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Equity Valuation: Enel SpA

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Resumo

A Enel SpA, uma figura proeminente no sector da energia, tem demonstrado consistentemente a sua proeza como líder global, deixando uma marca significativa no panorama energético desde a sua criação, em 1962. A perspicácia estratégica da empresa e a sua inabalável resiliência solidificaram a sua posição como uma força influente no domínio da energia.

A essência desta tese engloba uma exploração abrangente da avaliação das ações da Enel, aprofundando o tecido financeiro da empresa. Com um enfoque principal no modelo de Fluxo de Caixa Descontado (DCF), a investigação procura prever os futuros fluxos de caixa da Enel, considerando meticulosamente aspetos como as projeções de rendimentos, os gastos operacionais e muitos outros. Esse exame minucioso tem como objetivo fornecer uma compreensão diferenciada do valor potencial da empresa.

Para além de utilizar o modelo DCF, este estudo irá expor várias metodologias de avaliação, destacando a Avaliação Relativa utilizando o método dos múltiplos. Através desta abordagem multifacetada, a pesquisa compromete-se a fornecer uma avaliação abrangente do valor intrínseco da Enel, alavancando implicações práticas e referências do sector para facilitar uma avaliação robusta.

A avaliação pelo método dos fluxos de caixa descontados destacou o potencial da Enel para alcançar um crescimento sólido, principalmente pela sua estratégia de expansão em energias renováveis e descarbonização. Isso sugere que a empresa pode estar subvalorizada em relação ao seu valor de mercado atual. A análise baseada em múltiplos complementa essa visão, ao evidenciar que os principais indicadores financeiros da Enel apresentam uma performance favorável em comparação com outros players do setor energético.

Os resultados das duas abordagens de avaliação utilizadas apontam para uma possível subvalorização, com estimativas que variam entre 9,2% e 75,2%, de acordo com o modelo de fluxos de caixa descontados e o método de avaliação por múltiplos, respetivamente. Com base nessas análises, recomenda-se a compra das ações.

Palavras-Chave: Enel S.p.A.; Avaliação; Fluxos de Caixa Descontados; Avaliação dos Múltiplos.

Classificação JEL: G30, G32

Abstract

Enel SpA, a prominent figure in the energy sector, has consistently demonstrated its prowess as a global leader, leaving a significant mark on the energy landscape since its creation in 1962. The company's strategic acumen and unwavering resilience have solidified its position as an influential force in the energy field.

The essence of this thesis encompasses a comprehensive exploration of Enel's stock valuation, delving into the financial fabric of the company. With a primary focus on the Discounted Cash Flow (DCF) model, the research seeks to forecast Enel's future cash flows, meticulously considering aspects such as revenue projections, operating costs and many others. This scrutiny aims to provide a nuanced understanding of the company's potential value.

In addition to using the DCF model, this study will expose various valuation methodologies, highlighting Relative Valuation using the method of multiples. Through this multi-faceted approach, the research undertakes to provide a comprehensive assessment of Enel's intrinsic value, leveraging practical implications and industry benchmarks to facilitate a robust valuation.

The discounted cash flow valuation highlighted Enel's potential to achieve solid growth, mainly due to its strategy of expanding into renewable energies and decarbonization. This suggests that the company may be undervalued relative to its current market value. The multiples-based analysis complements this view by showing that Enel's main financial indicators perform favorably compared to other players in the energy sector.

The results of the two valuation approaches used point to a possible undervaluation, with estimates ranging from 9.2% to 75.2%, according to the discounted cash flow model and the multiples valuation method, respectively. Based on these analyses, it is recommended to buy the shares.

Keywords: Enel S.p.A.; Equity Valuation; Discounted Cash Flow; Relative Valuation.

JEL Classification: G30, G32

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Introduction

In recent years, the field of equity valuation has gained significant attention due to its pivotal role in guiding investment decisions and assessing the financial health of companies. This thesis aims to provide a comprehensive analysis of the equity valuation as of the 31st of December of 2023 of Enel, a leading multinational energy company. By employing various valuation methodologies and considering both qualitative and quantitative factors, this study seeks to determine the intrinsic value of Enel's shares.

Enel, founded in 1962, is one of the largest integrated electricity and gas operators in the world, serving over 74 million customers across more than 30 countries. With its diverse portfolio of generation assets, transmission and distribution networks, and a growing renewable energy segment, Enel has established itself as a dominant player in the energy sector.

The significance of equity valuation lies in its ability to assess the fair value of a company's shares, helping investors make informed investment decisions. An accurate equity valuation entails a thorough analysis of a company's financial statements, market position, industry dynamics, and macroeconomic factors. This process involves estimating future cash flows, determining an appropriate discount rate, and factoring in potential risks and uncertainties.

One of the widely recognized valuation methodologies is the discounted cash flow (DCF) analysis. DCF assesses the present value of a company's expected future cash flow stream, considering the time value of money and the risk associated with the estimated cash flows. Through DCF, one can determine the intrinsic value of a company's shares by discounting the projected cash flows at an appropriate discount rate. Various factors, such as the company's growth prospects, profitability, and risk profile, are incorporated into the DCF model to generate a comprehensive valuation.

Additionally, relative valuation techniques can be employed to compare Enel with its industry peers. These methods include price-earnings (P/E) ratio, price-to-book (P/B) ratio, and enterprise value-to-EBITDA (EV/EBITDA) ratio. Relative valuation provides insights into the market's perception of a company's value, considering factors such as growth potential, financial performance, and industry trends.

To ensure the accuracy and reliability of the valuation analysis, this thesis draws upon a wide range of reputable sources. Academic literature, industry reports, and financial statements are utilized to obtain a comprehensive understanding of Enel's operations, financial performance, and the energy industry as a whole. Noteworthy sources such as the International Monetary Fund (IMF), financial databases like Refinitiv Eikon (LSEG), and industry-specific publications are referred to in order to enhance the credibility and robustness of the research findings.

In conclusion, this thesis aims to provide a comprehensive evaluation of the equity valuation of Enel, employing various methodologies and considering both qualitative and quantitative factors. By conducting a thorough analysis, drawing insights from reputable sources, and ensuring a rigorous approach, this study endeavors to shed light on the true intrinsic value of Enel's shares.

CHAPTER 1

Literature Review

The literature review holds a pivotal role within any dissertation, acting as the launchpad for the journey ahead (Denney & Tewksbury, 2013). This segment extensively analyzes the existing literature on equity valuation, yielding a comprehensive grasp of the essential definitions and concepts pertinent to the subject matter. Moreover, it delves into the pros and cons of diverse valuation methods, thereby facilitating the selection of the most apt approach for valuing Enel, while considering the company's distinctive circumstances.

According to Fernández (2001), there exist four primary methods for evaluating a company: balance sheet-based methods, income statement-based methods, mixed methods, and cash flow discounting-based methods, from which the latter are deemed the more accurate ones from a conceptual standpoint. Additionally, Fernández (2001) introduces two other methods: value creation and option methods. This discussion will predominantly focus on cash flow discounting-based methods and the income statement methods, commonly known as relative valuation.

Aligned with the viewpoint presented by Fridson and Alvarez (2022), the critical prerequisites for a robust valuation exercise revolve around ensuring consistency between data and the assumptions applied in the forecasts, as well as establishing comparability among disparate valuation methods. Adhering to these conditions equips individuals to make informed choices regarding their preferred valuation method, while taking into consideration the distinctive characteristics of the company under scrutiny.

1.1. Discounted Cash Flow Model

The DCF valuation method, as previously mentioned, is widely regarded as one of the most effective techniques for valuing companies (Damodaran, 2014). DCF provides an estimate of the intrinsic value of an investment by discounting its projected future cash flows to their present value (Penman, 2010). This approach takes not only into account the risk associated with the discounted cash flows but also the time value of money, recognizing that a dollar received today is worth more than a dollar received in the future due to its potential for earning returns.

