

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.

From Wearables to Avionics:  
Equity Research Garmin Ltd.

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

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December 15, 2024

This report forms part of a comprehensive equity research on Garmin Ltd., a leader in advanced navigation technologies. This section begins with an overview of Garmin's stock and focuses on three key segments: outdoor, marine, and auto. After analyzing Garmin's balance sheet and benchmarking key figures against peers, revenue projections for these segments are made. Segment-specific discount rates, ranging from 7.86% to 11.36%, are derived using the WACC. Employing a Discounted Cash Flow model alongside scenario analysis, sensitivity testing, and Monte Carlo simulations, a target share price of \$140.58 is estimated. Combined with the Dividend Discount Model and Multiple Valuation from the complementary report section, a YE25 target price of \$139.43 is projected. Based on analyses from both parts of the report, this section recommends selling Garmin shares.

Keywords: Equity Research, Garmin Ltd., Valuation

This report is part of the “Equity Research Garmin: Navigating Sustainable Growth“ report (annexed), developed by Lennart Hilbing (57868) and Moritz Reusser (57863) and should be read as an integral part of it.

This work used infrastructure and resources funded by Fundação para a Ciência e a Tecnologia (UID/ECO/00124/2013, UID/ECO/00124/2019 and Social Sciences DataLab, Project 22209), POR Lisboa (LISBOA-01-0145-FEDER-007722 and Social Sciences DataLab, Project 22209) and POR Norte (Social Sciences DataLab, Project 22209).

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# Introduction

This analysis is part of a joint equity research report on the valuation of the equity value of Garmin Ltd., a company that offers advanced technological solutions for five markets: fitness, outdoor, aviation, marine and auto. Based on the in-depth analysis of the company, this report formulates a recommendation.

The joint report begins with a brief overview of the company, including its business model and product portfolio. This is followed by an analysis of the macroeconomic environment and a detailed assessment of Garmin's market segments and its competitors. Next the report evaluates the company's financial performance through balance sheet, income statement and cash flow analyses, identifying trends and understanding Garmin's market position. Building on these insights the report estimates revenue growth and profitability for the five operating segments. Factoring in macroeconomic and market-specific forecasts and value drivers, the valuation is conducted using a Discounted Cash Flow model, complemented by a Comparable Company Analysis and a Dividend Discount Model. Scenario and sensitivity analyses, as well as a Monte Carlo simulation, are employed to account for risks and uncertainties. Relevant risks, ESG factors and valuation risks are also addressed in order to provide a comprehensive perspective. The report concludes with a SELL recommendation based on the analysis and valuation, projecting a potential downside for Garmin shares.

## Company Overview

### Garmin Stock

After establishing its Cayman Island registration, Garmin went public on December 8, 2000, with an initial share price of \$14, marking its entry into the public markets. The company's stock later went through a split on August 16, 2006, to enhance accessibility for investors. In December 2021, Garmin (Ticker: GRMN) transitioned its listing to the NYSE. As of December 10, 2024, Garmin has 192.21 million shares outstanding, resulting in a market capitalization of approximately \$42.09 billion.

Over the last decade, from December 2014 to December 2024, Garmin's shares have increased by 291%, significantly outperforming the MSCI World Index, which rose by 122% in the same timeframe. This impressive growth trajectory includes two major phases: a decline at the onset of the COVID-19 pandemic, followed by a substantial recovery that peaked in August 2021 at \$178.38. The substantial recovery was largely driven by heightened demand for fitness and health products during the pandemic. With a strong lineup of fitness wearables and health-focused devices, Garmin capitalized on this trend, which boosted sales and fueled stock growth through 2021. The stock then faced a correction, gradually losing the gains made during the pandemic, reaching a low of \$78.47 in October 2022. From this

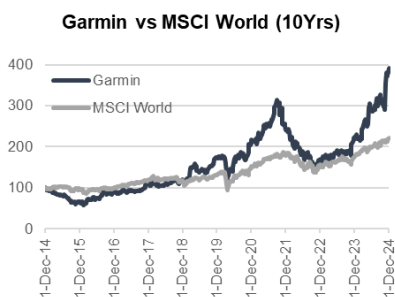


Figure 1: Historical Price Development Garmin vs MSCI World 2014-2024

low point, Garmin's shares began a new upward trend, as market stability returned and growth prospects resumed across its operating segments. This upward trend, bolstered by a recent 24% surge following the latest earnings call, brought the share price to \$219.21 as of December 10, 2024.

As of today, Garmin's largest shareholders are its founders, with Min Hwan Kao holding 9.7% and the family of co-founder Gary Burrell holding 9.3% of outstanding shares. Additionally, The Vanguard Group and BlackRock are the only other entities with over 5% ownership, while the remaining shares are held mostly by other institutional investors. Dividends have been a cornerstone of Garmin's financial strategy since their introduction in 2003. Over the past 21 years, the company has maintained a consistent record of never reducing its annual dividend. In 2011, Garmin shifted from annual to quarterly dividend payments, with the most recent payout of \$0.75 per share. In calendar year 2024, total dividend payments reached \$3.01.

