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Private Equity Challenge
Potential Leveraged Buyout of Nexus

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Abstract

This work seeks to assess Nexus AG from both commercial and financial perspectives as a plausible candidate for a leveraged buyout transaction. Through the analysis, it becomes evident that Nexus AG is a compelling private equity target, given the favorable outlook in strategic and financial dimensions. The valuation of Nexus resulted in approximately, primarily influenced by utilising multiples derived from comparable companies and transactions. Through value creation strategies like cloud transformation and international expansion, this work shows that the buyout of Nexus could result in a MOIC of 4.0x and an IRR of 33.0%.

Keywords

Private Equity, Leveraged Buyout, Healthcare Software, Nexus AG, Cloud Transformation

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Section A – Investment committee paper – Group work

1. Company overview

Nexus AG is a German software developer dedicated to creating, selling, and servicing software solutions for the international healthcare market. The firm's primary offering, the Hospital Information System (NEXUS / HIS), along with integrated diagnostic modules, presents a diverse product range catering to the functional needs of hospitals, psychiatric institutions, rehabilitation facilities, and diagnostic centres. Employing approximately 1,700 individuals, Nexus operates in seven European countries with its own sites and extends its services to customers in 23 countries through certified dealers. The company's key personnel include CEO Dr Ingo Behrendt, CSO Ralf Heilig, and CDO Edgar Kuner. The modular product structure allows for a fully customised software solution, beginning with a base information system and adding modular software based on client requirements. The company also engages in the development of specialised software. Nexus offers a portfolio of over 2,000 tailored software solutions licensed to the market. The company possesses a network of 40 subsidiaries in Europe and one in the US. The second aspect of Nexus's business model involves IT services and software maintenance, encompassing installation, maintenance, IT servicing, and consulting. A smaller portion of the business involves supplying third-party hardware and infrastructure components such as PCs, servers, and monitors. By combining these activities, Nexus has emerged as a leader in the European healthcare software industry. The company recorded strong top-line growth over the past years, with a significant increase in revenue from €112.5m in 2016 to €211.5m in 2022. At the same time, Nexus' EBITDA margin grew from 18.7% to 21.0% throughout the period, mainly due to operational improvements and higher productivity, resulting in a strong EBITDA of €29.4m in 2022. The company's business model is highly cash-generative, with a cash conversion ratio of at least 73% throughout recent years, driven by moderate working capital requirements and low maintenance capex needs. Free cash flow was

somewhat volatile due to M&A investments and continued efforts of debt amortization.

2. Business model

Nexus generates value through its three segments: software license sales (18%), maintenance and IT consulting services (76%), and, finally, hardware deliveries (6%). Through its license sales segment, Nexus sells license contracts to worldwide healthcare providers like hospitals and clinics, which gives them the right to use the software for an undetermined amount of time. The base contract includes the software customisation, the software installation on-premise, and a maintenance and update service, which the client pays at the time of the update/maintenance. The unique modular offer of Nexus consists of many self-developed add-on sales in addition to the main information software, all compatible with each other. Revenues are generated through a one-time license sale, granting clients the long-term right to use the software. In addition to the base offering, Nexus also offers its clients (1) the option to operate the information software remotely for them using the Nexus One Cloud system through a subscription model, which accounts only for a small fraction of Nexus business, (2) IT consulting services such as training, support or projects development, (3) self-developed specialised modules compatible with a third party HIS providers and (4) the re-sale and delivery of third-party hardware like computers.

3. M&A activity over the past years

Nexus has been active in M&A activity with more than 26 acquisitions in the past seven years and an inorganic revenue of more than €3.0m since 2018, peaking at €7.9m in 2021. The robust track record reflects the organisation's strategic acquisition expertise and an understanding of market dynamics. This supports the assumption that Nexus AG could be an excellent platform for add-on acquisitions. The acquisitions range from a broad spectrum of different sizes, stages of companies' lifecycle, specialisations, and countries, underscoring the organisation's diverse and adaptive approach to growth. Despite the company's remarkable success in M&A activities,

Nexus AG's geographical reach appears somewhat concentrated. Most of its subsidiaries are within the DACH region, with over half in Germany. While this regional focus has advantages, deepening market penetration and fostering relationships, it poses geographic expansion and diversification challenges.

4. Market overview

The healthcare IT market is a rapidly growing sector, marked by the integration of advanced information technology into healthcare operations. Currently, this market is on a trajectory of substantial growth, with projections indicating a potential size of €1,096.5bn and an annual growth rate (CAGR) of 19.8% over the next five years. This market is segmented into five critical areas: Hospital Information Systems (HIS) (CAGR 7.0%), Enterprise Resource Planning (ERP) solutions (6.2%), functional (19.3%), clinical, and ambulatory software. HIS solutions, crucial for managing both clinical and administrative data, are being enhanced by artificial intelligence (AI) and machine learning for predictive analytics and cybersecurity enhancements. ERP solutions, vital for operational excellence in healthcare institutions, are increasingly cloud-based, offering continuous monitoring and optimization of workflows. The functional software segment, focusing on the Internet of Things (IoT) and connected devices, is revolutionizing diagnostics and patient management through automation and real-time data sharing. Several factors are driving this market's growth. Government initiatives, technological advancements, and evolving healthcare practices play a significant role. There is a growing need for secure patient communication and effective prescription management, necessitating robust IT infrastructures. In Europe, the German Hospital Future Act and the French "Ma Santé" program are notable examples of legislation fostering market growth by allocating substantial funds for healthcare digitalization. Companies like SAP and Oracle Cerner are realigning their healthcare IT portfolios, creating new opportunities for market penetration and expansion. Among these, Nexus AG stands out for its integrated solutions across HIS, ERP, and functional

