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Innovative Frontiers in Aluminum:
The role of technology and recyclability in AMAG's niche market success

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Abstract

This thesis provides a comprehensive analysis of AMAG Austria Metall AG, a company in the Austrian aluminum industry, renowned for its high-quality aluminum products in sectors like automotive, aerospace, and packaging. Established in 1939 and publicly traded since 2011, AMAG has a strong global presence, with significant operations in Western Europe, North America, and other regions. The study delves into AMAG's strategic focus on niche market specialization, quality innovation, and bulk production abilities, which position is well in a competitive industry landscape increasingly influenced by sustainability, recycling, and technological advancements. The thesis examines AMAG's financial performance, highlighting its robust growth trajectory and the impact of external factors like the Covid-19 pandemic and in recent years geopolitical tensions. It offers a detailed financial analysis, including an assessment of revenues, cost of goods sold (COGS), selling, general and administrative expenses (SG&A), and capital expenditures. The revenue forecast is constructed using a bottom-up methodology, considering key drivers like product sales volume and pricing trends. Furthermore, the thesis provides a SWOT analysis, identifying AMAG's operational strengths, diverse product range, and challenges such as market volatility and supply chain dependencies. A critical evaluation of AMAG's capital structure and dividend strategy is presented, noting its high debt-to-equity ratio and conservative dividend approach. For valuation, the Discounted Cash Flow method is employed, supplemented by a comparative company analysis and Dividend Discount Model. The valuation process involves forecasting free cash flows and applying the WACC to determine AMAG's intrinsic value. The study concludes with a recommendation to buy AMAG stock, citing its potential for future growth and resilience in a dynamic industry environment.

Keywords (up to four)

AMAG Austria Metall AG, Aluminum Industry, Financial Analysis, SWOT Analysis

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This report is part of the Equity Reserach report (annexed), developed by Philipp Bonhoff and Luis Biefel and should be read has an integral part of it.

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Introduction

The global aluminum industry, characterized by its dynamic nature and increasing demand for high-quality, sustainable products, presents a conducive environment for examining the strategies and performance of leading companies. The joint paper (= Part 2) focuses on AMAG Austria Metall AG, a pivotal player in this industry, renowned for its exceptional aluminum products and services across various sectors. Founded in 1939 and going public in 2011, AMAG has established a formidable presence in the aluminum sector, particularly in Western Europe and North America. In regard to the shift towards innovation and sustainability AMAG has high potential for growth that's why this thesis was taken AMAG as a candidate for the analysis.

The thesis aims to analyze AMAG's strategic position, financial health, and growth prospects in the aluminum industry. It reviews AMAG's history, business model, and response to challenges like the Covid-19 pandemic. The thesis also examines the industry's competitive environment and future financial outlook. It includes an in-depth financial analysis of AMAG, covering revenue, costs, and efficiencies, alongside a SWOT analysis to assess the company's market position and profitability. Additionally, the thesis uses valuation methods such as the Discounted Cash Flow (DCF) and comparative analysis to determine AMAG's value and investment potential, based on historical financial data and market trends.

The following individual report was taken out of the joint report and delivers only partially the conclusions for the recommendation to buy AMAG. Structured to provide a comprehensive analysis, the report encompasses several key areas. The Industry Overview section situates AMAG within the broader context of the aluminum industry, essential for grasping the external factors influencing the company's operations. Following this, a Financial Analysis is presented, focusing on Ratio Analysis. This segment critically examines AMAG's financial metrics, offering insight into the company's financial health and operational efficiencies.

A significant part of the report is dedicated to the Value Drivers and Financial Forecast. This section is grounded in a thorough analysis of AMAG's historical financial statements, extending from FY16 to Q3 2023. It projects the company's future financial performance by evaluating the necessary line items to calculate the free cash flow to the firm.

Concluding the report is a recommendation to buy AMAG. The company presents a substantial upside potential. This assertion is backed by a median target price of €33.08, an anticipated dividend of €1.50 in FY24, against the backdrop of a current share price of €26.40. This recommendation encapsulates the comprehensive analysis conducted in the report, presenting a confident outlook on AMAG's investment potential.

Industry overview

China dominates global Aluminum production: Surging from 10% to over 60% of world's output, meeting 50% of global demand in FY20

Global aluminum production: Asia leads, Europe holds strong as second-largest consumer with anticipated 9 million tons annual demand

The aluminum industry encompasses the exploration, mining, refining, smelting and fabrication of aluminum. Aluminum, the third most abundant element on earth, is a lightweight, durable, and 100% recyclable material thus it has a wide range of applications, and its demand has been on an upward trajectory for decades. Studies show that demand is forecasted to increase in virtually all countries worldwide, expanding by more than 50% by FY50.[1] The landscape of primary aluminum production market shares reveals a prominent global hierarchy driven by geographic factors and demand dynamics. China, as the foremost contender, has firmly established its preeminence in primary aluminum production. In the early 21st century, China's contribution to global production stood at approximately 10%, but it has since surged to produce over 60% of the world's output. This supremacy is largely attributable to its extensive production facilities and robust demand within the nation. In FY20, the nation's share of global demand surpassed 50% for the first time, registering a total consumption of 43.8 million metric tons. Other pivotal regions in the context of Aluminum production encompass Gulf Cooperation Council (9.1%), Asia excluding China (6.8%), Russia and Eastern Europe (6.0%) and North America (5.6%). In FY22, Europe contributed 4.1% to the global production. The Asian countries – Asia including China – are expected to experience the most pronounced growth in primary aluminum consumption, while Europe presently ranks as the second-largest primary aluminum consumer and is anticipated to maintain this position until at least FY30. Over the forthcoming decades, Europe's annual demand for primary aluminum is estimated to be approximately 9 million metric tons.[2]

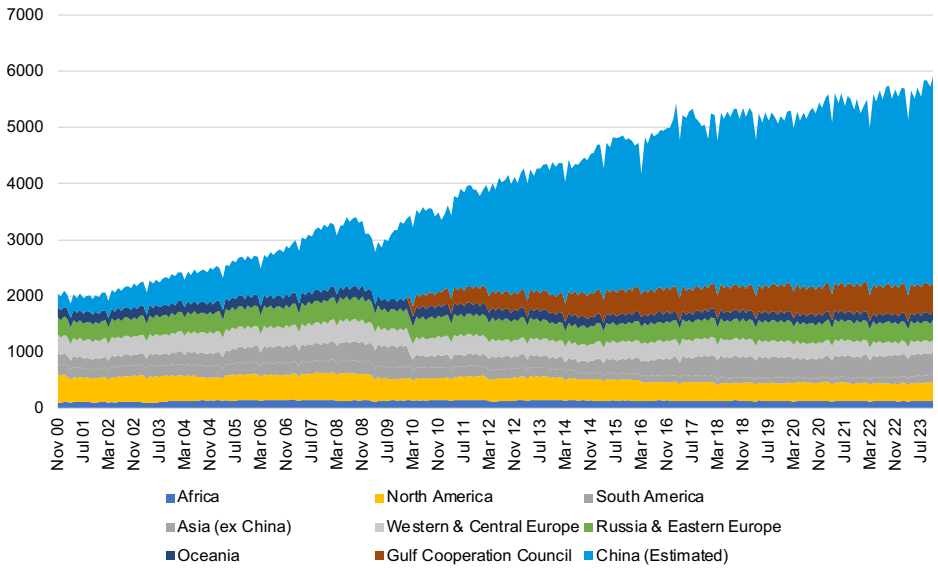


Figure 6: Development of geographical demand over the past decades

The key sector drivers of the worldwide demand are transport – includes automotive, aircraft &

[1] Source: CRU International Limited, 2022
[2] Source: Mishra, Pratapaditya, 2020

Automotive and packaging industries lead with impressive CAGRs: 8.20% in automotive, 4.39% in packaging in FY32

aerospace – construction, packaging, and the electrical industries, which are accounting for 75% of the total aluminum required. Particularly in established markets like Europe and North America, the move toward lightweight and fuel-efficient vehicles has amplified the need for aluminum within the automotive industry. This demand is quantitatively reflected in a projected CAGR of 8.20% up until FY32.[3] Furthermore, the global push for sustainable packaging solutions has increased aluminum's demand in the packaging industry, which is anticipated to exhibit a CAGR of 4.39% through to FY30.[4] In addition, the demand for aluminum has seen a pronounced increase in emerging markets. Countries undergoing rapid urbanization, such as India, China and several African nations, have a heightened need for aluminum in sectors like construction, automotive, and various infrastructure projects. This urbanization-driven demand shows a trend where these developing economies are moving toward patterns observed in the more mature markets.[5]

Rising demand in emerging markets driven by urbanization in India, China and Africa

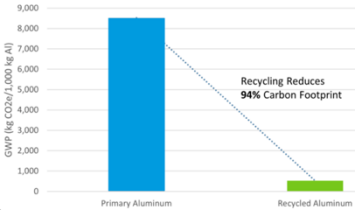
Market trends

Even though aluminum is being used in nearly every industry, the benefits of the material has not been exploited fully so far. It is imperative to acknowledge the ongoing shift and development in the demand driven by two main market trends that will shape the future of the aluminum industry: Sustainability and recycling as well as technological advancements.