***Track record of 21 years of steady or rising dividends.***

## Industry Analysis

### Market Analysis

The **outdoor equipment market** encompasses a wide variety of products designed for activities such as camping, hiking and exploring. Typical items in this market include tents, sleeping bags, backpacks and hiking boots. Moreover, the market also includes a variety of niche categories such as hunting equipment and outdoor cooking supplies.[9] Technology has also become a critical factor shaping the outdoor market. In recent years, consumers have sought products that combine durability, portability and smart features. This has led to the integration of GPS technology, solar charging and connectivity across a wide range of outdoor gear. Additionally, trends like the rise in adventure tourism, a growing focus on sustainability and the increasing popularity of solo or remote outdoor activities have further diversified the market, fostering demand for innovative products. Garmin operates within specific niches of this broader market, distinguishing itself through its focus on advanced outdoor technology.[10]

***In its outdoor segment Garmin offers adventure watches, handheld devices, golf equipment and automotive consumer products***

In 2008, Garmin launched its first dedicated outdoor products with the Oregon and Colorado series, introducing handheld GPS devices with color touchscreens - a groundbreaking innovation at that time. These devices catered to adventurers and outdoor enthusiasts by providing reliable navigation and detailed mapping capabilities, even in rugged and remote environments. By 2011, Garmin began reporting the outdoor segment separately from the fitness segment, reflecting its growing importance to the company. Over time, Garmin has expanded its offerings beyond core outdoor GPS devices into adjacent markets, such as golf technology. Today, Garmin's outdoor segment features adventure watches equipped with solar

charging capabilities and maps tailored to specific activities, such as skiing or golfing. Additionally, Garmin has entered the growing market for emergency communication devices with its inReach line and Garmin Response, which includes an in-house emergency response coordination center.

Distinct from outdoor and adventure products the segment also encompasses the previously separate auto consumer products. This market was first entered 1998 with the StreetPilot GPS navigation devices, achieving dominance in the personal navigation device (PND) market, with revenues peaking at \$2,538 million and a 73% revenue share in 2008.[11] However, the rise of smartphone navigation disrupted this market, which has since declined with a CAGR of nearly -15%. In response, Garmin pivoted toward dashcams, addressing growing safety concerns and mobile solutions that integrate with smartphones.

With its broad and evolving product portfolio, Garmin's outdoor segment goes far beyond traditional outdoor markets. To better capture this diversity, a dedicated market was constructed encompassing the regular outdoor and golf equipment market, as well as auto consumer products. Based on historical data regarding their auto consumer market and qualitative investor relations data the importance of these markets is weighted with 85%, 5% and 10% respectively in 2024.

In the subsegment of outdoor wearables, Garmin faces competition from Coros and Shearwater Research, which excel in specialized adventure and diving devices, while luxury brands like TAG Heuer and Tissot cater to more premium audiences. Globalstar and Zoleo offer strong alternatives to Garmin's inReach products in the area of emergency communication. In golf, Garmin competes with Trackman and Bushnell, known for their focus on performance analytics and GPS solutions. Legacy competitor TomTom together with Vista Outdoor represent the main competition in the automotive consumer market. Within Garmin's target market its share has (except for 2023) grown steadily for the past 5 years, rising from 2.8% in 2019 to 3.2% in 2024.

The **marine** sector is divided into two submarkets: commercial and recreational. The commercial segment includes industries such as shipping and naval operations, relying on specialized equipment and services designed to support large-scale maritime activities. In contrast, the recreational market focuses on private use, catering to individual consumers engaged in leisure activities. This segment offers a wide range of products, from small boats to luxury yachts, along with associated gear, emphasizing enjoyment and personal use.

As Garmin is a leading manufacturer in the field of recreational marine electronics, it primarily focuses on the recreational segment of the marine market. Over the past few years, the number of recreational boats in the United States has stagnated.[17] Conversely, despite this stagnation in boat numbers, the revenue

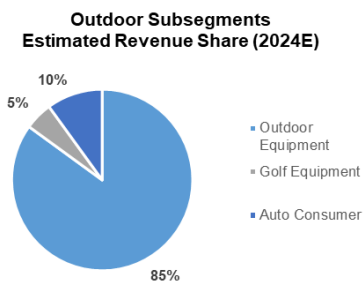


Figure 2: Outdoor Subsegments Estimated Revenue Share 2024

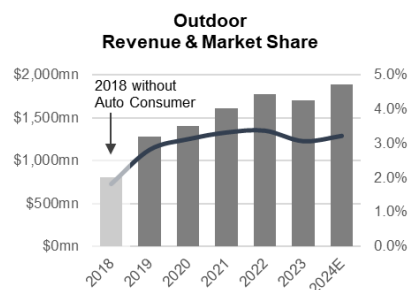


Figure 3: Outdoor Segment Revenue and Market Share 2018-2024

**Garmin primarily caters to the recreational marine market, complementing its offerings with specialized fishing equipment in the segment.**

in the recreational boating market has seen an increase. This discrepancy can be attributed to Garmin's strategy of broadening and strengthening its product portfolio, which makes its products appealing not only for newly built boats but also for upgrading older vessels. Garmin's commitment to innovation and quality ensures that their offerings remain attractive in a market where consumers are increasingly interested in enhancing their existing boats with the latest technology. The extensive product range includes advanced light and audio systems, chart plotters, sonar, communication tools and autopilot functionalities, further enhancing the boating experience.

In addition to its focus on the recreational boating market, Garmin also plays a significant role in the fishing equipment market. This segment has experienced substantial growth, with revenues increasing from \$17.5 billion in 2018 to \$24.7 billion by 2024.[18] Garmin has capitalized on this growth by offering a diverse range of products tailored specifically for the fishing industry. These products are designed to appeal to both seasoned anglers and newcomers to the sport, encompassing advanced fish finders, GPS devices and other specialized fishing technology. This strategic expansion into fishing equipment allows Garmin to tap into a broader consumer base and further solidify its presence in the marine electronics market.

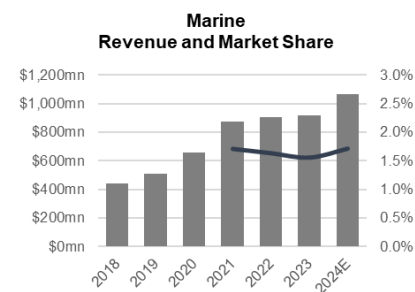


Figure 4: Marine Segment Revenue and Market Share 2018-2024

In contrast to other segments, Garmin faces a smaller circle of competitors. Furuno and Raymarine are both competitors in radar systems, fish finders and GPS equipment. Johnson Outdoors and Navico challenge Garmin in the fishing and marine electronics markets with their range of GPS devices, fish finders, chartplotters, sonar systems and autopilot functionalities. With its niche products Garmin maintained a stable market share between 1.6% and 1.7%, growing alongside its target market (15.9% CAGR since 2018).

