOY change in units sold 2022



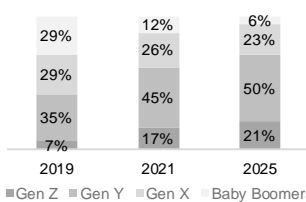
Legend:
 * EMEA
 * Americas
 * Mainland China, Hong Kong, Taiwan, APAC
 Source: Ferrari annual reports and equity research valuation

Chart 9
Volume of luxury vehicles by geography (in Percentage %)



Legend: China, Europe, US, Rest of world
 Source: McKinsey report, Five trends shaping Tomorrow's luxury-car market

Chart 10
Share of luxury goods market per generation (in Percentage %)



Legend: Gen Z, Gen Y, Gen X, Baby Boomers
 Source: Bain company

¹¹ Guan, M., & Middleton, S., & Miller, T. (2022, July 8). *Five trends shaping Tomorrow's luxury-car market*. McKinsey & Company. <https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/five-trends-shaping-tomorrows-luxury-car-market>

¹² D'Arpizio, C., & Levato, F. (n.d.-a). *Global Luxury Goods Market takes 2022 leap forward and remains poised for further growth despite economic turbulence*. Bain. <https://www.bain.com/about/media-center/press-releases/2022/global-luxury-goods-market-takes-2022-leap-forward-and-remains-poised-for-further-growth-despite-economic-turbulence/> "Generational trends are a powerful driver, with 'Gen Y' and 'Gen Z' continue leading the growth this year, and spending by Gen Z and 'Gen Alpha' set to grow some three times faster than for other generations until 2030, by when they will make up a third of the market"

¹³ D'Arpizio, C., & Levato, F. (n.d.-a). *Global Luxury Goods Market takes 2022 leap forward and remains poised for further growth despite economic turbulence*. Bain. <https://www.bain.com/about/media-center/press-releases/2022/global-luxury-goods-market-takes-2022-leap-forward-and-remains-poised-for-further-growth-despite-economic-turbulence/>

¹⁴ D'Arpizio, C., & Levato, F. (n.d.-a). *Global Luxury Goods Market takes 2022 leap forward and remains poised for further growth despite economic turbulence*. Bain. <https://www.bain.com/about/media-center/press-releases/2022/global-luxury-goods-market-takes-2022-leap-forward-and-remains-poised-for-further-growth-despite-economic-turbulence/>

¹⁵ Robtfrank. (2023a, January 17). Gen Z is driving luxury sales as wealthy shoppers get younger. CNBC. <https://www.cnbc.com/2023/01/17/gen-z-is-driving-luxury-sales-as-wealthy-shoppers-get-younger.html>

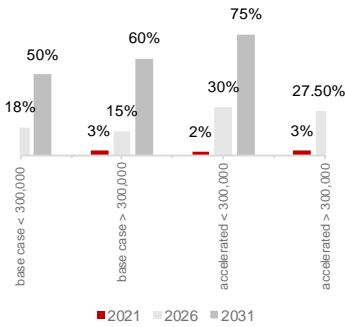
Table 3
Ferrari Target customers



Car(s)	Future Ferraristi	Ferraristi	Collecto
	Range	Range; Special Series	Special Series, Icona
Description	New clients Ferrari wishes to capture	Current clients whom Ferrari wishes to turn into Collector	Long-term clients owning multiple cars

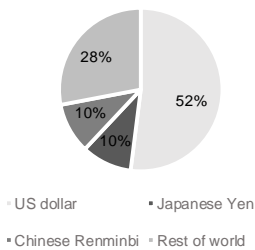
Source: Ferrari annual reports

Chart 11
Adoption of electric vehicles by cost bracket (in Percentage %)



Source: McKinsey report Five trends shaping Tomorrow's luxury-car market

Chart 12
Exchange rate exposure by share of risk for major geographies supplied



Source: Ferrari annual report

new clientele averaging eight years younger than the historical average¹⁶. This transformative trend is primarily propelled by a notably precocious approach to luxury consumption among these generations. These cohorts initiate luxury purchases three to five years earlier than their predecessors, signifying a paradigm shift in the timing and dynamics of luxury market engagement¹⁷.

The growth of hybrids and EV's: Rising concerns about the environment are driving the adoption of progressively more rigorous emissions standards and a surge in the desire for hybrid and electric vehicles¹⁸. Furthermore, growing pressure of governments and international organizations through new regulations¹⁹ and deals²⁰ also drives manufacturers to make this shift²¹. In accordance with McKinsey's accelerated scenario, as delineated in Chart 11, battery-electric vehicles (BEVs) are anticipated to achieve dominance across all tiers of the luxury automotive segment by 2031. This projected transition is underpinned by a heightened emphasis on sustainability among consumers, a sentiment substantiated by survey data indicating that a majority of current owners of luxury ICE vehicles are willing to switch to EV²². This foresight is corroborated when examining the strategic direction of numerous automobile manufacturers, many of whom have announced their intent to transition to EV technologies within the next five years, aligning with Ferrari's announcement during its Capital Markets Day. Additionally, an illustrative case is observed in Porsche, where their fully electric vehicle, the Taycan, outperformed (in units sold) other models such as the Boxster, the Cayman, and the Panamera in 2021, serving as a tangible indicator of the practical viability of such a transition²³.

Company Overview

To grasp value creation and the significance of each business unit for Ferrari, statements were categorized into core and non-core activities. Core activities encompass Ferrari's roles as a car manufacturer and luxury brand, covering customer care, prestige, quality, and reputation, ranging from the sale of cars to exclusive events under the "Others" segment scope. Non-core activities, on the contrary, pertain to activities beyond the company's primary purpose, such as exchange rate differences recorded under financial expenses. In 2022, the total

¹⁶ Ferrari annual report 2022

¹⁷ D'Arpizio, C., & Levato, F. (n.d.-a). *Global Luxury Goods Market takes 2022 leap forward and remains poised for further growth despite economic turbulence*. Bain. <https://www.bain.com/about/media-center/press-releases/2022/global-luxury-goods-market-takes-2022-leap-forward-and-remains-poised-for-further-growth-despite-economic-turbulence/>

¹⁸ Statista (electric vehicles insights for Asia, Europe and US). <https://www.statista.com/outlook/mmo/electric-vehicles/europe>, <https://www.statista.com/outlook/mmo/electric-vehicles/united-states>, <https://www.statista.com/outlook/mmo/electric-vehicles/asia>

¹⁹ Exclusive: China's drive to become world's most powerful electric car maker. South China Morning Post. (2018, October 23). In China, we observe this shift supported by the "Made in China 2025" plan to become the world's biggest auto market of electric cars.

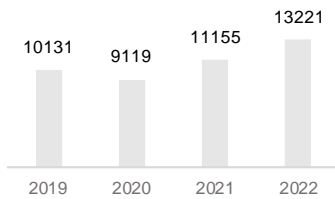
²⁰ Like the international Paris deal ("adopted by 196 Parties at the UN Climate Change Conference (COP21) in Paris, France, on 12 December 2015. It entered into force on 4 November 2016.") <https://unfccc.int/process-and-meetings/the-paris-agreement>

²¹ The surge of electric vehicles in United States cities. (n.d.). https://theicct.org/sites/default/files/publications/ICCT_EV_surge_US_cities_20190610.pdf. In the US, fiscal and parking incentives, associated with infrastructure investment reflect this growing concern as well.

²² Guan, M., Köstring, J.-C., Middleton, S., & Möller, T. (2022, July 8). *Five trends shaping Tomorrow's luxury-car market*. McKinsey & Company. <https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/five-trends-shaping-tomorrows-luxury-car-> "more than 70 percent of current owners of premium and luxury internal-combustion-engine (ICE) vehicles express a willingness to transition to electric vehicles (EVs) during their next vehicle purchase."

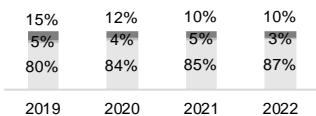
²³ Porsche annual reports <https://newsroom.porsche.com/en/company/annual-sustainability-report-2021/download-center.html>

Chart 13
Units of cars sold by Ferrari



Source: Ferrari annual reports

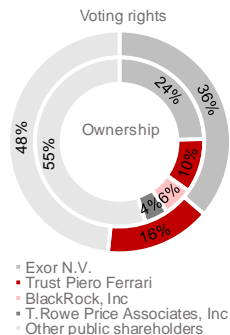
Chart 14
Revenue breakdown



■ Sponsorship, Commercial, and Brand
■ Engines
■ Cars and Spare Parts

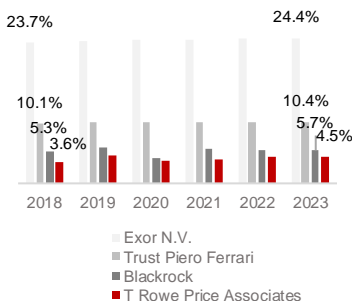
Source: Ferrari annual reports

Chart 15
Shareholder structure



Source: Ferrari 2022 annual report

Chart 16
Shareholder structure
(in Percentage %)



Source: Ferrari annual statements 2018-2022

trade flows exposed to foreign currency exchange rate risk amounted to 65 percent of the Group's net revenues, a significant increase from 58 percent in both 2021 and 2020²⁴. Most of the group's exposure to this risk comes from the activity in the US (52% of total currency risk), the rest comes mainly from the exchange rate from euro to the Japanese yen (over 10%) and to the Chinese Renminbi (over 10%)²⁵. Overall, the impact of foreign currency exchange rate differences for 2022, including the costs of hedging foreign currency exchange rate risk, amounted to net losses of €25.9 million, a growth in net losses from € 11.4 Million in 2021. For the future, given the little materiality of these expenses and the unpredictability of these rates, we forecasted it to follow historical levels.

Car and spare parts sales (87% of FY22 revenue²⁶): Ferrari sold a record number of cars in 2022 (Chart 13), with 45% of sales to EMEA, 26% to the Americas, 12% to Mainland China, Hong Kong and Taiwan and 17% to the Rest of APAC, with the Range segment representing 96% of total shipments. ICE sales still represent 78% of shipments, with hybrid vehicles representing the rest. **Sponsorship, commercial and brand (10% of FY22 revenue²⁴):** A sector more focused on lifestyle which includes sponsorship agreements (45% of segment revenues), world championship prize revenues (43%), general brand merchandise, and licensing (12%).

Rentals to Maserati and Formula One (3% of FY 22 revenue²⁴): Despite the recent cease of contract, this segment included a historical contract with Maserati, accounting for approximately 25% of the segment's revenues by 2022²⁷, and the rental of Ferrari engines to other Formula One teams (75% of the segment). Ferrari has yet another relevant revenue stream from the "Others" segment, which mainly comprises revenues stemming from Ferrari's financial services and the Mugello racetrack. The company's revenues also reached an all-time high of € 4.34 Billion which contributed to a net profit of € 939 Million in 2022.

Shareholder Structure

(Chart 15) Exor N.V.²⁸ holds the largest stake in Ferrari, with 24.4% ownership, investing across various sectors, including automotive, agriculture, and luxury goods²⁹. As of February 13, 2023, Trust Piero Ferrari, a Jersey trust established by the son of Enzo Ferrari, Piero Ferrari, holds approximately 10.39% of the outstanding common shares, preserving the brand's heritage and values. BlackRock is the world's largest asset manager with 5.69% of ownership of

²⁴ Ferrari annual reports

²⁵ Ferrari annual reports

²⁶ Excluding revenue from the "Others" segment

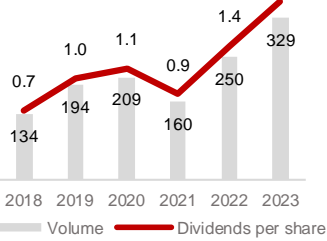
²⁷ Check engines Section of this equity research

²⁸ A leading global holding company with a market capitalization of €20.61 billion. Preço das ações e notícias de Exor NV (EXO) – Google Finance. (n.d.). Google Finance.

<https://www.google.com/finance/quote/EXO:AMS?sa=X&ved=2ahUKEwjj6pXRwvqCAxWSiP0HHsYxBFUQ3ecFegQIJRAg>

²⁹ It also maintains a significant holding in Stellantis N.V. (14.4%), one of the world's largest automotive manufacturers, which previously owned Ferrari N.V. before its spin-off in 2014. Fundamental Finance Playbook. (2020, March 2). EXOR N.V. | The Agnelli Holding Company - Fundamental Finance Playbook. <https://fundamentalfinanceplaybook.com/security-analysis/exor-nv-agnelli-investment-company/>

Chart 17
Dividends
(€ Millions)



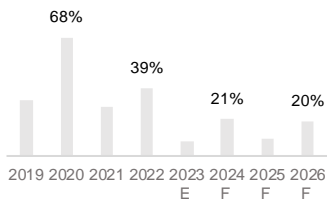
Source: Ferrari annual statements 2018-2022

Table 4
Annual Returns and Volatility by Dividend Policy (1973-2022)

Dividend Policy	Returns	Beta	Standard Deviation
Dividend Growers & Initiators	10.24%	0.88	16.15%
No Change in Dividend Policy	6.60%	1.01	18.55%
Dividend Cutters & Eliminators	3.95%	1.18	22.17%
Equal-Weighted S&P 500 Index	7.68%	1	17.76%

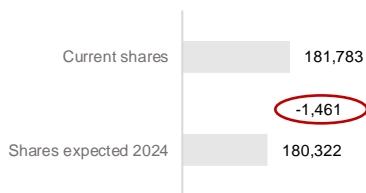
Source: Ned Davis Research and Hartford Funds, 12/22

Chart 18
Reinvestment Rate



Source: Equity research valuation model

Chart 19
Buyback program 2022-2026
(in Thousand units)



Source: Equity research valuation model

Ferrari, known for its passive and index-tracking strategies. Lastly, T. Rowe Price Group, Inc. is a publicly owned global asset management firm based in the United States, recognized for its active and passive investment approach³⁰.

Ferrari's principal shareholders' participation has been constant, and slightly growing over time (Chart 16), which safeguards the price stability of Ferrari's stock and reemphasizes the long-term mindset of the institutional investors. They are also predominantly concentrated in Europe which will be key for the appropriate risk-free rate assumption later developed in this report. Shareholders can acquire special voting shares³¹ by engaging with the loyalty voting structure, which is designed to reward long-term investors by splitting ownership of equity (Ownership, Chart 15), safeguarding strategic decisions and influence over the future of the company (Voting Rights, Chart 15). The current loyalty structure avoids conflicts of interest, as current members EXOR and Pierro Trust³² have the majority of voting power (52% combined, Chart 15). Jointly, they preserve the historical values of Ferrari and prevent other shareholders, as in the case of Blackrock, from leveraging their equity position into prioritizing increasing results and margins over customer welfare and brand reputation.

Dividends, cash distribution, and share buyback: On April 14, 2023, a dividend distribution of € 1.810 per outstanding common share was approved, corresponding to a total distribution of approximately € 329 Million³³ (Chart 17). Many investors seek dividend-paying stocks for their risk-adjusted preferred returns – historical data (1973-2022) verifies that dividend-paying stocks are, on average, more reassuring for investors (Table 4)³⁴. Ferrari pays dividends once per year, in May, and has a track record for increasing them over time (Chart 17), which is a positive sign for long-term investors. With gross margins closing in approximately at 40% and cash and cash equivalents at 17% of total assets, Ferrari sits comfortably paying dividends and distributing cash back to the shareholders, while maintaining a healthy, albeit decreasing, reinvestment rate of proceeds to support its long-term goals and steady growth (Chart 18).

On June 30, 2022, Ferrari announced a new multi-year share buyback program of approximately €2 billion to be executed by 2026³⁵. The fourth tranche³⁶ of the new repurchase program, up to €350 million, is projected to be completed no

³⁰ Their involvement can promote transparency and robust corporate governance practices. Additionally, they manage a diverse range of assets, including mutual funds, institutional funds, index funds, and ETFs, for diversification purposes. Masters, B., & Schmitt, W. (2023, October 27). Asset manager T Rowe Price warns outflows will persist in 2024. Financial Times. <https://www.ft.com/content/947abc2d-4e01-40d5-ae18-dc805368e3d2>

³¹ Each special voting share provides the holder with one vote during shareholder meetings. (2023, February 24) Ferrari 2022 annual report. Ferrari. (n.d.). Financial Documents | Ferrari Corporate - Ferrari.com. <https://www.ferrari.com/en-EN/corporate/financial-documents?year=2022>

³² They have been tied to the company since 1969, with Fiat's acquisition of 50% of Ferrari. Who owns Ferrari? | Who makes Ferrari? | Continental AutoSports Ferrari. (2021, December 21). Continental Ferrari. <https://www.continentalautosports.com/ferrari-information/who-owns-ferrari/>

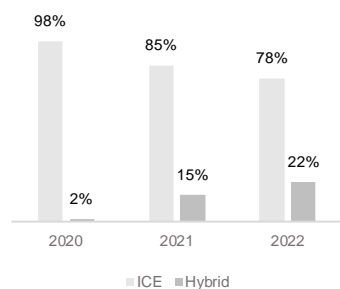
³³ In May 2023, €307 million of the distribution was paid to the parent company's owners, with the remaining balance was paid in the third quarter of 2023- Ferrari Q2 and Q3 reports. Ferrari. (n.d.). Financial Documents | Ferrari Corporate - Ferrari.com. <https://www.ferrari.com/en-EN/corporate/financial-documents>

³⁴ Dividend Growers & Initiators have the highest returns among the groups, indicating that companies with a history of increasing or initiating dividends tend to perform well, and also are less volatile than the market (Equal Weighted S&P 500 index serving as benchmark for comparison). Dividend Non-Payers have a negative return, suggesting that, on average, companies that do not pay dividends have experienced losses. The latter are also more volatile than the market

³⁵ Replacing the previous share buyback program that matured in 2020. Ferrari 2022 annual report
³⁶ Ferrari NV, announcement for the fourth tranche of the buyback period. globenewswire. (2023, November 7). Ferrari N.V. - Announcement of the fourth tranche of the Multi-Year Share Repurchase Program. [wallstreet-online.de. https://www.wallstreet-online.de/nachricht/17512718-ferrari-n-v-announcement-of-the-fourth-tranche-of-the-multi-year-share-repurchase-program](https://www.wallstreet-online.de/nachricht/17512718-ferrari-n-v-announcement-of-the-fourth-tranche-of-the-multi-year-share-repurchase-program)

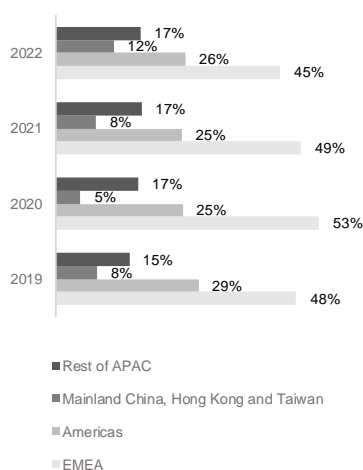
later than June 26, 2024. According to the average value of shares repurchased from the previous four tranches³⁷ (€ 239.6), until the end of 2024, the expected number of shares repurchased will be 1.46 million (Chart 19), leading to a forecasted number of common shares to total 180.32 million by the end of 2024, versus the current amount of 181.78 million. Repurchasing shares is generally a positive sign for investors as the firm is transmitting confidence to investors its equity value will be appreciating in the future; their percentage of ownership increases, alongside their earnings per share (EPS growth estimated at 7.9% for 2024) for the lower denominator (refer to final remarks section).