software segments. With a substantial market share, particularly in the DACH region, Nexus competes effectively against firms like Dedalus and CompuGroup by leveraging its comprehensive product suite. The future of the healthcare IT market is set up for continued growth, driven by technological innovations and regulatory support. For leaders like Nexus, adapting to market trends, such as the withdrawal of SAP's IS-H software from the healthcare market, and capitalizing on regulatory changes and advancements in cloud computing and IoT will be crucial. The ongoing need for innovative, patient-centered care solutions will propel market expansion, offering significant opportunities for companies positioned to meet these evolving demands.

5. Valuation

For the valuation of Nexus, two main methods were employed: multiples valuation (specifically EV/EBITDA, EV/revenue, and EV/EBIT) and the discounted cash flow (DCF) analysis. In the multiple valuation, EV/EBITDA played a pivotal role, contributing 60% to the overall valuation, while the remaining 40% was assigned to EV/revenue and EV/EBIT. For the comparable company analysis (CCA), the median multiples were 1.2x for EV/revenue, 9.2x for EV/EBITDA, and 13.9x for EV/EBIT. The comparable transaction analysis (CTA) focused on EV/EBITDA (60%) and EV/revenue (40%), resulting in multiples of 21.9x and 4.4x, respectively. With regard to the DCF analysis, the authors forecasted the unlevered free cash flows and computed a weighted average cost of capital (WACC) of 8.70% through the application of the capital asset pricing model. For the terminal value, a 2.1% perpetual growth rate was assumed, and an exit multiple of 15.6x was used based on the average of comparable transactions and trading multiples. The Gordon growth method contributed 30%, whereas 70% was allocated to the exit multiple method, leading to a DCF valuation of €1,395.8m (27.0x EV/EBITDA). The final valuation combined the three methods, assigning weights of 40% to both CCA and CTA and 20% to the DCF. The resulting valuation for Nexus was €886.6m. It

was subsequently presented in a valuation football field, along with the 25th and 75th percentiles of each method to display a valuation range. The authors deemed the final enterprise value reasonable, with strong historical performance, favourable market conditions, and positive future prospects as contributing factors.

6. Investment thesis and value creation

Nexus AG is an attractive target for many reasons. It is well-positioned in the market and has shown stable margins and growth in the past years. Nexus, a leader in specialized diagnostics solutions, is strategically positioned in the growing European healthcare technology sector. With the broadest product portfolio, Nexus's management in 2022 anticipated an 8-9% organic growth rate until 2026, driven by hospitals' increasing demand for efficiency and quality care. The company's unique market position and potential for scalability set the stage for improved margins and a potential transition to a SaaS Cloud business model. Nexus's commitment to ESG initiatives aligns with evolving regulatory landscapes, enhancing its competitive edge. Financially, Nexus's relatively low debt level compared to its peers, with only €8.7m in long-term borrowings while maintaining its cash and cash equivalents account at €20m in 2022, makes the company an ideal candidate for a leveraged buyout (LBO). Government subsidies, particularly in Germany, further bolster Nexus, providing a solid foundation for sustained growth. After analyzing Nexus's current business model and its embedded value drivers, three strategic initiatives were identified to boost returns. These include implementing cloud deployment and transitioning to a SaaS model. In addition, the business plan involves targeted expansion in Austria by leveraging existing subsidiaries and increasing Nexus's market share in France through an internationalization strategy.

6.1 Cloud transformation

Nexus primarily relies on an on-premises model for its software solutions, hosting them at clients' sites. However, evolving market dynamics, particularly in healthcare, indicate a

diminishing relevance of on-premises deployment driven by regulatory changes. Increasing patient numbers, stricter data privacy regulations, and growing workloads necessitate a shift to cloud solutions. The adoption of cloud systems for data storage and information system operations can enhance data security, reduce costs, and offer operational efficiencies. This trend aligns with initiatives led by the Austrian and French governments. In the European healthcare market, cloud deployment contributed over €63.3bn in 2023 and is expected to grow at a CAGR of 18.1% to reach €145.5bn by 2028, presenting substantial revenue potential for Nexus. While Nexus currently provides remote operation of clients' information systems through its cloud, it is acknowledged that these services need optimisation and expansion to accommodate all existing on-premises clients. To attract clients favoring cloud deployment, it is planned to enhance Nexus's cloud platform infrastructure and transition to a SaaS model. This strategic shift aims to capitalise on recurring revenue and increased operational efficiency, anticipating compensatory reductions in on-premises model costs. The transition is expected to generate additional cash flow, with projected increases in customer adoption and revenue growth. Although a slight margin pressure may arise due to higher staff costs for uninterrupted support, long-term benefits are expected to outweigh potential challenges. The two-year implementation phase will involve migrating existing clients progressively to the cloud passing on associated costs to clients. Leveraging expertise from the PCS add-on, specialising in cloud technology, Nexus aims to mitigate risks and expedite deployment.

