Rheinmetall AG:

"An Equity Valuation Amid Structural Growth in the Defense Industry"

Tom Schmanns

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Professor José Tudela Martins

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Abstract (English)

This dissertation presents an equity valuation of Rheinmetall AG, a German defense and technology group, recently transformed into a pure-play defense contractor. Motivated by Europe's rearmament, record defense budgets, and Rheinmetall's sharp share price surge, the study examines whether the company is fairly valued.

The primary valuation approach is a Discounted Cash Flow (DCF) model, utilizing Free Cash Flow to the Firm (FCFF) and discounting it at the Weighted Average Cost of Capital (WACC). Complementary Relative Valuation, based on trading and transaction multiples of peers, serves as a benchmark; however, limited comparability reduces its relevance.

The analysis builds on a financial forecast incorporating Rheinmetall's €62 billion backlog, its expanding industrial footprint, and structural NATO demand. An explicit forecast and transition period capture near-term momentum and convergence toward steady-state growth. Sensitivity tests and Monte Carlo simulations assess the models' robustness under varying assumptions.

The DCF model yields an implied share price of €1,763, an upside of 9.6% relative to the market price, August 15, 2025. Relative Valuation suggests lower values, reflecting Rheinmetall's unique position in European rearmament. Lacking comparability, the final target price relies on the DCF model, supporting a "Hold" recommendation. While near-term growth is robust, long-term prospects depend on sustained defense demand and effective program execution, requiring regular reassessment.

Author: Tom Schmanns

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Abstract (Portuguese)

Esta dissertação apresenta uma avaliação de capital próprio da Rheinmetall AG, grupo alemão de defesa e tecnologia recentemente transformado num pure-play de defesa. Motivada pela retoma do armamento europeu, orçamentos recorde e a valorização bolsista da empresa, a análise procura determinar se a Rheinmetall está corretamente avaliada.

O método principal é o Fluxo de Caixa Descontado (DCF), com base no Fluxo de Caixa Livre para a Empresa (FCFF) e descontado ao Custo Médio Ponderado de Capital (WACC). Como referência, é ainda considerada uma Avaliação Relativa através de múltiplos de mercado e de transações, embora a sua relevância seja limitada pela baixa comparabilidade.

A projeção financeira integra a carteira de encomendas de 62 mil milhões de euros, a expansão industrial e a procura estrutural da NATO. Testes de sensibilidade e simulações de Monte Carlo avaliam a robustez dos resultados.

O modelo DCF aponta para um preço-alvo de 1.763 euros por ação, implicando uma valorização de 9,6% face ao preço de mercado (15.08.2025). Os múltiplos sugerem valores inferiores, refletindo a posição única da Rheinmetall no rearmamento europeu. Assim, a recomendação final é “Manter”, dado que o crescimento de curto prazo é sólido, mas a evolução futura depende da continuidade da procura e da execução eficaz dos programas.

Autor: Tom Schmanns

Título: Rheinmetall AG: Uma Avaliação de Capital Próprio em Meio ao Crescimento Estrutural da Indústria de Defesa

Palavras-chave: Rheinmetall AG, Avaliação de Capital Próprio, Fluxo de Caixa Descontado, Avaliação Relativa, Análise de Sensibilidade, Indústria de Defesa, Rearmamento Europeu, Aquisições da NATO

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Table of Contents

List of Figures

List of Tables

List of Abbreviations

ABV	Asset-Based Valuation
APV	Adjusted Present Value
CAGR	Compound Annual Growth Rate
CAPEX	Capital Expenditures
CAPM	Capital Asset Pricing Model
CCA	Comparable Companies Analysis
CCV	Contingent Claim Valuation
CDS	Credit Default Swap
CEO	Chief Executive Officer
CF	Cash Flow
CFD	Costs of Financial Distress
CPI	Consumer Price Index
CTA	Comparable Transaction Analysis
D&A	Depreciation and Amortization
DAX 40	40 Largest Companies in Germany (Index)
DCAO	Days Contract Assets Outstanding
DCF	Discounted Cash Flow
DCLO	Days Contract Liabilities Outstanding
DDM	Dividend Discount Model
DIO	Days Inventory Outstanding
DSO	Days Sales Outstanding
EBIT	Earnings Before Interest and Taxes
EBITDA	Earnings Before Interest, Taxes, Depreciation, and Amortization
ECB	European Central Bank
EFH	Explicit Forecast Horizon
ERP	Equity Risk Premium

ESG	Environmental, Social, and Governance
ETF	Exchange-Traded Fund
EU	European Union
EV	Enterprise Value
FCF	Free Cash Flow
FCFE	Free Cash Flow to Equity
FCFF	Free Cash Flow to the Firm
FTE	Full-Time Equivalent
FV	Fair Value
GDP	Gross Domestic Product
IFRS	International Financial Reporting Standards
IMF	International Monetary Fund
ITS	Interest Tax Shield
IT	Information Technology
KMV	Kealhofer, McQuown, and Vasicek (Moody's credit risk model)
LGD	Loss Given Default
LTM	Last Twelve Months
M&A	Mergers and Acquisitions
NAV	Net Asset Value
NATO	North Atlantic Treaty Organization
NWC	Net Working Capital
OECD	Organisation for Economic Co-operation and Development
P/B	Price-to-Book Ratio
P/E	Price-to-Earnings Ratio
PEG	Price/Earnings-to-Growth Ratio
PPE	Property, Plant, and Equipment
P/S	Price-to-Sales Ratio

PPI	Producer Price Index
PV	Present Value
R&D	Research and Development
ROIC	Return on Invested Capital
SARD	Sum of Absolute Rank Differences
SOTP	Sum of the Parts
SWOT	Strengths, Weaknesses, Opportunities, Threats
TV	Terminal Value
UN	United Nations
UK	United Kingdom
US	United States
WACC	Weighted Average Cost of Capital
YTM	Yield to Maturity

List of Symbols and Variables

β	Beta
β_L	Levered Beta
β_U	Unlevered Beta
D	Debt (Market Value)
E	Equity (Market Value)
g	Growth (Explicit or Forecast Horizon)
g_t	Terminal / Perpetual Growth
p	Probability of Default
r	Discount Rate
r_D	Cost of Debt
r_E	Cost of Equity
T_C	Corporate Tax Rate (Effective)
V	Value
V_L	Value Levered
V_U	Value Unlevered

1 Introduction

Rheinmetall AG, Germany's largest defense contractor, has experienced unprecedented growth in recent years, marked by a record order backlog and a sharp surge in its share price. This rapid rise raises the central question of whether the company is overvalued, fairly valued, or still offers further upside potential. Current analyst valuations broadly support Rheinmetall's elevated stock price; however, this may reflect the principal–agent problem and the "lemming" effect in financial markets, where analysts tend to overestimate prices and follow consensus rather than fundamentals (Barber et al., 2007; Jegadeesh et al., 2004). An independent valuation is therefore essential to test whether the market's optimism is justified.

The structural transformation of the European defense industry amplifies the importance of this question. In response to Russia's invasion of Ukraine, NATO members have agreed to target defense spending of 5% of Gross Domestic Product (GDP), with Europe simultaneously seeking greater independence from U.S. security guarantees. Germany plays a pivotal role in this rearmament. Benefiting from relatively low debt levels and recent legislative changes that have eased borrowing restrictions, the German government has emerged not only as Rheinmetall's principal customer but also as a distributor of defense systems across Europe (Letzing, 2025; Zettelmeyer, 2025). Given Rheinmetall's historic integration into German procurement structures, these dynamics place the company in a uniquely favorable position.

From a valuation perspective, this context presents both opportunity and risk. While the market price reflects investor confidence in Rheinmetall's future, theory highlights the frequent divergence between price and intrinsic value. Value is determined by expected future cash flows and cost of capital, but its estimation depends on assumptions and forecasts. Thus, valuation is not entirely subjective, yet differences in methodology and inputs can lead to widely varying results. Moreover, speculative behavior can drive prices above fundamentals, especially in sectors sensitive to geopolitical shocks and political commitments (Barlevy, 2015).

Assessing Rheinmetall's fair value is therefore not only a company-specific exercise but also a test of how structural shifts in European defense spending are priced in capital markets. By applying rigorous valuation methods, this study seeks to determine whether fundamentals justify Rheinmetall's current market price or reflect temporary exuberance.

2 Literature Review

Valuation in finance rests on two fundamental premises: either the firm is a going concern, valued by its ability to generate future returns, or it is assessed on a break-up basis, with worth tied to its underlying assets. For going concerns, Discounted Cash Flow (DCF) and relative valuation (comparable companies and precedent transactions) dominate practice, either by projecting cash flows or benchmarking against market prices. Asset-based approaches, from adjusted book value to liquidation value, are typically reserved for distressed or asset-heavy firms. At the same time, option-based models capture the value of managerial flexibility in uncertain or innovation-driven settings (Jerald E. Pinto, 2020).

Each approach rests on distinct theoretical foundations and entails trade-offs: some emphasize intrinsic cash-flow potential, others the consensus of market comparables, and others the tangible security of assets. The choice of method is therefore not mechanical, but rather depends on the firm's outlook, industry structure, available data, and the purpose of the analysis, whether it is investment, acquisition, or internal strategy.

Against this backdrop, the following section reviews the principal valuation methods and considers their applicability to Rheinmetall AG.

2.1 Intrinsic Valuation: Discounted Cash Flow Approaches

Discounted cash flow (DCF) valuation is one of the most widely applied methods in corporate finance, investment analysis, and valuation practice. It estimates a firm's intrinsic value by projecting future cash flows and discounting them at a rate that reflects both the time value of money and the riskiness of those flows (Damodaran, 2012; Koller et al., 2020). Despite variations in application, all DCF models share a standard structure: cash flows are forecast over an explicit horizon, a terminal value is estimated to capture continuing operations, and both are discounted to present value. This framework can be expressed as:

$$Value = \sum_{t=1}^{n} \frac{CF_t}{(1+r)^t} + \frac{TV}{(1+r)^n} \quad (1)$$

Here, CF_t denotes the cash flow in period t, r is the discount rate reflecting the opportunity cost of capital and risk, and TV represents the terminal value.

The precise definition of cash flows and the appropriate discount rate vary across the exact models. Ultimately, assumptions about growth, profitability, capital structure, and risk drive the outcome, making the key components of intrinsic valuation the cash flows, the discount rate, and the terminal value.

2.2 Key Components of Intrinsic Valuation

2.2.1 Cash Flow Forecasting

Damodaran (2014) distinguishes sharply between revenue growth and earnings growth, noting that while revenue forecasts are often more stable, earnings growth ultimately drives firm value in DCF models and is considerably more volatile. Growth can be projected in three ways: by extrapolating historical rates, by incorporating analyst estimates, or by linking it directly to firm fundamentals. The first provides a baseline but is sensitive to timeframes and volatility; the second aggregates market expectations but may reflect consensus bias. The third connects growth to internal dynamics, such as reinvestment and returns on capital. For sustainable earnings growth, forecasts must align the reinvestment rate with the return on capital, expressed as:

$$Growth\ in\ Earnings = Reinvestment\ Rate\ \times Return\ on\ Capital \quad (2)$$

This implies that estimates of future growth are only consistent when reinvestment assumptions are matched with the quality of those investments; overestimating one without the other leads to distorted results. In practice, linking revenue trajectories to reinvestment, sales-to-capital ratios, and margin development helps maintain realism as firms transition from high growth to maturity (Damodaran, 2012; Jerald E. Pinto, 2020; Koller et al., 2020).

2.2.2 Cost of Capital (Discount Rate)

Discounting converts forecast cash flows into present value by reflecting both the time value of money and risk. The appropriate rate depends on the cash-flow definition: use the cost of equity for cash flows to shareholders (Dividends/FCFE), the cost of debt for contractual debt cash flows, and the weighted average cost of capital (WACC) for FCFF, which blends the opportunity costs of equity and debt using market-value weights (CFA Institute, 2025).

2.2.2.1 Cost of Equity

The cost of equity (r_e) represents the minimum return that shareholders require for bearing the risk of ownership. It is typically estimated using the Capital Asset Pricing Model (CAPM), which links expected return to systematic market risk (Fama & French, 2004):

$$r_e = r_f + \beta_L(r_m - r_f) \tag{3}$$

Where:

r_f = Risk Free Rate
r_m = Market Return
β_L = Unlevered Beta
$(r_m - r_f)$ = Equity Risk Premium (ERP)

R_f is usually proxied by long-term sovereign bonds, β_L measures systematic risk relative to the market, and the *ERP* is often derived from historical excess returns. However, forward-looking approaches estimate it from market valuations such as earnings yields or dividend growth models and are arguably better suited for valuations (Fernández, 2005).

B_L can be estimated by regressing the company's returns against a market index:

$$\beta_L = \frac{\sigma_{i,m}}{\sigma_m^2} \tag{4}$$

Where:

$\sigma_{i,m}$= Covariance of asset i with the market index m
σ_m^2= Variance of the market index

However, direct regression estimates are often noisy, especially for illiquid or structurally changing firms, and depend heavily on the chosen estimation window and return frequency. For this reason, the bottom-up beta is often preferred (Damodaran, 2014). This approach calculates betas for comparable firms, unlevering them to remove capital structure effects:

$$\beta_U = \frac{\beta_L}{1 + (1 - T_C) \times \frac{D}{E}} \tag{5}$$

The average unlevered beta (β_U) represents the underlying business risk. It can then be relevered with the target company's effective tax rate and debt-to-equity ratio to include financial leverage.

2.2.2.2 Cost of Debt

The cost of debt (r_d) is commonly proxied by the yield to maturity on a firm's outstanding corporate bonds. In the absence of direct market quotations, it may be inferred from average interest expense or approximated as a risk-free rate augmented by a credit spread. Such spreads are obtained from bond yield differentials, CDS quotations, or structural models (e.g., Merton), with benchmarking exercises often relying on Damodaran's annually updated rating–spread schedules. Where no public rating exists, a synthetic rating derived from the interest-coverage ratio is typically used, and the corresponding spread is applied (Damodaran, 2025b).

$$r_d = r_f + Credit\ Spread \tag{6}$$

Furthermore, advanced techniques, such as bootstrapping, can refine long-term estimates (Fabozzi et al., 2018).

2.2.2.3 Weighted Average Cost of Capital (WACC)

The weighted average cost of capital (WACC) is one of the most widely applied discount rates in valuation. It represents the blended opportunity cost of equity and debt financing, weighted by their market values, and reflects the minimum return required to satisfy all capital providers; the debt component is adjusted to capture the interest tax shield.

$$WACC = \left(\frac{E}{D+E}\right) r_e + \left(\frac{D}{D+E}\right) r_d(1 - Tc) \tag{7}$$

Where:

E = Market value of equity
D = Market value of interest-bearing debt
T_c = Corporate Tax Rate

In practice, WACC is the standard discount rate in free cash flow to the firm (FCFF) models, as it combines the required returns of shareholders and creditors into a single measure. Its use assumes a stable capital structure, with debt and equity weights remaining broadly consistent over time. Despite this simplification, WACC remains the prevailing benchmark in both academic and professional valuation, as it links operating cash flows to the firm's financing mix (Koller et al., 2020; Damodaran, 2014).

2.2.3 Terminal Value Estimation

The last significant component and arguably the most important, since it often accounts for a large proportion of the discounted cash flow value, is the Terminal Value (*TV*). The *TV* estimates the value of a business beyond the explicit forecast period and is larger for firms with high growth potential, as most of the return will stem from price appreciation at the point of sale rather than dividends. According to Damodaran (2012), the most theoretically sound method for estimating terminal value is the perpetuity growth model, which assumes that after a high-growth phase, the firm's cash flows grow at a stable rate forever; this is calculated as:

$$Terminal\ Value\ = \frac{CF_t \times (1+g)}{(r-g)} \tag{8}$$

Where:

CF = Cash Flow
g = perpetual growth rate
r = appropriate discount rate (depending on the type of CF)

In the perpetual growth model, the terminal growth rate (g) must be lower than the discount rate (r) and should not exceed the economy's long-term sustainable growth rate.

Alternatives include using exit multiples, anchored to market comparables, or utilizing the liquidation value where appropriate. However, most academics favor the stable growth approach due to its consistency and clear link to lasting economic fundamentals (Damodaran, 2012; Penman, 2010).

2.3 Variants of Discounted Cash Flow Models

2.3.1 Dividend Discount Model (DDM)

The DDM represents the most conceptually pure form of discounted cash flow valuation, grounded in the idea that a stock's value is equal to the present value of all future dividends expected to be paid to shareholders. In its basic form, the model assumes that dividends grow at a constant rate and are discounted using the investor's required return on equity:

$$P_0 = \frac{D_1}{r_e - g} \tag{9}$$

Where:

P_0 = Current intrinsic value of the stock
D_1 = Expected dividend in the next period and share buybacks
r_e = Cost of Equity (as defined in equation 4)
g = Constant dividend growth rate

This Gordon Growth Model, also known as the constant-growth DDM, is analytically elegant but limited in scope. It assumes that dividends grow indefinitely at a stable rate, which is rarely realistic, particularly for firms in cyclical or capital-intensive industries. For this reason, more flexible multi-stage versions are often used. The two-stage DDM separates the forecast into a high-growth period followed by a stable growth period, and the three-stage model incorporates a transition period. Overall, the DDM's reliance on stable dividends limits its use, as it excludes buybacks and can distort valuations when payouts are driven by managerial, tax, or regulatory factors rather than free cash flow (Campbell & Shiller, 1988; Hurley & Johnson, 1994; Penman, 2010). As Damodaran (2012) notes, the model may also overstate value if dividends exceed sustainable cash flows, mainly when funded by debt or asset sales, making it most suitable for mature firms with predictable payout policies.

2.3.2 Free Cash Flow to the Firm (FCFF)

The FCFF captures operating cash flows available to all providers of capital, including equity and debt, prior to financing decisions, and is widely preferred for valuing EV independently of the capital structure. By focusing on pre-interest operating cash flows, FCFF avoids the need to forecast future debt changes, making it robust for firms with complex or evolving financing structures, diverse segments, or varying working capital needs (Damodaran, 2012; Koller et al., 2020).

The FCFF for the respective year is calculated as:

$$FCFF_t = EBIT_t \times (1 - Tc) + Depreciation_t - CapEx_t - \Delta NWC_t \quad (10)$$

Where:

EBIT = Earnings before Interest or Tax
Depreciation = Non-Cash Expense added back to reflect the actual Cash Flow
CapEx = Capital Expenditures
ΔNWC = Change in Net Working Capital

This formulation adjusts for operating profitability after taxes and non-cash charges and deducts investments necessary to maintain or grow the firm's productive capacity. NWC changes reflect liquidity tied up in current operating assets and liabilities such as receivables, inventory, and payables. To determine the firm's EV, forecasted FCFF is discounted using the WACC.

2.3.3 Free Cash Flow to Equity (FCFE)

While the FCFF model derives EV, the FCFE model directly estimates equity value by adjusting FCFF for after-tax interest payments and net debt flows, and discounting these cash flows at r_e:

$$FCFE_t = FCFF_t - Interest_t \times (1 - Tc) + Net\ Borrowing_t \quad (11)$$

The FCFE approach is suitable for firms with stable capital structures. It is useful when the goal is to value equity directly, but its reliance on leverage and interest assumptions makes it less reliable in volatile or policy-driven financing environments.

2.3.4 Adjusted Present Value (APV)

The Adjusted Present Value (APV) method offers an alternative to WACC-based valuation by separating the value of a company's operations from the effects of financing. Unlike the FCFF approach, which embeds tax benefits and capital structure within the WACC, APV explicitly adds financing-related benefits and costs to the value of the unlevered firm. This makes it particularly useful when capital structures are expected to change or when financing side effects, such as tax shields or distress costs, must be carefully assessed (Inselbag & Kaufold, 1997; Luehrman, 1997):

$$APV: V_L = V_U + PV(Financing\ Effects) \tag{12}$$

Where:

V_U: Current intrinsic value of the stock

$PV_{(Financing\ Effects)}$: Expected dividend in the next period

The value of the unlevered firm is derived by discounting FCFF using the unlevered cost of equity, r_U, which captures the firm's operating or business risk independent of leverage. The most modeled financing effect is the interest tax shield (ITS), which represents the reduction in taxes resulting from the deductibility of interest expenses. When debt is assumed to remain constant (i.e., perpetual debt), the present value of interest tax shields is calculated as:

$$PV_{ITS} = \frac{T_C \times r_D \times D}{r_D} = T_C \times D \tag{13}$$

This formulation assumes full deductibility and stable leverage. In practice, tax benefits can be limited by regulation or insufficient taxable income; if EBIT falls below interest expense, the shield is partially or entirely lost.

Beyond tax shields, financial distress costs (CFD) can significantly reduce value even without default. These include direct costs (such as legal and administrative restructuring) and indirect costs (including reputational damage, customer or supplier losses, and reduced operating flexibility). Empirical studies estimate direct CFD at 3–5% of book assets, with higher totals once indirect costs are included (Andrade & Kaplan, 1998; A. G. Korteweg, 2011).

A standard approximation for CFD is:

$$PV_{CFD} = \frac{p \times CFD}{r_D + p} \tag{14}$$

Here, p is the annual default probability and CFD the loss if default occurs; its present value is obtained by discounting at the firm's cost of debt. Default probabilities are commonly estimated using structural models (e.g., Merton), market-implied measures from bond or CDS spreads (given an assumed recovery), or statistical scoring models (e.g., Altman Z or Moody's KMV). Each approach has limitations, so estimates differ and remain debated (Damodaran, 2012).

2.4 Enterprise Value to Equity Bridge

While some DCF models directly estimate equity value (FCFE and DDM), the FCFF and APV approaches yield EV, which must then be adjusted to derive equity value. The reconciliation follows the standard bridge:

$$Equity\ Value = EV - Net\ Debt - Debtlike\ obligations + Non\ Core\ Assets \tag{15}$$

This adjustment is essential because EV represents the value of operating assets available to all capital providers, whereas equity value reflects only the residual claim of shareholders. Net debt accounts for lenders' claims, while debt-like obligations, such as pension deficits or lease liabilities, further reduce equity. Non-core or financial assets are added back, as they lie outside the DCF framework but still accrue to shareholders.

2.5 Relative Valuation

Relative valuation estimates a company's worth by comparing it to similar firms or transactions, based on the principle that comparable assets should trade at similar levels (Damodaran, 2007; Goedhart et al., 2005). In practice, it is the most widely applied valuation approach, with around 85% of equity research reports and more than half of M&A valuations relying on multiples. The popularity of this method stems from its simplicity, intuitive interpretation, and ability to provide a quick benchmark of whether a firm appears "cheap" or "expensive" relative to its peers.

At its core, relative valuation links a value measure, equity or enterprise value, to a fundamental driver of performance. Earnings-based multiples, such as P/E, EV/EBIT, or EV/EBITDA, directly tie valuation to profitability and are the most frequently employed in practice. Book value multiples, such as the price-to-book ratio, play a central role in financial and asset-intensive sectors.