The **automotive market** encompasses passenger vehicles, commercial vehicles and electric vehicles (EVs), each with unique ecosystems of parts and component suppliers as well as OEMs. Within this vast market, automotive electronics play a critical role, driven by advancements in vehicle connectivity, safety and electrification.[19]

Global motor vehicle sales increased steadily from 66 million units in 2005 to a peak of 96 million units in 2017, with only minor interruptions during the 2008–2009 financial crisis. However, growth slowed in 2018 due to trade tensions and declined sharply during the COVID-19 pandemic in 2020, falling below 80 million units. Recovery has been underway but remains below pre-2018 levels, partly due to lower consumer interest and semiconductor shortages.[20] Despite this, the automotive market continues to expand, with passenger vehicle revenues expected to surpass \$2.5 trillion in 2024.[21] Automotive electronics, a fast-growing

**Garmin focuses on OEM solutions, offering domain control units, infotainment platforms, and ADAS technologies for connected vehicles.**

subsegment, is projected to reach \$338 billion by 2024. The segment is fueled by rising demand for advanced driver-assistance systems (ADAS), connected vehicle technologies and the electrification of powertrains. Key components include infotainment systems, sensors, telematics and control units that enhance vehicle safety and connectivity. Yet, challenges such as semiconductor shortages and integrating AI-driven systems persist.[19]

Garmin's presence in the automotive market spans the aftermarket and OEM segments. The aftermarket consumer devices are part of the outdoor segment. In the OEM segment, Garmin began by supplying navigation devices to car manufacturers but has pivoted in recent years to focus on advanced electronic systems. The company now provides domain control units, electronic control units and integrated infotainment platforms, aligning with trends in connectivity and ADAS. Despite the challenges of entering a competitive space, Garmin's auto revenue is projected to reach \$608 million by 2024, with a robust 34.7% annual growth rate since 2020. With this exceptional growth Garmin captured already a market share of 0.39%.

Garmin's main competitors in the automotive space can be grouped into three categories: infotainment platforms, where companies like Harman (Samsung), Panasonic and Alpine Electronics lead; ADAS and connectivity solutions, dominated by Bosch, Continental and Aptiv; and integrated domain control systems, where Bosch, Visteon and Continental are key players.

## Financial Statement Analysis

### Balance Sheet

To achieve a sum-of-parts valuation, balance sheets for Garmin's operating segments were constructed using proportional ratios of revenue, EAT and sum of COGS and operating expenses. This method ensures an accurate allocation of assets and liabilities based on each segment's financial performance and operational scale, reflecting Garmin's diverse business structure.

Analyzing the balance sheet reveals a steady improvement in Garmin's liquidity, which is reflected in a rising **current ratio** from 2.99 in 2019 to 3.48 in 2024. Meanwhile, the quick ratio, which peaked at 2.37 in 2020, declined to 1.79 in 2022 due to inventory growth and a 43% decrease in accounts payable during the pandemic. By 2023, it recovered to 2.18, driven by reduced inventory, higher net income and a stronger cash position. Throughout this period, Garmin's **quick ratio** consistently exceeded market averages across all operating segments, reflecting strong financial stability.

In addition to its strong liquidity metrics, Garmin's operational metrics provide a mixed picture. Garmin's **asset turnover** ratio remained stable between 0.62 and

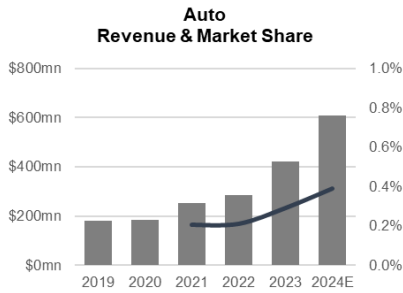


Figure 5: Auto Segment Revenue and Market Share 2018-2024

***We separated balance sheet items to separately value the five business segments.***

0.68, indicating steady revenue generation relative to assets. Still, the ratio lags behind fitness (0.91), marine (1.02), auto (1.03) segment medians, while aligning more closely with outdoor and aviation benchmarks (0.80 & 0.59). In contrast, **inventory turnover** declined from 2.75 to 1.55, signaling slower inventory movement compared to industry norms. Fitness peers achieve higher inventory turnover (median: 4.35) and other segments such as outdoor (median: 4.35) and marine (median: 6.08) also surpass Garmin, highlighting potential differences.

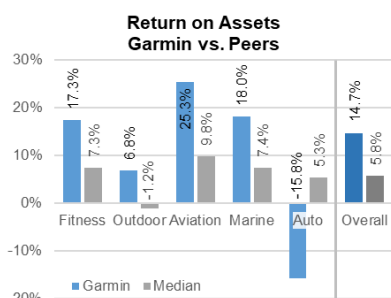


Figure 6: Return on Assets Garmin vs. Peers 2023

Profitability has been a consistent strength. Garmin's **return on assets (RoA)** ranged between 13.7% and 17.1%, reflecting effective asset utilization. This outpaced many segment averages, particularly in outdoor and aviation and demonstrated resilience compared to declining trends in the auto sector. While some competitors have significant overlap but nevertheless follow another business model (e.g. Apple), the median of most segments is below Garmin's segments RoA, showcasing Garmin's strong asset management.

Examining Garmin's liabilities, these have undergone notable changes in recent years, reflecting both operational trends and external factors. Accounts payable have fluctuated, with **days payable outstanding (DPO)** ranging between 38 and 55 days. Especially the years 2019 to 2022 represent extraordinary years with a high DPO levels and a peak in 2021 of 55 days, before returning to its historical range in subsequent years. A similar trend was observed with **days salaries and benefits payable**, which peaked at 109 days during this period but normalized to values around 80 days afterward.

