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The Leveraged Buyout of Inwido – Valuation

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Abstract

This work project was conducted by three finance students and takes the form of an Investment Committee Paper proposing the leveraged buyout of Inwido, a Swedish window and door manufacturing group. The company was valued at an 8.4x EV/EBITDA, at entry and exit. Under the proposed business plan and capital structure, the investment case yields an IRR of 26.3% and a MM of 3.8x, over a holding period of 6 years. This paper also explores different aspect of valuation between relative and intrinsic valuation. With a special emphasis on the valuation of PE targets and Inwido.

Keywords: Private Equity, Leveraged Buyout, Valuation, Window and Doors, Inwido

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Company Profile

Inwido is a leading European supplier of windows and doors. Founded in 2004 and headquartered in Malmö, Sweden. The company consists of 33 business units (independent portfolio companies) with approx. 4,900 employees. These units are divided into four business areas: Scandinavia, Eastern Europe, Western Europe, and e-Commerce. It is present in twelve countries across Europe, with operations in Denmark, Estonia, Finland, Germany, the Netherlands, Ireland, Lithuania, Norway, Poland, Romania, Sweden, and the UK.

Inwido offers a wide range of windows and doors tailored for residential and commercial applications, where the core focus lies in the manufacturing and distribution of high-quality fenestration products designed to enhance energy efficiency. As a market leader, it positions itself as a pioneer in the field of energy-efficient building components. This includes incorporating advanced materials, smart designs, and innovative construction techniques to improve insulation, reduce heat loss, and contribute to overall energy saving. By enhancing energy efficiency, Inwido differentiates itself in the market being a provider of solutions not only meeting functional needs but addressing broader societal and environmental concerns too.

Business Model & Value Creation

Inwido's strategy rests on 4 cornerstones, (1) a decentralized structure that drives customer and result focus, (2) focus on consumer-driven markets for profitable growth, (3) sustainable growth improved through acquisitions, and (4) synergies that drive structural developments.

One of the key concepts in the firm's strategy is decentralization. Each business unit is independent and makes its own decisions, tailoring its strategies based on local conditions and retaining full responsibility for business operations and financial outcomes. Given the inherent disparities among markets in the industry, with distinct variations in methods, lifestyle, regulatory frameworks, seasonal patterns, and consumer preferences, successful navigation requires a close understanding of the specific market dynamics. The revenue process involves customizing products to meet the unique demands of individual customers, often sold before the actual manufacturing process. Central support functions in Inwido provide strategic assistance in areas such as purchasing, digitization, and leadership, increasing decision-making effectiveness. The streamlined decision-making process allows the group management to remain solid, fostering insights, synergies, and economies of scale, where the outcome is an agile and efficient group that can quickly adapt operations to demand fluctuations in their markets, with supported customer relations.

Acquisitions are an important driver of Inwido's growth strategy. Evaluating potential candidates involves criteria considering factors such as profitability, local market position, and alignment with the group. With a track record of approx. 50 successful acquisitions, Inwido has gained valuable insights into fostering the growth of acquired companies within its portfolio. Synergies derived and developmental opportunities realized within the group have proven transformative for these entities. The acquisition process involves a thorough examination of mature, cash-flow generative European windows and doors companies, and their market conditions.

Product Portfolio

Inwido's 33 business units deliver a wide range of different products in the fenestration category. They cater to both the premium market as well as to the middle range and value products, while each business unit designs and produces its products, often custom-made to each client there are a few overall general features that are consistent. The biggest category is windows followed by doors, a few companies also produce conservatories and other accessories on a smaller scale. Windows are split into four main materials; uPVC, aluminum, wood, and composite. Each with its distinct benefits and features, from price, insulation, and design, and often with strong geographic preferences. Doors are produced in a wide range of materials including aluminum, wood, glass, and steel.

Management Team

The management team has been led by Henrik Hjalmarson (CEO) for the last 6 years, together with Peter Welin (CFO & Deputy CEO). Together they have restructured the operations of the senior management team, where they have brought in four Executive Vice Presidents (EVP) to be responsible for one business area each, Scandinavia, Western Europe, Eastern Europe, and e-Commerce. This allows the CEO and CFO to focus on the long-term strategy and acquisitions while the EVPs follow up on the existing portfolio companies. Mr. Hjalmarson has decided to step down as CEO and Fredrik Mueller has been recruited as successor, he is expected to start no later than May 2024. Mueller is the current CEO of Nord-Lock, a Swedish manufacturing company, and he brings M&A and consulting experience from JPMorgan and McKinsey.