According to Fernández (2001), this method requires the careful forecast, for each period, of each of the financial items related with the generation of cash flows corresponding to the company's operations, such as, for example, sales, costs with personnel, raw materials, administrative expenses,

loan repayments, etc.. Also, in cash flow discounting-based valuations, a suitable discount rate needs to be determined and, determining the discount rate is a crucial task that considers factors such as the associated risk and historical volatilities (Fernández, 2001).

The different types of cash flow discounting-based methods start with the mathematical expression presented in Equation (1):

$$EV = \sum_{t=1}^n \frac{CF_t}{(1+r)^t} + \frac{CF_n + TV_n}{(1+r)^n} \quad (1)$$

where,

- EV = enterprise value;
- t = time period of the respective cash flow;
- n = time period corresponding to the last explicitly forecasted cash flow;
- r = appropriate discount rate for the cash flow;
- CF_t = cash flow generated by the company in the period t;
- CF_n = cash flow generated by the company in the period n;
- TV_n = terminal value of the company

It is essential to establish a clear understanding of the distinct categories of cash flows used in the valuation process, that is, free cash flow to the firm (FCFF) and free cash flow to equity (FCFE). The FCFF method first values the entire business, including existing assets and growth assets, to calculate the Enterprise Value (EV). It then adjusts for net debt and the worth of non-operating assets to determine the Equity Value (EQV). On the other hand, the FCFE method only values the equity portion of the business. The cash flows in this method already account for debt payments and the business's reinvestment requirements, allowing the EQV to be calculated in a single step (Koller et al., 2010).

1.1.1. Free Cash Flow to the Firm

The FCFF valuation methodology focuses on estimating the cash flows available to all providers of capital, including both equity and debt holders. By discounting these cash flows back to the present value, FCFF valuation aims to assess the worth of the entire firm (Brealey et al., 2017).

According to Damodaran (2012), to calculate the FCFF (see Equation (4)), we start with the operating income before interest and taxes (EBIT) and subtract the taxes (t) due, as well as well as adjusting for non-cash items as depreciation and amortization (DA). The resulting amount represents the operating cash flow generated by the firm, from which is then subtracted the net change in working capital (WC) and the capital expenditures (CAPEX), leaving us with the FCFF.

$$FCFF = EBIT \times (1 - t) + DA - \Delta WC - CAPEX \quad (4)$$

1.1.2. Free Cash Flow to Equity

The FCFE methodology focuses specifically on the cash flows available to the equity shareholders, incorporating factors such as taxes, reinvestment needs, and debt-related expenses (Damodaran, 2009). While the FCFF measures the cash available to all stakeholders, FCFE specifically calculates the cash flows available to equity shareholders (Penman, 2010). This dissimilarity arises from the inclusion or exclusion of interest expenses and non-equity-funded investments in the calculations.

To calculate the FCFE (see Equation (3)), we must consider various components of a company's cash flows: first, we start with the net income (NI), then we subtract capital expenditures (CAPEX), which reflect investments in long-term assets, and include depreciation and amortization (DA) to account for non-cash expenses. Next, we incorporate changes in working capital, which capture fluctuations in current assets and liabilities. Finally, we must account for net debt issuance or repayment, which reveals the impact of financing activities on the firm's cash flows (Damodaran, 2009).

$$FCFE = NI - CAPEX + DA - \Delta WC - \Delta Debt \quad (3)$$

1.1.3. Discount Rate

Ever since the seminal contribution of Modigliani and Miller (1958), a key result of corporate finance theory is that a project's cash-flows should be discounted at a rate that reflects the project's risk characteristics. In a perfect capital market, the Modigliani-Miller theorem states the irrelevance of capital structure on firm value. According to Miles and Ezzell (1980), the Weighted Average Cost of Capital (WACC) captures both debt and equity costs, representing the firm's required return. Also, the WACC aligns with the time value of money, making it an apt discount rate for cash flows with varying durations. Thus, WACC's incorporation of capital structure neutrality and project dynamics justifies its use as the discount rate. To compute WACC accurately, we need to consider three key elements as outlined in Koller et al. (2010): the cost of equity, the after-tax cost of debt, and the target capital structure.

The WACC can be computed using Equation (5):

$$WACC = \frac{E}{E + D} \times K_e + \frac{D}{E + D} \times K_d \times (1 - t) \quad (5)$$

where,

- E = Market Value of Equity
- D = Market Value of Debt
- K_e = Cost of Equity
- K_d = Cost of Debt
- t = Corporate Tax Rate

The cost of equity reflects the return required by equity investors given their perceived risk associated with investing in the company. The after-tax cost of debt $[K_d \times (1 - t)]$ represents the interest rate paid on debt capital, adjusted for any tax shield benefits resulting from interest expense deductions. The target capital structure $\left[\frac{E}{E+D} \text{ and } \frac{D}{E+D}\right]$ defines the desired proportion of debt and equity financing that a company aims to maintain (Brealey et al., 2017).

1.1.4. Cost of Equity (K_e)

The cost of equity is a critical element in the company's capital structure, which significantly influences various financial decisions, including dividend policies and capital budgeting. To compute it, generally accepted norm is to use the Capital Asset Pricing Model (CAPM), as it quantifies the expected return on an investment, given its inherent market risk, represented by Beta (β) (Berk & DeMarzo, 2019). The model was first introduced in the early 1960s by Sharpe (1964), Treynor (1962), Linter (1965a, b) and Mossin (1966). The CAPM is based on the idea that not all risks should affect asset prices (Perold, 2004).

The CAPM is presented in Equation (6):

$$K_e = r_f + \beta_L \times \underbrace{(E[R_{Mkt}] - r_f)}_{\text{Market Risk Premium}} \quad (6)$$

where,

- K_e = Cost of equity
- β_L = Beta levered
- r_f = Risk-free rate
- $E[R_{Mkt}]$ = Expected market return

The market risk premium is the additional return expected by investors for holding a risky market portfolio over risk-free assets (Berk & DeMarzo, 2019). While there is no universally agreed-upon method for calculating the market risk premium, two commonly accepted approaches exist. The first, and most traditional, involves using historical return data and combining it with the current long-term government bond rate, which reflects expected inflation rates. The second approach estimates the market risk premium based on the implied relationship between a company's current stock price and its anticipated future financial performance (Fernández, 2004).

The Beta (β) parameter is a crucial metric that captures a stock's incremental risk compared to the overall stock market. It essentially measures a stock's volatility in relation to the aggregate stock market. Estimating Beta typically involves regression against a market portfolio return over a specific time period. However, this approach is not without its challenges (Damodaran, 2012). According to the author, the process of estimating Beta through regression is imprecise and comes with several limitations. The author suggests the use of an alternative approach known as Bottom-up Betas.

This method involves deriving beta estimates based on fundamental factors such as industry characteristics, operating leverage, and financial leverage, rather than relying solely on historical stock price movements

For the risk-free rate, according to Damodaran (2008), using the 10-year bond rate on all cash flows is considered a good practice, at least in mature markets. In certain circumstances, where year-specific rates vary across time, we should consider using risk-free rates that vary across time.

1.1.5. Cost of Debt (K_d)

This metric delineates the prevailing cost incurred by a firm in borrowing funds, influenced by factors such as the risk-free rate, default risk, and corporate tax rate (Koller et al., 2010). Moreover, the after-tax cost of debt, an integral part of the WACC formula, not only accommodates the value of tax shields but also mirrors the company's expenditure in procuring funds through borrowing (Koller et al., 2010).

