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Mo-Bruk: A LBO candidate

Group 8

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Executive Summary

We propose doing a leveraged buyout (LBO) of Mo-Bruk, Poland's leading hazardous waste management company. Our private equity fund would offer PLN 405 per share, representing approximately a 30% premium to the current trading price, suggesting an enterprise value of PLN 1,510 million. The transaction would be financed with approximately 60% debt and 40% equity or with a 7,1x debt/EBITDA ratio. This aligns with standard LBO structures; Axelson et al. (2013) found that leveraged buyouts typically apply an 70% debt financing and leverage ratios of 5-7 times EBITDA.

Value creation in our LBO would be driven by three key levers: (1) robust organic growth supported by structural regulatory tailwinds. (2) operational enhancements to sustain industry-leading margins and (3) tax-efficient leverage to amplify equity returns. We anticipate a 5-year holding period and targeting an exit in 2029 primary via a strategic sale or secondary buyout. Our base-case model projects a 3.7x MOIC and a 30,24% IRR, exceeding our long-term return threshold of 30%.

1. Introduction

The waste management industry in Poland is experiencing strong secular growth, driven by tightening environmental regulations and EU directives. Poland's push toward a circular economy and adapting to the EU waste hierarchy – which prioritizes waste reduction, reuse, and recycling and has increased demand for advanced waste processing and disposal solutions. Notably, hazardous waste generation in Poland rose from approximately 1.5 million tons in 2010 to 2.18 million tons in 2018, reflecting both industrial growth and stricter reporting requirements. This trend is expected to continue as industries such as mining, manufacturing, and energy cause by-products like ash, sludge, and asbestos that require safe disposal (Justyna Pyssa, 2021). Mo-Bruk is a specialized waste management firm, and is well-positioned to benefit from these tailwinds, offering services that are increasingly in demand due to legal mandates for hazardous waste treatment. In addition, Poland has launched initiatives to remediate so-called “ecological bombs” (illegal toxic waste dumps), creating windfall opportunities for licensed firms like Mo-Bruk to secure sizable contracts. Therefore, we believe there are macro trends benefiting Mo-Bruk as we see environmental regulatory pressure, rising environmental awareness, and increasing waste volumes. That creates a favorable backdrop to support Mo-Bruk's revenue growth going forward.

1.1 Company overview

Mo-BRUK S.A. was founded in 1985 by Józef Mokrzycki and was in its early years focused on producing terrazzo products for its retail customers. In 1996, Mo-Bruk shifted to waste

management, setting the stage for rapid expansion and when public in 2010. The company has become the market leader in hazardous waste processing in Poland, operating across three complementary segments: (1) incineration of industrial and medical waste, a high-margin business essential for treating hazardous organic materials; (2) solidification and stabilization of inorganic waste, turning ashes and sludge into inert forms; and (3) production of Refuse-Derived Fuel (RDF), converting certain waste streams into alternative fuel.

Mo-Bruk has built a network of facilities concentrated in Poland's industrial regions, including incinerators in Karsy and Jedlicze, and stabilization/RDF plants in Niecew, Skarbimierz, and Walbrzych. This gives the company a logistical advantage in serving waste producers nationwide. See Facilities Map in Exhibit 1.

Capacity has grown steadily through consistent investments but most notably with the 2023 acquisition of EL-KAJO and PMD. EL-KAJO is active in hazardous and non-hazardous waste treatment, as well as building materials production, while PMD distributes those materials. The deal more than doubled Mo-Bruk's hazardous inorganic waste capacity to 240k tons, bringing total production capacity to 390k tons/year.

Mo-BRUK has a strong compliance track record and longstanding relationships with regulators, which likely support its ability to secure, maintain, and optimize these permits as capacity grows.

Furthermore, upon completing a PLN 210 million capex program by 2025, capacity will reach 500k tons. It is important to note, however, that Mo-BRUK operates under government-issued permits that cap the annual volume of waste each facility is allowed to process, permits that come with strict environmental protection requirements. Mo-Bruk has managed these constraints well, likely due to its long experience and good relationships with regulators, which support its ability to secure and maintain these permits as capacity growth.

1.2 Competitors

Mo-Bruk faces limited competition domestically, especially in its most critical segment – hazardous incineration. Aside from Mo-Bruk's own two incineration plants, Poland has only 6 other where only Veolia's Sarpi Dabrowa Gornicza facility rivals Mo-Bruk's capacity in hazardous waste incineration (DuckPond, 2024).

Competition is more pronounced in the stabilization and RDF segments, where large international players such as Suez and Remondis are active. However, these companies operate across a wider range of waste categories and municipal services, while Mo-BRUK

remains focused on their specialized niche. A key element of Mo-BRUK's competitive positioning is its integrated service offering, for example, a client that sends waste for incineration can also purchase byproducts such as the cement substitute, RDF, or electricity (fed into the grid) generated during processing. This closed-loop model, combined with long-term contracts, helps ensure stable demand. Additionally, the high technical and regulatory entry barriers in hazardous waste processing reinforce Mo-Bruk's competitive edge.

1.3 Financial Performance

Mo-BRUK has experienced strong growth in recent years, driven by higher waste-processing volumes and increased prices. Polish government increased landfill fees nearly 6 times between 2007 and 2019 to discourage dumping (Exhibit 2). Mo-Bruk has therefore been able to charge more for its waste-processing services – partly contributing to Mo-Bruk superior margins (see revenue and margin graph in Exhibit 3). From 2018 to 2021 Mo-Bruk benefitted from lucrative contracts for cleaning up ecological bombs which further fueled revenue growth.

In 2022 and 2023 sales dipped mainly due to a reduction in these eco-bomb contracts (a PLN 29 million decline in 2022 vs. 2021) and the PLN 210 million investment program to expand capacity, as previously mentioned. These factors reduced margins, which nevertheless remain above industry averages (Mo-Bruk Annual Report, 2022).

Furthermore, according to data of the Chief Inspectorate of Environmental Protection there are still about 800 sites classified as ecological bombs, Mo-BRUK estimated the total value of this market to be about PLN 15 billion (Mo-Bruk Annual Report, 2021).

In the first three quarters of 2024 revenues have rebounded, rising 18% year over year to 238k tons of processed waste (up from about 183k tons). The RDF segment posted a 40.27% increase, supported by higher prices and a 5% volume gain. The solidification and stabilization segment of inorganic waste rose 12.7%, supported by ramped-up of EL-KAJO capacity. The medical and hazardous waste segment grew 8.7%, lifted by higher prices and a contract for an eco-bomb cleanup. Overall costs rose 27.8% due to consolidating EL-KAJO and PMD, though excluding those acquisitions, cost growth was about 10.4%.