Historical Financials

Despite turbulent years with the COVID-19 pandemic and the Russa-Ukrainian War, Inwido has shown proven stability over economic cycles. Revenue has consistently increased, with a 5Y CAGR of 8% and a 9Y CAGR of 9,3%. Despite a negative trend with higher COGS relative to sales, leading to a slight decrease in the gross margin in 2022, operating EBITDA margin and profit margin grew at a 2.6% CAGR and 10.7%, respectively. Inwido's liquidity position is currently very strong, with a current ratio of 1.3x. cash and equivalents grew at a 26% CAGR since 2017 and net debt decreased significantly, at a -14% CAGR since 2017. Increasing profitability and decreasing net debt led to a consistent decrease in the Net Debt/EBITDA Ratio, making Inwido more resilient against economic uncertainty and higher interest rates. The Cash Conversion Cycle has decreased significantly to 5.5 days in 2022 due to supply chain finance, lengthening their payment terms due to a bank paying the suppliers, and deferring Inwido's payments. Maintenance CapEx is relatively stable every year, while strategic CapEx fluctuates due to differences in acquisitions from year to year. Free cash flow to the firm has been positive for the past 5 years except for 2018, however, this was largely due to this year's intense M&A activity. Free cash flow to equity was negative in 2018, again due to the high CapEx, and in 2021, due to the company's highest debt repayment in the past ten years. Still, Inwido's significant cash balance growth indicates that the company's free cash flow is resilient enough to accommodate for years when cash is under more pressure, be it due to greater than usual M&A activity or debt repayments. High and stable cash flows, low debt, and an asset-heavy balance sheet make Inwido a robust LBO target from a financial perspective.

Market Overview

Market Size, Growth Drivers & Trends

The European Windows & Doors market was estimated to have amounted to $61 billion in 2022 and is forecasted to grow at a 4.13% CAGR until 2028, reaching a size of $78 billion (Arizton Advisory & Intelligence 2023). There are three key trends in the window and door industry: energy efficiency, smart technology, and e-commerce. Due to higher inflation, decreased disposable income, and decreased consumer sentiment, consumers are more and more conscious about their energy consumption and where to save money. In Norway, 39% have reported that they plan to invest in triple-glazed windows, and 50% in Sweden plan to invest in solar panels in the next 10 years (Inwido Annual Report 2023), clearly showing consumer preference and the importance of energy savings. The interest in smart windows and doors that are monitored through your phone and connected to the rest of the house is another trend among customers that offers more convenience and enhanced security. The shift toward e-Commerce has hit the fenestration industry where more and more customers prefer to buy windows and doors online. This offers wider availability and an easier shopping experience.

The main growth drivers for the window and door market are the construction of new buildings and renovation. Construction of new buildings, both commercial and private is the largest driver, this is again driven by two main factors: population growth and economic cycles. As areas get more populated more buildings are built, and more windows and doors are needed. However, this is cyclical as more is invested in construction during strong economies and there is a slowing in new building during economic downturns. The other main driver, renovation & retrofitting accounts for c.70% of Inwido's sales. Due to consumer demand for energy savings, together with government incentives, there is a huge increase in demand for shifting old insulated windows and doors with new, better-insulated, and energy-saving windows. The EU considers this one of the pillars of the fight against climate change and incentivizes consumers to renovate their existing houses. Incentives are also given by local governments. In Ireland, consumers get EUR 1,500 – 4,000 for changing windows and doors, and Scotland is giving loans of up to EUR 5,000 for home renovation (Inwido 2023).

<u>Market Segmentation</u>

The fenestration market can be segmented into two main segments, windows, and doors. Window sales are projected to grow at a 4.3% CAGR between 2022 and 2028, and doors to grow at a 2.7% CAGR between 2021 and 2027. There are two end-use segments, residential and commercial, residential is projected in 2022 to make up for 64% of market revenues. Installation is also an important criterion, splitting the market into new construction and renovation, with 60% of the demand for windows and doors in Western Europe and 55% in Eastern Europe currently coming from the renovation space. In terms of production materials: aluminum is a strong and lightweight material and particularly suitable for larger windows and doors; composite materials are made using two or more materials, usually timber clad with aluminum; uPVC is robust and easy to clean and is especially used in the renovation; finally, timber windows and doors can be made from softwood or hardwood. The market can also be segmented into geography, with Germany being projected to be the largest European market as of 2023, followed by Turkey, the UK, and France (Ceresana Market Research, 2021).

Competitive Landscape

The competition in the fenestration industry is heavily associated with its fragmented characteristics, with approx. 5,000 different window and door companies in Europe. Mostly being small privately owned serving their local markets. While all these compete for the same customers as Inwido's business units we have decided to only compare Inwido to similar companies of size, revenue, and geographic reach. The main competitors are chosen together with Inwido's EVP of M&A and through our evaluation and analysis. In comparison, we note that Inwido is on the larger side with EUR 895m in revenue in 2022, while the largest competitor JELD-WEN had EUR 1,221m of revenue in Europe, and the smallest, NorDan, had EUR 176m. Looking at the performance metrics, Inwido outperforms the average on many metrics with an EBITDA margin of 14.2%, the lowest Net Debt/EBITDA at 0.6x, and the lowest Cash Conversion Cycle at 5 days for 2022.

Investment Thesis

As previously stated, the European windows and doors market is facing interesting growth opportunities as the need for a green transition is growing across all societal levels, where solutions are targeted at replacing the existing building stock that is largely energy inefficient. In addition, Inwido operates in a highly fragmented market creating opportunities for acquisition-driven growth both in existing and new geographies. These factors were crucial determinants guiding the decisions to create additional value following the transaction.