The most straightforward way of estimating cost of debt is to compute the yield on long-term bonds, but only when they are frequently traded (Damodaran, 2012), which is also a solution recommended for investment-grade companies, debt rated as BBB or above (Koller et al., 2015). If the bond appears to have low liquidity, but it still rated, cost of debt is obtained by using the rating and respective default spread, by using the formula in Equation (7):

$$K_d = r_f + \text{Default Spread} \quad (7)$$

where,

- K_d = Cost of Debt
- r_f = Risk-free Rate

1.1.6. Terminal Value

To estimate a company's value, future cash flows are divided into two distinct periods: during and after an explicit forecast period (Koller et al., 2015). The present value of cash flows following this explicit forecast period, referred to as terminal value or continuing value, is crucial in valuation as it often constitutes a significant portion of the company's total value (Koller et al., 2015). As the explicit forecast period shortens, the influence of the terminal value on the total present value grows (Pratt, 2002).

Terminal value is calculated with the assumption of a stable growth rate that can be maintained indefinitely. This rate reflects the company's inability to sustain high growth, thereby estimating the value of cash flows beyond the explicit forecast period (Damodaran, 2012). The stable growth rate significantly influences terminal value, making the firm's value highly sensitive to this rate (Damodaran, 2012). Due to its importance, Damodaran (2012) recommends several constraints on the stable growth

rate: it should be lower than the growth rate of the economy in which the company operates, or, if the company is multinational, it should be lower than the growth rate of the global economy or the specific area of operation. Koller et al. (2010) agree and state that “the best estimate is probably the expected long-term rate of consumption growth for the industry’s products, plus inflation” (p. 216). Additionally, the growth rate must be consistent with the terms, either real or nominal, used in the rest of the valuation

The Terminal Value can be computed using Equation (8):

$$TV_n = \frac{CF_{n+1}}{r - g} \quad (8)$$

where,

- TV_n = Terminal Value of the company;
- CF_{n+1} = cash flow generated by the company in the period $n+1$;
- r = appropriate discount rate for the cash flow;
- g = constant growth rate for the cash flows after the explicit forecast period

1.2. Equity Value

Damodaran (2002) considers the Equity Value (EQV) essentially as a measure of a firm's total value from the perspective of the shareholders. It takes into account the Enterprise Value (EV), non-operating assets, and non-equity claims. The formula for computing EQV is given in Equation (9):

$$EQV = EV + (Non\ Operating\ Assets) - (Non\ Equity\ Claims) \quad (9)$$

Where Non-Operating Assets, according to Damodaran (2002), can be Cash and Near-Cash Investments, Equity or Bond Investments in Other Companies, Holdings in Other Private or Public Firms, and Assets not Generating Cash Flows. Non-Equity Claims, from Koller et al. (2010) perspective, encompass various forms of debt such as short-term and long-term debt, debt equivalents, and hybrid securities

In the end, the EQV allows us to understand the value of the firm specifically from the standpoint of the shareholders, considering both the operating and non-operating aspects along with the obligations to non-equity stakeholders. It is also important to notice that the EQV needs to be divided by the total number of shares outstanding, giving us the exact value per share instead of the overall company equity value.

1.3. Relative Valuation

Damodaran (2002) explains that the discounted cash flow valuation aims to determine asset value based on cash flow, growth, and risk, while relative valuation assesses asset value by comparing it to

similar assets in the market. Despite their ease of use, multiples can lead to misconstrued results if used incorrectly.

Fernández (2001) notes that relative valuation, often using multiples like the price-to-sales ratio or Value to EBITDA multiple, is commonly used in equity research reports and acquisition valuations. However, firms in the same industry may not always be comparable. Relative valuation involves standardizing prices into multiples of earnings, book values, or sales, and identifying similar firms, which can be challenging due to variations in risk, growth potential, and cash flows among firms.

Fernández (2001) and Damodaran (2002) attribute the popularity of relative valuation to its simplicity, requiring fewer assumptions, less data, and less in-depth analysis. However, they also warn that this approach may overlook critical variables like risk, growth, and cash flow potential, and may lead to flawed estimates if the market is overvaluing or undervaluing the comparable firms. They suggest using multiples at the secondary stage of valuation to compare and identify any disparities with the primary valuation method which can help verify and scrutinize the estimation derived from the DCF approach.

1.3.1. Multiples

Fernández (2001) calls this type of valuation as being an income-statement valuation method. He highlights the practice of ascertaining a company's worth based on its earnings, sales, or other pertinent indicators. Figure 1.1 shows the most widely used valuation methods by Morgan Stanley Dean Witter's analysts for valuing European Companies.

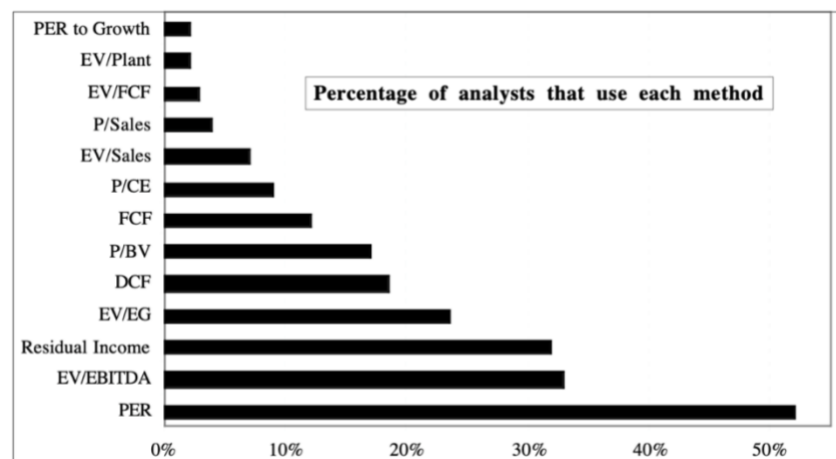


Figure 1.1. Most commonly used valuation methods | Source: Fernández (2001)

Multiple valuation methods based on the EV are linked to the company's capitalization or price, offering the advantage of being intuitive and straightforward to compute. As seen in Figure 1 and also highlighted by Koller et al. (2010), the Price to Earnings Ratio (P/E) stands as the most widely utilized multiple owing to its simplicity. However, it is susceptible to misestimation due to its limited connection to the firm's financial fundamentals. Enterprise Value (EV) multiples, as expounded by Fernández (2001), are grounded in the company's overall value. These multiples resemble EQV multiples, yet they utilize indicators reliant on the firm's financial debt alongside its market capitalization. Notably, the EV to EBITDA ratio emerges as one of the most prevalent multiples utilized by analysts. Nonetheless, akin to the P/E it overlooks pivotal factors such as changes in working capital requirements and neglects to account for capital investments.

When performing this type of relative valuation, it is crucial to select a peer group of 8 to 15 comparable firms that share similar traits with the company being valued (Koller et al., 2010). It is better to have a smaller, accurate group than to include companies with dissimilar characteristics.

Goedhart et al. (2005) suggest going through these four steps in order to complete this type of valuation:

1. Select peers with similar expectations for Return on Invested Capital (ROIC) and Growth. Selecting the appropriate companies to serve as a peer group is critically important yet highly challenging, as the chosen group should not only belong to the same industry but also exhibit similar prospects for ROIC and growth.
2. Employ forward-looking multiples. Empirical evidence and valuation principles support the concept that a company's value equals the present value of future cash flows (Koller et al., 2015). Therefore, it is recommended to use multiples based on forecasts rather than historical data.
3. Use enterprise-value multiples. Price to equity multiples have two major limitations. First, they are influenced by capital structure, allowing unlevered companies to increase the ratio by swapping debt for equity. Second, because the ratio is based on earnings, it includes several non-operating items and one-time events, which can potentially be misleading.
4. Adjust the multiple for non-operating item included in the reported EBITDA. While the exclusion of one-time non-operating items from net income enhances the utility of EBITDA in calculating multiples, adjustments are still necessary for enterprise-value-to-EBITDA multiples to account for non-operating items embedded within both enterprise value and EBITDA. These adjustments specifically address items like excess cash and operating leases, which can otherwise distort results.