6.2 Buy-and-build strategy

Twelve potential add-on targets have been assessed, with a focus on strategic fit and potential synergies. Prioritizing these targets based on strategic alignment, Nexus has identified Professional Clinical Software GmbH (PCS) as a standout choice for its first add-on acquisition. With 30 years of expertise in healthcare software solutions, PCS aligns with Nexus's expansion goals. The HIS market in Austria, with an expected CAGR of 15% from 2024 to 2028, presents

a lucrative opportunity for Nexus. The company could strategically prioritize Austria for immediate market share and revenue growth by leveraging its existing network and subsidiaries across Austria and Switzerland. The evaluation of potential add-ons considers both strategic and financial aspects. Essential criteria include the compatibility of product offerings with Nexus's portfolio and the established presence and profitability in Austria. Setting a threshold of a minimum €5.0m in EBITDA and a minimum margin of 10%, Nexus ensures that selected companies are financially robust. PCS emerges as an ideal choice, not only meeting but exceeding these criteria. With a product range encompassing hospital information systems, imaging solutions, and unique clinical applications, PCS offers Nexus a pathway to increased market share and diversified offerings in Austria. The integration of PCS aligns with Nexus's strategy, emphasizing a robust buy-and-build approach. The investment rationale for acquiring PCS is multifaceted. Foremost is the prospect of rapidly increasing Nexus's market share in Austria, capitalizing on the growing HIS market. The acquisition is anticipated to create synergies that drive efficiency and reduce duplicated overheads, generating economies of scope. The infusion of PCS's expertise in cloud development, combined with its proficiency in functional and clinical healthcare areas, positions Nexus for enhanced competitiveness. Financing the acquisition with a balanced mix of debt and equity underscores Nexus's commitment to a prudent financial strategy. Notably, the divestment decision by PCS's previous shareholder, GPI Group, would align with its broader shift towards the Italian and US markets. As PCS integrates into Nexus, the focus remains on rapid deployment to capture the dynamic Austrian HIS market. While full integration is envisioned, PCS retains a high level of autonomy in strategy implementation, recognizing the critical importance of its market knowledge and skilled workforce to the success of Nexus's buy-and-build strategy in Austria.

6.3 Internationalization

To enhance its global presence and navigate potential regional economic fluctuations, Nexus should consider strategic acquisitions beyond the current DACH stronghold to expand into new markets. By diversifying its geographic footprint, Nexus AG could strengthen its resilience and capitalise on emerging opportunities in different international markets. This approach aligns with the company's demonstrated capability in successful M&A activities. It also slightly changes its geographic focus on its previous inorganic growth strategy. Maincare Solutions would be the first acquisition for this strategy in 2025, and Visiodent SA would be the second acquisition in 2026. Nexus AG's primary market is the DACH region. France contributed a modest 3.4% to the total revenue in 2022, ranking it the fifth most significant country in Nexus AG's portfolio. Sales in France increased substantially by 11.5% in the first half of 2023 compared to the previous year's period. Consequently, Nexus AG is well-positioned to leverage its established customer base and existing client relationships. Moreover, the commitment of two top executives to this region and two subsidiary companies within France equips Nexus AG with substantial market insight and expertise. This local presence and knowledge base are advantageous for streamlining and accelerating the integration of acquisitions. The French healthcare market has unique characteristics, and its public sector invests significant amounts in healthcare. In fact, the French government is focused on improving the healthcare system, and the newly introduced bill "Ségur de la Santé" aims to make medical support more accessible, increase collaboration between health practitioners, and enhance patients' experience in the medical sector. To achieve these goals, the government is investing €2.0bn over three years. This investment program puts pressure on healthcare providers to prioritise digitalisation and technological advancements. (Ministère de la Santé et de la prévention 2023). In 2025, it is planned to make a significant move by acquiring Maincare Solutions, a renowned French company specialising in electronic patient records, hospital administration,

interoperability, and telemedicine technologies. This acquisition is a strategic step for Nexus, as Maincare Solutions provides a comprehensive hospital information system that aligns well with Nexus's existing offerings. The acquisition of Maincare Solutions supports the strategic expansion into the French healthcare market. It will strengthen Nexus's presence in France, enhance its bargaining power due to increased size and network, and create opportunities to access new customer segments within the French healthcare industry. The strategy aims to acquire Visident SA in 2026, a French company with expertise in designing digital dental imaging and radiology systems, as well as cloud-based management platform software for dental clinics. The company's administrative support software solution is marketed as a SaaS. Given Visident's substantial experience in the dental market, the acquisition will enhance Nexus's position in this sector and expand its reach in the broader healthcare sector. It offers avenues for further expansion in the niche, shared product features, market insights, customer base expansion, and access to skilled professionals with dental expertise in the French market. Additionally, the acquisition could prove advantageous for Nexus by securing the company at a lower multiple compared to Nexus's current valuation.

7. Acquisitions agenda

In executing the buy-and-build strategies, a planned phased acquisition approach targets twelve potential companies, emphasising Priority 1 entities – PCS, Maincare, and Visident. The acquisition schedule unfolds as follows. PCS's planned acquisition date is in January 2024 at a multiple of 15.7x. Cross-sectional teams will seamlessly transition both Nexus and PCS to a Cloud SaaS model, leveraging PCS's existing cloud operations. Post-acquisition, the aim is to expand the clinical and functional business by capitalising on PCS's specialised expertise. Maincare will be acquired at the same time at a multiple of 9.4x. Commencing Cloud deployment from June onwards, the expertise of Nexus and PCS cloud teams will be utilised to integrate standardised technology within Maincare. The growth strategy includes market