Chart 20
Volume of cars by type
(in percentage %)



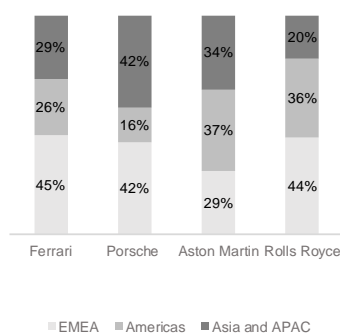
Source: Ferrari annual reports

Chart 21
Car sales - geographic distribution



Source: Ferrari annual reports

Chart 22
Units sold by geography - competitive landscape



Source: Ferrari, Porsche, Aston Martin and Rolls Royce annual reports

Company Structure

Cars and Spare Parts (85.2% of Revenues in 2022): This segment primarily encompasses various car models categorized based on their engines into three types: ICE, Hybrid, and Electric. Each category includes Range, Special Series, and Icona models, along with their corresponding customization options. While ICE vehicles currently hold a majority at 78% in 2022 (Chart 20), Ferrari foresees a rising prominence of hybrid models, with the first EV expected in 2025³⁸. Despite lacking fully electric vehicles, Ferrari commands a substantial 22% share of non-ICE vehicles, surpassing competitors like Porsche (21.8%) and Mercedes (16%), both offering Battery Electric Vehicles (BEVs)³⁹. Most car shipments from Ferrari are attributed to Range models, constituting 96% of total shipments and catering to a broader market. Special Series cars, characterized by their limited-time availability and distinct features not found in Range models, account for approximately 3% of total shipments. Icona models, focusing on iconic concepts and generally commanding higher prices than Special Series cars, represent around 1% of shipments. In addition to these regular segments, Ferrari intermittently produces limited edition Supercars and One-offs, representing the pinnacle of Ferrari's innovation, tailored for a select clientele. A geographic analysis of sales distribution reveals that Ferrari predominantly sells its vehicles in the EMEA region, comprising 45% of total shipments. Notably, there is a discernible shift in relative importance, with China, Hong Kong and Taiwan, and the rest of the APAC area exhibiting a growth in significance from 22% in 2018 to 29% in 2022. Conversely, the Americas experienced a relative decline, decreasing from 32% to 26% during the same period (Chart 21)⁴⁰. An interesting fact about Ferrari's geographic breakdown is that when compared to competitors like Porsche and Aston Martin, the Asia and APAC regions represent much

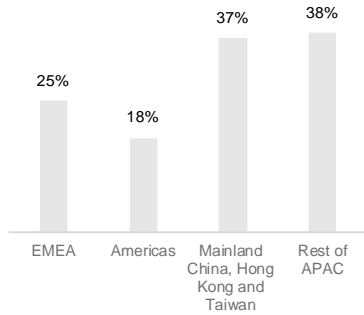
³⁷ According to Ferrari's latest update on the Share buyback program 2022-2026, total shares repurchased amount to 2.33 million at a total value of € 559.2 Million, leading to an average value per share repurchased of € 239.56. With the announcement of the fourth tranche valued at € 350 Million, the expected number of shares repurchased is 1.46 million. Equity Research Team

³⁸ Ferrari Capital Markets Day 2022. <https://www.ferrari.com/en-EN/corporate/articles/ferrari-capital-markets-day-2022>

³⁹ Calculations based on Porsche, Mercedes, Ferrari and Aston Martin's annual reports.

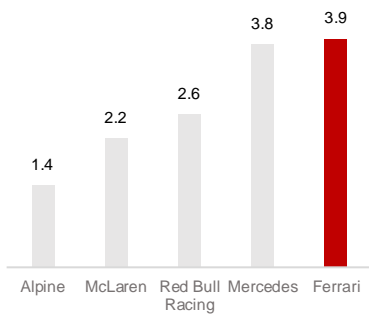
⁴⁰ Calculations based on Porsche (<https://newsroom.porsche.com/en/company/annual-sustainability-report-2021/download-center.html>), Mercedes (<https://group.mercedes-benz.com/investors/reports-news/annual-reports/2022/>), Ferrari (<https://www.ferrari.com/en-EN/corporate/financial-documents?year=2022>) and Aston Martin's (<https://www.astonmartinlagonda.com/investors/annual-report>) annual reports.

Chart 23
Ferrari's market share in 2022



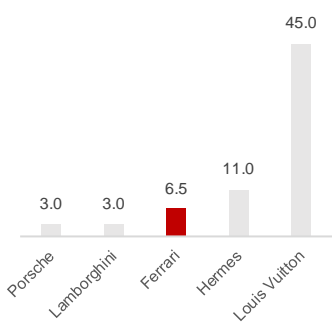
Source: Ferrari annual reports

Chart 24
Racing team value (\$ Billions)



Source: Forbes

Chart 25
Maximum selling price point of finished brand products (Thousand €)



Source: Online selling prices of respective company's

smaller relative importance in terms of shipments (as seen in Chart 22)⁹.

Nonetheless, these are exactly the markets where Ferrari has the biggest market share (37-38% as per Chart 23), showcasing a successful and targeted market strategy. We expect this success to drive further expansion into these regions. The segment also includes spare parts revenues, involving sales to clients for car customization or participation in the Ferrari Challenge race. While Ferrari doesn't disclose the exact proportion of revenues from this segment, considering its lower significance in competitors like Aston Martin (below 10%)⁴¹, and seeing that Ferrari highlights that these revenues grow as car sales increase⁴² we decided to focus our analysis on the cars and their respective customizations.

Sponsorship, Commercial and Brand (9.4% of Revenues in 2022): Ferrari

holds the unique distinction of being the only team to have participated in every FIA Formula One World Championship since its inception in 1950⁴³. This exclusive legacy significantly contributes to Ferrari's global recognition as the most valuable racing team, a distinction duly acknowledged by Forbes⁴⁴ (Chart 24). The company's involvement in Formula One not only serves as a pivotal factor in garnering substantial revenue through prizes and sponsorships but also underscores its esteemed reputation. This reputation has enabled Ferrari to go beyond racing, diversifying its revenue streams. Beyond Formula One, the company engages in licensing agreements with selected partners, operates a network of retail establishments comprising 16 Ferrari-owned stores and 2 franchised stores, and has ventured into pioneering initiatives such as theme parks. Furthermore, Ferrari has established its presence in the apparel and accessories market, positioning itself in direct competition with other luxury brands. A comparative analysis (Chart 25) of Ferrari's pricing strategy with renowned luxury brands such as Hermes and Louis Vuitton still reveal a distinction in pricing. While Hermes and LV present price ranges spanning €500 to approximately €11,000 and €45,000, respectively⁴⁵, Ferrari's apparel prices fall within the range of €200 to €6,500⁴⁶. Despite this variance, Ferrari positions itself above the average luxury car manufacturer, surpassing the pricing of companies like Lamborghini (prices ranging from \$75 to around \$3000), Porsche (prices ranging from €55 to €3000), and Aston Martin (prices ranging from €25 to around €200)⁴⁷. This pricing strategy signals Ferrari's aspiration for exclusivity, setting the stage for potential competition at higher price points akin to other luxury apparel brands. Collectively, these strategic initiatives underscore Ferrari's

⁴¹ Aston Martin annual report (2022)

⁴² Ferrari annual report (2022)

⁴³ <https://www.theguardian.com/sport/blog/2017/nov/09/ferrari-f1-formula-one-group-budget-cut>. (n.d.).

⁴⁴ Ozanian, M. (2023, July 24). Formula 1's Formula 1's most valuable teams 2023. Forbes. <https://www.forbes.com/sites/mikeozanian/2023/07/19/formula-1s-most-valuable-teams-2023/>

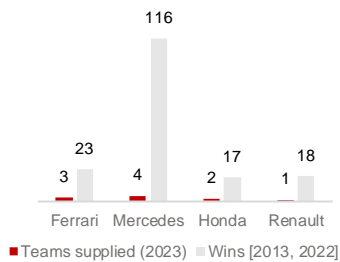
⁴⁵ <https://www.hermes.com/pt/en/> (Hermes), https://eu.louisvuitton.com/eng-e1/men/ready-to-wear/all-ready-to-wear/_/N-tmfgzj3 (Louis Vuitton)

⁴⁶ <https://store.ferrari.com/en-pt> (Ferrari website)

⁴⁷ <https://shop.porsche.com/us/en-US/c/porsche-clothing-men-women-children> (Porsche), <https://www.lamborghini.com/us/man.html?page=3&sort=price%20DESC> (Lamborghini), <https://shop.astonmartinf1.com/> (Aston Martin)

ambition to evolve into a lifestyle brand, diversifying its offerings beyond the realm of automotive excellence.

Chart 26
F1 race wins and engines supplied to teams by constructor (in units)



Source: The Race Magazine

Table 5
V12 Ferrari modules



Purosangue
First model 4 door mode launched
Year: 2022



812 GTS
800 cv makes it the most powerful production convertible on the market
Year: 2019



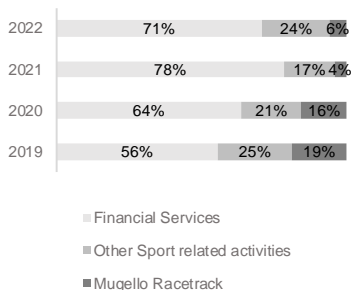
812 Competizione/A
A special series car with a top speed of over 211mph
Year: 2021



Daytona SP3
An Icona model inspired in Ferrari's racing models of the 60's
Year: 2021

Source: General Research by the analysis team

Chart 27
Others segment revenue breakdown



Source: Ferrari reports and equity research valuation model

Engines (3% of Revenues in 2022): The engine segment of Ferrari encompasses the provision of engines to Maserati⁴⁸ and the leasing of engines to other racing teams, namely Alfa Romeo and Haas. In this arena, Ferrari faces direct competition from players such as Honda, Mercedes, and Renault, with potential contenders on the horizon, including Red Bull, Audi, and Ford⁴⁹. This competitive landscape poses challenges to Ferrari's market position, particularly amid its recent struggles in Formula One, as evident in Chart 26. This segment is not very significant for Ferrari's revenues and is expected to remain this way with the contract with Maserati to end this year⁵⁰. Nevertheless, is a very important segment for Ferrari in terms of Research and Development activities, which in turn plays a vital role in the company's main segment: Cars and Spare Parts, as the investment in the engines segment over the years as translated into enhancements in both performance and design. The V12 engine stands out as the most noteworthy contribution from the segment, powering Ferrari's innovations for over 75 years. Notably, it propelled Ferrari's first car in 1947 and currently drives one-third (4 out of 12) of Ferrari's available models (table 5), including the recently introduced Ferrari Purosangue⁵¹. Another example is that just 2 years ago, Ferrari introduced a new hybrid system that improved performance and was the basis of the 2022 design's energy recovery system, through the investment in this segment⁵². For the near future, Ferrari also filed a patent application for a Gas Thruster - Pulse Jet Handling System for Supercars - which could further enhance performance⁵³. In the electric supercar's advent, this segment is also a vital piece. Ferrari filed a new patent for an amplification system to feature distinctive engine noise in electric vehicles⁵⁴, an important piece in replicating ICE driving sensation (a major concern for Ferrari⁵⁵).

Others (2.4% of Revenues in 2022): This segment primarily encompasses Ferrari's Financial Services (Chart 27), a financing facility tailored for prospective clients. Notably, this financial service has experienced growth in recent years and plays a pivotal role in supporting the core business activities by providing financing options for vehicle acquisitions. Within this segment, Ferrari derives revenue contributions from the rental of the Mugello racetrack for various racing events (table 6). Additionally, other sources of revenue within this category include income generated from various sports-related events.

⁴⁸ Contract finishing this year

⁴⁹ Straw, E. (2023, September 15). FIA names six F1 engine manufacturers registered for 2026-30. The Race. <https://www.the-race.com/formula-1/fia-names-six-f1-engine-manufacturers-registered-for-2026-30/>

⁵⁰ Ferrari annual report (2022)

⁵¹ Ferrari annual report (2022)

⁵² See "Engines" valuation section

⁵³ <https://www.thedrive.com/news/ferrari-files-patent-for-gas-thruster-pulse-jet-handling-system-for-supercars>. (n. d.).

⁵⁴ Remondini, C., & Lepido, D. (2023, January 24). Ferrari plans to Rev Up Engine Noise for its electric supercars. Bloomberg.com. <https://www.bloomberg.com/news/articles/2023-01-24/ferrari-plans-to-rev-up-engine-noise-for-its-electric-supercars>

⁵⁵ Ferrari annual report (2022)

Strategy

Table 6
Mugello Racetrack



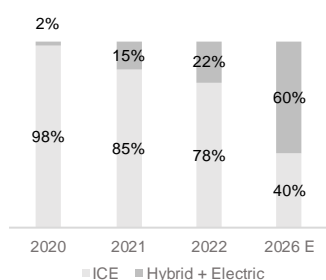
Venue
Location: Italy
Capacity: 50 000 people
Purpose: Host races (mainly bike races)



Main Events.
Italian Grand Prix
F1 Tuscany GP (2020)
2022: Hosted 190 days of track activities and 13 race weekends.

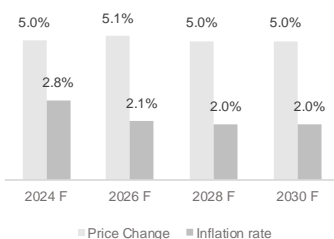
Source: General Research by the analysis team

Chart 28
Engines by type
(in percentage %)



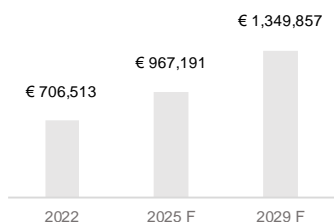
Source: Ferrari 10k reports and equity research valuation model

Chart 29
Forecasted price changes above inflation rate



Source: Equity research valuation model

Chart 30
R&D Costs in Cars and Spare Parts segment



Source: Ferrari reports and Equity research valuation model

“Different Ferrari for different Ferraristi, different Ferrari for different moments”⁵⁶: One of Ferrari's forward-looking priorities centers around

broadening its customer base, specifically targeting a younger demographic, and fostering a new generation of collectors⁵⁷. This strategic shift aligns with the evolving trend where luxury buyers are increasingly becoming younger⁵⁸. In accordance with this strategy, Ferrari is set to expand its product offering over the next 4 years, by introducing 15 new models, including a new supercar and the first ever fully electric vehicle of the brand (2025)⁵⁹. This desire to diversify its portfolio, while limiting its robustness⁶⁰, will likely imply a change in the portfolio constitution, with Ferrari looking for a more balanced offering of ICE, Hybrid and BEV's (as seen in Chart 28) and more distinctive features across different models. This trend is already observed by the introduction of the company's first ever SUV (the Purosangue), aiming to satisfy a broader market.

Exclusivity: Ferrari's value is intricately tied to its exclusive brand image, as such it requires meticulous attention. For Ferrari, this entails careful management of the production volumes for each model and an intentional extension of waiting times for prospective buyers. This approach is underscored by stringent ratio objectives set for the forthcoming years. Notably, the Icona and Supercar models are anticipated to constitute less than 5% of the total production volumes, while Special series models are targeted to comprise approximately 10%. Even with substantial demand, the annual contribution to shipments from Purosangue, Ferrari's inaugural SUV, is expected to be maintained below 20% throughout its lifecycle⁶¹. Furthermore, the pricing strategy for Ferrari, a fundamental element of its aura of exclusivity, is poised to see continued escalation above inflation rates (Chart 29). This trajectory is driven not only by the company's ongoing investments in Research and Development (Chart 30) but also in response to the expanding customer base and the success of the industry. A final aspect worth mentioning is the Ferrari Classiche department⁶², which focuses on supporting Ferrari customers in managing their historic Ferrari vehicles, ensuring their certification of authenticity, restoration, and spare parts management (even if no longer on the market), to preserve the historical value of vehicles.

Electrification efforts: Alongside the mentioned goal of introducing a fully electric vehicle in 2025, by 2026, the company also aims to achieve a product offering composed of 40% ICE vehicles, and the remaining 60% to be occupied

⁵⁶ Ferrari annual report (2022)

⁵⁷ Ferrari annual report (2022)

⁵⁸ See this reports section: Trends

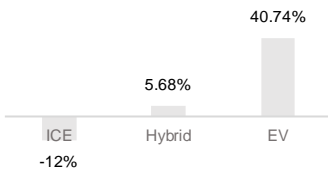
⁵⁹ Ferrari. (2022, November 11). Ferrari Capital Markets Day 2022. Official Ferrari website. <https://www.ferrari.com/en-EN/corporate/articles/ferrari-capital-markets-day-2022>

⁶⁰ Revealed in Ferrari's Q3 webcast

⁶¹ Ferrari. (2022, November 11). Ferrari Capital Markets Day 2022. Official Ferrari website. <https://www.ferrari.com/en-EN/corporate/articles/ferrari-capital-markets-day-2022>

⁶² Ferrari annual report (2022)

Chart 31
CAGR of volume of sales from the different engine types (2025-2030)

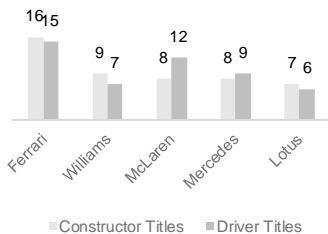


Source: Ferrari reports and Equity research valuation model



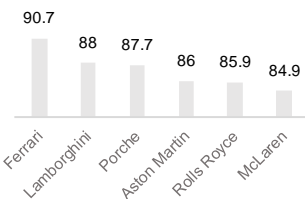
Source: Ferrari website. Giorgio Armani partnership and Ferrari Formula One racing drivers

Chart 32
F1 historical leaderboard (in units)



Source: Autosport magazine

Chart 33
Brand strength index score (0-100 scale)



Source: Brand Finance

Chart 34
New cars sold to clients owning more than one car (in percentage %)



Source: Ferrari 10k Reports

by hybrid and fully electric models (as seen in Chart 31). Lastly, Ferrari has the ambitious goal of achieving carbon neutrality by 2030. These goals established indicate further investment by Ferrari, not only in R&D, through the introduction of further technological innovations, but also in higher manufacturing costs as it will be harder to find reliable suppliers of new components. Moreover, we anticipate an EV CAGR of roughly 41% in this period (2025-2030).

Lifestyle investment: The last key point of Ferrari's strategy reflects its desire to be considered more than a car manufacturer, and to establish itself as a Lifestyle brand, expanding its offering into retail, through experiences and mainly through new apparel, accessory collections, and luxury services⁶³. This includes not only new partnerships (exploring the existing relationship with Giorgio Armani)⁶⁴ but also further investment in restaurants and theme parks⁶⁵. We predict this transition to drive Ferrari's Sponsorship, Commercial and Brand revenues growth (1.15% CAGR of segment between 2024-2030) with revenues stemming from the brand showing a CAGR of 3.42% for the same period.

Competitive Advantages

Formula One recognition and heritage: Ferrari is considered the most valuable racing team in the world⁶⁶, as it is the one with most titles (Chart 32). Despite a less successful past decade, with only one title, the team's historical presence remains crucial for brand image, particularly among car enthusiasts and potential customers, as it represents a unique stage to show-off the innovations developed by the company. Aston Martin revealed that more than 95% of US customers feel Aston Martin's presence in Formula One made them more likely to consider the brand⁶⁷, and one can assume that the same happens with Ferrari too. This is an advantage that competitors like Porsche, Rolls Royce or BMW don't enjoy – no Formula One presence. Among competing manufacturers in the sport, only Mercedes has outperformed Ferrari in the past decade, with Aston Martin and McLaren consistently trailing behind Ferrari⁶⁸.

Brand Value, Quality and Efficiency: Ferrari was once again considered by Brand Finance⁶⁹ the strongest Automobile Brand (Chart 33). Through our analysis, we also conclude that customers in general perceive Ferrari as a quality brand, allowing Ferrari to charge customers way above the cost of sales. Ferrari's gross margin of 48% beats those of brands like Aston Martin (with

⁶³ Ferrari annual report (2022)

⁶⁴ Ferrari. (2022, July 26). Scuderia Ferrari Mission Winnow and Giorgio Armani sign a partnership of style and excellence. <https://www.ferrari.com/en-EN/formula1/articles/scuderia-ferrari-and-giorgio-armani-sign-a-partnership-of-style-and-excellence>

⁶⁵ Ferrari annual reports and Ferrari. (2022, November 11). Ferrari Capital Markets Day 2022. Official Ferrari website. <https://www.ferrari.com/en-EN/corporate/articles/ferrari-capital-markets-day-2022>

⁶⁶ Ozanian, M. (2023, July 24). Formula 1's most valuable teams 2023. Forbes. <https://www.forbes.com/sites/mikeozanian/2023/07/19/formula-1s-most-valuable-teams-2023/>

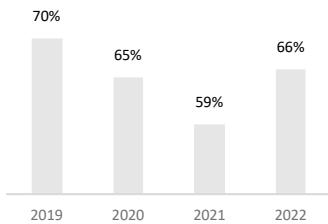
⁶⁷ Aston Martin Annual reports 2022

⁶⁸ As of December 2023

⁶⁹ BAIGRIE, B. (n.d.). Automotive Industry 2023: The annual brand value ranking. Brandirectory. <https://brandirectory.com/rankings/automobiles/>; Compliant with ISO 20671, Brand Finance's assessment of stakeholder equity incorporates original market research data from over 100,000 respondents in 38 countries and across 31 sectors

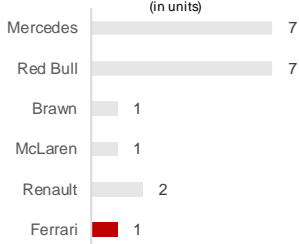
32.6%), Mercedes (22.7%) or Porsche (28%)⁷⁰.