- Sustainability and recycling

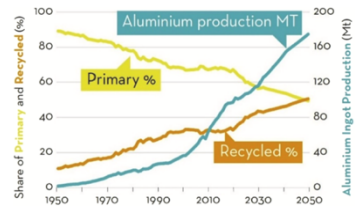
The most important impact of innovation in aluminum will be on the social system, notably through reducing energy consumption and mitigating environmental pollution. Right now, primary aluminum production is energy-intensive, and it involves high rates of greenhouse gas emission – particularly CO2 and perfluorocarbons. Overall, the industry contributes 1% to the global greenhouse gas emissions and with the exponential growth of demand for aluminum, the need for producing greener aluminum with renewable energy sources and an increased use of recycled materials is constantly growing. Nevertheless, the aluminum industry has traditionally maintained a highly effective circular economic model. This can be explained by the characteristics of aluminum: the material can be recycled almost indefinitely without degradation in quality as well as consuming only a fraction of energy. Studies show recycling saves 94% of the energy required for its initial production. Furthermore, such practices significantly reduce the dependence on raw materials which is especially important for European based companies without any occurrence of natural resources for the extraction of aluminum[6]. Additionally, the increasing expectations of eco-aware consumers, coupled with progressively stringent regulatory mandates from political entities – such as the objective of achieving zero emissions by FY50 – compel businesses to align their product offerings with these sustainable objectives and adapt to these evolving standards. Consequently, advancements in technology have led to the creation of efficient methodologies for the separation of aluminum scrap. The purity of this material is crucial for its

Figure 7: Carbon Footprint of Recycling vs. Primary Aluminum



Source: The Aluminum Association, 2023

Figure 8: The Trend towards increased Use of Recycled Aluminum



Source: The Aluminum Association, 2023

[3]Source: Reports and Data, 2022
[4] Source: Precedence Research, 2023
[5] Source: International Aluminium, 2023
[6] Source: Pernelle, 2022

closed-loop material recycling, as higher purity levels broaden its applicability across various industries and can be better continuously used.[7] This leaves multiple companies in the industry opportunities for optimization in the design of products and the employment of sorting technologies. Economic and ecological optimizations proceed hand in hand. Increasing efficiency translates into environmental relief, conservation of resources, and cost savings. For companies, it is crucial to evolve their processes and product designs accordingly.

Enhanced consumer incentives needed to boost efficiency in the closed recycling loop

However, driving greater circularity goes both ways. On the side of the producers and recyclers, but also on the consumer end. The recycling rates for aluminum are high in Germany, with 95% being recycled in the transport and construction sectors, for example. Around 90% of packaging is also recycled[8]. Additionally, approximately 90% of aluminum packaging undergoes recycling. These high rates of recycling can be attributed to stringent environmental protection legislation that ensures the recyclability of aluminum. This helps the aluminum producers in their efforts of sorting and re-using the aluminum. In contrast, the United States exhibits lower recycling rates, with less than 50% of durable goods being recycled by households, although the transport and construction sectors achieve an 80% recycling rate as of FY22. Similar trends are observable in Russia and China. Consequently, there is a growing emphasis on establishing political objectives aimed at augmenting recycling efficiency and fostering environmentally conscious behaviors.[9]

- Technological advancements

By FY23, organizations across all sectors are predicted to invest close to $6.8 trillion in digitalization efforts. The initial reason for this push is obvious: automation of business operations leads to higher accuracy and saves time as well as the push towards sustainability and recycling leaves companies in the push to act. Since the start of mass production in 1886, aluminum has been at the forefront of technological and sustainable progress. In the past the aluminum industry made technological advancements by introducing the material to different industry. Nowadays, aluminum can be found in nearly every industry and has reached its near full potential in terms of expanding in different industries. Current trends, such as the rise of recycled aluminum, lightweight materials for transportation and the increasing use of aluminum in construction and infrastructure, are changing the industry. Companies invest their money in mainly creating higher quality and efficiency in all the value chain.[10] High-performance aluminum alloys, the increasing role of aluminum in renewable energy and consumer electronics, and a commitment to sustainability practices underscore this shift. In addition, the aluminum sector is embracing automation, 3D printing and circular economy initiatives, highlighting its adaptability and innovation. This multifaceted development reflects the industry's focus on improving product utility and efficiency, meeting diverse application needs and prioritizing environmental responsibility.[11] However, definitive conclusions about technological advancements remain elusive, as a

[7] Source: Soo, Peeters, et al., 2019
[8] Source: Alles über Alu, 2023
[9] Source: Lee, Feth, et al., 2022
[10] Source: International Aluminium, 2023
[11] Source: Hydro, 2021

Advancing Industry 4.0 with focused R&D – 145 projects funded at 1.7million each with emphasis beyond digitalization

substantial portion of the $6.8 trillion investment is channeled into research and development and operational aspects of companies, with limited disclosure of detailed insights. Consequently, only fragmented information is made available to the public. A survey of the Frauenhofer Institute reveals those key entities within the European iron and steel sector – The aluminum industry included – are actively pursuing digitalization initiatives. Within the scope of European funding avenues, the Research Fund for coal and steel is particularly prominent in supporting R&D endeavors aimed at digitalizing the European steel industry. This fund encompasses approximately 145 R&D projects with an average allocation of €1.7 million each. The degree of focus on Industry 4.0, contingent upon its specific definition and practical application, varies, with about 30 to 50 R&D projects being intensively centered on aspects of Industry 4.0 that extend beyond mere digitalization. Regarding the practical application of these projects, most are in the stages of prototype development and demonstration, with only a limited number advancing towards robust commercial application.[12]

Competitive landscape

Figure 9: Market Concentration in the Aluminum Industry

The global aluminum industry is dominated by large conglomerates like Alcoa Corporation, Rio Tinto, and RUSAL, managing the entire supply chain from extraction to product fabrication. This paper focuses on companies similar to AMAG in innovation, geographical presence, and size, excluding large producers outside Europe focused on mass production. AMAG and its peers specialize in niche markets, also capable of bulk production. Overall, the market can be summarized as a highly fragmented market with many players small and big.

- Key competitors of AMAG

Norsk Hydro ASA, with over a century of history in Norway, has transitioned from hydroelectric power to becoming a major player in the global aluminum market. This evolution is marked by strategic acquisitions, notably the purchase of Sapa, the largest aluminum extrusion company, in FY17. Norsk Hydro's vertical integration from bauxite mining to finished aluminum products ensures quality and cost efficiency, aligning with industry standards. The company maintains a strong presence in Europe and actively expands into emerging markets, adapting to shifts in global demand and exploring diverse market opportunities.[13]

Aluminium Bahrain BSC (Alba) stands as the pioneer aluminium smelting operation in the Middle East and the first non-oil industry in Bahrain, reflecting substantial governmental endorsement and backing. Alba is a company that focuses solely on critical operational stages of the aluminium production process, from smelting to casting. With its strategy its main focus is the demand in the Middle East. However, numerous expansion such as the Line 6 Expansion Project makes Alba the largest aluminium smelter ex-China and positioned Alba in the worldwide

[12] Source: Neef, Hirzel, & Arens, 2018
[13] Source: Hydro, 2023

markets. it is expanding its presence especially in the EU and United Kingdom.[14]

Vimetco PLC, a globally operating company with vertically integrated operations in both primary and processed aluminum production, has a significant presence in Europe and China. Its Romanian subsidiary, **Alro SA**, is a key contributor to its European operations, ranking among the top five primary aluminum producers in the region, with over 80% of its profits generated there.[15] Additionally, Vimetco's investment in firms like **Henan Zhongfu Industrial Co Ltd** extends its global reach. This diverse portfolio equips Vimetco with the flexibility to swiftly adapt to changing global demands, enhancing its competitive edge in the aluminum industry.[16]

Gränges AB, a prominent Swedish manufacturer of rolled aluminum products, predominantly serves the automotive and packaging industries. The company is structured into two key business segments: Gränges Eurasia and Gränges Americas, both undergoing significant expansion. Gränges stands out for its strong commitment to sustainability and recycling, actively investing in various initiatives to achieve its goal of becoming climate neutral by FY40. This focus on environmental stewardship is integral to its business strategy, ensuring Gränges remains at the forefront of sustainable practices in the aluminum production sector.[17]

Constellium SE is a global manufacturer specializing in aluminum rolled products, extruded products, and structural parts for various industries, notably aerospace, automotive, and packaging. Some of its notable clients include Mercedes-Benz, BMW, Ford, Airbus and Boeing. The company, formed in FY11 through the sale of Alcan Engineered Products by Rio Tinto to Apollo Management and FSI, has undergone various mergers and acquisitions and is listed on the New York Stock Exchange. The company has over 28 manufacturing sites across North America, Europe, and Asia, with its headquarters in Paris and its main markets are Europe and North America. Constellium's C-TEC Technology Center, established in 1967, focuses on research and development in aluminum, holding over 600 patent families and trademarks, signaling a strong commitment to innovation in its field. Constellium also emphasizes sustainability, participating in initiatives to improve sustainability within the aluminum industry.[18]

Alcoa Corporation, a global leader in bauxite, alumina, and aluminum production, is headquartered in Pittsburgh, Pennsylvania, and was founded in 1888. The company is involved in the entire aluminum production process. It focuses on both bulk and specialized production to serve various industries, such as aerospace, automotive, and packaging. Alcoa's notable mergers and acquisitions include the divestiture of Alcoa Warrick LLC in November 2020 for $670M and the Alcoa - Avilés and La Coruña Aluminum Plants in Spain in July 2019. In 2016, the company spun off Arconic Inc., and in 2015, it acquired RTI International Metals, Inc. for $1.5B. These strategic moves reflect Alcoa's ongoing efforts to optimize its operations and expand its global

[14] Source: Alba, 2023
[15] Source: Vimetco alro, 2011
[16] Source: Vimetco, 2021
[17] Source: Gränges AB, 2023
[18] Source: Constellium, 2023

reach, especially in the EU.[19]

- SWOT-Analysis on AMAG

AMAG's strengths, as reflected in its H1/FY23 performance, include robust operational capabilities and a solid market presence. Its impressive EBITDA of EUR 83.6 million demonstrates financial resilience. The company's diverse product range and efficient order processing are key to its strong market position. This product diversity, combined with rapid delivery capabilities, allows AMAG to effectively meet diverse customer needs, crucial in the dynamic aluminum industry. AMAG's commitment to innovation and R&D, along with its specialized expertise in aluminum production and benefits from being in the European Union, positions it well against competition and new market entrants. However, the company's faces also challenge internally but also externally. Tariffs, trade tensions, and geopolitical conflicts disrupt the market, impacting prices and supply chains. This lead AMAG to a reduction in shipment volumes and dependency on raw materials. Leaving AMAG with a strong EBITDA of €83.6 million, but a decrease in sales revenue to €644.4 million, compared to €664.1 million in FY22. This decline reflects competitive pressures in the market. Moreover, the reduction in EBITDA from the previous year's €118.1 million points to potential operational challenges. Adapting to these changing market conditions and maintaining profitability are key internal challenges for AMAG. Furthermore, the uncertainty of availability of raw materials further challenges AMAG's production chain.