consolidation in Austria and strategic internationalisation in the French markets. Visiodent's acquisition is planned for January 2026 at an EBITDA entry multiple of 8.2x. Initiating cloud deployment in April will draw from the experience gained in Maincare. The designated goal is rapid expansion into the dental software market, enhancing the overall market presence of the company. The value creation and synergies approach encompasses horizontal expansion through the acquisition of healthcare software providers and vertical integration, such as strengthening the clinical and functional business with PCS and venturing into the dental software market with Visiodent. A robust financial strategy is central to the entry conditions, defining acquisition multiples through comprehensive valuation processes, averaging 11.1x. Financing is structured through a mix of acquisition facilities (€113.8m), balance sheet cash (€16.4m), and additional fund equity (€97.4m), with a total financial commitment for add-ons amounting to €227.6m. Operational enhancements are integral to the strategy. Anticipating synergies playing a pivotal role, elevating EBITDA margins where necessary, the EBITDA margin scenario has been conservatively modelled to guide value creation projections. The buy-and-build strategy is poised to fuel strategic growth, fostering synergies across the expanding portfolio and ensuring a phased, sustainable approach to integration and financial management for sustained success.

8. Business plan

The business plan for Nexus is a comprehensive strategy to transform the company's revenue streams and market position through a transition to a Software-as-a-Service (SaaS) model and international expansion. In 2023, Nexus anticipates net revenue of €232.1m, based on historical growth and current reports. The revenue stream is currently combined with an assumed split of services, maintenance, licences, SaaS, and deliveries, which is reflective of industry norms. However, license sales are projected to phase out by 2026 as the SaaS model becomes the primary business focus, starting in 2024. The shift to SaaS is expected to result in reduced

maintenance revenue as it gets integrated into the SaaS offerings. Nevertheless, services revenue should increase as customers require more customized support for the interoperability of Nexus's software solutions. Concurrently, hardware sales will align with market growth rates as the focus shifts to a subscription-based model. The introduction of the SaaS model aims to minimize upfront payments for clients, thus facilitating more accurate software expense planning and enhancing customer retention. This strategy is projected to boost recurring revenue from 30% in 2023 to 47% in 2028. Consequently, Nexus's revenue CAGR is expected to surge to 24.1%, bolstered by a strategic M&A approach and a persistent demand for its services, culminating in revenues of €683.9m by the end of the holding period. Geographically, Nexus plans to diversify to reduce reliance on the German market, especially considering the expected cessation of digitalization subsidies by 2025. Despite this risk, the forecast is optimistic about continued growth in Germany, supported by expert opinions and industry reports. Target markets for organic growth include Switzerland and Austria, where SAP and Cerner's withdrawal presents a substantial market opportunity. Nexus aims to capture an annual market share increase of 0.9% in Switzerland and 1.5% in Austria. In France, growth is anticipated through strategic acquisitions. The operational forecast indicates a positive trajectory, with a reduction in development costs due to standardization across Europe, streamlined administrative expenses through headcount reductions, and stable operating expenses. EBITDA margins are expected to improve through enhanced efficiency and synergy from acquisitions. A consistent EBITDA growth is projected, from €51.7m in 2023 to €166.7m in 2028. This growth reflects strategic pivots, such as the capitalization of development costs and the reduction of license-based revenues in favour of the more sustainable SaaS model. To conclude, Nexus's business plan is geared towards establishing the company as a European leader in healthcare software through cloud transformation, SaaS conversion, and

internationalization, resulting in a well-diversified revenue structure and improved profitability over the forecast period.

9. LBO

The financing for Nexus's Leveraged Buyout (LBO) is carefully structured, comprising a total capital injection of €928.8m. This sum is segmented between equity and debt based on the current debt market accessibility and maximization of fund returns. The equity portion amounts to €515.5m, of which the sponsoring entity provides a substantial subordinated loan of €413.3m. Additionally, the sponsor and Nexus's management team also contribute to the equity with common stock investments of €24.0m and €6.0m, respectively. On the debt front, the structure is diverse and aligned with existing market trends, expert insights, and strategic assumptions. The composition includes Term Loan A, Term Loan B, Term Loan C, Mezzanine Debt, and an Acquisition Facility, cumulatively amounting to €413.3m. This represents 44.5% of the total funding sources and corresponds to an 8.0x EBITDA leverage ratio. The debt instruments' interest rates are thoughtfully benchmarked against the 5-year EURIBOR swap rate. The total uses of the funds are calculated at €928.8m, enveloping the enterprise value of €886.6m, a stipulated minimum cash reserve of €20.0m, and transaction fees totalling €22.2 m. The enterprise value itself is a result of an EBITDA multiple analysis and a DCF analysis, with the EBITDA for the year 2023 projected at €51.7m and valued at an EV/EBITDA multiple of 17.2x. In a reassuring financial position for 2023, Nexus is anticipated to maintain a net cash-positive status, with its cash and cash equivalents surpassing total debt and other debt-like obligations by €69.6m. The transaction fees, pegged at 2.5% of the enterprise value, are broken down into sponsor and M&A advisory fees at 1%, due diligence costs at 0.75%, and arrangement fees at 0.75%. These fees are standard for transactions of such magnitude and complexity, ensuring that all due diligence and financing arrangements are conducted thoroughly and strategically. Regarding covenants, Nexus AG exhibits favorable financial

health post-LBO. The net debt-to-EBITDA ratio, with a headroom between 19.8% and 24.5%, ensures robust debt coverage. The Debt Service Coverage Ratio consistently exceeds the minimum threshold of 1.0x, affirming Nexus's liquidity and ability to settle liabilities. Interest coverage, with a minimum headroom of 19.8% in 2024 indicates preparedness for meeting debt and financial obligations. For the debt repayment, the conservative scenario aligns with Nexus's financial capabilities, with anticipated cumulative debt repayment of €144.7m and cumulative cash interest of €162.0m from 2024 to 2028, ensuring efficient debt management. Despite debt servicing, substantial free cash flow remains accessible annually, providing resources for sustained growth and potential investments. In conclusion, Nexus AG emerges as financially robust, adept at meeting obligations, maintaining liquidity, and efficiently managing debt repayment throughout the LBO holding period.