Renovation segment

The ongoing energy crisis in Europe, and high energy prices, have placed energy efficiency improvements increasingly high on the agenda. While this creates opportunities for Inwido, given that windows and doors have a significant impact on energy saving, it, more importantly, increases the pace of the green transition, and this is where Inwido has the potential to contribute to a better world. A green transition within the European construction sector will be one of the fastest ways to alleviate the energy crisis and mitigate carbon dioxide emissions from buildings. This coupled with the EU's renovation wave, aiming to improve energy efficiency, boost the economy, and deliver better living standards for Europeans, will be a major growth driver as Inwido already has a reputation as one of the pioneers in energy-efficient fenestration products. Despite an increasing demand for energy-efficient products, there is still limited consumer knowledge regarding the impact of windows and doors on domestic energy usage that must remedied. Providing energy calculators on each business unit's website will enable consumers to understand the effect energy-efficient windows and doors have on their household consumption. To fully grasp the coming renovation wave and customer demand for sustainable products, accelerated investments in existing business units requiring additional resources to innovate their product portfolio must be made to ensure a competitive position in the renovation segment. As renovation currently accounts for 70% of Inwido's sales, it is projected to have a major impact on both organic and inorganic revenue growth through acquisitions of companies with capabilities and competitive advantages in the renovation market.

<u>Buy & Build</u>

Considering Inwido's asset base, liquidity, and cash generation, highly fragmented markets create opportunities for European consolidation enabling both superior growth in existing markets and further diversification of the firm's revenue streams. Initially, five targets were identified all sharing common characteristics of being profitable companies operating in the European windows and doors industry. Specific focus was directed towards Scandinavia and Western Europe given the strategic fit and favorable market conditions. In addition, we have assumed acquisitions of three more companies, all sharing characteristics with the five identified targets. The first add-on acquisitions, namely *McMullanODonell* (IR) and *Nordvestvinduet* (NO), will occur in the first year of the investment period, i.e., in 2024, with the ambition to strengthen Inwido's position in the British Isles, as well as providing additional competitive advantage in the production and selling of energy efficient wood products in Scandinavia and across Europe. The third and fourth add-on acquisitions will happen in 2025, being the purchase of *Whiteline*, the largest independent fabricator of uPVC windows and doors in southern England, as well as the acquisition of *Profialis*, the largest company among them all and the first add-on investment in the newly entered market France, after initially entering through the E-commerce platform. The acquisition of the British uPVC specialist *Garrard Windows* will take place in 2026 together with a smaller niche add-on investment in Denmark, followed by the two last acquisitions in the UK and France that will occur in 2027. The intense acquisition strategy of British companies with competitive advantages in rapidly growing energy-efficient products will enable an accelerated consolidation of the growing UK market, as well as achieve a stronger competitive position in the renovation segment (specifically, favorable EU Green Deal subsidies in Ireland). Value-creating M&A in Norway and Denmark will strengthen the current market share in Scandinavia (principal markets) focusing on premium and niche expertise. Lastly, acquisitions in France will enable accelerated market penetration through acquisition-driven growth strengthening the business units and Inwido's market position in the French market. Moreover, through the realization of cost synergies provided by Inwido's stronger negotiation power with suppliers, targets will be able to improve their operating efficiency reducing the cost of raw materials (usually 50% of total COGS) by 10%. The acquisitions will be financed with cash, at an EV/EBITDA multiple of 5.5x, based on past acquisitions made by Inwido in the same markets.

<u>Internationalization</u>

To accelerate the process of European consolidation, internationalization will play a critical role. Five target countries were identified considering factors such as market size, renovation potential, GDP per capita, and strategic fit. While Turkey and Russia are the countries with the largest market size, the current high levels of political, legal, and reputational risks hinder any sustainable growth potential there. Italy and Spain are reasonably large markets, and both have high projected growth. However, France has arguably more potential: it is a larger market still with good growth prospects, has a higher GDP per capita, and is closer to Inwido's current geographic scope. It also has a high expected renovation market CAGR, with a large portion of houses requiring renovation and an implemented government renovation program to promote energy efficiency. In addition, the French market is heavily fragmented, favoring consolidation. The first part of the internationalization strategy is to leverage Inwido's existing e-Commerce platform to establish a new French brand under the JABS Group and distribute to France from the existing production facilities in Eastern Europe. In line with Inwido's approach in the past, operating expenses such as marketing and setting up the online platform will be outsourced to a local company familiar with the French market. This will enable a less risky, more cost-efficient, and customer-centered entry into the French market. The second part of the strategy is the acquisition of Profialis, a player with a solid presence in the market, and a second acquisition in 2027, to boost market penetration. Incorporating M&A into the strategy will allow us to build on Profialis' existing local market knowledge and resources.

As for projections, Inwido's e-commerce strategy in Germany was used as a benchmark. The company entered Germany in 2015, and revenues have been growing at roughly 33% CAGR since 2018. It was assumed that market share growth through e-Commerce would go at the same pace as in Germany. In addition, the acquisition of Profialis will result in a significant revenue increase every year, contributing to SEK 867m yearly revenue by 2029.