AMAG's Growth in aerospace and automotive, offset by market competition and material volatility

The overall aluminum industry's future looks promising, given the metal's diverse applications and its growth potential, which underlines AMAG's potential. Especially, the growing industries like aerospace and automotive present opportunities for AMAG to expand its market reach further. The company's focus on quality and innovation aligns well with the industry's move towards specialized, high-quality aluminum products. Furthermore, in all its division, AMAG follows a strong emphasis on sustainability and environmentally friendly production methods. But AMAG also must overcome the intense competition in the aluminum market, especially from large conglomerates. The company's dependency on raw materials makes it susceptible to fluctuations in material costs and availability, which could impact its operational efficiency.

Financial Analysis

Ratio Analysis

As previously mentioned in this paper, the aluminum industry has experienced heightened volatility and unpredictability in recent years. This instability can be attributed to several factors, including the COVID-19 pandemic, geopolitical tensions, and more recently, wars and protectionist policies. These circumstances have resulted in resource shortages, escalating prices, and market uncertainty, significantly impacting aluminum companies. Consequently, these

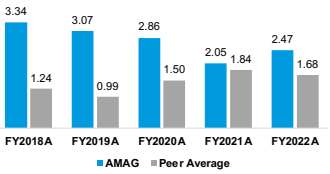
[19] Source: Alcoa, 2023

companies are increasingly dependent on robust financial frameworks. A closer examination of AMAG's short-term liquidity and efficient inventory management reveals that the company presents itself as financially resilient and capable of adapting to changing market conditions.

- Liquidity ratios

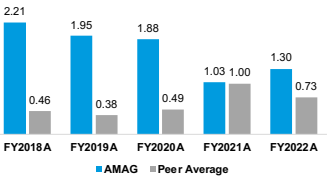
Until FY18, AMAG showed a steady financial strength with the ability to cover short-term obligations, seen by a current ratio of 3.337. This can be reflected on the favourable economic situation being fairly predictable and having less volatility in the market prices. The subsequent years witnessed a downward trend, which is attributed to the shift in the economic situation. The markets increased volatility and the cumulation of different external events made the market less predictable. In FY21, the Covid-19 pandemic dropped the ratios from 2.97 in FY20 to 2.05. However, there has been a slight upward trend in FY22 by an increase 0.44 and remaining stable in H1/FY23, demonstrating an improved short-term financial strength, as seen throughout all liquidity ratios. This trend demonstrates that AMAG has generally maintained good short-term financial stability. When comparing AMAG's current ratio to its industry peers, it is evident that it outperforms approximately 50.75% of companies in the Metals & Mining industry. The industry median for current ratios stands at 2.37, while AMAG's current ratio is slightly higher at 2.43. This positioning within the industry underscores AMAG's favourable liquidity compared to many of its competitors. Thus, the company's current ratio reflects not only its financial health but also its ability to efficiently manage its working capital.

Figure 16: Current Ratio Comparison



Source: Refintiv

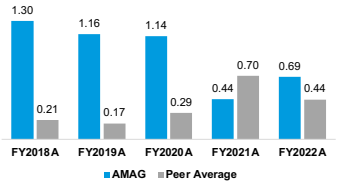
Figure 17: Quick Ration Comparison



Source: Refinitiv

Furthermore, the quick ratio shows a similar trend with AMAG demonstrating a ratio of 2.207 in FY18 and in FY20 dropping to 1.030 in results to the mitigation of the economic stagnation during the COVID-19 crisis leaving the company more vulnerable to financial instability. However, this downturn appears to be shifting again to on an upward trend since FY21 reaching to 1.30 in FY22, reflecting improved liquidity. When compared to industry peers, AMAG's recent quick ratio of 1.34 is lower than the industry median of 2.07, indicating that the company needs to further enhance its short-term liquidity to match industry standards.

Figure 18: Cash Ratio Comparison



Source: Refinitiv

Similar to the other ratios, the cash ratio has shown an evolution with notable drops in FY17 and FY21, but a peak in FY18. Currently, AMAG demonstrates a cash ratio of 0.52, which could illustrate an effective cash management and confidence in its ability to avoid worst-case scenarios in the future. However, signifies that the company lacks sufficient cash to meet its short-term debt obligations, which might raise concerns about its liquidity and ability to cover immediate financial obligations in cases of impending insolvency. When comparing AMAG's cash ratio to industry peers, it ranks worse than approximately 68.12% of companies in the Metals & Mining industry, with an industry median of 1.57 as opposed to AMAG's 0.52. This comparison underscores the need for AMAG to potentially improve its liquidity position, considering industry standards.

AMAG demonstrates financial resilience with a strong current ratio, aims to enhance quick and cash ratios

In summary, despite the heightened volatility in the aluminum industry due to various global factors, AMAG has demonstrated considerable financial resilience. Its liquidity ratios, particularly the current ratio, indicate a strong capacity to meet short-term obligations, outperforming many industry peers. However, the quick and cash ratios suggest areas for improvement, as they fall

below industry medians. This indicates a need for AMAG to enhance its liquidity management to better align with industry standards. Overall, AMAG's financial performance shows adaptability and good strategic management in challenging times, but with room for bolstering certain aspects of its financial health.

- Profitability ratios

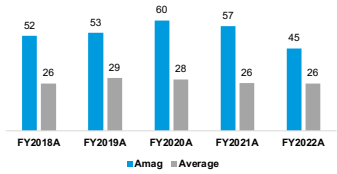
AMAG' strong financial performance: Improved ROA and efficient ROIC

AMAG's return on assets (ROA) surged from a low of 2.62% in FY20 to a strong 12.52% in FY22, which indicates a robust adaptability and efficiency. With an average of 8.04% over the last seven years, AMAG outperforms 88.74% of peers in the Metals & Mining industry, boasting better asset utilization. Compared to the industry median of -15.93%, AMAG's positive 4.48% ROA showcases its superior ability to generate profits from assets, highlighting its competitive edge within the sector.

Similar development over the last seven years shows AMAG's return on invested capital (ROIC), indicating how well the company generates cash flow relative to the capital it has invested in its core business. AMAG's most recent ROIC yields nearly 10% showing efficient capital allocation and strong operational performance.

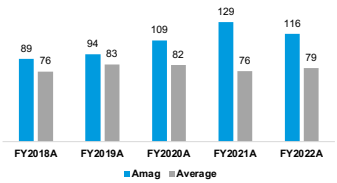
- Cash Flow Management

Figure 19: Days Sales Outstanding Comparison



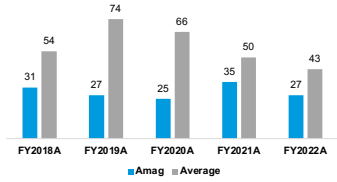
Source: Bloomberg

Figure 20: Days Inventory Outstanding Comparison



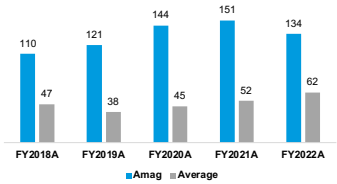
Source: Bloomberg

Figure 21: Days Payables Outstanding Comparison



Source: Bloomberg

Figure 22: Cash Conversion Cycle Comparison



Source: Bloomberg

For H1/FY23, AMAG demonstrated a significant improvement in its Cash Conversion Cycle (CCC), with a value of 142.86 days. This figure represents the time it takes for AMAG to sell its inventory (Days Inventory Outstanding of 131.84 days), collect receivables (Days Sales Outstanding of 41.59 days), and pay its bills (Days Payable of 30.57 days). Comparatively, in the FY22, the company's CCC was 120.38 days, indicating a substantial reduction in the time it takes to convert investments and sold products into cash. This positive trend can be attributed to efficient management and operational improvements. The decrease in CCC from not only FY22 but also the years prior FY21, FY20 to H1/FY23 shows that AMAG has become more proficient in managing its cash cycle. This reduction aligns with the global economic trends and factors, which disrupted supply chains. Companies worldwide had to adapt to new challenges, re-evaluate their inventory management, and optimize their cash flows. AMAG's ability to lower its CCC in this environment reflects its resilience and adaptability. In FY22, the average CCC for the peer group was around 61.98 days and has been showing a slight increase over time. Notably, AMAG has experienced a significant rise in both DPO and DSO over the past three years, while the peer group has remained relatively stable in these areas.

In the context of aluminum, where inventory management is crucial due to raw material sourcing and processing, a lower CCC is advantageous. This decrease may indicate that AMAG has implemented more efficient inventory control, faster accounts receivable collection, and optimized payment processes. These improvements not only enhance the company's financial stability but also position it favourably when compared to competitors in the sector.

Value Drivers and Financial Forecast

The forecast of the required line items to calculate the free cash flow to the firm is based on the analysis of AMAG's historical financial statements from FY16 to Q3 2023, and various additional assumptions. The forecast was conducted for the period Q4 FY23 and on an annual basis from FY24 until FY33, after which the growth of cashflows will stabilize on a lower level. The steady state, which represents the start of the terminal growth begins in FY30. To prove this state, three years were assumed as the steady state. Therefore, for the years after FY33, a terminal value was computed for the cashflows of the firm. In order to remain constant with the separation into core, non-core and financial result, the forecast Free Cash Flow map was also conducted based on these assumptions. However, following line items are crucial for the cashflow forecast and subsequently for the valuation of AMAG.