In contrast, revenue-based measures, such as Price-to-Sales or EV/Sales, are particularly relevant for high-growth or loss-making companies. Additionally, sector-specific multiples are often applied when industry economics dictate. Among these, the P/E ratio remains the most common reference point for stable companies with positive earnings. In contrast, EV/EBIT and EV/EBITDA are widely used enterprise value measures that approximate a firm's underlying cash generation capacity. In general terms, a multiple can be expressed as:

$$Multiple = \frac{Value\ Measure\ (Equity\ or\ EV)}{Fundamental\ Driver} \tag{16}$$

2.5.1 Peer Group Selection

The accuracy of relative valuation hinges not only on the multiple but also on the selection of peers. Industry codes are a valid starting point, yet comparability does not require the same industry if firms share similar value drivers. Empirically, peer choice materially affects precision, and standard classifications can miss key economic similarities (Bhojraj & Lee, 2002). A transparent alternative is the Sum of Absolute Rank Differences (SARD): rank the target and candidates on a small set of metrics (e.g., size, margins, growth, leverage), sum each candidate's absolute rank gaps from the target, and select the firms with the lowest scores. Evidence suggests SARD-based peers align valuations more closely with market prices than naïve industry groupings (Knudsen, 2017).

2.5.2 Application, Adjustments, and Evaluation

The application of relative valuation requires several additional decisions that shape its reliability. Analysts must determine whether to employ historical or forward-looking multiples, with the latter generally preferred despite their reliance on projections. Another consideration is whether to use market multiples, which reflect the trading values of listed peers, or transaction multiples, which embed control premia but demand strict comparability. Finally, the choice of the multiple itself must be aligned with the firm's underlying business model and value drivers (Goedhart et al., 2005).

Relative valuation offers important advantages, most notably speed, transparency, and alignment with prevailing market benchmarks. At the same time, it suffers from well-known limitations: results are susceptible to the definition of comparables. They may be distorted by market sentiment or cyclical conditions, and remain vulnerable to differences in accounting practices across firms. For these reasons, multiples are most effective when used in conjunction with intrinsic valuation methods, where they provide a market-based cross-check that balances consensus pricing with fundamental analysis (Bhojraj & Lee, 2002; Damodaran, 2014).

2.6 Other Valuation Methods and Concepts

2.6.1 Asset-Based Valuation

Asset-based valuation (ABV), often implemented as the Adjusted Net Asset Method, estimates equity value as the fair value (FV) of assets minus the fair value of liabilities:

$$Equity\ Value = \sum FV\ (Assets) - \sum FV\ (Liabilities) \tag{17}$$

Book values are restated to fair value (IFRS 13), covering tangible assets, identifiable intangibles, off-balance-sheet items (leases, pensions, provisions), and related deferred taxes. This provides a conservative floor or break-up value relevant in asset-heavy sectors or when cash flows are thin or volatile (Koller et al., 2020; Penman, 2010). The drawback is the omission of going-concern drivers such as profitability, growth options, and non-separable intangibles (brands, know-how), which can understate value. In practice, ABV works best as a downside anchor, triangulated with DCF and market multiples.

2.6.2 Contingent Claim Models

Contingent claim valuation (CCV) prices assets and capital-structure elements with asymmetric payoffs by modeling them as financial options (Black & Scholes, 1973; JONES et al., 1984; Merton, 1977). Equity is treated as a European call on firm assets with a strike equal to the face value of debt:

$$Equity_T = \max(V_T - D, 0) \tag{18}$$

Implementation typically uses the Black–Scholes model, with values driven by volatility, time to maturity, the risk-free rate, payouts, and leverage (Cox et al., 1979). Applying this to real options captures managerial flexibility, such as deferring, expanding, abandoning, or staging projects, making CCV especially relevant for patents, technology, natural resources, and expansion opportunities. Practical use is constrained by inputs (volatility, default dynamics) and restrictive assumptions (e.g., constant volatility, liquid markets, European exercise) that fit traded options better than multi-period strategic projects. CCV is most useful in a selective manner, particularly for distressed or highly leveraged firms, start-ups, or option-like exposures, and should be triangulated with DCF and scenario analysis (Venkatachalam, 2004).

2.6.3 Sum of the Parts Valuation

Sum-of-the-Parts (SOTP) values each segment using the method best suited to its economics (e.g., DCF for mature, cash-generative units, market multiples for comparable-rich growth businesses, and asset-based/NAV for real estate or resource holdings). It aggregates these to total enterprise value, and then bridges to equity by netting debt and other corporate items. It is most appropriate for conglomerates whose divisions differ in growth, risk, and market drivers, enabling segment-specific assumptions that a single-model valuation would obscure. The main challenges lie in disclosure quality and disciplined aggregation, ensuring consistent accounting definitions, aligning WACC and capital structure across segments, and avoiding double-counting. Despite this complexity, SOTP remains a flexible tool for uncovering hidden value and capturing the economics of diversified corporate portfolios (Berger & Ofek, 1995; Damodaran, 2007; Koller et al., 2020).

2.7 Synthesis and Method Selection Considerations

Each valuation approach offers advantages and drawbacks. Discounted cash flow (DCF) methods capture long-term fundamentals but depend heavily on assumptions about growth, margins, and discount rates. Relative valuation is intuitive and market-based, yet vulnerable to peer selection and cyclical sentiment. Asset-based approaches provide a conservative floor but ignore going-concern dynamics, while option-based models capture flexibility but are complex and data-intensive. In practice, analysts often combine methods to balance these weaknesses and apply sensitivity or scenario analysis to key inputs to gauge the range of potential outcomes. A more comprehensive summary table is provided in Appendix I.

In the next section, we analyze Rheinmetall and its market context to determine which method is most appropriate as the primary valuation tool.

3 Rheinmetall AG: Strategic Profile and Growth Outlook

3.1 Historical Background and Strategic Shift

Rheinmetall AG, headquartered in Düsseldorf, Germany, was founded in 1889 and is one of the country's oldest listed industrial groups. With over 28,000 employees as of mid-2025, Rheinmetall operates across 171 global sites, reflecting substantial international reach and manufacturing capability. The Group's historical roots span defense and civilian engineering. At the same time, recent years have seen a decisive transformation under CEO Armin Papperger, resulting in over 80% of sales now coming from military technologies, following the divestment of its piston business and the consolidation of civilian activities (Rheinmetall AG., 2025a).

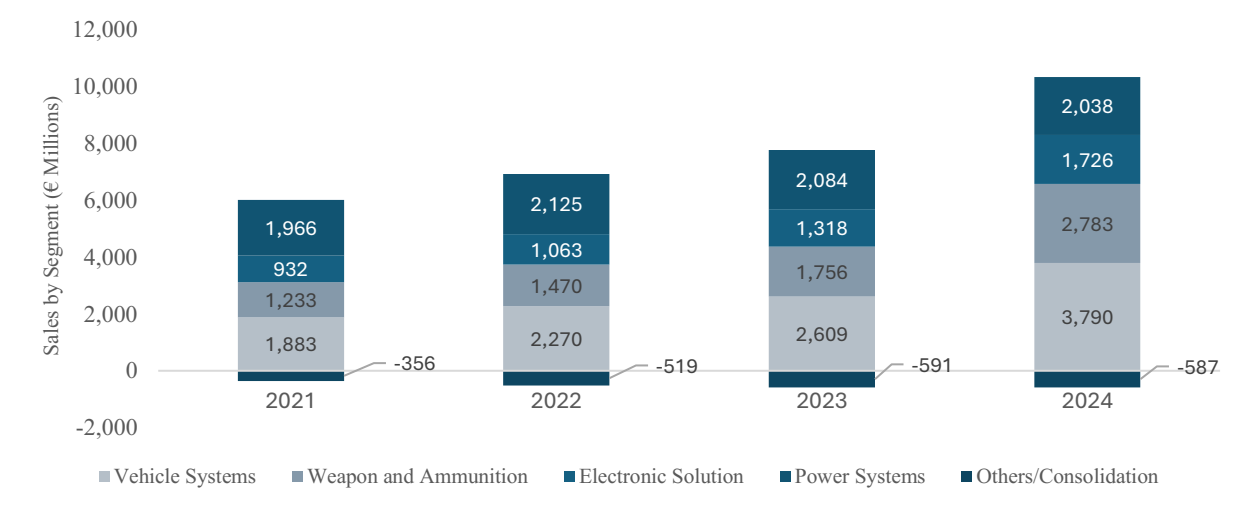
Rheinmetall's strategic goal, as stated in current reports, is to achieve "sustainable profitable growth" through technologically advanced solutions in security and mobility, and to reach CO_2 neutrality by 2035 (Rheinmetall AG., 2025b). Its corporate mission emphasizes responsibility in a changing world and aims to "create the indispensable basis for peace, freedom and sustainable development: security." Management, guided by Papperger, seeks to shape market transformation while maintaining robust governance, risk oversight, and stakeholder engagement (Rheinmetall AG., 2025c).

While the company is well-positioned to capitalize on recurring multi-year defense contracts and increased allied procurement, risks remain, notably greater exposure to government spending cycles, geopolitical volatility, margin pressure from rapid scaling, and ongoing weakness in the civil segment. Continued adaptation and risk management will be critical to achieving Rheinmetall's medium-term targets and long-term strategic aims.
Further details on segments, backlog, geography, capital structure, and key programs follow in the subsequent sections.

3.2 Business Segments, Sales, and Backlog

Rheinmetall is structured into four main business segments: Vehicle Systems, Weapons and Ammunition, Electronic Solutions, and Power Systems. Following its 2021 strategic realignment, the Group has shifted to a defense-centered approach, with Vehicle Systems delivering advanced tactical and logistic platforms for NATO modernization and allied export markets. Weapons and Ammunition has become a global leader in artillery, tank ammunition, explosives, and propellants, now expanding capacity to meet surging NATO demand and maintain margins above 20%. Electronic Solutions drives growth in digital defense through integrated battlefield technologies and long-term contracts, while Power Systems continues to innovate in hydrogen and electrification (Rheinmetall AG., 2025a).

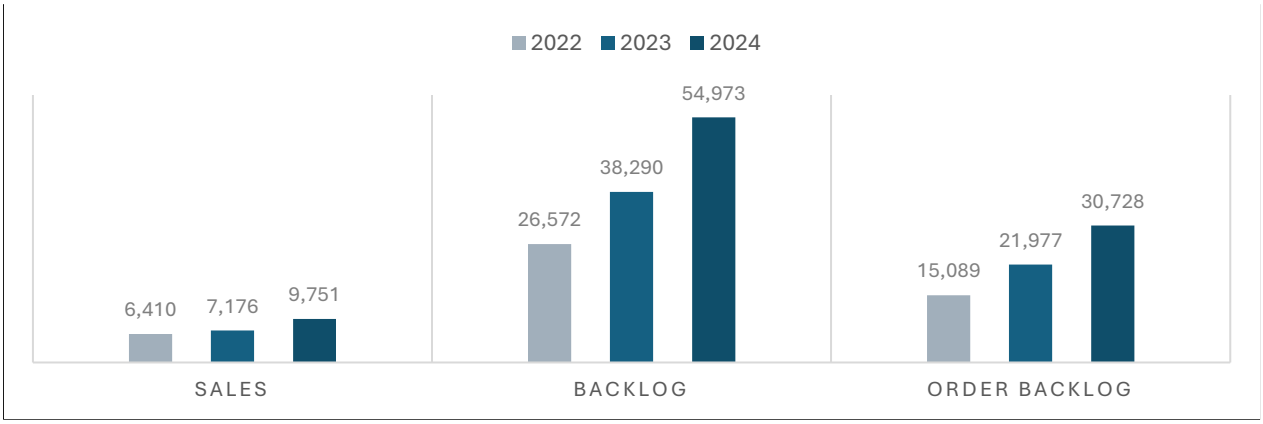
Figure 1: Sales by Business Segments 2021 - 2024



Source: Rheinmetall Annual Reports – Own Figure

This segment specialization has positioned Rheinmetall for exceptional financial momentum. In 2024, revenues increased by 35.9% year-over-year to a record €9.75 billion, driven by heightened demand for weapons, ammunition, and vehicles amid unprecedented rearmament among Western allies. Scale efficiencies, high-value contracts, and a favorable product mix contributed to an expansion of operating margins to 14.3%. By early 2025, Rheinmetall's order backlog had soared to €62 billion, more than six times its current annual revenue, ensuring long-term cash flow visibility and anchoring its growth plans. The €800 billion "Readiness 2030" European defense initiative further reinforces structural demand and momentum for years to come.

Figure 2: Sales and Backlog Development (€ Millions)



Source: Rheinmetall Annual Reports – Own Figure

3.3 Capital Structure and Cash Flow

The balance sheet has strengthened, with the equity ratio improving from 31.1% at year-end 2024 to 33.7% by mid-2025, partly due to €723 million in convertible bond conversions. Free cash flow exceeded €1 billion in 2024 but turned negative in H1 2025 (€644 million) due to inventory build-up and heavy capital expenditure, which absorbed liquidity. Net debt remains moderate at €1.66 billion, leaving room for capacity expansion and targeted acquisitions. This dynamic reflects the working capital intensity of scaling production while maintaining long-term financial flexibility. Overall, they follow a very conservative debt strategy common in the defense industry, and they are expected to build up cash reserves during the high growth years rather than increasing leverage (Rheinmetall AG., 2025b).

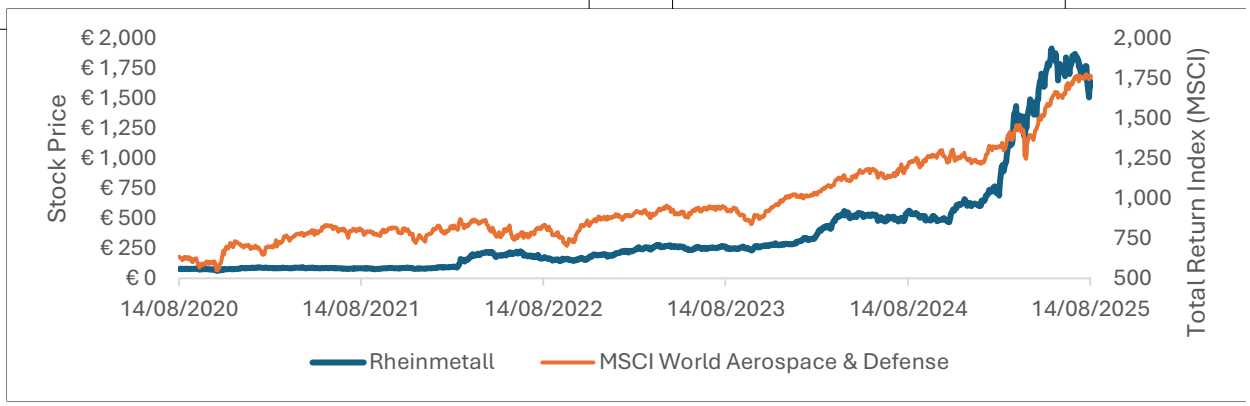
3.4 Opportunities and Risks

Rheinmetall's order backlog supports predictable revenues, but significant risks include contract execution, supply chain bottlenecks (especially in ammunition), Environmetal, Social and Governance (ESG) exposure tied to social and environmental controversies, and dependency on timely German budget approvals. Germany's procurement reforms and NATO's "piggybacking" approach, where allies leverage German contracts, accelerate exports by enabling direct awards that bypass lengthy tenders and share procurement infrastructure for military systems, training, and logistics (Höller, 2025). This framework streamlines joint orders and enhances scale, but margin pressure from rising volumes and government bargaining power, as well as structural risks tied to political continuity, remain. See Appendix II and III for detailed SWOT and PESTEL analysis.

3.5 Equity Market Performance and Shareholder Structure

Rheinmetall's equity has mirrored its operational transformation. Since Russia invaded Ukraine, the share price has risen more than twentyfold, securing inclusion in the DAX 40 index.

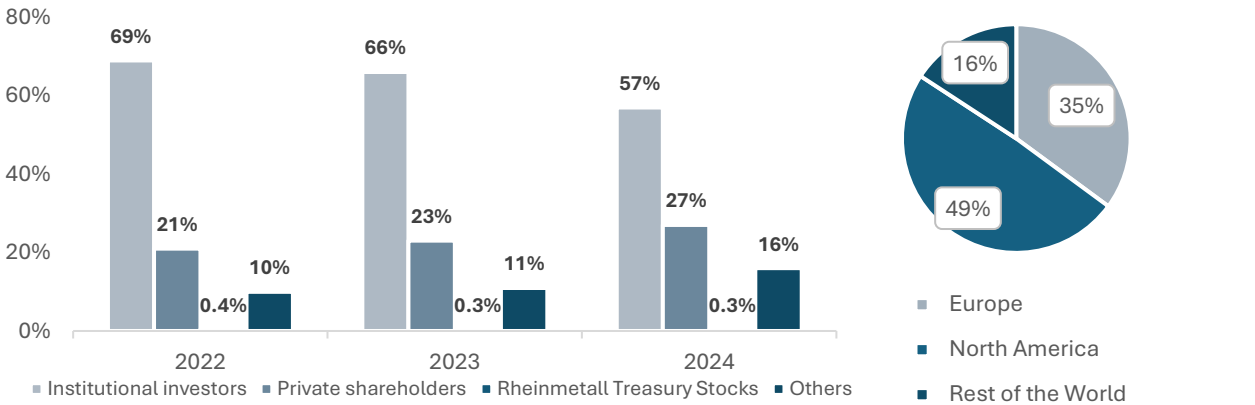
Figure 3: Rheinmetall Stock Performance (2020 – 2025)



Source: Refinitiv – Own Figure

Ownership is diversifying, institutional holdings decreased from 69% in 2022 to 57% in 2024, while retail shareholders increased to 27% and other investors rose to 16%. Significant institutional stakes include BlackRock (7.28%), Goldman Sachs (4.94%), Morgan Stanley (4.37%), Bank of America (4.64%), and UBS (3.83%). This shift broadens the shareholder base but increases volatility, as retail and short-term investors are more sensitive to geopolitical events and earnings releases. The result is a higher equity beta (β) and cost of equity (r_e) under CAPM, which may raise Rheinmetall's WACC, despite stable debt costs supported by strong fundamentals and government contracts. Cash flow stability, stemming from a record backlog and a robust credit profile, helps offset this effect (Rheinmetall AG., 2025c).

Figure 4: Shareholder Structure

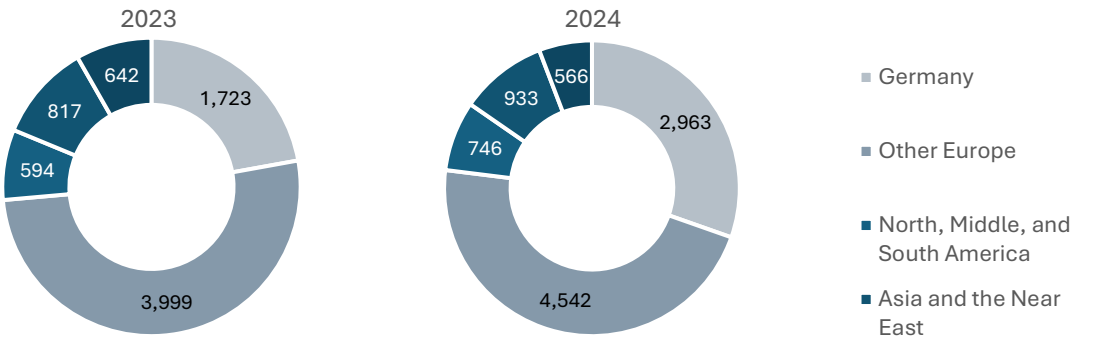


Source: Rheinmetall Annual Reports – Own Figure

3.6 Global Footprint and Strategic Expansion

Rheinmetall is rapidly expanding its global industrial footprint, now spanning 171 sites across Europe, North America, Asia, and Australia. The strategy centers on localizing production within allied nations to meet procurement needs and deepen integration into NATO supply chains.

Figure 5: Revenue by Country/Region



Source: Rheinmetall Annual Reports – Own Figure

In 2025, Rheinmetall inaugurated a €200 million facility in collaboration with Northrop Grumman, reinforcing Germany's aerial modernization efforts. Meanwhile, artillery and ammunition capacity are being scaled worldwide, including record contracts at Rheinmetall Denel Munition. Its "Home Market" strategy is driving armored vehicle production in Hungary and Ukraine, strengthening the European base. In parallel, Rheinmetall is building the U.S. into a core foreign market through the Loc Performance acquisition, which meets "Buy American" standards and anchors growth in ground vehicle modernization. Supported by partnerships with Anduril (autonomous systems) and ICEYE (space surveillance), U.S. revenues are projected to grow from €366 million in 2023 to €2 billion by 2027 (CAGR >50%). Beyond Europe and North America, acquisitions such as Expal Systems in Spain and collaborations in India, the Netherlands, and Australia are broadening market reach, boosting resilience, and supporting diversified global growth (Rheinmetall AG., 2025a).

4 Market Analysis

4.1 Germany as the Driving Force of European Rearmament

Global defense spending reached $2.7 trillion in 2024 and is projected to grow 4–5% annually through 2030, reflecting a structural shift in procurement rather than a temporary upswing (Ahlander, 2025; Janes, 2025).

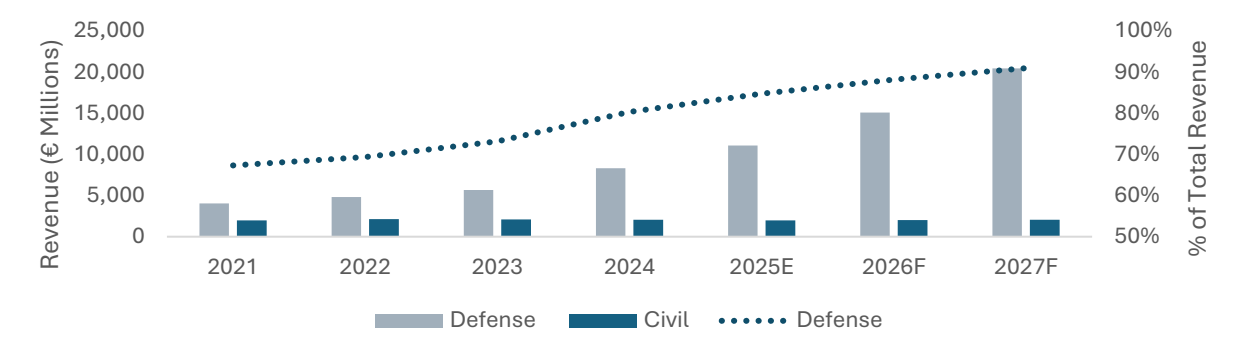
Germany has emerged as Europe's key driver of rearmament, allocating €86 billion in 2025 through its budget and special funds, supported by reforms that suspend the debt brake for defense and accelerate procurement. Framework agreements enable NATO allies to "piggyback" on German contracts, thereby lowering costs and promoting standardized equipment, a crucial step toward a more coordinated European force with interoperable systems. In this role, Germany acts as principal buyer and distributor and is likely to push Rheinmetall as the continent's anchor supplier (Reuters, 2025b).