Chart 35
New cars sold to current
Ferrari clients
(in percentage %)



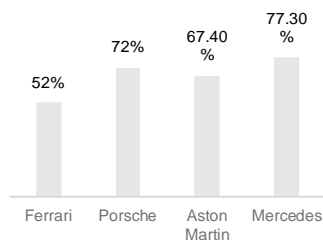
Source: Ferrari annual reports

Chart 36
Number of F1 titles since
2005
(in units)



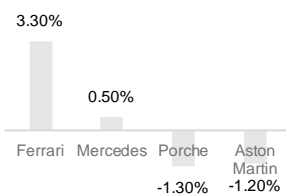
Source: Formula One

Chart 37
COGS as a percentage of
revenues
(2022)



Source: Ferrari, Mercedes, Porsche and Aston Martin annual reports

Chart 38
COGS as a percentage of
changes in revenues



Source: Ferrari, Mercedes, Porsche and Aston Martin annual reports

Loyalty: According to Ferrari's report, in 2022, approximately 38% of clients own more than one car (Chart 34) and 66% of the new cars were sold to existing clients (Chart 35). Furthermore, during the period between 2018 and 2022, Ferrari was reported to have generated 60% new collectors and a 25% increase in the average number of Ferrari cars owned per client⁷¹. These numbers indicate a high level of loyalty among the customer base. Competitors like Aston Martin, on the other hand, presented that the majority (60%) of its customers were new to the brand⁷². Furthermore, as of 2021, Ferrari has been identified as the industry leader in customer retention⁷³.

Risks

Poor performance of the Formula One team: Ferrari's brand image is tightly connected to its racing team's success, but the team's performance in the past decade, as seen in Chart 36, poses a significant risk⁷⁴. Ferrari's best results since 2018 were only three second-place finishes as a team and two second places with drivers, consistently trailing behind Mercedes and, often, Red Bull. The current year continues the trend, with Ferrari securing a third-place finish as a team and fifth place in the driver category. The most direct impact of poor performance on the company relates to revenue from sponsorships. Until last year, Ferrari was the F1 team with the biggest sponsorship deal (Marlboro), despite not winning a championship since 2007. In 2022, it was surpassed by Red Bull racing⁷⁵ (Oracle deal), a team that has shown a better performance in the last decade (Chart 36). Our predictions reflect exactly the possibility of further loss of sponsorship attractiveness if F1 performances stay like this. The impact can go beyond sponsorships and contribute to a reduction of brand value in the long run, hurting the company in other segments⁷⁶.

Disruptions of Supply and electrification efforts: Ferrari procures materials from a diverse array of suppliers, employing a selective approach to ensure the quality of its products⁷⁷. However, this stance exposes Ferrari to price and supply fluctuations, reducing bargaining power and intensifying reliance on current partners. Our analysis of Ferrari's COGS as a percentage of revenues, in comparison to several competitors, reveals that while Ferrari is more adept in managing its COGS (manifested in a lower percentage of revenues as seen in Chart 37), its margins are comparatively more affected to disruptions in its supply

⁷⁰ Check Competition section

⁷¹ Ferrari annual reports (2018-2020)

⁷² Aston Martin Annual reports 2022

⁷³ Shefska, Z. (2021, November 19). Automakers with the most & least loyal customers. CarEdge. <https://caredge.com/guides/automaker-loyalty>

⁷⁴ Ferrari annual report (2022): "The prestige, identity, and appeal of the Ferrari brand depends in part on the continued success of the Scuderia Ferrari racing team in the Formula 1 World Championship. The racing team is a key component of our marketing strategy and may be perceived by our clients as a demonstration of the technological capabilities of our cars".

⁷⁵ <https://www.sportskeeda.com/f1/3-largest-f1-sponsorship-deals-history>. (n.d.).

⁷⁶ Check Sponsorship, Commercial and Brand Valuation section

⁷⁷ Ferrari annual report (2022)

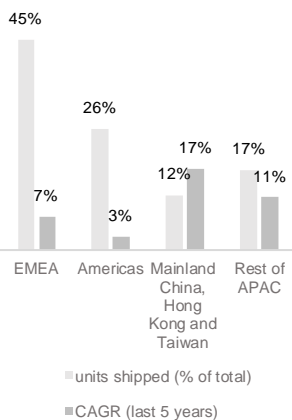
Table 7
New Ferrari E-building



Venue
Location: Maranello
Opening (Expected): 2024
Purpose: Manufacture electric and hybrid vehicles as well as next-generation powertrains.

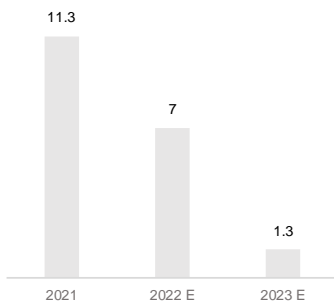
Source: Ferrari annual report

Chart 39
Percentage of units shipped and CAGR per geography



Source: Ferrari annual reports

Chart 40
Number of vehicles removed from production worldwide due to semiconductor shortage in 2021 (In millions of cars)



Source: Statista

chain⁷⁸. In 2022, the entire industry faced challenges with higher raw materials and energy prices due to the ongoing conflict between Russia and Ukraine. This resulted in a 3.3% increase in COGS as a percentage of revenues for Ferrari, climbing from 48.7% to 52%. In contrast, competitors such as Mercedes experienced only a 0.5% increase, while both Porsche and Aston Martin observed decreases of 1.3% and 1.2%, respectively. This disparity underscores Ferrari's heightened sensitivity to changes in the supply side, as depicted in Chart 38⁷⁹. A similar trend was observed during the pandemic period (2019-2021), as we observed that Ferrari's COGS increased by 0.8% as a percentage of revenues, while competitors like Mercedes and Porsche decreased it by 6% and 2% respectively⁸⁰. Furthermore, as Ferrari intensifies its efforts in hybrid and electric engine development, the company will necessitate sourcing components from various suppliers. The challenge lies in identifying reliable partners during a period when demand is escalating, potentially rendering Ferrari more vulnerable to market changes. An AlixPartners report⁸¹ discusses the implications of transitioning to BEVs, emphasizing potential margin reductions. This is crucial for Ferrari, known for its low-volume, high-margin strategy. Industry challenges, such as semiconductor shortages and rising raw material costs, intensify the complexities of this transition. Ferrari's commitment to BEVs is evident in its announcement of a €126 million expenditure since 2019 to finance expansion plans, including the construction of an E-building for BEV production⁸². These challenges pose a threat to Ferrari's margins and overall value, at least until the fruition of investments materializes into revenue increases.

Expansion to other markets: Ferrari's growth is dependent on its ability to expand to different markets, but this poses risks for the company. Based on Ferrari's reports⁸³, and what we discussed in previous sections of this document⁸⁴ we anticipate further expansion to the regions of Mainland China, Hong Kong and Taiwan, and the rest of APAC. In these markets, government actions may limit Ferrari's ability through regulations, taxes, or even active discouragement of luxury purchases. For instance, since August 2021 the President of the People's Republic of China has been signaling its intention to regulate the spending patterns of UHNWI's, limiting the purchasing power of the biggest target clients of Ferrari⁸⁵. Moreover, in Asian nations, particularly China, substantial government subsidies are frequently employed to enhance the competitiveness of domestic products against foreign counterparts, giving rise to

⁷⁸ Refer to the Competition section

⁷⁹ Ferrari annual report (2022), Mercedes annual report (2022), Aston Martin annual report (2022), Porsche annual report (2022)

⁸⁰ Ferrari annual report (2022), Mercedes annual report (2022), Aston Martin annual report (2022), Porsche annual report (2022)

⁸¹ 2023 Global Automotive Outlook, AlixPartners. (n.d.). <https://www.alixpartners.com/media-center/press-releases/global-automotive-outlook-2023/>

⁸² Ferrari annual report (2022)

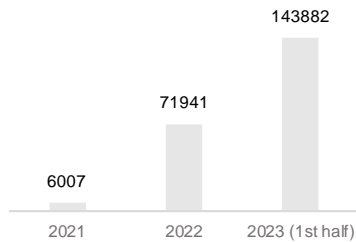
⁸³ As described by Ferrari in its last report "We believe we have potential for further success in new geographies, in particular in China, but also more generally in Asia, recognizing the increasing personal wealth in these markets".

⁸⁴ See "Increased demand in Asia" in the trends section, and geographical analysis of the Cars and Spare Parts segment in the "Company Structure" section. China, Hong Kong are expected to display a big growth in the number of HNWI's and UHNWI's, we expect Ferrari to invest in it. Rest of APAC: second biggest CAGR in the last 5 years, and second lowest percentage of units shipped.

⁸⁵ Ferrari annual report (2022)

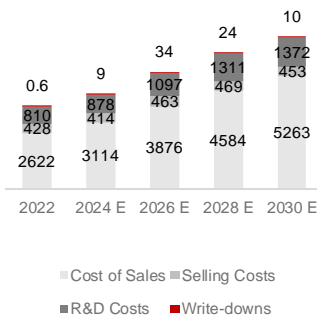
concerns of unfair competition⁸⁶. The electric vehicle development in China poses an additional threat to Ferrari as Chinese carmakers are repositioning themselves as high-end manufacturers⁸⁷, and brands like Zeekr sold over 71000 units just last year in China (with sales twice as high in the first half of this year). Even though these companies don't usually directly compete at the same price points as Ferrari, their presence can saturate the market and make Ferrari's offering less appealing, especially when facing a more hazardous economic outlook. Regarding direct competitors, Porsche already has an established EV presence in China, as it is in fact, its biggest market⁸⁸, posing once again an obstacle to Ferrari's EV expansion in China⁸⁹. Furthermore, in some Asian countries, there is a lack of resources and infrastructure to enforce Intellectual Property (IP) rights effectively, and the concept of IP is often undervalued⁹⁰, leading to potential infringements. China is considered to still have a lot of regional imbalances and to present a model based on experimentation, which indicates a risk of unappropriated protection for Ferrari. The main risk is the possibility of forced technological transfers, as it often happens with foreign firms in China, who see themselves exchanging technology for market access or regulatory approvals, making their products less competitive⁹¹. This practice is especially concerning as part of the "Made in China 2025" strategy to pursue IP⁹². As hard it as is to predict the extent to which Ferrari will be affected by these risks, the difficulty in expanding further into these markets, whether due to inappropriate protection or adverse government actions and competition is an obstacle able to hinder Ferrari's sustained growth strategy.

Chart 41
Zeekr Unit sales in China



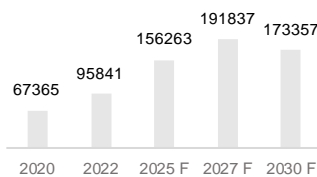
Source: Financial Times

Chart 42
Operating costs
(in Millions€)



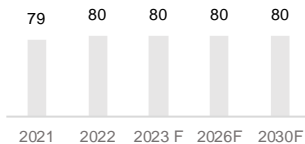
Source: Equity research valuation model

Chart 43
Selling costs
(€ in thousands)



Source: Equity research valuation model

Chart 44
Average cost per
commercial employee
(in thousands€)



Source: Ferrari 10k and Equity research valuation model

Operating Costs

Cost of Sales: This is the most significant operating cost of the company (Chart 32) and its forecast for the Cars and Spare Parts segment was based on the volume of sales of Ferrari, the constitution of its portfolio, and the analysis of competitors that already introduced EV's in the past. As of 2022, and because of supply chain disruptions, the COGS of Ferrari jumped to over 56% of its revenues. Nonetheless, as Ferrari adjusts to the market conditions following the disruptions in 2022, and since no significant adjustments in the usual lineup during this period are expected, we predict this value to decrease to around 55% by 2024 (closer to the usual observed in Ferrari). However, we expect this value to slowly increase (starting in 2025) to around 59% of revenues by 2030. This reasoning is based on Ferrari's transition to BEVs, as these vehicles are typically

86 EU to launch anti-subsidy probe into Chinese Electric Vehicles. (n.d.). <https://www.ft.com/content/55ec498d-0959-41ef-8ab9-af06cc45f8e7>

87 China/geely: High-end electric cars pose challenge to European rivals. (n.d.). <https://www.ft.com/content/025133e1-68ee-405c-9871-cc67520a0b65>

88 Press releases: Porsche China speeds up diving into the Main Circuit of Electrification and digitalisation - newsroom & press - about Porsche - dr. ing. h.c. F. Porsche AG. HOME: Porsche China speeds up diving into the main circuit of electrification and digitalisation - Dr. Ing. h.c. F. Porsche AG. <https://www.porsche.com/china/en/aboutporsche/pressreleases/international/?id=2022-02-22&pool=china&lang=en>

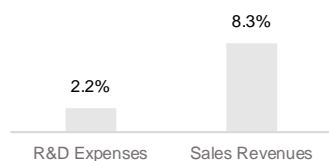
89 Porsche delivers more than 300,000 vehicles. Porsche Newsroom. (2022, December 1). <https://newsroom.porsche.com/en/2022/company/porsche-deliveries-2021-worldwide-27003.html>

90 Antons, C., & Blakeney, M. (2023). Intellectual property, creativity and innovation in ASEAN. Intellectual Property Law in South East Asia, 1-16. <https://doi.org/10.4337/9781035308392.00005>

91 Zubaşcu, F. (n.d.). Poor IP protection in China causes "irreparable harm" to EU Companies. Science. <https://sciencebusiness.net/news/poor-ip-protection-china-causes-irreparable-harm-eu-companies>

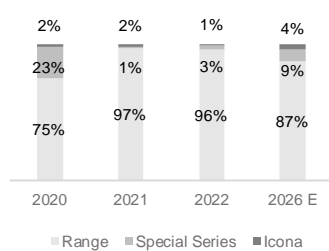
92 Frankenfield, J. (n.d.). Forced Technology Transfer (FTT): Meaning, history, criticism. Investopedia. <https://www.investopedia.com/forced-technology-transfer-ftt-4687680>

Chart 45
CAGR R&D and sales revenue (2018-2022)



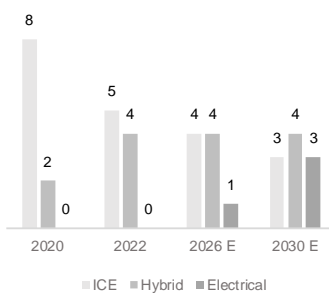
Source: Ferrari 10k reports and Equity research valuation model

Chart 46
Car volumes by type (in percentage %)



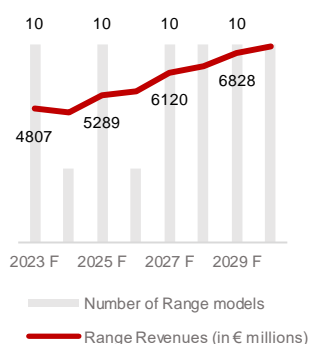
Source: Ferrari annual report and Equity research valuation model

Chart 47
Number of car modules per engine type



Source: Equity research valuation model

Chart 48
Relationship between product mix and revenues



Source: Equity research valuation model

more expensive to produce, mainly due to a lack of initial capabilities and a bigger challenge in finding suppliers. If we observe Porsche (who introduced its first BEV in 2019), we can see that its COGS as a percentage of sales increased from 72.2% in 2018, to 74.5% in 2019 and even 75.2% in 2020, before starting to normalize again. We expect Ferrari's margins to slightly decrease (in this initial transition period (2025-2030)). Regarding the Engines segments, we forecasted a slight increase in COGS as a % of segment revenues during the years prior and right after the introduction of the first EV, decreasing thereafter to its long-term average. For the Sponsorship, Commercial, and Brand segment, given the low COGS variability over the last 5 years, we decided to assume the last 5-years' average for each period (stable at around 9% of the segment's revenues).

Selling Costs: Selling costs account for costs related to sales personnel, marketing and events. The costs with sales personnel are a function of the number of commercial employees and the average cost per employee. Based on past numbers, we expect it to slightly increase in 2026 after the introduction of the 1st electric model, with the need of more specialized commercial personnel (reaching 510 by 2028). We assumed the average cost per employee to stay constant at 80 000€ - little fluctuation in the past years (Chart 34). Regarding the cost with marketing and events, we predict it to stay at around 2% of revenues, peaking in 2025, and slightly decrease as a percentage of revenues given the normalization in operations following the unveil of the first EV. Overall, selling costs are predicted to increase to an all-time high of €191.8 million in 2027, slowly decreasing in the following years after Marketing expenses stabilize.

R&D Costs: These costs were calculated as a percentage of the sales revenues of the company, as we believe these reflect the company's efforts to introduce new models that will eventually translate into higher sales revenues. Looking at Ferrari's past performance, we understand that the R&D expenses have been increasing in absolute value reflecting the company's constant concern with performance and design improvement, but decreasing as a percentage of revenues, reflecting a growth of sales superior to the growth in R&D expenses. (Chart 36) Nonetheless, we anticipate an increase in R&D expenses in the next decade with the ongoing transition to BEV's and the introduction of 15 new models. Given these opposing trends (a superior growth of sales compared to the growth in R&D expenses, and the announced increase in investment), we anticipate stable R&D expenses as a percentage of revenues, varying between 15 and 16% in the next decade.

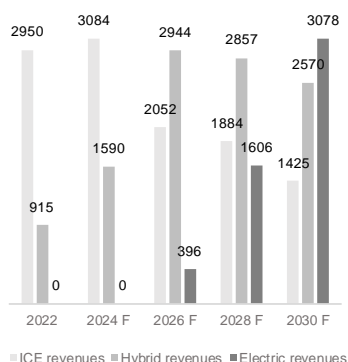
Valuation

Cars and Spare Parts

Product Mix: As mentioned earlier, Range models dominate shipments, and in line with Ferrari's future ratio objectives⁹³, we anticipate minimal change (Chart 46). The significant shift in Ferrari's product mix is chiefly towards hybrid and electric models. As of 2022, Ferrari had 5 ICE models, and 4 hybrid models. Over the next years, we forecasted an increase in the number of hybrid and electric models, accompanied by a decrease in the number of ICE, in a way that is consistent with Ferrari's exclusivity strategy, i.e., not surpassing the total 10 range models in each year (Chart 47). In 2024, the year prior to the launch of its first EV, we predict a reduction in the number of ICE models⁹⁴, from 6 (one more than in 2022 because in 2023 the Purosangue was announced) to 5, reflecting in just 9 range models instead of the usual 10. Given that our revenue forecast is dependent on the average price per model, the average number of productions per model and the total number of models, we expect less revenues in 2024, as we have both a reduction in the number of models and the average production per model. Nonetheless, after the first EV introduction in 2025, the revenues observed a consistent increase until 2030 (Chart 48). Only in 2026 do we observe again a slowdown of revenues, due to the same reason as in 2024 (the reduction of ICE models with the introduction of a new electric model only in the following year, translating into a temporary portfolio of 9 range models). In 2027, we expect the second electric range model to be launched, in the form of the Spider version of the model announced in 2025 (following Ferrari's past tendency of introducing Spider versions of previous models. Finally, in 2029, the third electrical range model is expected to be unveiled, likely as an E-SUV (possibly an electric version of Purosangue). This 2029 date comes as an expectation based on Lamborghini's announcement of their first electric SUV⁹⁵.