As a result of the EL-KAJO and PMD acquisitions, Mo-BRUK's financial debt increased significantly to PLN 142.3 million as of Q3 2024 (up from PLN 53.3 million in the 2023 annual report), including PLN 27.5 million related to the EL-KAJO earn-out. With PLN 54.9 million in cash, net financial debt stands at PLN 87.4 million, or 0.8x EBITDA (Mo-BRUK Q3, 2024). See Exhibit 12.

2. Strategic and Economic Rationale for the Investment

2.1 Why Mo-Bruk is an attractive target

Mo-BRUK has several qualities that make it an attractive LBO target. (1) Its high EBITDA margins result in strong free cash flow conversion. Even after some margin normalization post-2021, Mo-BRUK's EBITDA margin remains above 40%, leaving room to service potential debt. Cash flows are also relatively resilient, as waste management is a non-cyclical service, optimal to sustaining leverage.

(2) Mo-BRUK offers significant growth upside, as displayed by the Q3 2024 numbers above. The supply of hazardous ash and dust in Poland is projected to rise from 120k tons in 2023 to 250k tons by 2028, implying a 15.8% CAGR. Mo-BRUK's new capacity is well captured to this demand (Mo-BRUK Q3, 2024).

(3) Mo-BRUK has a very low leverage, with only a PLN 115 million bank loan. This provides an excellent starting point for optimizing the capital structure. The company has therefore significant headroom to take on additional debt, which could be used to obtain tax benefits by deducting the interest and lower the overall cost of capital

2.2 Value creation strategy

Mo-Bruk is considered a very well-run company based upon its historic performance and with favorable macro trends will much of our value creation builds upon these key factors. Our strategy therefore focuses on organic growth, operational improvements, financial structuring, and governance.

We believe it's important to ensure Mo-Bruk new capacity is quickly utilized the company take additional contracts, such as industrial clients and especially eco-bomb cleanups. Because of Mo-Bruk's unique niche with hazardous waste treatment we would further explore how pricing strategies can be leveraged to capture value from a strong demand.

While considering the growth potential operational improvements relates to maintain the high margins as we scale. For example, did Mo-Bruk invest in a 0,8 MW solar photovoltaic installation (completion is planned for late 2025) and plan two ORC turbines (2.1 MW) to generate power to the company operations. These projects will lower operating costs and provide a hedge against energy price volatility – an increasingly important factor given EU's unstable energy security and Poland's heavy reliance on coal, which may change as the EU ETS (Emissions Trading System) continues to roll out (EU, 2022). Nonetheless, due to these investments, Mo-Bruk should be able to significantly reduce the cost of

electricity, amounting to PLN 3.7 million in the first three quarters of 2024 (Mo-Bruk Q3 2024). We will encourage similar stabilizing effects and ROI-positive investments.

We'll also investigate buy-and-build opportunities to build on the acquisitions of EL-KAJO and PMD. If attractive targets emerge, they could help expand Mo-BRUK's service offering or geographic footprint. Our fund can support this through follow-on equity or by using the revolver, while staying within covenant limits. However, given the size of the recent acquisitions and the increased debt burden, these considerations are likely to be relevant 2-3 years for Mo-Bruk – although there's no plan for any additional large build-on acquisitions.

Furthermore, using more debt instead of excess equity creates interest tax savings, which can meaningfully increase returns. Using an Adjusted Present Value (APV) approach we can isolate the potential value of these financing benefit – we will expand on this later.

Lastly, we'll implement governance framework to help guide Mo-Bruk after the LBO. That means having 2-3 board seats reserved for our fund and have strict financial controls and reporting to ensure that our performance targets are met. In addition, a Management Incentive Plan (discussed in Deal Structure section) will be implemented to align the management team and the Mo-Bruk's interests; our PE fund (NHH, 2025).

2.3 Timing

We believe that this is the right time to carry out this transaction for two main reasons, one concerning the characteristics of Mo-BRUK's business and the second concerning the willingness of the current shareholders to accept our offer.

First, as mentioned earlier, Mo-BRUK operates in a stable sector and has managed to generate consistent and predictable cash flows in previous years. In today's uncertain environment, where potential de-globalization poses risks to many firms, investing in a domestic company in a geopolitically insulated sector offers valuable diversification and risk mitigation.

Secondly, over the past five years, Mo-BRUK's share performance has lagged behind the WIG40 index. Up until April 13, 2025, the mWIG40TR (including dividend) has increased 149,84 %, whereas Mo-BRUK's shares have risen about 75% during the same period. Mo-Bruks share price peaked at PLN 409 per share in the end of April 2021, and four years later the price is down almost -30% from this high. An offer of 405 PLN per share could therefore prove attractive to investors without having to bear the risk of waiting for the company's business plan to be implemented to revisit the same prices as in 2021.

2.4 Free Float and Ownership

At the time of Mo-Bruks IPO in 2010, it had a very limited free float of just 1.74%, with most shares held by the founding family (via Ginger Capital) and the investment fund Value FIZ. (Note, that in the beginning Mo-Bruk was listed on NewConnect Exchange which allowed such a low free-float). In 2020, both major shareholders sold large portions of their stakes, increasing the free float to approximately 50%. Following the full exit of Value FIZ in late 2021 and increased participation by institutional investors, the free float rose further (RLRinvestor, 2021). As of April 2025, they trade on the WSE exchange, and the free float is approximately 80%.

The increased free float and more diversified ownership structure suggest that it may now be more difficult for individual large shareholders to block our takeover bid – making this an attractive entry point. However, research by Zingales (1995) and Stoughton (1998) shows that ownership concentration can have both positive and negative effects on takeover premiums, highlighting the complexity of this dynamic (Ljungqvist, 2004).

3. Assumptions, Valuation and Return Analysis

Mo-Bruk is currently trading at 310,50 PLN per share, which equal a market value of 1 090 million PLN (approximately \$288m). Poland's median EBITDA market multiple is 7.73x (Aswath Damodaran, 2025) which is in line with Mo-Bruk's current multiple of 8x. We believe Mo-Bruk deserve a premium based on their attractive business model and believe a competitive purchase price would be a 30 % premium to the current share price (PLN 310,5) which would be around PLN 405 per share and receive a market value of 1 423 million PLN (approximately \$376m). The premium is under Kaplan's (1989) study which indicate the average buyout pays more than a 40 % premium – but we believe a 30 % would appropriate for Mo-Bruk and would increase their EBITDA multiple to 12x.

We have conducted a valuation analysis of Mo-BRUK to assess the justifiability of our offer price and to forecast expected investment returns.