Rheinmetall's vertical integration, local production capacity, and regulatory protections (Art. 346 TFEU) reinforce this privileged position. Multi-billion-euro orders for ammunition and soldier systems already secure long-term demand, while close alignment with NATO capability targets supports resilient margins. As Germany advances the creation of a more unified European defense structure, Rheinmetall is well-positioned to capture a disproportionate share of contracts, thereby sustaining revenue visibility and maintaining a premium competitive stance (Martin, 2024).

4.2 Rheinmetall's Market Position Across Key Segment Trends

Following Rheinmetall's strategic pivot towards a pure defense player due to surging NATO demand, management decided to allocate virtually all new investment into defense, leaving Power Systems as a non-core activity, as evidenced by the declining proportion of Sales and an even more minor contribution to free cash flows.

Figure 6: Defense and Civil Revenue Progression



Source: Rheinmetall Annual Reports – Own Figure

Recent European armored vehicle programs emphasize modularity, digital integration, and rapid upgrade cycles. Germany and Hungary prioritize local manufacturing and technology transfer, while Eastern Europe accelerates the development of tracked and wheeled fleets for NATO brigades. Rheinmetall leads with the KF41 Lynx and KF51 Panther, benefiting from the shift to domestically sourced platforms and upcoming German procurements, key opportunities to expand margins ahead of BAE Systems and General Dynamics, which have less integration in Europe.

In the weapons and munitions sector, Europe has increased shell production sixfold in two years to counter shortages and support Ukraine, with a new emphasis on vertically integrated supply chains and rapid scaling. Rheinmetall, with the continent's largest factory (Uterlüß), and the Expal acquisition, now controls the process from propellants to finished rounds (Rutte, 2025). This integration and long-term frameworks secure its role as a primary NATO supplier ahead of Leonardo and Thales. However, bottlenecks and regulatory chokepoints remain risks, and the segment is highly exposed to geopolitical shocks.

Air defense and digital solutions are shifting toward network-centric, interoperable, and modular systems, driven by demand for cybersecurity, drone defense, and lifecycle management. Rheinmetall's Electronic Solutions segment is well-positioned to shape joint European procurement alongside Thales and Hensoldt, supported by turnkey integration and soldier-system contracts, though scaling research and development across NATO partners remains a challenge.

Hydrogen mobility and clean energy are central to Europe's green transition but face infrastructure and policy hurdles. Rheinmetall's Power Systems leverages its automotive legacy in hydrogen and electric vehicles. Yet, growth is flat and competition intense, making the segment a candidate for transformation or divestiture as resources shift to defense.

4.3 Peer Comparison

The peer group for Rheinmetall has been selected based on a combination of geography, size, profitability, business overlap, and capital structure. It includes major European defense firms such as BAE Systems, Thales, Leonardo, Saab, and Hensoldt, alongside global leaders General Dynamics and Northrop Grumman. While these companies provide a valuable benchmark for scale and profitability, Rheinmetall occupies a unique position as the central beneficiary in Europe's rearmament efforts due to its product portfolio and integration into Germany's procurement system, as mentioned before. This position yields structurally higher expected growth rates than its peers, making direct comparability challenging and necessitating careful adjustments. These limitations for valuation will be addressed further in Section 7.

Table 1: Short Peer Evaluation (Market Cap and Revenue in € Millions)

Company	Market Capitalization	Revenue	EBITDA Margin	Net Debt/EBITDA	EV/EBITDA
Rheinmetall AG	73,925	9,751	17.95%	0.95	42.24
BAE Systems plc	61,321	31,824	15.10%	1.68	12.76
Leonardo S.p.A.	27,636	17,763	12.65%	0.92	12.30
Saab AB	24,339	5,572	13.32%	-0.05	32.79
Hensoldt AG	9,841	2,240	15.40%	3.22	28.52
Thales Group	48,479	20,577	12.67%	1.20	18.60
Indra Sistemas	6,042	4,877	11.28%	0.16	10.98
General Dynamics Corp.	72,045	46,081	12.20%	1.09	12.82
Northrop Grumman Corp.	71,389	39,627	17.08%	1.74	10.55

Source: Refinitiv – Own Table

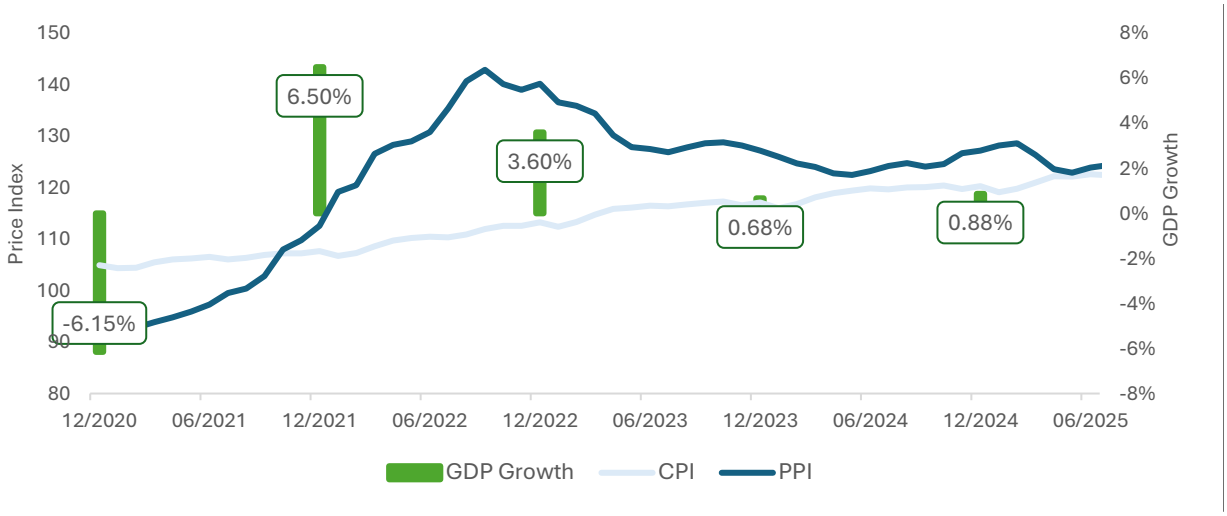
4.4 Investor Sentiment and ESG Reframing

Since 2022, investor perceptions of the defense sector have undergone a structural revaluation, with defense increasingly reframed as "sustainable security". This shift has supported capital inflows of over USD 2.5 billion into European defense ETFs year-to-date (2025), enhancing sector liquidity and broadening the investor base. For Rheinmetall, the change is double-edged: while stronger demand for defense equities reduces the historic "exclusion effect," some institutional lenders still apply an ESG-related debt premium of 30–50 basis points, offsetting part of the benefit from lower benchmark rates. At the same time, rising retail participation has increased sector betas from 0.8 to 1.0–1.1, making them currently more sensitive to geopolitical news and potentially raising the cost of equity under CAPM models. This capital market dynamic, combined with Rheinmetall's improving fundamentals, implies a structurally lower cost of debt but a more volatile cost of equity, which shapes the company's overall WACC (Morningstar Sustainalytics, 2025; Reuters, 2025a).

4.5 Macroeconomic and Fiscal Backdrop

The macroeconomic environment for valuing Rheinmetall is shaped by moderate global growth, easing inflation, and sustained fiscal support for defense. The International Monetary Fund (IMF, April 2025) projects global GDP growth of 3.2% in 2025 and 3.0% in 2026, with the Eurozone expected to grow just above 1%. Germany is expected to lag at 0–0.5% due to weak industry, though rising defense expenditure provides a stabilizer and should support recovery in 2026. Eurozone inflation is forecast to ease to 2.3% in 2025 and 2.0% in 2026, near the ECB's target, while the defense-related manufacturing Producer Price Index (PPI) has normalized at +1.8% after the 2022–2023 spikes. Steel and aluminum prices are expected to rise 2–3% annually to 2027, with volatility in specialty chemicals posing margin risks. Monetary conditions are loosening, with the ECB deposit rate at 3.25% and two cuts anticipated by mid-2026. On the fiscal side, NATO's 2025 pledge to raise defense and security spending to 5% of GDP by 2035 marks a milestone. However, most members are likely to stabilize around 2–2.5%, with the potential to exceed 3% during heightened tensions (IMF, 2025; World Bank, 2025).

Figure 7: GDP Growth and Inflation in the Eurozone



Source: Refinitiv – Own Figure

5 Financial Analysis and Forecasting

The valuation of Rheinmetall is based on a detailed financial analysis and a forward-looking forecast. The company is experiencing unprecedented growth driven by Europe's strategic push for defense autonomy, the Russia–Ukraine war, Germany's Zeitenwende, and the easing of the constitutional debt brake for defense spending. These structural shifts have dramatically expanded Rheinmetall's addressable market and order pipeline.

As the company is far from reaching a steady state, the model employs a detailed three-year forecast to capture near-term dynamics, followed by a seven-year transition phase that reflects a gradual convergence to long-term equilibrium. I used data available up to August 15, 2025. This includes the 1st and 2nd quarter results published by Rheinmetall.

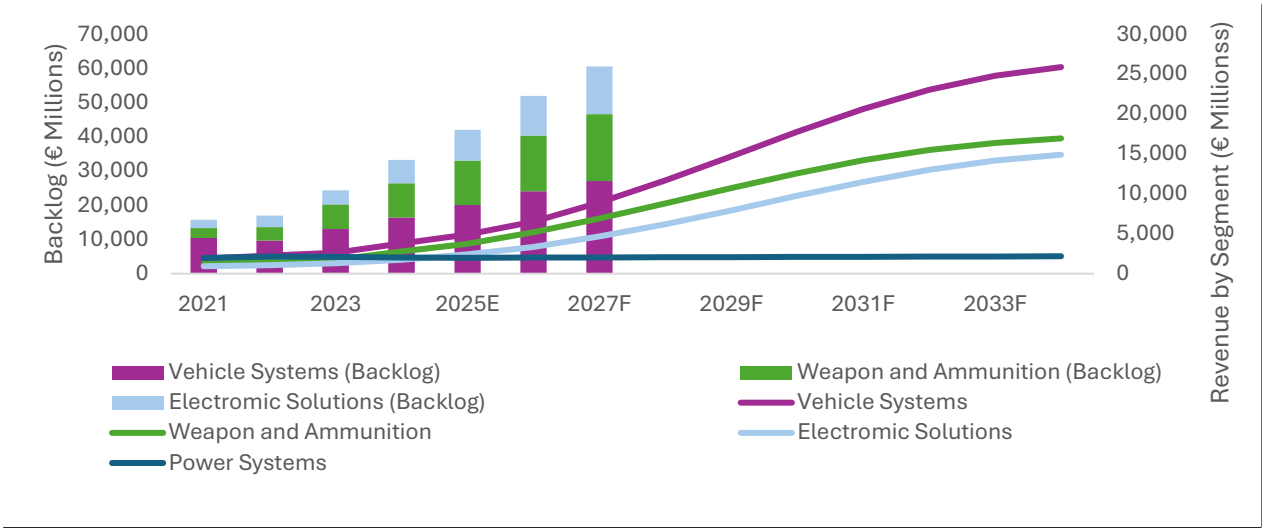
5.1 Income Statement

5.1.1 Revenue

Between 2018 and 2021, Rheinmetall's revenues declined by 8%. However, the Russia-Ukraine war reversed this trend, with sales growing 13% in 2022 and 12% in 2023. By 2024, supported by Germany's €100 billion "Zeitenwende"[1], a broader European rearmament push, and a record order backlog, sales surged 36% year-on-year to €9.75 billion. Because these represent structural changes in Europe's defense spending, historical growth rates offer little predictive value (as Damodaran notes, past data is less helpful after such inflection points). Instead, I relied on backlog-to-sales conversion, the standard industry practice for defense firms, to estimate future revenues across Vehicle Systems, Weapons & Ammunition, and Electronic Solutions. NATO's 2025 pledge to lift defense spending to 5% of GDP by 2035, though unlikely to be fully met, accelerates market growth. Jane's Defense forecasts €2.56 trillion in global budgets and a European record of €479 billion in 2025. This sustained budget growth is expected to support Rheinmetall's backlog; however, expansion is likely to moderate from the extraordinary surge following 2022. Past backlog growth of up to 80% in Weapons & Ammunition and 70% in Electronic Solutions strained conversion ratios. However, as Rheinmetall expands capacity and orders normalize, I expect improved backlog-to-sales conversion and steadier long-term growth.

[1] Zeitenwende refers to Chancellor Scholz's 2022 declaration of a "turning point" in German defense policy, including a €100 billion Bundeswehr fund.

Figure 8: Revenue and Backlog by Segment



Source: Own Figure

While the growth in the first three years is determined by backlog growth and the conversion of backlog to sales, the transition period is modeled with an exponential progression towards a steady state. The formula I used to model the growth rate during the transition period is:

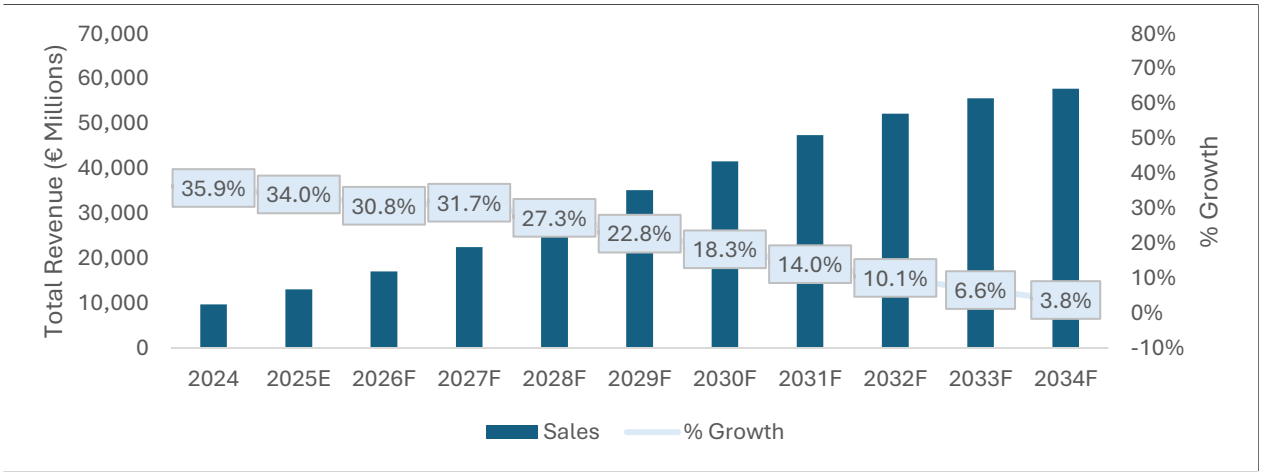
$$g_t = g_{terminal} + (g_{2027} - g_{terminal}) \times \left(1 - \frac{t}{T}\right)^{\beta}$$

(19)

This approach models a nonlinear glide path from each segment's 2027 growth rate to the terminal rate over a defined transition period. The gap to the terminal shrinks according to the curvature parameter β. A β greater than 1 front-loads the deceleration (a steeper early decline that flattens as the terminal rate is approached), whereas a β smaller than one back-loads it. Given the post-war surge and normalization dynamics, all Rheinmetall segments are assigned a beta greater than 1. However, Weapons & Munitions is the most cyclical and conflict-sensitive, so it receives the highest β to reflect the sharpest early step-down in growth. By contrast, Vehicle Systems and Electronic Solutions are anchored by structural rearmament, standardization, and multi-year procurement programs. They are therefore modeled with lower beta values, implying a more gradual, program-driven taper toward the terminal rate. This approach towards a transitional period combines the assumption that growth will normalize and that high growth rates are hard to sustain.

The whole development of Sales and their respective yearly growth rate can be seen in Figure 9.

Figure 9: Total Sales Progression (2024 - 2034)

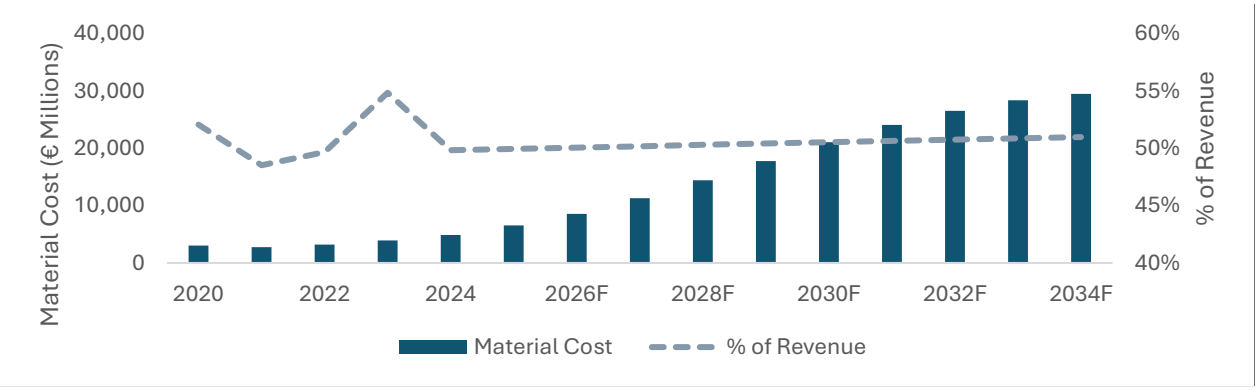


Source: Own Figure

5.1.2 Material Costs

Material costs are a critical component of Rheinmetall's cost structure, historically accounting for approximately 50% of total revenues. This reflects the company's asset-heavy manufacturing model, particularly in the Defense and Power Systems segments, where complex systems and high-quality raw materials are required. In 2023, material costs temporarily rose to 55% of revenue due to elevated producer prices following geopolitical and energy-related supply shocks. Since then, producer prices have returned to normal levels, and material costs have reverted to their historical averages, even dropping below 50% of sales in 2024. Given the current stable outlook for producer prices and Rheinmetall's partial ability to pass on inflation to customers, especially in long-term defense contracts, I assume that material costs as a percentage of revenue will remain relatively constant, slowly reverting to the historical average of 51.7%.

Figure 10: Material Costs (2020 - 2034)

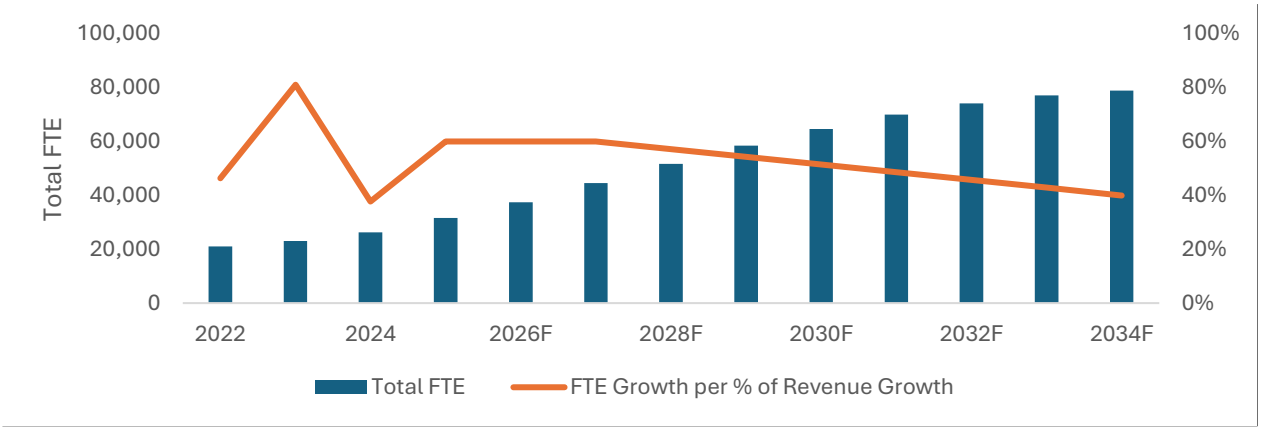


Source: Own Figure

5.1.3 Personnel Cost

Rheinmetall's rapid growth has required significant hiring. Historically, each 1% increase in revenue growth was matched by a 0.55% increase in headcount, a ratio I maintain through 2027 as the workforce expands from approximately 30,000 to over 40,000. Between 2028 and 2034, this growth-headcount elasticity decreases to 0.40, reflecting efficiency gains and partial automation. While industry benchmarks suggest possible levels of 0.30, persistent labor shortages in defense make a slower convergence more realistic.

Figure 11: Full-Time Equivalent (FTE) Development (2022 – 2034)

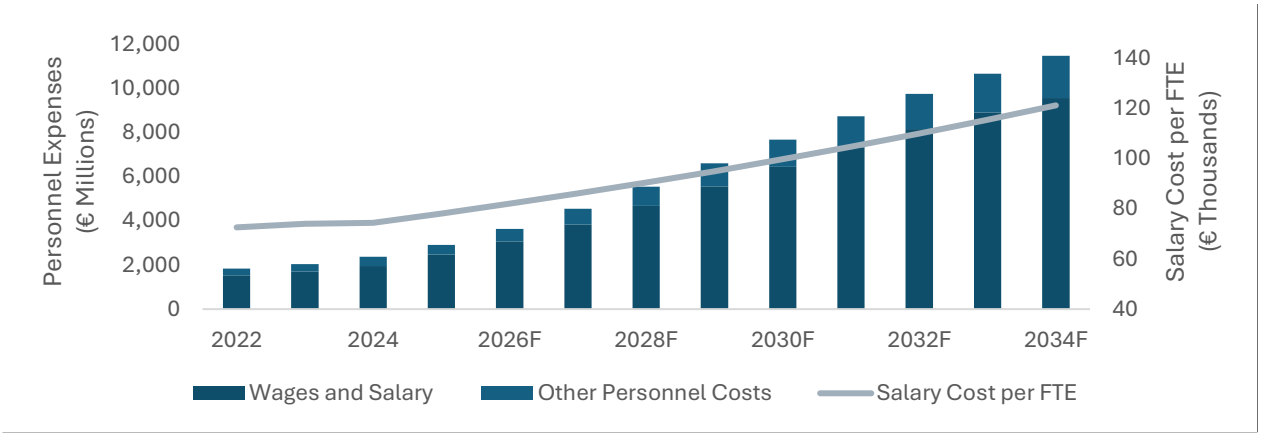


Source: Own Figure

Personnel costs at Rheinmetall increased 2.98% annually per full-time equivalent (FTE) from 2021 to 2024. Due to expansion and competition for technical talent, a temporary increase to 5% per year is assumed for 2025 to 2027. This elevated growth rate is projected to continue through 2028 and beyond, reflecting wage pressure, promotions, and retention needs. This exceeds broader German wage forecasts due to Rheinmetall's sector-specific dynamics and public-sector wage rigidity. Total personnel expenses are modeled as FTEs multiplied by the average cost, plus additional personnel costs, which rise from 17% to 20% of salary by 2034, accounting for pensions, benefits, and regulatory changes. Rising non-wage compensation is anticipated as the company's international footprint and demand for skilled staff expand, leading to a conservative yet robust forecast for personnel costs.