10. Exit and returns

The exit process for Nexus AG, as outlined in the Investment Case, forecasts robust returns for institutional investors and management by 2028. Institutional investors anticipate a 4.0x MOIC with a corresponding IRR of 33.0%, while management expects a MOIC of 68.4x and an IRR of 132.8%. The total value creation at exit amounts to €2,361.8m, driven by market demand, government incentives, and strategic shifts. The value creation in Nexus's LBO generated by revenue growth consists of a substantial €1,078.2 m, driven by strategic acquisitions and operational enhancements. EBITDA margin expansion contributes by €413.3 m, showcasing a commendable MOIC of 0.81x as Nexus's cash-generative model foresees strong cash generation. Over the holding period, cash generation comprises 7.8% of total value creation, at €184.8 m. Meanwhile, multiple arbitrage contributed by €260.9m thanks to lower EV/EBITDA multiples in add-on acquisitions. Finally, the synergies contribute by €424.7 m. Nexus's exit strategy involves selling to a healthcare software solutions company, aiming for synergies with industry giants. Potential buyers include Oracle, Optum, Philips, GE Healthcare, and Microsoft.

Despite the challenges posed by Nexus's size, strategic advantages in financial expertise and potential speed in the exit process make Oracle an attractive buyer. However, integration challenges, cultural differences, and regulatory hurdles are acknowledged risks.

11. Due diligence

The due diligence process is a vital stage of the acquisition process as it is expensive. It demands commitment from the buyer and the seller and is thus performed only at a later stage of the purchase. The Commercial, Tech, and Legal DD will require particular attention, given the inherent nature of the target business. In Tech due diligence, issues related to implementation and interoperability hold vital significance and demand consistent and thorough analysis. This becomes significantly pronounced in the context of acquisitions planned due to its essential role in the fund's value-creation process. Moreover, additional aspects of due diligence specific to Nexus' acquisition require in-depth examination as they could pose potential challenges. For instance, employee retention emerges as a pivotal concern in this field, with Nexus having experienced some past issues in this domain, according to the GAIA report and its financial statements. Understanding and mitigating these challenges is imperative to the acquisition's success, and a meticulous examination of the broader due diligence landscape will be instrumental in ensuring a comprehensive understanding of the potential risks and opportunities associated with the transaction.

Section D – Focus area: Capital structure – Alexia Häslar – 56050

D1. Introduction

The capital structure of an LBO is crucial as it will impact the profitability and return of the investors will receive and the overall riskiness of a deal. The challenge lies in balancing maximum returns and minimum risks while meeting lenders' and investors' restrictions and expectations. Indeed, it is a critical fine-tuning exercise with no clear optimal solution as it is influenced by many factors such as the PE firm's preferences and risk profile, the availability of debt and equity, the current debt and equity environment, the target's characteristics, the industry characteristics, and economic forecasts and so on. (LinkedIn 2023) Three scenarios will be considered to address these uncertainties: the bank, management, and investment cases. The scenarios will be implemented on the chosen capital structure to compare the evolution of the critical metrics, such as the investor returns and the covenants. The scenarios take the viewpoints of the transaction's different stakeholders. The bank case takes the creditor's perspective with the worst-case scenario. It includes the most material risks, taking, among others, a revenue growth rate of 8%, which is four percentage points lower than the average of the last five years, personal expenses set at a rate of 56% of total revenue, which assumes no economies of scale, and other operating income set at 4% of total revenue yearly which is more conservative than the three years average. The investment case takes the most likely scenario. It is the base for calculating the returns with, among others, growth rates fluctuating depending on the company's activities (reaching up to 21% in 2028 and decreasing to 19% in 2030), personal expenses decreasing by 1% every second year, and other operating income set at 4% of total revenue. Lastly, the management case considers the optimistic scenario with, among others, growth rates increasing to reach 20% from 2028 onwards, personal expenses decreasing by 1% on average yearly, assuming economies of scale, and other operating income set at 5% of total revenue.

D2. Market overview

Given the current macroeconomic environment marked by high-interest rates, inflation, geopolitical uncertainty, and instability, notably the war in Ukraine and other tensions, leverage is becoming increasingly expensive, and banks are reluctant to grant credit for large leveraged transactions (Bain & Company 2023). The elevated interest rates and underlying risks undermine the appeal of debt financing in LBOs. Indeed, the 6-month EURIBOR has been very high since mid-2022 and is forecasted to stay at a high level, i.e., 3.7% in 2024 making it more challenging and expensive for entities to issue new debt. (Moody's Investor Service 2023) Furthermore, a significant portion of issuance activity focused on refinancing transactions, with the amend-and-extend activities for leveraged loans reaching exceptional levels recently (Rader 2022). It is frequently perceived as a sign of underlying financial stress for companies and lenders. Additionally, lenders, aware of the potential need for future refinancing, might demand higher interest rates or more stringent terms upfront.