Forecasts & Business Plan

Inwido's revenue forecasts rely on the market analysis of specific growth drivers and trends of each individual market where the company has its operations. Due to local markets, forecasts have been conducted per country and not per business area. The overall top-line revenue growth is forecasted by splitting standalone and incremental revenue. Standalone revenue forecasts mainly reflect current market expectations with a 4.5% CAGR ('23-'30). Conservative organic growth rates have mainly been applied in Inwido's principal markets in Scandinavia and Eastern Europe to capture the economic downturn, particularly hitting the construction industry, resulting in declining standalone revenue in 2023 and 2024 (besides from Denmark and Poland). Inwido has a relatively high proportion of sales to new construction in Sweden and Finland, thus the largest decline in those markets, even though renovation dominates when looking at the entire group. Strong outlooks for the renovation segment strengthened by the European Green Deal policy are the main growth drivers. Together with the internationalization strategy, a more geographically diversified portfolio enables Inwido to exploit the renovation wave at larger scales, as well as decrease its operational risk associated with local sentiments and individual performances of the Group's business units. Furthermore, it allows capitalization on regional trends and momentum of specific portfolio companies, mainly identified in the British Isles and Germany (note: only e-Commerce operations in Germany). Incremental revenue forecast accelerated by the *Buy & Build* strategy will have a total CAGR of 37.6% ('24-'30), mainly coming from large acquisitions in the British Isles and France. At the exit in 2029, the UK, France, and Denmark will be the markets with the largest revenue contribution driven by strong projections of both organic and inorganic growth. As for the bottom-line forecasts, a gross margin improvement will stem from cost synergies realization associated with the acquisitions of selected target companies. Inwido's size and greater negotiation power with suppliers will reduce the cost of raw materials.

OpEx will remain similar in proportion to revenues as Inwido is perceived to have sufficient competencies in the present management group. A slightly higher fraction of sales will be targeted to R&D expenses, to provide for investments in energy inefficient business units to enable greater capitalization of the growing renovation segment. In the end, organic EBITDA growth will mainly come from the strong continuation of organic revenue growth in both principal and secondary markets. Inorganic EBITDA growth will come from the acquisition of target companies in Denmark, France, Ireland, Norway, and the UK, which will be implemented between 2024-2027, allowing Inwido to immediately capture value from add-on acquisitions. FCFF is expected to grow from SEK 708m in 2023 to 1,918m in 2029, at a CAGR of 18% during these 6 years. CapEx is the main factor dictating the free cash flow development in the forecast period, it is split between maintenance CapEx and strategic CapEx. Between 2024 and 2027 c. 65% of the forecasted Capex will come from strategic, associated with acquisitions of subsidiaries. This has a negative impact on the FCFF as it is a cash expense and all planned acquisitions are expected to be paid in cash, resulting in a slight decrease in FCFF until 2025, before it increases again. Acquisitions and therefore CapEx is expected to slow down after 2027, due to a shift in focus towards an exit and planned debt repayments.

Valuation

Inwido is valued at an EV/EBITDA multiple of 8.4x which gives an enterprise value of SEK 11,069m. This is calculated using three valuation methods, a Discounted Cash Flow model (DCF), Comparable Transaction Analysis (CTA), and Comparable Company Analysis (CCA).

The DCF yields the highest valuation at 19x using the Gordon Growth Terminal Value approach, with a terminal growth rate of 1,5%, and WACC of 8,4%. DCF using exit multiple for terminal value of 8.4x EV/EBITDA yields a multiple of 15.4x. CTA is done by comparing recent transactions of similar companies and analyzing their purchase multiple. Companies have been selected on size, location, financial metrics, and time of transactions. This gives a multiple of 8.4x and represents a realistic purchase price as it includes premiums paid in the past. CCA looks at other peers, chosen based on similar criteria as CTA, and current trading metrics, and suggests an EV/EBITDA of 8.1x. Looking at the transaction price of peers, current trading levels, and the value of our predicted cash flows, we believe that Inwido can be acquired at a multiple of 8.4x which results in a total enterprise value of SEK 11,069m.

LBO Model

Capital Structure:

The credit market today is particularly challenging, with record-high inflation having led to increased interest rates around the world. According to professionals in the Swedish bank and private equity environment, interest spreads on bank debt range between 400 and 600bps, depending on firm-specific factors. In Inwido's case, since it is a large company, with SEK 9.2b in revenue and 1.3b EBITDA at entry, size is a factor that should drive the spread down. Its leverage level should also inspire confidence in banks since it has strong liquidity and solvency ratios. However, two factors that could weaken negotiations and drive the spread upward are low diversification linked to the fact that, even though Inwido's sales are widespread across Europe, they are still very much dependent on fenestration products, and the challenging macro environment featuring high-interest rates and inflation. In conclusion, given Inwido's size, leadership across several markets, cash generation, strong solvency, and liquidity, it should be possible to rely on cheaper, senior bank debt from major Swedish banks to achieve the desired returns rather than resort to more expensive, subordinated debt. In the end, the chosen capital structure includes 3 senior debt facilities, TLA (amortizing) priced at 3m SOFR + 425bps, TLB (bullet) priced at 3m SOFR + 480bps, and TLC (bullet) priced at 3m SOFR + 525bps, amounting to a total of SEK 5,798m, 4.4x EBITDA. Equity includes a Fixed Return Instrument of SEK 5,008m, with a 10% PIK element accrued annually. Ordinary shares are split between an institutional strip of SEK 730m and a Sweet Equity instrument of SEK 30m, vesting to 4% of total ordinary shares. Total equity contribution is thus SEK 5,769m (4.4x EBITDA). The buyout is structured with an earnout, investing 80% of the equity at entry and

20% in December 2025 if the EBITDA margin recovers to 2022 levels after predicted declines in '23 and '24. This creates alignment in the incentives between management and the fund.

Returns

Under a holding period of 6 years and no multiple arbitrages, exiting in 2029 at an 8.4x EV/EBITDA multiple, the investment case yields a money multiple of 3.8x and an IRR)of 26.3% for the fund. EBITDA in 2029 is projected to be c. SEK 2,688m, leading to an enterprise value of SEK 21,395m at exit. Net Debt amounts to a negative SEK 601m, thus, total Equity proceeds amount to SEK 21,996m. Management will receive proceeds of SEK 460m, corresponding to a 15.1x MM and an IRR of 57.3%. The main source of value creation is cash generation achieved through the deleveraging effect, amounting to SEK 5,312m. Inorganic and organic revenue contributions are SEK 5,045m and SEK 3,712m respectively, due to growing operations in Inwido's principal and secondary markets capitalizing on the European renovation wave and the *Buy & Build* strategy. Finally, SEK 2,655m of value results from EBITDA margin expansion, stemming from increased synergies and economies of scale associated with M&A and the further consolidation of the European market.

Exit

After evaluating four different exit opportunities, we have found three feasible options, all with their pros and cons. Selling to a strategic buyer is considered the best option due to its high valuation and value of potential synergies. Potential buyers might be industrial manufacturing companies who seek to enter vertical into the window and door industry, or other larger window and door manufacturers who want to strengthen their foothold in Northern Europe. Inwido's expected large size limits potential buyers, but we have found two promising candidates, French Saint-Gobain, and Swiss Holcim. Both have done recent acquisitions of around EUR 2b, the expected value of Inwido at the exit, and both have portfolio companies that operate in the fenestration industry with opportunities for synergies. A secondary sale to another private equity firm is another potential exit, an expected faster and cheaper exit, but often at a lower valuation. Interest from potential buyers is expected to be high as Inwido's cash flow is high and stable with a leveragable balance sheet in a continuously fragmented industry that has consolidation potential. PE funds with the potential of a large equity ticket are needed and we have found CVC and EQT as potential buyers due to their large funds size, previous acquisitions, and expertise in the industry. The last potential exit option is an IPO in the Stockholm Nasdaq Stock Exchange. Inwido will be a highly attractive IPO case and would most likely attract both local and international investors. This is however very dependent on market timing, but an exit on the top of a cycle has the potential to deliver very high returns.

Due Diligence

To validate the analysis and assumptions made in this ICP, thorough due diligence should be conducted in the commercial, financial, operational, and ESG fields. Commercial and operational DDs should assess the strategic fit, operational capabilities, and growth potential of our proposed M&A targets; as well as the French market's competitive landscape and Inwido's ability to integrate it into the existing e-commerce supply chain. These points are critical for the success of the *Buy & Build* and Internationalization strategies, respectively. A financial DD is also essential to validate the assumptions made in the forecasts and evaluate the impact that both market trends and the Investment Thesis strategies will have on the business plan. Finally, it's important to conduct an ESG DD into the impact that national and EU incentives to improve the energy efficiency of buildings will have on consumers and businesses. An essential part of the Investment Thesis rests on the hypothesis that these incentives will become increasingly relevant, boosting demand for energy-efficient windows and doors as well as allowing Inwido to capitalize on this trend and, through Green Transition, *Buy and build* and Internationalization, further consolidate its position in the European fenestration market.

Individual Part – Valuation

Introduction

Valuation is the process of determining a company's, assets, or projects' economic worth. In the case of Private Equity, it is used to determine a company's intrinsic value which is used for deciding whether to buy, sell, or merge with another company, and is used to by both the buyers and sellers of the businesses. The process involves analyzing several factors including the company's assets, liabilities, historic performance, forecast future financial performance, industry trends, and the state of the economy. Generally, there are two main categories of valuation methods, relative and intrinsic valuation. Relative valuation methods involve comparing the target company to similar companies using specific metrics like EV/Revenue, EV/EBITDA, and P/E ratios. This approach is based on the principle that similar assets should have similar valuations. Within relative valuation, there are two methods, comparing with publicly traded companies, called Comparable Company Analysis (CCA), and comparing with past transactions and acquisitions, called Comparable Transaction Analysis (CTA). Intrinsic valuation, on the other hand, focuses on the inherent value of the business. It estimates a company's value based solely on the company itself and on the present value of its expected future cash flow. The main method is the Discount Cash Flow (DCF). While none of these methods are perfect, they each have their own pros and cons. To minimize the downside, valuation methods are rarely done alone, and a combination of intrinsic and relative valuation is used to derive a valuation as precise as possible. While there are many other types of valuation methods, the ones mentioned above, CCA, CTA, and DCF are arguably the most common and are also the ones used for this private equity challenge. In this paper, I will dig deeper at each valuation method and how it's done, while focusing on the case of the LBO of Inwido.