In absolute terms, personnel costs increased substantially from approximately €2 million in 2024 to more than €11 million in 2034, as shown in Figure 12. However, as a percentage of revenue, they declined slightly (Table 2, p. 30).

Figure 12: Personnel Expenses (2022 – 2034)

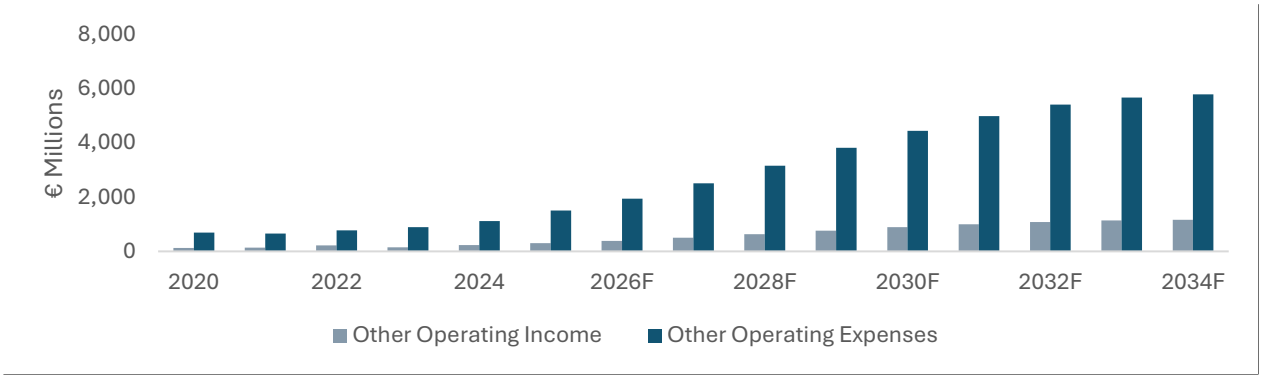


Source: Own Figure

5.1.4 Other Operating Income and Expenses

Other operating income is expected to gradually fall from 2.48% of revenue to 2.00% by 2034, reflecting the limited scalability of grants and reimbursements. Other operating expenses, which have historically accounted for 11.85% of revenue, are forecasted to decline to 10.00% by 2034 due to scale efficiencies in IT, administration, and travel, offsetting increases in insurance and maintenance as operations expand.

Figure 13: Other Operating Income and Expenses (2020 – 2034)



Source: Own Figure

"Results from Investments" and "Other Financial Results" are projected as constant nominal values, set at their five-year historical averages of €33 million and €23 million, respectively. As neither item shows a stable trend or correlation with revenue, flat projections avoid introducing volatility while preserving consistency with Rheinmetall's IFRS reporting structure.

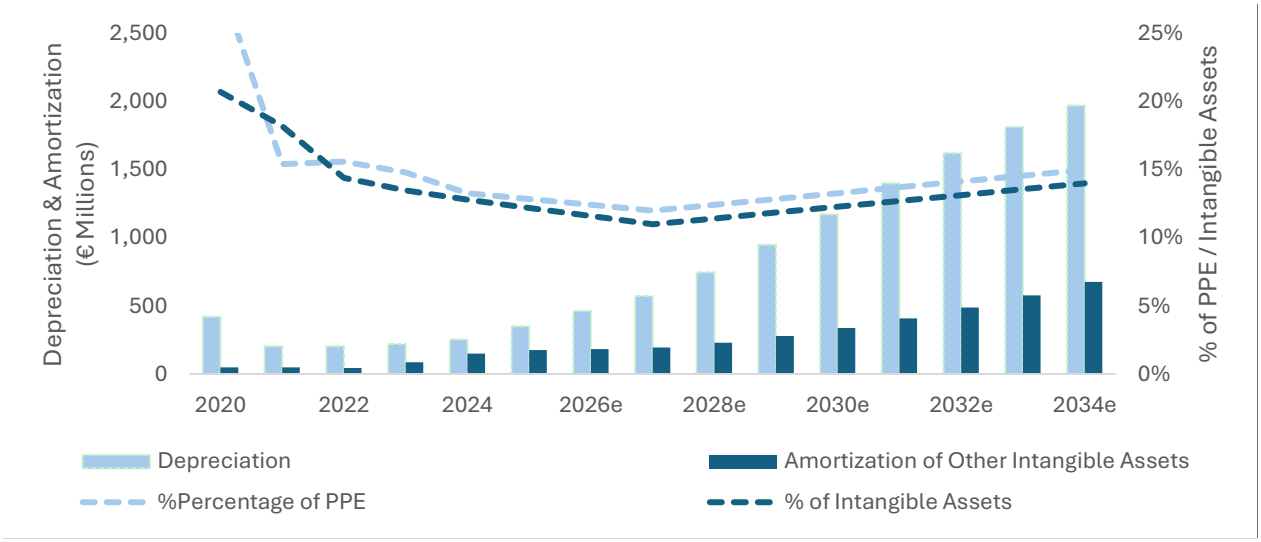
5.1.5 Depreciation and Amortization

Depreciation is modeled as a percentage of average net fixed assets (PPE including right-of-use assets). The ratio fell from over 15% to just under 13% in the last three years, as significant, long-lived investments (vehicle assembly plants, ammunition lines) created a younger asset base that temporarily dilutes charges. I project a further dip to approximately 12% by 2027, followed by a gradual rise to 15% by 2034 as capital expenditures shift from expansion to maintenance and the asset composition normalizes. The long-run level is consistent with Rheinmetall's pre-expansion history and industry norms of 10–20% (PwC, 2023).

Amortization of intangibles (excluding goodwill) is set as a percentage of average intangibles. The rate declines to 11% in the medium term, reflecting capitalization of current development and defense software with longer lives, then increases from 2028 toward 15% by 2034 as projects mature and renewal cycles begin, aligned with typical 10–18% ranges for capitalized R&D/software (Kothari et al., 2002).

Under IFRS, goodwill is excluded (impairment only) (International Accounting Standards Board, 2023). Overall, the path captures temporary dilution during expansion and reversion to long-run averages.

Figure 14: Depreciation and Amortization



Source: Own Figure

5.1.6 Profitability and Condensed Income Statement

The net income forecast is based on the previously projected operating positions. Sales growth is assumed to result in efficiency and scalability gains, which increase margins (peaking above 18% EBIT before easing toward a steady state of just below 17%). The complete income statement, methods, and assumptions for non-core items are provided in Appendices VI, VII, and XII.

Table 2: Condensed Income Statement

In € Millions	2024	2025E	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F
Sales	**9,751**	**13,069**	**17,092**	**22,503**	**28,651**	**35,181**	**41,622**	**47,464**	**52,257**	**55,717**	**57,813**
Change Sales YoY	*35.9%*	*34.0%*	*30.8%*	*31.7%*	*27.3%*	*22.8%*	*18.3%*	*14.0%*	*10.1%*	*6.6%*	*3.8%*
Change in Inventory	167	0	0	0	0	0	0	0	0	0	0
Total Operating Performance	**9,918**	**13,069**	**17,092**	**22,503**	**28,651**	**35,181**	**41,622**	**47,464**	**52,257**	**55,717**	**57,813**
Material Expenses	4,859	6,527	8,556	11,291	14,409	17,733	21,027	24,033	26,520	28,339	29,472
Personnel Expenses	2,373	2,912	3,631	4,547	5,549	6,608	7,687	8,749	9,758	10,680	11,493
Other Operating Result	-938	-1,191	-1,538	-1,998	-2,509	-3,036	-3,539	-3,975	-4,309	-4,521	-4,616
EBITDA	**1,748**	**2,438**	**3,367**	**4,667**	**6,185**	**7,804**	**9,369**	**10,707**	**11,671**	**12,176**	**12,232**
Margin	*17.9%*	*18.7%*	*19.7%*	*20.7%*	*21.6%*	*22.2%*	*22.5%*	*22.6%*	*22.3%*	*21.9%*	*21.2%*
Depreciation & Amortization	403	524	645	766	978	1,228	1,510	1,809	2,109	2,394	2,646
EBIT	**1,345**	**1,914**	**2,722**	**3,901**	**5,207**	**6,576**	**7,859**	**8,898**	**9,562**	**9,782**	**9,586**
Margin	*13.8%*	*14.6%*	*15.9%*	*17.3%*	*18.2%*	*18.7%*	*18.9%*	*18.7%*	*18.3%*	*17.6%*	*16.6%*
Financial Result	-116	-75	-75	-70	-61	-45	-23	5	37	73	110
Income Taxes	333	494	703	1,008	1,340	1,684	2,000	2,249	2,400	2,464	2,424
Discontinued Operations	-88	0	0	0	0	0	0	0	0	0	0
Minority Interest	91	151.6	218.92	317.89	428.62	545.84	657.25	749.39	810.85	832.43	818.94
Net Income	**717**	**1,194**	**1,725**	**2,505**	**3,377**	**4,301**	**5,179**	**5,905**	**6,389**	**6,559**	**6,453**
Margin	*7.4%*	*9.1%*	*10.1%*	*11.1%*	*11.8%*	*12.2%*	*12.4%*	*12.4%*	*12.2%*	*11.8%*	*11.2%*
As % of Sales											
Material Expenses	50%	50%	50%	50%	50%	50%	51%	51%	51%	51%	51%
Personnel Expenses	24%	22%	21%	20%	19%	19%	18%	18%	19%	19%	20%
Depreciation & Amortization	4%	4%	4%	3%	3%	3%	4%	4%	4%	4%	5%

Source: Own Table

5.2 Balance Sheet

5.2.1 Net Working Capital

On the asset side, forecasts cover inventory, trade receivables, contract assets, the operating portion of other current assets, and a minimum cash buffer. Inventory is modeled via days inventory outstanding (DIO), with an average of 234 days from 2019 to 2024, consistent with long defense production cycles and above peer averages of 150–190 days (EY-Parthenon, 2023; PwC UK, 2024). This is expected to decline to 180 days by 2034, driven by digitalization and improvements in the supply chain. Receivables follow the historical average of days sales outstanding (DSO) of 80 days (2019–2024), aligning with industry benchmarks. Contract assets are set at a constant historical average of 25 days contract assets outstanding (DCAO), reflecting persistent milestone-based billing and IFRS 15 timing effects, given the backlog of large, long-term programs. Operating "other" current assets captures recurring working-capital balances. A minimum cash balance equals 3% of sales during the ramp-up, converging to 2% in the steady state as a permanent liquidity buffer against operating and working capital volatility (Koller et al., 2020).

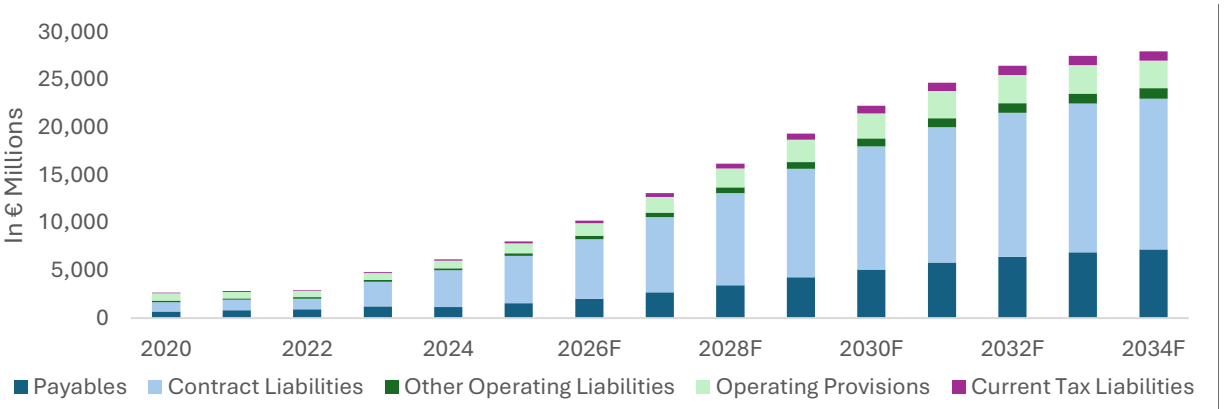
Figure 15: Working Capital Assets (2020 – 2034)

Source: Own Figure

On the liability side, forecasts cover trade payables, contract liabilities, operating other current liabilities, current operating provisions, and current income tax payables. Payables are modeled using days payable outstanding (DPO), with an average of 96 days from 2019 to 2024 (compared to the sector's 70–90 days), converging to 90 days as supply chains normalize and bargaining power stabilizes. Days contract liabilities outstanding (DCLO) increased sharply due to exceptional prepayments made to secure delivery slots. They are expected to normalize to 90 by 2034, consistent with multi-year defense milestones and the historic average of 88 days. Operating other

current liabilities are forecasted as a percentage of sales. Current operating provisions are included in NWC, reflecting warranty/service obligations tied to sales and reinvestment needs (Damodaran, 2012). Current income tax payables are set at 10% of current tax expense to capture near-term obligations.

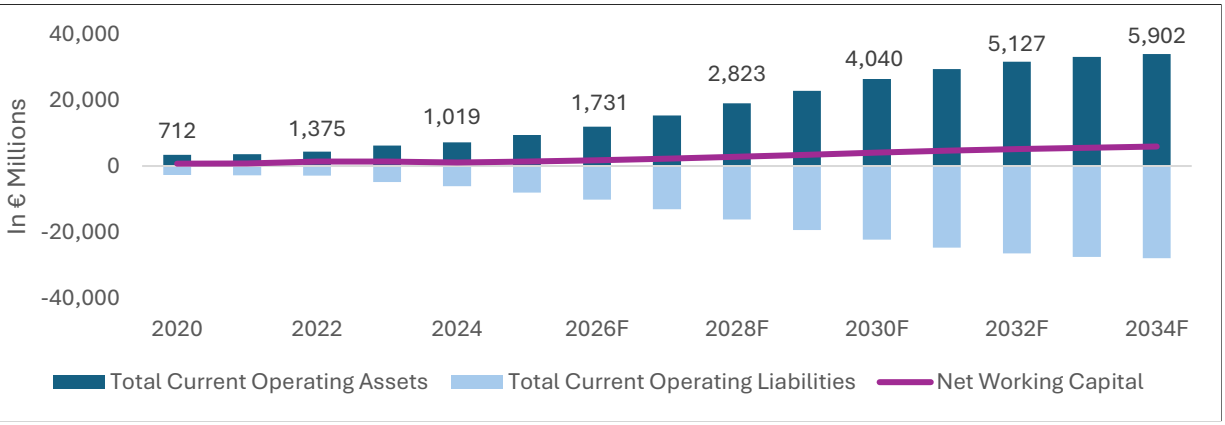
Figure 16: Working Capital Liabilities (2020 – 2034)



Source: Own Figure

Figure 17 shows that Rheinmetall's net working capital (NWC) is projected to rise from €1.0 billion in 2024 to €5.8 billion by 2034, as operating assets outpace liabilities. Inventories and receivables grow broadly with revenue despite gradual DIO/DSO gains, while contract assets increase modestly under IFRS 15. On the liability side, payables track COGS and contract liabilities normalize from the 2024 peak but stay elevated due to substantial customer prepayments on long-lead defense projects. Provisions and current taxes scale with activity. Overall, NWC expands during the ramp-up phase, but its growth rate slows as efficiency gains temper the sector's structurally high working capital intensity.

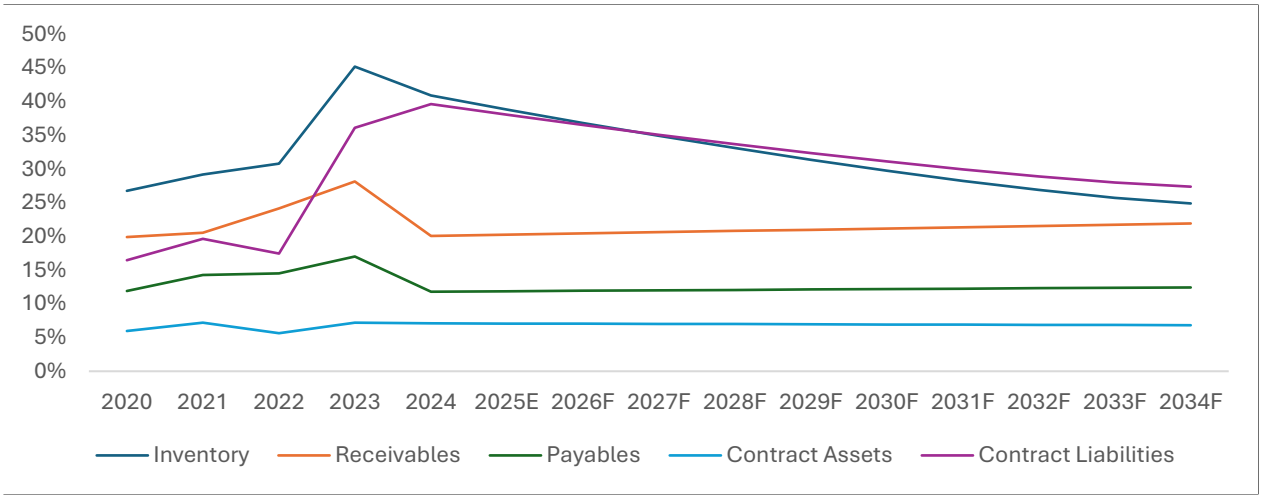
Figure 17: Net Working Capital Forecast (2020 – 2034)



Source: Own Figure

Additionally, the most significant working capital positions are visualized as a percentage of Revenue.

Figure 18: Significant Working Capital Positions as % of Revenue (2020 – 2034)



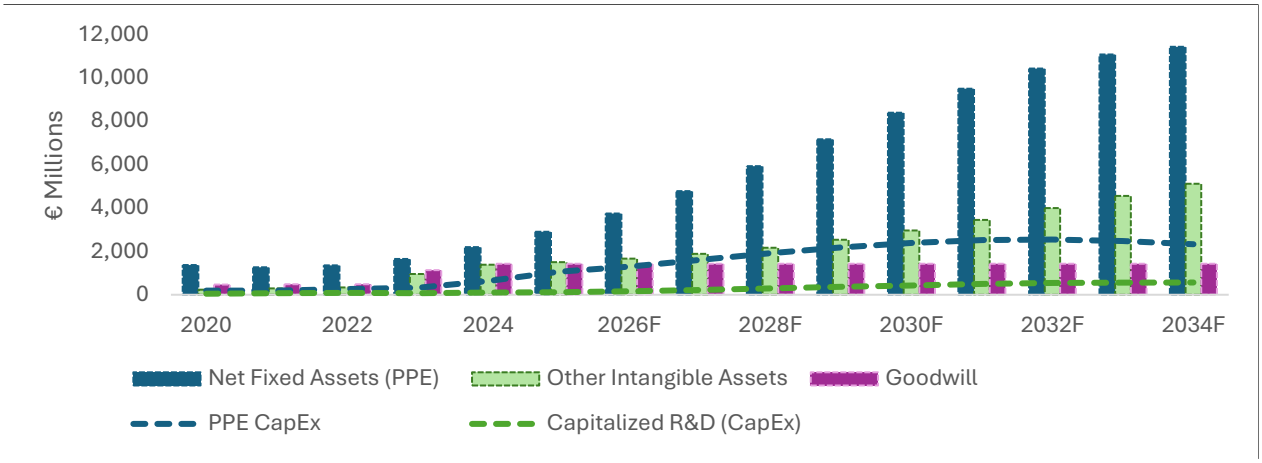
Source: Own Figure

5.2.2 Capital Formation and Asset Base Development

CapEx is modeled as a share of revenue, rising from 7.5% in 2024 to 9% in 2025 to reflect the front-loaded capacity build (vehicle assembly and ammunition lines), and then tapering to a 5% long-term target by 2034. This path aligns with Rheinmetall's investment cycle, which involves initial expansion and subsequent normalization. It places long-run capital expenditures modestly below the historical average of approximately 5.3%, while remaining within the typical 4–6% range observed in capital-intensive defense and heavy manufacturing (Damodaran, 2025a; KPMG, 2025). The CapEx mix has historically averaged 80% PPE to 20% intangibles. Following a 87/13 shift in 2024, it is expected to lean towards 90% PPE in the near term as the industrial footprint expands, before reverting to the 80/20 steady state as innovation and software investment regain their share. Net fixed assets (defined as PPE including right-of-use assets under IFRS 16) are projected via a roll-forward (opening balance plus PPE CapEx less depreciation), rising from €2.2 billion in 2024 to €11 billion by 2034, with the PPE-to-sales ratio stabilizing around 18-19% (consistent with sector norms of 15-25% depending on asset intensity and growth phase). Other intangible assets are modeled under IAS 38 as capitalized R&D (opening balance plus capitalized R&D less amortization)(International Accounting Standards Board, 2023). As a cross-check, a total R&D expense of 5% of sales implies a capitalization rate of 15–25%, in line with industry practice. Goodwill is held flat post-2024, absent any material acquisitions.

Figure 19 shows PPE CapEx, capitalized R&D, and the buildup of tangible and intangible assets.

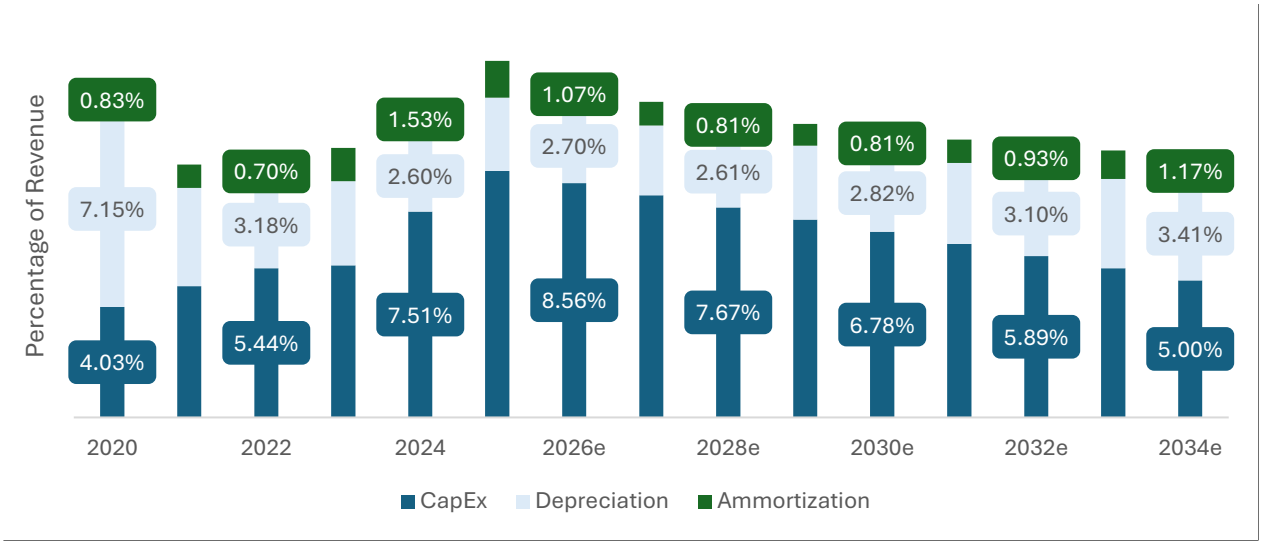
Figure 19: CapEx, PPE, and Intangibles



Source: Own Figure

Depreciation and amortization (D&A) are applied to average balances, linking future charges to the evolving asset mix. The younger, longer-lived assets created during the build-out phase dilute depreciation and amortization in the near term, while charges gradually rise as the base matures and renewal cycles normalize. This framework ensures that PPE and intangibles growth, as well as the timing of D&A, align with Rheinmetall's shift from expansionary CapEx to maintenance investment, thereby preserving consistency between the investment profile, operating margins, and free cash flow conversion in the outyears.