Industry and Macroeconomic Overview

2.1. Energy Industry Overview

The energy industry plays a pivotal role in global economic development, with companies like Enel operating across diverse sectors and regions. Enel is a global leader in electricity generation and distribution, with significant operations in thermal energy, trading, green and renewable energy, and grid management. In the thermal energy sector, Enel utilizes fossil fuels for electricity production while transitioning towards sustainable solutions. Its green and renewable energy division is a key focus, driving growth in solar, wind, hydro, and geothermal power. The company also plays a vital role in energy trading and distribution, ensuring efficient grid management and servicing end users. Geographically, Enel has a strong presence in Italy, Spain, and across Europe, alongside growing markets in Latin America and North America. This expansive reach enables the company to leverage regional opportunities and contribute to global energy transition efforts.

2.1.1. Electricity Demand

According to Ember (n.d.), in 2023, the two biggest electricity markets for Enel, Italy and Spain, suffered from a reduction in consumption, primarily due to high temperatures and a slowdown in economic activity. As we can see on Figure 2.1, both Italy and Spain saw consecutive drop in electricity demand from 2021. The monthly electricity consumption for the first nine months of 2023 was consistently lower than the previous year, with a slight recovery in the last quarter of that failed to offset earlier losses, again reflecting mild temperatures and weak industrial activity. Contrary to this trend, Latin American countries saw an increase in electricity demand compared to right after the pandemic, supported mainly by ongoing favorable economic growth. Notable increases were seen in countries like Brazil and Colombia (+1.8%), while more modest rises were recorded in Chile and Argentina.

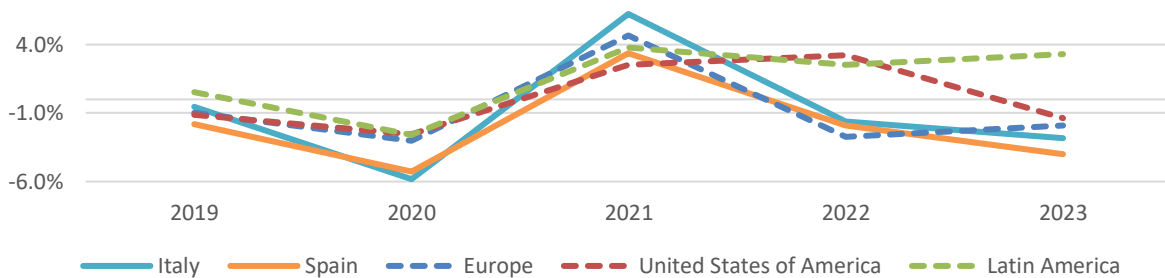


Figure 2.1 Electricity demand % change in Enel main geographies (2019 -2023)

Source: Ember Climate Data Catalogue

2.1.2. Electricity Prices

Electricity prices in Italy and Spain also dropped after 2021, with a sharp decrease in 2023 compared to 2022, reflecting the decrease in energy commodity market prices. Specifically, a significant drop in gas prices, along with an increase in renewable energy generation, led to a 58% reduction in electricity prices in Italy compared to the previous year (Enel, 2023). Spain saw a less dramatic but still substantial decrease of 48%, where prices in 2022 had risen less than in other European countries, thanks to the strong presence of renewable generation and regulatory measures introduced to limit the impact of rising gas prices. Consumer prices per kWh (kilowatt hours) also fell significantly compared to 2022, except for residential prices in Italy, which rose in the first half of the year.

2.1.3. Other Commodities

According to the company yearly report, in 2023, European gas market prices showed a strong downward trend, reflecting high storage levels and decreasing demand. On average, the TTF (Title Transfer Facility) benchmark price dropped by more than 65% compared to the previous year, due to the easing of supply risks that emerged in 2022, the year when gas flows from Russia, the main supplier to the European market, ceased. However, the gas market remained highly volatile and sensitive to upward shocks during the year, reflecting the fragile balance between supply and demand, although prices never reached the levels seen in 2022. Price volatility was moderated by achieving a high storage fill rate (above 90%) before the start of the winter season, which, combined with mild temperatures in November and December, led to a sharp reduction in gas prices in Europe in the final months of 2023, falling below €35/MWh (megawatt hour). These developments in gas prices, along with high storage levels, also drove a decrease in coal prices, which averaged \$129/ton in 2023 (-55.5% from the previous year). The dynamics of the gas market also made coal-fired generation less attractive, discouraging its consumption and promoting accumulation of the commodity. In Italy and Spain, the two primary geographies for the gas market of Enel, demand decreased by 10.1% and 8.9%, respectively, reflecting the mild temperatures during the year, increased electricity generation from renewable sources, and continued weakness in industrial production, which remains below pre-crisis levels. In Italy, gas demand decreased by 10.1% compared with 2022.

Analyzing consumption by sector, thermal generation registered a particularly large decline (-15.5%), mainly due to the replacement of gas generation with renewable generation. This is followed by distribution grids (-7.3%), where the decrease reflected mild temperatures in the first and fourth quarters.

In the first half of 2023, oil prices declined due to the normalization of supply and expectations of weak demand recovery. However, in the second half, prices surged considerably, peaking in September, reflecting the impact of additional supply cuts combined with growing demand. In the last quarter of 2023, the price trend reversed again, with Brent prices falling below \$75 a barrel. In 2023, the European average price of a barrel was \$82, 17% lower than the previous year.

In contrast to other energy commodities, CO₂ (carbon dioxide) prices in the ETS (Emissions Trading System) rose slightly in 2023, increasing by about 4% compared to the previous year. On a monthly basis, prices displayed a downward trend in the second half of the year, mainly due to low demand for allowances from both ordinary market participants and speculative operators.

Following developments in the second half of 2022, weak economic growth and the increasingly tense geopolitical context dominated metals markets in 2023, exacerbated in the final part of the year by the resurgence of conflict in the Middle East. As often happens in commodity markets, China again had a decisive impact on market balances and price trends. Following the easing of logistical issues in 2022, fears of a slowdown in growth and the crisis in the construction sector dampened demand and, therefore, prices for the Asian giant as well. As for base metals such as aluminum and copper, which are highly correlated with economic and industrial activity, the weak economic conditions caused the prices of both to perform less strongly than expected. Copper prices saw an overall decrease in the first half of 2023 before stabilizing from June onwards, recording an average price of \$8,495/ton for the year, down 3.8% compared to 2022. Aluminum fared even worse, with the price remaining weak throughout the year, closing 2023 with an average of \$2,256/ton, down 16.6% from the 2022 average.

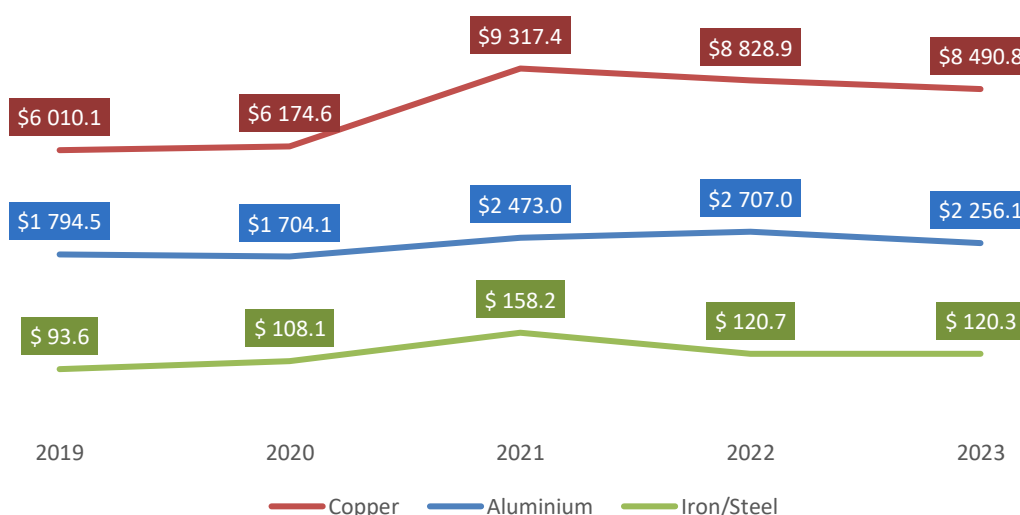


Figure 2.2. Prices of Copper, Aluminium and Iron/steel (2019 -2023, in \$/metric ton)