Other current operating liabilities, such as accrued warranty and sales program costs, remained consistent at 3 to 4% of revenue. In contrast, income taxes payable saw a significant increase, primarily driven by Switzerland's adoption of the minimum tax rate, which elevated Garmin's tax-related obligations. Meanwhile, deferred net sales declined as a percentage of revenue between 2015 and 2019 but stabilized from 2020 onward. The implementation of Accounting Standards Codification 842 in 2019 introduced operating lease liabilities for leases exceeding one year, which increased in terms of absolute values until stabilizing around 10.8% of net PPE in 2022. Garmin's dividend strategy is reflected by one quarterly payment outstanding since 2022.

Minimal reliance on traditional debt has been a defining feature of Garmin's financing strategy, with **debt-to-equity** ratios remaining below 2% since 2016. This limited debt, primarily consisting of lease liabilities and dividends payable, sets Garmin apart from peers. In the fitness segment, competitors' debt-to-equity median is 28.1% in 2023. The outdoor segment showed improvement, with ratios dropping from 59.6% to 28.4%, while aviation, marine and auto peers saw rising debt levels during the COVID-19 era to address financing needs.

The company's long-term **debt-to-capital** ratio further highlights its financial approach, with no reliance on traditional long-term debt. This contrasts with competitors in the aviation and outdoor sectors, where debt-to-capital ratios averaged above 25%. In the marine and fitness segments, some peers align with Garmin's low debt strategy, while other close peers reported significantly higher ratios of up to 43%. These differences underscore Garmin's disciplined and debt-averse financial management.

Equity growth has been a strong indicator of financial strength, with Garmin's total equity rising from \$3,345 million in 2015 to \$8,003 million in 2024, reflecting a CAGR of 10.2%. This growth was primarily driven by retained earnings, which increased from \$1,931 million to \$6,060 million, showcasing the company's operational success. Supporting this, Garmin reduced treasury shares from \$415 million to \$244 million, reinforcing its focus on efficient capital allocation and shareholder value. The contributed capital remained stable and fluctuations in other comprehensive income had minimal impact.

Garmin's equity growth has been supported by a steady **return on equity (RoE)**, ranging from 15.3% to 21.3%, demonstrating its ability to efficiently utilize shareholder equity to generate consistent profits. Compared to peers, Garmin's RoE underscores its operational stability across diverse segments. In the fitness segment, Garmin's RoE is in line with the industry median. The outdoor segment, marked by frequent fluctuations and negative averages, contrasts with Garmin's consistent RoE performance. In aviation, RoE medians typically range between 10% and 25%, driven by the industry's capital-intensive nature and competitors' higher leverage, while Garmin's marine segment RoE aligns closely with industry median of 14.3%. The auto segment has experienced significant RoE volatility, with competitors showing extreme swings.

Garmin's overall **return on invested capital (ROIC)** declined from 27.2% in 2016 to 17.8% in 2023, reflecting a mixed performance across different segments. In the fitness segment, Garmin shows a potential 5% ROIC advantage over competitors. The outdoor segment stands out with a strong ROIC of 25.2%, far exceeding the peer median of 13.1%. Similarly, Garmin's aviation and marine segments surpass their peers by about 8%. However, the auto segment struggles with a negative ROIC of -13.7%, underperforming the peer median of 14.8%, due to not having reached profitability yet. This variance across segments highlights areas of both strength and concern within Garmin's operations.

Garmin's financial performance reflects a well-rounded combination of liquidity, profitability and stability, underpinned by a conservative approach to debt and strong equity growth. This strength is further highlighted by its **unlevered free cash flow (FCF)** trends. The atypical low FCF in 2019 was driven by significant

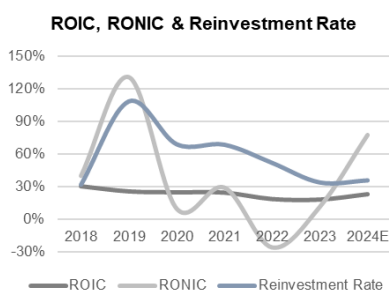


Figure 7: ROIC, RONIC and Reinvestment Rate 2018-2024

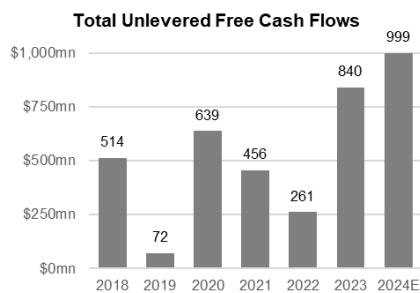


Figure 8: Total Unlevered Free Cash Flows 2018-2024

investments in goodwill and an increase in net working capital. In 2020, FCF improved, propelled by robust operating performance. However, 2021 experienced a decline due to a rise in net working capital, followed by another drop in 2022, attributed to a lower EBIT, increased other noncurrent assets and foreign currency adjustments. Tax adjustments in 2023 contributed to a higher FCF, with momentum expected to continue into 2024, leading to further increases in FCF.

The consistent return on equity, steady return on assets and robust balance sheet underscore its operational efficiency and resilience across its segments. Despite challenges such as pandemic-driven disruptions and varying industry benchmarks, the company has maintained superior liquidity metrics, outpacing peers in profitability measures. While opportunities exist to enhance inventory management and asset turnover, Garmin's disciplined financial strategy - marked by minimal reliance on traditional debt, strong retained earnings growth and effective shareholder value initiatives - positions it as a leader in financial stability and operational strength within its markets.

## Financial Projections

**Full year results and end of year balance sheet was forecasted through seasonality analysis of historical data in combination with provided full year outlook.**

By the valuation date, the performance for the first three quarters of 2024 had already been published. During the Q3 earnings call in November, Garmin's executives also shared their revenue expectations for the full year 2024. Given Garmin's tendency to underestimate fourth-quarter performance in previous years, particularly in 2023, we analyzed the seasonality of revenue from past years. Based on this evaluation, we developed a forecast for Q4 2024 and, consequently, the full-year results for 2024. A more granular split of revenues either by regions or by subcategories was requested at the investor relations department but found no answer. Therefore, the performance forecast for the 5 segments will be discussed in the following.

