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Private Equity Challenge: Project Tundra – Capital Structure

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Abstract

Project Tundra investigates the LBO of Husqvarna Group, a renowned manufacturer of outdoor equipment and construction tools. The company is positioned to benefit from high growth as a result of its fundamental focus on robotics and autonomous solutions. The LBO encompasses a strategic shift from the phase-out of petrol products, in combination with changing market dynamics, to meet a new customer demand related to sustainability and environmentally friendly solutions. The projections in this report suggest the LBO of Husqvarna to yield a Multiple on Invested Capital of 3.1x and an IRR of 25.1% over a five-year holding period.

Keywords: Private Equity, Leveraged Buyout, LBO, Value Creation, Investment Committee Paper, Private Equity Challenge, Husqvarna, Industrials, Project Tundra, Capital Structure

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Section I – Group Analysis

1.1 Company Overview

Husqvarna Group is a Swedish manufacturer and world-leading provider of innovative outdoor power products and equipment for forestry, gardening, and light construction. Founded in 1689 as a firearms manufacturer, it is one of the oldest continuously running companies in the world. The company is headquartered in Stockholm, Sweden, and its products are available in more than 100 countries. It is dedicated to innovation and sustainability and has reduced its carbon emissions by 40% since 2015. Husqvarna has over 14,000 employees worldwide, more than 3,350 patents, and net sales amounting to SEK 54.0bn (EUR 4.6bn) in 2022.

Husqvarna Group is subsequently organized into three divisions, Forest & Garden (F&G), Gardena, and Construction, and two core brands, Husqvarna and Gardena. F&G specializes in products for residential and commercial forestry, tree care, and landscaping. Contributing with almost 60% to total net sales, F&G is the largest division. Its core brand, Husqvarna, is the world's leading producer of robotic lawn mowers. With over 25,000 independent dealers worldwide, the brand ensures broad accessibility. The product portfolio extends to regional brands like Zenoah in Japan and RedMax in North America. Gardena is recognized as Europe's leading watering brand and is represented in over 80 countries, providing an extensive product range from watering systems to lawn mowers and garden tools. The division is a key player in the residential home and garden industry and includes brands like Orbit and Flymo. It represents roughly 25% of total net sales and is the second largest division. Husqvarna's third division, Construction, serves professionals in the light construction and natural stone processing industries. With a focus on innovation, the division offers a wide range of equipment, diamond tools, and services. Sales occur through various channels, including construction dealers, retailers, rental companies, and direct sales. Brands like

Diamonds Tool Supply, HTC, and Heger are integral parts of this division, providing essential support for professionals working with hard materials like concrete and stone. Overall, the group sells its products worldwide through dealers (~40%), retailers (~50%), and direct customers (~10%). Husqvarna's sales, predominantly from forest and garden products, follow a seasonal pattern with peak demand during spring and summer, mainly in the second quarter. While forestry product demand rises in the second half of the year, the sales of construction equipment remain stable and evenly distributed. The company's business model revolves around robust R&D activities, driving innovation in response to customer demands. As the global leader in robotic lawn mowers, the company's strategic R&D investments, averaging 4% since 2019, surpasses industry peers', positioning it to capitalize on market opportunities and maintain competitiveness. M&A has also played a pivotal role, contributing significantly to the company's net sales growth, with half of the overall growth in 2022. With a commitment to transitioning to battery-powered products, Husqvarna aims to increase its share of electrified products from 38% in 2021 to 67% by 2026, reflecting a proactive approach to industry shifts.

1.2 Historical Financial Analysis

Over the past five years, Husqvarna Group has consistently delivered a robust financial performance, with net sales showing a stable 6.5% Compound Annual Growth Rate (CAGR) from 2018 to 2022. Despite this positive trajectory, the year 2022 brought significant challenges due to global supply chain disruptions, which had a remarkable negative impact on its Net Working Capital (NWC). These disruptions resulted in critical component shortages and a substantial 37% surge in inventory levels. Despite the adverse conditions, Husqvarna managed to maintain a strong EBITDA growth, exhibiting an impressive 12.4% CAGR during the same five-year period. This resilience was partly attributed to the company's strategic focus on M&A, particularly in the construction division, which contributed significantly to overall sales growth.

1.3 Market Overview

With significant growth potential, Husqvarna operates in markets with a combined market value of over USD 203bn, especially in important sub-segments like robotic lawn mowers, smart irrigation systems, and battery-powered products. Particularly in the shift from manual and petrol-powered products to automated and battery-powered solutions, the company caters to the increasing customer demands for sustainability and is well-positioned to profit from this trend. The Gardena and Orbit brands have the tools to hold their dominant market shares, specifically in the smart irrigation market. About 85% of the global market value is accounted for by North America and Europe combined, with challenges in other regions arising from different climates, distinct gardening habits, and lower purchasing power. By leading the charge to replace conventional commercial lawn care equipment with robotic models – such as CEORA, which especially targets the U.S. market and takes on local incumbents – Husqvarna hopes to capture a market opportunity that is estimated at SEK 65bn. The introduction of new ecologically friendly products, providing climate advantages, lowering CO2 emissions, and electrification for a low-carbon economy are some of the key trends driving this sector. The company's shift to service-based business models increases client value and creates a steady source of income, while cyclicity is reduced by concentrating on infrastructure, repair, and refurbishment projects. Constant R&D expenditures enable the company to take the lead in implementing cutting-edge technology and adjusting to changing legal requirements, bolstering the business's dedication to electrification and sustainability. Its competitive position is characterized by growth-oriented strategic advantages. Top competitors include Stanley Black & Decker, John Deere, Toro, STIGA, STIHL, Kaercher, and Fiskars. Husqvarna is focused on improving market penetration and product line diversification, despite a lower net sales CAGR. Strong operational efficiency is reflected in the company's steadily rising EBIT margin, enhancing its market edge. Simultaneously, there is room for improvement in profitability,

when compared to competitors like Toro and John Deere, which makes Husqvarna a desirable target for private equity. The company's performance is not as strong as that of its Nordic peers in the Industrials sector, but it is nevertheless in a strong position to benefit from emerging trends such as electrification and autonomous solutions.