Source: Federal Reserve Economic Data

For metals closely linked to renewable energy technologies, such as lithium for batteries or polysilicon used in photovoltaic panels, 2023 saw price declines even larger than those registered by base metals. Lithium was adversely impacted by lower-than-expected demand for batteries and a significant expansion of supply, both domestically in China and from Australia and South America, leading to a continuous price decline throughout the year, ending at an average price of around \$36,000/ton, down nearly 50% from 2022. Polysilicon prices showed similar developments, with sharp declines beginning in December 2022 and remaining weak throughout 2023, averaging about \$16,000/ton, down about 54% from 2022 (Federal Reserve Economic Data, 2023)

2.2. Macroeconomic Overview

The global macroeconomic environment in 2023 was marked by a general slowdown in the real economy, continuing a downward trend from the previous year. Global GDP growth decelerated to 3%, down from 3.1% in 2022 and the post-pandemic surge of 6.4% in 2021. This decline reflects the cumulative effects of restrictive monetary policies adopted by central banks to counteract high inflation, weakening consumer purchasing power, and deteriorating financial and credit conditions globally. The continued conflict between Russia and Ukraine, alongside rising geopolitical tensions elsewhere, exacerbated energy and commodity price volatility. According to the IMF, global GDP growth is expected to average around 2.7% annually between 2024 and 2028, as inflationary pressures gradually ease but high interest rates weigh on investment and consumer demand (International Monetary Fund, 2023).

For Enel, these trends are particularly relevant due to its operations across multiple geographies. The following countries and regions have been selected for macroeconomic analysis because they represent key markets for the company, either as areas with substantial ongoing operations or as regions that influence Enel's future growth trajectory. The company's presence in these geographies contributes significantly to its revenues, capital expenditure, and overall strategic positioning. Understanding their macroeconomic trends is crucial for estimating future cash flows.

In the United States, the economy outperformed market expectations in the fourth quarter of 2023, with GDP expanding by 3.1% year-on-year. This lifted overall growth to 2.5% for the year, compared to 1.9% in 2022. Private consumption remained resilient despite tighter financial conditions, supported by a strong labor market and easing inflationary pressures. Looking ahead, the OECD projects that US GDP will grow at a slower pace of around 1.7% annually through 2028, as higher interest rates continue to dampen domestic demand and investment (Organisation for Economic Co-operation and Development, 2023).

In the euro area, economic conditions stagnated in 2023, with GDP contracting by 0.1% in both the third and fourth quarters, signaling a technical recession. Inflation moderated to 5.5% in the final quarter of 2023, down from the 8.4% peak in 2022, largely due to lower energy prices and weak demand. The European Central Bank forecasts a modest recovery, with growth averaging 0.8% annually through 2028, as inflationary pressures ease and external demand remains subdued (European Central Bank, 2023).

Italy saw GDP growth slow to 0.7% in 2023, down from 3.9% the previous year, as high inflation eroded private consumption and tighter financial conditions restrained investment. The OECD expects Italy's growth to remain modest, averaging 0.6% annually through 2028, reflecting the prolonged impact of tighter credit and fiscal constraints (Organisation for Economic Co-operation and Development, 2023).

Spain, by contrast, posted stronger economic performance in 2023, with GDP growing by 2.4%, driven by the services sector. Inflation averaged 3.4%, a significant reduction from the 8.3% rate in 2022, largely due to lower energy costs. For the period from 2024 to 2028, the OECD forecasts that Spain's economy will grow at an average of 1.5% annually, benefiting from a gradual recovery in domestic demand and improving external conditions (Organisation for Economic Co-operation and Development, 2023).

In Latin America, 2023 saw mixed performance across the region. In Chile, GDP growth slowed to just 0.2%, down from 2.5% in 2022, due to restrictive monetary policies and political uncertainty. However, inflation fell to 7.7%, down from 11.6% in 2022, leading to interest rate cuts by the central bank. The World Bank projects that Chile's GDP will grow at an average rate of 1.8% annually through 2028, driven by improving export demand and stabilizing inflation (World Bank, 2023).

In Colombia, GDP growth decelerated sharply to 1% in 2023, a significant drop from 7.3% in 2022, as persistent inflation and high interest rates dampened both consumption and investment. Inflation remained elevated, averaging 11.8%, prompting only a slight reduction in interest rates. Looking ahead, the IMF forecasts a moderate recovery, with GDP growth averaging 2.2% annually through 2028 (International Monetary Fund, 2023).

Peru's economy contracted by 0.5% in 2023, following 2.7% growth in 2022, due to political instability, El Niño-related climate anomalies, and high food prices. Inflation fell to 6.3% from 7.9% the previous year, enabling the central bank to cut interest rates. The OECD projects Peru's economy to recover slowly, with an average growth rate of 1.7% per year through 2028, as stability gradually returns (Organisation for Economic Co-operation and Development, 2023).

Argentina experienced a severe economic crisis in 2023, with GDP contracting by 1.2% and inflation soaring to 127.9%, driven by currency devaluations and political instability. According to the IMF and World Bank, Argentina's economy is expected to remain fragile, with minimal growth averaging 0.5% annually between 2024 and 2028, as hyperinflation and ongoing fiscal challenges persist (International Monetary Fund, 2023; World Bank, 2023).

Company Overview

3.1. Introduction

Building on the earlier sections of this thesis, this chapter takes a closer look at Enel's internal structure and performance. The focus will be on understanding how the company is organized, how it operates across different business areas, and how it performs financially.

We will begin by giving a quick company profile and history, then examining Enel's shareholder structure, explaining who owns the company and how this influences its decisions. Next, we will explore the company's main business areas, including its role in both traditional energy and renewable energy sectors. A financial analysis will follow, looking at key figures that show Enel's profitability and overall financial health. Finally, the chapter will review how Enel's stock has performed over time in the financial markets.

3.2. Company Profile and History

Enel, originally established as a public utility in 1962, is a multinational energy company and one of the world's leading integrated electricity and gas operators. Headquartered in Rome, Italy, Enel operates in over 30 countries across five continents, serving more than 70 million end users worldwide. The company was privatized in 1999, marking a significant shift in its operations and market approach.

Over the years, Enel has transformed the energy sector by expanding its activities from traditional electricity generation to include renewable energy sources, energy distribution, and innovative energy solutions. The company is known for its commitment to sustainability and innovation, striving to lead the transition to a clean energy future.

Today, Enel is mostly focused on the production and distribution of electricity and gas. It has a diversified energy portfolio that includes wind, solar, geothermal, hydroelectric, and thermal power plants. Enel's integrated business model covers the entire energy value chain, from generation to distribution and customer solutions, serving residential, commercial, and industrial markets.

Enel's corporate strategy emphasizes the development of renewable energy and the promotion of energy efficiency and electrification. In line with this strategy, the company has set ambitious targets for reducing carbon emissions and increasing the share of renewable energy in its portfolio. Enel aims to achieve total decarbonization of its energy mix by 2050.

The company's renewable energy division, Enel Green Power, is a global leader in the sector, with a capacity of more than 49 GW (Gigawatt) of renewable energy projects across various regions. Enel's efforts in developing clean energy solutions have positioned it at the forefront of the global energy transition, making significant contributions to environmental sustainability.

Enel also invests heavily in digital transformation and smart grids, enhancing the efficiency and reliability of its energy distribution networks. The company's commitment to innovation is reflected in its development of advanced technologies such as smart meters and energy management systems, which enable better energy consumption monitoring and control for customers. Enel's leadership in the energy sector is further underscored by its pioneering work in smart grid technology and electric mobility solutions. The company has established itself as a key player in the development of electric vehicle (EV) charging infrastructure, promoting the adoption of electric mobility as part of its broader sustainability goals.