### Revenue Forecast

**We project the outdoor segment to reach a sales volume of \$3,164 million by 2030 with a CAGR of 9.0%.**

The **outdoor segment** is projected to achieve annual revenue exceeding \$3,164 million in 2030, with a relatively steady growth rate averaging a CAGR of 9%. This growth is driven by increasing consumer spending on recreation and culture, weighted at 75% and health-related expenditures, weighted at 25%, resulting in a combined value driver that reflects the market's key influences. Unlike the traditional outdoor market, Garmin's Outdoor segment also includes golf equipment and automotive consumer products. These additions provide a more diversified revenue base, requiring a detailed analysis of growth contributions from each submarket.

The regular outdoor equipment market, in which Garmin contributes core products like adventure watches and satellite communicators and the golf equipment market

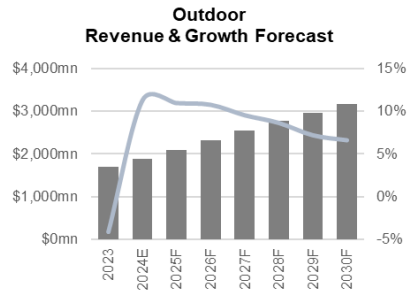


Figure 9: Outdoor Segment Revenue and Revenue Growth Forecast 2023-2030

are both expected to grow about 1% faster than the underlying value drivers over the next four to five years. After this period, their growth rates are anticipated to slightly decline to 3.5% in 2030.[9] The automotive consumer electronics market, while historically in decline, is expected to return to positive growth rates as safety concerns drive demand for dashcams and related products.[26] This market is projected to see accelerating growth over the coming years, peaking at a growth rate of nearly 7% by 2030.

Garmin’s focus on advanced outdoor technology, such as adventure watches, satellite communicators and range finders, sets it apart from generic equipment like sleeping bags or golf balls. To create an accurate performance projection for the forecast period, we applied specific markups and markdowns based on Garmin’s strengths and challenges compared to the broader market. The company’s emphasis on premium products enables higher growth through innovation rather than simple replacement cycles. Additionally, Garmin’s focus on safety and survival features supports above-market growth expectations. However, increasing competition from smartphones in handheld GPS devices and new entrants in outdoor tech pose challenges. Based on these factors, we forecast a growth premium of 5% above the weighted outdoor market growth in 2025 and 2026, a level consistent with Garmin’s historical performance. This premium is expected to gradually decline, reaching 2% by 2030 and eventually diminish. Overall, this results in projected revenue growth of 11% over the next two years, tapering to 6.6% by 2030, reflecting both Garmin’s strong positioning and the normalization of market conditions.

**We project the marine segment to reach a sales volume of \$1,789 million by 2030 with a CAGR of 9.0%.**

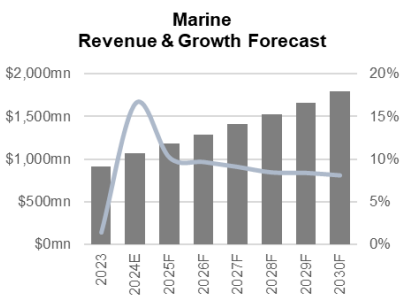


Figure 10: Marine Segment Revenue and Revenue Growth Forecast 2023-2030

Garmin’s **marine segment** is projected to achieve a sales volume of \$1,789 million by 2030, reflecting a CAGR of 9.0% over the next six years. Growth of the general market for recreational marine is tied to the general consumer spending in the area of recreation & culture, which we therefore identified as primary value driver. Operating in two separate markets, marine electronics for recreational boating and fishing equipment, the segment is subject to distinct growth dynamics. The recreational boating market is expected to grow at a steady rate of 1% above its value driver until 2030, fueled by rising disposable incomes and advancements in technology that make boating easier, safer and by that more accessible for a broader customer base.[27] In comparison, the fishing equipment market is projected to grow slightly faster, at a rate of 6.5% in 2025 and 2026, resulting in a CAGR of 5.5% through 2030.[18]

Given Garmin’s strategic focus on recreational marine products over fishing equipment, we weighted these markets at 80/20 to arrive at a combined growth forecast of around 6% in 2025, gradually decreasing to 5% by 2030. Beyond 2030, growth is expected to align with the broader recreational spending outlook.

Garmin's technological leadership in navigation and sonar systems, demonstrated by numerous innovation awards, is expected to allow the company to outpace the general market in the near term. Its comprehensive marine ecosystem and premium product focus provide additional advantages. However, these strengths are balanced by rising competition and the price sensitivity of customers, which will limit growth over time. Overall, we estimate that these strengths and challenges will lead to a mid-term growth premium of 2.5 to 4.5% above the general market rate. As a result, we project Garmin's Marine segment to achieve short-term growth of 10.2% and 9.7% in 2025 and 2026, respectively, before tapering off to around 8% annual growth through 2030.

**We project the auto segment to reach a sales volume of \$1,903 million by 2030 with a CAGR of 20.9%.**

The **auto** segment is expected to sustain its strong growth trajectory, surpassing \$1,900 million in revenue by 2030 with a projected CAGR of 20.9% over the next three years. The long-term value driver for this market is consumer spending on transportation, forecasted to grow between 4.5% and 5.2% annually until 2030.[21] Garmin's vision in this segment is to become a leading global supplier of integrated electronic solutions for the automotive industry, leveraging its robust technology portfolio and vertically integrated global business model. Garmin is also benefiting from increased demand for electronic control units and related software, a market anticipated to grow at 7% in 2025 and stabilize at an annual growth rate of 4–5% between 2026 and 2030. [21] Despite these positive trends, the segment remains partially influenced by the cautious outlook of car manufacturers, which could temper growth. Garmin's mid-term outlook, issued in early 2023, projected auto revenue to reach \$800 million by 2025, alongside achieving profitability. Current performance suggests that Garmin is on track to surpass this milestone, with profitability expected by the final quarter of 2024. Market share is also forecasted to rise steadily, but Garmin most likely will not be able to sustain an annual market share growth of 38% as in past two years. With continuing but slowly decreasing market share growth we expect Garmin to capture a market share of almost 1% by 2030. This growth forecast is reinforced by Garmin's significant progress in recent years, achieved despite the challenging economic conditions in the automotive industry. Additionally, announced long-term contracts set to commence in 2026 and 2027 provide further support for the segment's sustained expansion.