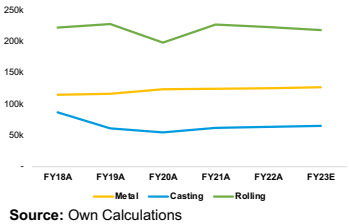
Revenue Forecast

In order to construct a dependable revenue, forecast for AMAG, we employ a thorough bottom-up methodology that involves identifying the key drivers of the company's revenues. These factors include the average products sold in tons and the price per ton sold.

When analysing the historical growth of the main three products of AMAG, Metal, Rolled and Casting products, one can derive a precise analysis about how many tons were sold per segment as well as for how much did AMAG sell their tonne of product per segment. Based on this value driver analysis we estimated future revenue growth rates. Additionally, we included different industry forecasts on Aluminum products demand as well as future pricing prospects. Overall, our approach is also in line with AMAG's management view and prospected future revenues. The revenue segment Service is forecasted based on its historical performance in term of revenue share of total revenues. Due to the fact, that Service only has minor revenue share of around 1% throughout the analysed historical time span, it is assumed to stagnate around this average share in the forecasted period.

- Tons sold per segment

Figure 23: Development of Tons Sold (in tons)



Source: Own Calculations

When looking at the product metal from AMAG, they had a decent increase in sold tons in FY20. However, the recent years demand for metal decreased to a year-over-year growth rate of about 1%, which also indicates the long-term average growth rate of the past 8 years. Keeping this in mind and following the industry worldwide demand for basic aluminum metal products as we addressed above, we conducted a future segment CAGR of 1.3%.

Casting represents the smallest share of total revenue of about 10%, besides Service, which we do not consider as critical. Overall, we analyzed a slight decrease in sold tons since the COVID pandemic. However, after the drop in FY19, AMAG managed to sell a relatively constant amount of casting products. Nevertheless, we conducted a 3% increase from FY22 to FY23, which is also in line with management expectations. From FY24 ongoing we use the average year-over-year growth rate, outlier in FY19 not taken into account, of 1% combined with the industry demand forecast for such products, as stated in our industry analysis. Overall, we expect AMAG to achieve a long-term CAGR till FY33 of approximately 1.7%.

Thirdly, Rolling shows the highest revenue share of AMAG, with almost 70% in the most recent years. Looking at the market demand, it is projected to decrease in FY23 by about 2%. AMAG's management is already aware of that trend and expects a similar decrease of tons sold in this segment. However, in the long-term the Market demand is quite promising, showing a strong development of sold tons of rolling products. Therefore, after combining future industry demands with AMAG's management expectations as well as our historical year-over-year growth analysis, we conducted a yearly growth rate of 4% from FY24-FY28. Beginning in FY29, we expect the yearly growth rate to decrease by 0.1% per year, due to saturation of the market as well as potentially new competitors in the Asian region.

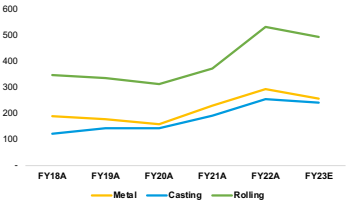
- Price Forecast

Similar to the demand of sold tons of each segment, we derived a historical prices analysis of AMAG's sold products as well as future outlooks of the aluminum price. Result of our historical analysis were different price ranges for different product segments. This only makes sense, due to different qualities of produced products.

Metal's main driver is the raw aluminum market price. Various forecast agencies and industry reports predict a rather promising outlook for the short-term future on the aluminum market, indicating a bullish trend for the rest of FY23, FY24 and FY25. Therefore, we opted for a 2% year-over-year growth rate, resulting in a CAGR of 3.4% from FY23 to FY33. This approach is also in line with management expectations and reflects market prospects.

Similar approach was taken for the price forecast of casting products of AMAG. This segment shows similar per ton prices as the analysis of AMAG's Metall division. Also, its development indicates the same trend. Therefore, we decided to take same yearly growth rates of approximately 2% forecasting respective casting prices.

Figure 24: Price Development per Sold Ton



Source: Own Calculations

With the main revenue contributor Rolling AMAG managed to achieve highest per ton prices. This is due to the fact, that rolling products are already highly technologically processed aluminium products, which bring a significant higher value on the market. Average per ton price in this segment was approximately 335€ per ton sold. In FY22 however, AMAG was able to obtain a significant increase by more than 40% over the year. Nonetheless, this high level might not be sustainable, therefore we expect a price decrease in FY23. Based on the average level of the most recent 3 years and an expected growth rate of 4% per year, we conclude in a constant increase resulting in a CAGR of approximately 1% from FY23 to FY33. Being in line with market experts and AMAG's management expectations, this approach indicates the most reliable forecast of revenues.

COGS and operational margins

After deriving a thorough analysis of AMAG's historical COGS, which used to range of 75% - 80% of total revenues, we opted for a forecasted gross margin of 80%. This represents rather the upper bound of the range, however, aluminum prices and market trends indicate an increase of

raw material prices. Additionally, wages and inflation will most likely cause higher personnel costs. Therefore, COGS show an expected CAGR of about 3% from FY23 to FY33.

Regarding the EBITDA margin, it ranged between 18% in FY16 and 12% in FY20, resulting in an average percentage of 14.4%. Forecasted EBITDA is based on the forecasted reformulated income statement, resulting in an expected adjusted EBITDA margin of more than 11% till FY33. The decrease is caused by various ongoing challenges as well as possibly occurring shortages of supply, increased wages and increasing competition due to low-wages workforce in the Asian region. Hence, the forecast for adjusted EBITDA is more conservative.

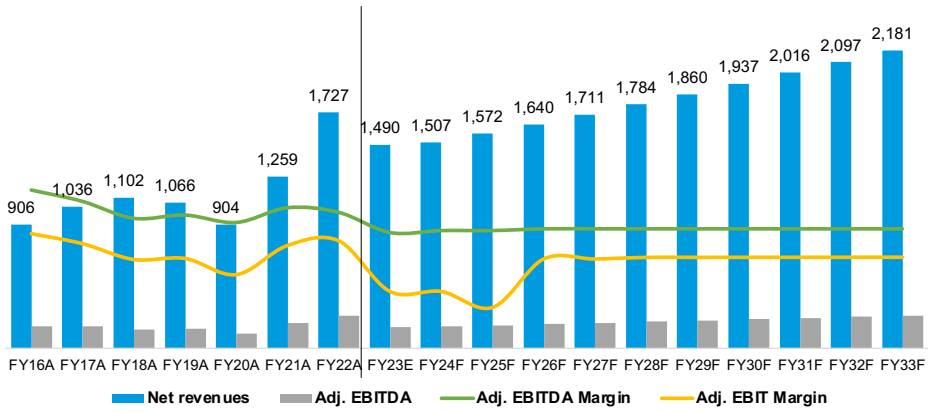


Figure 25: Profitability Overview of AMAG

Capital Expenditures

Historically, capital expenditures of AMAG ranged about 5-8% of revenues with a constant decreasing trend in the most recent years. One of the main drivers of capex are the acquisitions of AMAG, however, since capex margin to revenues did not increase at the company's last acquisition of Aircraft Philipp Group, located in Übersee, Germany, we re-analysed CAPEX. This resulted in a constant downward trend of capex ratio to 4.5% in FY22 and even lower at 3.2% in FY23E. Therefore, we opted for a forecasted average percentage ratio of the past three years of 4.5%

Net Working Capital

Net Working Capital (NWC) defined as current assets (less cash and short-term investments) minus current liabilities (less debt) was forecasted using the long-term average ratio of NWC to revenues of approximately -27%. We expect AMAG to remain its working capital to be constant at that level, due to its historical performance and usage of short- and long-term cash. However, this approach is also in line with the forecast of NWC's main value driver of DSO, DIO and DPO, which were already analysed and conducted a historical deep-dive in the section before, resulting in the same forecasted NWC figures.

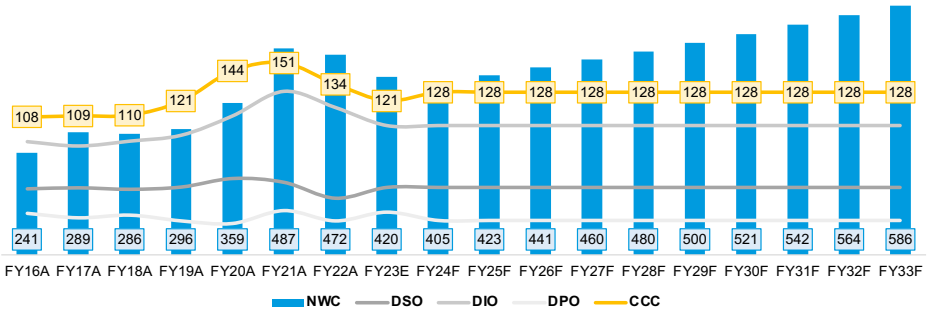


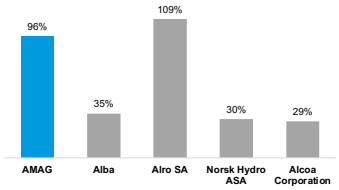
Figure 26: Overview of Net Working Capital of AMAG

Capital Structure and Dividend Strategy

During our analysis of AMAG, we observed an extremely high level of debt in the analyzed historical period. Specifically, AMAG's Debt-to-Equity ratio varies historically between 0.82 and 1.03 in recent years. When comparing those D/E ratios to some peer companies, one can see generally highly diversified D/E ratios, ranging from similar numbers to much less levered Balance sheets[20]. However, a high level of debt compared to the company's equity indicates a capital structure that is heavily skewed toward debt financing. In terms of leverage and risk, this can be a cost-effective source of capital, allowing AMAG to leverage its operations and potentially generate higher returns on equity for shareholders. It also helps AMAG to contribute to financially healthy capital structure, by providing financial flexibility for growth and expansion, which, as we observed during our analysis, was needed for previous acquisitions or recovering from diverse economic downturns like the covid pandemic or conflict in the Ukraine and Russia. AMAG pursues an aggressive investment strategy, prioritizing robust company growth. This strategy heavily relies on long-term debt to fund most of its investments, resulting in substantial long-term financial obligations and a limited availability of short-term credit facilities. Management's guidance implies a commitment to maintaining this strategy unchanged in the foreseeable future, reinforcing our expectation of minimal alterations in the company's capital structure during the forecasted period.