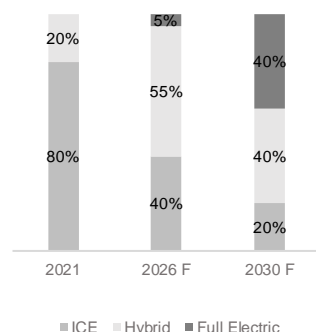
Quantity: Following the same tendency described in the Product mix, we forecast a reduction in the number of vehicles produced per ICE model, with an anticipated average of 1,200 units per model by 2026 and 915 units by 2030, contrasting with the 1980 units of 2022. To offset this decline, we foresee a prevalence of hybrid vehicles by 2026, while electric models are still in the early stages. The hybrid lineup is projected to show an elevation to approximately 1,670 units per model in 2026, as opposed to 698 units in 2022. As market trends align with Ferrari's commitment to achieving carbon neutrality by 2030, our forecast envisions electric vehicles sharing significance with hybrid models. By 2030, we anticipate an average production of 1,360 cars per model. This contrasts with the projection for 2026, where only one electric model is expected, with a production volume of 650 units, given that it's only the second year of

Chart 49
Range models revenues
(in millions €)



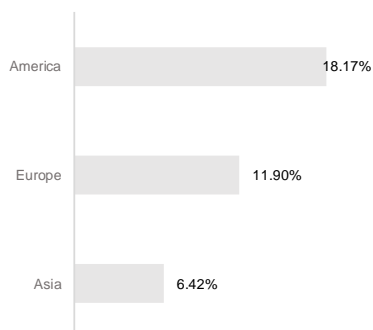
Source: Equity research valuation model

Chart 50
Type of cars by engine type,
2020-2030
(€ Millions)



Source: Ferrari 2022 Sustainability Report

Chart 51
EV market forecasted CAGR
(2023-2028)



Source: Equity research valuation model

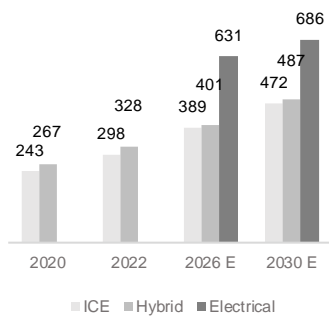
⁹³ Ferrari. (2022, November 11). Ferrari Capital Markets Day 2022. Official Ferrari website. <https://www.ferrari.com/en-EN/corporate/articles/ferrari-capital-markets-day-2022>

Established that the contribution to volume by Special Series models will be around 10%, whereas the Icona models will likely increase beyond the current 1%, but stay below 5%, which indicates a range contribution between 90% and 85% of unit shipments.

⁹⁴ Given Capital Market's day announcement of less than 40% ICE vehicles, Ferrari. (2022, November 11). Ferrari Capital Markets Day 2022. Official Ferrari website. <https://www.ferrari.com/en-EN/corporate/articles/ferrari-capital-markets-day-2022>

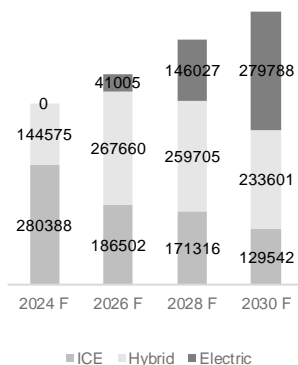
⁹⁵ Lamborghini unveils the lanzador: Future electric emotion. Lamborghini.com. (n.d.). <https://www.lamborghini.com/en-en/news/lamborghini-unveils-the-lanzador-future-electric-emotion>: To be produced in 2028 and commercialized in 2029

Chart 52
Average price of range models
(in Thousands €)



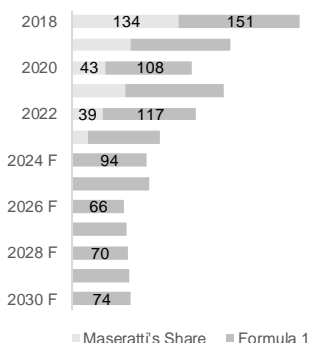
Source: Equity research valuation model

Chart 53
Forecasted customization revenues
(thousands €)



Source: Equity research valuation model

Chart 54
Engine revenues by value driver
(€ Millions)



Source: Equity research valuation model

production for such vehicles. Overall, as observed in Chart 50, we expect the revenues stemming from ICE to consistently decrease, while offset by a temporary increase in hybrid revenues (2022-2026), and a continuous increase of electric vehicles revenues (2025-2030). In summary, considering Ferrari's corporate objectives and prevailing market dynamics, we anticipate a CAGR of -11.76% for ICE vehicles from 2024 to 2030, offset by a 7.09% CAGR for hybrid models during the same period and a robust 40.74% CAGR for electric vehicles from 2025 to 2030. We expect these changes to translate into a product offering composed of less than 25% ICE vehicles by 2030 (in line with Ferrari's electrification efforts). In substantiation of the rationale for this transition, it is noteworthy that the EV market is anticipated to exhibit sustained growth throughout the period spanning 2023 to 2028 (Chart 51) across diverse global regions. Projections indicate a CAGR of 6.42% (9.3 million vehicles by 2028)⁹⁶ for the Asian region, while Europe and the US are anticipated to experience CAGRs of 11.9% (4.83 million vehicles by 2028)⁹⁷ and 18.17% (2.46 million vehicles by 2028)⁹⁸, respectively, during this specified timeframe.

Price: Given Ferrari's brand perception, the expected industry growth in the next decade, and the past evolution of prices, we expect a continuous price increase across all models in the next decade (Chart 52). Ferrari's range models currently average between € 300 Thousand (ICE) and € 330 Thousand (hybrid models), but we expect a YoY growth slightly (3%) above inflation, based on the organic growth observed in the past⁹⁹. Rising the average model price of the Range models for the following: ICE to around € 472 Thousand in 2030; Hybrid to around € 487 Thousand in 2030; and Electric to around € 686 Thousand in 2030. Icona and Special series models are more unpredictable given the lower volume and short lifecycle, but we expect a rise in prices for these models as well, given past information. Another great source of revenue for Ferrari is through customization, we conservatively assumed in our analysis that 50% of clients personalize at least some part of their vehicle¹⁰⁰ worth, on average, 20% of the value of their model purchased¹⁰¹ (Chart 53). This customization is made available to clients through special ateliers programs and multiple options to improve both performance and design in vehicles and has seen an increase in demand in the last years¹⁰².

Engines

The current business unit of Ferrari is responsible for the development of engines

⁹⁶ Electric vehicles - asia: Statista market forecast. Statista. (n.d.-a). <https://www.statista.com/outlook/mmo/electric-vehicles/asia>

⁹⁷ Electric vehicles - europe: Statista market forecast. Statista. (n.d.-a). <https://www.statista.com/outlook/mmo/electric-vehicles/europe>

⁹⁸ Electric vehicles - US: Statista market forecast. Statista. (n.d.). <https://www.statista.com/outlook/mmo/electric-vehicles/united-states>

⁹⁹ Refer to section sensitivity analysis - Impact of inflation in Ferrari's valuation

¹⁰⁰ Guan, M., K&umtstring J.-C., Middleton, S., & M&umtstring T. (2022, July 8). Five trends shaping Tomorrow's luxury-car market. McKinsey & Company. <https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/five-trends-shaping-tomorrows-luxury-car-market>; "In a recent survey of potential Chinese luxury-vehicle buyers, nearly 84 percent of respondents say that the ability to personalize their vehicle is important or very important"

¹⁰¹ Robtfrank. (2019, October 15). Inside Ferrari's New York Design Lab where the Super Rich can customize \$500,000 cars. CNBC. <https://www.cnbc.com/2019/10/15/inside-ferraris-new-york-design-lab-where-the-super-rich-can-customize-500000-cars.html>

¹⁰² Personalization offer section Ferrari annual report 2022

and their associated technology.

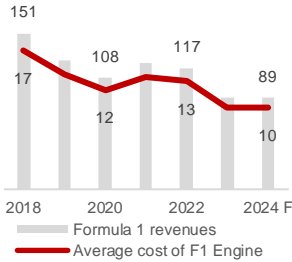
Maserati: Historically, Ferrari has been a supplier to Maserati, providing them with V6 and V8 power units since 2003. However, this long-standing partnership recently came to an end as part of Maserati's "Dare Forward 2030"¹⁰³ commitment from Stellantis, their holding group. Their existing contract with Ferrari is set to expire this year, with 5,000 units supplied until the year-end, a reduction from 9,140 units in 2022 and 14,900 units in 2021. Maserati will now turn to Marelli, an Italian electric motor manufacturer, to fulfil their powertrain needs. Its impact on the revenues of the segment is evident in Chart 54 – in a period of four years (2021-2024F), revenues should decrease by 51%.

The deceleration rate of engines supplied to Maserati started in 2019¹⁰⁴. Since then, an average gross result of € 7.5 Million has been lost year-on-year and completely from 2024 thereafter. The end of the partnership is forecasted to impact negatively the 2024 results in € 6.95 Million.

Formula One: Over the past five years Ferrari has been supplying engines to two teams: Sauber (under the name Alfa Romeo) and HAAS, an American racing team. However, a major shift is occurring after the 2023 season. Alfa Romeo has announced its withdrawal from Formula One and, according to market rumours, it will merge with HAAS to form a single team¹⁰⁵. The Swiss-based Sauber team, currently operating under Alfa Romeo's name, will continue to use Ferrari's power unit until the end of 2025. The entrance of the German manufacturer Audi into Formula One will result in Ferrari being replaced as the power unit provider for one of its two customers, leading to a substantial decrease in revenues of € 29.2 Million, per year, shown in Chart 54.

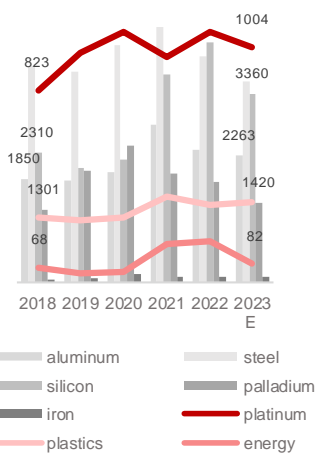
A single turbocharged 1.6-liter V6 engine, which is used in Formula One cars, is valued at approximately \$10.5 million (€9.84 million), with teams allowed to use three of these engines throughout the season. Notably, the cost of engines in Formula One has been a significant point of focus, with costs decreasing by 41% since 2018. However, it's worth highlighting those raw materials experienced a notable increase during the years of the pandemic, and although there has been some stabilization in the market, prices have not returned to historical levels (Chart 56). The impact of raw material costs on overall prices is a factor that cannot be overlooked - the average cost of the primary raw materials for engine production has been increasing at an average rate of 5.79% per annum. As a result, our research team anticipates increasing its revenues at the same pace

Chart 55
Formula One revenues
(€ Millions)



Source: Equity research valuation model

Chart 56
Raw materials
(USD/Tonne)



Source: Statista

Table 8
Relevant Ferrari modules

	599 GTO First model using hybrid technology. Year: 2010
	Ferrari LaFerrari First hypercar using hybrid technology. Year: 2013
	SF90 Stradale First sports car using plug-in hybrid technology. Year: 2019
	296 GTB First range car using plug-in hybrid technology. Year: 2021

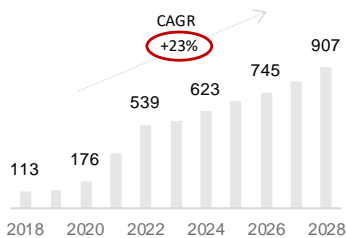
Source: General Research by the analysis team

¹⁰³ As part of this commitment, Stellantis has pledged that all of Maserati's new models will be entirely developed, engineered, and produced in Italy, and they will be equipped with electric powertrains (2030), and will come in a 100% electric version by 2025. Press release - Maserati Media Site. (n.d.). <https://www.media.maserati.com/en-us/releases/1690>

¹⁰⁴ Mihalascu, D. (2019, May 12). Ferrari will stop supplying engines to Maserati from 2021-2022. Carscoops. <https://www.carscoops.com/2019/05/ferrari-will-stop-supplying-engines-to-maserati-from-2021-2022/>

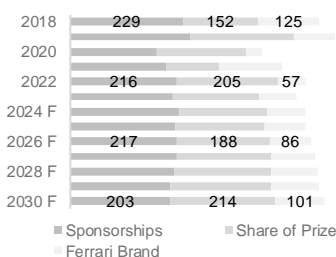
¹⁰⁵ Chinchero, R. (2023, August 2). Alfa Romeo resta in F1: rinominerà le power unit di Haas dal 2024. motorsport.com. <https://it.motorsport.com/f1/news/alfa-romeo-resta-in-f1-rinominera-le-power-unit-di-haas-dal-2024/10503138/>

Chart 57
Global electric vehicle
revenue forecast 2016-2028
(\$ Billions)



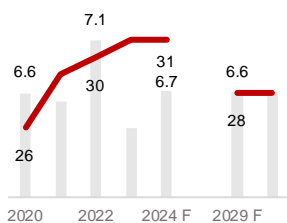
Source: Equity research valuation model

Chart 58
Sponsorship, Commercial and
Brand revenues
(€ Millions)



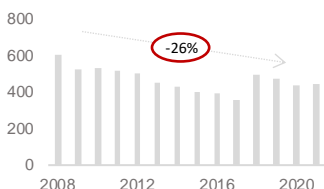
Source: Equity research valuation model
nicol

Chart 59
Sponsors and Partners
(€ Millions)



Source: Equity research valuation model

Chart 60
Formula One racing global TV
audience
(Millions of viewers)



Source: Equity research valuation model

from 2025 and beyond for the segment.

Legislation: Engine production has been subject to sustained pressures due to recent legislation. This trend is not unique to the United States and the UK¹⁰⁶.

Independent international organizations such as the United Nations (UN) are actively involved in shaping regulations, exemplified by the UN Global Technical Regulation (UN GTR) focused on the topic of brake particulate emissions from the brake systems of light-duty vehicles¹⁰⁷. As a response to the current and anticipated environmental regulations, Ferrari has taken steps to improving the HY-KERS (Kinetic Energy Recovery System) technology into their Formula One cars¹⁰⁸. Currently, the company has adopted plug-in hybrid technology in the likes of the SF90 Stradale and the 296 GTB. These new hybrid models have succeeded in reducing vehicle emissions during the usage phase by approximately 30% when compared to traditional internal combustion engines¹⁰⁹.

Ferrari's commitment to innovation encompasses a range of areas, including enhancements in turbochargers, engine downsizing (with V6 and V8 hybrid configurations), transmission, electric steering, and hybrid technology. These advancements signal a significant transformation for Ferrari in the years to come (Table 8), aligning the company with changing industry standards and environmental concerns. Supply and demand are both driving this transformational change in the luxury mobility market. External pressures like legislation are strengthened by demand for electric mobility, expected to increase at a compounded annual growth rate of 23.2% by 2028 (Chart 57).

Sponsorship, Commercial and Brand

Sponsorship deals: Ferrari's F1 team (Scuderia Ferrari) benefits from sponsorship agreements with large companies such as Santander, Shell, and Puma, Ferrari's official Formula One sponsor¹¹⁰. The revenues for this segment were projected based on the average contribution per sponsor, which has historically been around €6.8 million (Chart 59)¹¹¹, times the number of sponsors.

In 2017, when Liberty Media took control of the Formula One brand, it marked a pivotal juncture in the history of the sport¹¹². Central to their approach was placing the drivers, and to a somewhat lesser extent, the technical and mechanical side of Formula One racing, at the heart of the sport¹¹³. While this

¹⁰⁶ Notably, the Washington State House bill 1204, titled "Clean Cars 2030," mandates that all passenger and light-duty vehicles, whether privately or publicly owned, of model year 2030 or later registered in Washington state must be electric vehicles. In November 2020, the UK Prime Minister, as part of the 10-Point Plan for a Green Industrial Revolution, announced the phasing out of the sale of new petrol and diesel cars in the United Kingdom by 2030. Ferrari 2022 Annual Report

¹⁰⁷ UNECE adopts groundbreaking regulation introducing a methodology to measure particle emissions from cars and vans' braking systems | UNECE. (2023, June 21). <https://unece.org/media/press/380012>

¹⁰⁸ This feature was first incorporated into the Ferrari 599 GTB Fiorano, in 2010, Ferrari's first of many road cars to utilize hybrid technology. Brogan, M. (2021, August 12). Ferrari 599 HY-KERS, Ferrari's first hybrid – Geneva 2010. Drive. <https://www.drive.com.au/news/ferraris-first-hybrid/>

¹⁰⁹ Ferrari 2022 Annual report

¹¹⁰ PUMA recently renewed its contract with Ferrari Formula One racing team as official sponsor. Ferrari Q3 Webcast session, November 2023

¹¹¹ Santander alone made a substantial individual contribution of €60 million for the 2023 season. Ferrari Q3 Webcast session, November 2023

¹¹² Admin, N. (2022, April 22). F1 fandom: Will the bubble burst? National Motorsport Academy. <https://motorsport.nda.ac.uk/news/f1-fandom-will-the-bubble-burst/>

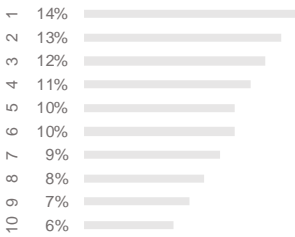
¹¹³ This strategic shift aimed to create compelling human-interest stories, enriching the Formula One experience for fans. A Kulpa, C. (2022, November 7). Formula One is growing in the U.S. Is it a bubble waiting to pop? Twin Checkers. <https://www.twin-checkers.com/formula-one-us-bubble-waiting-to-pop/>

Table 9
Formula One Sponsors 2022

Entities F1	Number of Sponsors
McLaren	43
Ferrari	30
Aston Martin	26
Mercedes	24
Formula 1	18
Total Branded Partnerships	299
B2C	145
B2B	135
B2All	19

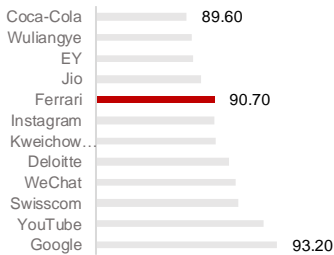
Source: Formula One, Marksin Mikov

Chart 61
Variable Prize Money
(€ in Thousands)



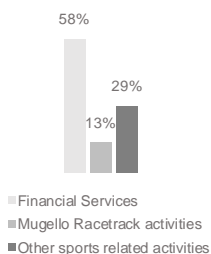
Source: Equity research valuation model

Chart 62
Leading brands worldwide,
2023 Brand Strength Index
(0-100 scale)



Source: Equity research valuation model

Chart 63
Others revenue breakdown



Source: Ferrari annual reports

approach worked to ramp-up attention to the sport in 2018 and 2019 (Chart 60), the analyst's view is that Formula One is currently living in a bubble of broadcasting, set to decline in the years that follow¹¹⁴.

Out of the total sponsors and partners, the Italian manufacturer counts with 31 (2023 season), but this number is anticipated to decrease over the years to 28¹¹⁵ (Chart 60), duly of the historical viewership decrease¹¹⁶. The total contribution of sponsorship deals is forecasted to follow the same evolution, from 44% to 37% by 2030, at a negative CAGR of 1.31%.

The automaker also competes in the World Endurance Championship (WEC), participating in two of the three categories: GTLM (a successor to the GT3 class) and the Hypercar class, which they joined in the 2023 calendar year. With their entry into the second racing category, research indicates that the amount of sponsorship directed at the Scuderia Ferrari WEC team is expected to double, representing approximately 2% of revenues for this segment. The average contribution of sponsors to the F1 team was projected using a moving average, considering the connection to the previous years' constructor's results.

Prize money: The amount of revenue the team earns at the end of the racing season, mostly derives from Formula One. It is composed of two independent variables: a fixed participation fee – Long Standing Participation (LSP) – that is awarded singularly to Ferrari for its participation in the sport since its beginning (1950), which has been around € 63 Million for the past five years; and a variable reward, dependent on the constructor's position in the Formula One ranking. The first place receives 14% (€ 126 million) of the total variable prize and decreases proportionally until it reaches the last position (10th place), which is entitled to € 54 Million (6% of the capital pool)¹¹⁷. Scuderia Ferrari finished third this season, awarding the company with € 108 Million of variable compensation. Forecast of revenues was done based in Ferrari's position in the championship for the years to come. We believe it will keep third place as average, given the substantial pressure coming from the top four contenders, Redbull, Mercedes, McLaren and Aston Martin; new engine suppliers (Audi, 2026 and GM, 2028) entering the sport; and shorter, lighter and thinner cars, as planned by the FIA¹¹⁸.