Financially, Enel has shown robust performance, with consistent growth in revenue and operational results. In 2023, the company's EBITDA reached almost €22.0 billion, driven by strong performances in both the renewable energy sector and traditional energy markets. Enel continues to invest significantly in expanding its infrastructure and modernizing its energy assets, with capital expenditures totaling €12.7 billion in 2023. In terms of the number of employees, Enel ended 2023 with a total of 61,055.

Enel's commitment to sustainability is also evident in its adherence to Environmental, Social, and Governance (ESG) principles. The company has been recognized for its efforts in promoting sustainable development and has received high ratings from various ESG rating agencies. Enel has committed to the United Nations' Sustainable Development Goals (SDGs) and integrates these objectives into its business operations and strategic planning. Moreover, Enel's strategic plan for 2021-2023 focuses on six key value drivers: growth in renewable energy capacity, enhancement of customer services, development of new business models, improvement of operational efficiency, digitalization of the energy grid, and fostering a culture of innovation and sustainability within the organization.

3.3. Shareholder Structure

As of December 31, 2023, Enel SpA's fully subscribed and paid-up share capital amounted to €10,166,679,946, consisting of the same number of ordinary shares, each valued at €1.00. This share capital remained unchanged from December 31, 2022.

Following the authorization from the Shareholders' Meeting on May 10, 2023, and a subsequent Board of Directors' resolution on October 5, 2023, Enel initiated a program to purchase treasury shares to support the 2023 Long-Term Incentive (LTI) Plan for its management and subsidiaries. Through transactions conducted from October 16, 2023, as of December 31, 2023, the company held 9,262,330 treasury shares.

Based on the shareholders' register and other available data, the shareholders with more than a 3% stake in Enel's share capital as of December 31, 2023, included the Ministry for the Economy and Finance, holding approximately 23.6%, and BlackRock Inc., with approximately 5.0% stake for asset management purposes.

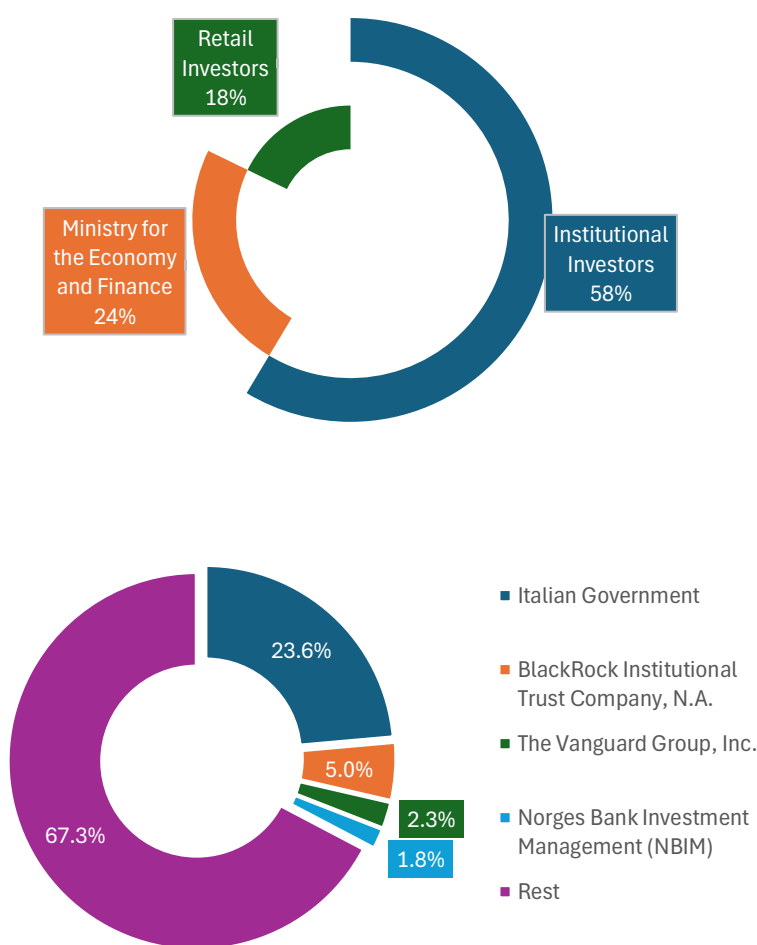


Figure 3.1 *Shareholder structure as of 31st of December of 2023* | Source: Company Report

Enel has been listed on the Euronext Milan market, managed by Borsa Italiana SpA, since 1999. Its shareholders include major international investment funds, insurance companies, pension funds, and ethical funds.

Regarding Environmental, Social, and Governance (ESG) investments, as of December 31, 2023, Socially Responsible Investors (SRIs) held approximately 17.5% of Enel's share capital, up from 14.9% at the end of 2022. Additionally, investors adhering to the Principles for Responsible Investment (PRI) accounted for 42.8% of the share capital, compared to 42.1% as of December 31, 2022.

3.4. Business Areas

In 2023, the Enel group achieved significant financial performance, generating €95,565 million in revenues across its diverse portfolio of activities. Enel operates through five business segments: thermal generation and trading, Enel green power, Enel grids, end user markets, and holding and services. Each segment plays a vital role in driving the company's mission to lead the global energy transition through innovation, sustainability, and excellence in service delivery.

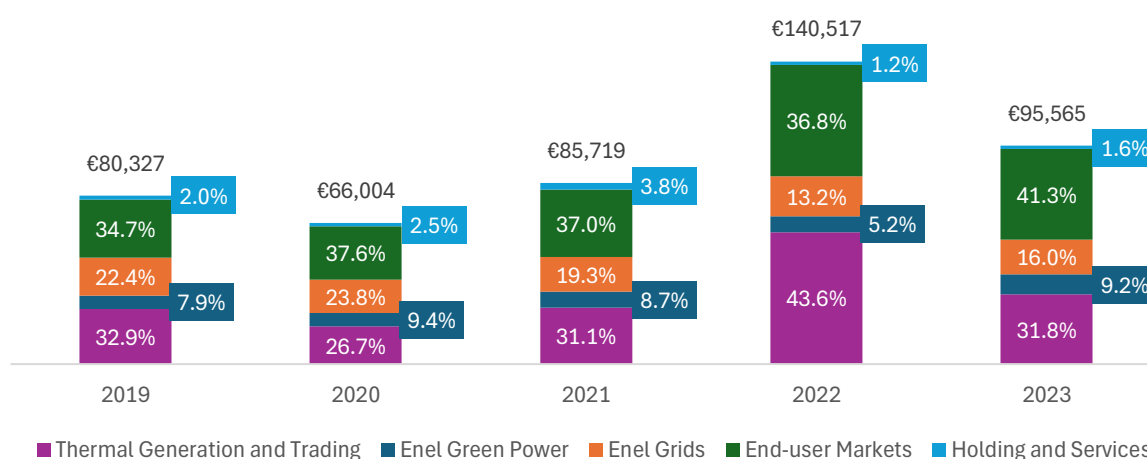


Figure 3.2. Revenues by segment (2019 – 2023, Million €, %) | Source: Company reports

3.4.1. Thermal Generation and Trading

This segment generated €40,190 million in revenues and €3,067 million in EBITDA in 2023. It encompasses the production of electricity through conventional thermal power plants and the trading of electricity and gas, primarily operating in geographies such as Italy, Iberian Peninsula and Latin America.

Enel operates extensive thermal power generation facilities, ensuring a diversified energy mix that includes coal, gas, and oil-fired power plants. Despite challenges posed by market fluctuations and regulatory changes, this segment has demonstrated resilience, supported by strategic investments and efficient operations.