1.4 Investment Strategy

The three substantially different divisions showcase the need for a multifaceted strategy to achieve long-term profitability. The plan involves leveraging the company's current strengths in combination with favorably changing market dynamics. The investment strategy has a keen focus on sustainability, market penetration, and operational efficiency, while navigating through the challenges of geographical expansion. At the forefront of Project Tundra's growth trajectory is the robotics segment, particularly with the CEORA line, which presents a strategic advantage in the professional turf care market. To capitalize on these opportunities, a major focus market will be the U.S., which is one of the largest markets in the world, but also one of the hardest to break into. To compete with large U.S. key players Husqvarna will need local expertise and tailored experience at hand. The strategy therefore encompasses a strategic shift in management, with Blake Grams replacing Mr. Winberg, which is pivotal for the U.S. expansion. Mr. Grams brings extensive experience and industry expertise from his +20 years at Toro, a U.S. based company and one of Husqvarna's main competitors. Mr. Grams will accelerate execution and penetration in the U.S. by leveraging his industry network. To further enhance value creation, the strategy includes a series of four bolt-on acquisitions, some of which are specifically targeting the U.S. market. The buy and build strategy is not solely for the purpose of geographical reach, but also for achieving margin improvement and reducing revenue seasonality, which is a current weakness of the company. Each of the four acquisitions brings unique strengths, from Brokk's dominance in the remote demolition market to

TechnoAlpin's pioneering efforts in sustainable snowmaking. Brokk and Ehwa will be additions to the Construction division, as they will extend current product lines so that the division can offer customers a complete range of tools for any light construction work. TechnoAlpin and Douglas Dynamics will further expand Husqvarna's products into snow equipment and will become an integral part of the F&G division. As the main sources of revenue for the latter two companies stem from the winter season and colder weather, their quarterly net sales will partly balance out Husqvarna's current seasonality. The strategy therefore reduces the need for expensive short-term debt during the second half of the year. Lastly, financial efficiency is another key focus of the strategy for Husqvarna. A pivotal move here is the change of product mix, favoring higher-margin robotic products. This shift towards sustainable products and their underlying drivers is further discussed in the next chapter.

1.5 ESG Strategy

The Environmental, Social, and Governance (ESG) strategy is a cornerstone of Project Tundra's investment strategy as it seeks to highlight factors that are believed to be intrinsically important for future business operations and long-term sustainable growth. Strong emphasis is put on accelerating the phase-out of legacy petrol products, which will increase focus on electrified robotic products with lower CO₂ emissions that are expected to see high growth in the next five to seven years considering new legislations and changing consumer behavior. However, as legacy petrol products will be phased out, top-line development will be affected negatively. Conversely, as the shift in product mix will lead to margin improvement, bottom-line development will experience a positive upward trend. As shown with CEORA, robotic products can lead to significant cost-savings for the end-user, thereby increasing the willingness to pay a higher price for these products. The benefits of having a fundamental ESG strategy also stretch

beyond those of the products themselves. With the company's strong track record of sustainability focus, the acquisition of Husqvarna is designed to be partly financed by a Sustainability Linked Loan (SLL). The SLL will be related to a performance objective, more specifically the phase-out of legacy petrol products. If the objective of decreasing legacy petrol product sales to less than 6% of total Group sales is achieved, the firm will get a discount of 15 bps on the margin for this specific facility. Contrary, the company must pay a premium of 15 bps if the objective is not achieved. This strategy utilizes the debt structure as a leverage tool, aligning financial incentives with operational objectives, while also proving to its Limited Partners (LP) and stakeholders that they are truly committed to the ESG targets. In a world characterized by dynamic shifts in societal values, Husqvarna is positioned to take advantage of global growth trends in autonomous solutions and electrification. Historically, Husqvarna has been able to reduce its CO2 emissions by 32%, while simultaneously increasing net sales by 49%. Their electrified products can reduce the product life-cycle CO2 emissions by more than 80%, compared to traditional petrol products. These strategic aspects might also allow Project Tundra to benefit from an ESG premium at exit. In precedent research, suggestive evidence is found that companies in the Industrials sector with a higher ESG score trade at a higher multiple. The multiple becomes even higher when there are constant improvements over time, which is the vision of Husqvarna during the five-year holding period. Consequently, buyers might be willing to pay a premium at the exit, boosting returns favorably.

1.6 Business Plan

Project Tundra outlines a comprehensive business plan for Husqvarna, emphasizing a robust growth strategy driven by both organic and inorganic components. Positioned for long-term success, the plan centers on technological innovation, market expansion, and operational efficiency. Husqvarna's top-line growth strategy integrates organic and inorganic initiatives,