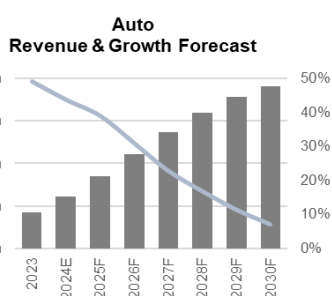


Figure 11: Auto Segment Revenue and Revenue Growth Forecast 2023-2030

## Balance Sheet Forecast

In the upcoming years, Garmin's operating cash as a percentage of revenue is expected to maintain distinct trends across its segments. The fitness and outdoor segments are projected to exhibit similar levels of operating cash. Aviation shows the highest operating cash as percentage of revenue. The marine segment, focusing on niche markets, is expected to sustain operating cash at 8.5% of revenue. Despite improvements in the auto segment's performance, operating

cash is expected to remain the lowest among all segments due to intense competition and the need to reinvest heavily into R&D.

During the COVID-19 pandemic, inventory levels peaked at unprecedented highs. To smooth these anomalies, we base our inventory forecasts on the 5-year average Days Inventory Outstanding (DIO) of 85 days, ensuring a balanced and reliable estimate for inventory levels in the balance sheet. Similarly, accounts receivable are forecasted using the 5-year average Days Sales Outstanding (DSO) of 58 days, providing consistency and accuracy. In contrast, accounts payable and salaries and benefits payable are forecasted using a 3-year average to better capture recent trends. Including the extraordinary years 2020 and 2021 would result in inflated ratios that fail to reflect typical non-pandemic conditions.

Garmin is projected to maintain its commitment to capital investments, allocating approximately 4-5% of revenue to property, plant and equipment (PPE) over the forecast period. This rate is aligned with historical trends and is expected to taper to 4% of revenue as growth moderates towards the end of the period. Consequently, net PPE expansion will be proportionate to the sales trajectory, factoring in depreciation and aligning with anticipated sales growth.

Over the past decade, Garmin has consistently avoided using long-term debt as part of its business strategy, maintaining a D/E ratio of no more than 1–2%. Given Garmin’s stated outlook and its emphasis on remaining debt-free, we are confident that the company will continue to target a zero-debt level, resulting in a D/E ratio of 0%. Garmin has a strong history of paying consistent dividends, a trend expected to persist. Future dividend payments are projected using the 5-year average dividend payout ratio of 51% of net income. Additionally, the share repurchase program announced in February 2024 is treated as an extraordinary dividend for shareholders, given its partial utilization as of the valuation date.

All remaining balance sheet items are forecasted based on historical trends, applying a 5-year average as a percentage of specific indicators. Minor items, such as deferred costs, are excluded as they are not considered significant.

## Valuation

The valuation of Garmin’s share price for YE25 was carried out using four methods: the Discounted Cash Flow (DCF) model, Comparable Company Analysis (CCA), Comparable Transaction Analysis (CTA) and the Dividend Discount Model (DDM). These approaches provide both intrinsic and market-based perspectives to ensure a thorough evaluation.

The DCF model is central to our analysis, as it captures Garmin’s ability to generate future cash flows, offering an intrinsic view of the company’s value. To complement this, the CCA method was used to compare Garmin against a peer group of similar

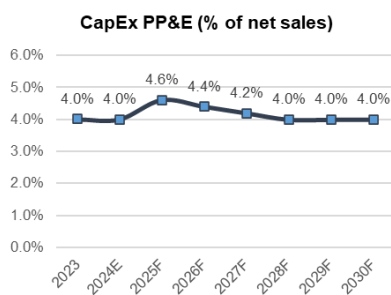


Figure 12: CapEx Forecast 2023-2030

***We used the Discounted Cash Flow model, Comparable Company Analysis and the Dividend Discount Model for the Valuation***

companies, utilizing market multiples to provide a relative valuation. A CTA was initially considered to include insights from similar transactions, but this method was not viable due to a lack of sufficient transaction data as detailed in Figure 46. However, Garmin’s history of regular dividend payments made the DDM a useful addition, reflecting the company’s focus on shareholder returns through consistent dividends. By combining these methods, we aim to present a balanced and reliable valuation of Garmin.

## WACC

Given Garmin’s target D/E ratio of zero, the Cost of Equity is a key factor in calculating the company’s weighted average cost of capital (WACC). Using the Capital Asset Pricing Model (CAPM), segment-specific betas were determined through peer analysis to reflect varying risk levels across Garmin’s markets. Peer betas were derived by regressing excess returns (returns over the risk-free rate) against market excess returns, using the MSCI World Index as a proxy and a five-year timeline with monthly data. To ensure comparability, the derived equity betas were unlevered using the peers’ current leverage ratios.