3.1 Methodology

Given the capital structure will change and be more leveraged, we chose the Adjusted Present Value (APV) valuation method as a reality check to Mo-Bruks intrinsic value.

We forecasted Mo-BRUK's unlevered free cash flows (FCFF) over a 5-year projection period, based on operational assumptions (discussed below) and then discounted these using an unlevered cost of equity. To derive at the discount rate, we estimated Mo-BRUK's fundamental beta by doing a regression of the Mo-Bruk against the Warsaw Stock

Exchange Index (WIG), giving a raw beta of 0.44. Betas tend to revert toward the market average of 1.0 over time, and therefore we adjusted the raw beta upward to 0.81 (Blume, 1975). Given Mo-BRUK's low leverage, the unlevered beta is 0.74. Using Poland's risk-free rate, 5,85%, and Damodaran's country equity risk premium of 5.84%, we arrived at an unlevered cost of equity of 10.14%.

To quantify the value of the tax shield, we took the total interest expense times the 19% corporate tax rate – and discounted these at a risk-adjusted cost of debt. We applied a gradually decreasing risk premium to the cost of debt in line with Damodaran's methodology based on EBIT ICR. This approach captures the declining risk profile of the debt as financial leverage is reduced post-LBO.

We estimated terminal value at year 5 for both FCFF and tax shields, applying a conservative 2% perpetual growth rate in line with long-term inflation and GDP expectations. We used the same cost of debt and equity as in year 5, assuming the company stabilizes its capital structure at a conservative debt-to-EBITDA ratio of 1.5x. This approach should reflect the fact that our exit valuation (i.e. the tax shield) is based on the capital structure a new buyer would likely adopt after the acquisition (NHH, 2025).

3.2 Assumptions

The largest revenue driver for Mo-Bruk is the increase in waste volumes processed. Given large difference in volumes and turnover between the segments, we decided to isolate the hazardous waste segment in our calculations. It represents 37,6% of revenues but only 10% of the processed waste (Mo-BRUK Q3, 2024).

Hazardous waste segment: considering management's estimates, we assumed that Mo-BRUK will maintain its current market share as of 2023 (21%) and with an expected market size of 290k tons/year in 2029 (Mo-BRUK Annual Report, 2023), Mo-Bruk would need a capacity of 70k ton/year. Their current capacity is 35k ton/year which and we believe that the company can increase this capacity through M&A but mainly further investment in current facilities as they previously done. Capacity utilization in past years been extremely high (over 100%) and we assume this will normalize in the 85-86% range. Pricing has remained elevated mainly due to eco-bombs and we believe this will normalize and we assume a constant growth rate of 3% (9% between 2023-2024). However, given the high volatility of revenues from eco-bombs and the difficulty in forecasting the granting of new contracts, we chose to exclude them from our forecasts.

Stabilization and RDF segments: together it represents 62,4% of revenues and 90% of the processed waste – with stabilization somewhat larger. We assume a gradual increase of 25k tons/year from 2026 to 2029 and that utilization will rise from 85% in 2025 to 90% by 2029. This considering plants ramps ups and a high demand (thereby leveraging the EL-

KAJO acquisition). As for pricing, it's more volatile and more comparative so we conservatively assume average prices remain at the same. See calculations are in Exhibit 4.

COGS and D&A have remained stable, resulting in an estimated EBIT margin of around 40% and an EBITDA margin of 45-46%. Since we excluded eco-bombs, there is potential for further margin improvement.

We include the remaining capex for the expansion plan (through 2025), after which capex will normalize somewhat above historic levels considering upcoming capacity expansion, PLN 20-25m annually; 5 % of revenue. On top and if necessary, some investments could potentially be funded through the revolver or additional equity if justified, but these are not assumed in the base case. Poland's corporate tax rate (19%) is applied consistently, and working capital has remained stable; we use the historical average of 2.7% of sales. See the full assumptions and FCFF in Exhibit 5.

3.3 Valuation

Based on these assumptions, we estimate the APV-derived value of Mo-BRUK's equity at PLN 578.78 per share, implying a total market value of PLN 2 032 million (approximately \$507 million). This is 43% above our proposed offer price of PLN 405 indicating that our bid is under the intrinsic value but still within a sensible range. It also reflects a 90% premium over Mo-BRUK's current share price of PLN 310,5. We would view the APV result as confirmation that our offer is reasonable – not overpaying, while still offering an attractive premium to current shareholders. See Exhibit 5.1 for full APV valuation.

In terms of EBITDA multiple, it's a reality check that our 13x valuation is realistic (previously 8x) and thereby backing a premium to Poland's median EBITDA of 7.73x – as we earlier predicted.

3.4 Return Analysis

Using our base-case projections, we assume an entry multiple of 12x and a conservative exit at the same multiple 5-years later. This results in an estimated enterprise value of approximately PLN 2 956 million at exit. After deducting the Management Incentive Plan (MIP) and net debt, it results in an equity value of PLN 2 393 million. This implies a Multiple on Invested Capital (MOIC) of 3.7x and an IRR of 30.24%. This meets our funds targeted IRR of ≤30% and align with the typical LBO goal of around 30% (NHH, 2025). See calculations and values in Exhibit 6.

We also examined how sensitive our returns are to key assumptions, particularly the exit multiple and entry price (premium). Even in a downside scenario where the exit EBITDA multiple contracts to 10-11x, or if we had to pay a slightly higher entry price, our IRR

remains in the acceptable range around 26-28%. Conversely, a best-case scenario could be an exit to a strategic buyer at a higher multiple (more on this later), which could boost our IRR well above our original 30,24%. See sensitive analysis in Exhibit 7.

Additionally, consider the potential to pay dividends in years 4 and 5 (see covenants); rather than fully repaying debt immediately, earlier equity distributions could enhance the IRR. However, in this case, we assume a disciplined deleveraging strategy and prioritize full debt amortization.

4. Deal Structure and Financing

In structuring the Mo-Bruk buyout, our goals are to maximize value with leverage while also maintaining financial stability. Below we outline the transaction's sources and uses, the planned capital structure with attached terms, as well as the incentive arrangement.

4.1 Sources and Uses

Uses of funds will cover the full equity purchase price of PLN 1,423 million, which is assumed to be paid entirely to existing shareholders with no equity roll-over. Our financial due diligence indicates that the company's existing debt of PLN 115 million is a standard bank facility, with no restrictive covenants or change of control provisions, allowing for early repayment and no restriction to our ability to acquire Mo-Bruk – we will refinance this debt. The transaction also includes a transaction fee and a financing fee. The transaction fee, amounting to 2.5% of the enterprise value, is payable to the investment bank advising on the deal. The financing fee, equal to 2% of the total loan amount, is payable to our lenders. This amount to total uses of PLN 1,593 million.