leveraging growth-oriented advantages for product line diversification and market penetration. Forecasts indicate organic sales rising from SEK 53.6bn in 2023 to SEK 75.9bn in 2028, with inorganic sales contributing with an additional SEK 17.6bn. Key drivers include product robotization, the CEORA platform, and smart watering products, with acquisitions targeting market share, expanded product lines, and cross-selling opportunities. A detailed financial outlook, presented in Table 1 an Appendix, underscores the strategic initiatives contributing to top-line projections. The bottom-line forecast reflects a strategic shift from petrol-powered to battery-powered products and robotics, resulting in margin improvements across the divisions. Project Tundra anticipates a 1% yearly decrease in COGS for the F&G division, aligning with the focus on higher-margin products. Gardena and Construction divisions envision gradual declines in COGS, supported by a commitment to growing robotic sales and operational efficiency. Bolt-on acquisitions are expected to yield margin improvements, driven by cost synergies within the Husqvarna ecosystem. A cost breakdown is displayed in Table 2 in the Appendix. Accordingly, Project Tundra projects an organic EBITDA of SEK 13.5bn, complemented by an inorganic EBITDA of SEK 3.2bn at exit in 2028. The total EBITDA for the same period is projected at SEK 13.5bn, reflecting a CAGR of 15%, and a margin improvement from 13% in 2023 to 18% in 2028. The effective management of inventory and supply chains transforms strong EBITDA growth into solid cash flows. The NWC forecast, driven by inventory optimization, indicates a commitment to operational efficiency. The forecasted EBITDA growth at 17% CAGR is supported by a strategic shift from petrol products to robotics and battery products, organic growth, and bolt-on acquisitions. The maintenance CapEx focuses on investments in robotics, particularly the CEORA products, and extending the Construction division's product line-up on the PACE battery platform.

1.7 Valuation

Husqvarna is valued at an EV/EBITDA multiple of 11.2x, yielding an Enterprise Value (EV) of SEK 80.5bn (EUR 6.8bn). The multiple is calculated by applying different weights to the median EV/EBITDA multiples, which are derived from the valuation methods outlined in Table 3. As observed in the table, the weights are higher for the Comparable Companies (CCA) and Comparable Transactions (CTA) of the F&G and Gardena segments, given that they collectively represent 85% of the total net sales in 2022, and lower for the trading comparables and precedent transactions of its Nordic peers, since they align more with geography rather than business model, products, and industries. The Discounted Cash Flow (DCF) analysis employs two approaches using a Weighted Average Cost of Capital (WACC) of 9.01%, which is shown in Table 4. The first approach calculates the terminal value using the Gordon-Growth Model (GGM), while the second approach applies an EV/EBITDA exit multiple of 11.2x to the 2028 exit EBITDA. The first approach uses a 1.63% terminal growth rate from average forecasted real GDP growth in Europe, North America, and the rest of the world. This results in EV estimates of SEK 118bn for the GGM and SEK 144bn for the exit multiple analysis. In the CTA and CCA, multiple sectors are assessed, including forest and garden equipment, light construction equipment, and Nordic Industrial transactions, due to Husqvarna's unique market position having no direct peer to compare it to. The median EV/NTM EBITDA multiples range from 7.2x to 13.1x, with corresponding median EV figures between SEK 51.8bn and SEK 93.8bn. The Dividend Discount Model (DDM) considers an annual average dividend of SEK 1.92 and a consistent 7.2% growth rate from 2007 to 2023, estimating an EV of SEK 61.2bn. The Sum of the Parts (SOTP) analysis evaluates each segment by averaging the medians from both the CCA and CTA for the F&G and Construction divisions. This results in a median EV of SEK 73.2bn, with valuations of SEK 41.7bn for F&G, SEK 17.5bn for Gardena, and SEK 14.0bn for Construction.

1.8 Capital Structure

Husqvarna's capital structure pre-acquisition consists of 75.4% equity and 24.6% debt, reflecting a market capitalization of SEK 47.2bn and net debt of SEK 15.4bn. Opting for the optimal debt structure 1 as detailed in Table 5, which offers higher returns while maintaining a manageable 5.7x leverage ratio, the proposed Leveraged Buyout (LBO) involves an equity investment of SEK 65.0bn. This transition reshapes the post-acquisition capital structure to 46.2% debt and 53.8% equity, corresponding to SEK 40.8bn in debt and SEK 47.4bn in equity as seen in Table 6. The financing structure primarily relies on a 6.4x shareholder loan of SEK 45.6bn, featuring a 9% PIK interest element, and ordinary equity accounting for 0.3x, which includes sweet equity for Management amounting to SEK 90m. The debt structure encompasses Senior debt, representing 4.2x, and subordinated debt in the form of mezzanine debt amounting to 1.5x. The senior debt is divided into three tranches: Term Loan A (TLA), Term Loan B (TLB), and the SLL, with variable interest rates ranging from 3.0% to 6.5% based on leverage development. TLA is amortized and has a term of 6 years at a variable rate, while TLB and SLL feature a bullet repayment having a term of 7 and 8 years respectively. The mezzanine debt includes a fixed interest rate with a partial payment structure involving accrued interest and cash disbursements. Transaction expenses, comprising refinancing costs, M&A advisory fees, due diligence fees, and arrangement fees, amount to 7.9% of the total EV.

1.9 Value Creation and Returns

The Investment Case is estimated to generate an attractive MOIC of 3.1x and an IRR of 25.1%, while the Bank Case and the Management Case are expected to generate a MOIC of 2.5x and 3.7x and an IRR of 19.8% and 29.6% at exit, respectively. Assuming no multiple expansion with an entry and exit multiple of 11.2x EBITDA 2023, the estimated EV at exit amounts to

SEK 187bn (EUR 15.9bn), of which SEK 33.1bn in net debt. After deducting advisory fees for the exit of 3% of EV, the investment generates an equity value at exit of SEK 149bn (EUR 12.7bn), of which ordinary shares account for SEK 78.5bn. Management receives a 5% stake in the ordinary shares amounting to SEK 3.9bn, implying a MOIC of 43.6x. Additionally, a scenario analysis is conducted that tests the returns and covenants in the case of (i) no M&A, (ii) an increase of +300bps on Euribor, and (iii) multiple contraction at exit of 9.0x vs. 11.2x. In any of these possible, yet unlikely, scenarios the returns at exit are still attractive at 2.7x, 2.9x, and 2.3x MOIC, while no covenant is breached during the holding period. In this regard, several risk mitigation strategies are determined to reduce the potential risks of these scenarios.