AMAG is following a rather conservative dividend strategy, not increasing dividends as often as the company's peers. Therefore, AMAG pays consistent dividends over multiple years, as seen from FY15 to FY18. During the corona crisis, the shareholders' meeting supported the proposal by the Management and Supervisory Boards to decrease paying dividends in 2020, aiming to strengthen independence and enhance the ability to navigate the challenges effectively. As soon as the pandemic ended, AMAG increased its dividends to normal standards of 1.50€ per share in FY22 and FY23. Due to historical analysis and management guidance, we are expecting another dividend of 1.50€ in FY24.

Figure 27: Debt/ Equity Ratio with Peer Group in FY22



Source: Bloomberg

Figure 27: Overview of Capital Structure

Source: Own Calculations

[20] Source: Bloomberg

Recommendation

Recommendation - BUY

Median target price of €33.08 and expected €1.50 dividend, signifying a 25.29% growth potential

AMAG Austria Metall AG exhibits substantial upside potential, given our Median target price of €33.08, an anticipated dividend of €1.50 in FY24, and the current share price of €26.40, amounting to a potential increase of 25.29%. With a proven and resilient business model, AMAG finds itself in a highly competitive and fragmented market that is experiencing a drastic shift in its demands towards eastern countries like China and Russia. Furthermore, the industry is confronted with multiple trends that could change the operational activities of each company, mainly the trend towards new and innovative technologies as well as the shift towards a more sustainable approach. AMAG shows with its R&D efforts in trends like recycling and automation of operations and its long-term corporate strategy, constant growth projections combined with a diversified product portfolio – Rolling, Casting, Metal, Service – and the possibility of meeting the demand through a skilled workforce and infrastructure, high potential for future growth. In summary, it's important to acknowledge that no single method of valuation can definitively determine AMAG's true stock price in the future. This is because each valuation method relies on assumptions and forecasts that are inherently uncertain. Consequently, a range of methods has been employed in forming the final recommendation, offering a more reliable perspective through their consistency.

Our recommendation for the stock of AMAG Austria Metall AG is **BUY.**

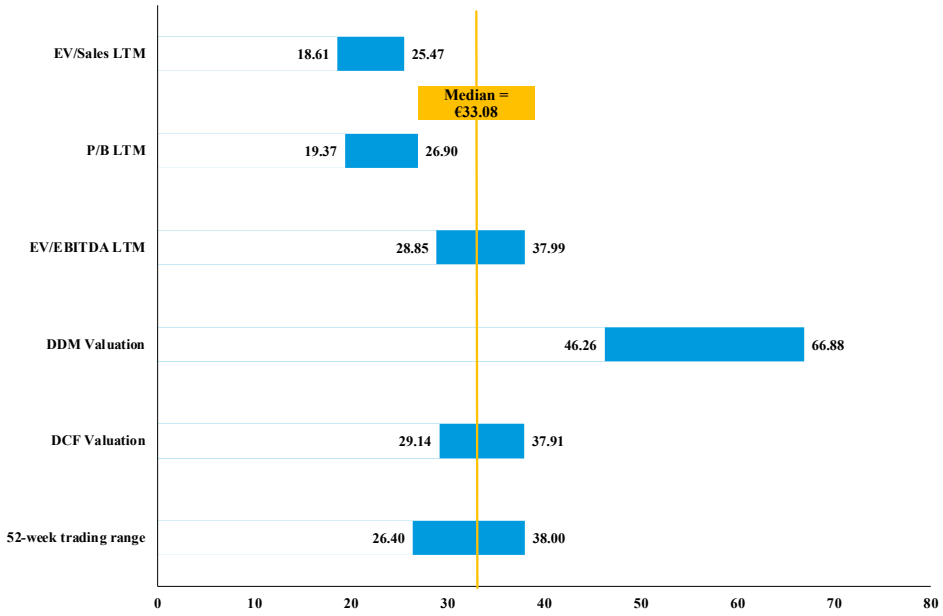


Figure 36: Football Field/ Valuation Overview

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Appendix

Consolidated Balance Sheet

Reformulated Balance Sheet

in € mio.	Explanation #	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023E
Core Operations									
Cash & Cash Equivalents		18.12	20.72	22.03	21.32	18.08	25.19	34.53	29.80
Inventories		198.99	227.22	256.56	257.01	261.65	396.63	486.88	297.85
Holding Period		*89*	*86*	*89*	*94*	*109*	*129*	*116*	*102*
Other Current Assets		-	-	-	-	-	-	-	-
in % of Total Revenues		*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Trade Receivables		133.95	153.07	164.44	157.94	151.05	199.18	216.80	219.99
Collection Period		*52*	*53*	*52*	*53*	*60*	*57*	*45*	*53*
Intangible Assets		7.42	8.79	9.11	8.85	13.41	14.39	15.08	14.16
in % of Total Revenues		*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*
Other non-current Assets		2.40	2.17	2.18	1.32	3.04	4.35	2.23	0.80
in % of Total Revenues		*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
PP&E		743.38	751.73	748.09	740.3	723.1	719.64	720.7	654.9
in % of Total Revenues		*82%*	*73%*	*68%*	*69%*	*80%*	*57%*	*42%*	*44%*
Trade Payables		(94.17)	(99.23)	(111.95)	(97.25)	(84.31)	(135.39)	(155.48)	(122.84)
Payable Period		*33*	*29*	*31*	*27*	*25*	*35*	*27*	*27*
Other current liabilities		(18.54)	(18.42)	(19.86)	(20.73)	(18.22)	(22.27)	(22.12)	(20.10)
in % of Total Revenues		*-2%*	*-2%*	*-2%*	*-2%*	*-2%*	*-2%*	*-1%*	*-1%*
Investments in Associates, Joint Venture		0.03	1.40	1.76	1.77	1.89	1.51	1.52	1.23
Income tax liabilities		(6.73)	(1.04)	(0.08)	(10.33)	(3.73)	(20.95)	(0.08)	(6.19)
Other non-current liabilities		(119.86)	(83.35)	(67.84)	(59.55)	(46.02)	(73.80)	(73.32)	(66.62)
in % of Total Revenues		*-13%*	*-8%*	*-6%*	*-6%*	*-5%*	*-6%*	*-4%*	*-4%*
Core Invested Capital		**864.99**	**963.06**	**1,004.44**	**1,000.65**	**1,019.94**	**1,108.48**	**1,226.74**	**1,002.93**
		111%	111%	111%	113%	113%	110%	108%	109%
Non-Core Operations									
Deferred Tax Assets		23.41	13.61	6.74	9.72	10.99	23.08	17.17	15.60
in % of Total Revenues		*3%*	*1%*	*1%*	*1%*	*1%*	*2%*	*1%*	*1%*
Provisions for pensions and similar obligations		(96.60)	(108.74)	(108.01)	(122.68)	(129.47)	(126.01)	(110.83)	(94.50)
Provisions/ FTE		*(0.05)*	*(0.06)*	*(0.06)*	*(0.06)*	*(0.07)*	*(0.06)*	*(0.05)*	*0.04*
Deferred tax liabilities		(13.07)	-	-	(0.01)	(0.17)	-	(4.85)	(2.93)
Assets held for sale		0.35	1.20	1.28	1.32	1.51	1.58	11.12	2.62
Non-Core Invested Capital		**(85.91)**	**(93.93)**	**(99.99)**	**(111.65)**	**(117.14)**	**(101.35)**	**(87.39)**	**(79.20)**
		-11%	-11%	-11%	-13%	-13%	-10%	-8%	-9%
Total Invested Capital		**779.08**	**869.13**	**904.45**	**889.00**	**902.80**	**1,007.13**	**1,139.35**	**923.72**
Financial Operations									
Excess of cash		131.71	149.03	273.84	246.00	286.82	146.24	251.14	-
Current financial liabilities		(36.58)	(117.48)	(38.81)	(64.69)	(101.72)	(159.67)	(166.35)	(51.53)
in % of Total Financial Liabilities		*13.0%*	*28.6%*	*7.0%*	*12.5%*	*17.3%*	*30.5%*	*24.5%*	*19.7%*
Non-Current Financial Liabilities		(243.76)	(292.80)	(518.60)	(451.01)	(485.19)	(364.21)	(513.82)	(209.39)
in % of Total Financial Liabilities		*87.0%*	*71.4%*	*93.0%*	*87.5%*	*82.7%*	*69.5%*	*75.5%*	*80.3%*
Total Financial Liabilities		(280.34)	(410.28)	(557.41)	(515.70)	(586.91)	(523.88)	(680.17)	(260.92)
Minority Interests		-	-	-	-	(0.31)	-	-	-
Net Financial Assets/(Liabilities)		**(148.63)**	**(261.25)**	**(283.57)**	**(269.70)**	**(300.40)**	**(377.64)**	**(429.03)**	**(260.92)**
Equity		**630.46**	**607.87**	**620.87**	**619.29**	**602.39**	**629.47**	**710.31**	**662.81**