Equity Value vs Enterprise Value

In finance, a company's worth or value can be measured in two ways: its market value (market cap), as determined by the stock market, and its implied or intrinsic value, which is based on specific company assumptions. These two valuation methods can differ due to varying views on the company's future performance or disagreement over correct discount rates. The concept of value also varies depending on who is valued, Equity Value refers to the valuation of all distributable assets of a company to its equity investors. The other option, Enterprise Value (EV) assesses the total value of all assets a company can distribute to all types of investors, both equity and debt.

In practice, most valuation methods focus on determining a company's EV. To calculate the Equity Value from EV, the Equity Bridge method is used. This involves subtracting debts, non-controlling interest, and preferred stock while adding cash and cash equivalents. Deductions are made for debt and similar liabilities as they represent obligations to non-equity stakeholders. Cash and cash equivalents are added as they are assets eventually distributable to the equity shareholders after paying their debts. Cash equivalents typically include marketable securities, short-term deposits, and commercial paper, which can be liquidated quickly. Similar liabilities might consist of short- and long-term interest-bearing debts like loans, bonds, and leases. Furthermore, Equity Value can be influenced by factors such as season cycles in working capital or pension deficits.

In summary, Enterprise Value represents the aggregate value of a company, including equity value and debt. For investors, understanding the final payout upon selling their shares is crucial, hence they use the mentioned equity bridge method subtracting net debt from EV to arrive at a company's real Equity Value.

Relative Valuation Methods

The relative valuation methods can be divided into two main methods: Comparable Company Analysis (CCA) and Comparable Transaction Analysis (CTA). The main difference between the two is what they compare against. CCA uses the current stock price and metrics of similar companies, trying to estimate what the target company might be valued if it was publicly traded, in relation to the market and its peers. CTA bases its valuation on the prices from comparable transactions in the market, trying to assess the value in relation to the valuation of similar recent deals in its sector. For a fair comparison of both methods, several key factors cots need to be aligned. These include geographical location, industry sector, company size, and financial metrics such as the size of the deal or EBITDA. In the case of CTA, the timing of the transaction is also crucial to make it an accurate benchmark. The process of selecting companies and transactions results in a pool of a valuation peer group, which is used as a reference for valuing the target company.

CTA

Comparable Transaction Analysis is a valuation using the price, or multiple, other business has been acquired for. Different from other methods this accounts for more than just the intrinsic value of the business, it gives a picture of what they have been bought for which includes the premium paid and gives a clear picture of what can be expected to pay. These methods rely on publicly available information on transactions, which we have sourced from CapitalIQ and Pitchbook. The information can be limited as it differs in how much each company publishes from the transactions, and how many transactions have happened recently. Selecting the right pool of transactions and peers is crucial to arrive at a valuation as precise as possible, and several criteria are chosen to decide on transactions to analyze. The idea is to find transactions and companies like the one we value to arrive at the correct valuation. Time of transaction, industry, size, financials of the target company, and the location of the target are the main criteria we have used to screen companies for, as these have a large effect on purchase multiples.

The time of the transaction is arguably the most critical factor to consider as we know valuations move in cycles and are highly variable. As we try to value what an acquisition of Inwido would cost today, we get very little from comparing purchase multiples that happened at the height of valuations several years ago. We therefore selected acquisition in the time frame between 2021 and 2023, with more than half of selected transactions being in 2023. Another large driver of valuation multiples is the size of the target companies, larger companies are bought at a premium compared to smaller companies. Selected target companies have an enterprise value (EV) between SEK 3-15b, the average being SEK 7.3b.

The industry of the target companies is also an important metric, as different industries are valued and operated differently. As with the other criteria, the industry the peer companies should be as close to Inwido as possible. Our chosen comparable operates within building products, household durables, and construction. Lastly, they are screened on the geographic location they operate in. While the world is getting more and more globalized and companies operate cross-border, we still see valuation differences between countries and areas. Inwido is no different and has operations in 11 different countries, therefor selected comparables are from Sweden, Germany, the UK, Norway, Switzerland, and Finland. The ideal pool of comparable companies is identical to the target company, and acquired recently, however, due to low deal flow, lack of public data, and differences in the industry, certain assumptions must be made. There is therefore a balance between how important each criterion is, and the number of transactions needed to do the valuation analysis. Evaluating all this has given us 18 precedent transactions, giving a large enough pool to generate an implied enterprise value.