Figure 20: CapEx, Depreciation & Amortization as % of Revenue



Source: Own Figure

5.3 Net Debt and Condensed Balance Sheet

Gross debt is assumed to remain flat, as Rheinmetall refinances maturing debt while avoiding new borrowing, provided it has sufficient free cash flow. This conservative stance preserves modest leverage and liquidity, resulting in a decline in net debt and a net cash position that could support future acquisitions or buybacks not included in the base case.

Table 3: Net Debt and Condensed Balance Sheet

In € Millions	2024	2025E	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F
Net Debt											
Gross Debt	2,423	2,009	2,009	2,009	2,009	2,009	2,009	2,009	2,009	2,009	2,009
Excess Cash	892	1,021	900	992	1,411	2,199	3,383	4,948	6,837	8,932	11,134
Net Debt	1,531	988	1,109	1,017	598	-190	-1,374	-2,939	-4,828	-6,923	-9,125
NWC Composition											
Inventory	3,989	5,076	6,298	7,862	9,487	11,041	12,386	13,410	14,054	14,333	14,398
Acc. Receivable	1,959	2,649	3,496	4,644	5,966	7,389	8,818	10,143	11,263	12,110	12,671
Acc. Payable	1,151	1,551	2,041	2,701	3,458	4,270	5,078	5,821	6,442	6,903	7,199
Contract Assets	692	924	1,205	1,580	2,005	2,453	2,892	3,286	3,605	3,830	3,960
Contract Liabilities	3,866	4,977	6,249	7,899	9,656	11,389	12,953	14,219	15,107	15,607	15,839
Other Current Operating Assets	537	725	956	1,268	1,586	1,912	2,221	2,486	2,685	2,807	2,855
Other Current Operating Liabilities	1,141	1,508	1,934	2,500	3,106	3,708	4,247	4,668	4,931	5,017	4,944
NWC	1,019	1,339	1,731	2,255	2,823	3,430	4,040	4,616	5,127	5,552	5,902
Condensed Balance Sheet											
Non-Current Assets	6,112	7,039	8,314	9,863	11,585	13,458	15,375	17,205	18,822	20,121	21,051
Current Assets	8,232	10,618	13,150	16,742	20,967	25,633	30,467	35,162	39,436	43,087	46,151
Total Assets	14,344	17,657	21,464	26,605	32,552	39,092	45,842	52,367	58,259	63,209	67,201
Total Equity	4,465	6,129	7,503	9,503	12,082	15,227	18,836	22,734	26,708	30,517	34,014
Non-Current Liabilities	3,097	2,606	2,805	3,052	3,260	3,467	3,659	3,821	3,942	4,018	4,053
Current Liabilities	6,782	8,922	11,137	14,050	17,210	20,397	23,348	25,812	27,609	28,673	29,134
Liabilities + Equity	14,344	17,657	21,446	26,605	32,552	39,092	45,842	52,367	58,259	63,209	67,201

Source: Own Table

The complete balance sheet, including all items and Notes on the forecast assumptions, can be found in Appendix VIII, IX, X, and XII.

6 Valuation of Rheinmetall

In the following section, I will apply different valuation methods to provide a price target as of August 15, 2025. Information published after August 2025 is not considered in the valuation.

Given Rheinmetall's profile and the structural expansion of the defense sector, a Discounted Cash Flow (DCF) approach using FCFF and WACC serves as the primary method, as it best reflects long-term cash flow visibility, strong order backlog, and predictable government contracts. To complement this, I use relative valuation through comparable company and transaction analysis, benchmarked against major defense primes. Additionally, I employ a discounted mean reversion multiples approach, which adjusts current elevated multiples toward long-term averages, thereby mitigating cyclical overvaluation risks.

To ensure robustness, I conduct a sensitivity analysis on key inputs (WACC, terminal growth, and FCFF growth) and a Monte Carlo simulation to capture the probability distribution of outcomes and identify value drivers. This triangulated framework balances intrinsic, market, and risk perspectives in deriving Rheinmetall's equity value.

6.1 Discounted Cash Flow (DCF) Valuation

6.1.1 Cost of Equity

Cost of Equity is based on the CAPM model (Equation 3). The risk-free rate is based on the 10-year German Government Bond. The ERP used to calculate Rheinmetall's cost of equity is a weighted average of the implied cost of equity (r_e) for Germany, the Eurozone, North America, Asia, and the Middle East. The weighting factor was Rheinmetall's revenue generation in 2024, adjusted for future expectations and Rheinmetall's investor base. The calculated ERP for Rheinmetall is 5.63%.

Table 4: Implied Equity Risk Premium

Country	ERP	CRP	ERP+CRP	Weight	Adjusted Weight
Germany	4.33%	0.00%	4.33%	32.26%	33%
Eurozone	5.45%	1.12%	6.57%	49.46%	50%
North America	4.33%	0.00%	4.33%	8.12%	12%
Asia and the Near East	6.15%	1.80%	7.95%	10.16%	5%
Sum				100.00%	100.00%
Revenue Weighted ERP				**5.81%**	**5.63%**

Source: Own Table

Rheinmetall's equity beta combines a bottom-up unlevered Defense beta with Damodaran's published Automotive beta, then is re-levered to the target capital structure. Defense peer betas are estimated by regressing excess returns on the relevant market index, using currency-consistent risk-free rates, Euro Stoxx 600 for European peers, and S&P 500 for U.S. peers, with both 5-year monthly and 2-year weekly horizons. Given the post-2022 structural break in European defense, the 2-year weekly window is better suited to capture the new risk profile (higher European betas; U.S. peers less sensitive). Peer betas are unlevered using market values of net debt and equity, then averaged with a European tilt to reflect Rheinmetall's exposure.

Table 5: Regression Betas for the Defense Industry

Company:	Debt/Market Cap	Tax Rate	Levered Beta	Unlevered Beta
Rheinmetall AG	0.04	25%	1.09	1.06
BAE Systems plc	0.13	25%	0.65	0.60
Leonardo S.p.A.	0.08	28%	1.22	1.15
Saab AB	-0.01	20%	0.76	0.76
Hensoldt AG	0.06	25%	1.49	1.43
Thales Group	0.06	25%	0.73	0.70
Indra Sistemas	0.01	25%	0.85	0.84
General Dynamics Corp.	0.10	25%	0.52	0.48
Northrop Grumman Corp.	0.16	25%	0.10	0.09
Europe	0.05	25%	0.95	0.91
USA	0.13	25%	0.31	0.29
Overall	0.07	25%	0.79	0.76
Weighted Unlevered Beta				**0.82**

Source: Own Table

Automotive is a residual, non-core exposure where peer selection adds noise; thus, I use Damodaran's broad industry beta. The blended asset beta is the value-weighted average of the Defense bottom-up beta and Automotive industry beta, with weights based on revenue multiples (EV/Sales). Rheinmetall's unlevered beta is then re-levered using current market values, and a Blume adjustment is applied to reflect mean reversion toward 1 (Blume, 1971).

Table 6: Beta Weighting and Adjustments

Segment	Sales	EV/Sales	Est. Value (€Millions)	Weight	$Beta_u$	$Beta_u$*
Defense (Regression)	8,299	2.6	21,577	0.94	0.82	
Auto Parts (Damodaran)	1,997	0.75	1,498	0.06	0.79	
Rheinmetall Beta						81%
Adjusted Beta Calculation						
Weighted Unlevered Beta						0.81
Relevered Beta						0.84
Blume Adjusted Beta						**0.89**

Source: Own Table

6.1.2 Cost of Debt

I estimated the cost of debt via the credit-spread approach. The 10-year German Bund serves as the EUR risk-free benchmark, reflecting Germany's high credit quality. Following Rheinmetall's Moody's upgrade to Baa1 (March 2025), I apply a 120-bps spread consistent with Damodaran (Jan-2025) corporate yield spreads. The after-tax cost uses a 25% tax rate to reflect Germany's planned reduction from 30% effective 2028, consistent with forward-looking valuation practice.

Table 7: Cost of Debt

Credit Spread Method	
Credit Rating (Moody's)	Baa1
Credit Spread (Damodaran)	1.20%
Risk Free Rate (r_f)	2.69%
Cost of Debt (r_D)	**3.89%**
Cost of Debt (After Tax)	2.91%

Source: Own Table

6.1.3 Weighted Average Cost of Capital (WACC)

Historically, Rheinmetall has maintained a conservative capital structure, as evidenced by its persistently low net debt-to-market capitalization ratio. This is consistent with defense-sector incentives, long development cycles, dependence on government contracts, and regulatory scrutiny, which favor financial flexibility and low refinancing risk. The company does not disclose a target leverage ratio, and there is no indication of a shift toward higher indebtedness. Given strong operating cash flows sufficient to fund both the front-loaded capacity build and ongoing innovation, a stable capital structure near current levels is a reasonable forecast assumption. Using today's mix of debt and equity to re-lever the beta is therefore conservative and realistic for valuation purposes.

Table 8: Weighted Average Cost of Capital (WACC) Calculation

Weighted Average Cost of Capital	
Net Debt/Market Capitalization	0.04
Debt/Value	0.034
Equity/Value	0.966
Cost of Debt	3.98%
Cost of Debt after Tax	2.99%
Cost of Equity	7.82%
WACC	**7.65%**

Source: Own Table

6.1.4 Discounted Free Cash Flow to the Firm

The free cash flow to the firm is based on the forecasted profit and loss section, as covered in Section 5.1, and the forecasted changes in asset and liability formation, as discussed in Section 5.2. Depreciation encompasses both the depreciation of tangible assets and the amortization of intangible assets that have been capitalized. Changes in NWC are driven primarily by inventory, accounts receivable, accounts payable, contract assets and liabilities, and other operational working capital items. Furthermore, the change in "other provisions" is added since they are operating in nature, while changes in pension provisions are not considered due to their debt-like nature. Changes in "Other" refer to the changes in the operating portion of other current assets and liabilities.

Table 9: Discounted Free Cash Flow to the Firm (€ Millions)

DCF Model	Detailed Forecast Period			Transitional Period							TV
Year	2025E	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F	
Sales	13,069	17,092	22,503	28,651	35,181	41,622	47,464	52,257	55,717	57,813	
Δ Sales in %	34%	31%	32%	27%	23%	18%	14%	10%	7%	4%	2%
EBIT	1,914	2,722	3,901	5,207	6,576	7,859	8,898	9,562	9,782	9,586	
Tax Rate	27%	27%	26%	26%	26%	26%	25%	25%	25%	25%	
NOPAT	1,401	1,999	2,874	3,851	4,880	5,853	6,650	7,172	7,337	7,189	
+Depreciation	524	645	766	978	1,228	1,510	1,809	2,109	2,394	2,646	
- CapEx	1,176	1,462	1,825	2,197	2,541	2,821	3,006	3,077	3,033	2,891	
- Δ in NWC	320	392	524	569	607	610	576	511	426	350	
+Δ Provisions LT	85	98	127	136	134	120	95	61	24	-9	
FCFF	**513**	**888**	**1,419**	**2,199**	**3,096**	**4,052**	**4,971**	**5,754**	**6,296**	**6,586**	**118,889**
PV (15.08.2025)	**189**	**802**	**1,191**	**1,715**	**2,242**	**2,726**	**3,107**	**3,340**	**3,395**	**3,299**	**59,553**
Share of PVs	2.68%			24.30%							73.02%

Source: Own Table

6.1.5 Terminal Value

The terminal value in Section 6.2 is based on a 2% terminal growth rate, which is consistent with long-term structural drivers. Defense spending is expected to remain structurally higher than pre-war levels, anchored by NATO/EU commitments, as well as a multipolar security environment. Combined with euro-area inflation near 2% and real GDP growth of 0.5–1.0%, this supports a nominal baseline of around 2%. A lower rate could reflect a lasting peace and normalized budgets; persistent shocks could justify a higher rate. On balance, 2% aligns with macro averages, sector

guidance, and expert assessments. Since the terminal value accounts for over 70% of enterprise value in the FCFF model, Section 8 examines the sensitivity to this assumption.

As an alternative, Section 6.3 applies an exit multiple approach, using a long-term average EV/EBIT ratio to the forecasted 2034 EBIT. This yields a higher fair value than the perpetual growth model (Table 10).

6.1.6 Enterprise Value to Equity Bridge

Since I discounted FCFF, I first derived the Enterprise Value (EV), which captures the value of Rheinmetall's operating assets irrespective of financing. To translate EV into the equity value attributable to shareholders, it is necessary to adjust for claims that do not belong to equity holders. These include subtracting net debt (€2,784m) to remove creditor claims, adding back financial assets (€366m) that were excluded from the operating DCF, deducting pension liabilities (€490m) as long-term obligations, and subtracting minority interests (€459m) to reflect only the portion of subsidiaries owned by Rheinmetall. After these adjustments, the resulting equity value amounts to €78,061m, which, when divided by 45.94 million shares outstanding, implies a fair value per share of €1,702 for the perpetual growth method and €1,800 for the exit multiple method. This EV-to-equity bridge follows the methodology outlined by Damodaran and other valuation authorities, ensuring that all non-operating items and stakeholder claims are correctly incorporated.

Table 10: Enterprise Value to Equity Calculation

EV to Equity Bridge	TV Growth	Exit Multiple
Enterprise Value (€ Millions)	**81,557**	**86,060**
- Net Debt (MV - 30.06.2025)	2,784	2,784
+ Financial Assets (30.06.2025)	366	366
- Pension Liabilities (30.06.2025)	490	490
- Minority Interest (30.06.2025)	459	459
Equity Value (€ Millions)	**78,190**	**82,693**
# of Shares (30.06.2025)	45.94	45.94
Stock Price (€)	**1,702**	**1,800**

Source: Own Table

6.2 Adjusted Present Value (APV)

Since Rheinmetall's management does not disclose a clear financing strategy, testing alternative leverage scenarios is essential. To complement the FCFF–WACC valuation, the adjusted present value (APV) method was applied under three scenarios: a constant capital structure, a permanent debt policy, and a hybrid model that combines permanent debt in the forecast horizon with a WACC-based terminal value. The hybrid APV result (€1,701 per share) is virtually identical to the FCFF–WACC valuation (€1,702), confirming the robustness of the primary method. The permanent debt case (€1,697) yields a slightly lower value due to diminishing leverage, while the constant capital structure case (€1,744) produces a higher value, reflecting persistent tax shield benefits. These results underline the importance of leverage assumptions in the valuation. However, APV was used solely for validation purposes and was not considered in determining the target price. Complete calculations and assumptions are provided in Appendix XIII.

6.3 Relative Valuation

6.3.1 Trading Multiples (CCA)

As discussed in Section 4.4, Rheinmetall's peer group was selected based on similarity in business models, geography, size, profitability, and growth. Using a composite scoring approach, I ranked companies by comparability and selected the eight closest peers. Firms outside the defense industry were excluded, as they do not share Rheinmetall's risk profile, which is shaped by long-term government contracts, procurement cycles, and structural shifts in the defense sector. Likewise, the automotive business is not considered, since Rheinmetall has effectively transformed into a pure defense player and its valuation is now almost entirely driven by the performance of its defense segments. Despite this careful peer selection, Rheinmetall remains uniquely positioned in the European defense boom, with structurally higher growth prospects than any of its large-cap peers. Thus, no "true twin" exists, and multiples must be interpreted with caution. For example, Rheinmetall's trailing P/E (65.6x) appears inflated relative to the peer median (24.8x). The gap narrows on a forward 12-month basis (41.9x vs. 22.7x) but remains elevated, comparable only to growth-oriented peers such as Saab AB and Hensoldt AG. Analyst consensus on five-year EPS growth shows that companies with higher P/E ratios also expect stronger earnings expansion, partly justifying these premiums.

Growth-adjusted valuation supports this: Rheinmetall's PEG ratio (the PE ratio divided by expected growth) of 1.62 is below the peer median (1.95), indicating its premium reflects growth optionality rather than simple overpricing, underscoring the importance of growth-adjusted multiples.

Table 11: PE and PEG Ratio (Complete Table in Appendix XIV)

Company	PE (Trailing LTM)	PE 12 Month Forward	5 Year Est. Growth	PEG
Rheinmetall AG	65.55	41.90	40.50%	1.62
P25	22.42	20.58	11%	1.77
P75	34.47	27.65	19%	2.16
Median	**24.83**	**22.71**	**12%**	**1.95**

Source: Own Table

Other earnings-based multiples (EV/EBIT, EV/EBITDA) also suggest Rheinmetall is overvalued relative to peers, with trailing figures more than double the peer median and forward multiples still showing a premium. However, since forward ratios only reflect the following year, they miss Rheinmetall's longer-term growth, making overvaluation seem exaggerated. This highlights the need for growth-adjusted metrics, such as PEG or DCF, to accurately capture the company's value.

Table 12: EBIT & EBITDA to EV Multiples (Complete Table in Appendix XV)

Company	EV/EBIT	EV/EBITDA	EV/EBIT	EV/EBITDA
Rheinmetall AG	43	34	29	24
P25	19.06	14.24	16.88	13.15
P75	24.91	18.44	22.08	16.50
Median	**20.42**	**15.41**	**17.57**	**13.89**

Source: Own Table

Lastly, book value and revenue multiples also indicate that Rheinmetall is trading at unusually high levels. Its price-to-book (P/B) ratio of 18 is far above the sector range of 3–8, reflecting investor confidence in future growth and backlog rather than its asset base (Appendix XVI).

Table 13: Implied Share Prices based on Trading Multiples (LTM)

Multiples	PE	EV/EBIT	EV/EBITDA	Price / Book	Price / Sales
Median	24.83	20.42	15.41	4.75	1.84
Implied EV	28,007	35,832	34,387		
Implied Equity Value	24,640	32,465	31,020	19,227	20,205
Implied Share Price	**536**	**707**	**675**	**418**	**440**

Source: Own Table

Median peer multiples imply share prices of €418–€707, which are well below the current market level, underscoring the limitations of conventional multiples for a fast-growing firm. While peers trade at lower valuations, Rheinmetall's unique growth outlook and strategic role in Europe appear to justify a premium not captured by standard measures.

Using 12-month forward multiples still shows slightly elevated implied share prices compared to trailing multiples since they incorporate some of the expected growth. However, they still fall short of the current share price and the implied share price by the DCF Model.

Table 14: Implied Share Price based on Trading Multiples (12 Month Forward)

	EV/EBIT	EV/EBITDA	Price / Sales
Median	17.57	13.89	1.75
Implied EV	43,106	42,464	
Implied Equity Value	39,739	39,097	27,543
Implied Share Price	**865**	**851**	**599**

Source: Own Table

Although forward and growth-adjusted multiples, such as the PEG, reflect part of Rheinmetall's expected growth, they remain inadequate for estimating fair value, underscoring the need for a more forward-looking approach, as discussed in Section 6.3.3.

6.3.2 Transaction Multiples (CTA)

In addition to trading multiples, I also analyzed transaction multiples to capture valuation evidence from actual M&A activity in the defense sector. This approach provides a complementary perspective, as deal valuations often incorporate control premiums and strategic considerations that trading multiples may not reflect. For this purpose, I screened transactions over the past five years in Europe with a minimum deal value of €500 million and a completed status, focusing exclusively on the defense industry. The complete list of transactions is available in Appendix XVII.

The multiples and thus the implied share prices are very similar to the ones seen in the trading multiples section. This further confirms that Rheinmetall is trading well above what is typically seen in both the capital market and M&A transactions.

Table 15: Implied Share Prices Based on Transaction Multiples

	EV/EBIT	EV/EBITDA	Price / Sales
Median	21.01	15.48	2.32
Implied EV	36,857	34,550	
Implied Equity Value	33,490	31,183	25,462
Implied Share Price	**729**	**679**	**554**

Source: Own Table

6.3.3 Discounted Mean-Reversion Multiples Approach

Traditional trading multiples (P/E, EV/EBITDA, EV/EBIT) are reliable only when peers share similar growth, profitability, and risk. For Rheinmetall, higher structural growth versus mature defense peers renders direct comparisons misleading; a "premium" may reflect anticipated future cash flows rather than overvaluation. Forward-looking multiples help reduce, but do not eliminate, this bias since they overlook Rheinmetall's long-term expansion.

Academic studies show that multiples revert to industry averages over time, driven by fundamentals such as growth, ROIC, and cost of capital. Short-term deviations, like those in current defense cycles, are cyclical, and multiples often spike during geopolitical shocks but normalize once expectations are absorbed (Lev, 1969).

Given this, a long-run steady-state approach is employed: applying 10-year average peer multiples to Rheinmetall's stabilized EBITDA, discounted at the WACC to maintain consistency with the DCF and account for mean reversion and sector cyclicality.

Table 16: Relative Valuation (Forward Looking Approach)

EV/EBITDA	Bear	Base	Bull
Median	9.10	12.14	15.17
Implied EV	56,888	75,851	94,813
Implied Equity Value	53,521	72,484	91,446
Implied Share Price	**1,165**	**1,578**	**1,990**

Source: Own Table

Although still below the current share price, the implied value from this forward-looking approach is far more credible than estimates from spot trading or transaction multiples. Its main limitation is reliance on robust assumptions, specifically the accuracy of DCF projections and the return of multiples to long-term industry norms, which means it serves best as a DCF validation tool rather than an independent method. Multiples fluctuate cyclically in response to changes in credit conditions, investor sentiment, and growth outlooks, often spiking in reaction to geopolitical shocks and normalizing once spending expectations stabilize (Fernández, 2005; Lie & Lie, 2002). Reflecting this uncertainty, a scenario analysis was applied around the long-term industry EV/EBITDA median (12.14), using a ±25% range to yield bear (9.10) and bull (15.17) cases. The implied prices (€1,165, €1,578, €1,990) highlight the method's sensitivity to assumptions and reinforce its value as a plausibility check and stress test for the DCF.