As for the sources, the PLN 1,593 million required will be funded through a combination of equity and debt. Our private equity fund will contribute approximately PLN 638 million in equity, representing about 40% of the total capital. The remaining 60%, or PLN 900 million, will be financed through new debt issuance across multiple tranches, as outlined in detail below. The debt sizing is based on maintaining reasonable financial ratios. Specifically, we target an interest coverage ratio (ICR) of $\leq 2.0x$. Under this assumption, a debt level of 60%, or approximately 7.1x Debt/EBITDA, appears feasible. See sources and uses details in Exhibit 8.

Our capital structure is similar to market norms for LBOs. Research by Axelson et al. (2007) observed an average 70/30 debt-equity in many buyouts, so our structure is slightly more conservative on equity contribution, which is deliberate to ensure covenant headroom. More generally, the costs of financial distress can outweigh the incremental tax shield benefits for leveraged firms. However, as Mo-Bruk is deleveraging, there may be room for dividends without raising distress concerns. That said, as previously

mentioned, we remain committed to full amortization with Mo-Bruk's cash flows. (NHH, 2025). See the ICR ratios in Exhibit 6.

4.2 Debt Structure

Our proposed debt structure for the Mo-Bruk LBO aligns with industry practices and European market conventions (Axelson et al., 2007; 2013). The total debt is split into four tranches of debt: two senior loans, one subordinated loan and a Revolver.

Term Loan A is the largest loan, accounting for about 60% of the total debt financing. It is a senior secured term loan, first lien on assets. We anticipate an interest rate of approximately 7.8% on this tranche. This rate comes from a base rate (considered the 10-year Polish government bond at 5.85%) plus a spread of 197 basis points. The loan has a 6-year term, but we apply a 100% cash sweep and amortize the debts in a waterfall based upon their seniority. As leverage comes down, it's not unusual for the debt sweep % to decreased but we assumed it stays constant.

Term Loan B is a smaller senior tranche, is 15,6 % of total debt and carries a slightly higher interest rate of 7.94%. It has a spread of 210 basis points, reflecting its second in line seniority compared to Term Loan A. Term Loan B have a required amortization of 3%, while it otherwise will function as a bullet payment at maturity or exit, 5-years maturity (if not refinanced).

The subordinated debt represents 24% of total debt and have a higher interest rate of 10.31% due to subordinate to Term Loan A and B, second-lien loan. It has a spread of 447 basis points and have a bullet payment at maturity or exit, 6-years maturity (if not refinanced).

The Revolver is PLN 75 million with an interest rate of 8% with a spread of 216 basis points. It's not intended to fund the acquisition itself, but rather to provide liquidity for unexpected short-term events, any working capital swings or for small expansion projects. See the debt- structure and schedule in Exhibit 9 and 10.

4.3 Interest Rate Considerations

In addition to loan size and basis point estimates from Axelson's research, we calculated the expected interest rate by adding a risk premium to the 10-year Polish government bond yield (5.85%). The risk premium is derived from Aswath Damodaran's method, which is based on Mo-Bruk's average ICR of 2.7x over the first three years, and therefore: $5.85\% + 2.61\% = 8.46\%$. This serves as a reasonable proxy for the weighted average interest rate (8.44%). See the interest- rates and costs in Exhibit 9 and 11.

Furthermore, as a brief reality check, we compared the 10-year Polish government bond yield to the ICE BofA Euro High Yield Index Option-Adjusted Spread: $5.85\% - 3.29\% = 2.56\%$. Since our Damodaran risk premium is in a similar range (2.61%), this indicates the plausibility of our assumed interest rate.

Please note, in practice it would be more accurate to use the more volatile short-term Poland Three-Month Interbank Rate and then add the spread when setting the interest rate costs. Since our model is estimating a 5–6-year outcome, it has assumed that the 10-year yield would better reflect long-term expectations for interest rates going forward. For reference, the Poland Three-Month Interbank Rate currently trades around 5.85%, therefore the same as the 10-year rate.

4.4 Covenants

We assume the debt contains certain covenants that we must adhere to. (1) An ICR (EBITDA/Interest) covenant of $\geq 2x$, which protects the debt holders by ensuring that Mo-Bruk's earnings sufficiently cover its interest expenses. Our projections show an initial ICR of 2.03x, which is expected to improve over time as the debt is reduced (Debt-EBITDA improving from 5.2x to 1.83x year 5). Our assumption for next year is relatively certain, and with hedging in place (see more below), we should feel confident in Mo-Bruk's cash flows. Assumptions become more unpredictable as the years pass, but by then we expect to have significantly more covenant headroom. (See Exhibit 6 for the exact ICR each year.)

(2) A Restricted Payments covenant prohibiting dividends or other equity payouts for the first three years. This ensures that cash goes to debt repayment rather than shareholders, until the debt owners are comfortable. (3) Due to the scope of this paper, we settle for these two covenants.

4.5 Hedging and Risks

We plan to fix the interest rate on a portion of the debt to hedge the risk. Specifically, enter an interest rate swaps for Term Loan A for the first 3 years, effectively fixing 60% of the debt at 8.01% (including a 20-basis point premium on top of the current spread).

This shields us from rate hikes in the near term while allowing some benefit if rates fall since 40% remains floating – until the ICR strengthens and we can take more risk since we believe interest rates could fall.

Furthermore, we will confirm that Mo-Bruk maintains adequate insurance coverage to protect against any environmental liabilities and accidents.

4.6 Equity structure, Ownership and Governance

Post-transaction, the equity of Mo-Bruk will 95,5% be owned by our PE fund (and any co-investors) and 4.5% by management through the MIP. To start, we will technically own 100% of the shares, but we will allocate the 4.5% in the form of options to management that vest at exit.

The MIP itself is also dependent on the performance at exit, so the payout will occur only if these targets are met. In this case we assume management reaches these goals and the MIP are vested at the full 4,5% equity. The purpose of the MIP is to align management incentives with ours at the PE fund (skin in the game) – to increase the value of Mo-Bruk.

As for our PE fund equity, the equity investment is likely through a combination of fund capital and possibly a small co-investment by LPs. Although depending on our fund size.

After the LBO, our PE fund can as the 100% equity owner control the board of directors. Our goal is to remain Mo-Bruks management team at large and have 2-3 people on our team join. That plan somewhat hinges on the Family Mokrzycki attitude towards the acquisition. It's a friendly takeover if the board supports the offer and their 40 years in business could prove very valuable. Their commitment would be preferable all while it's they should not be seen irreplaceable – we believe it's possible to find exceptional talent through our extensive PE network.