Nordic Waterproofing is a Swedish roof waterproofing company that was acquired by the British Kingspan Group in September 2023 for EUR 2.66b – at an EV/EBITDA multiple of

9.6x. They operate in the housebuilding industry with roof products. While not windows, their industry has a lot of similarities to the window and doors industry and is expected to move in the same cycles.

Ideal Standard was also acquired in September 2023, bought from another PE firm CVC, by strategic buyer Villroy & boch operating in the same industry for EUR 640m at an EV/EBITDA multiple of 8.1x. Ideal Standard produces and manufactures bathrooms products, still in the housebuilding cycles, and operating manufacturing plants, similar to Inwido. Duni AB, a Swedish company that was acquired by Melby Gård in September 2023 for EUR 300 million (SEK 3.184) at a multiple of 7.6x. They produce and sell house goods essentials where we see a lot of similarities to the operations and the demand from customers with Inwido. These three transactions represent the type of transaction based in our CTA valuation. As we can gather, they are all different sized producing different materials, and are therefore prized at different multiples, related to their size. After analyzing a larger pool of transactions, the peer group was shortened to 18 companies and acquisitions that best reflect the criteria discussed above. For our analysis, the main multiple analyzed is the EV/EBITDA, due to its industry-standard in Private Equity when calculating acquisition price. The median EV/EBITDA LTM is 8.45x while the median forward multiple NTM is 8.37x. We have also looked at multiples as EV/Sales and EV/EBIT to get a clearer picture, which respectively yields a median of 0.8x and 13.8x LTM. Using the EV/EBITDA LTM the implied enterprise value of Inwido is SEK 11 135m.

<u>CCA</u>

Comparable Company Analysis is also the most common and easiest to do. This analysis compares publicly traded companies' current value and financial performance with other companies selected on a set off different criteria. For this approach we have interviewed Inwido's VP of M&A about competitors, and from his reported competitors, including our own analysis based on their industry, product offering, location, and key financials & size, we have narrowed the pool down to 10 companies. The goal is to choose comparable companies as similar to the target company as possible, as this is crucial to get a precise as possible valuation. The first criteria we selected on was the industry. As we are looking to value a window and door company, we want comparable that operate in a as similar environment as possible. All selected targets are therefore either window and door companies or operate in a related field like house ventilation and waterproofing of roofs. Moreover, as discussed under CTA, size is an important fact for valuation multiples and all selected comparable have an enterprise value between EUR 560m and EUR 14 000m, with the median EV being EUR 1 621m. The median EV/EBITDA LTM is 8.1x and the forward rate of the NTM is at 7.4x. Suggesting an enterprise value of Inwido of SEK 10 673m.

Intrinsic Valuation

<u>DCF</u>

The key difference between intrinsic value and relative value lies in the basis of valuation. Intrinsic valuation uses the business's projected cash flows to determine a value, rather than external comparisons. This approach depends largely on expectations and assumptions about the company's future performance, including growth rates, margins, and future acquisitions and investments. The main method used in intrinsic valuation is the Discounted Cash Flow Model (DCF). The DCF method evaluates a company's net operating assets and non-operating investments, subtracting debt liabilities to estimate the final Equity value. The DCF focuses on the total cash flows available to both equity and debt investors. This requires a detailed projection of the company's financials to accurately compute the Free Cash Flow. For the valuation of Inwido, our predicted cash flows for the Investment case are used. This is done because we want to get a grasp of the potential value given our growth predictions and our assumed potential. This means that all predictions and assumed acquisitions from 2024 – 2030 are included. When determining the present value of the expected future cash flows, we decided to use the post-LBO capital structure to derive the values. This is done because that represents the most realistic cost of capital, given that we predict future cash flows. To get the discount rate, also known as the Weighted Average Cost of Capital (WACC), this formula was applied.

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

The cost of each source, debt, and equity, is multiplied by its relative weight to get the predicted total cost of capital. Cost of equity was derived from the Capital Asst Pricing Model (CAPM):