7 Sensitivity Analysis and Target Price

7.1 Deterministic Sensitivity Analysis

Damodaran (2014) argues that offering low, mid, and high values is misleading, since investors cannot buy at multiple prices; instead, uncertainty should be treated as an inherent feature of valuation. The key is to understand how this uncertainty shapes the implied share price, while ultimately selecting a single target. As shown in Section 6.2, roughly 73% of Rheinmetall's value is derived from the terminal stage, primarily driven by the terminal growth rate and the WACC. Given Rheinmetall's low leverage, the WACC is primarily determined by the cost of equity, which is itself heavily influenced by the company's beta. Debt costs and tax effects play only a minor role. Table 17 illustrates how changes in beta affect WACC and the implied share value under different growth assumptions, with outcomes ranging from €1,161 to €3,095.

Table 17: Sensitivity to WACC and Terminal Growth (Share Price in €)

Beta	WACC	Terminal Growth						
		1.25%	1.50%	1.75%	**2.00%**	2.25%	2.50%	2.75%
0.59	6.00%	2,226	2,330	2,445	2,574	2,722	2,890	3,083
0.69	6.54%	1,953	2,032	2,119	2,216	2,325	2,446	2,584
0.79	7.08%	1,731	1,793	1,861	1,936	2,018	2,109	2,211
0.89	**7.65%**	1,542	1,591	1,644	1,702	1,765	1,835	1,911
0.99	8.17%	1,395	1,436	1,479	1,526	1,577	1,632	1,692
1.09	8.71%	1,265	1,298	1,334	1,372	1,413	1,457	1,505
1.19	9.26%	1,153	1180.748	1210.045	1,241	1274.9094	1310.941	1,350

Source: Own Figure

Since I also used the exit multiple approach to determine the TV, I tested the share price sensitivity towards the exit multiple. This is relevant since I assumed mean reversion; however, under certain conditions, defense industry multiples might remain elevated or drop below the historical average.

Table 18: Sensitivity to WACC and Exit Multiple (Share Price in €)

Beta	WACC	Exit Multiple						
		11.84	12.34	12.84	**13.34**	13.84	14.34	14.84
0.59	6.00%	1,837	1,897	1,957	2,018	2,078	2,139	2,199
0.69	6.54%	1,770	1,827	1,885	1,942	2,000	2,057	2,115
0.79	7.08%	1,706	1,761	1,816	1,871	1,926	1,980	2,035
0.89	**7.65%**	1,643	1,695	1,748	1,800	1,852	1,904	1,957
0.99	8.17%	1,588	1,638	1,688	1,738	1,788	1,838	1,888
1.09	8.71%	1,534	1,582	1,629	1,677	1,725	1,772	1,820
1.19	9.26%	1,482	1527.901	1573.372	1,619	1664.3126	1709.783	1,755

Source: Own Figure

While the capital structure is assumed to remain conservative, I also tested scenarios with higher leverage and varying FCFF growth over the forecast horizon. Because the terminal value is derived from the last forecasted FCFF, growth assumptions affect both interim cash flows and the terminal stage. At the same time, leverage influences WACC through the debt-to-equity ratio. The sensitivity analysis reveals that higher leverage could potentially raise the share price to €2,126. However, deviations in FCFF growth have a more substantial impact, as evidenced by a 27% CAGR, which reduces the implied share price to €1,261.

Table 19: Sensitivity to CAGR (EFH) and Capital Structure (Share Price in €)

CAGR (FH)	FCFF 2034	Debt/Equity						
		0.00%	**3.55%**	10.00%	15.00%	20.00%	25.00%	30.00%
27%	4,344	1,220	1,261	1,334	1,389	1,443	1,497	1,550
29%	5,001	1,344	1,390	1,473	1,536	1,598	1,659	1,719
31%	5,745	1,484	1,536	1,630	1,702	1,772	1,842	1,910
33%	**6,586**	1,642	1,702	1,808	1,890	1,970	2,048	2,126
35%	7,534	1,821	1,888	2,009	2,101	2,192	2,282	2,370
37%	8,602	2,022	2,099	2,236	2,340	2,443	2,544	2,644
39%	9,803	2,249	2334.969	2489.87	2,608	2724.6078	2839.555	2,953

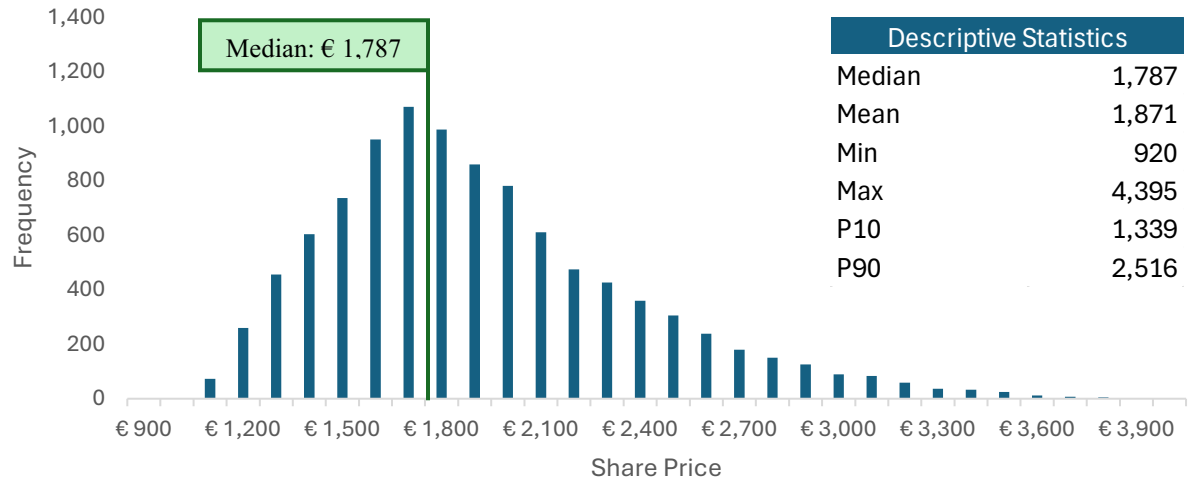
Source: Own Table

7.2 Monte Carlo Simulation

As a complement to the two-factor sensitivity analysis, I conducted a Monte Carlo simulation to test multiple variables simultaneously. In this setup, the FCFF for 2034 is forecasted by generating random values around the explicitly modeled cash flows with an assumed standard deviation of 10%. The debt-to-equity ratio and company-specific factors were modeled using discrete probability estimates (see Appendix XIX). At the same time, the terminal growth rate was randomly drawn from a range of 1.25% to 2.75%. WACC was then derived as a function of these variables.

The histogram in Figure 21 illustrates the probability distribution of Rheinmetall's share price based on 10,000 simulations. The median outcome of €1,787 lies slightly above the valuations obtained from DCF and relative multiples. The distribution is notably right-skewed, which pushes the mean higher at €1,871 and highlights the potential for upside under favorable conditions. This result suggests that the target price derived from the base case is realistic, with a relatively limited downside and meaningful upside optionality.

Figure 21: Monte Carlo Analysis



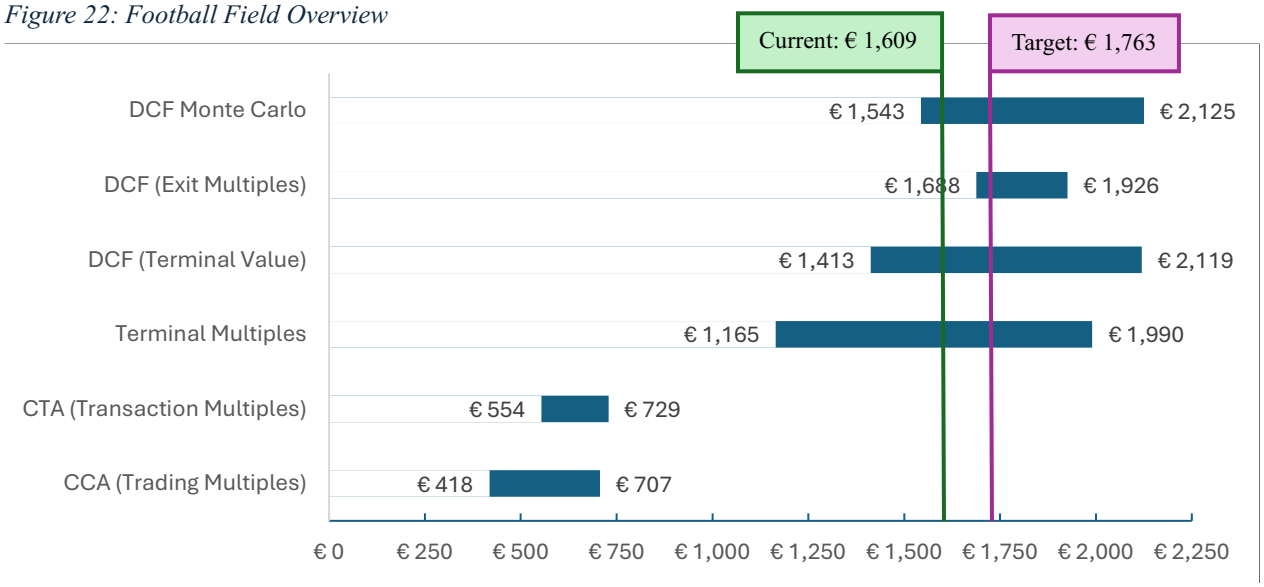
Source: Own Figure

7.3 Target Price – 15.08.2025

The price target is based on the different valuation methods I applied to Rheinmetall as well as the sensitivity analysis I conducted. While I was as objective as possible, the valuation results are still subject to my personal assumptions about Rheinmetall as a company, the future of the defense industry, and the company's position within it. The final target is the average of the median from the Monte Carlo Analysis, the DCF Exit Model, and the DCF Terminal Growth. The multiple approaches have not been considered since it was not possible to set up a truly representative peer group. While the mean-reversion multiples approach yielded more realistic numbers, it relies on both assumptions about the DCF and assumptions about the steady-state industry multiple. Thus, it is more suitable as a feasibility check rather than introducing more noise into the valuation.

The resulting target price of €1,763 reflects an upside of 9.6% relative to the closing share price on August 15, 2025. The three-month average price of €1,743 closely aligns with the calculated fair value. Considering a more extended trading period helps mitigate short-term volatility and transient market effects. While the estimate indicates that the stock is modestly undervalued, the upside falls just below the 10% threshold commonly cited in academic and industry guidelines for issuing a Buy recommendation. (Barber et al., 2007). Moreover, Rheinmetall already trades at a premium to several peers, leaving limited relative upside, while execution risks around order intake and capacity expansion could delay the realization of forecasted growth. Sensitivity and Monte Carlo analyses also reveal a wide valuation range, underscoring the uncertainty inherent in the estimates. Taken together, these factors support a more conservative Hold recommendation.

Figure 22: Football Field Overview



Source: Own Figure

8 Comparison of my Valuation to Analyst Estimates

To validate my valuation and explain deviations in target prices (€1,763), I benchmark my results against a broad range of analyst estimates. I then examine three representative reports (Warburg Research, MWB Research, and DZ Bank) in more detail to identify how differences in capital structure, forecast horizon, and operating assumptions translate into diverging target prices (Cohrs, 2025; Rieck, 2025; Schmidt, 2025).

Table 20: Target Price Comparison

Contributor	Signal	Rec. Date	EUR Target	% Diff. from Current Price
Landesbank Baden-Wuerttemberg	BUY	08-Aug-25	1,950	21.19%
MWB Research AG	BUY	05-May-25	2,000	24.30%
Jefferies	BUY	17-Mar-25	2,250	39.84%
Warburg Research	HOLD	04-Mar-25	1,550	-3.67%
Hauck Aufhäuser	BUY	12-May-25	2,200	36.73%
Oddo BHF	Neutral	21-Mar-25	1,650	2.55%
Berenberg	BUY	10-Nov-24	2,100	30.52%
DZ Bank	BUY	23-Jun-25	1,985	23.37%
Metzler Equities	BUY	31-Mar-25	1,980	23.06%
Median			**1,985**	**23.37%**

Source: Refinitiv - Own Table

My target price is relatively conservative, falling below the analyst median of €1,985. Only Warburg and Oddo BHF publish lower valuations, while others reach as high as €2,250 (as per Jefferies). All estimates lie within the bounds of my sensitivity analysis and Monte Carlo simulation, which makes them technically possible but not equally realistic. To explore the drivers of divergence, I focus on Warburg's conservative case and the more optimistic perspectives of MWB Research and DZ Bank.

Table 21: Comparison of Key DCF Inputs

Issuer	Own Valuation	Warburg Research	MWB Research
Date	15.08.2025	09.05.2025	21.05.2025
Target Price (€)	**1,763**	**1,550**	**2,000**
Forecast Horizon	2034	2037	2032
Debt Ratio	0.04	0.2	0.3
Beta	0.89	1	1.17
Risk Free Rate	2.78%	2.75%	2.00%
Cost of Debt	3.98%	4.00%	5.00%
Equity Risk Premium	5.63%	5.50%	6.00%
WACC	7.65%	7.16%	7.80%
Terminal Growth	2.00%	2.00%	2.00%
Number of Shares	45.94	45.00	43.50

Source: Warburg Research, MWB Research - Own Table

While inputs across models are broadly similar (Table 21), three factors explain most of the divergence: leverage, share count, and forecast horizon. I estimate a bottom-up, market-value capital structure and re-lever beta accordingly. In contrast, Warburg and MWB apply book-value or target ratios that inflate the debt-to-equity ratio and, in turn, the levered beta (MWB shows the highest). If I were to impose a 30% D/E ratio, my model's target price would exceed €2,000, which demonstrates that much of the valuation gap stems from capital structure assumptions rather than operational forecasts (Table 19). Since I regard such a high debt load as unrealistic for Rheinmetall, I maintain my lower target.

A second factor is the share count: both MWB and Warburg base their valuations on outdated figures of 43.5 and 45 million shares, rather than the current 45.9 million shares as of the post-Q2 2025 period. Adjusting to the higher number reduces their per-share targets and narrows the difference with my result.

Finally, the forecast horizon affects the weight of the terminal value. MWB applies the most extended horizon, which lowers terminal value dependence to below 70%, whereas Warburg's shorter horizon pushes it close to 80%. My forecast falls between 73% and 74%, striking a balance between short-term and long-term assumptions.

Beyond these structural factors, Warburg's lower WACC, driven by higher leverage, is offset by more cautious operational forecasts: sales of €55.3 billion in 2034 (compared to my €57.8 billion) and an EBIT margin of 16.3% (compared to 16.6%). MWB did not disclose comparable long-term sales assumptions, so I supplemented the comparison with DZ Bank's report, which provides additional insight into sales and margin expectations.

Table 22: Sales and Margin Comparison (€ Millions)

Issuer	Own Analysis	Warburg Research	DZ Bank
Sales 2029	35,181	31,912	30,555
EBIT 2029	6,576	5,600	5,739
Margin	18.69%	17.55%	18.78%
Sales 2034	57,813	55,348	-
EBIT 2034	9,586	8,996	-
Margin	16.58%	16.25%	-

Source: Warburg Research & DZ Bank – Own Figure

Table 22 compares long-term sales and margin assumptions. My forecasts are somewhat more optimistic than Warburg's, but both converge to EBIT margins of around 16–17% by 2034.

DZ Bank's projections for 2029 are broadly consistent with mine. Its higher target price likely reflects the expectation that Rheinmetall can sustain higher margins over time, due to lower CapEx assumptions.

Taken together, the comparison shows that valuation gaps arise less from divergent views on Rheinmetall's growth outlook and more from structural modelling choices, particularly capital structure assumptions and their impact on the discount rate, with margins providing a secondary influence. Importantly, all analysts converge on the same underlying narrative of robust growth and profitability.

The divergence in analyst target prices stems chiefly from capital structure choices (leverage, beta, and WACC) rather than from differing expectations regarding Rheinmetall's sales or margins, where assumptions converge around a 16–17% EBIT by 2034.

9 Conclusion, Limitations, and Implications for Investors

This thesis analyzed and valued Rheinmetall AG to assess whether its rapid share price increase is justified. Based on a DCF approach, I derive a target price of €1,763, which supports a hold recommendation. The target implies modest upside from current levels but remains below the analyst consensus. The gap to more optimistic valuations stems from my more conservative capital structure, updated share count, and slightly higher CapEx assumptions.

For investors, the key insight is that Rheinmetall's value is anchored in long-term growth expectations rather than current fundamentals. If Germany consolidates its role as Europe's rearmament leader and continues to favor Rheinmetall as its primary supplier, these expectations are likely to remain or even intensify. Conversely, political reversals, fiscal tightening, or procurement shifts would directly erode value.

The primary limitation of this analysis is its reliance on a DCF framework, as relative valuation is currently not applicable to Rheinmetall. This makes the outcome highly dependent on assumptions, particularly regarding growth, capital structure, and discount rates.

In sum, Rheinmetall should be viewed as a structural growth investment, supported by Europe's defense trajectory, yet highly exposed to political and geopolitical uncertainty. Investors must closely monitor both company execution and policy developments, as these will determine whether today's assumptions and valuation remain valid.

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Appendix I: Valuation Methods Summary Table

Method	Description	Advantages	Limitations	Best Used For
Discounted Cash Flow (DCF) (FCFF, FCFE, DDM, APV)	Projects future cash flows and discounts at the cost of capital. Variants differ in the definition of cash flows and discount rates.	Captures intrinsic value, is flexible, widely used, and aligns with fundamentals.	Highly assumption-sensitive (growth, margins, WACC, TV).	Firms with stable or projectable cash flows and a long-term growth outlook.
Dividend Discount Model (DDM)	Values equity as the PV of expected future dividends.	Conceptually pure, simple.	Limited to dividend-paying firms; ignores buybacks, distorts if payouts ≠ free cash flow.	Mature firms with predictable payout policies.
Free Cash Flow to Firm (FCFF)	PV of post-tax operating cash flows to all capital providers, discounted at WACC.	Captures enterprise value, avoids forecasting debt.	Requires detailed operating forecasts, assumes stable capital structure.	Firms with complex financing structures, full enterprise valuation.
Free Cash Flow to Equity (FCFE)	PV of cash flows after debt service, discounted at the cost of equity.	Direct to equity value, intuitive.	Sensitive to leverage assumptions, less reliable under volatile financing.	Firms with stable leverage and financing policies.
Adjusted Present Value (APV)	Values unlevered firm + PV of financing side effects (tax shields, distress).	Separates operating and financing effects, providing flexibility for changing structures.	Requires explicit modelling of financing costs/benefits.	Firms with shifting capital structures or significant financing effects.
Relative Valuation (CCA, CTA, Multiples)	Benchmarks against peers or transactions using valuation multiples.	Simple, intuitive, market-based, quick check of "cheap/expensive."	Peer comparability issues are influenced by sentiment and cycles.	Market validation of intrinsic models, M&A benchmarks.
Asset-Based Valuation (ABV)	Equity = FV of assets – FV of liabilities.	Provides a conservative "floor" value, transparent.	Ignores going-concern value, growth options, and intangibles.	Asset-intensive or distressed firms.
Contingent Claim Models (Real Options)	Treats equity/projects as options on assets; uses option pricing frameworks.	Captures managerial flexibility and strategic options.	Data-intensive, restrictive assumptions; complex.	Start-ups, resource firms, innovation-driven or highly uncertain projects.
Sum-of-the-Parts (SOTP)	Values segments separately using the most appropriate method, then aggregates them.	Tailors valuation to segment characteristics, surfaces hidden value.	Requires disclosure, risk of double-counting.	Conglomerates, diversified firms.
Residual Income (RI)	Equity value = Book equity + PV of excess returns over cost of equity.	Highlights value creation; works without dividends.	Sensitive to accounting assumptions, relies on sustained ROE.	Firms with reliable accounting details but weak dividend/cash flow data.
Economic Value Added (EVA)	Firm value = Net assets + PV of returns above WACC.	Emphasizes value creation at the firm level, making it suitable for performance evaluation.	Accounting-driven, not a standalone valuation model.	Internal capital budgeting, performance monitoring.

Appendix II: SWOT Analysis

Strengths

- Leading European defense supplier, NATO standard.
- Broad portfolio: ammunition, vehicles, air defense.
- Strong ties with German government and NATO.
- Record order backlog ensures revenue visibility.
- Expanding capacity with new plants and M&A.
- Solid financials, investment-grade rating.
- Technological expertise, strong R&D.
- High barriers to entry in defense industry.

Weaknesses

- Historically low margins, capital-intensive.
- Production capacity bottlenecks.
- Heavy reliance on European markets.
- Limited global diversification vs. U.S. peers.
- ESG concerns restrict some investors.
- Reputation risk from arms exports.
- Past exposure to underperforming automotive unit.

S W O T

Opportunities

- Structural rise in global defense spending.
- NATO rearmament, Germany's Zeitenwende.
- EU initiatives (ReArm Europe, Readiness 2030).
- Ammunition replenishment cycle.
- Market growth in Eastern Europe and NATO expansion.
- Innovation in drones, AI, cyber, and hybrid vehicles.
- Improving investor sentiment toward defense.
- Potential ESG re-classification as "sustainable security".

Threats

- Demand drop if geopolitical tensions ease.
- Fiscal pressures may cut budgets.
- Political resistance in some NATO countries.
- Intense competition from U.S. and European peers.
- Supply chain bottlenecks (e.g. nitrocellulose).
- Cost inflation in energy, materials, labor.
- Export controls and embargoes.
- Renewed ESG backlash in peacetime.

Source: Own Analysis

Appendix III: PESTEL Analysis

P

Political:

- NATO's 3.5% GDP target and Germany's €100bn fund drive structural demand.
- EU programs like ReArm Europe favor domestic and NATO suppliers.
- Budgets remain vulnerable to elections, shifting policies, and export rules.

E

Economic:

- Global defense spending is at record highs, supporting long-term growth.
- Investor optimism boosts valuations but increases volatility risk.
- Rising debt, inflation, and FX shifts may pressure budgets and margins.

S

Social:

- Defense is increasingly framed as essential for security and stability.
- ESG funds are softening restrictions, broadening investor access.
- Arms exports remain controversial, and talent recruitment is a challenge.

T

Technological:

- Innovation in AI, drones, and cyber is crucial to stay competitive.
- Heavy R&D and digital transformation sustain growth and efficiency.
- Cybersecurity and IP protection are vital for long-term resilience.

E

Environmental:

- Emissions and waste regulations directly affect defense production.
- Demand for greener and hybrid systems is steadily increasing.
- Climate change poses risks to supply chains and operations.

L

Legal:

- Export controls and embargoes can restrict sales and growth markets.
- Contracts carry penalties for delays, overruns, and defects.
- Compliance with anti-corruption and ESG laws raises operating costs.