5. Post-Investment Strategy

5.1 Fundamental Breakdown of Mo-Bruks Operations

After the acquisition, the focus will shift to strategic initiatives to grow EBITDA, improve efficiency, and effective governance to ensure Mo-Bruk moves towards the right direction. We believe that Mo-Bruk is already a well-managed company; thus, our approach is to support and enlarge the existing strategy instead of replacing it.

The core strategy can be summarized as expanding capacity to meet demand, maintaining technological and high service quality, and growing with the market. By committing to these goals, Mo-Bruk would position itself as a leader in industrial waste on a European scale.

Considering the strategy from a growth perspective, when Mo-bruk is adding more capacity such as the utilization with EL-KAJO and adding capacity to current locations we need to monitor the process for any key bottlenecks. This could for example be regulatory approvals where hands on with the regulators are necessary. The same would apply with lobbying for stricter environmental waste processes leading to more business for Mo-Bruk. That would also mean that after getting new capacity online we must ensure there

is a fast customer on-boarding process, and that the sales funnel is finetuned, and our pricing strategy is on point.

Ultimately, this boils down to fundamentally breaking down all of Mo-Bruk's key processes and identifying improvements that can enhance operations and build momentum to increase the company's value.

5.2 New Revenue Streams and Growth

Mo-Bruk could potentially expand vertically and offer services such as hazardous waste collection or environmental consulting on waste. This could leverage the company's existing competencies while also strengthening the Mo-Bruk brand and raising awareness of the importance of its business. While it would be difficult to achieve any significant impact on EBITDA or revenue within a short time frame (e.g., five years), it could serve as a strategic positioning move toward long-term value creation – and indirectly increase Mo-Bruk's valuation.

Additionally, if Mo-Bruk's supply were to outpace Poland's demand for waste management, the company could explore treating waste imported from neighboring countries. Countries where less developed waste technology or where processing is more expensive. This could potentially increase Mo-Bruk's margins, as it may still be more cost-effective for these countries to outsource processing to us rather than handle it domestically. We will examine the legal and economic feasibility of processing foreign waste as a potential growth opportunity.

5.3 Acquisitions

An additional method for generating value involves the implementation of a buy-and-build strategy. In this context, the fund can support the management team by providing expertise relevant to mergers and acquisitions.

To mitigate the risk associated with excessive leverage and to focus on the EL-KAJO acquisition the emphasize would be on smaller-scale acquisitions (as previously mentioned). Furthermore, by concentrating initially on the same niche markets in which Mo-Bruk is already active, the company can optimize the utilization of its existing production capacity, thereby enhancing operational efficiency and achieving economies of scale.

6. Exit Strategy and Timing

Our investment in Mo-Bruk has a well-defined exit strategy, and we have planned an exit in roughly five years, or around 2029, assuming an early close in 2025. By that time, we

should have had enough time to execute on our post-investment strategy to have capacity expansion, revenue growth, and optimized operations. We also believe an exit time of 5 years is deemed appropriate to have enough time to realize value while beyond that operations would be more difficult to optimize compared to current levels – therefore would 5 years strike the balance between value creation and return maximization.

The loans have a term period between 5–6 years. By year 5 much of the balance sheet has been deleveraged and the estimated net debt is PLN 383 million (PLN 900 million in year one). In regard to Mo-Bruks stable cash flows the refinancing risk would be limited.

6.1 Strategic Sale

The preferred route would be a strategic sale to a large waste-management group with or planned occupation in central and eastern Europe, e.g. Veolia, Remondis, or Suez. There are multiple reasons why this would be relevant; the difficulty of getting incineration permits, having modern incinerators, and creating a well-established client base. For a strategic acquirer these characteristics would give an immediate scaling effects and utilize logistics synergies – this can justify paying a premium. For example, combining Veolia's hazardous waste capacity with Mo-Bruk's could create a near-monopoly, increasing pricing power and synergies. Although we recognize that the Polish Competition Authority would have to approve such a deal in relation to Veolia, it highlights the possibilities. The best-case scenario would be up to 13- 14x EBITDA, compared to our base-case assumption of 12x (same as entry multiple).

6.2 Sale to Another PE or IPO

If a strategic buyer does not materialize, another route could be a secondary buyout – selling to another PE firm. As argued, Mo-Bruk presents an attractive business for PE firms or even an infrastructure fund looking for stable cash flow generation within a growing sector. Furthermore, these might see additional opportunities in areas we haven't pursued in depth. For example, international expansion or really expanding the buy-and-build process. Achieving a similar premium to a strategic sale would be optimal, although perhaps less likely – we expect the 12x entry/exit multiple.

If no appropriate buyer is found, there is also an opportunity for an IPO, provided market conditions are favorable. A listing would allow us to sell an initial stake at the offering and exit gradually, for example in year 6 or 7. Nevertheless, IPOs are generally considered to carry more timing and pricing risk, so a trade sale remains our preferred route.

6.3 Risks

A market risk that always will be present is if the overall market is down – essentially a recession or bear market. That could cause the valuation to compress and/or buyers would be scarcer. Due to Mo-Bruks defensive business it might still interest buyers even

in downturns. For example, is it not uncommon for infrastructure funds to invest during downturns. Also, there could be a possibility for us to extend our hold until markets improve, say year 6 or 7 and it would still be a reasonable timeframe for a PE investment (Bain, 2014).

In terms of regulatory change, we see that it a change, positive or negative, in regulation could affect the exit. For example, EU or Poland introduce stricter environmental laws it would benefit Mo-Bruk. Conversely, a less stringent policy's or if a new technology is introduced it could reduce Mo-Bruks long-term opportunities. We believe the second is more unlikely studying at other countries progression and with the EU ETS – although we observe regulatory trends closely.

7. Conclusions

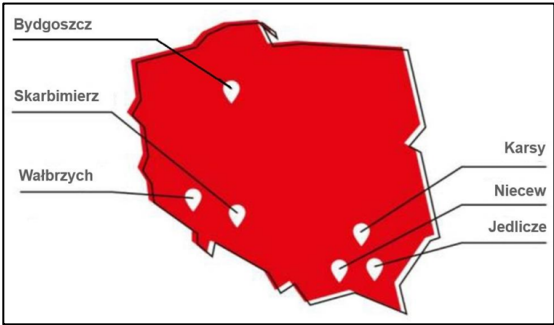
Mo-Bruk offers a unique combination of stable cash flows and regulatory tailwinds to fuel growth potential, while having low leverage – thereby making it an ideal LBO candidate.