$$ER_i = R_f + \beta_i(ER_m - R_f)$$

The risk-free rate was set to the Swedish 10-year treasury at a current level of 2.6% (Marketwatch 2023). The Swedish rate was determined to be used as the majority of sales of Inwido are in the Swedish currency SEK, and the company's headquarters are in Sweden. In addition, the Market Risk Premium of 5% was used for the Swedish market (Damodaran 2023). The levered beta was calculated as the company was private and had no moving stock price. Using the 9-trading peer companies their respective beta was obtained and unlevered using their tax rate and Debt/Equity ratio. With the average unlevered beta, we re-levered it using Inwiods expected post-LBO capital structure. Due to above-average debt levels, the re-levered beta for Inwido is calculated to 1.54. This however is in line with NYU's list of industry betas, which estimates an industry beta of 1.50 for Homebuilding companies (Damodaran 2023). To find the cost of debt we used the new proposed debt structure and its expected pricing. Term Loan A at SEK 2 635m, or 45% of the total debt is priced at the forward 3m SOFR + 425 basis points. Term Loan B at SEK 1 845m, or 32% of the total debt is priced at the forward SOFR + 480 basis points, and the last loan Term Loan C is at SEK 1 318m, 23%, is priced at the forward 3m SOFR + 525 basis points. The total cost of debt is then calculated with a weighted average of each debt tranche, resulting in 8.3%. The cost of equity is calculated with the market risk premium of 5%, Beta of 1.54, and the risk-free rate of 2.6%, and equals 10.4%. This gives a total weighted average cost of capital of 8.4%. In the DCF valuation, the terminal value is a crucial component. It represents the predicted cash flows beyond the forecasted period to 2030 acknowledging that the company is expected to continue to grow after the 7year forecast period. This therefore often reflects a larger part of the final calculated value of the company, often between 60-80% of the total value, as it tries to capture all future cash flows. We have used two methods to get a terminal value, the Gordon growth method, and exit multiple. The first method, the Gordan Growth Model, terminal value is based on the concept of ongoing growth, assuming that a company's growth will consistently increase. This approach is most suitable for businesses with stable and unchanging operational and financial performance. One of the challenges, however, lies in accurately determining a specific rate of continuous growth for the company, and that the selected growth rate is highly sensitive to its predicted returns. With this approach, the Terminal value of Inwido was calculated using the following formula:

$$Terminal\ Value = \frac{FCF_n * (1 + g)}{(r - g)}$$

A discount rate, the WACC of 8.4% was used together with a selected growth rate of 1.5%. This is done conservatively as a high growth rate will inflate the final value. The result is a terminal value of SEK 18 367m, representing 73% of the total enterprise value. All the other cash flows were discounted and added to the terminal value, suggesting an implied enterprise value of SEK 25 305, or an EV/EBITDA of 19x. Due to the nature of this analysis and all assumptions made to get to the final value, several sensitivity analyses were done to get a grasp of the potential result if the assumptions were to change. Both an enterprise and EV/EBITDA result were solved for, changing the terminal growth rate between 0,5% - 2,5% and the WACC between 6,9% and 9,9%. Showcasing how sensitive the result is with just a minor adjustment. For the second approach to determine a terminal value, the first two valuation methods were used to determine the value, Comparable Company Analysis and Comparable Transaction Analysis. We use these methods to find an industry standard multiple, in this case, an

EV/EBITDA. The median multiple is 8.4x, terminal value is then calculated by multiplying the target companies' EBITDA with the suggested multiple.

$$Terminal\ Value = EBITDA_n * Implied\ EV/EBITDA$$

The result is a terminal value of SEK 13 293m, as with the Gordan growth method all cash flows ass added and discounted to reach an implied enterprise value of SEK 20 230 or an EV/EBITDA of 15x, representing 66% of the total implied enterprise value. Sensitivity analysis was also conducted on this method, exploring the possible results given change in the assumed WACC (6,9%-9,0%%) and exit multiple (7.4x-9.4x).

Conclusion

All the different valuations were gathered into a football field chart to get a visual representation of the valuation methods and their results. This approach helps narrow down errors by relying on the median of all valuation methods to propose an implied valuation. This implied value, however, is important not to mistake with a company's real worth. Since determining a company's price value is challenging, a football field chart plays an important role in illustrating the different results and outcomes. In terms of the general results between the different methods, it is often that Comparable Transaction Analysis (CTA) often yields a higher valuation than Comparable Companies Analysis (CCA). These differences come from the real cost of acquiring a business and the control premiums paid in CTA, increasing the value over CCA. The Discounted Cash Flow (DCF methods vary based on all the specific assumptions made and can often give varied results compared to the relative valuation methods. Moreover, it is important to understand why we value a company, and what the result is for. An equity research analyst might have incentives to push the value in one direction, and the management of the company might want to impact the valuation in another direction. This also represents the flaws with a business valuation, due to the large number of assumptions made, which can be everything from adjusting the future expected cash flows in the DCF to cherry-picking the right companies in the relative valuation.

In our case, the leveraged Buyout of Inwido, and in private equity in general, the goal is to find a valuation that will return as much as possible for the investment. This means that the valuation is often set as low as possible, within the limits of what the PE fund believes the target owners will accept, and what other competitors might bid for the company. The real transaction of other comparable companies serves therefore as a solid measurement of what we can expect to pay, which gives the CTA the highest weight in the valuation summary. The CCA serves as a good check due to its more recent and more exact data and list of comparables, it can work at adjustments for the given industry and company. The DCF yields a high value due to the use of the investment case and positive outlook on cash flows and improvements, this therefore works more like an upper limit or shows what we could potentially pay if the price were to be pushed up. In our valuation of Inwido the Comparable Transaction Analysis suggested a median EV/EBITDA of 8.45x, the Comparable Company Analysis a median of 8.1x, the DCF Terminal Growth Rate 19x, and DCF Exit Multiple 15x. Based on these results we believe Inwido can be acquired for an EV/EBITDA multiple of 8.4x or Enterprise Value of SEK 11 069m.

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Pitchbook Database 2023

CapitalIQ Database 2023