Most of the 3.06x value creation for Project Tundra is expected to be achieved through revenue growth (1.14x), followed by an increase in EBITDA margin from 13.3% in 2023 to 17.8% in 2028 due to economies of scale, pricing power, as well as costs, production and sourcing synergy effects arising from M&A (0.90x) and inorganic EBITDA from the bolt-on acquisitions (0.69x). Furthermore, bolt-on multiple expansion generates SEK 9.6bn in value (0.18x) arising from acquiring these four bolt-ons at a lower entry multiple, between 7.8x-8.2x, than the exit multiple of 11.2x. Lastly, cash generation and deleveraging contribute 0.15x to total value creation of SEK 160bn.

1.10 Exit Strategy

The exit strategy of Project Tundra is complex and requires a detailed plan to maximize shareholder value in a timely manner. In the case of Husqvarna, there is mainly a size constraint, considering that the company at exit has an estimated EV of SEK 187bn (EUR 15.9bn), which significantly lowers the pool of potential buyers. Additionally, the company consists of three fundamentally different divisions in separate industries. Four main exit routes have been

explored, all of which are characterized by benefits and drawbacks. First and foremost, the most likely exit strategy is a sale in parts, in which the Construction division would be separated from F&G and Gardena, and spin-off the two entities to different strategic buyers. If needed, F&G and Gardena could also be further separated, thereby selling off the three divisions separately. As the EV of each of the newly formed entities would be lower than the EV of the company as a single entity, it would enable a larger group of acquirers to take part in a bidding process. However, a sale in parts approach could also result in a complex and time-consuming process with higher costs due to multiple selling processes. Additionally, the estimated valuation of the sale in parts at exit would most likely yield a higher valuation than the company as a whole, as a premium of 1.6x on top of the exit multiple of 11.2x would be included for F&G and Gardena, in line with the 75th percentile of average CCA and CTA, that represents the brand name, strong reputation, and a leading position of both divisions in their respective markets. However, a premium is not estimated for the Construction division, as the main focus lies on gardening. The MOIC for a potential sale in parts is projected to be 3.5x at exit, compared to 3.1x if the company were to be sold as a single entity. Furthermore, taking liquidity into perspective, an IPO is a plausible exit option for a company of Husqvarna's size, especially in an American stock exchange such as the NYSE. Lastly, the fourth option would be a secondary buyout from another private equity firm. Although this industry is not characterized by a high PE activity, a sale to a financial sponsor implies a faster and more efficient sale compared to selling to a strategic buyer or going public, it will likely yield a lower purchase price. Project Tundra deems the best course of action to be an IPO and M&A dual track process, as that maximizes the chance of a high-yielding exit, while lowering the risk of being unable to exit the investment. When examining the key strategic players in the market, there are five companies expected to show particularly strong interest in acquiring Husqvarna. The most notable potential buyer is Bosch, which has also publicly stated its interest in expanding into

markets where Husqvarna has a strong presence. For sale in parts, John Deere and Honda would be ideal buyers for F&G and Gardena, whereas Stanley Black & Decker and Hilti have more synergies to realize from the acquisition of the Construction division.

1.11 Key Risks and Due Diligence

Husqvarna's high seasonality of net sales poses a major challenge which is addressed by exploring snow equipment opportunities and shifting towards services. Historical low organic growth – excluding robotic lawn mowers – makes M&A an essential path to deliver attractive returns, which is supported by Husqvarna's successful track record of acquisitions in the last years. Additionally, to prevent external disruptions like the 2022 supply chain issues impacting sales and production, Husqvarna is reengineering products for broader compatibility, establishing direct supplier relationships, and building safety stock. Lastly, FX risks are managed by establishing local production facilities, maintaining resilience through multiple growth drivers, and hedging FX exposure with currency clauses in contracts.

Before finalizing the transaction, Tundra has identified four critical areas that require in-depth due diligence, namely commercial, financial, operational, and legal. In the commercial part, Project Tundra advises a thorough analysis of market trends and dynamics, specifically focusing on the North American and APAC regions, particularly in the robotic lawn mower, battery, and watering markets. Additionally, it suggests evaluating the strength of dealer and retailer relationships, reviewing contractual agreements, engaging with key stakeholders, as well as thorough due diligence on the bolt-on acquisitions. For financial due diligence, Project Tundra recommends a comprehensive assessment of financial reporting, including revenue recognition and division consolidation methods as well as conducting a fixed asset optimization appraisal to assess facility utilization rates, capacity for growth, maintenance practices, and the integration of new technology. In the operations area, Project Tundra advises an assessment of

inventory management efficiency, focusing on turnover ratios, supply chain robustness, quality control for inventory safety and reliability, as well as an evaluation of R&D capabilities. Lastly, for the legal area, the team recommends a comprehensive evaluation of intellectual property, contracts, and non-compete clauses, as well as a thorough ESG analysis.

1.12 Investment Thesis

Husqvarna inherits many traits that qualify it as a suitable candidate for an LBO, with the intention to transform the firm to a global leader in forest and gardening products and light construction equipment. These traits refer primarily to its position as a global market leader in its core markets, including robotic lawnmowers, consumer watering systems, as well as cutting equipment and diamond tools for the construction industry. This results in Husqvarna having a best-in-class brand name and reputation, together with an extensive distribution network and customer trust. Additionally, Husqvarna benefits from attractive market dynamics supported by positive tailwinds and further consolidation potential in fast-growing sustainable autonomous solutions, transitioning from petrol-powered products to low-battery and electrical products. Furthermore, Husqvarna showcases an attractive financial profile that enables several value creation levers. The firm's historic growth was accompanied by steady and predictable EBITDA growth achieved through an improved product mix and reduced exposure to low-margin petrol products, growing at 12.4% CAGR from 2018 to 2022. This is further supported by the attractive inorganic growth potential in snow removal and snowmaking segments that reduce the seasonality of cash flows, and the tangible opportunity in the professional use of autonomous solutions, such as CEORA for golf courses and sports fields. Lastly, Husqvarna benefits from a highly committed and incentivized management with over 50 years of combined industry experience and a solid track record of value creation, growing the firm's EBITDA from SEK 4.0bn in 2018 to SEK 6.4bn in 2022, an increase of c. 60%.