Reformulated Balance Sheet

in € mio.	FY2024F	FY2025F	FY2026F	FY2027F	FY2028F	FY2029F	FY2030F	FY2031F	FY2032F	FY2033F
Core Operations										
Cash & Cash Equivalents	30.30	31.61	32.98	34.40	35.87	37.39	38.94	40.53	42.16	43.83
Inventories	189.13	227.59	247.78	233.12	198.21	268.24	380.13	264.57	68.72	374.65
Holding Period	*102*	*102*	*102*	*102*	*102*	*102*	*102*	*102*	*102*	*102*
Other Current Assets	-	-	-	-	-	-	-	-	-	-
in % of Total Revenues	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Trade Receivables	223.18	232.80	242.86	253.38	264.20	275.33	286.76	298.49	310.50	322.80
Collection Period	*53*	*53*	*53*	*53*	*53*	*53*	*53*	*53*	*53*	*53*
Intangible Assets	13.23	13.80	14.40	15.02	15.67	16.33	17.00	17.70	18.41	19.14
in % of Total Revenues	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*
Other non-current Assets	3.48	3.63	3.78	3.95	4.12	4.29	4.47	4.65	4.84	5.03
in % of Total Revenues	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
PP&E	632.43	659.68	688.19	717.99	748.67	780.21	812.60	845.82	879.87	914.71
in % of Total Revenues	*42%*	*42%*	*42%*	*42%*	*42%*	*42%*	*42%*	*42%*	*42%*	*42%*
Trade Payables	(90.21)	(94.10)	(98.16)	(102.41)	(106.79)	(111.29)	(115.91)	(120.65)	(125.50)	(130.47)
Payable Period	*27*	*27*	*27*	*27*	*27*	*27*	*27*	*27*	*27*	*27*
Other current liabilities	(19.41)	(20.25)	(21.12)	(22.04)	(22.98)	(23.95)	(24.94)	(25.96)	(27.01)	(28.07)
in % of Total Revenues	*-1%*	*-1%*	*-1%*	*-1%*	*-1%*	*-1%*	*-1%*	*-1%*	*-1%*	*-1%*
Investments in Associates, Joint Ver	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
Income tax liabilities	(6.19)	(6.19)	(6.19)	(6.19)	(6.19)	(6.19)	(6.19)	(6.19)	(6.19)	(6.19)
Other non-current liabilities	(64.34)	(67.11)	(70.01)	(73.04)	(76.17)	(79.37)	(82.67)	(86.05)	(89.51)	(93.06)
in % of Total Revenues	*-4%*	*-4%*	*-4%*	*-4%*	*-4%*	*-4%*	*-4%*	*-4%*	*-4%*	*-4%*
Core Invested Capital	**912.84**	**982.70**	**1,035.73**	**1,055.41**	**1,055.85**	**1,162.21**	**1,311.42**	**1,234.15**	**1,077.52**	**1,423.60**
	112%	111%	111%	112%	112%	111%	110%	112%	114%	111%
Non-Core Operations										
Deferred Tax Assets	15.07	15.72	16.40	17.11	17.84	18.59	19.36	20.15	20.96	21.79
in % of Total Revenues	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*
Provisions for pensions and similar o	(111.81)	(116.63)	(121.67)	(126.94)	(132.36)	(137.94)	(143.67)	(149.54)	(155.56)	(161.72)
Provisions/ FTE	*(0.06)*	*(0.06)*	*(0.06)*	*(0.06)*	*(0.06)*	*(0.06)*	*(0.06)*	*(0.06)*	*(0.06)*	*(0.06)*
Deferred tax liabilities	(2.93)	(2.93)	(2.93)	(2.93)	(2.93)	(2.93)	(2.93)	(2.93)	(2.93)	(2.93)
Assets held for sale	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62
Non-Core Invested Capital	**(97.05)**	**(101.22)**	**(105.58)**	**(110.14)**	**(114.83)**	**(119.65)**	**(124.61)**	**(129.69)**	**(134.90)**	**(140.23)**
	-12%	-11%	-11%	-12%	-12%	-11%	-10%	-12%	-14%	-11%
Total Invested Capital	**815.79**	**881.48**	**930.15**	**945.28**	**941.02**	**1,042.56**	**1,186.82**	**1,104.45**	**942.62**	**1,283.37**
Financial Operations										
Excess of cash	-	-	-	-	-	-	-	-	176.11	-
Current financial liabilities	(13.83)	(19.44)	(20.88)	(15.27)	(5.42)	(16.02)	(34.62)	(8.00)	-	(21.21)
in % of Total Financial Liabilities	*19.7%*	*19.7%*	*19.7%*	*19.7%*	*19.7%*	*19.7%*	*19.7%*	*19.7%*	*19.7%*	*19.7%*
Non-Current Financial Liabilities	(56.20)	(79.01)	(84.83)	(62.06)	(22.01)	(65.11)	(140.67)	(32.51)	-	(86.20)
in % of Total Financial Liabilities	*80.3%*	*80.3%*	*80.3%*	*80.3%*	*80.3%*	*80.3%*	*80.3%*	*80.3%*	*80.3%*	*80.3%*
Total Financial Liabilities	(70.03)	(98.46)	(105.71)	(77.33)	(27.43)	(81.13)	(175.29)	(40.52)	-	(107.42)
Minority Interests	-	-	-	-	-	-	-	-	-	-
Net Financial Assets/(Liabilities)	**(70.03)**	**(98.46)**	**(105.71)**	**(77.33)**	**(27.43)**	**(81.13)**	**(175.29)**	**(40.52)**	**176.11**	**(107.42)**
Equity	**745.76**	**783.02**	**824.45**	**867.95**	**913.59**	**961.43**	**1,011.52**	**1,063.94**	**1,118.73**	**1,175.95**

Consolidated Income Statement

Reformulated Income Statement

in € mio.	FY16A	FY17A	FY18A	FY19A	FY20A	FY21A	FY22A	FY23E
Core Operations								
Metal	185.9	208	216.32	206.26	197.61	285.84	369.57	322.28
growth in % per year	*-3.6%*	*11.9%*	*4.0%*	*-4.7%*	*-4.2%*	*44.6%*	*29.3%*	*-12.8%*
share in % of total revenues	*20.5%*	*20.1%*	*19.6%*	*19.3%*	*21.9%*	*22.7%*	*21.4%*	*21.6%*
Casting	102.69	110.16	105.53	87.92	78.4	118.25	162.63	155.81
growth in % per year	*-20.5%*	*7.3%*	*-4.2%*	*-16.7%*	*-10.8%*	*50.8%*	*37.5%*	*-4.2%*
share in % of total revenues	*11.3%*	*10.6%*	*9.6%*	*8.2%*	*8.7%*	*9.4%*	*9.4%*	*10.5%*
Rolling	611.94	712.16	773.8	766.08	622.41	848.77	1,188.29	1,006.59
growth in % per year	*4.4%*	*16.4%*	*8.7%*	*-1.0%*	*-18.8%*	*36.4%*	*40.0%*	*-15.3%*
share in % of total revenues	*67.5%*	*68.7%*	*70.2%*	*71.9%*	*68.8%*	*67.4%*	*68.8%*	*67.6%*
Service	5.71	5.92	5.91	5.72	5.76	6.54	6.22	5.43
growth in % per year	*5.4%*	*3.7%*	*-0.2%*	*-3.2%*	*0.7%*	*13.5%*	*-4.9%*	*-12.7%*
share in % of total revenues	*0.6%*	*0.6%*	*0.5%*	*0.5%*	*0.6%*	*0.5%*	*0.4%*	*0.4%*
Revenues	**906.24**	**1,036.24**	**1,101.56**	**1,065.98**	**904.18**	**1,259.40**	**1,726.71**	**1,490.10**
Main COGS	(569.84)	(698.93)	(763.08)	(707.76)	(593.54)	(823.77)	(1,208.98)	(1,179.36)
COGS	(669.26)	(805.33)	(876.79)	(824.92)	(701.38)	(949.17)	(1,345.12)	(1,325.71)
SG&A	(77.24)	(79.77)	(95.24)	(106.61)	(98.49)	(122.91)	(146.53)	(142.42)
in % of Total Revenue	*-9%*	*-8%*	*-9%*	*-10%*	*-11%*	*-10%*	*-8%*	*-10%*
Other Operating Income/ (Expenses)	2.29	13.46	12.67	9.30	5.83	(1.26)	5.99	1.08
Depreciation	(70.03)	(77.65)	(80.34)	(81.91)	(83.45)	(84.40)	(87.46)	(71.54)
in % of PPE & Intangible Assets	*-9%*	*-10%*	*-11%*	*-11%*	*-11%*	*-11%*	*-12%*	*-11%*
Core Result before Taxes	**92.00**	**86.95**	**61.86**	**61.84**	**26.69**	**101.66**	**153.59**	**(48.49)**
growth in % per year	*n/a*	*-5.5%*	*-28.9%*	*0.0%*	*-56.8%*	*280.9%*	*51.1%*	*-131.6%*
Statutory Taxes	(24.33)	(19.70)	(11.77)	(14.97)	(7.74)	(31.05)	(40.85)	(33.97)
Statutory Tax Rate	*-26%*	*-23%*	*-19%*	*-24%*	*-29%*	*-31%*	*-27%*	*-25%*
Tax Adjustments	(0.00)	(0.00)	0.00	(0.00)	0.01	(0.01)	0.00	23.90
Core Result	**67.66**	**67.25**	**50.09**	**46.86**	**18.96**	**70.60**	**112.75**	**(58.56)**
Non-Core Operations								
Sale of Intangible Fixed Assets	0.19	-	-	-	-	-	-	-
Other Non-Operating Income/(Expenses)	-	-	-	-	-	-	-	-
Non-Recurring Income/ Expense	(17.71)	-	-	-	(0.42)	-	(1.24)	-
Non-Core Result before Taxes	**(17.52)**	**-**	**-**	**-**	**(0.42)**	**-**	**(1.24)**	**-**
Statutory Taxes	4.63	-	-	-	0.12	-	0.33	-
Statutory Tax Rate	*-26%*	*25%*	*25%*	*25%*	*-29%*	*25%*	*-27%*	*24%*
Tax Adjustments	0.00	-	-	-	(0.00)	-	(0.00)	-
Other Comprehensive Income	11.57	(45.07)	12.74	2.10	(9.12)	(21.48)	24.39	(11.80)
Non-Core Result	**(1.32)**	**(45.07)**	**12.74**	**2.10**	**(9.42)**	**(21.48)**	**23.48**	**(11.80)**
Financial								
Interest Income/(Expenses)	(6.78)	(4.70)	(5.17)	(6.74)	(5.85)	(8.25)	(9.26)	(6.68)
Non-Interest Income/(Expenses)	(4.76)	(2.11)	(2.06)	(4.37)	(4.94)	(0.51)	5.31	(1.92)
Equity Earnings	-	1.52	0.39	0.26	0.12	0.12	0.48	0.41
Financial Result before Taxes	**(11.54)**	**(5.29)**	**(6.84)**	**(10.85)**	**(10.67)**	**(8.64)**	**(3.47)**	**(8.19)**
Statutory Taxes	3.05	1.20	1.30	2.63	3.10	2.64	0.92	-
Statutory Tax Rate	*-26%*	*-23%*	*-19%*	*-24%*	*-29%*	*-31%*	*-27%*	*-25%*
Tax Adjustments	0.00	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)	-
Financial Result	**(8.49)**	**(4.09)**	**(5.54)**	**(8.22)**	**(7.58)**	**(6.00)**	**(2.55)**	**(8.19)**
Total Comprehensive Income before Taxes	**62.94**	**81.66**	**55.02**	**50.99**	**15.60**	**93.02**	**148.88**	**- 56.68**
Total Comprehensive Income	**11.57**	**18.09**	**57.27**	**40.74**	**1.93**	**43.14**	**133.67**	**- 78.55**