With more stringent environmental rules by the EU and Poland, few players on the market give Mo-Bruk superior margins and a competitive moat. Our proposed PLN 405 per share offers a 30% premium to current shareholders and values the business at 12x EBITDA (LTM), while the APV still indicates an intrinsic upside of 43% from these levels. Financing the deal with 60% debt delivers a manageable 7x leverage ratio, adding tax shield benefits. Mo-Bruk's debt is reduced throughout our planned holding period (5 years) to <1.5x EBITDA, thereby providing covenant headroom and a low exit refinancing risk.

Under these assumptions, the LBO would yield a 3.8x MOIC and a 30.24% IRR – reaching our 30% IRR target, with sensitivity scenarios ranging between 26-28% IRR. A strategic sale to a larger waste-management player or a secondary buyout in 2029 is conservatively assumed to have the same entry-exit multiple of 12x, also offering potential for increased returns.

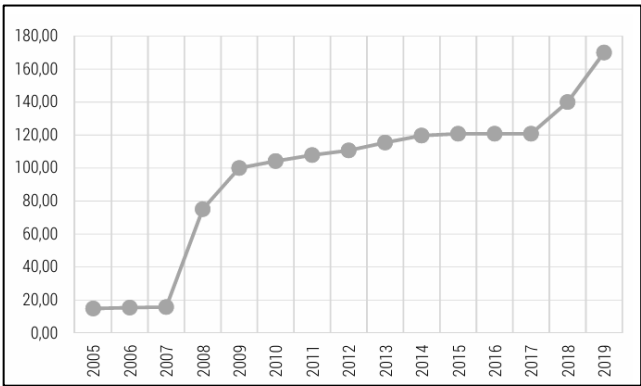
Considering these circumstances, Mo-Bruk presents an attractive opportunity to invest in a high-quality company at an attractive valuation.

Exhibit 1.



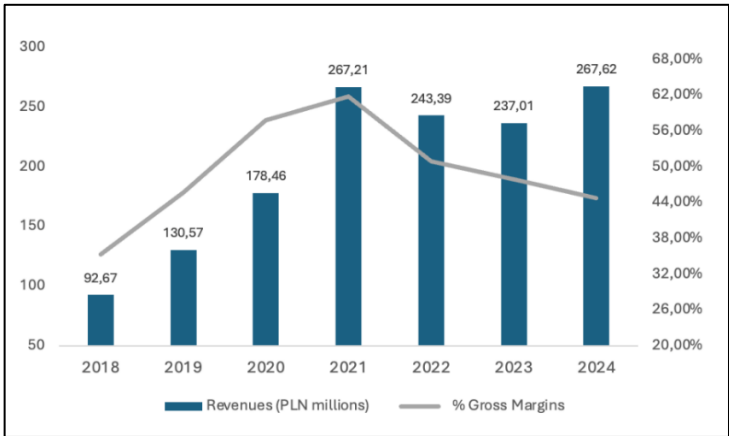
Facilities Map (Mo-BRUK Annual Report, 2023)

Exhibit 2.



Price per ton of waste (Malecki, 2020)

Exhibit 3.



Source: TIKR

Exhibit 4.

	1	2	3	4	5
Hazardous waste segment	2025E	2026E	2027E	2028E	2029E
Capacity (kton)	35	44	53	61	70
Utilization	85%	85%	86%	86%	86%
Waste Processed (kton)	29,8	37,3	44,9	52,4	60,0
Price/ Kton	3,58	3,68	3,79	3,91	4,03
Revenue	107	138	170	205	242
Stabilization and RDF segment					
Capacity (kton)	465	481	498	514	530
Utilization	85%	86%	87%	88%	90%
Waste Processed (kton)	395,3	413,9	432,8	452,1	477,0
Price/ Kton	0,57	0,57	0,57	0,57	0,57
Revenue	225	235	246	257	271
Tot. Capacity (kton)	500	525	550	575	600
Total Revenue	331	373	416	462	513

Revenue calculations

Exhibit 5.

Assumptions (blue)	2021	2022	2023	2024(E)	2025E	2026E	2027E	2028E	2029E
Revenue growth		-8,9%	-2,6%	21,5%	22,1%	11,8%	11,1%	10,4%	10,5%
Gross margin	61,8%	50,9%	47,9%	48,7%	46,9%	48,5%	48,7%	48,7%	48,7%
OpEx margin	7,2%	5,0%	7,5%	9,0%	7,2%	7,2%	7,2%	7,2%	7,2%
Tax rate	19,4%	18,9%	18,6%	18,6%	19,0%	19,0%	19,0%	19,0%	19,0%
EBITDA Calculation									
EBIT	146	112	96	115	140	163	181	200	221
D&A	8	8	20	12	17	19	21	23	26
EBITDA	154	119	116	126	157	181	202	223	247
EBITDA margins	57,5%	48,9%	48,9%	43,8%	44,5%	46,1%	46,3%	46,3%	46,3%
Operating Model	2021	2022	2023	2024(E)	2025E	2026E	2027E	2028E	2029E
Revenue	267	243	237	288	352	393	437	482	533
% growth		(8,9%)	(2,6%)	21,5%	22,1%	11,8%	11,1%	10,4%	10,5%
COGS	102	120	124	148	187	202	224	247	273
% of sales	38,2%	49,1%	52,1%	51,3%	53,1%	51,5%	51,3%	51,3%	51,3%
Gross Profit	165	124	113	140	165	191	213	235	259
% of sales	61,8%	50,9%	47,9%	48,7%	46,9%	48,5%	48,7%	48,7%	48,7%
OpEx	19	12	18	26	25	28	31	34	38
% of sales	7,2%	5,0%	7,5%	9,0%	7,2%	7,2%	7,2%	7,2%	7,2%
EBIT	146	112	96	115	140	163	181	200	221
% of sales	54,6%	45,9%	40,4%	39,8%	39,7%	41,3%	41,5%	41,5%	41,5%
(-) Interest Expense	2,18	0,48	1,44	4,99	76	72	67	59	50
Interest Income	0,08	2,34	3,30	1,13	0,5	0,5	0,5	0,5	0,5
EBT	148,3	114,4	100,6	120,6	65	91	115	142	172
% of sales	55,5%	47,0%	42,4%	41,9%	18,3%	23,1%	26,4%	29,3%	32,2%
(-) Taxes	29	22	19	18	12	17	22	27	33
% tax rate	19,4%	18,9%	18,6%	18,6%	19,0%	19,0%	19,0%	19,0%	19,0%
Net Income	177,1	136,1	119,3	138,5	52,3	73,6	93,5	114,6	138,9
% of sales	66,3%	55,9%	50,3%	48,1%	14,9%	18,7%	21,4%	23,8%	26,1%
Change in Net Working Capital	-14,9	5,5	27,1	7,8	9,5	10,6	11,8	13,1	14,4
% of sales	(5,6%)	2,3%	11,4%	2,7%	2,7%	2,7%	2,7%	2,7%	2,7%
D&A	7,6	7,5	20,1	11,6	16,8	18,8	20,9	23,1	25,5
% of sales	2,8%	3,1%	8,5%	4,8%	4,8%	4,8%	4,8%	4,8%	4,8%
CapEx	1,8	11,2	62,6	124,9	28,1	23,6	21,8	24,1	26,6
% of sales	0,7%	4,6%	26,4%	43,4%	8,0%	6,0%	5,0%	5,0%	5,0%