Section II – Capital Structure

2.1 Introduction

The following paper will discuss the dynamics and importance of the capital structure in Leveraged buyouts (LBOs), by introducing the origins of this phenomenon originated in the 1980s and deep-diving into the different components of the capital structure, mostly debt and equity, and their respective sub-components. Also, this paper will provide the reader with an understanding of why leverage is so popular in LBOs and what are the main sources value creation that makes debt an interesting financing instrument to achieve attractive returns in the private equity sector.

2.2 Origins of Leveraged Buyouts

Leveraged Buyouts (LBOs) refer to acquisitions in which a company is acquired by an investment firm or a consortium of various investors using a significant portion of external debt financing and a relatively small portion of equity. The main objective of LBOs and the rationale behind its frequent utilization in Private Equity and Mergers & Acquisitions (M&A) stems from its ability to facilitate large acquisitions without requiring an extensive deployment of the company's own capital. LBOs target both, private as well as publicly listed companies, with the objective of acquiring a controlling stake in the firm and grow it in terms of profitability, scale, efficiency of operations, and ultimately, sell the business for a higher valuation after a timeframe of normally 3-7 years. In a typical LBO transaction, approximately 80% to 90% of funding is secured through debt, while the remaining 10% to 20% is sourced from equity (Gheorghe Hurduzeua, 2015).

Although it is still unclear when the first LBO was carried out, this acquisition form first emerged during the 1980s. Newly created investment firms such as Kohlberg Kravis Roberts

(KKR) and Thomas H. Lee identified opportunities to capitalize on inefficient and undervalued corporate assets, as numerous publicly listed entities were trading below their net asset value (NAV), driven by the potential profits associated with acquiring entire companies, dismantling them, and selling off the individual components (Olsen, 2002). Given the rapid rise in popularity and success in the USA, investors realized that they were able to generate higher returns to their investors by maximizing the debt contribution to total invested capital, as debt financing costs were significantly below the returns generated by the investments (Masaveu, 2019).

KKR is considered the first ever private equity firm, and the originators of the term LBO as it is known nowadays, especially as a result of KKR's takeover of RJR Nabisco, an American conglomerate selling tobacco and food products, for a consideration of \$31.1bn and the largest LBO up until 2007. This transaction created a precedent for the industry, resulting in a strong momentum for LBOs during the 1980s. The regulatory environment of the time played a crucial role in the rise in popularity of LBOs, while deregulation, particularly the moderation of restrictions on debt, mainly high-yield debt issuance, empowered LBO firms with financial tools for aggressive acquisitions. However, this period also prompted regulatory scrutiny, leading to changes aimed at addressing concerns about excessive leverage and corporate governance (Jensen, 1989).

Nevertheless, not every firm is appropriate for an LBO. Typically, suitable candidates have to meet certain requirements. These include having very stable and predictable cash flows, that enables the firm to repay the principal and the interest expenses on the debt used to finance the transaction. Furthermore, the firm needs a strong asset base to use as collateral for the debt. The higher the quality of assets of the firm, the better will be the conditions for the senior debt provided by banks. Also, a relevant aspect for LBOs are Capital Expenditures and Working capital requirements. As both have a direct impact on Free Cash Flow, typical LBO target do

not require substantial investments in Working Capital nor CapEx for growth. Lastly, a motivated and well-incentivized management team, committed to drive the firm into its next phase of growth and value creation is essential to achieve desired returns (Masaveu, 2019).

2.3 Capital Structure in Leveraged Buyouts

Capital structure refers to the sources and uses of funds in an LBO transaction. The former represents the contributions of debt, equity and cash used to finance the transaction, while the latter refers to where the capital is flowing towards, which is typically to acquire the equity of the target, refinancing the current debt and paying the fees associated with an LBO transactions, M&A advisory, due diligence and banking fees. The details of each capital structure is dependent on case by case, however, there are significant similarities in the capital structure of buyouts. These arise as debt structures are mostly determined by market conditions and transactions size. Smaller LBOs have simpler capital structures and are typically financed with senior bank debt, while larger buyouts include more complex capital structures and multiple different sources of capital. In most of the cases, debt is the major source of capital, followed by equity and cash on hand (Gompers, 2013).

The financing process for an LBO transaction typically encompasses several stages. Initially, the General Partners (GPs), acting as the managers of the private equity fund, raise equity capital through institutional investors or Limited Partners (LPs). While in the process of identifying target companies, the GPs may utilize these funds to acquire the specific target. The GPs, who may assume unlimited liability for partnership obligations, typically contribute 3% to 5% of the fund's equity capital. Contrarily, LPs, who are not exposed to losses beyond their initial investment in the fund, commit to providing the majority of the equity capital, ranging from 95% to 97% (European Central Bank, 2007).

GPs bear the responsibility for both, making investments and actively participating in the management of the target companies, while LPs, usually institutional investors such as pension funds, investment funds, hedge funds, insurance companies, endowments, high-net-worth individuals, and to a lesser extent, banks, form the investor base. Upon identifying the target companies, debt financing is secured, typically sourced from banks. These banks subsequently disperse their credit exposures and other investors through syndication, to mitigate risks and exposure to a particular asset (European Central Bank, 2007).

The following chapters will deep-dive into the different components of the capital structure in an LBO, Debt and Equity financing.

2.4 Debt financing

As briefly mentioned before, debt financing has historically constituted the majority of the sources of capital in an LBO, averaging between 50%-70% and Debt-to-EBITDA of 3.2x-6.3x and during the first decade of the 2000s (Gompers, 2013).