Ferrari Brand: The last component of the driver is the value associated with the Ferrari brand itself, through licensing, royalty income and merchandising. There was insufficient data available to conduct a well-sustained and accretive forecast.

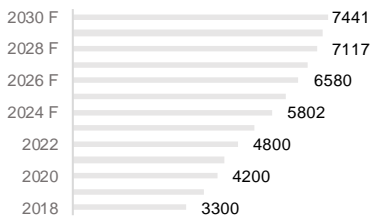
¹¹⁴ Entering next weekend's inaugural Las Vegas Grand Prix, Formula 1 is averaging 1.11 million viewers across the ESPN family of networks — down 8% from last year but still the second-highest average on record. Ramirez, I. (2023, November 18). Formula 1's race in Las Vegas proves it doesn't get its new American audience. Vox. <https://www.vox.com/culture/2023/11/18/23965792/formula-1-growth-race-las-vegas-strip-grand-prix-fans>

¹¹⁵ The total number of B2C sponsors in the sport were 145. Sponsors agree to these partnerships for three main purposes – increase sales, brand awareness, and strategy. We have assumed, for forecasting purposes, if their expected return is not being fulfilled, some of these sponsors will not renew their contracts in the following seasons. Equity Research Team ¹¹⁶ F. (2022, February 17). Formula 1 announces TV, race attendance and digital audience figures for 2021 | Formula 1®. Formula One. <https://www.formula1.com/en/latest/article.formula-1-announces-tv-race-attendance-and-digital-audience-figures-for-2021.1YDpVJIOHGNuok907sWcKW.html>

¹¹⁷ Booth, D. (2023, March 4). F1 prize money 2023: Payout breakdown, how much drivers and constructors win. Sporting News. <https://www.sportingnews.com/us/formula-1/news/f1-prize-money-2023-breakdown-how-much-drivers-constructors-win/niv7nqafitvoiphufjj4dy>

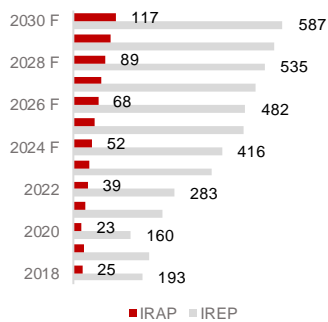
¹¹⁸ FIA has declared a 50kg weight target reduction by 2026 in all cars. (2023, September 19). The FIA targets 50 kg lighter cars for F1's 2026 rules changes. F1News.live. <https://www.f1news.live/the-fia-targets-lighter-more-efficient-cars-for-f1s-2026-rules-revolution/>

Chart 64
Number of financial services' clients (in units)



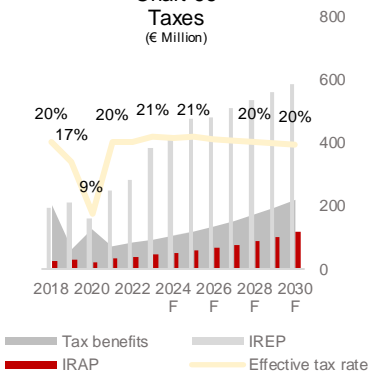
Source: Equity research valuation model

Chart 65
IREP and IRAP (€ Millions)



Source: Equity research valuation model

Chart 66
Taxes (€ Million)



Source: Equity research valuation model

Table 10
Patent Box Regime

	Patent Box	No Patent Box
Equity	€ 63,158,311	€ 63,074,885
Price Target	€ 350.3	€ 349.8
Capital gain	3.50%	3.40%

Source: Equity research valuation

The historical values (2018-2023) were obtained by difference from the total sponsorship, commercial and brand revenues to sponsorship and prize contributions. Based on recent historical growth and brand recognition worldwide (Chart 62)¹¹⁹, we have concluded that Brand would be the biggest driver of growth for the segment (Chart 58), to appreciate at a CAGR of 3.42%.

Others

This segment is mainly driven by the Financial Services activities of Ferrari (Chart 63), which has seen a significant increase in the last year, surpassing pre-pandemic results (Chart 64). Given the industry outlook for the future¹²⁰, the fact that car loans have been increasing¹²¹, and the expected increase in price for Ferrari models, the revenues of this service are also expected to increase in the future and drive Ferrari's revenues in this segment, as we expect them to reach over 125 million by 2030 - approximately € 70 Million in 2022. The remainder activities of the company in this segment were forecasted based on their previous performance, so we assumed both the Mugello Track revenues and other Sport Related activities to keep on increasing based on their previous growth, reaching around 28 million (15.8 million in 2022) and 56 million (34.7 million in 2022) respectively, by 2030. A good indicator of this forecasted growth is the record 650 thousand visitors in Ferrari Museum from the beginning of the year.

Taxes

Ferrari's business is subject to a range of taxation, primarily in Italy, which encompass the Italian corporate income tax (IRES), having remained steady at 24% over the past three years, and the regional trade tax (IRAP) with a rate of 3.9% (Chart 65¹²²).

In 2018, Ferrari N.V. entered into an agreement with the Italian Revenue Agency concerning the Patent Box tax regime, offering tax advantages to companies that derive income from the utilization of patents, trademarks, designs, and know-how. The current Patent Box regime introduced a 110% "super tax deduction" for specific costs associated with eligible intangible assets, such as research and development capital expenditures (R&D). This new regime is set to expire in 2024. Ferrari's ability to renew its participation in this regime will depend on potential future changes to Italian tax legislation¹²³. The effective tax rate is estimated to fall within the range of 20-21%, considering assumptions regarding

¹¹⁹ Ferrari is again the strongest Automobile brand with a Brand Strength Index score of 90.7, and AAA+ brand rating. Automotive Industry 2023 | The Annual Brand Value Ranking | BrandDirectory. (n.d.). <https://branddirectory.com/rankings/automobiles/>

¹²⁰ Check trends section of this report

¹²¹ Aleksandric, M. (2023, December 7). Car loan statistics 2023: Average debt, payment and default rate. FinMasters. <https://finmasters.com/car-loan-statistics/>

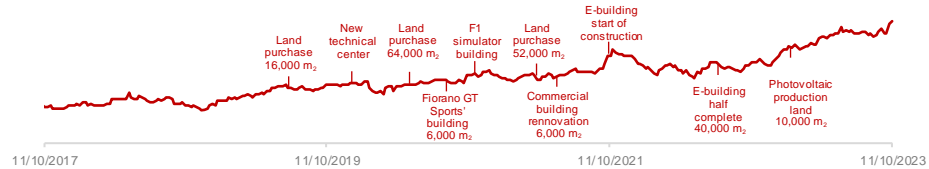
¹²² The unusual tax behaviour in 2020 can be attributed to Article 110 of Law Decree No. 104/2020¹²², which enacted "Urgent measures to support and revitalize the economy." This article reintroduced the voluntary step-up of tangible and intangible assets, subject to the application of a substitute tax at a rate of 3%. Ferrai 2020 annual report

¹²³ Companies undergoing bankruptcy procedures are ineligible to opt for the regime. Consequently, in our analysis, we anticipate that Ferrari will be able to utilize this regime over an extended period. Ferrari 2022 annual report and Equity Research Team

the growth of corporate tax rates and associated benefits. Tax adjustments deriving from the Patent Box regime are immaterial to the overall valuation (Table 10), with roughly 0.2% capital gain impact in the price target sensitivity estimation.

Property, Plant, and Equipment

Land: Since 2018, Ferrari has been making substantial land purchases to accommodate the transition into electric mobility (Timeline 1).



Timeline 1: PP&E Timeline, Ferrari Annual Reports

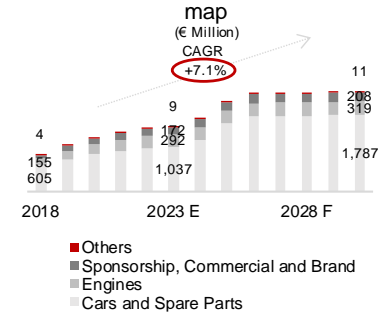
The current construction of the E-building and supporting infrastructure (photovoltaic production field¹²⁴) are halfway done (completion by June 2024). Historical growth of land has been at a CAGR of 45.1%, with 2022 alone growing at 164% YoY. 2023-2026 are years of expected slowdown in land purchases, given the shorter-term focus on finishing the E-Building¹²⁵. Nevertheless, with the phase of the photovoltaic field at one-quarter, some considerable investments in Maranello are still expected by the end of the decade. Therefore, land is estimated to continue growing at a CAGR of 14.70%. It also does not possess right-of-use assets as the company only builds and operates in proprietary land.

Industrial buildings: Before the recent additions (Timeline 1), Ferrari counted three major facilities – Maranello’s headquarters¹²⁶, Modena’s production plant¹²⁷, and Fiorano’s racing track¹²⁸. Distribution was mostly attributed to Cars and Spare parts (80% of the total) and forecasted in the same line of thought as land. As far as information goes, planned Industrial Buildings will have been fully reached by 2026, thus no new additions until 2030. Regardless, some capital commitments will be made between 2023-2026. As such, expected CAGR is 4.85% (Chart 69).

Right of use assets had an average historical representation of 2%, decreasing substantially in the last two available fiscal years (-18% and -14%). Forecasted leases were assumed to start at 2% and decrease by 1% thereafter.

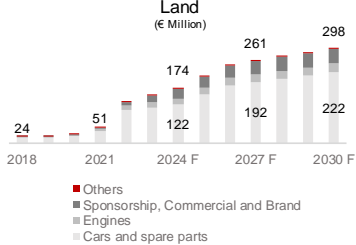
Plant, Machinery and Equipment (PME): Distribution of machinery and

Chart 67
Property, plant and equipment map



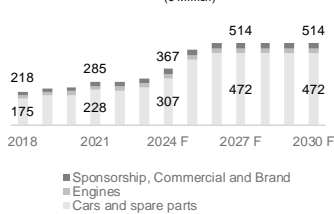
Source: Equity research valuation model

Chart 68
Land



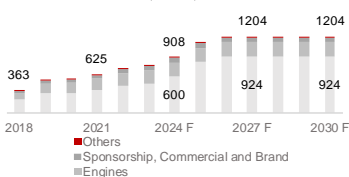
Source: Equity research valuation model

Chart 69
Industrial Buildings



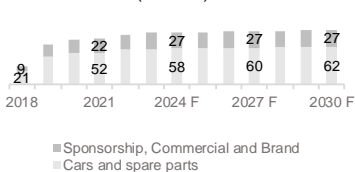
Source: Equity research valuation model

Chart 70
Plant, Equipment and Machinery



Source: Equity research valuation model

Chart 71
Other assets



Source: Equity research valuation model

¹²⁴ Ferrari’s collaboration with the Enel Group has entered the operational phase with the recent installation of the first of the system’s four sections. In total, they will comprise 3,800 solar panels, able to deliver a maximum power of 1,535 kWp. Ferrari. (2023, March 28). Ferrari invests in solar energy systems with Enel X. Ferrari. <https://www.ferrari.com/en-EN/corporate/articles/ferrari-invests-in-solar-energy-systems-with-enel-x>

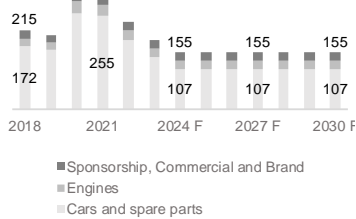
¹²⁵ Automotive News Europe. (2023, November 3). Ferrari is ahead of schedule with first all-electric model. Automotive News Europe. <https://europe.autonews.com/automakers/ferraris-q3-results-lead-raised-annual-earnings-forecast>

¹²⁶ In operation for the design, development and production of road and track cars, as well as of our Formula 1 single-seaters. Include a Product development center, hospitality area and the Ferrari Museum. Ferrari 2022 annual statement

¹²⁷ Manufactures aluminium bodyworks for the regular Range, Special Series and prototype cars. Ferrari 2022 annual report

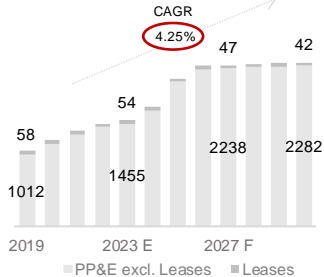
¹²⁸ Also houses Formula One logistics office. Ferrari 2022 annual report

Chart 72
Advances and assets under construction
(€ Million)



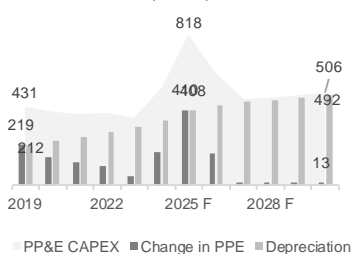
Source: Equity research valuation model

Chart 73
Property, plant and equipment map
(€ Million)



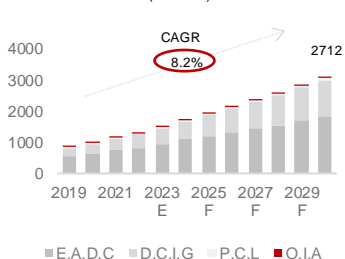
Source: Equity research valuation model

Chart 74
PP&E CAPEX Breakdown
(€ Million)



Source: Equity research valuation model

Chart 75
Intangible Assets
(€ Million)



Source: Equity research valuation model

equipment was less skewed towards Cars and Spare parts (60%) - Engines (30%), Sponsorship, commercial and brand (9%), and Others (1%). The split took into account the intensity of use of machinery required by each unit and assumed to change at the growth rate of Industrial buildings, since correlation between both is expected to be very high. CAGR is expected to grow at 3.97% (Chart 70).

Historical growth of rights of use assets of PME has been negative (-51%, 2020; -31%, 2021; -40%, 2022). Accounting for roughly 0.3% of total PME, the declining growth was extended until 2028 and assumed to remain constant thereafter.

Other assets: These were assumed to be related to retail stores of Ferrari. Consequently, 70% of the total amount was attributed to Cars and Spare parts and 30% to Sponsorship, commercial and brand, for its merchandising component. CAGR of other assets is 0.59% following 2023 (Chart 71).

Right of use assets were forecasted based in leasing costs per retail store. The downwards trend of number of stores made these asset's estimations to fall at a CAGR of 5.84%.

Advances and assets under construction: Assets under construction were assumed to be related to other work-in-progress assets, associated with the construction of the E-Building and supporting infrastructures, complementing the finished infrastructure accounted for in "Industrial Buildings". As previously mentioned, roughly one-quarter of the development has already been made and is ahead of schedule. Growth rate was assumed at negative 25% (2023 – 2025). Following that, no change is expected, leading to a CAGR of -2.92%.

The declining trend across all rights-of-use assets across all categories is attributed to Ferrari's investments in expanding its facilities to accommodate the transition to electric and hybrid models, reducing the need for leasing.

With the previous analysis, PP&E is forecasted to grow at a CAGR of 4.25%.

CAPEX and depreciation: With the growth rate of PP&E, Ferrari becomes liable for an increasing number of assets subject to depreciation. After 2026, it is assumed a slowdown of asset purchases (annual average PP&E change of € 13.13 Million vs € 187.6 Million before 2026), despite depreciation's¹²⁹ 4.44% CAGR increase. This makes CAPEX¹³⁰ to grow at an accelerated pace until 2025, and to decrease to historical rates of growth afterwards (Chart 74), foreseen to grow steadily at 2.44% CAGR.

Intangible Assets

¹²⁹ Depreciation was forecasted based on the average number of years of expected useful life of tangible and intangible assets. Tangible assets subject to depreciation were assumed to be split into two – industrial buildings and PMEs, with a respective useful life of 10 and 5 years. Intangible assets were assumed with a lower useful life of 3 years. These values were reconciled with historical depreciation levels. Equity Research Team

¹³⁰ Capex was calculated by summing changes in PP&E and yearly depreciation. Equity Research Team

Chart 76
Externally acquired development costs
(€ Millions)

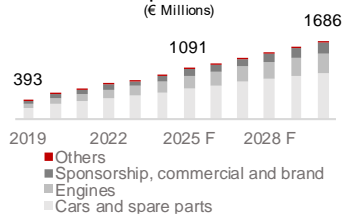


Chart 77
Development costs internally generated
(€ Millions)

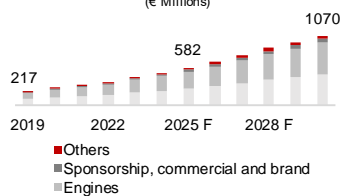


Chart 78
Patents, concessions and licenses
(€ Millions)

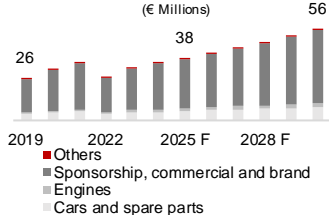


Chart 79
Other intangible assets
(€ Millions)

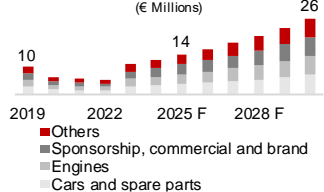
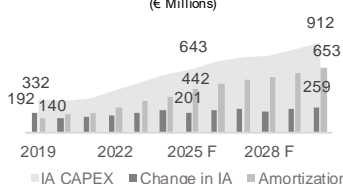


Chart 80
Intangible Assets and Amortization
(€ Millions)



Source: All graphs sourced from our Equity research valuation model

Externally acquired development costs (EADC): These relate to development costs of the current and future product offering of Ferrari¹³¹. Over the period from 2023-2026, Ferrari plans to launch fifteen new models, assumed at an average of 3 current model's upgrades¹³², and two entirely new models. 2022 also saw 3 models added to the portfolio, meaning this effort from Ferrari is consistent, yet not overly ambitious. EADC are forecasted to grow at 25% YoY, higher than the 21% observed historically, and at 5% thereafter. CAGR sits at 7.79% from 2023.

Development costs internally generated (DCIG): Under the IAS 38¹³³, internally generated development costs¹³⁴ have had a historical cap of 34% of the total IA. The same cap was assumed for forecasting purposes. Growth rate of DCIG was assumed at historical levels (19%) until 2026 and reduced gradually to 10% until 2030 to comply with the covenant, leading to a CAGR of 9.26% (Chart 77).

Patents, concessions and licenses (PCL) and Other Intangible Assets (OIA): These two elements have been put together for their shared goal, mainly related to the registration of trademarks¹³⁵. Trademarks in Europe take at least 7 months to become registered¹³⁶. The time-consuming and highly regulated process restricts the amount of trademarks Ferrari can do yearly. Historical growth from PCL and OIA have been at 8% and 14% on average. Forecasted growth has been assumed at these respective rates, with a CAGR of 6.92% and 9.80% (Chart 78).

CAPEX and amortization: According to EU regulation, trademarks are available for a period of 10 years¹³⁷, patents often last of 20 years¹³⁸, and licenses are usually contractual in a yearly basis, with a maximum validity of 3 years¹³⁹. This led our analysis to a weighted average useful life of IA of approximately 3 years. Amortization is expected to grow at a CAGR of 8.12%, reaching 57% of total depreciation and amortization (PP&E and IA) by 2030 (Chart 80).

Debt

Debt has four main components for which we assume book value equals market value (Chart 81).