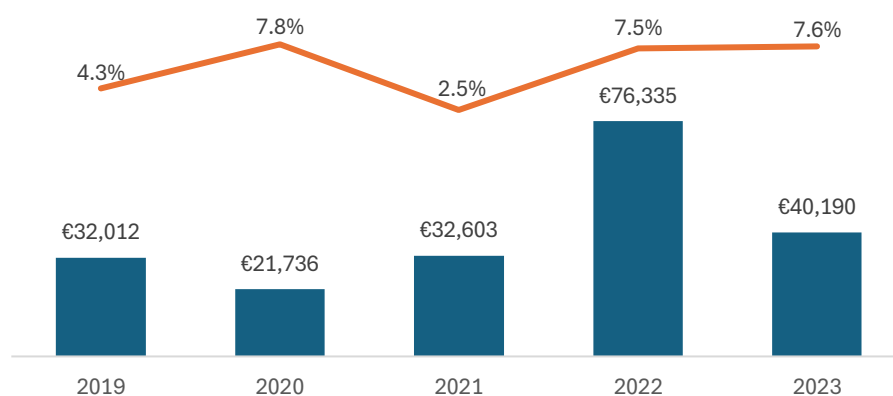


Figure 3.3. Thermal Generation and Trading revenue and EBITDA Margin (2019 -2023, Million €, %)

Source: Company reports

As seen in Figure 3.3, the revenue from 2023, when compared with 2022, reflects a decrease of €36,145 million. This decline is primarily due to a reduction in thermal generation, partly offset by increased renewable generation, especially from hydroelectric sources, and lower average prices applied to wholesale sales compared to the previous year.

3.4.2. Enel Green Power

This business segment focuses on the development, construction, and operation of renewable energy plants. In 2023, Enel Green Power generated €11,620 million in revenues and €5,178 million in EBITDA. Enel Green Power is a leader in the renewable energy market, with a presence in over 20 countries and a total net efficient installed capacity of 55.5 GW (Figure 3.4).



Figure 3.4. Geographical presence of Enel (2023) | Source: Company reports

The company continues to expand its portfolio, adding new projects and increasing capacity. The segment includes diverse renewable energy sources such as solar, wind, geothermal, and hydroelectric power. Enel Green Power has shown robust growth, driven by strong investments, strategic partnerships, and the global push towards decarbonization.

As seen in Figure Y, the revenue streams in this business area have shown significant growth year-over-year, reflecting the increasing demand for renewable energy.

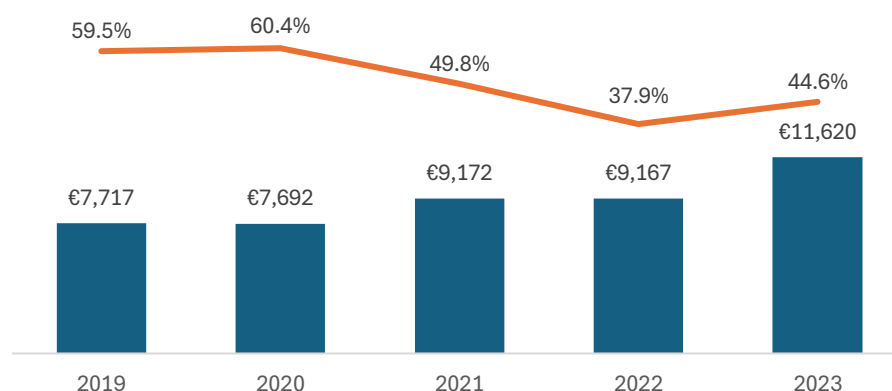


Figure 3.5. Enel Green Power revenue and EBITDA Margin (2019 -2023, Million €, %)

Source: Company reports

3.4.3. Enel Grids

This segment focuses on the distribution of electricity, including the development and maintenance of smart grids. In 2023, Enel Grids generated €20,259 million in revenues and €7,461 million in EBITDA. Enel Grids transported over 489.2 TWh (terawatt hours) in 2023, a slight decrease when compared to 2022 (-3.6%) due to three aspects:

- The sale in October 2023 of all the investments held by the Enel Group in Romania.
- The sale in December 2022 of Celg Distribuição SA - Celg-D (Enel Goiás) and of Enel Transmisión Chile SA, in Brazil and Chile, respectively.
- The decrease of 2.9% in demand for electricity in Italy.

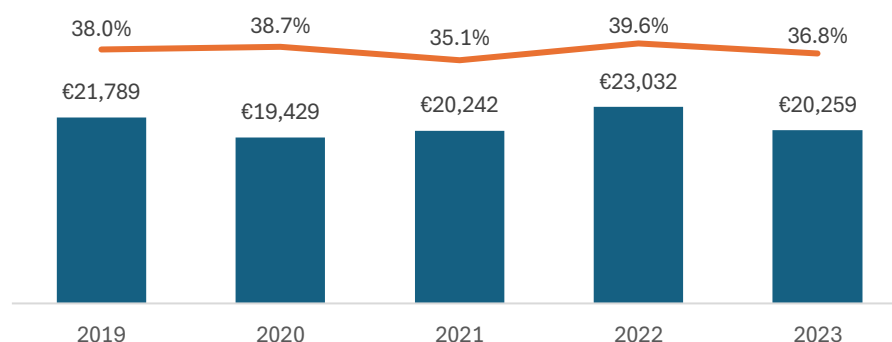


Figure 3.6. Enel Grids revenue and EBITDA Margin (2019 -2023, Million €, %)

Source: Company reports

By analyzing Figure 3.6, one can see this impact on the revenue streams. Nonetheless, revenues have been stable, and are expected to maintain an upward trend through the next years.

3.4.4. End User markets

This segment encompasses Enel's retail operations, offering a wide range of energy products and services to residential, commercial, and industrial customers, both of electricity and natural gas. End User Markets generated €51,119 million in revenues and €5,158 million euros in EBITDA in 2023. This segment primarily operates in Italy and Spain, with a very small presence in Latin America and other European countries.

Overall, they have 61.1 million retail customers, of which 24.3 million in the free market. End User Markets offers comprehensive electricity and gas solutions, including integrated home energy management systems and green energy tariffs.

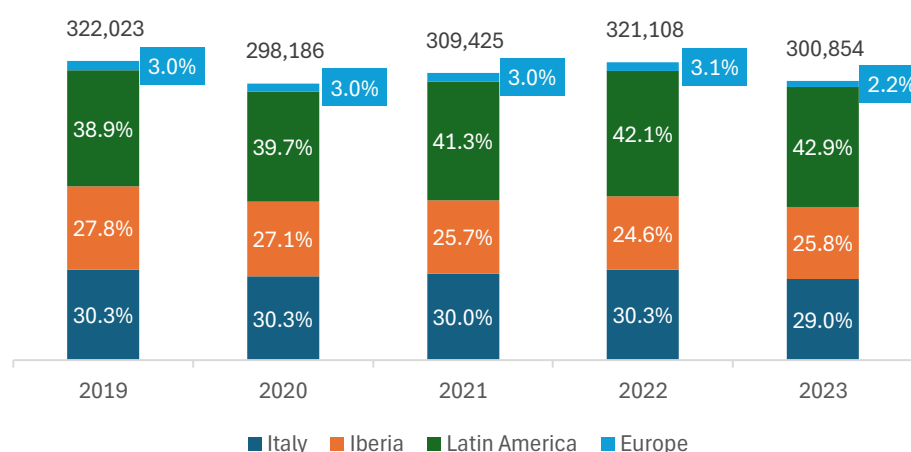


Figure 3.7. Total Electricity sold and by geography (2019 – 2023, Millions of kWh, %)