The debt arrangement in an LBO transaction can be categorized into Senior Debt and Subordinated Debt, with both categories comprising different instruments. Senior debt is mainly provided by banks and encompasses mostly asset-backed loans, term loans A, B and C, bridge loans and revolving credit facilities. Contrarily, subordinated debt includes more complex debt instruments, including second-lien loans, high-yield bonds, mezzanine debt, provided by other financial institutions such as merchant banks, private debt funds, hedge and mezzanine funds rather than traditional banking institutions (European Central Bank, 2007).

Senior debt

Senior debt is the most senior claims in the capital structure and generally requires the lenders

to make fixed interest payments in the future, which are tax-deductible. Failing to comply with these strict interest commitments, can consequence in default as well as loss of control of the firm to lender to whom payments are due (Damodaran, 2008).

Asset-backed loans are based on the liquidation value of the collateral and rely on the quality and value of the underlying collateral. Typically, firms with an asset-heavy infrastructure that own real estate, heavy machinery, factories are good candidates for an Asset-based lending. Similarly, leveraged loans are also at the top of the capital structure. These loans are cash-flow based, implying that the credit quality is not determined by the collateralized asset-base of the firm, but rather its cash-flow generation abilities. When it comes to pricing, leveraged loans are typically floating unlike public bonds, meaning that the basis interest rate is linked to Euribor, in case of Europe, or to Libor, for USA. Lastly, leveraged loans can be repaid at any time with no prepayment penalty (Gompers, 2013).

Furthermore, term loans, typically term loan A, B, and C, represent another very common type of debt financing in LBOs. These refer to specified senior loans granted by banks or financial institutions, usually maturing within 5 to 6 years depending on the terms agreed. They are characterized by a concrete amortizing schedule, in the case of term loan A, and a bullet repayment in case for term loan B and C. These term loans are also linked to Libor or Euribor and are typically utilized for addressing the more prolonged financial requirements of a firm, such as the acquisition of PP&E, while mandating repayment in installments over its duration. This structure provides the lender with a means to monitor the company's ongoing financial health by assessing the ease of scheduled payments. Generally, the company is expected to cover these repayments through profit generation during the specified period. However, in cases where immediate profit generation is challenging, negotiations may enable options like a single repayment, referred to as “bullet repayment” or a focus on later scheduled payments “balloon repayments” (Clifford Chance LLP).

Revolving credit facilities (RCFs) are also part of senior debt and together with TLAs, are provided by banks. This facility acts similar to a corporate credit card, allowing a company to access funds as needed and repay multiple times until the line's maturity. RCF borrowers incur a commitment fee on undrawn amounts, while the spread on the drawn portion aligns with that on a TLA. Unlike term loan facilities, which form the primary financing for buyouts, RCFs are typically employed for addressing working capital and periodic capital expenditure requirements (Gompers, 2013)

Subordinated debt

Subordinated debt, or junior debt, is situated in the intermediate layer of a firm's capital structure between senior debt and equity. Mostly unsecured, these debt instruments possess claims on the firm's assets that are subordinate to senior secured classes. In comparison to a more senior leveraged loan, junior debt encompasses various sub-categories of debt, including mezzanine loans, high-yield bonds and convertible subordinated notes, among others. A crucial distinction lies in the fact that components of junior debt usually stand as independent issues, constituting distinct contracts with diverse maturities, terms, pricing and a higher risk-return ratio (European Central Bank, 2007).

Mezzanine financing constitutes a less precisely defined component of the LBO capital structure, strategically utilized as a residual element in the financing package. Positioned between senior debt and equity, mezzanine serves as an intermediate layer and a combination of both. Historically, it was predominantly employed as junior debt in Europe due to the less active high-yield bond market, while in the U.S., it functioned as the primary subordinated debt source for smaller transactions without access to high-yield bonds. These transactions are typically privately negotiated and placed, that enables tailoring the terms to specific situations, while making it an attractive feature for private equity transactions. Typically, interest rates for Mezzanine debt have a cash element and a non-cash PIK element, in which the interest

payments are accrued to the nominal and repaid in bullet at maturity. Mezzanine covenants often mirror those of leveraged loans, and while mezzanine usually features no-call provisions, that are typically less stringent compared to those associated with high-yield bonds (Gompers, 2013).

High yield bonds have become an important funding source in LBOs, especially for SMEs. These bonds have served as a viable alternative, in the aftermath of the refinancing challenges post the financial crisis. Ever since, a substantial portion of debt issuances was directed towards replacing expired issues and refinancing bank debt. High yield bonds are sold under registration exemptions, and are characterized by significant operational flexibility and minimal interfere from bondholder, as they only contain incurrence covenants that prohibit the firm e.g. to incurring debt, paying dividends, or repurchasing its shares. Providers of high-yield bonds are typically mutual funds, hedge funds, insurance companies and pension funds (Ashurst Llp, 2018).

Convertible subordinated notes are hybrid instruments that combine elements of both, equity and debt. They are considered to be at the very bottom within the hierarchy of debt obligations, and offer holder the possibility to exchange the debt security for common stock at his discretion or on a predetermined trigger event such as raising funds or exiting the investment, which is commonly used among corporations in a growth phase. The conversion from debt to equity occurs typically at a 10-20% discount, giving investors more stock in the firm than they would get otherwise if they purchased the shares directly. Also, convertible notes tend to have a negotiated valuation cap, that refers to the maximum price on the note that will be converted to equity. However, they may create uncertainty in relation to the final ownership structure once the debt notes mature (Casado, 2017).