Bonds and notes: Ferrari issued two bonds, one with maturity until 2023 and another until 2025. Since we do not foresee an unexpected scenario that would compel Ferrari to raise its debt outstanding, to forecast this component, we

¹³¹ Ferrari annual report 2022

¹³² Improvements of existing new models – Roma Spider, 296 GTS (2023), to new models like the Purosangue (SUV). Equity Research Team

¹³³ The costs of generating other internally generated intangible assets are classified into whether they arise in a research phase or a development phase. Research expenditure is recognized as an expense. Development expenditure that meets specified criteria is

recognized as the cost of an intangible asset. IFRS - IAS 38 Intangible assets. (n.d.). <https://www.ifrs.org/issued-standards/list-of-standards/ias-38-intangible-assets/>

¹³⁴ Materials and personnel costs relating to the engineering, design and development activities focused on content enhancement of existing cars and new models. Ferrari 2022 report

¹³⁵ Ferrari owns approximately 500 trademarks (word or figurative), registered in several countries. The maximum level of protection is given to the following iconic trademarks, for which they own approximately 4,270 applications/registrations in approximately 140 countries, in most of the main classes for goods and services. Ferrari 2022 annual report

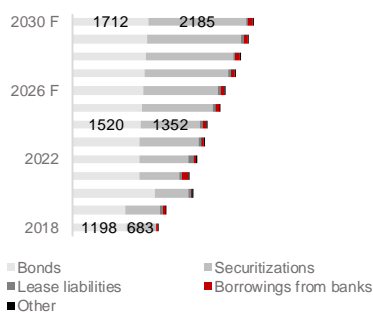
¹³⁶ Mar, A. (2022, February 16). How long does it take to register a trademark? TradeMarkAngel. <https://trademarkangel.com/faq-items/long-take-register-trademark/>

¹³⁷ FAQ: Renewals. (n.d.). EUIPO. <https://www.euipo.europa.eu/en/the-office/help-centre/forms/faq-renewals>

¹³⁸ Where is a patent valid and how long does it last? EPO.org. (n.d.). <https://www.epo.org/en/service-support/faq/patents-and-ip/where-patent-valid-and-how-long-does-it-last>

¹³⁹ The L_2019186EN.01000101.XML. (n.d.). <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX%3A32019R1148>

Chart 81
Debt
(€ Thousands)



Source: Equity research valuation model

Table 11

Cashflow management
(in days)

	2019	2020	2021	2022
AHP	85	100	95	93
ACP	22	19	16	17
APP	144	155	140	124
CCC	-37	-35	-29	-15

Source: Equity research valuation model

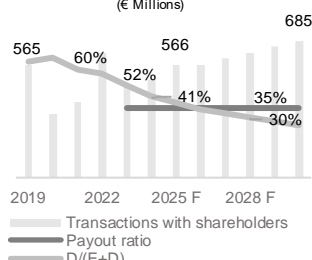
Table 12

Cashflow management
(in days)

	2019	2020	2021	2022
Current Ratio	2.3	1.9	2.3	2.0
Quick Ratio	1.9	1.6	1.9	1.7
Cash Ratio	0.8	0.8	0.9	0.7

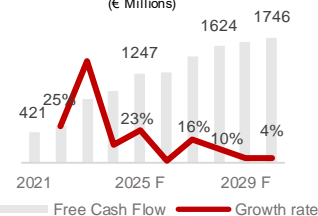
Source: Equity research valuation model

Chart 82
Debt accounts
(€ Millions)



Source: Equity research valuation model

Chart 83
Free Cash Flows
(€ Millions)



Source: Equity research valuation model

assumed Ferrari rolls it over¹⁴⁰. The company also has two notes (due 2029 and 2031) issued for general corporate purposes, including the funding of capital expenditures, both with a principal of € 150M. It has been assessed that Ferrari is better off not repaying its debt entirely since the automotive industry is very capital intensive¹⁴¹.

Securizations: As a means of diversifying its sources of funds, the Group sells some of its receivables originated by its financial services in the United States through asset-backed financing or securitization programs¹⁴². Consequently, we have decided to forecast this component as a percentage of total revenue from car sales (CAGR 1.71%).

Lease liabilities: The Group recognizes lease liabilities in relation to right-of-use assets in accordance with IFRS 16, previously described in the Property, Plant, and Equipment section.

Borrowing from banks: These relate mainly to financial liabilities of Ferrari Financial Services (FFS) to support the financial services operations - offering retail clients financing for the purchase of Ferrari cars, and dealer financing. Consequently, we forecast this component has a percentage of total revenue from cars since FFS Inc will grow proportionally to car sales.

Despite being too early to make assumptions on interest rates for 2030, from Q2 2024, they are expected to start decreasing¹⁴³. This incentivizes companies to take-in additional leverage as it becomes relatively cheaper compared to equity. Ferrari, however, is sitting comfortably regarding cash management and it does not require more debt to grow (Tables 11 and 12). On the contrary, main shareholders have been increasing their equity portion for the past 5 years (Group Structure). Our analysis is that this trend will continue moving forward and total debt-to-value will gradually decrease (Chart 82).

Value Creation

Ferrari's core operations will experience significant transformations throughout the explicit forecasting period (2023-2030), preventing it from reaching a steady state (Chart 83). As historical and forecasted data demonstrates, the behaviour of RONIC is non-linear¹⁴⁴, as it is dependent on new capital invested in the firm and the incremental impact on cashflows in the following year. RONIC's upticks are correlated with brand new models introduced by Ferrari¹⁴⁵ - prior investments

¹⁴⁰ Bonds with the same issue costs, Yield to Maturity, coupon rates, maturity, and price. Equity Research Team and Ferrari 2022 annual report

¹⁴¹ In the near/medium future, it will require cash to support its future operational activities, continue its R&D expenditures and execute the buyback program. Equity Research Team

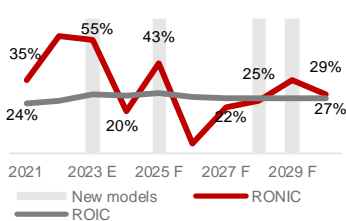
¹⁴² This strategy had been employed for self-financing purposes, further reducing dependence on intercompany funding so that it can then be loaned to clients and dealerships when buying Ferraris and increasing the portion of self-liquidating debt with various securitization transactions. Ferrari 2022 annual report and equity research team

¹⁴³ Outlook 2024 | Barclays Private Bank. (n.d.). <https://privatebank.barclays.com/insights/2023/november/outlook-2024/>

¹⁴⁴ The trajectory of RONIC is non-linear due to the evolution of the company's product mix - reduction in ICEs and a rise in hybrid and electric vehicles. This shift led to an increase in manufacturing costs in preceding years, alongside a broader product range catering to a more extensive customer base, boosting sales in the years to come. Equity Research Team

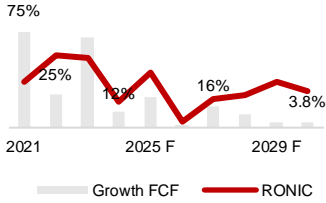
¹⁴⁵ Brand new models timeline and forecast: 2023- Purosangue; 2025 - First EV GT; 2028 - Second EV GT Spider; 2029 - First EV (SUV). Equity Research Team

Chart 84
Value creation
(in percentage %)



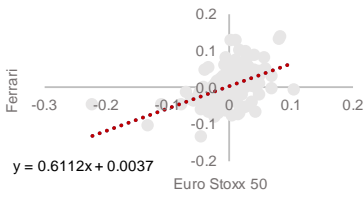
Source: Equity research valuation model

Chart 85
RONIC vs growth of FCF
(in percentage %)



Source: Equity research valuation model

Chart 86
Ferrari's weekly excess returns
against the market



Source: Equity research valuation model

Table 13
Beta Unlevered Peer comparison

	Business	Beta Unlevered
Automotive	Aston Martin	0.93
	Mercedes Benz	0.55
	BMW	0.47
	Wolkswagen	0.42
	Stellantis NV	0.78
Luxury Brands	Burberry	1.32
	Estee Lauder	1.05
	Hermes	1.20
	Kering	1.27
	LVMH	1.29
	Moncler	1.16
	Prada	0.80
	Richemont	1.45
	Average	0.98

Source: Bloomberg and valuation model

see turnover when the models are made available and sold to the customers.

In years of brand-new model launches, growth rates of FCF tend to be inversely related to the RONIC (Chart 84). This happens due to Ferrari's ramp-up strategy for the years following a launch¹⁴⁶, i.e., the model is made available in year x at a limited quantity; in year x+1, more quantities of that model are put available, which drives core results to increase (higher FCF, higher growth rate). This coincides with periods of divestment and preparation for new future models, and the cycle repeats itself (Chart 85). With the overall surge in invested capital, it is anticipated that ROIC will experience a decline in 2025-2027 but gradually recover over time as cash inflows from EVs materialize.

Weighted Average Cost of Capital

The equity beta was first obtained to calculate the return on equity¹⁴⁷. The value was benchmarked against numerous players, encompassing not just the automotive sector but also the luxury industry (Table 13)¹⁴⁸.

Using the CAPM formula with a risk-free rate of 2.596%¹⁴⁹ and a market risk premium of 6.2%¹⁵⁰, we arrived at a levered cost of equity¹⁵¹ of 7.2% (Table 14).

Considering Ferrari's BBB+ rating (CRIF Ratings Agency -annual default rate of 0.25%¹⁵²), we factored in the expected loss rate given default for unsecured debt at 42.10%. With the Yield to Maturity of the company's longer-term bond (Bond 20/25) at 4.18%, we calculated the cost of debt¹⁵³ to be 4.08% (Table 14).

Lastly, we conducted an analysis to determine the company's long-term Debt-to-Enterprise Value (D/EV) ratio, which is set at 26.5%. This ratio is projected to steadily decrease over the years, primarily driven by equity repurchasing programs employed by Ferrari. This reduction mitigates financial risk and provides Ferrari with more flexibility for strategic decisions¹⁵⁴.

Utilizing Ferrari's statutory tax rate of 24%, we calculated a WACC of 5.92%¹⁵⁵, which is used to discount the core free cash flows generated by the company after the fiscal year 2023.

¹⁴⁶ Ferrari's ramp-up phases are those in which a brand-new model is launched. Quantities of that model available for that year are purposefully made lower, and increasing the years that follow. This strategic move drives demand given the exclusivity of the most recent models. Ferrari Webcast Q3 2023 – section ramp-up or Purossangue.

¹⁴⁷ The raw beta was computed by regressing the weekly returns of each company's stock price, from January 2018 until November 2023, against the returns of the market (Eurostoxx 50 was used in approximation). Raw Beta measures the price volatility of Ferrari's stock to the overall market.

An adjusted Beta of equity was used (assuming that a security's beta gradually moves toward the market average over time, $\beta_{Market} = 1$), as a proxy of Ferrari's future Beta of Equity, under the formula: $\beta_{Adjusted} = \frac{2}{3} * \beta_{Raw} + \frac{1}{3} * \beta_{Market}$

The selected risk-free rate was the 10-year German Government Bond Yield because Ferrari's main shareholders are European long-term investors. Equity Research Team

¹⁴⁸ Our selection process involved refining the list using some key metrics: market capitalization, enterprise value, cash and marketable securities, revenue, EBITDA, EBIT, net income, and operating margin. Highlighting luxury brands as core competitors, disregarded as direct competition by Ferrari. Ferrari 2022 annual statements

¹⁴⁹ 10Y German Government Bond yield - 17th of November 2023. Germany 10-Year bond historical data - Investing.com. (n.d.). Investing.com. <https://www.investing.com/rates-bonds/germany-10-year-bond-yield-historical-data>

¹⁵⁰ Market risk premiums were computed as the average of market risk premiums of selected nations in Europe. Statista. (2023, September 14). Average market risk premium for selected countries in Europe 2023. <https://www.statista.com/statistics/664786/average-market-risk-premium-selected-countries-europe/>

¹⁵¹ $r_e = r_f + Adj\beta_e * MRP$

¹⁵² The 2Y default probability was retrieved from CRIF Ratings Agency, and converted into a 1Y probability by: $1Y\ Default\ Probability = \sqrt{1 + 2Y\ Default\ Probability} - 1$

¹⁵³ $r_d = YTM - P(default) * Loss\ Given\ Default$

¹⁵⁴ A company with a decreasing D/EV has greater leeway for growth opportunities, such as acquisitions, without significantly increasing its debt burden. Equity Research Team

¹⁵⁵ $WACC = r_e * \frac{E}{EV} + r_d * \frac{D}{EV} * (1 - t)$

Table 14
Weighted average cost of capital

WACC	5.92%
Adjusted Beta	0.74
Re	6.9%
Rf	2.6%
Market risk premium	5.9%
Rd	4.1%
Loss given default	42.1%
Recovery rate	57.9%
Default Probability 2Y	0.5%
Yield Ferrari N.V. 20/25	4.2%
D/V	26.5%
Debt Beta of the market	0.14
Corporate Tax rate	24.0%

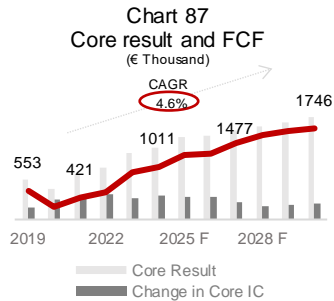
Source: Equity research valuation model

Discounted Cash Flows Valuation

For the Discounted Cash Flow (DCF) valuation, the business units were valued individually¹⁵⁶. Free cash flows were calculated until 2030 and discounted, using the same WACC¹⁵⁷, from 2024 onwards. The analysts determined the terminal value using the terminal value growth rate¹⁵⁸ (g_t) (Table 17).

Cars and spare parts were set with a g_t of 3.8%. An acknowledgement must be made regarding its relatively high value¹⁵⁹ - the risk-free rate assumption used in the model is at a three-year all-time high (Chart 88), which put a floor to how much we could lower the expectations on perpetual growth (refer to impact of inflation in valuation section).

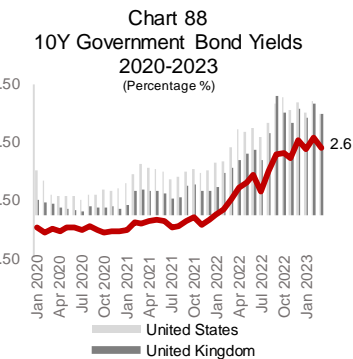
Core result is expected to grow at a CAGR of 4.99%, slightly below the market of luxury cars, (6.9% CAGR¹⁶⁰) until the end of the decade. Non-core business was valued at the book value of assets, since applying the DCF method with the same discount rate for the core business could potentially lead to a misleading valuation - financial assets are not a part of the company's core business, thus being subject to different discounting criteria. With an enterprise value of €64.0 billion and net financial assets of € 888 Million, we arrived at an equity value of €63.1 billion in 2024 (Chart 90). With a projected number of shares outstanding at 180,3 million, the implied price target (excluding scenario analysis) for 2024 is €350.25.



Source: Equity research valuation model

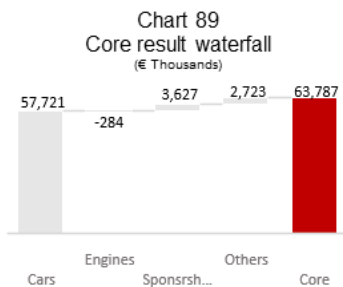
Macro Outlook

The anticipated recession in 2023 did not become a reality. Simply because it did not happen in 2023, many investors are now expecting it in 2024¹⁶¹. Despite the 2024 outlook not being the most positive, Ferrari enjoys a large base of core customers¹⁶² that are so affluent they're resistant to inflation or macro headwinds. Even if the projected results of next year's macro environment on Ferrari's are negative, this was taken lightly, given its gross margins and inelastic demand.



Source: Statista

Multiples Valuation



Source: Equity research valuation model

¹⁵⁶ The analyst concluded this would be more accurate to depict how value is created, alongside a more detailed sensitivity assessment. Equity Research Team

¹⁵⁷ The same was used since WACC assumptions are company, and not Business unit specific. Equity Research Team

¹⁵⁸ Achieved by multiplying the RONIC and the RR for all but the Engines segment. In an industry characterized by constant evolution, where connected, autonomous, shared, and electric mobility will surely be relevant, Ferrari may encounter challenges in maintaining its supremacy as a luxury car manufacturer. Nevertheless, disruptive changes have already been at play since the beginning of the manufacturer's life, thus we are confident that Ferrari will continue being disruptive for a very long period. We also believe it's prudent to temper expectations regarding growth opportunities in the very distant future, hence trimming the 2030 value of growth rate for Cars and Spare parts by half a percent. Engines were expected to continue growing in the long run at the increasing price of raw materials, the same growth rate used to forecast revenues until 2030. Sponsorships and Others were kept at terminal RONIC * RR of 2030, assumed to be already in a steady state.

¹⁵⁹ Ferrari anticipates a 2% terminal growth rate in their annual accounts of 2022

¹⁶⁰ Luxury Car Market Size, Share & Trends Analysis Report by vehicle type, by propulsion type (Internal Combustion Engine, Electric), by region, and segment Forecasts, 2023 - 2030. (n.d.). <https://www.grandviewresearch.com/industry-analysis/luxury-car-market-report>

¹⁶¹ With a stronger base of 2.8% (2023) worldwide economic growth, 2024 is likely to decrease to 2.4%. Inflation is expected to drop following central bank's price pressures, to below 3% in most large economies. Politics is also a pinning factor with 40 different states having governmental elections, including Taiwan in January, the UK and the US later in the year. Irrespective of their political inclinations, governments around the world will come under pressure to address excessive deficits, which is assumed to spill over into the general population, whether in the form of tightening fiscal policies or reformed government spending. Overall CPI is therefore expected to follow the same path. J.P. Morgan releases 2024 Long-Term Capital Market Assumptions, revealing opportunities to build upon 60/40 portfolio as economy enters period of transition. (n.d.). <https://am.jpmorgan.com/us/en/asset-management/adv/about-us/media/press-releases/jp-morgan-releases-2024-long-term-capital-market-assumptions-revealing-opportunities-to-build-upon-6040-portfolio-as-economy-enters-period-of-transition/>

¹⁶² Ferrari (brand value is up slightly 3% to US\$7.2 billion), retains the pole position in the Brand Strength Index (BSI) with an impressive 91/100 score and the consequent top rating of AAA+. brand-finance-luxury-and-premium-50-2023-preview (1). (n.d.). Scribd. <https://www.scribd.com/document/662601924/brand-finance-luxury-and-premium-50-2023-preview-1>

Trading Multiples: Ferrari occupies a unique position as the only stand-alone publicly traded luxury automotive manufacturer, making it challenging to find directly comparable peers. Hence, one placed more emphasis¹⁶³ on Price-to-Sales, EBITDA and EBIT multiples. EBIT is particularly relevant as it considers the impact of Capital Expenditures (CAPEX), which is crucial in capital-intensive industries such as the automotive. Valuing Ferrari using multiples on a third-quartile¹⁶⁴ basis leads to an estimated share price of €113, €265, and €219 respectively. This suggests a potential downside of approximately 65%, 20% and 34%, leading to a SELL recommendation (Chart 91).

Transaction Multiples: This section was split into four categories based in the standard industrial classification (SIC) codes tapping into Ferrari's core activities¹⁶⁵. Transactions considered were either resulting from investments, mergers and acquisitions or spinoffs since 2014, above a € 1 Billion threshold. EV/EBITDA data was collected from the seller and used for the multiple analysis¹⁶⁶. Transaction multiples severely understate Ferrari's share price – acquisitions were in general too low for Ferrari's standard (Chart 91) value. Transaction multiples price Ferrari in a range between € 29 and € 279, leading to a strong SELL.

As mentioned, we acknowledge the absence of true comparables for Ferrari, and we undermine the relevance of multiple analysis for our investment recommendation.

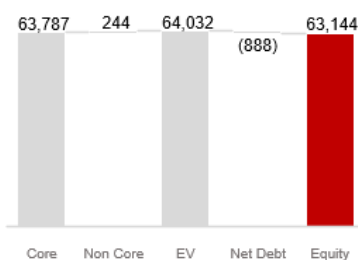
Sensitivity Analysis

Our team conducted a sensitivity analysis (Chart 94) by adjusting five key inputs: the weighted average cost of capital (WACC), terminal growth rate of cars and spare parts, retention ratio and RONIC, and share capital. These inputs were selected because they have a direct impact in the share price calculation.

WACC: The recent surge in inflation has been at historical highs over the last two decades. As inflation rises, investors demand higher yields (higher cost of debt) to compensate for the eroding value of fixed interest payments. Given the relatively inflated German Government Bond yields (Chart 88), a key component of the WACC (risk-free rate), the variability of the WACC tends to trend downward, inflating the share price adjustments more than deflating (Chart 94).