The gap in price expectations between buyers and sellers of companies is broad and exposed to current volatility (Fitch Ratings 2023), making deal closing challenging and creating difficulties in achieving desired returns on exits. Due to these market dynamics, the PE industry's debt proportion in the capital structure decreased. (Bain & Company 2023)

Despite significant challenges, some interesting positive market developments should also be noticed. The increase in Collateralized Loan Obligation (CLO) issuance in North America and Europe bolsters leveraged loan issuance, suggesting that investors are willing to invest in these structured financial products, which often consist of pools of leveraged loans. Activity in the primary mergers and acquisitions market, especially involving private equity financial sponsors, is expected to improve modestly. (Fitch Ratings 2023) These current market features were also considered when deciding the structure of Nexus' buyout.

D3. Nexus rating

The company's past performance and characteristics should be analyzed to understand Nexus's probable specific borrowing conditions and bargaining power. To this purpose, Altman Z-score was used as the base for the assessment. It is a financial formula that combines different financial ratios to predict a company's bankruptcy probability. Given the changes expected in the level of debt and in the operating business model of Nexus, both the current and the projected Altman Z Scores were computed, and the median was used to estimate the firm's credit rating. The consistent and substantial past cash flows, stable and high margins, low capex requirements, and robust cash position the company in the "safe zone" with a score of 6.21, implying a rating of BBB. (Altman 2005) Additionally, Nexus mainly sells its products to healthcare institutions with high credit ratings. The group's customer structure can be translated into no significant default risk concerning trade receivables. (Nexus 2022) To further support this assessment, Capital IQ (2023) rated the company's relative credit health score as above average, especially concerning its solvency and liquidity based on an assessment of key metrics over the past five years, comparing them with 40 companies active in the Healthcare Technology sector worldwide. Also, the healthcare and IT, more precisely software sectors, have proven resilient to macroeconomic downturns and are considered by borrowers as relatively stable markets as they are less volatile, mainly when they use SaaS business models (Bain & Company 2023), which is precisely the market where Nexus positions itself. These aspects make Nexus's access to more interesting bank loan conditions likelier—Moody's currently rates Nexus at a B3 level with a stable outlook as of 2023. (Moody's Investor Service 2023)

D4. Sources and uses

The LBO of Nexus will be financed with a combination of 44.5% debt and 55.5% equity, amounting to €413.3m and €515.5m, which accounts for a gross leverage of 8.0xEBITDA

reflecting the acquisition multiple of 17.2x. The “uses” mainly regroup the overall enterprise value, which is estimated at €886.6m, and the transaction and financing fees which were estimated at €22.2m, corresponding to the deal’s complexity. (Industry Experts 2023) The chosen financial resources supporting the transaction, also called “sources,” with their specific breakdown composition, will be explained below.

D4.1. Debt

As briefly mentioned above, more debt increases the leverage ratio (the amount of debt compared to equity). A higher leverage ratio will potentially boost the IRR and returns for the PE firm as a lower equity contribution is needed. (Macabacus 2023) The transformation of capital structures towards more debt enables a risk shift from equity to debt holders. It also brings tax advantages as interest expenses are considered tax-deductible. (Adrian Blundell-Wignall 2007) However, more debt also reduces the available free cash flow and increases the covenants' strictness, which indicates a higher risk of distress and default.

As usual practice in private equity, Nexus's existing debt will be refinanced due to change-of-control covenants and replaced with the newly drowned debt, commonly combining multiple tranches of debt. Those debt tranches vary in terms of interest rates, repayment schedules, seniority, and covenants. (Macabacus 2023) Conventionally, four primary types of syndicated loan facilities exist: revolving debt, term debt (TLA, TLB, and TLC), letter of credit, and equipment line. (PitchBookLCD 2022) However, today, many different innovative formats have been built upon these, such as covenant-lite or second-lien loans.

Firstly, the revolver is the senior debt instrument with the lowest interest rate. Its functioning is commonly compared to a "credit card" as it can be settled at any point without repayment penalty, the interest is cash paid, and has a tenor period ranging from 3 to 5 years on average. (Macabacus 2023) In the case of Nexus, no revolving credit facility will be leveraged as its working capital needs are low on average and can be covered by the high cash availability.

Further, there are term loans, also called leveraged loans. They have floating interest rates, meaning they can vary based on fluctuations in a reference interest rate, often the Euro Interbank Offered Rate (EURIBOR). These loans usually have a fixed tenure ranging from 4 to 8 years. (Breaking into Wall Street 2023 & Brouwer 2008) They are among the cheapest types of debts as they are often secured and rarely have prepayment penalties, which makes them attractive. Nevertheless, these upsides are offset by the lender also protecting itself by imposing more strict financial maintenance and negative covenants limiting the company's flexibility. (Macabacus 2023) These loans can be drawn on for a limited commitment period where a ticking fee is due and are categorized as among the highest senior debts.

The amortizing term loan, called TLA, is repaid through regular payments, also referred to as amortizing. It has a lower interest rate as it has higher seniority. TLAs usually range between 5 years or less and were designed for commercial banks. They generate cash-paid interest, meaning their interest is reimbursed regularly. TLA loans are used much more in Europe compared to the USA. (Brouwer 2008) For Nexus's LBO, a TLA of €103.3m, accounting for 11.1% of the total sources, has been drawn.