2.5 Equity Financing

Another very relevant part in the capital structure of LBOs is equity. This financing refers to the equity contribution made by the GP or sponsor, who has previously raised capital from external investors. When structuring an LBO, the equity contribution will depend on the size and complexity of the deal and typically represent around 20% of the total capital sources. It offers the highest interest rate, due to the embedded risk of being at the very bottom of the capital structure. Thus, in case of liquidation of the firm, equity investors may not receive any returns (Echenique, 2009). Shareholder loan (SHL), often also referred to as preferred stock depending on whether the target is private or publicly listed, is the main equity component in an LBO and sits between debt and common equity in the capital structure. Typically, SHLs are structured with a fixed PIK element, similar to mezzanine debt, and is not tax-deductible. Differing from a traditional loan, SHLs have no maturity date and the coupon rate ranges between 8% and 12% and serves as a hurdle rate or threshold for common investors. Ultimately, unless the overall return on the deal surpasses this hurdle rate of normally 8%, common investors will not benefit from capital appreciation. Contrary, the preferred lender is assured a specified return on the loan, represented by the coupon, on the basis that the sale of the company generates sufficient funds to repay all lenders, along with the outstanding balance of the SHL (ECB, 2007).

Another relevant component of the equity contribution is common stock or ordinary shares, which is split among sweet equity and sponsor equity provided by the same GP. Sweet Equity is issued to the target's management team as an incentive package, ensuring that the management is committed to drive growth and profitability during the investment period, as they will be directly participating in the success of the firm. This contribution is commonly equivalent to twice the annual salary of the management, and if successful, the management will receive a significant return on their investment (Echenique, 2009).

2.6 Value creation and leverage

As previously mentioned, LBOs are funded with a significant amount of debt and hence, leverage is a key driver of returns and value creation in LBOs.

The main motivation for private equity funds to use large amounts of leverage to can be condensed in two main aspects: boosting the return on initial equity through consistent and periodic debt repayments as well as decreasing risk exposure through the distribution of risks on debt providers. Also, the time value of money states that, as money is worth more today than it is tomorrow, even though you will have to repay the borrowed funds for the acquisition either during the investment period or when you exit, lowering your investment costs by \$100 today will increase your IRR more than increasing your proceeds by \$100 at the exit. This leverage effect creates the so-called tax shield, whereby the value of a firm is increased by tax-deductible nature of the interest expenses. The tax shield has the potential to amplify returns by augmenting the cash flows accessible to capital investors, achieved through the yearly reduction of tax expenses. Nevertheless, the value generated by leveraging and the associated tax shield comes with a risk, as the utilization of leverage is directly linked to the potential threat of bankruptcy, in case of not being able to service mandatory debt and interest payments. Hence, it is essential to calculate and establish the optimal level of debt in an LBO (Codina, 2020).

Debt further facilitates the dispersion of the target business's risk among various debt providers and among different risk preferences levels. In the event of default by a firm in which the private equity fund is invested in, the potential negative impact on the fund is confined to its equity contribution. Moreover, by minimizing the necessary investment and enabling additional fund investments in different companies, the exposure of the entire fund to a single company or industry is mitigated (Minguell, 2017).

2.7 Conclusion

Throughout this paper, the reader had the chance to delve into the dynamics of capital structure in LBOs, shedding light on their origins, financing process, and critical components of debt and equity. LBOs have evolved as a prominent strategy for acquisitions, offering a means to pursue transactions without deploying extensive corporate capital. Rooted in the 1980s, the success of LBOs, exemplified by firms like KKR, has been attributed to the efficient use of debt financing, taking advantage of the tax-deductible nature of interest expenses.

The capital structure in LBOs is a multifaceted framework encompassing debt and equity. Debt financing, constituting the majority of capital sources, is divided into senior and subordinated debt, each with distinct instruments. Senior debt, with its floating interest payments and prioritized claims, includes asset-backed loans, leveraged loans, term loans, and revolving credit facilities. On the other hand, subordinated debt, positioned between senior debt and equity, involves mezzanine financing, high-yield bonds, and convertible subordinated notes. Each component serves specific purposes, providing flexibility and risk-return options.

Equity financing, representing around 20% of the total capital, is crucial for LBOs, offering a buffer between debt and common equity. Common stock, including sweet equity for management teams and sponsor equity, plays a significant role in aligning incentives and driving value creation. Shareholder loans, or preferred stock, further contribute to the equity portion, acting as a hurdle rate for common investors.

As shown during the paper, leverage in LBOs serves as a key driver of returns and value creation. The use of leverage is prompted by the desire to augment returns on equity and to distribute risks among debt providers. The leverage effect gives rise to the tax shield, enhancing returns through the tax-deductible nature of interest expenses. However, given the risk embedded with leveraging firms, determining the optimal level of debt is crucial in mitigating such risks and ensuring the success of LBO transactions.

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Appendix

Table 1: Net Sales Forecast

Net sales (SEK in millions)	2022A	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	CAGR '24-'30
Husqvarna Forest & Garden	32,082	32,342	33,537	45,465	48,919	52,740	56,968	61,647	66,828	11%
Robotics	5,574	6,354	7,291	8,366	9,601	11,017	12,642	14,506	16,646	15%
Petrol products	7,288	5,923	4,679	4,486	4,302	4,124	3,954	3,792	3,635	(7%)
Sales excluding robotics and petrol products	19,221	20,065	21,566	23,180	24,915	26,779	28,783	30,936	33,251	7%
Inorganic sales				9,432	10,102	10,820	11,589	12,413	13,296	
Gardena	13,606	12,774	13,855	15,030	16,306	17,693	19,201	20,840	22,623	9%
Robotics	1,113	1,224	1,373	1,541	1,729	1,940	2,176	2,442	2,740	12%
Sales excluding robotics	12,493	11,550	12,482	13,489	14,577	15,753	17,025	18,398	19,883	8%
Husqvarna Construction	8,232	8,390	8,883	9,405	15,006	16,048	17,177	18,401	19,732	13%
Construction (organic)	8,232	8,390	8,883	9,405	9,958	10,543	11,162	11,818	12,513	6%
Inorganic sales					5,049	5,505	6,014	6,583	7,219	
Group common	117	118	120	123	125	127	130	133	135	2%
Total organic sales	54,037	53,624	56,395	60,590	65,206	70,283	75,872	82,025	88,803	7%
Total inorganic sales				9,432	15,151	16,326	17,604	18,996	20,514	
Total net sales	54,037	53,624	56,395	70,022	80,357	86,609	93,476	101,021	109,317	11%
Growth, %	15%	(1%)	5%	21%	18%	8%	8%	8%	8%	
Organic growth, %			5%	7%	6%	6%	6%	6%	6%	
Inorganic growth, %				14%	11%	1%	1%	2%	2%	