The **fitness** peer group has an average beta of 0.95, reflecting a market that is moderately risky. This stems from consumers viewing fitness products, such as wearables and accessories, as somewhat essential tools for health and well-being, making demand more stable compared to general consumer electronics. In contrast, the selected peers in the **outdoor** market show a higher beta of 1.27, signaling significantly greater volatility and risk. This is primarily due to the market’s reliance on discretionary spending, which is closely tied to economic cycles and high levels of disposable income. Products in this category, such as adventure equipment and outdoor GPS devices, are also influenced by cyclical tourism trends, making the market more sensitive to economic fluctuations. Both the aviation and the marine peer groups show a beta below 1. In terms of **aviation** with a beta of 0.91 this most likely reflects the stable demand drivers of fleet modernization and regular compliance, which provide a cushion against market volatility. These reasons also apply to the **marine** segment with a low beta of 0.64. Additionally, most investments in recreational marine are made as part of lifestyle products by mostly affluent customer groups, who are known to cut spending less than low-income customers. The **auto** peer group yields a beta of 1.25, reflects the cyclical nature of the automotive industry. Demand for automotive products fluctuates with macroeconomic conditions, as vehicle sales and car manufacturers investments in technology are heavily dependent on consumer confidence and economic growth.

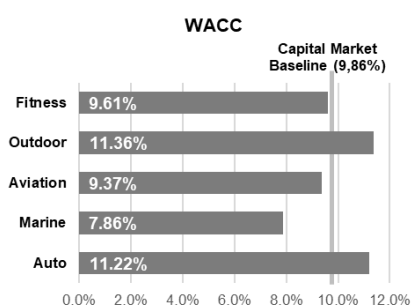


Figure 13: WACC per Segment

To validate the calculated betas and their applicability to Garmin, segmental revenue-weighted industry betas were compared to Garmin’s own unlevered beta

derived from its five-year monthly regression against the MSCI World Index. The resulting weighted beta aligns closely with Garmin's unlevered beta, confirming the accuracy of the approach.

Using these industry peer group betas, along with the current U.S. risk-free rate of 4.4% and a market risk premium of 5.5% [28], segment-specific WACCs were calculated. This resulted in discount rates ranging from 7.9% to 11.4% annually.

## Discounted Cash Flow

In our **DCF model**, we divided the valuation into three distinct periods. The first is the detailed forecast period, where we carefully projected the three financial statements, enabling the precise calculation of free cash flows. This period reflects Garmin's short- to mid-term operational outlook. Following this, we introduced an interim period, where the free cash flow growth rate transitions smoothly from the last forecast year to the perpetual growth rate, ensuring a gradual convergence to long-term expectations. Lastly, we modeled the terminal period, which captures the perpetual value of Garmin's cash flows beyond the interim period. This phase accounts for the majority of the enterprise value, with the terminal year and terminal value representing 59% of the total enterprise value under the base scenario. Segmental cash flows were discounted according to their riskiness, using segment-specific WACC, arriving at the present value of future cash flows. Adding non-core net assets of \$270 million and subtracting Garmin's negative net debt of \$-2,797 million, which reflects its robust cash position, results in an equity value of \$28,811 million. On a per-share basis, this translates to a target of \$150.04 at the valuation date of 31<sup>st</sup> December 2025.

In addition to the base case, a **scenario analysis** was performed to incorporate the potential impact of an escalated conflict between China and Taiwan. Such a conflict would heavily disrupt Garmin's supply chain, particularly the fitness, outdoor and marine segment, where a substantial part of the production is based in Taiwan. The scenario assumes rising tensions in 2026, leading to higher production costs and a decline in revenue for these segments. Additionally, CapEx is projected to increase as supply chains would need to be restructured. Applying these expectations results in an equity value of \$19,732 million, translating to \$102.76 per share. This scenario is assigned a 20% probability based on various sources [29, 30, 31, 32], compared to an 80% weight for the base case. Weighting these scenarios by probability leads to a **statistically expected** equity value of \$26,995 million and therefore a **target share price of \$140.58**.

Forecasting by nature involves a degree of uncertainty. To address these uncertainties, we employed a two-pronged approach: sensitivity analysis and Monte Carlo simulation. First, a **sensitivity analysis** was conducted on the base case to evaluate how changes in critical assumptions affect the valuation. On the

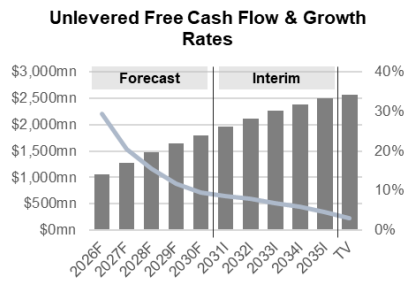


Figure 14: Unlevered Free Cash Flows and Growth Rates 2026-2036

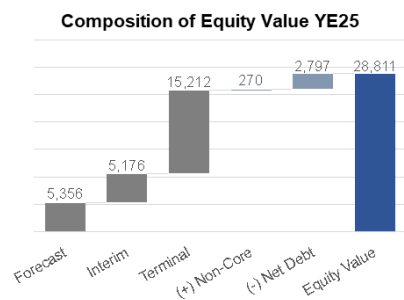


Figure 15: Composition of Equity Value YE25

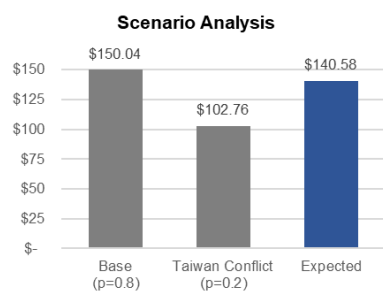


Figure 16: Results of Scenario Analysis

operational side, we examined the effects of changes in revenue growth and cost of goods sold as a percentage of revenue. On the valuation side, we analyzed the impact of deviations in the terminal growth rate and beta. Since the target capital structure assumes full equity financing, beta is particularly important in determining the discount rate. Examining revenue and COGS the sensitivity indicates that a generally misjudged sales growth in the range of up to  $\pm 3\%$  has an effect of  $\pm 8\%$  on the enterprise value. However the COGS relative to revenue as a main influencer on profitability have a larger impact with  $+1.5\%$  of  $-9\%$  enterprise value and vice versa.