Term loans TLB and TLC, also called institutional term loans, have higher interest rates and are either amortized in small amounts or fully repaid at maturity, also called bullet payments. (Breaking into Wall Street 2023) Those longer-term bullet loans bring the advantage for lenders of having predictable maturities and interest income streams, and their length enables them to better fit the maturity for both the lender and the borrower. (Brouwer 2008) They usually generate cash-paid interest as well; however, it can be seen that they have a payment-in-kind coupon payment option, meaning that their interest expense will be reimbursed only at the maturity date. In practice today, institutional loans are often structured as covenant-lite. One way to distinguish a "covenant-lite" loan is that it has many of the same covenants as a traditional loan, such as incurrence covenants, but leaves out others (known as maintenance

covenants) that set minimum requirements for ratings or financial performance. Today's covenant-lite loan market prevalence is noteworthy as they command more than 90% of the leveraged debt market. (Rader 2022) A TLB of €206.6m, accounting for 22.2% of the total sources for Nexus's LBO, has been drawn. The large share of this debt tranche has been chosen due to its low price and current market presence, making it easier to find. Most importantly, however, the PIK interest and bullet repayment schedule enables the cash outflows to happen only at the exit, providing more flexibility and allowing the fund to concentrate on executing the investment thesis. Also, the significant cash flow from the selling of the target at the exit should enable debt reimbursement without issues.

The proposed capital structure with a large portion of the debt drawn in form of TLA, TLB, and TLC loans was adopted as the company's financial health enables the covenants to remain with enough headroom in all three tested scenarios. It also seems likely that the company will be able to leverage such debt as it shows positive financial health prospects.

Acquisition or equipment lines (also called delayed-draw term loans) are credit lines intended to acquire specific assets, equipment, or companies within a given period. During the commitment period, the issuer incurs a fee, and the lines are subsequently reimbursed over a designated time frame. Once repaid, the borrower cannot reborrow the amount. (PitchBookLCD 2022) They involve high risk and are, therefore, more expensive. Additionally, they are often structured with a shorter repayment term, considering the strategic nature of acquisitions and the potential for quick changes in business structure. They are typically structured as a senior secured loan, meaning it holds the highest priority in terms of repayment in case of bankruptcy or liquidation. To finance Nexus's acquisitions from the buy-and-build and internationalization strategies, the total amount needed for the transactions is substantial, with the total enterprise values estimated at €222.1m, reflecting an overall average entry multiple of 11.1x. A first lien acquisition facility of €113.8m has been leveraged in addition to

using the sponsor loan and cash on hand.

Different types of junior debt are also often considered for the capital structure of an LBO. The most common forms include second-lien loans, subordinated high-yield bonds, and mezzanine loans. (Chen 2021) Junior debt also brings covenants that must be complied with, but it has the advantage of providing more flexibility as the covenants have more headroom than senior debt. This flexibility can benefit private equity firms looking to implement aggressive growth or restructuring plans. This type of debt, however, is much more expensive as it is riskier for the lender, and prepayment penalties are applied in case of early repayment. It has either pay-in-kind interest or a combination of pay-in-kind and cash interest, which is the case for mezzanine debt. (Terrydale Capital 2022) In brief, some of the main differences between these debt types are underlined in the subsequent statements. Mezzanine loans include elements of both debt and equity. For this reason, they are also referred to as “structured equity” investments. This dual nature often involves debt instruments with equity-related features as standard operating practice. Warrants, for example, provide lenders the right to purchase equity at a predetermined price. (Breaking into Wall Street 2023) These features offer lenders the potential for an equity upside in addition to the regular interest income from the debt component, helping to entice them. Recently, they have garnered attention as a practical compromise for companies seeking capital without opting for pure debt and being hesitant to raise equity at undervalued levels. (Rader 2022) Mezzanine debt has been chosen to finance Nexus’s acquisition for €51.7m, resulting in 1.0x EBITDA based on expert interviews, as it will allow partial PIK interest and enable the sponsor to increase returns by increasing the transaction’s leverage.

Paid-in-kind (PIK) debt is a new debt component. It brings the advantage to sponsors to reserve cash for other purposes, not use the cash flow to repay interest expense during the investment period, and only reimburse it at the exit. However, it brings more risk because the final balance can be substantial and is linked to higher default rates, increasing its price compared to

traditional debt. (Cordone 2021) The TLB, TLC and the mezzanine debt of Nexus have been structured to include a PIK interest component for the cash to be reserved for the add-on acquisitions and for the company to concentrate its cash flows on executing the investment thesis.

Additionally, a notable market development is that private credit has enjoyed increasing popularity in the past years due to a heightened syndication risk, meaning that successfully arranging and completing a syndicated loan has become more and more challenging. (Bain & Company 2023) This growth is also attributed to larger fund sizes of private credit institutions and new loan structures in the private credit market, enabling types of lending that were previously not feasible. (PitchBookLCD 2022) The potential for increased upside and, notably in the current environment, the mitigation of downside risks is facilitated by close collaboration and alignment between borrowers and lenders, along with the utilization of more intricate and customized financial instruments. (Rader 2022) This development supports the decision to structure Nexus's debt mostly with TLB, TLC and mezzanine loans to enable easier and faster access to leverage and to strengthen the bargaining power of the sponsor to access better terms.