Source: Own Analysis

Appendix IV: Peer Selection

Table 23: Peer Selection (Sum of Absolute Differences)

	Business Overlap	Geography	Market Cap	Revenue	EBITDA Margin	Net Debt/Market Cap	Score
BAE Systems plc	5	5	5	1	5	3	**4.4**
Leonardo S.p.A.	5	5	1	3	5	5	**4.2**
Saab AB	3	5	1	3	5	5	**3.6**
Hensoldt AG	3	5	1	1	5	5	**3.4**
Safran S.A.	3	5	3	1	1	3	**2.9**
Thales Group	3	5	3	3	5	5	**3.9**
Indra Sistemas	3	5	1	3	3	5	**3.3**
General Dynamics Corp.	5	3	5	1	5	3	**4**
Northrop Grumman Corp.	3	3	5	1	5	1	**3.2**
Lockheed Martin Corp.	1	3	5	1	5	1	**2.6**
RTX Corporation (formerly Raytheon)	3	3	3	1	5	1	**2.9**
L3Harris Technologies Inc.	1	3	3	3	5	1	**2.5**
Leidos Holdings Inc.	1	3	1	3	5	1	**2.2**
Textron Inc.	3	3	1	5	3	1	**2.7**
Weight	**30%**	**20%**	**15%**	**10%**	**15%**	**10%**	

Source: Refinitiv – Own Table

Out of a pre-selected group, the companies highlighted in green were chosen for the beta calculation and the relative valuation (CCA). To assess comparability, each company was scored on a scale from 1 to 5 across the underlying variables, with 5 indicating high similarity and 1 indicating low suitability as a peer. Using the sum of absolute differences approach, these scores were aggregated into a composite measure of distance from the target company. The eight firms with the lowest composite distances received the highest score and were ultimately selected as the most suitable peers.

Appendix V: Analyst Sales Forecasts and Growth Assumptions

Table 24: Comprehensive Analyst Sales Forecast (2025 – 2027)

Analyst Estimates				
Year	**2024**	**2025E**	**2026F**	**2027F**
Berenberg				
Sales Forecast	9,751	12,475	16,650	22,298
YoY Growth %		28%	33%	34%
DZ Bank				
Sales Forecast	9,751	12,540	16,599	21,979
YoY Growth %		29%	32%	32%
Hauck Aufhäuser				
Sales Forecast	9,751	12,743	17,203	23,224
YoY Growth %		31%	35%	35%
Metzler Equities				
Sales Forecast	9,751	12,940	18,965	25,500
YoY Growth %		33%	47%	34%
Morningstar				
Sales Forecast	9,751	13,105	17,451	23,813
YoY Growth %		34%	33%	36%
MWB Research				
Sales Forecast	9,751	12,355	16,172	20,959
YoY Growth %		27%	31%	30%
NH Investments				
Sales Forecast	9,751	12,700	16,796	21,780
YoY Growth %		30%	32%	30%
ODDO BHF				
Sales Forecast	9,751	12,696	17,024	22,617
YoY Growth %		30%	34%	33%
Warburg Research				
Sales Forecast	9,751	12,550	16,087	20,926
YoY Growth %		29%	28%	30%
Summary				
Year		**2025E**	**2026F**	**2027F**
Mean		30.0%	34.0%	32.7%
Median		30.2%	33.2%	32.9%
High		34.4%	46.6%	36.5%
Low		26.7%	28.2%	29.6%

Source: Refinitiv – Own Table

Appendix VI: Historical Income Statement

Table 25: Historical Income Statement (2019 - 2024)

In € Millions	2018	2019	2020	2021	2022	2023	2024
Sales	**6,148**	**6,255**	**5,875**	**5,658**	**6,410**	**7,176**	**9,751**
Change Sales YoY		*1.7%*	*-6.1%*	*-3.7%*	*13.3%*	*12.0%*	*35.9%*
Change in Inventory		236	129	117	153	696	167
Own Work Capitalized		0	0	0	0	0	0
Total Operating Performance		**6,491**	**6,004**	**5,775**	**6,563**	**7,872**	**9,918**
Material Expenses		3,444	3,058	2,745	3,183	3,935	4,859
Personnel Expenses		1,678	1,723	1,643	1,836	2,047	2,373
Other Operating Income		186	123	134	221	153	228
Other Operating Expenses		781	693	656	768	889	1,120
Investments (Equity Method)		37	20	11	38	57	-37
Other Financial Result		-20	-26	-17	-48	-6	-9
EBITDA		**791**	**647**	**859**	**987**	**1,205**	**1,748**
Margin		*12.6%*	*11.0%*	*15.2%*	*15.4%*	*16.8%*	*17.9%*
Depreciation of Fixed Assets		238	420	203	204	221	254
EBITA		**553**	**227**	**656**	**783**	**984**	**1,494**
Amortization of Intangible Assets		41	49	48	45	87	149
Amortization of Goodwill		0	88	0	0	0	0
EBIT		**512**	**90**	**608**	**738**	**897**	**1,345**
Margin		*8.2%*	*1.5%*	*10.7%*	*11.5%*	*12.5%*	*13.8%*
Interest Income		11	9	4	12	29	19
Interest Expenses		46	42	30	32	111	135
EBT		**477**	**57**	**582**	**718**	**815**	**1,229**
Income Taxes		123	56	150	183	185	333
Current		99	91	108	121	223	319
Deferred		24	-8	42	62	-38	14
Continuing Operations		**354**	**1**	**432**	**535**	**630**	**896**
Income Discontinued Operations		0	0	-100	5	-44	-88
Before Minority Interest		**354**	**1**	**332**	**540**	**586**	**808**
Minority Interest		19	27	41	66	51	91
Net Income		**335**	**-26**	**291**	**474**	**535**	**717**
Margin		*5.4%*	*-0.4%*	*5.1%*	*7.4%*	*7.5%*	*7.4%*

Source: Rheinmetall Annual Reports - Own Table

Appendix VII: Forecasted Income Statement

Table 26: Forecasted Income Statement (2025 - 2034)

In € Millions	2025E	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F
Sales	**13,069**	**17,092**	**22,503**	**28,651**	**35,181**	**41,622**	**47,464**	**52,257**	**55,717**	**57,813**
Change Sales YoY	*34.0%*	*30.8%*	*31.7%*	*27.3%*	*22.8%*	*18.3%*	*14.0%*	*10.1%*	*6.6%*	*3.8%*
Change in Inventory	0	0	0	0	0	0	0	0	0	0
Own Work Capitalized	0	0	0	0	0	0	0	0	0	0
Total Operating Performance	**13,069**	**17,092**	**22,503**	**28,651**	**35,181**	**41,622**	**47,464**	**52,257**	**55,717**	**57,813**
Material Expenses	6,527	8,556	11,291	14,409	17,733	21,027	24,033	26,520	28,339	29,472
Personnel Expenses	2,912	3,631	4,547	5,549	6,608	7,687	8,749	9,758	10,680	11,493
Other Operating Income	301	388	503	631	763	889	997	1,080	1,133	1,156
Other Operating Expenses	1,501	1,935	2,510	3,149	3,809	4,437	4,981	5,398	5,664	5,781
Investments (Equity Method)	33	33	33	33	33	33	33	33	33	33
Other Financial Result	-23	-23	-23	-23	-23	-23	-23	-23	-23	-23
EBITDA	**2,438**	**3,367**	**4,667**	**6,185**	**7,804**	**9,369**	**10,707**	**11,671**	**12,176**	**12,232**
Margin	*18.7%*	*19.7%*	*20.7%*	*21.6%*	*22.2%*	*22.5%*	*22.6%*	*22.3%*	*21.9%*	*21.2%*
Depreciation of Fixed Assets	349	462	572	747	950	1,173	1,401	1,621	1,815	1,971
EBITA	**2,089**	**2,905**	**4,095**	**5,438**	**6,854**	**8,196**	**9,306**	**10,051**	**10,361**	**10,261**
Amortization of Intangible Assets	175	183	194	231	278	337	407	489	579	676
Amortization of Goodwill	0	0	0	0	0	0	0	0	0	0
EBIT	**1,914**	**2,722**	**3,901**	**5,207**	**6,576**	**7,859**	**8,898**	**9,562**	**9,782**	**9,586**
Margin	*14.6%*	*15.9%*	*17.3%*	*18.2%*	*18.7%*	*18.9%*	*18.7%*	*18.3%*	*17.6%*	*16.6%*
Interest Income	24	24	28	38	53	75	103	136	172	208
Interest Expenses	99	99	99	99	99	99	99	99	99	99
EBT	**1,840**	**2,647**	**3,830**	**5,146**	**6,531**	**7,836**	**8,903**	**9,599**	**9,855**	**9,695**
Income Taxes	494	703	1,008	1,340	1,684	2,000	2,249	2,400	2,464	2,424
Current	494	703	1,008	1,367	1,710	2,026	2,275	2,426	2,490	2,450
Deferred	0	0	0	-26	-26	-26	-26	-26	-26	-26
Continuing Operations	**1,346**	**1,944**	**2,823**	**3,806**	**4,847**	**5,836**	**6,654**	**7,200**	**7,391**	**7,271**
Income Discontinued Operations	0	0	0	0	0	0	0	0	0	0
Before Minority Interest	**1,346**	**1,944**	**2,823**	**3,806**	**4,847**	**5,836**	**6,654**	**7,200**	**7,391**	**7,271**
Minority Interest	152	219	318	429	546	657	749	811	832	819
Net Income	**1,194**	**1,725**	**2,505**	**3,377**	**4,301**	**5,179**	**5,905**	**6,389**	**6,559**	**6,453**
Margin	*9.1%*	*10.1%*	*11.1%*	*11.8%*	*12.2%*	*12.4%*	*12.4%*	*12.2%*	*11.8%*	*11.2%*

Source: Own Table

Appendix VIII: Historical Balance Sheet

Table 27: Historical Balance Sheet (2019 - 2024)

In € Millions	2019	2020	2021	2022	2023	2024
Intangible Assets	800	716	768	821	2,077	2,802
Goodwill	567	476	481	483	1,125	1,426
Other Intangible Assets	233	240	287	338	952	1,376
PPE (incl. ROA)	1,565	1,365	1,270	1,346	1,641	2,187
Financial Assets	351	327	231	432	395	366
Investment Property	42	39	30	24	22	20
Investments (Equity Method)	309	288	201	408	373	346
Other Non-Current Assets	255	272	337	187	339	585
Deferred Tax Assets	224	249	147	98	164	172
Non-Current Assets	**3,195**	**2,929**	**2,753**	**2,884**	**4,616**	**6,112**
Inventories	1,463	1,573	1,651	1,976	3,244	3,989
Current Receivables	1,535	1,522	1,572	1,910	2,537	2,651
Contract Assets	388	352	408	362	516	692
Trade Receivables	1,147	1,170	1,164	1,548	2,021	1,959
Other Current Assets	303	216	386	397	264	407
Cash and Cash Equivalents	919	1,028	1,039	545	851	1,185
Assets Held for Sale	0	0	334	377	196	0
Current Assets	**4,220**	**4,339**	**4,982**	**5,205**	**7,092**	**8,232**
Total Assets	**7,415**	**7,268**	**7,735**	**8,089**	**11,708**	**14,344**
Share Capital	112	112	112	112	112	112
Capital Reserves	553	556	561	566	676	696
Retained Earnings	1,478	1,233	1,755	2,140	2,533	3,247
Treasury Shares	-17	-13	-9	-6	-5	-4
Shareholders Equity	**2,126**	**1,888**	**2,419**	**2,812**	**3,316**	**4,051**
Minority Interest	146	165	203	271	327	414
Total Equity	**2,272**	**2,053**	**2,622**	**3,083**	**3,643**	**4,465**
Non-Current Provisions	1,383	1,368	983	689	792	812
Pensions	1,169	1,177	773	484	562	527
Other Non-Current Provisions	214	191	210	205	230	285
Non-Current Financial Debts	880	873	706	517	1,503	1,871
Other Non-Current Liabilities	86	82	45	56	51	58
Deferred Tax Liabilities	16	4	38	78	260	356
Non-Current Liabilities	**2,365**	**2,327**	**1,772**	**1,340**	**2,606**	**3,097**
Other Current Provisions	709	796	677	674	690	807
Current Financial Debt	112	150	215	454	410	552
Contract Liabilities	948	968	1,111	1,120	2,594	3,866
Trade Payables	695	700	809	931	1,222	1,151
Other Current Liabilities	215	198	196	200	274	288
Income Tax Liabilities	99	76	87	67	108	118
Liabilities (Assets Held for Sale)	0	0	246	220	161	0
Current Liabilities	**2,778**	**2,888**	**3,341**	**3,666**	**5,459**	**6,782**
Total Liabilities and Equity	**7,415**	**7,268**	**7,735**	**8,089**	**11,708**	**14,344**

Source: Refinitiv – Own Figure

Appendix IX: Forecasted Balance Sheet (Assets)

Table 28: Forecasted Asset Base (2025 - 2034)

In € Millions	2025E	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F
Intangible Assets	2,920	3,081	3,302	3,592	3,953	4,384	4,875	5,411	5,970	6,534
Goodwill	1,426	1,426	1,426	1,426	1,426	1,426	1,426	1,426	1,426	1,426
Other Intangible Assets	1,494	1,655	1,876	2,166	2,527	2,958	3,449	3,985	4,544	5,108
PPE (incl. ROA)	2,897	3,735	4,767	5,928	7,157	8,374	9,488	10,409	11,068	11,424
Financial Assets	350	355	380	369	364	364	366	368	366	366
Investment Property	27	25	24	23	24	24	24	24	24	24
Investments (Equity Method)	323	330	356	346	340	339	342	345	342	342
Other Non-Current Assets	701	971	1242	1549	1862	2155	2402	2585	2692	2727
Deferred Tax Assets	172	172	172	147	123	98	74	49	25	0
Non-Current Assets	**7,039**	**8,314**	**9,863**	**11,585**	**13,458**	**15,375**	**17,205**	**18,822**	**20,121**	**21,051**
Inventories	5,076	6,298	7,862	9,487	11,041	12,386	13,410	14,054	14,333	14,398
Current Receivables	3,574	4,701	6,225	7,970	9,843	11,710	13,429	14,868	15,940	16,631
Contract Assets	924	1,205	1,580	2,005	2,453	2,892	3,286	3,605	3,830	3,960
Trade Receivables	2,649	3,496	4,644	5,966	7,389	8,818	10,143	11,263	12,110	12,671
Other Current Assets	555	738	988	1,279	1,596	1,918	2,222	2,484	2,689	2,832
Cash and Cash Equivalents	1,413	1,413	1,667	2,230	3,154	4,453	6,101	8,031	10,126	12,290
Assets Held for Sale	0	0	0	0	0	0	0	0	0	0
Current Assets	**10,618**	**13,150**	**16,742**	**20,967**	**25,633**	**30,467**	**35,162**	**39,436**	**43,087**	**46,151**
Total Assets	**17,657**	**21,464**	**26,605**	**32,552**	**39,092**	**45,842**	**52,367**	**58,259**	**63,209**	**67,201**
As % of Sales										
Intangible Assets	22%	18%	15%	13%	11%	11%	10%	10%	11%	11%
PPE (incl. ROA)	22%	22%	21%	21%	20%	20%	20%	20%	20%	20%
Financial Assets	3%	2%	2%	1%	1%	1%	1%	1%	1%	1%
Other Non-Current Assets	5%	6%	6%	5%	5%	5%	5%	5%	5%	5%
Inventories	39%	37%	35%	33%	31%	30%	28%	27%	26%	25%
Current Receivables	27%	28%	28%	28%	28%	28%	28%	28%	29%	29%
Cash and Cash Equivalents	11%	8%	7%	8%	9%	11%	13%	15%	18%	21%

Source: Own Table

Appendix X: Forecasted Balance Sheet (Liabilities)

Table 29: Forecasted Balance Sheet - Equity and Liabilities (2025 - 2034)

In € Millions	2025E	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F
Share Capital	117	117	117	117	117	117	117	117	117	117
Capital Reserves	1,363	1,363	1,363	1,363	1,363	1,363	1,363	1,363	1,363	1,363
Retained Earnings	4,080	5,328	7,142	9,482	12,335	15,609	19,146	22,752	26,207	29,380
Treasury Shares	0	0	0	0	0	0	0	0	0	0
Shareholders Equity	**5,560**	**6,808**	**8,622**	**10,962**	**13,815**	**17,089**	**20,626**	**24,232**	**27,687**	**30,860**
Minority Interest	568	696	881	1,120	1,412	1,746	2,108	2,476	2,830	3,154
Total Equity	**6,129**	**7,503**	**9,503**	**12,082**	**15,227**	**18,836**	**22,734**	**26,708**	**30,517**	**34,014**
Non-Current Provisions	970	1,157	1,389	1,632	1,875	2,103	2,302	2,464	2,584	2,664
Pensions	600	689	793	901	1,009	1,117	1,222	1,323	1,418	1,508
Other Non-Current Provisions	370	468	595	732	866	986	1,081	1,142	1,166	1,156
Non-Current Financial Debts	1,218	1,218	1,218	1,218	1,218	1,218	1,218	1,218	1,218	1,218
Other Non-Current Liabilities	62	74	89	105	120	135	148	158	166	171
Deferred Tax Liabilities	356	356	356	305	254	203	153	102	51	0
Non-Current Liabilities	**2,606**	**2,805**	**3,052**	**3,260**	**3,467**	**3,659**	**3,821**	**3,942**	**4,018**	**4,053**
Other Current Provisions	1039	1303	1641	1996	2335	2627	2840	2955	2968	2891
Current Financial Debt	791	791	791	791	791	791	791	791	791	791
Contract Liabilities	4,977	6,249	7,899	9,656	11,389	12,953	14,219	15,107	15,607	15,839
Trade Payables	1,551	2,041	2,701	3,458	4,270	5,078	5,821	6,442	6,903	7,199
Other Current Liabilities	380	489	634	794	959	1,116	1,251	1,354	1,418	1,445
Income Tax Liabilities	184	265	383	515	653	784	890	960	986	970
Liabilities (Assets Held for Sale)	0	0	0	0	0	0	0	0	0	0
Current Liabilities	**8,922**	**11,137**	**14,050**	**17,210**	**20,397**	**23,348**	**25,812**	**27,609**	**28,673**	**29,134**
Total Liabilities and Equity	**17,657**	**21,446**	**26,605**	**32,552**	**39,092**	**45,842**	**52,367**	**58,259**	**63,209**	**67,201**
As % of Sales										
Non-Current Provisions	7%	7%	6%	6%	5%	5%	5%	5%	5%	5%
Other Current Provisions	8%	8%	7%	7%	7%	6%	6%	6%	5%	5%
Contract Liabilities	38%	37%	35%	34%	32%	31%	30%	29%	28%	27%
Trade Payables	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%

Source: Own Table

Appendix XI: Historical Cash Flow Statement

Table 30: Historical Cash Flow Statement (2019 - 2024)

In € Millions	2019	2020	2021	2022	2023	2024
Net Income	354	1	332	540	586	808
Depreciation & Amortization	279	557	254	249	308	403
Changes in Provisions	23	88	-51	9	29	135
(Gains)/Losses on Asset Disposals	0	-6	0	5	-59	103
Equity-Method Income and Dividends Received	-20	11	15	-15	25	31
Other Non-Cash Adjustments	-65	-79	118	-107	71	-167
Cash Flow before NWC Change	**571**	**572**	**668**	**681**	**960**	**1,313**
Changes in Working Capital	31	-119	22	-507	-217	407
Net Cash from Operating Activities	**602**	**453**	**690**	**174**	**743**	**1,720**
Capex (PPE, Intangibles, Investment Property)	-288	-237	-271	-349	-398	-732
Government Grants and Asset Disposals	7	20	3	18	2	43
Net Acquisitions/Disposals (Subsidiaries & Investments)	28	29	-34	-203	-909	-484
Securities Held for Trade	0	0	-160	0	130	0
Net Cash from Investing Activities	**-253**	**-188**	**-462**	**-534**	**-1175**	**-1173**
Increase in Shares in Consolidated Subsidiaries	-136	0	0	1	21	22
Dividends Paid	-90	-104	-87	-143	-187	-248
Net Debt Issued (Borrowings – Repayments)	72	-43	-109	17	-78	20
Other	-4	-1	-5	-6	-3	-28
Convertible Bond Issuance (Net)	0	0	0	0	993	0
Net Cash from Financing Activities	**-158**	**-148**	**-201**	**-131**	**746**	**-234**
Change in Cash	191	117	27	-491	314	313

Source: Refinitiv - Own Table

Appendix XII: Explanatory Notes to the Forecasted Financial Statements

Pension Provisions: Pension provisions are projected using the average of the forecasted FTE growth rate and salary per FTE growth rate. This reflects the two key operational drivers of pension obligations: workforce size (i.e., the number of beneficiaries) and wage levels (benefits typically scale with final or average salaries). By averaging these growth rates, the model offers a straightforward and transparent approach to linking business expansion and personnel cost dynamics to future pension liabilities.

This approach is a simplification of full actuarial models, which incorporate additional factors such as discount rates, plan asset returns, mortality, and regulatory changes. As Damodaran stresses, pension liabilities should primarily be treated as a form of debt, heavily influenced by discount rates; scaling provisions with business variables risks overstating obligations if defined benefit schemes do not cover new employees (Damodaran, 2014). Still, practitioners note that incorporating pension forecasts into long-term corporate valuation models can enhance transparency (Cai, 2020). Accordingly, this method should be seen as an approximation, valid for operational linkage but limited in its ability to capture actuarial volatility.

Other Non-Current Provisions: Other non-current provisions are projected to grow in nominal terms from €285 million in 2024 to €1,156 million by 2034, but to decline as a percentage of sales from 2.92% to 2.00%. These provisions historically include buffers for variable remuneration, environmental risks, structural measures, and contract-related obligations, many of which are contingent or reversible (Rheinmetall AG., 2025a).Their volatility, evident in substantial utilization (€347 million) and reversal (€69 million) in 2024, suggests a limited direct correlation with revenue growth. Instead, the forecast assumes that as Rheinmetall scales its operations and improves risk management systems, the need for relative provisioning will diminish. Additionally, no major litigation events, environmental liabilities, or restructuring charges are anticipated in the projection horizon. As such, the provisions are modeled as a gradually declining share of sales, in line with the company's historical average (≈3%) and a long-term target of 2.0%, which is consistent with best practice assumptions in long-term DCF modeling for industrials with improving operational maturity (PwC, 2023; KPMG, 2021).

Other Current Provisions: Other current provisions include variable compensation, unused vacation and overtime, offset obligations, and other short-term operational risks, which were forecast to increase in nominal terms but decline materially as a percentage of sales, from 8.28% in 2024 to 5% by 2034. This reflects economies of scale and greater stability in contract execution and HR cost planning. While items such as performance bonuses and offset obligations (e.g., €156 and €169 million, respectively, in 2024) are expected to grow in line with business volume, their relative weight is anticipated to decline as Rheinmetall's operating model matures and large defense programs become more routinized.