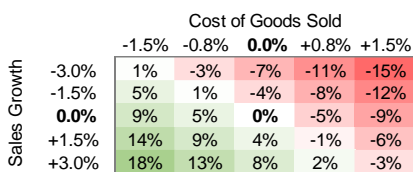


Figure 17: Sensitivity of Share Price on Sales Growth and Relative Cost of Goods Sold

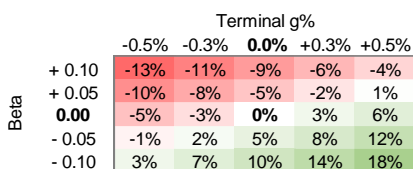


Figure 18: Sensitivity of Share Price on Beta and Terminal Growth Rate

The potential impact of changes in beta was evaluated by considering the range of values observed among the peers for each segment. In the marine and fitness segments, the peer group beta ranges are notably wide, leading to a sensitivity testing range of approximately  $\pm 0.20$ . This variability results in significant valuation effects, with the marine segment showing changes of  $+4\%$  to  $-21\%$  and the fitness segment experiencing  $\pm 17\%$  variations in value. Conversely, the terminal growth rate exhibits a more moderate impact, influencing the overall enterprise value by approximately  $\pm 6\%$  for changes of up to  $\pm 0.5\%$  in the growth rate. At the consolidated business level, these segment-specific effects are mitigated by Garmin's well-diversified portfolio, which helps balance operational as well as valuation-related uncertainties and fluctuations.

By conducting a Monte Carlo simulation with a total of 1,000 iterations, we generated a distribution of potential share prices, capturing the expected value and a range of likely outcomes. The simulation was conducted for both the base scenario and the Taiwan conflict scenario, producing distinct results. Standard deviations for key inputs were largely derived from historical data, with two notable exceptions. For revenue growth projections, a relative standard deviation of 20% of the mean was applied. In contrast, for auto cost variables (COGS and OPEX in percentage of revenue), a higher standard deviation of absolute 5% was manually assigned due to the limited historical data available for the auto segment. The simulation yielded a median target share price for YE25 of \$154.90 in the base case, with a standard deviation of \$22.22. In the Taiwan conflict scenario the median share price is \$104.52, with a standard deviation of \$15.57. These results align closely with the original DCF results but showcase that the estimated enterprise value is not a fixed point but rather falls within a probable range, reflecting uncertainties and variability.

Monte Carlo on Base Case DCF Share Price YE25 Distribution

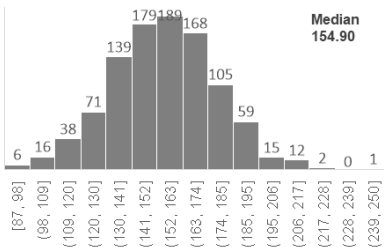


Figure 19: Monte Carlo Analysis on Share Price for Base Scenario

Monte Carlo on Taiwan Conflict DCF Share Price YE25 Distribution

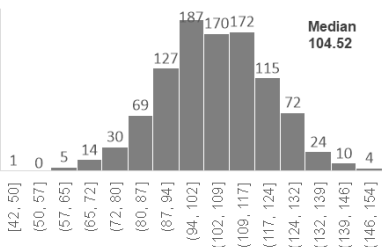


Figure 20: Monte Carlo Analysis on Share Price for Taiwan Conflict Scenario

## ESG

Garmin embeds sustainability into its business strategy, focusing on reducing environmental impact, supporting its workforce and maintaining strong governance. Garmin actively reduces its **environmental** impact by incorporating renewable energy sources and enhancing energy efficiency. A notable achievement is the headquarters located in Olathe, Kansas, which operates entirely on renewable energy, contributing to a company-wide reduction of over 26,000 metric tons of CO<sub>2</sub>e in 2023. Furthermore, Garmin prioritizes waste reduction and recycling, aiming to be landfill free. Though it must be critically remarked that the company does not disclose specific ratios such as renewable energy or recycling percentages.

Garmin fosters a supportive workforce with strong **social** and safety practices. Its 2023 global turnover rate of 12% reflects high employee engagement, while a recordable injury rate of 0.23 significantly outperforms industry averages. Beyond its workforce, Garmin supports community well-being through contributions to education and disaster relief programs.

**Governance** remains a key focus, with stringent ISO certifications in quality and safety management underscoring compliance and accountability. Garmin's transparent reporting and adherence to ethical practices maintain stakeholder trust, solidifying its position as a sustainable and reliable business partner.

Refinitiv rates Garmin's ESG performance at 63, highlighting strong social scores (70) but identifying environmental efforts (50) as an area for improvement. By addressing these three ESG pillars, Garmin demonstrates a comprehensive and balanced approach to sustainability, ensuring long-term value creation for both shareholders and broader stakeholders.

## Recommendation

Based on our analyses, we forecast a target price for Garmin Ltd. of \$139.43 on December 31, 2025. Combined with our expected time adjusted dividend of \$4.33 and the current share price of \$219.21, this results in a potential downside of 34%. While Garmin's robust performance in Q3 2024 and its premium valuation over peers have fueled optimistic growth expectations, we believe these projections are now above sustainable levels. Given this, we anticipate a market correction as the stock price adjusts to align more closely with long-term financial realities. Although we project steady margins and revenue in the coming years, the current valuation significantly overshoots these expectations.

Therefore, our recommendation for Garmin Ltd. is to **SELL**.

**Garmin's environmental strategies are identified as a key area that requires enhancement to better align with its ambitious sustainability goals.**

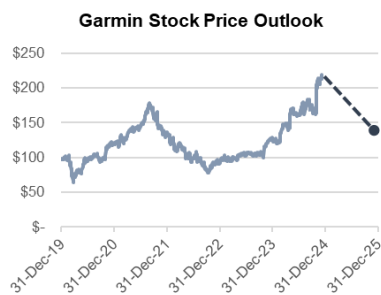


Figure 21: Garmin Stock Price Outlook until YE2025

# Appendix