Reformulated Income Statement

in € mio.	FY24F	FY25F	FY26F	FY27F	FY28F	FY29F	FY30F	FY31F	FY32F	FY33F
Core Operations										
Metal	335.11	344.48	354.11	364.01	374.19	384.65	395.41	406.47	417.83	429.51
growth in % per year	*4.0%*	*2.8%*	*2.8%*	*2.8%*	*2.8%*	*2.8%*	*2.8%*	*2.8%*	*2.8%*	*2.8%*
share in % of total revenues	*22.1%*	*21.8%*	*21.5%*	*21.2%*	*20.9%*	*20.6%*	*20.3%*	*20.1%*	*19.8%*	*19.6%*
Casting	163.36	168.31	173.41	178.67	184.08	189.67	195.41	201.34	207.44	213.73
growth in % per year	*4.8%*	*3.0%*	*3.0%*	*3.0%*	*3.0%*	*3.0%*	*3.0%*	*3.0%*	*3.0%*	*3.0%*
share in % of total revenues	*10.8%*	*10.6%*	*10.5%*	*10.4%*	*10.3%*	*10.1%*	*10.0%*	*9.9%*	*9.8%*	*9.8%*
Rolling	1,011.30	1,062.27	1,115.81	1,172.05	1,229.93	1,289.44	1,350.52	1,413.13	1,477.22	1,542.72
growth in % per year	*0.5%*	*5.0%*	*5.0%*	*5.0%*	*4.9%*	*4.8%*	*4.7%*	*4.6%*	*4.5%*	*4.4%*
share in % of total revenues	*66.7%*	*67.2%*	*67.7%*	*68.1%*	*68.6%*	*69.0%*	*69.4%*	*69.7%*	*70.1%*	*70.4%*
Service	5.44	5.46	5.48	5.49	5.51	5.52	5.54	5.55	5.57	5.59
growth in % per year	*0.3%*	*0.3%*	*0.3%*	*0.3%*	*0.3%*	*0.3%*	*0.3%*	*0.3%*	*0.3%*	*0.3%*
share in % of total revenues	*0.4%*	*0.3%*	*0.3%*	*0.3%*	*0.3%*	*0.3%*	*0.3%*	*0.3%*	*0.3%*	*0.3%*
Revenues	**1,515.22**	**1,580.52**	**1,648.81**	**1,720.22**	**1,793.72**	**1,869.28**	**1,946.88**	**2,026.49**	**2,108.06**	**2,191.54**
Main COGS	(1,057.27)	(1,102.84)	(1,150.48)	(1,200.31)	(1,251.60)	(1,304.32)	(1,358.47)	(1,414.02)	(1,470.93)	(1,529.19)
COGS	(1,213.81)	(1,266.13)	(1,320.83)	(1,378.04)	(1,436.91)	(1,497.45)	(1,559.61)	(1,623.38)	(1,688.72)	(1,755.60)
SG&A	(138.30)	(144.26)	(145.55)	(151.85)	(158.34)	(165.01)	(171.86)	(178.89)	(186.09)	(193.46)
in % of Total Revenue	*-9%*	*-9%*	*-9%*	*-9%*	*-9%*	*-9%*	*-9%*	*-9%*	*-9%*	*-9%*
Other Operating Income/ (Expenses)	-	-	-	-	-	-	-	-	-	-
Depreciation	(69.05)	(72.02)	(75.13)	(78.39)	(81.74)	(85.18)	(88.72)	(92.34)	(96.06)	(99.86)
in % of PPE & Intangible Assets	*-11%*	*-11%*	*-11%*	*-11%*	*-11%*	*-11%*	*-11%*	*-11%*	*-11%*	*-11%*
Core Result before Taxes	**94.06**	**98.11**	**107.30**	**111.94**	**116.73**	**121.64**	**126.69**	**131.87**	**137.18**	**142.62**
growth in % per year	*-294.0%*	*4.3%*	*9.4%*	*4.3%*	*4.3%*	*4.2%*	*4.2%*	*4.1%*	*4.0%*	*4.0%*
Statutory Taxes	(22.57)	(23.55)	(25.75)	(26.87)	(28.01)	(29.19)	(30.41)	(31.65)	(32.92)	(34.23)
Statutory Tax Rate	*-24%*	*-24%*	*-24%*	*-24%*	*-24%*	*-24%*	*-24%*	*-24%*	*-24%*	*-24%*
Tax Adjustments	-	-	-	-	-	-	-	-	-	-
Core Result	**71.48**	**74.56**	**81.55**	**85.08**	**88.71**	**92.45**	**96.29**	**100.22**	**104.26**	**108.39**
Non-Core Operations										
Sale of Intangible Fixed Assets	-	-	-	-	-	-	-	-	-	-
Other Non-Operating Income/(Expenses)	-	-	-	-	-	-	-	-	-	-
Non-Recurring Income/ Expense	-	-	-	-	-	-	-	-	-	-
Non-Core Result before Taxes	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Statutory Taxes	-	-	-	-	-	-	-	-	-	-
Statutory Tax Rate	*24%*	*24%*	*24%*	*24%*	*24%*	*24%*	*24%*	*24%*	*24%*	*24%*
Tax Adjustments	-	-	-	-	-	-	-	-	-	-
Other Comprehensive Income	(4.68)	(4.77)	(4.86)	(4.96)	(5.06)	(5.16)	(5.27)	(5.37)	(5.48)	(5.59)
Non-Core Result	**(4.68)**	**(4.77)**	**(4.86)**	**(4.96)**	**(5.06)**	**(5.16)**	**(5.27)**	**(5.37)**	**(5.48)**	**(5.59)**
Financial										
Interest Income/(Expenses)	(6.68)	(6.68)	(6.68)	(6.68)	(6.68)	(6.68)	(6.68)	(6.68)	(6.68)	(6.68)
Non-Interest Income/(Expenses)	(1.92)	(1.92)	(1.92)	(1.92)	(1.92)	(1.92)	(1.92)	(1.92)	(1.92)	(1.92)
Equity Earnings	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41
Financial Result before Taxes	**(8.19)**	**(8.19)**	**(8.19)**	**(8.19)**	**(8.19)**	**(8.19)**	**(8.19)**	**(8.19)**	**(8.19)**	**(8.19)**
Statutory Taxes	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05
Statutory Tax Rate	*-25%*	*-25%*	*-25%*	*-25%*	*-25%*	*-25%*	*-25%*	*-25%*	*-25%*	*-25%*
Tax Adjustments	-	-	-	-	-	-	-	-	-	-
Financial Result	**(6.14)**	**(6.14)**	**(6.14)**	**(6.14)**	**(6.14)**	**(6.14)**	**(6.14)**	**(6.14)**	**(6.14)**	**(6.14)**
Total Comprehensive Income before Taxes	**85.87**	**89.93**	**99.11**	**103.76**	**108.54**	**113.46**	**118.51**	**123.69**	**129.00**	**134.43**
Total Comprehensive Income	**60.67**	**63.66**	**70.54**	**73.98**	**77.51**	**81.15**	**84.88**	**88.71**	**92.64**	**96.66**