Operating Assumptions 2025-2029

Levered Free Cash Flow	2025E	2026E	2027E	2028E	2029E
Net Income	52	74	93	115	139
D&A	16,8	18,8	20,9	23,1	25,5
CapEx	28,1	23,6	21,8	24,1	26,6
Change in NWC	9,5	10,6	11,8	13,1	14,4
Mandatory Debt Repayments	4	4	4	4	4
Levered Free Cash Flow (Pre-revolver)	27	54	77	97	120
Revolver	0	0	0	0	0
Levered Free Cash Flow (Post-revolver)	27	54	77	97	120

Levered Free Cash Flows, FCFF

Exhibit 5.1.

Mo-Bruk SA	Previous report: Q3 2024					Discounting factor
		1	2	3	4	5
	2024 E	2025E	2026E	2027E	2028E	2029E
Revenue	288	352	393	437	482	533
% growth		22%	12%	6%	6%	6%
Operating Income (EBIT)	115	140	163	181	200	221
% of revenue		40%	41%	41%	41%	41%
(-) Taxes	18	12	17	22	27	33
% tax rate		19%	19%	19%	19%	19%
EBIAT (EBIT after tax)	97	128	145	160	173	189
(+) D&A		17	19	21	23	26
% of CAPX		5%	5%	5%	5%	5%
(-) CapEx		28	24	22	24	27
% of revenue		8%	6%	5%	5%	5%
Change in net working capital		10	11	12	13	14
% of revenue		3%	3%	3%	3%	3%
FCFF (unlevered, no interest deducted)		107	130	147	159	173
Unlevered Cost of Capital (tax shield not included)		10,14%	10,14%	10,14%	10,14%	10,14%
PV of FCFF		97	107	110	108	107
Interest cost		76	72	67	59	50
Tax shield		14	14	13	11	10
Cost of debt		8,32%	7,17%	6,85%	6,22%	5,71%
Pv of tax shield		13	12	10	9	7

APV valuation with unlevered CoC

Valuation	
Terminal value	2 170
PV of terminal value	1 339
PV of FCFF	529
PV of tax shield	52
Terminal value Ts	263
PV terminal value Ts	199
APV (EV)	2 119
Cash & cash equivalents	55
Debt	142
Equity value	2 032
Shares outstanding (m)	3,51
Price target	578,78 PLN
Reference price (offer)	405,00 PLN
Premium to the offer	43%
Current share price	305,00 PLN
Upside	273,78 PLN
Upside (%)	90%
Unlevered Cost of Capital:	10,14%
Terminal growth rate:	2,00%
Terminal values % of EV	75,61%

Unlevered Cost of Capital	
Tax rate	19%
Debt	142
Market cap	1 091
Debt/Equity Ratio	13%
Adjusted Beta	0,81
Unlevered Beta	0,74
Unlevered Cost of Equity	10,14%

Cost of Debt	2025	2026	2027	2028	2029
Long Term risk free rate	5,85%	5,85%	5,85%	5,85%	5,85%
EBIT	140	163	181	200	221
Interest costs	75,79	72,20	66,64	59,38	50,42
Interest coverage ratio	1,84	2,25	2,72	3,37	4,39
Spread (Risk premium)	4,42%	3,00%	2,61%	1,83%	1,20%
Cost of Debt before Tax	10,27%	8,85%	8,46%	7,68%	7,05%
Tax rate	19,00%	19,00%	19,00%	19,00%	19,00%
Cost of Debt after Tax	8,32%	7,17%	6,85%	6,22%	5,71%

CoD

Exhibit 6.

IRR					
EBITDA at Exit					247
Exit Multiple					12,0x
Enterprise Value					2 956
Net Debt					451
Management Incentive Program (4,5% MIP)					113
Sponsor Equity Value					2 393
Sponsor Equity at Entry					638
Multiple on Invested Capital (MOIC)					3,7x
IRR					30,24%
ICR (EBITDA)	2,07	2,51	3,04	3,76	4,90

Valuation; IRR, MOIC and ICR

Exhibit 7.

Sensitivity Table						
IRR						
Premium						
		24%	27%	30%	33%	36%
Exit multiple	10,0x	27,45%	26,00%	24,65%	23,38%	22,18%
	11,0x	30,43%	28,95%	27,57%	26,27%	25,05%
	12,0x	33,17%	31,66%	30,24%	28,92%	27,67%
	13,0x	35,69%	34,16%	32,72%	31,36%	30,09%
	14,0x	38,05%	36,48%	35,02%	33,64%	32,34%

Sensitivity Table

Exhibit 8.

Sources and Uses							
Sources				Uses			
	Amount	xEBITDA	% Capital		Amount	xEBITDA	% Capital
Revolver	0	0,0x	0%	Equity payment	1 423	11,3x	89%
Senior debt - PLN Term loan A	540	4,3x	34%	Debt refinancing	115	0,9x	7%
Senior debt - PLN Term loan B	140	1,1x	9%	Transaction fee	38	0,3x	2%
Subordinate debt - PLN Second Lien	220	1,7x	14%	Financing fees	18	0,1x	1%
Cash on hand	55	0,4x	3%				
Sponsor equity	638	5,1x	40%				
Total	1 593	12,6x	100%	Total	1 593	12,6x	100%

Sources and Uses

Exhibit 9.

Capital Structure							
	Amount	xEBITDA	Interest (%)	Ink. 3y. interest swap	Total debt (%)	Spread ex. swap 10y	Term
Revolver	0	0,0x	8,80%		0,00%	296	6 yrs
Senior debt - PLN Term loan A	540	4,3x	7,81%	8,01%	60,00%	197	6 yrs
Senior debt - PLN Term loan B	140	1,1x	7,94%		15,56%	210	5 yrs
Subordinate debt - PLN Second Lien	220	1,7x	10,31%		24,44%	447	6 yrs
Total	900	7,1x	8,44%		100,00%		

Capital structure

Exhibit 10.