Financial Assets: Both investment property and investments accounted for using the equity method were forecasted using a 5-year rolling average, in line with the historical volatility of these items and their non-core, ancillary nature in Rheinmetall's balance sheet. Investment property remains stable and relatively immaterial to the group's operations, reflecting limited strategic intent to expand or divest such holdings. Similarly, equity-method investments (primarily joint ventures and minority stakes) do not exhibit consistent growth patterns. They are not central to Rheinmetall's expansion strategy, which is focused on organic growth and defense infrastructure. From an academic perspective, using historical averages for non-operating or irregular assets is widely accepted, particularly when future developments are uncertain and when these items are not key value drivers (Damodaran, 2012; Koller et al., 2020). The rolling average approach strikes a balance between realism and simplicity, avoiding overfitting forecasts to short-term fluctuations that are unlikely to persist over the valuation horizon.

Deferred Tax Assets and Liabilities: Deferred tax assets (DTAs) and liabilities (DTLs) are modeled in line with best-practice guidance from Koller et al. (2020) and Damodaran (2014). To ensure transparency and avoid distortions in cash flow forecasts, deferred tax balances are held constant for the first three forecast years, capturing ongoing expansion and new temporary differences from investment and provisioning. Thereafter, balances are assumed to decline linearly over the remaining explicit forecast horizon, reflecting the gradual reversal of temporary timing differences. Annual reversals are recognized as deferred tax expense in the income statement, ensuring consistency between the balance sheet and profit and loss forecast. By the end of the projection period, deferred tax balances are substantially reduced, consistent with academic and professional practice for steady-state financials. This approach maintains the model's parsimony

and reliability, avoiding undue complexity while ensuring that deferred taxes do not distort the terminal value.

Other Assets: The current portion of other assets is projected to increase from slightly below average levels to a historical average of 4.9% of revenue by 2034. The non-current portion is expected to decline gradually from its currently elevated levels to a historical average of 4.7%. Based on a review of historical disclosures, the composition of "other assets" has remained relatively stable, allowing for the defensible assumption that approximately 60% of the balance represents operational items. These operational components fluctuate with the operating cycle, influence short-term liquidity, and therefore justifiably scale with sales. For instance, derivative positions used for FX hedging are classified as operational, as they serve Rheinmetall's day-to-day business and relate to sales exposure. By contrast, non-operational elements, such as tax-related receivables, long-term prepaid insurance, and one-time settlements, are excluded from Net Working Capital (NWC), as they do not systematically vary with revenues and have little bearing on recurring cash flows.

This selective inclusion of operational items is consistent with valuation best practices (Koller et al., 2020; Damodaran, 2014). It ensures that only the recurring, sales-driven components of other assets are incorporated into the NWC adjustment. In contrast, long-dated balances such as finance lease receivables, bonds, or net defined benefit plan assets are excluded. Consequently, the free cash flow calculation captures the actual funds tied up or released by the firm's core operations, while avoiding distortion from items unrelated to short-term operating liquidity. This treatment reflects established valuation practice by clearly separating operating working capital dynamics from long-term or non-operational assets.

Other Liabilities: Other current liabilities are projected as a percentage of sales, declining from 3.4% in the base year to a long-term target of 1.5% by 2034, reflecting the expected normalization of temporarily elevated balances as Rheinmetall transitions from a high-growth phase to steady-state operations. Other non-current liabilities are forecast to remain a stable proportion of non-current provisions, gradually declining from 7.1% in 2024 to a historical average of 6.4% by 2034, consistent with the structural link between long-term provisions and related obligations, such as deferred government grants and long-dated derivatives. A review of historical disclosures reveals that approximately 75% of the overall balance of other liabilities is operational in nature, primarily comprising tax payables, social security obligations, and derivatives used for hedging, and

therefore included in the calculation of Free Cash Flow to the Firm (FCFF). The remaining 25%, stemming from financing-related or non-core items, is excluded from Net Working Capital to preserve a clear distinction between operating and financing flows. This treatment is consistent with established valuation practice, ensuring that only liabilities directly tied to short-term operating cycles are factored into reinvestment needs (Damodaran, 2014; Koller et al., 2020). Long-term contractual items are modeled transparently but do not distort free cash flow forecasts.

Share Capital and Capital Reserves: In March 2025, Rheinmetall executed a capital increase, issuing approximately 3 million new shares to institutional investors in exchange for gross proceeds of €345 million. As a result, the company's share capital increased from €112 million to €115 million, reflecting the nominal value of the newly issued shares. Meanwhile, the capital reserves rose by €342 million due to the premium over par. This capital increase was conducted to support the firm's ambitious growth strategy and strengthen its financial position. Given that such equity issuances are typically rare and strategic, share capital is held constant in the forecast beyond 2025, consistent with standard valuation practice and the assumption of no further dilutive events. This treatment aligns with academic valuation approaches, which emphasize maintaining a stable equity structure unless further capital actions are explicitly planned (Damodaran, 2012). Treasury shares are set to zero in the forecast period, reflecting the assumption that the company will not actively repurchase shares going forward, in line with its recent focus on expansion and capital deployment toward growth initiatives.

Minority Interest (BS): Minority interests (non-controlling interests) are represented as a fixed 10% of total equity, consistent with the most recent financial year. This reflects Rheinmetall's current ownership structure, in which several subsidiaries, particularly those operating in international markets, continue to involve minority shareholders. Historical disclosures indicate that minority interests have been around 9% to 10% of total equity, suggesting that the current level is not a temporary anomaly. Maintaining the ratio constant avoids speculative assumptions about future acquisitions or buyouts, while still capturing the economic reality that minority interests represent a recurring feature of Rheinmetall's consolidated reporting. In accordance with valuation best practices, this approach ensures transparency and sustainability in the long-term projection, while preventing distortions that could arise from arbitrarily phasing out the balance (Damodaran, 2012; Koller et al., 2020).

Assets Held for Sale and Associated Liabilities: As of fiscal year 2024, Rheinmetall completed the divestment of its non-core Pistons business, which had been classified as held for sale since May 2021. The sale encompassed all relevant production sites and investments, including Kolbenschmidt Huayu Piston Co. Ltd., and was finalized on April 15, 2024. The transaction resulted in the full deconsolidation of associated assets and liabilities, resulting in a net deconsolidation loss of €75 million, which was recognized in earnings from discontinued operations. Since the divestiture is complete and no further disposal groups have been identified, both assets held for sale and liabilities associated are set to zero throughout the forecast period. Since Rheinmetall did not hold any assets for sale in 2024, no additional cash inflow is recorded. This treatment aligns with standard accounting practices under IFRS 5 (International Accounting Standards Board, 2023). It reflects Rheinmetall's strategic transformation into a focused defense technology group with no indication of further discontinued operations or material asset disposals in the planning horizon (Rheinmetall AG., 2025a).

Income Tax Liabilities: To forecast income tax liabilities, the historical relationship between these liabilities and current tax expense was analyzed. The ratio has remained between 9 % and 13% in the most recent years. I forecasted the expected tax liabilities based on 10% of the current tax expense, which aligns with the firm's recent history and reflects constant tax cash flow management. This approach is grounded in best practice, where tax liabilities are forecasted based on their link to taxable income or tax expense, ensuring consistency with the broader structure of the financial model.

Appendix XIII: Adjusted Present Value (APV) Model

Rheinmetall is rated Baa1 (stable), implying a 5-year cumulative default probability of 1.6–2.3% (annualized ~0.33–0.46%) and a 10-year cumulative PD of 3.2–4.5% (Moody's Investors Service, 2024). While defense firms generally face lower default risk and higher recovery rates due to stable government contracts and countercyclical demand (S&P Global, 2024), financial distress cannot be ruled out, particularly in the face of regulatory or geopolitical shocks. Financial distress costs are set at 15% of firm value, combining direct (~3%) and indirect (~12%) costs, consistent with academic and industry practices (Andrade & Kaplan, 1998; A. Korteweg, 2010). Under a constant capital structure, ITS grows with FCFF and is discounted at the unlevered cost of equity (r_U), with PD fixed at 0.004 (0.40%). Under permanent debt, ITS is constant and discounted at the cost of debt (r_D), with the long-run PD approximated at 0.001 (0.10%). In the hybrid APV, a PD of 0.001 is applied in the forecast horizon, reflecting Rheinmetall's modest leverage, high interest coverage, and strong backlog. The terminal value is derived directly using the WACC.

Table 31: Interest Tax Shield (ITS) Calculation

APV Model - ITS Calculation (€ Millions)												
Year	2025E	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F	TV	Sum
FCFF	513	888	1,419	2,199	3,096	4,052	4,971	5,754	6,296	6,586	118,889	
PV (FCFF)	**189**	**801**	**1,189**	**1,711**	**2,236**	**2,717**	**3,094**	**3,325**	**3,377**	**3,280**	**59,214**	**81,133**
Permanent Leverage												
Gross Debt	2,009	2,009	2,009	2,009	2,009	2,009	2,009	2,009	2,009	2,009	2,009	
Tax Rate	27%	27%	26%	26%	26%	26%	25%	25%	25%	25%	25%	
Cost of Debt	3.98%	3.98%	3.98%	3.98%	3.98%	3.98%	3.98%	3.98%	3.98%	3.98%	3.98%	
ITS - Permanent Leverage	21	21	21	21	21	20	20	20	20	20	502	
PV (ITS - Permanent Leverage)	**8**	**20**	**19**	**18**	**17**	**17**	**16**	**15**	**14**	**14**	**348**	**507**
Constant Capital Structure												
ITS - Constant Capital Structure	21	37	59	92	129	169	208	241	263	275	3341.66	
PV (ITS - Constant Capital Structure)	**8**	**35**	**54**	**81**	**109**	**137**	**162**	**180**	**190**	**191**	**2,317**	**3,465**

Source: Own Table

Levered enterprise value is derived by adding the present value of the interest tax shield and deducting the cost of financial distress. It is then adjusted via the standard EV-to-equity bridge to obtain the equity value and implied share price.

Table 32: APV - Adjusting Unlevered EV for ITS and CFD

EV to Equity Bridge	Hybrid	APV - Permanent Leverage	APV - Constant Capital Structure
Unlevered Enterprise Value (€Millions)	**81,473**	**81,133**	**81,133**
PV Interest Tax Shield	158	507	3,465
Cost of Financial Distress	94	298	1,111
Levered Enterprise Value (€Millions)	**81,537**	**81,342**	**83,487**
- Net Debt (MV - 30.06.2025)	2,784	2,784	2,784
+ Financial Assets (30.06.2025)	366	366	366
- Pension Liabilities (30.06.2025)	490	490	490
- Minority Interest (30.06.2025)	459	459	459
Equity Value (€Millions)	**78,171**	**77,975**	**80,120**
# of Shares (30.06.2025)	45.94	45.94	45.94
Stock Price (€)	**1,701**	**1,697**	**1,744**

Source: Own Table

The hybrid APV model yields a stock price of €1,701, which is almost identical to the FCFF-WACC result of €1,702. This confirms that the hybrid setup, permanent debt in the forecast horizon, and WACC in perpetuity effectively mirror the mechanics of the WACC method.

The permanent debt APV results in a slightly lower value of €1,697, reflecting the gradual decline in leverage as nominal debt remains fixed. With lower long-run tax shields and reduced financial distress risk, the net effect is a marginally lower equity value compared to WACC.

By contrast, the constant capital structure APV yields a higher stock price of €1,744, as leverage is assumed to scale with firm value from the outset. This amplifies the present value of tax shields, partially offset by higher distress costs, but overall leads to a higher equity value than in the WACC and permanent debt cases.

While these APV variants confirm theoretical expectations, their outcomes are highly dependent on assumptions regarding leverage policy, default probability, and distress costs. They are therefore best used to validate the WACC result rather than as the primary basis for the target price estimate.

Appendix XIV: Peer Company P/E and PEG Ratios (Detailed)

Company	PE (Trailing LTM)	PE 12 Month Forward	5 Year Est. Growth	PEG
Rheinmetall AG	65.55	41.90	40.50%	1.62
BAE Systems plc	24.24	21.76	11.00%	2.20
Leonardo S.p.A.	28.55	23.18	17.00%	1.68
Saab AB	52.62	41.07	29.60%	1.78
Hensoldt AG	52.21	41.24	24.40%	2.14
Thales Group	25.42	22.71	11.00%	2.31
Indra Sistemas	18.64	16.17	10.70%	1.74
General Dynamics Corp.	21.33	19.07	10.10%	2.11
Northrop Grumman Corp.	22.79	21.08	11.70%	1.95
Median	**24.83**	**22.71**		**1.95**

Source: Own Table

Appendix XV: Peer Company EBIT and EBITDA Ratios (Detailed)

	Trailing LTM		**Forward 12 Months**	
Company	EV/EBIT	EV/EBITDA	EV/EBIT	EV/EBITDA
Rheinmetall AG	43	34	29	24
BAE Systems plc	19	15	17	13
Leonardo S.p.A.	21	14	17	12
Saab AB	41	29	32	23
Hensoldt AG	34	24	28	20
Thales Group	20	14	18	14
Indra Sistemas	13	10	11	8
General Dynamics Corp.	18	16	16	14
Northrop Grumman Corp.	22	17	20	15
Median	**20.42**	**15.41**	**17.57**	**13.89**

Source: Own Table

Appendix XVI: Peer Company Price to Book and Sales Ratios (Detailed)

Company	Price / Book	Price to Sales (LTM)	Price to Sales (Forward)
Rheinmetall AG	18	7	5
BAE Systems plc	4	2	2
Leonardo S.p.A.	3	2	1
Saab AB	8	4	3
Hensoldt AG	11	4	4
Thales Group	6	2	2
Indra Sistemas	5	1	1
General Dynamics Corp.	3	2	2
Northrop Grumman Corp.	5	2	2
P25	4.12	1.62	1.53
P75	6.80	2.70	2.45
Median	**4.75**	**1.84**	**1.75**

Source: Own Table

Appendix XVII: Selected Precedent Transactions – Basis for Transaction Multiples

Table 33: Precedent Transaction Overview

Announced	Target	Acquiror	Target Advisors	Acquiror Advisors	Deal Value (€Millions)	EV/ EBIT	EV/ EBITDA	EV/ Sales
03/02/2025	Triumph Group Inc	Titan BW Acquisition Holdco	Goldman Sachs & Co	Lazard	1,992	18.4	15.4	2.3
11/07/2024	Heroux-Devtek Inc	Platinum Equity LLC	Scotiabank	BMO Capital Markets	765	22.4	13.9	2.0
19/01/2024	Kaman Corp	Ovation Parent Inc	JP Morgan Securities LLC	Morgan Stanley & Co LLC	1,221	33.8	17.5	2.4
18/12/2022	Aerojet Rocketdyne Holdings Inc	L3Harris Technologies Inc	Evercore Partners|Citi	Barclays Capital Goldman Sachs & Co	4,543	19.4	15.5	2.1
18/10/2022	Lockheed Martin Corp	Lockheed Martin Corp	n.a.	n.a.	4,066	15.3	13.2	2.0
04/08/2021	Industria de Turbo Propulsores SA	Investor Group	Lazard|Goldman Sachs & Co	Rothschild & Co	1,800	40.8	23.7	3.0
02/08/2021	Meggitt PLC	Parker Hannifin Corp	Rothschild & Co. Morgan Stanley &Co.	Citigroup Global Markets Ltd	7,321	19.6	12.8	4.9
21/06/2021	Raven Industries Inc	CNH Industrial NV	JP Morgan Securities LLC	Barclays PLC, Goldman Sachs & Co	1,807	104.4	55.4	5.9

Source: Own Table

The table lists precedent M&A transactions in the aerospace and defense sector that were used to derive transaction multiples for Rheinmetall's relative valuation cross-check. To ensure relevance and comparability, only deals from the past five years were included, with a minimum deal value of €500 million, a completed status, and a target company operating primarily in the defense industry. This filtering excludes smaller transactions, non-defense targets, and announced but not closed deals, which could bias multiples due to illiquidity, different risk profiles, or incomplete information.

The resulting set captures large-scale, strategic acquisitions in the sector, where valuations typically embed control premiums and synergies not reflected in trading multiples. By benchmarking Rheinmetall against this sample, the analysis highlights how its current market valuation compares not only to listed peers but also to the pricing of actual transactions executed under similar industry dynamics.

Appendix XVIII: Steady-State Multiple Estimation (Mean-Reversion Approach)

Table 34: Historical Industry Multiples

EV/EBIT

Date	Rheinmetall	BAE Systems	Leonardo	Saab	Hensoldt	Thales	Indra Sistemas	General Dynamics	Northrop Grumman
15.08.2016	7.79	10.00	7.51	13.62		10.44	8.62	11.32	13.80
15.08.2017	8.58	9.86	9.62	14.11		10.62	8.58	14.30	14.88
15.08.2018	8.69	10.31	8.11	14.48		12.14	7.13	14.38	16.85
15.08.2019	8.95	9.15	7.30	10.85		12.23	7.18	13.40	18.19
15.08.2020	9.79	9.79	6.91	10.24		10.53	9.00	12.05	16.03
15.08.2021	5.84	9.55	6.27	10.14	10.44	10.15	7.80	15.00	17.11
15.08.2022	9.10	11.66	6.56	12.65	11.05	13.06	5.19	15.89	21.41
15.08.2023	10.40	11.96	7.93	15.80	11.82	13.97	7.03	14.02	17.47
15.08.2024	14.24	14.37	11.13	18.96	13.37	13.27	6.68	15.99	18.81
15.08.2025	29.58	17.21	17.68	33.43	28.96	17.18	10.69	16.87	20.33
Average	11.30	11.39	8.90	15.43	15.13	12.36	7.79	14.32	17.49
Median of Averages	**13.34**								

EV/EBITDA

Date	Rheinmetall	BAE Systems	Leonardo	Saab	Hensoldt	Thales	Indra Sistemas	General Dynamics	Northrop Grumman
15.08.2016	5.30	9.46	6.46	8.19		8.75		9.52	12.81
15.08.2017	6.35	13.76	8.39	15.47		9.90	9.46	14.20	13.07
15.08.2018	7.10	15.86	8.35	15.68		11.59	6.42	14.36	12.47
15.08.2019	6.21	9.66	7.43	11.89		12.91	4.69	12.80	12.13
15.08.2020	9.98	8.40	6.52	6.93		9.17	10.81	10.08	14.29
15.08.2021	5.20	6.65	7.99	8.39	11.64	10.07	8.46	12.19	8.77
15.08.2022	12.44	11.33	7.31	11.13	12.04	10.74	5.21	13.62	9.84
15.08.2023	11.65	9.58	6.07	11.60	13.24	11.47	5.20	12.71	10.92
15.08.2024	15.78	13.05	8.50	17.85	16.61	14.12	7.27	15.88	16.90
15.08.2025	44.95	15.72	13.94	28.18	38.42	20.29	9.74	13.72	12.52
Average	12.50	11.35	8.10	13.53	18.39	11.90	7.47	12.91	12.37
Median of Averages	**12.14**								

Source: Own Table

The tables show the estimation of steady-state multiples, assuming mean reversion to a long-term average, using a 10-year window.

Appendix XIX: Discrete Probability Distribution (Monte Carlo Simulation)

Table 35: Discrete Probability Distribution (Monte Carlo Simulation)

Net Debt/Equity			Beta		
Cumulative Probability	**Option**	**Likelihood**	**Cumulative Probability**	**Option**	**Likelihood**
0	0.00	20%	0	0.59	15%
20%	0.04	50%	15%	0.74	20%
70%	0.10	15%	35%	0.89	40%
85%	0.20	10%	75%	1.04	15%
95%	0.30	5%	90%	1.19	10%

Source: Own Table

The table shows the discrete probability distributions applied to capital structure (Net Debt/Equity) and systematic risk (beta) in the Monte Carlo simulation. Scenarios reflect Rheinmetall's conservative financing and risk profile: the base case (D/E ≈ 4%, β ≈ 0.89) carries the highest weight, while extreme outcomes, such as net cash or materially higher leverage and risk, are assigned only limited probabilities. This setup acknowledges Rheinmetall's strong free cash flow, which makes further deleveraging feasible, and the possibility of temporary risk spikes from geopolitical or market shocks. However, I consider a progression toward a lower beta more likely than a sustained increase, as business normalizes and government-backed contracts reduce systematic risk.

I deliberately use discrete scenarios rather than random distributions because these variables are shaped by management policy choices and structural industry factors rather than pure statistical volatility. A discrete setup ensures consistency with qualitative judgment and provides more realistic bounds for Rheinmetall's valuation.

Appendix XX: Valuation Summary

Share Price (as of 15.08.2025)	€ 1,609
Share Price (Average 15.06.- 15.08.2025)	€ 1,744
Median Analyst Target	€ 1,985

Implied Share Price			
	Bear Case	**Base Case**	**Bull Case**
Discounted Cash Flow Analysis			
WACC (TV Growth)	€ 1,413	€ 1,702	€ 2,119
Upside / Downside [15.08.2025]	-12.2%	5.8%	31.7%
Upside / Downside [3 Month Average]	-19.0%	-2.4%	21.5%
WACC (Exit Multiple)	€ 1,688	€ 1,800	€ 1,926
Upside / Downside [15.08.2025]	4.9%	11.9%	19.7%
Upside / Downside [3 Month Average]	-3.2%	3.2%	10.4%
WACC (Monte Carlo)	€ 1,543	€ 1,787	€ 2,125
Upside / Downside [15.08.2025]	-4.1%	11.1%	32.1%
Upside / Downside [3 Month Average]	-11.5%	2.5%	21.9%
WACC (Average)	€ 1,548	**€ 1,763**	€ 2,057
Upside / Downside [15.08.2025]	-3.8%	9.6%	27.8%
Upside / Downside [3 Month Average]	-11.2%	1.1%	17.9%
APV Average (No Scenario Analysis)	n.a.	€ 1,714	n.a.
Upside / Downside [15.08.2025]		6.5%	
Upside / Downside [3 Month Average]		-1.7%	
Relative Valuation			
Comparable Company Analysis	€ 418	€ 606	€ 707
Upside / Downside [15.08.2025]	-74.0%	-62.4%	-56.1%
Upside / Downside [3 Month Average]	-76.0%	-65.3%	-59.5%
Comparable Transaction Analysis	€ 554	€ 679	€ 729
Upside / Downside [15.08.2025]	-65.6%	-57.8%	-54.7%
Upside / Downside [3 Month Average]	-68.2%	-61.1%	-58.2%
Price Target as of 15.08.2025	**€ 1,763**	→	**Hold**

Source: Own Table

The table summarizes the valuation approaches used to estimate Rheinmetall's equity value. Bear and bull cases are derived from the sensitivity analysis and correspond to the 25th and 75th percentiles, with the upside and downside shown relative to both the current share price (as of 15.08.2025) and the three-month average. The APV method is included as a cross-check. At the same time, relative valuation provides context on Rheinmetall's premium trading position but is excluded from the final target due to weak peer comparability. The resulting price target of €1,763 is based on the average of the DCF models, which use the WACC as the discount rate. This implies a 9.6% upside, slightly below the 10–15% threshold generally required for a Buy recommendation, and also below the median analyst target of €1,985. Accordingly, I issue a Hold rating.