Table 2: Expenses Forecast

Expenses (SEK in millions)	2022A	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	CAGR '24-'30
Total net sales	54,037	53,624	56,395	70,022	80,357	86,609	93,476	101,021	109,317	11%
Cost of goods sold	(39,424)	(37,425)	(39,180)	(47,210)	(54,886)	(58,568)	(62,586)	(66,972)	(71,762)	10%
Gross income	14,613	16,199	17,215	20,934	25,206	27,626	30,310	33,290	36,603	12%
Gross margin, %	27%	30%	31%	30%	31%	32%	32%	33%	33%	
SG&A	(11,771)	(12,525)	(11,771)	(13,655)	(15,576)	(16,712)	(17,956)	(19,319)	(20,813)	8%
Other operating income (expense)	201	24	110	(44)	(397)	(439)	(484)	(533)	(282)	
Restructuring costs				(195)	(198)	(99)				
EBITDA	6,385	7,152	9,169	11,017	13,364	14,916	16,663	18,524	20,927	17%
EBITDA margin, %	12%	13%	16%	16%	17%	17%	18%	18%	19%	
Organic EBITDA		7,152	9,169	9,821	10,838	12,076	13,471	14,939	16,900	13%
Inorganic EBITDA				1,196	2,526	2,840	3,191	3,585	4,027	
Items affecting comparability	1,810	1,077	-	195	198	99	-	-	-	
Adj. EBITDA	7,450	7,729	9,169	11,212	13,561	15,015	16,663	18,524	20,927	15%
Adj. EBITDA margin, %	14%	14%	16%	16%	17%	17%	18%	18%	19%	

Table 3: Summary of Valuation Methods

Valuation Method	Median	EV/EBITDAx	Weight	Weighted Multiple
CCA - Forest & Gardening	61,872	8.7x	15.0%	1.298x
CCA - Construction	93,807	13.1x	10.0%	1.312x
CCA - Nordic Industrial Peers	73,848	10.3x	5.0%	0.516x
CTA - Forest & Gardening	66,164	9.3x	15.0%	1.388x
CTA - Construction	51,834	7.2x	10.0%	0.725x
CTA - Nordic Industrial Peers	67,960	9.5x	5.0%	0.475x
DCF - Perpetuity Growth	117,852	16.5x	10.0%	1.648x
DCF - Exit Multiple	143,580	20.1x	10.0%	2.008x
DDM	61,234	8.6x	10.0%	0.856x
Sum of the Parts	73,226	10.2x	10.0%	1.024x
Implied acquisition multiple >>				11.2x
Total Entry value in SEKm >>				80,449.0

Table 4: Weighted Average Cost of Capital (WACC)

Capital Structure	
Market Value of Equity (SEKm)	47,234
Net Debt 2023 Q3	15,405
D/E ratio	32.6%
Implied E/EV	75.4%
Implied D/EV	24.6%
General Assumptions	
Risk free rate GER	2.6%
Swedish Corporate Tax rate	20.6%
Market Risk Premium	7.0%
Equity beta 3Y	1.21
Cost of Equity	
Cost of Equity	11.11%
Cost of Debt - Credit Spread	
Credit Spread S&P BBB rated	1.4%
Cost of Debt	4.1%
After-tax cost of debt	3.23%
WACC	9.01%

Table 5: Debt Financing Structure

	Structure 1	Structure 2	Structure 3	Structure 4	Financing fees (%)	Fee (SEK)
Cash-on-hand	0.0x	0.0x	0.0x	0.0x	0.0%	0.0
RCF	0.0x	0.0x	0.0x	0.0x	0.5%	20.0
CapEx Facility	0.0x	0.0x	0.0x	0.0x	0.5%	55.2
Senior debt						
Term Loan A	1.2x	2.0x	1.2x	2.0x	1.0%	85.8
Term Loan B	1.5x	1.0x	1.2x	1.0x	1.5%	160.9
SLL	1.5x	1.0x	1.5x	1.0x	2.0%	214.5
Subordinated debt						
Mezzanine	1.5x	1.0x	2.0x	1.5x	3.0%	321.8
Total debt	5.7x	5.0x	5.9x	5.5x	8.5%	
Total fees excl. RCF and Capex facility						783.1

Table 6: Financing Assumptions

	Leverage	Term		Repayment	Interest		Margin			Interest rate
		years	Nominal		Type	Margin (bps)	OOB (bps)	Floor (bps)	Cap (bps)	
Cash-on-hand	0.0x		0							
Senior debt										
Term Loan A	1.2x	6	8,582	Amortization	FLOAT	Leverage grid	450	300	600	
Term Loan B	1.5x	7	10,727	Bullet	FLOAT	Leverage grid	475	325	625	
SLL	1.5x	8	10,727	Bullet	FLOAT	Leverage grid	500	350	650	
Subordinated debt										
Mezzanine	1.5x	9	10,727	Bullet						
PIK element					FIXED					5.5%
Cash element					FIXED	450				8.4%
Total debt	5.7x									
Shareholder loan	6.4x	9	45,640							
PIK element										9.0%
Ordinary equity	0.3x		1,800							
Institutional equity	0.2x		1,710							
Sweet equity	0.0x		90							