Growth rate: As mentioned before, the terminal growth rate of cars and spare parts converges to 3.8%. The value is sensitive to variations in Ferrari's strategy,

Chart 90
Equity Waterfall
(€ Million)



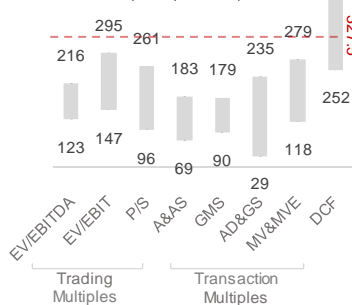
Source: Equity research valuation model

Table 15
Gross Domestic Product (GDP) Forecast,
Year-on-year growth
(in percentage %)

	2022	2023F	2024F
Global	3.3	3	2.4
Advanced	2.6	1.5	0.8
Emerging	3.8	4	3.6
US	1.9	2.4	1
Eurozone	3.4	0.4	0.3
UK	4.3	0.5	0.4
China	3	5.1	4
India	6.8	6.3	6.4

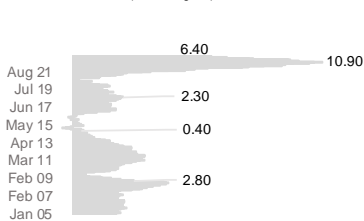
Source: Barclays Outlook 2024

Chart 91
Multiples valuation
(Share price in €)



Source: Bloomberg and research valuation model

Chart 92
Inflation Rate of the EU
2005-2023
(Percentage %)



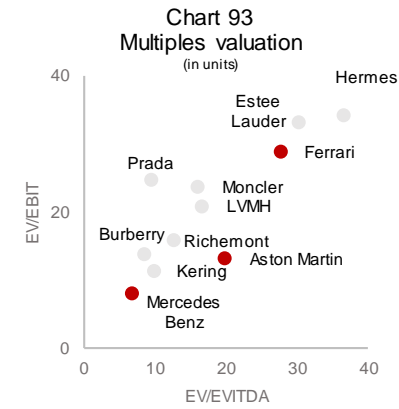
Source: Statista

¹⁶³ Given the distinctive characteristics of the industry the Price-to-Earnings (P/E) ratio may be misleading due to its sensitivity to a company's capital structure.

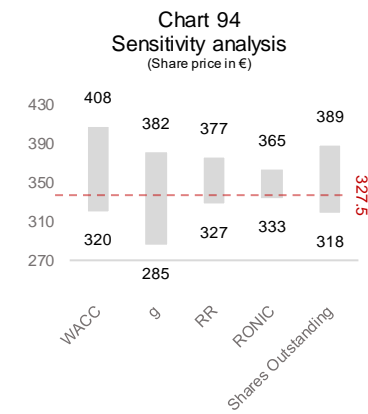
¹⁶⁴ The utilization of the third quartile of the sample for valuation was based on the fact that comparable companies trade at low multiples, especially when considering automotive industry peers. To arrive at a reasonable valuation, we had to adopt the optimistic perspective that Ferrari stands among the best performers in the selected sample. Due to the wide range of share prices derived from various multiples, we believe this method may not be the most suitable approach for evaluating this company. Equity Research Team

¹⁶⁵ Apparel and Accessory stores (AAS): SIC 5200-5299; General Merchandising Stores (GMS): SIC 5301-5399; Automotive dealers and gasoline service stations (AD): SIC 5500 – 5599; Motor vehicles and motor vehicles equipment (MV): SIC 3700-3799

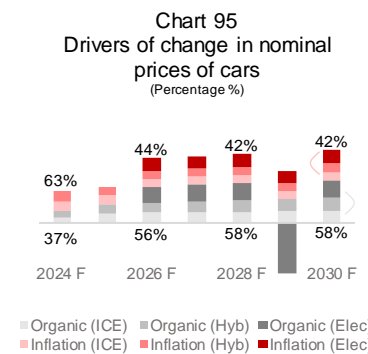
¹⁶⁶ Minimum and maximum acquisitions were disregarded to account for the existence outliers. Equity Research Team



Source: Yahoo Finance, multiple sources



Source: Equity research valuation model



Source: Equity research valuation model

Table 16
Sensitivity of price target to risk free and perpetual growth rate of cars
(in percentage %)

Price target	0.5	1.0	1.8	2.6	2.7	r_f
	4.4	4.8	5.3	5.9	6.0	WACC
2.0	372					BUY
3.0		362				HOLD
3.5			348			HOLD
3.8				350		HOLD
4.0					353	HOLD

$g_{t(c)}$
Source: Equity research valuation model

product demand, competition, technology disruptions, legal frameworks, and other factors. Inversely to the WACC, the deflating potential of terminal growth is more probable, decreasing the overall valuation. In fact, long-term growth assumed in this valuation report has been above of Ferrari's own assumption of 2% (DCF Valuation section).

Impact of inflation on Ferrari's valuation: Government yields and inflation tend to be positively correlated to compensate for the real value deterioration of yields. The stated risk-free rate at 2.6% (WACC section) implies that the discount rate applied on future cash-flows is also inflated, driving the valuation down. However, inflation is also implicitly incorporated in the model's prices, with an elevated impact in the revenues of cars and spare parts (Chart 95). Free cash flows are affected by spillover and eventually, the perpetual growth rate of cars, one of the most pondering factors in Ferrari's valuation. Analytically, we believe both should cancel out in the long run, as they are expected to move parallelly, but having contrasting effects in the valuation (Table 16).

Monte Carlo Simulation: To assess the potential impact of the quantifiable risk of our valuation regarding the WACC and terminal value growth of Cars, we carried out a Monte Carlo simulation, with a standard deviation of 0.1% and 0.2% respectively. The main results of our analysis are approximately: 29% of the outcome support a SELL recommendation, while 37% and 34% support HOLD and a BUY respectively. The output distribution is right-skewed (negatively skewed), as seen in Chart 96.

Retention Ratio and RONIC: To reach terminal value growth rates of all but Engines¹⁶⁷, the assumed steady state RR was multiplied by RONIC. The retention ratio is higher in capital-intensive units of the firm - Cars and Spare Parts – with a steady state interval of variation of 1% and 2% respectively (Chart 94).

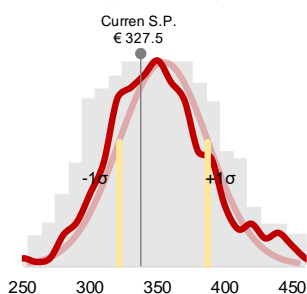
Shares outstanding: Ferrari is currently executing a share buyback program scheduled to continue until 2024. The number of outstanding shares was varied primarily in the lower tail of the interval, since the projected number of shares repurchased was made at average historical value (Share Buyback section). The interval ranged from negative 10% to positive 5% (Chart 94).

Scenario Analysis

The alternative scenarios (downside and upside) were based in the assumptions for the forecasted results of the value drivers, with some common and case-

¹⁶⁷ Perpetual growth was considered at the historical growth rate of prices of raw materials (Engines Section). Equity Research Team

Chart 96
Monte Carlo Simulation
(Share price in €)



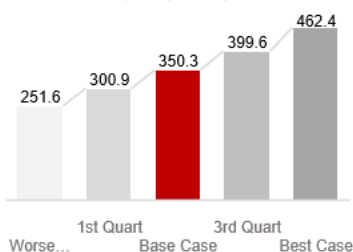
Source: Equity research valuation model

Table 17
Scenario analysis main captions

2024 F	Downside	Base Case	Upside
FCF	863,673	1,013,033	1,261,197
g_{2024}	22.0%	13.0%	46.0%
$g_{r(c)}$	3.85%	3.87%	4.05%
ROIC	23.0%	28.0%	30.0%
RONIC	5.0%	21.0%	31.0%
WACC	5.9%	5.9%	5.9%
Price target	€ 251.6	€ 350.3	€ 475.9
Capital Gain	-25.1%	4.2%	41.6%

Source: Equity research valuation model

Chart 97
Scenario Valuation
(Share price in €)



Source: Equity research valuation model

Table 18
Equity research analyst's view in Ferrari stock, by major investment banks

Publish date	Company	Opinion	Price target
06-Nov	DBS	Strong Buy	€ 400
06-Nov	Evercore ISI	Strong Buy	€ 362
06-Nov	Barclays	Buy	€ 337
03-Nov	Morgan Stanley	Buy	€ 337
03-Nov	JP Morgan	Hold	€ 335
04-Nov	Kepler capital	Hold	€ 320
08-Nov	Bernstein	Hold	€ 310
08-Nov	Goldman Sachs	Hold	€ 305
02-Nov	Equita	Hold	€ 303
Share price at 03/11/2023			€ 309

Source: Business Insider, Street Insider, multiple sources

specific variations¹⁶⁸ (Table 17). In the optimistic scenario, the share price exhibits an upside variation of 41.6% (BUY), excluding capital gains. Downside variation had a lower magnitude of negative 25.1% capital gain, leading to a SELL recommendation. Our assumption is that both scenarios share a 10% probability of materializing as the future reality of Ferrari.

Investor consensus and final remarks

Table 18 holds some of the financial consensus¹⁶⁹ regarding the Italian brand's stock price after the third quarter results were published. The distribution gravitated towards HOLD (56%) as analysts are concerned about the year of 2024 (refer to Marco Overview). Regardless 2023 is promising, with annual results expected to follow the development seen throughout the year¹⁷⁰. Further, 2025 is expected to be another great year for Ferrari as they unveil their new alternative mobility solution powered solely through electricity, which is expected to bring an uptick in demand for the brand as they turn greener.

The stock is currently trading at 58x earnings, which is deemed high for a company with supply chain reliance. Even with earnings multiple expected to decrease to 48x¹⁷¹ by the end of next year, it is still considerably higher compared to European luxury, trading at an average of 23x 12-month forward earnings¹⁷². Macro headwinds like Taiwan's elections could burst another sequence of unexpected events that could impose threats in chips used in car manufacturing (Qualcomm¹⁷³). Nonetheless (as of the 17th of December of 2023 – with the previously mentioned data accountable to such date), with an expected capital gain of 6.9%, a cash gain of 0.8% (dividend yields), and the previously mentioned impacts of the scenario analysis, the final price target is € 353, providing an upside gain of 8.61%. Henceforth, the final investment recommendation is HOLD.

¹⁶⁸ Upside and downside variations: 20% deviation in sales of cars, for increasing distribution (online); PP&E variation range (16%), for increasing productivity of new PP&E purchased; 5% variation in sales for Bitcoin payment acceptance in the US and -10% in downside (crypto volatility); 20% deviation in licenses and patents for Sponsorship segment; 3% raw materials price decrease for engines; renewal of engine subcontract for formula 1; decrease in 10% of sales of Brand associated to raw material price decrease; achieving an average of 2nd place for best case, 4th place in formula 1 championship (vs current 3rd place); variation of sponsors (by 3) for sponsorship revenue calculation. Equity Research Team

¹⁶⁹ Ferrari. (n.d.). Analyst Coverage | Ferrari Corporate - Ferrari.com. <https://www.ferrari.com/en-EN/corporate/analyst-coverage>

¹⁷⁰ RTTNews. (n.d.). Ferrari lifts FY23 view after strong Q3 results; Stock up. Nasdaq. <https://www.nasdaq.com/articles/ferrari-lifts-fy23-view-after-strong-q3-results-stock-up>

¹⁷¹ Price target 2024 at € 350.25 and Earnings per share forecasted at 7.2: $Earnings\ Multiple = \frac{Price\ per\ share}{Earnings\ per\ share}$

¹⁷² Raitano, L. (2023, January 31). Europe's luxury stocks have room to rise, but becoming costly. Reuters. <https://www.reuters.com/markets/europe/europes-luxury-stocks-have-room-rise-becoming-costly-2023-01-31/>

¹⁷³ Bell, S. (2022, February 9). Ferrari announces partnership with chip manufacturer Qualcomm. Carscoops. <https://www.carscoops.com/2022/02/ferrari-announces-partnership-with-chip-manufacturer-qualcomm/>

Appendix

Financial Statements

Forecasted Income Statement													
€ thousand	2018	2019	2020	2021	2022	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Car and Spare Parts													
Total Revenues	€ 2,535,245	€ 2,925,721	€ 2,835,170	€ 3,573,119	€ 4,341,482	€ 5,474,638	€ 6,369,037	€ 7,266,272	€ 8,118,002	€ 8,194,174	€ 8,329,560	€ 8,531,548	€ 8,989,223
Core Cost of sales	€ 1,350,715	€ 1,566,602	€ 1,501,223	€ 1,898,856	€ 2,438,281	€ 3,065,797	€ 3,630,351	€ 3,996,449	€ 4,464,901	€ 4,916,504	€ 4,997,736	€ 5,123,194	€ 5,429,491
Selling Costs	€ 65,958	€ 73,051	€ 67,365	€ 74,874	€ 95,841	€ 199,620	€ 195,375	€ 211,027	€ 216,517	€ 201,438	€ 187,242	€ 174,059	€ 173,849
Marketing and events	€ 44,887	€ 46,083	€ 46,182	€ 46,536	€ 56,285	€ 164,239	€ 159,226	€ 174,391	€ 178,596	€ 163,883	€ 149,932	€ 136,505	€ 136,157
R&D Costs	€ 583,298	€ 632,862	€ 642,913	€ 694,710	€ 706,513	€ 1,128,116	€ 1,401,188	€ 1,743,905	€ 2,029,501	€ 1,638,835	€ 1,665,912	€ 1,706,310	€ 1,797,845
Write-Downs of Financial Receivables	€ 2,465	€ 3,681	€ 7,787	€ 1,227	€ 506	€ 2,737	€ 9,554	€ 36,331	€ 40,590	€ 32,777	€ 24,989	€ 17,063	€ 9,775
Car and Spare Parts Before Taxes	€ 532,807	€ 649,525	€ 615,882	€ 903,451	€ 1,100,340	€ 1,078,367	€ 1,132,570	€ 1,278,559	€ 1,366,494	€ 1,404,620	€ 1,454,181	€ 1,511,434	€ 1,570,120
Taxes	€ 127,874	€ 155,886	€ 147,812	€ 216,828	€ 264,082	€ 258,908	€ 271,817	€ 306,854	€ 327,959	€ 337,109	€ 349,013	€ 362,744	€ 376,829
Core Result on Car and Spare Parts After Taxes	€ 404,934	€ 493,639	€ 468,070	€ 686,623	€ 836,258	€ 819,559	€ 860,753	€ 971,704	€ 1,038,535	€ 1,067,512	€ 1,105,177	€ 1,148,689	€ 1,193,291
Engines													
Total Revenues	€ 284,546	€ 198,308	€ 150,655	€ 189,432	€ 155,342	€ 109,629	€ 93,689	€ 99,114	€ 69,903	€ 73,951	€ 78,233	€ 82,764	€ 87,557
Core Cost of sales	€ 158,908	€ 123,216	€ 98,982	€ 123,838	€ 131,090	€ 73,110	€ 62,479	€ 66,098	€ 45,437	€ 46,589	€ 47,722	€ 46,348	€ 52,534
Selling Costs	€ 9,637	€ 10,819	€ 9,829	€ 11,117	€ 14,361	€ 11,614	€ 7,817	€ 7,890	€ 6,310	€ 6,270	€ 6,012	€ 5,844	€ 5,946
Marketing and events	€ 5,985	€ 6,144	€ 6,158	€ 6,205	€ 7,505	€ 5,481	€ 4,684	€ 4,757	€ 3,146	€ 3,106	€ 2,816	€ 2,648	€ 2,750
R&D Costs	€ 68,868	€ 73,493	€ 77,005	€ 80,227	€ 86,056	€ 65,777	€ 58,087	€ 64,424	€ 45,437	€ 44,370	€ 43,028	€ 41,382	€ 39,401
Write-Downs of Financial Receivables	€ 277	€ 250	€ 414	€ 65	€ 18	€ 55	€ 94	€ 248	€ 140	€ 111	€ 94	€ 99	€ 95
Engines Before Taxes	€ 46,856	€ 9,469	€ 35,755	€ 25,815	€ 76,183	€ 40,927	€ 34,789	€ 39,546	€ 27,420	€ 23,390	€ 18,623	€ 10,909	€ 10,419
Taxes	€ 11,246	€ 2,273	€ 8,538	€ 6,196	€ 18,284	€ 9,823	€ 8,349	€ 9,491	€ 6,581	€ 5,614	€ 4,470	€ 2,618	€ 2,501
Core Result on Engine After Taxes	€ 35,611	€ 7,197	€ 27,037	€ 19,620	€ 57,899	€ 31,105	€ 26,440	€ 30,055	€ 20,840	€ 17,776	€ 14,154	€ 8,291	€ 7,918
Sponsorship, Commercial and Brand													
Total Revenues	€ 505,701	€ 538,238	€ 390,002	€ 430,579	€ 478,499	€ 460,131	€ 478,713	€ 478,685	€ 491,085	€ 498,684	€ 502,963	€ 506,650	€ 517,363
Core Cost of sales	€ 63,563	€ 52,807	€ 41,242	€ 30,960	€ 39,327	€ 44,508	€ 43,532	€ 42,843	€ 42,357	€ 44,443	€ 45,522	€ 45,225	€ 46,008
Selling Costs	€ 249,968	€ 257,414	€ 257,110	€ 260,104	€ 315,368	€ 246,472	€ 247,132	€ 256,296	€ 261,099	€ 253,826	€ 248,549	€ 251,567	€ 255,554
Marketing and events	€ 97,255	€ 99,847	€ 100,062	€ 100,828	€ 121,950	€ 103,384	€ 110,658	€ 115,022	€ 116,403	€ 118,489	€ 117,770	€ 119,593	€ 122,628
Retail Stores	€ 149,623	€ 153,611	€ 153,941	€ 155,120	€ 187,616	€ 137,899	€ 131,172	€ 135,901	€ 139,134	€ 129,838	€ 125,307	€ 126,465	€ 127,398
R&D Costs	€ 4,564	€ 3,572	€ 6,267	€ 3,417	€ 8,499	€ 5,285	€ 5,734	€ 6,245	€ 6,109	€ 6,653	€ 6,266	€ 6,410	€ 6,616
Write-Downs of Financial Receivables	€ 492	€ 677	€ 1,071	€ 148	€ 56	€ 230	€ 383	€ 718	€ 491	€ 399	€ 352	€ 304	€ 310
Sponsorship, Commercial and Brand Before Taxes	€ 187,114	€ 223,768	€ 84,312	€ 135,951	€ 115,250	€ 163,636	€ 181,933	€ 172,584	€ 181,029	€ 193,363	€ 202,274	€ 203,144	€ 208,874
Taxes	€ 44,907	€ 53,704	€ 20,235	€ 32,628	€ 27,660	€ 39,273	€ 43,664	€ 41,420	€ 45,447	€ 46,407	€ 48,516	€ 48,755	€ 50,130
Core Result on Sponsorship, Commercial and Brand After Taxes	€ 142,206	€ 170,064	€ 64,077	€ 103,323	€ 87,590	€ 124,364	€ 138,269	€ 131,164	€ 137,582	€ 146,956	€ 153,728	€ 154,390	€ 158,745
Others													
Total Revenues	€ 94,829	€ 104,348	€ 83,963	€ 77,764	€ 119,931	€ 145,773	€ 164,039	€ 179,538	€ 187,964	€ 195,010	€ 201,450	€ 205,848	€ 209,549
Core Cost of sales	€ 15,891	€ 17,602	€ 8,248	€ 10,320	€ 13,109	€ 15,889	€ 17,716	€ 18,852	€ 19,172	€ 19,501	€ 19,742	€ 19,761	€ 19,907
Selling Costs	€ 1,777	€ 1,896	€ 1,822	€ 1,929	€ 2,404	€ 2,658	€ 2,893	€ 3,092	€ 3,231	€ 3,309	€ 3,398	€ 3,444	€ 3,478
Marketing and events	€ 1,496	€ 1,536	€ 1,539	€ 1,551	€ 1,876	€ 2,187	€ 2,411	€ 2,603	€ 2,725	€ 2,808	€ 2,901	€ 2,944	€ 2,976
R&D Costs	€ 4,564	€ 3,572	€ 6,267	€ 3,417	€ 8,499	€ 7,924	€ 9,121	€ 10,751	€ 10,700	€ 11,608	€ 11,535	€ 11,906	€ 12,214
Write-Downs of Financial Receivables	€ 92	€ 131	€ 231	€ 27	€ 14	€ 29	€ 33	€ 27	€ 19	€ 20	€ 20	€ 10	€ 10
Others Before Taxes	€ 72,505	€ 81,147	€ 67,395	€ 62,072	€ 95,906	€ 119,272	€ 134,276	€ 146,817	€ 154,842	€ 160,572	€ 166,755	€ 170,726	€ 173,939
Taxes	€ 17,401	€ 19,475	€ 16,175	€ 14,807	€ 23,017	€ 28,625	€ 32,226	€ 35,236	€ 37,162	€ 38,537	€ 40,021	€ 40,974	€ 41,745
Core Result on Others After Taxes	€ 55,103	€ 61,672	€ 51,220	€ 47,175	€ 72,889	€ 90,647	€ 102,049	€ 111,581	€ 117,680	€ 122,035	€ 126,734	€ 129,752	€ 132,194
Core Result Before Taxes	€ 839,282	€ 944,971	€ 732,014	€ 1,075,659	€ 1,235,312	€ 1,320,348	€ 1,413,989	€ 1,558,414	€ 1,674,944	€ 1,735,166	€ 1,804,586	€ 1,874,395	€ 1,942,515
Taxes	€ 201,428	€ 226,793	€ 175,683	€ 258,158	€ 296,475	€ 316,883	€ 339,357	€ 374,019	€ 401,987	€ 416,440	€ 433,101	€ 449,855	€ 466,204
Core Result after Taxes	€ 637,854	€ 718,178	€ 556,331	€ 817,501	€ 938,837	€ 1,003,464	€ 1,074,632	€ 1,184,394	€ 1,272,958	€ 1,318,726	€ 1,371,486	€ 1,424,540	€ 1,476,311
Core Tax Adjustments	€ 176,389	€ 34,165	€ 28,033	€ 41,673	€ 44,744	€ 50,653	€ 54,246	€ 59,786	€ 64,257	€ 65,567	€ 69,230	€ 71,908	€ 74,522
Core Result after Tax Adjustments	€ 814,243	€ 752,343	€ 584,364	€ 859,174	€ 983,581	€ 1,054,118	€ 1,128,877	€ 1,244,181	€ 1,337,215	€ 1,385,293	€ 1,440,716	€ 1,496,448	€ 1,550,833
Non-Core Business													
Result from Investments	€ 2,665	€ 3,522	€ 4,647	€ 6,896	€ 6,175	€ 6,175	€ 6,175	€ 6,175	€ 6,175	€ 6,175	€ 6,175	€ 6,175	€ 6,175
Total Financial income from Industrial Activities	€ 2,122	€ 5,806	€ 1,127	€ 5,140	€ 4,580	€ 4,580	€ 4,580	€ 4,580	€ 4,580	€ 4,580	€ 4,580	€ 4,580	€ 4,580
Other Income	€ 15,062	€ 9,297	€ 6,592	€ 8,105	€ 12,446	€ 12,446	€ 12,446	€ 12,446	€ 12,446	€ 12,446	€ 12,446	€ 12,446	€ 12,446
Non-core profit before taxes	€ 19,849	€ 18,625	€ 12,366	€ 20,141	€ 23,201	€ 23,201	€ 23,201	€ 23,201	€ 23,201	€ 23,201	€ 23,201	€ 23,201	€ 23,201
Statutory taxes	€ 4,764	€ 4,470	€ 2,968	€ 4,834	€ 5,568	€ 5,568	€ 5,568	€ 5,568	€ 5,568	€ 5,568	€ 5,568	€ 5,568	€ 5,568
Non-Core adjustments	€ -	€ 733	€ 73,900	€ 633	€ 553	€ 553	€ 553	€ 553	€ 553	€ 553	€ 553	€ 553	€ 553
Non-Core profit after taxes before OCI	€ 15,085	€ 13,422	€ 83,298	€ 14,674	€ 17,080	€ 17,080	€ 17,080	€ 17,080	€ 17,080	€ 17,080	€ 17,080	€ 17,080	€ 17,080
Total comprehensive income/(loss), net of taxes	€ 3,143	€ 632	€ 17,122	€ 32,294	€ 79,299	€ 79,299	€ 79,299	€ 79,299	€ 79,299	€ 79,299	€ 79,299	€ 79,299	€ 79,299
Non-Core Result	€ 11,942	€ 12,790	€ 100,420	€ 17,620	€ 96,379	€ 96,379	€ 96,379	€ 96,379	€ 96,379	€ 96,379	€ 96,379	€ 96,379	€ 96,379
Financing Result													
Total Financial Expenses	€ 56,187	€ 88,232	€ 77,345	€ 53,569	€ 80,747	€ 93,602	€ 90,672	€ 92,315	€ 106,797	€ 113,776	€ 111,925	€ 112,833	€ 115,863
% of previous year debt	-13484.88	-21175.68	-18562.8	-12856.56	19,379.28	22,465	€ (21,761.21)	€ (22,155.66)	€ (25,631.31)	€ (27,306.17)	€ (26,862.06)	€ (27,080.04)	€ (27,807.14)
Statutory taxes	-	-	-	-	-	-	-	-	-	-	-	-	-
Financing Adjustments	-	-	-	-	-	-	-	-	-	-	-	-	-
Financing result after taxes	€ 42,702	€ 67,056	€ 58,782	€ 40,712	€ 61,368	€ 71,138	€ 68,911	€ 70,160	€ 81,166	€ 86,470	€ 85,063	€ 85,753	€ 88,056