Debt Schedule									
Debt Paydown	2021	2022	2023	2024(LTM)	2025E	2026E	2027E	2028E	2029E
Cash									
Beginning Balance					55	55	55	55	55
Inflow / (Outflow)					0	0	0	0	0
Ending Balance				55	55	55	55	55	55
Revolver									
Beginning Cash Balance					55	55	55	55	55
Minimum Cash					55	55	55	55	55
Beginning Excess Cash					0	0	0	0	0
Free Cash Flow Generated					27	54	77	97	120
Cash Available to Paydown / (Draw From) Revolver					27	54	77	97	120
Beginning Balance					0	0	0	0	0
Increase / (Decrease)					0	0	0	0	0
Ending Balance				0	0	0	0	0	0
Maximum Availability					75	75	75	75	75
Senior debt - PLN Term loan A									
Beginning Balance					540	513	459	382	285
Paydown					27	54	77	97	120
Ending Balance				540	513	459	382	285	165
Senior debt - PLN Term loan B									
Beginning Balance					140	136	132	128	124
Mandatory paydown					4	4	4	4	4
Paydown					0	0	0	0	0
Ending Balance				140	136	132	128	124	120
Subordinate debt - PLN Second Lien									
Beginning Balance					220	220	220	220	220
Mandatory paydown					0	0	0	0	0
Paydown					0	0	0	0	0
Ending Balance				220	220	220	220	220	220
Total Debt									
Beginning Balance					900	869	810	730	629
Paydown					31	58	81	101	123
Ending Balance				900	869	810	730	629	506
CHECK					0,0000	0,0000	0,0000	0,0000	0,0000

Debt Schedule

Exhibit 11.

Interest	2021	2022	2023	2024(LTM)	2025E	2026E	2027E	2028E	2029E
Cash	0,08	2,34	3,3	1,13	0,5	0,5	0,5	0,5	0,5
Interest income rate				2,1%	1,0%	1,0%	1,0%	1,0%	1,0%
Revolver					0	0	0	0	0
Interest rate					8,80%	8,8%	8,8%	8,8%	8,8%
Senior debt - PLN Term loan A					42	39	34	27	18
Interest rate					8,0%	8,0%	8,0%	8,0%	8,0%
Senior debt - PLN Term loan B					11	11	10	10	10
Interest rate					7,9%	7,9%	7,9%	7,9%	7,9%
Subordinate debt - PLN Second Lien					23	23	23	23	23
Interest rate					10,3%	10,3%	10,3%	10,3%	10,3%
Total interest expense					76	72	67	59	50
Blended interest rate					8,6 %	8,6 %	8,7 %	8,7 %	8,9 %

Interest costs

1. We assume that amortization occurs throughout the year and have therefore used the average of the beginning and ending debt balances to calculate each year's interest cost.
2. We used Excel's iterative calculations, as interest affects net income, which in turn affects levered free cash flow, which then affects debt paydown – which effectively goes back to interest costs.

Exhibit 12.

	2020-12-31	2021-12-31	2022-12-31	2023-12-31	LTM
Total Equity	162,57	206,77	188,27	221,79	230,57
Long term debt, ink leases	26,79	28,87	22,9	60,74	135,61
Debt-equity	16%	14%	12%	27%	59%

Historic leverage

Sources

Axelson, U., Jenkinson, T., Strömberg, P. & Weisbach, M. (2013) “*Borrow Cheap, Buy High? The Determinants of Leverage and Pricing in Buyouts*”, Journal of Finance, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1596019 (Accessed April 05, 2025).

Bain & Company (2014), *Global Private Equity Report 2014*, https://www.bain.com/contentassets/19a87eaf7da54f4090613772d7c10cd1/report_global_private_equity_report_2014.pdf (Accessed April 10, 2025).

Blume, M. (1975) *Betas and Their Regression Tendencies*, Journal of Finance 30, https://www.jstor.org/stable/pdf/2326858.pdf?refreqid=fastly-default%3A69db140617d7fb236ae85300e4b3992c&ab_segments=&initiator=recommender&acceptTC=1 (Accessed April 05, 2025).

Damodaran, A. (2025) *Country Risk Premiums and Cost-of-Capital Data*, https://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/countrystats.html (Accessed April 05, 2025).

DuckPondVR (2024) “*Mo-Bruk: Hidden Champion in Polish Waste*”, Substack, <https://duckpondvr.substack.com/p/mo-bruk> (Accessed April 10, 2025).

European Commission (2022) “*EU ETS: Slight Up-turn in 2022 Emissions*”, https://climate.ec.europa.eu/news-your-voice/news/slight-upturn-2022-ets-emissions-due-energy-crisis-and-rebound-aviation-declining-trend-maintained-2023-04-24_en (Accessed April 15, 2025).

Kirkland & Ellis LLP (2004) “*Divide and Conquer: Why and How to Bifurcate Your LBO Financing*”, <https://www.kirkland.com/publications/article/2004/03/divide-and-conquer-why-and-how-to-bifurcate-your-l> (Accessed April 09, 2025).

Ljungqvist, A. (2004) “*IPO Underpricing, Handbook of Corporate Finance: Empirical Corporate Finance*”, (Provided by NHH) (Accessed April 10, 2025).

Stoughton, N. & Zechner, J. (1998) “*IPO Mechanisms, Monitoring and Ownership Structure*”, *Journal of Financial Economics*.

Zingales, L. (1995) “*Insider Ownership and the Decision to Go Public*”, *Review of Economic Studies*.

Mo-Bruk S.A. (2023) *Annual Report 2022*. <https://mobruk.pl/wp-content/uploads/2023/04/PresentationFY222.pdf> (Accessed March 28, 2025).

Mo-Bruk S.A. (2024a) *Group Management Report Q1–Q3 2024*, <https://mobruk.pl/wp-content/uploads/2024/08/MOBRUKGroupreportonactivities3.6.224EN.pdf> (Accessed March 28, 2025).

NHH (2025) *Lecture 5: “Leveraged Buyouts”*, Norwegian School of Economics.

Polish Chief Inspectorate of Environmental Protection (2021) “*Hazardous Waste Statistics 2010–2020*”, https://www.e3s-conferences.org/articles/e3sconf/abs/2021/99/e3sconf_mpsu2021_00027/e3sconf_mpsu2021_00027.html (Accessed April 09, 2025).

RLR Investor (2021) “*Mo-Bruk SA – Shareholder Changes*”. <https://www.rlrinvestor.com/en/mobruk-sa-mbr> (Accessed April 10, 2025).

TIKR (2025) Financial database, <https://www.tikr.com> (Accessed March 27, 2025).