D4.2. Debt terms

The choice between fixed and floating interest rates depends on market conditions and the preferences of both borrowers and investors. Fixed rates provide stability while floating rates allow flexibility in response to market changes. In the case of Nexus, floating rates are preferred as the forecast of market recovery and lowering of interest rates is estimated more likely. Indeed, according to Moody's and other financial resources (Siedenbiedel 2023), the EURIBOR 6-month rate is expected to decrease. (Moody's 2023)

To calculate the interest rate applied for each type of loan, the EURIBOR 5-year swap rate was used as a base, as is the usual practice. This rate was added to a 4.00%, 4.25%, and 4.50% margin, also called spread, to estimate the interest rate for the term loans A, B, and C. For the

mezzanine debt, an interest rate of 6.59% was estimated on the cash-paid interest, and a 4.00% interest was estimated for the PIK interest. (Industry Experts 2023)

Arranging the entire debt structure beforehand ensures that the necessary funds are available for executing the investment strategy as planned. However, such an arrangement typically involves a commitment fee from the lender. In Nexus's case, these fees were not factored in as the debt was fully drawn within the first year for simplicity's sake, with the exception of the acquisition facility. It was assumed to sit at a commitment fee of 40% of the interest rate on the undrawn portion. This translates to fees of €3.7m, €1.8m, and €1.7m for the first, second, and third years until the entire committed amount is utilized.

Taking on debt is accompanied by different lender protection mechanisms. One of them that should be especially considered when deciding on the capital structure is financial covenants. Indeed, even though insightful indicators should be considered when looking at broad market data, critical company-specific ratios can vary greatly between companies, highlighting the necessity to analyze the unique characteristics of each investment as these can diverge significantly from the general market trends. Loan agreements always incorporate numerous covenants that limit borrower actions, and they may include provisions mandating the borrower to uphold minimum financial performance. Financial covenants are positive maintenance covenants, meaning they should be maintained at any time with quarterly performance tests to check their compliance. The ratios are established in advance, and the lender is entitled to take various actions in case of breach. (Macabacus 2023) Borrowers who breach covenants find themselves in a "technical" default, potentially leading lenders to demand immediate repayment of all principals. However, in practice, lenders typically renegotiate the loan terms. The main financial covenants are the cash cover, the leverage cover, and the interest cover.

The cash cover assesses the company's ability to generate cash from its day-to-day operations to cover its debt-related payments. It is calculated by dividing the cash flow from operations

generated over the long term by the debt service (including interest and debt repayments) and should always be higher than 1. According to the forecasts based on the bank case scenario, the cash cover is always maintained during the investment period, reaching its minimum in 2026 with a level of 1.14x (Investment case: 1.34x, Management case: 1.45x in 2024) The net leverage cover is another crucial covenant to analyze a company's debt structure. It is calculated as the net debt (including the M&A facility) divided by its EBITDA. It measures the company's debt load relative to its earnings power. In the case of Nexus, it starts at 7.05x EBITDA in 2024 (Investment case: 6.25x, Management case: 5.24x). It decreases to 2.60x EBITDA in 2028 (Investment case: 1.28x, Management case: 0.75x), leading to a reasonable headroom of 24.5% in that year. The interest cover provides insight into the company's ability to meet its interest obligations from its long-term operating earnings (EBITDA). It is calculated as its long-term EBITDA divided by the net interest expenses. The interest cover remains above 1.75x with a headroom of 19.8% during the entire investment period. (Investment case: 1.95x, Management case: 2.30x)

D.4.3. Equity

There are different financial instruments for the PE fund to be invested in the target company, referred to as an institutional strip; the most frequent types are preferred shares and shareholder loans. (LexisNexis 2023) Both instruments are structured to provide downside protection since there is a guaranteed return to the investor (i.e. preferred dividend and interest). In case of financial distress, the recovery of the investment has priority over ordinary shares. Preferred shares are attractive as they have both debt and equity characteristics. The dividends are fixed similarly to debt, and their classification as equity enables the balance sheet to seem stronger to support higher leverage. However, the resulting dividends are not tax deductible. On the contrary, shareholder loans are classified as debt; thus, the resulting interest payments are tax deductible. In the case of Nexus, a shareholder loan was chosen as mean of investment,

accounting for 52.3% of the total uses, as the company's balance sheet is healthy and enables to take advantage of the tax deductibility. The PIK interest rate has been set at 10%.

To fully align the motivations of the management team with those of the fund in bearing part of the risk of the acquisition and uniting both under the targeted internal rate of return, they are often implicated in the equity structure of the company. (FD Capital 2023) To that end, they will often receive sweet equity, which works similarly to derivative instruments and will only gain value if the company grows above the shareholder loan. It has the lowest seniority in repayment but considerable upward potential. Nexus' most meaningful employees were chosen to be the three critical executive board employees (Ingo Behrendt, Ralf Heilig, and Edgar Kuner). (Nexus AG 2023) Sweet equity amounting to €6m has been used in the LBO of Nexus and has been calculated as twice the annual salary of the leading positions.

D.4.4. Structure

In buyouts, structural subordination is used to protect senior lenders, involving different companies and debt types. The operating company lender (BidCo) has priority over the parent company lender (HoldCo). (Brown, Harris, and Munday 2021) This setup leads to higher pricing for HoldCo debt due to its lower priority. Typically, a structure includes ManagementCo, Fund-levelCo, HoldCo, and OpCo. The complexity and number of companies in the structure can sometimes become substantial. Due to a lack of transparency, the specific structures of debt remain hard to study. Complex structures incur extra costs, so decisions depend on stakeholder needs (Brown, Harris, and Munday, 2021). For Nexus, the simple structure involves four entities for efficiency: OpCo, BidCo (with senior debt), HoldCo (with the subordinated loan and mezzanine), and TopCo (with equity).

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