Balance Sheet Reformulated - Core Business Per Segment - Base Case

€ thousand	2018	2019	2020	2021	2022	2023 E	2024 F	2025 F	2026 F	2027 F	2028 F	2029 F	2030 F
CORE BUSINESS													
CARS AND SPARE PARTS													
Operating Cash	€ 126,702	€ 146,286	€ 141,759	€ 178,656	€ 217,074	€ 273,732	€ 318,452	€ 363,314	€ 408,900	€ 409,709	€ 416,478	€ 426,577	€ 449,461
Inventories	€ 332,404	€ 373,845	€ 419,161	€ 497,329	€ 627,436	€ 786,794	€ 944,886	€ 1,040,172	€ 1,157,678	€ 1,279,638	€ 1,300,781	€ 1,333,434	€ 1,413,155
Trade Receivables	€ 64,739	€ 74,589	€ 62,301	€ 58,446	€ 85,696	€ 119,457	€ 138,973	€ 158,550	€ 177,135	€ 178,797	€ 181,751	€ 186,159	€ 196,145
Current tax receivables	€ 81,408	€ 14,488	€ 10,465	€ 12,016	€ 14,300	€ 14,014	€ 14,719	€ 16,616	€ 17,759	€ 18,254	€ 18,898	€ 19,642	€ 20,405
Property, Plant and Equipment	€ 668,274	€ 829,546	€ 952,563	€ 1,052,821	€ 1,133,726	€ 1,320,030	€ 1,578,677	€ 1,861,259	€ 1,979,679	€ 2,091,137	€ 2,174,672	€ 2,238,798	€ 2,308,768
Intangible Assets	€ 300,642	€ 393,156	€ 400,496	€ 540,610	€ 617,737	€ 689,052	€ 768,762	€ 878,423	€ 1,076,380	€ 1,252,380	€ 1,433,511	€ 1,625,091	€ 1,858,161
Employee benefits	€ 45,712	€ 45,900	€ 30,954	€ 51,654	€ 56,490	€ 122,223	€ 119,624	€ 129,208	€ 132,569	€ 128,336	€ 121,708	€ 113,139	€ 113,002
Other liabilities	€ 549,810	€ 762,800	€ 650,559	€ 676,285	€ 901,313	€ 708,154	€ 739,822	€ 735,227	€ 752,160	€ 767,335	€ 740,540	€ 747,017	€ 748,456
Trade payables	€ 555,688	€ 633,270	€ 649,564	€ 734,005	€ 839,760	€ 1,213,616	€ 1,437,098	€ 1,582,020	€ 1,767,460	€ 1,946,230	€ 2,053,864	€ 2,119,458	€ 2,261,048
Current tax payables	€ 4,847	€ 4,884	€ 13,373	€ 94,834	€ 52,164	€ 41,130	€ 43,198	€ 48,766	€ 52,120	€ 53,574	€ 55,464	€ 57,648	€ 59,886
Goodwill	€ 582,001	€ 609,891	€ 643,428	€ 656,900	€ 669,025	€ 632,249	€ 642,298	€ 648,780	€ 649,850	€ 648,441	€ 644,324	€ 646,739	€ 647,627
Other current assets	€ 40,817	€ 63,807	€ 64,339	€ 102,657	€ 136,446	€ 111,490	€ 117,094	€ 132,188	€ 141,279	€ 145,221	€ 150,345	€ 156,264	€ 162,332
Provisions (Core)	€ 123,577	€ 123,243	€ 117,377	€ 126,194	€ 156,828	€ 197,189	€ 233,500	€ 257,048	€ 287,178	€ 316,225	€ 321,449	€ 329,519	€ 349,219
Investments accounted for using the equity method	€ 20,142	€ 23,275	€ 26,918	€ 33,399	€ 38,174	€ 36,295	€ 43,376	€ 46,995	€ 39,150	€ 41,055	€ 42,511	€ 44,587	€ 48,345
Net Working Capital	€ 31,783	€ 38,549	€ 26,343	€ 426	€ 90,446	€ 33,633	€ 34,788	€ 19,985	€ 26,747	€ 78,086	€ 154,854	€ 173,288	€ 202,287
CARS AND SPARE PARTS - CORE RESULT	€ 937,554	€ 958,695	€ 1,319,602	€ 1,449,861	€ 1,533,057	€ 1,700,801	€ 1,993,994	€ 2,394,027	€ 2,653,324	€ 2,857,932	€ 3,070,246	€ 3,210,511	€ 3,572,688
ENGINES													
Operating Cash	€ 14,227	€ 9,915	€ 7,533	€ 9,472	€ 7,767	€ 5,481	€ 4,684	€ 4,956	€ 3,495	€ 3,698	€ 3,912	€ 4,138	€ 4,378
Inventories	€ 39,106	€ 29,404	€ 27,637	€ 32,435	€ 33,733	€ 18,763	€ 16,034	€ 16,963	€ 11,661	€ 11,956	€ 12,247	€ 11,894	€ 13,482
Trade Receivables	€ 47,882	€ 49,782	€ 37,906	€ 23,737	€ 19,184	€ 20,166	€ 17,233	€ 18,231	€ 12,858	€ 14,391	€ 15,224	€ 16,105	€ 16,105
Current tax receivables	€ 7,159	€ 211	€ 604	€ 343	€ 990	€ 1,425	€ 1,218	€ 1,288	€ 908	€ 961	€ 1,017	€ 1,076	€ 1,138
Property, Plant and Equipment	€ 85,055	€ 106,965	€ 122,663	€ 135,317	€ 145,783	€ 156,653	€ 163,171	€ 167,192	€ 170,518	€ 173,554	€ 176,514	€ 179,514	€ 182,616
Intangible Assets	€ 238,921	€ 309,974	€ 362,283	€ 426,145	€ 490,673	€ 560,376	€ 560,925	€ 561,542	€ 562,238	€ 563,023	€ 563,908	€ 564,907	€ 566,034
Employee benefits	€ 8,398	€ 8,537	€ 5,885	€ 10,120	€ 11,082	€ 9,155	€ 6,162	€ 6,219	€ 4,974	€ 4,942	€ 4,739	€ 4,606	€ 4,687
Other liabilities	€ 17,122	€ 13,054	€ 11,940	€ 16,927	€ 15,640	€ 15,047	€ 14,632	€ 14,837	€ 15,417	€ 15,115	€ 15,009	€ 15,002	€ 15,076
Trade payables	€ 65,375	€ 49,808	€ 42,828	€ 47,870	€ 45,148	€ 62,905	€ 24,733	€ 26,165	€ 17,886	€ 18,443	€ 18,891	€ 18,347	€ 20,796
Current tax payables	€ 426	€ 71	€ 772	€ 2,710	€ 3,612	€ 1,561	€ 1,327	€ 1,508	€ 1,046	€ 892	€ 710	€ 416	€ 397
Goodwill	€ 65,321	€ 41,339	€ 34,190	€ 34,826	€ 23,938	€ 39,923	€ 34,843	€ 33,544	€ 33,415	€ 33,133	€ 34,972	€ 33,981	€ 33,809
Other current assets	€ 3,590	€ 930	€ 3,716	€ 2,933	€ 947	€ 4,231	€ 3,597	€ 4,089	€ 2,835	€ 2,418	€ 1,925	€ 1,128	€ 1,077
Provisions (Core)	€ 14,539	€ 9,693	€ 7,739	€ 8,230	€ 8,432	€ 4,702	€ 4,019	€ 4,251	€ 2,922	€ 2,997	€ 3,069	€ 2,981	€ 3,379
Investments accounted for using the equity method	€ 2,997	€ 3,001	€ 3,466	€ 4,293	€ 4,909	€ 4,670	€ 5,581	€ 6,046	€ 5,037	€ 5,282	€ 5,469	€ 5,736	€ 6,207
Net Working Capital	€ 35,841	€ 39,293	€ 30,247	€ 17,773	€ 15,536	€ 18,495	€ 13,219	€ 13,985	€ 10,028	€ 10,814	€ 11,658	€ 12,910	€ 13,170
ENGINES - CORE RESULT	€ 398,000	€ 467,668	€ 523,737	€ 582,510	€ 638,818	€ 712,977	€ 751,874	€ 755,709	€ 757,043	€ 762,187	€ 769,565	€ 774,822	€ 779,152
SPONSORSHIP, COMMERCIAL AND BRAND													
Operating Cash	€ 25,285	€ 26,912	€ 19,500	€ 21,529	€ 23,925	€ 23,007	€ 23,936	€ 23,934	€ 24,554	€ 24,934	€ 25,148	€ 25,333	€ 25,868
Inventories	€ 15,643	€ 12,602	€ 11,515	€ 8,109	€ 10,120	€ 11,422	€ 11,172	€ 10,995	€ 10,870	€ 11,406	€ 11,683	€ 11,606	€ 11,807
Trade Receivables	€ 69,747	€ 71,312	€ 53,803	€ 53,568	€ 67,194	€ 61,952	€ 64,454	€ 64,451	€ 66,120	€ 67,143	€ 67,719	€ 68,216	€ 69,658
Current tax receivables	€ 28,589	€ 4,991	€ 1,433	€ 1,808	€ 1,498	€ 5,980	€ 6,221	€ 6,221	€ 6,382	€ 6,481	€ 6,536	€ 6,584	€ 6,724
Property, Plant and Equipment	€ 87,273	€ 114,440	€ 131,246	€ 143,421	€ 153,458	€ 180,475	€ 207,057	€ 223,810	€ 239,074	€ 241,141	€ 242,228	€ 242,785	€ 243,067
Intangible Assets	€ 84,973	€ 109,102	€ 126,921	€ 137,031	€ 157,740	€ 175,968	€ 183,755	€ 192,772	€ 203,232	€ 215,389	€ 229,543	€ 246,049	€ 265,329
Employee benefits	€ 24,068	€ 25,053	€ 17,261	€ 29,306	€ 32,153	€ 34,454	€ 37,499	€ 40,071	€ 41,877	€ 42,888	€ 44,044	€ 44,641	€ 45,078
Other liabilities	€ 17,289	€ 17,632	€ 18,896	€ 24,968	€ 26,101	€ 20,977	€ 21,715	€ 22,531	€ 23,258	€ 22,916	€ 22,280	€ 22,540	€ 22,765
Trade payables	€ 26,150	€ 21,346	€ 17,845	€ 11,967	€ 13,545	€ 17,619	€ 17,233	€ 16,960	€ 16,767	€ 17,593	€ 18,020	€ 17,903	€ 18,213
Current tax payables	€ 1,702	€ 1,083	€ 1,831	€ 14,271	€ 5,464	€ 6,241	€ 6,939	€ 6,583	€ 6,905	€ 7,715	€ 7,715	€ 7,748	€ 7,967
Goodwill	€ 116,091	€ 112,200	€ 88,509	€ 79,160	€ 73,737	€ 93,939	€ 89,509	€ 84,971	€ 84,263	€ 85,284	€ 87,593	€ 86,324	€ 85,687
Other current assets	€ 14,334	€ 21,982	€ 8,808	€ 15,448	€ 14,291	€ 16,918	€ 18,810	€ 17,843	€ 18,716	€ 19,991	€ 20,913	€ 21,003	€ 21,995
Provisions (Core)	€ 5,815	€ 4,154	€ 3,225	€ 2,058	€ 2,529	€ 2,863	€ 2,800	€ 2,756	€ 2,724	€ 2,828	€ 2,928	€ 2,909	€ 2,959
Investments accounted for using the equity method	€ 2,779	€ 3,211	€ 3,709	€ 4,550	€ 5,167	€ 4,934	€ 5,897	€ 6,388	€ 5,322	€ 5,581	€ 5,779	€ 6,061	€ 6,558
Net Working Capital	€ 84,525	€ 89,479	€ 66,973	€ 71,238	€ 87,694	€ 78,763	€ 82,330	€ 82,420	€ 84,777	€ 85,890	€ 86,530	€ 87,252	€ 89,121
SPONSORSHIP, COMMERCIAL AND BRAND - CORE RESULT	€ 369,690	€ 406,884	€ 386,386	€ 382,052	€ 427,339	€ 492,442	€ 524,625	€ 542,485	€ 567,063	€ 583,723	€ 602,155	€ 618,221	€ 639,372
OTHERS													
Operating Cash	€ 4,741	€ 5,217	€ 4,198	€ 3,888	€ 5,997	€ 7,289	€ 8,202	€ 8,977	€ 9,398	€ 9,750	€ 10,073	€ 10,292	€ 10,477
Inventories	€ 3,911	€ 4,201	€ 2,303	€ 2,703	€ 3,373	€ 4,078	€ 4,547	€ 4,838	€ 4,920	€ 5,005	€ 5,067	€ 5,071	€ 5,109
Trade Receivables	€ 29,031	€ 35,756	€ 30,250	€ 49,249	€ 60,340	€ 62,552	€ 70,390	€ 77,040	€ 80,656	€ 83,679	€ 86,443	€ 88,330	€ 89,918
Current tax receivables	€ 11,078	€ 1,810	€ 1,145	€ 826	€ 1,246	€ 1,616	€ 1,797	€ 1,705	€ 1,788	€ 1,910	€ 1,998	€ 2,006	€ 2,063
Property, Plant and Equipment	€ 9,548	€ 18,701	€ 20,158	€ 21,607	€ 24,859	€ 28,802	€ 33,000	€ 37,362	€ 42,093	€ 47,550	€ 53,859	€ 61,140	€ 69,584
Intangible Assets	€ 21,260	€ 25,707	€ 29,589	€ 34,387	€ 41,279	€ 47,686	€ 47,701	€ 47,716	€ 47,733	€ 47,751	€ 47,770	€ 47,791	€ 47,814
Employee benefits	€ 8,398	€ 8,537	€ 5,885	€ 10,120	€ 11,082	€ 12,256	€ 12,913	€ 13,799	€ 14,420	€ 14,768	€ 15,167	€ 15,372	€ 15,523
Other liabilities	€ 5,522	€ 5,980	€ 6,066	€ 8,594	€ 8,971	€ 7,027	€ 7,327	€ 7,597	€ 7,903	€ 7,765	€ 7,524	€ 7,623	€ 7,683
Trade payables	€ 6,538	€ 7,115	€ 3,569	€ 3,989	€ 4,515	€ 6,290	€ 7,013	€ 7,462	€ 7,590	€ 7,720	€ 7,815	€ 7,823	€ 7,880
Current tax payables	€ 660	€ 610	€ 1,463	€ 6,516	€ 4,547	€ 4,549	€ 5,121	€ 5,600	€ 5,906	€ 6,124	€ 6,360	€ 6,512	€ 6,634
Goodwill	€ 21,769												

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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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