Consolidated Free Cash Flow Map

AMAG | Forecast & Free Cash Flow Calculation

in € mio.	FY2016A	FY2017A	FY2018A	FY2019A	FY2020A	FY2021A	FY2022A	FY2023E
Metal	185.90	208.00	216.32	206.26	197.61	285.84	369.57	326.00
growth in % per year	*-3.6%*	*11.9%*	*4.0%*	*-4.7%*	*-4.2%*	*44.6%*	*29.3%*	*-11.8%*
Casting	102.69	110.16	105.53	87.92	78.40	118.25	162.63	158.55
growth in % per year	*-20.5%*	*7.3%*	*-4.2%*	*-16.7%*	*-10.8%*	*50.8%*	*37.5%*	*-2.5%*
Rolling	611.94	712.16	773.80	766.08	622.41	848.77	1,188.29	1,078.98
growth in % per year	*4.4%*	*16.4%*	*8.7%*	*-1.0%*	*-18.8%*	*36.4%*	*40.0%*	*-9.2%*
Service	5.71	5.92	5.91	5.72	5.76	6.54	6.22	5.43
growth in % per year	*5.4%*	*3.7%*	*-0.2%*	*-3.2%*	*0.7%*	*13.5%*	*-4.9%*	*-12.7%*
Net revenues	**906.24**	**1,036.24**	**1,101.56**	**1,065.98**	**904.18**	**1,259.40**	**1,726.71**	**1,568.95**
growth in % per year	*-0.8%*	*14.3%*	*6.3%*	*-3.2%*	*-15.2%*	*39.3%*	*37.1%*	*-9.1%*
Adj. EBITDA	**162.03**	**164.60**	**142.20**	**143.75**	**110.14**	**186.06**	**241.05**	**155.18**
in % of Net revenues	*17.9%*	*15.9%*	*12.9%*	*13.5%*	*12.2%*	*14.8%*	*14.0%*	*9.9%*
Depreciation	70.03	77.65	80.34	80.38	82.25	82.54	85.46	69.73
in % of Net revenues	*7.7%*	*7.5%*	*7.3%*	*7.5%*	*9.1%*	*6.6%*	*4.9%*	*4.4%*
Amortization	-	-	-	1.53	1.20	1.86	2.00	1.82
in % of Net revenues	*0.0%*	*0.0%*	*0.0%*	*0.1%*	*0.1%*	*0.1%*	*0.1%*	*0.1%*
D&A	70.03	77.65	80.34	81.91	83.45	84.40	87.46	71.54
in % of Net revenues	*7.7%*	*7.5%*	*7.3%*	*7.7%*	*9.2%*	*6.7%*	*5.1%*	*4.6%*
Adj. EBIT	**92.00**	**86.95**	**61.86**	**61.84**	**26.69**	**101.66**	**153.59**	**(48.49)**
in % of Net revenues	*10.2%*	*8.4%*	*5.6%*	*5.8%*	*3.0%*	*8.1%*	*8.9%*	*-3.1%*
Interest	(11.54)	(5.29)	(6.84)	(10.85)	(10.67)	(8.64)	(3.47)	(8.19)
in % of Net revenues	*-1.3%*	*-0.5%*	*-0.6%*	*-1.0%*	*-1.2%*	*-0.7%*	*-0.2%*	*-0.5%*
EBT	**80.46**	**81.66**	**55.02**	**50.99**	**16.02**	**93.02**	**150.12**	**(56.68)**
Effective Tax rate	*-30.2%*	*-24.1%*	*-21.4%*	*-29.4%*	*-48.3%*	*-33.4%*	*-27.2%*	*25.2%*
Taxes	(24.33)	(19.70)	(11.77)	(14.97)	(7.74)	(31.05)	(40.85)	(33.97)
Net income	**56.13**	**61.96**	**43.25**	**36.02**	**8.28**	**61.97**	**109.27**	**(90.65)**
Adj. EBIT	**92.00**	**86.95**	**61.86**	**61.84**	**26.69**	**101.66**	**153.59**	**(48.49)**
Taxes	(24.33)	(19.70)	(11.77)	(14.97)	(7.74)	(31.05)	(40.85)	(33.97)
NOPLAT	**67.67**	**67.25**	**50.09**	**46.87**	**18.95**	**70.61**	**112.74**	**(82.46)**
CAPEX	(186.83)	(108.97)	(83.70)	(79.37)	(58.22)	(72.99)	(78.42)	(50.21)
in % of Net revenues	*-20.6%*	*-10.5%*	*-7.6%*	*-7.4%*	*-6.4%*	*-5.8%*	*-4.5%*	*-3.2%*
NWC	192.16	240.98	289.03	285.86	296.07	358.59	486.80	442.32
in % of Net revenues	*21.2%*	*23.3%*	*26.2%*	*26.8%*	*32.7%*	*28.5%*	*28.2%*	*28.2%*
Delta NWC		48.82	48.05	(3.17)	10.21	62.52	128.21	(44.48)
Free Cash Flow to Firm		**7.10**	**14.44**	**(35.67)**	**(29.06)**	**60.14**	**162.53**	**(177.14)**

AMAG | Forecast & Free Cash Flow Calculation

in € mio.	FY2024F	FY2025F	FY2026F	FY2027F	FY2028F	FY2029F	FY2030F	FY2031F	FY2032F	FY2033F
Metal	335.11	344.48	354.11	364.01	374.19	384.65	395.41	406.47	417.83	429.51
growth in % per year	*2.8%*	*2.8%*	*2.8%*	*2.8%*	*2.8%*	*2.8%*	*2.8%*	*2.8%*	*2.8%*	*2.8%*
Casting	163.36	168.31	173.41	178.67	184.08	189.67	195.41	201.34	207.44	213.73
growth in % per year	*3.0%*	*3.0%*	*3.0%*	*3.0%*	*3.0%*	*3.0%*	*3.0%*	*3.0%*	*3.0%*	*3.0%*
Rolling	1,011.30	1,062.27	1,115.81	1,172.05	1,229.93	1,289.44	1,350.52	1,413.13	1,477.22	1,542.72
growth in % per year	*-6.3%*	*5.0%*	*5.0%*	*5.0%*	*4.9%*	*4.8%*	*4.7%*	*4.6%*	*4.5%*	*4.4%*
Service	5.44	5.46	5.48	5.49	5.51	5.52	5.54	5.55	5.57	5.59
growth in % per year	*0.3%*	*0.3%*	*0.3%*	*0.3%*	*0.3%*	*0.3%*	*0.3%*	*0.3%*	*0.3%*	*0.3%*
Net revenues	**1,515.22**	**1,580.52**	**1,648.81**	**1,720.22**	**1,793.72**	**1,869.28**	**1,946.88**	**2,026.49**	**2,108.06**	**2,191.54**
growth in % per year	*-3.4%*	*4.3%*	*4.3%*	*4.3%*	*4.3%*	*4.2%*	*4.2%*	*4.1%*	*4.0%*	*4.0%*
Adj. EBITDA	**163.10**	**170.13**	**182.43**	**190.33**	**198.46**	**206.82**	**215.41**	**224.22**	**233.24**	**242.48**
in % of Net revenues	*10.8%*	*10.8%*	*11.1%*	*11.1%*	*11.1%*	*11.1%*	*11.1%*	*11.1%*	*11.1%*	*11.1%*
Depreciation	67.80	70.73	73.78	76.98	80.27	83.65	87.12	90.68	94.33	98.07
in % of Net revenues	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*	*4.5%*
Amortization	1.24	1.30	1.35	1.41	1.47	1.53	1.60	1.66	1.73	1.80
in % of Net revenues	*0.1%*	*0.1%*	*0.1%*	*0.1%*	*0.1%*	*0.1%*	*0.1%*	*0.1%*	*0.1%*	*0.1%*
D&A	69.05	72.02	75.13	78.39	81.74	85.18	88.72	92.34	96.06	99.86
in % of Net revenues	*4.6%*	*4.6%*	*4.6%*	*4.6%*	*4.6%*	*4.6%*	*4.6%*	*4.6%*	*4.6%*	*4.6%*
Adj. EBIT	**94.06**	**98.11**	**107.30**	**111.94**	**116.73**	**121.64**	**126.69**	**131.87**	**137.18**	**142.62**
in % of Net revenues	*6.2%*	*6.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
Interest	(8.19)	(8.19)	(8.19)	(8.19)	(8.19)	(8.19)	(8.19)	(8.19)	(8.19)	(8.19)
in % of Net revenues	*-0.5%*	*-0.5%*	*-0.5%*	*-0.5%*	*-0.5%*	*-0.4%*	*-0.4%*	*-0.4%*	*-0.4%*	*-0.4%*
EBT	**85.87**	**89.93**	**99.11**	**103.76**	**108.54**	**113.46**	**118.51**	**123.69**	**129.00**	**134.43**
Effective Tax rate	*24.0%*	*24.0%*	*24.0%*	*24.0%*	*24.0%*	*24.0%*	*24.0%*	*24.0%*	*24.0%*	*24.0%*
Taxes	20.61	21.58	23.79	24.90	26.05	27.23	28.44	29.69	30.96	32.26
Net income	**106.48**	**111.51**	**122.90**	**128.66**	**134.59**	**140.69**	**146.95**	**153.37**	**159.96**	**166.69**
Adj. EBIT	**94.06**	**98.11**	**107.30**	**111.94**	**116.73**	**121.64**	**126.69**	**131.87**	**137.18**	**142.62**
Taxes	20.61	21.58	23.79	24.90	26.05	27.23	28.44	29.69	30.96	32.26
NOPLAT	**114.67**	**119.69**	**131.08**	**136.85**	**142.78**	**148.87**	**155.14**	**161.56**	**168.14**	**174.88**
CAPEX	(68.37)	(71.32)	(74.40)	(77.62)	(80.94)	(84.35)	(87.85)	(91.44)	(95.12)	(98.89)
in % of Net revenues	*-4.5%*	*-4.5%*	*-4.5%*	*-4.5%*	*-4.5%*	*-4.5%*	*-4.5%*	*-4.5%*	*-4.5%*	*-4.5%*
NWC	407.43	425.00	443.36	462.56	482.32	502.64	523.51	544.91	566.85	589.30
in % of Net revenues	*26.9%*	*26.9%*	*26.9%*	*26.9%*	*26.9%*	*26.9%*	*26.9%*	*26.9%*	*26.9%*	*26.9%*
Delta NWC	(34.89)	17.56	18.36	19.20	19.76	20.32	20.87	21.41	21.93	22.45
Free Cash Flow to Firm	**11.40**	**65.94**	**75.05**	**78.43**	**81.60**	**84.84**	**88.15**	**91.52**	**94.95**	**98.44**

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Buy	Expected total return (including expected capital gains and expected dividend yield) of more than 10% over a 12-month period.
Hold	Expected total return (including expected capital gains and expected dividend yield) between 0% and 10% over a 12-month period.
Sell	Expected negative total return (including expected capital gains and expected dividend yield) over a 12-month period.

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