Source: Company reports

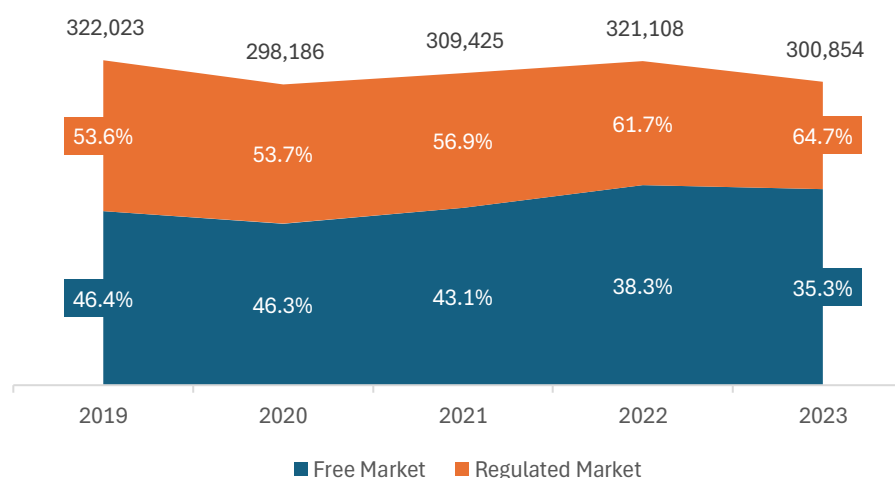


Figure 3.8. Total electricity sold by free and regulated market (2019 – 2023, Millions of kWh, %)

Source: Company reports

As seen in Figure 3.7 and Figure 3.8, the decrease in electricity sales volume in 2023 was primarily seen in the regulated market in Latin America, where sales dropped by 9.7 TWh following the divestment of Celg Distribuição SA - Celg-D (Enel Goiás) at the end of 2022. Italy also experienced a significant reduction of 6.8 TWh, attributed to the shift of customers to the free market, partly due to the anticipated phase-out of the enhanced protection market. In the free market sector, Italy and Spain saw declines of 3.1 TWh and 0.6 TWh, respectively. However, these losses were partially mitigated by increases in Brazil (+2.2 TWh) and Chile (+0.6 TWh).

3.4.5. Holding and Services

This segment includes the activities related to the central management and coordination of the Enel group, providing various services that support the other business areas. It generated €2,045 million in revenues and a negative EBITDA of €609 million in 2023. The segment operates globally, supporting operations in all primary geographies.

The Holding and Services segment provides administrative, financial, legal, and IT services, ensuring efficient operations across the entire group. It also includes strategic planning, corporate governance, and other centralized functions that support Enel's global operations.

3.5. Financial Analysis

Consistent with the data presented in the previous section, Enel's operational performance has remained stable during the course of the analysis, with the exception of 2022 (Figure 3.9).

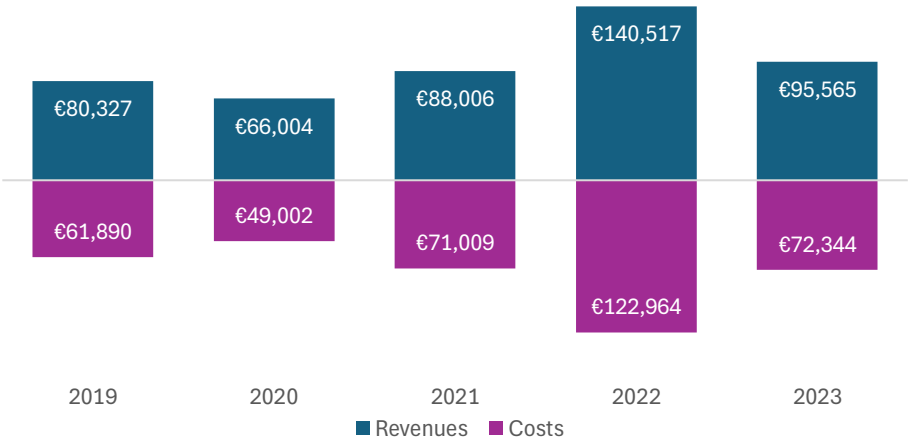


Figure 3.9. Revenues and cost (2019 – 2023, Million €) | Source: Company reports

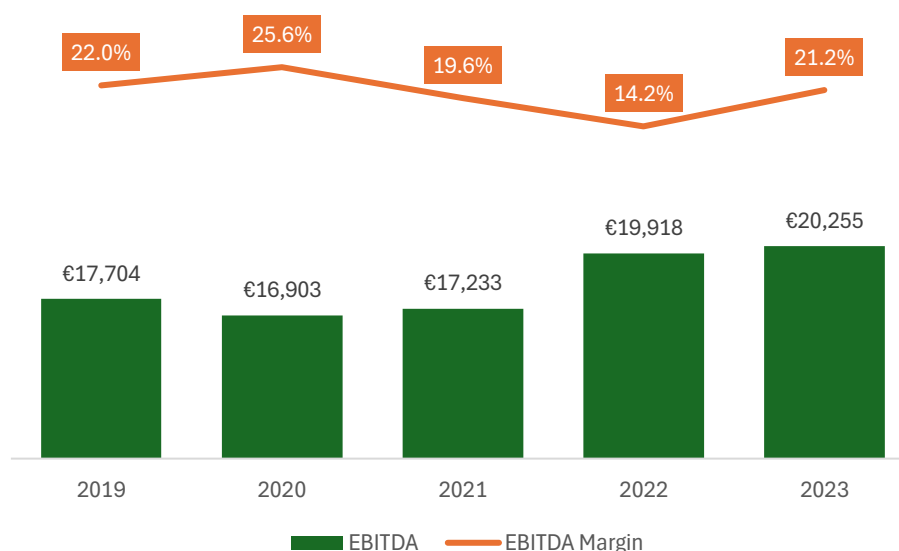


Figure 3.10. EBITDA and EBITDA Margin (2019 -2023, Million €, %) | Source: Company reports

In 2023, revenue fell by €44,952 million (32.0%) from €140,517 million in 2022. This decline is attributed to lower electricity sales volumes in both wholesale and retail markets and changes in average commodity selling prices over the two years, significantly affecting the recognition of sales contracts with physical settlement.

The revenue reduction also reflects the impact of deconsolidating several companies sold in the latter half of 2022—such as Enel Transmisión Chile, Celg Distribuição SA - Celg-D (Enel Goiás), and Fortaleza CGT in Brazil—and in early 2023, including Enel Generación Costanera and Central Dock Sud in Argentina. These effects were only partially offset by higher revenue from renewable energy generation, particularly from hydroelectric plants in Italy and Spain and wind and solar plants in Latin America.

Costs decreased by €50,620 million, primarily due to a general decline in the average prices of energy commodities and a reduction in volumes. Contributing factors included lower transport costs in Italy, attributed to reduced volumes, and in Spain, due to a change in rates. Additionally, there were lower ancillary costs in Chile's gas business due to reduced sales, decreased costs for service concession arrangements in Brazil, a reduction in CO2 allowance purchases, and lower material costs following changes in the consolidation scope.

These cost reductions were partially offset by higher expenses related to early-retirement incentives and regulatory measures linked to claw backs in Italy and Spain. There was also an increase of €515 million in costs in Spain due to an arbitration dispute with a Qatari gas supplier and also charges amounting to €363 million were recognized from the sale of Enel Generación Costanera SA, Central Dock Sud SA, and the El Chocón plant in Argentina, along with a €23 million adjustment related to the sale of Celg Distribuição SA - Celg-D (Enel Goiás).

As we can see in Figure 3.10, the EBITDA for 2023 was €20,255 million, an increase of €337 million compared to the previous year. The EBITDA margin, alongside with the increased EBITDA, grew by 7 percentage points. This increase to 21.2% is seen as the first sign of recovery since the COVID-19 pandemic.

Another key aspect to consider when evaluating a company relates to its ability of paying off short-term liabilities without having to rely on raising external capital. This provides investors with fundamental knowledge on how the revenue streams generated by the company can fulfil its outstanding obligations. The most common method of measuring liquidity is through a set of ratios, as showcased in Figure 3.11.

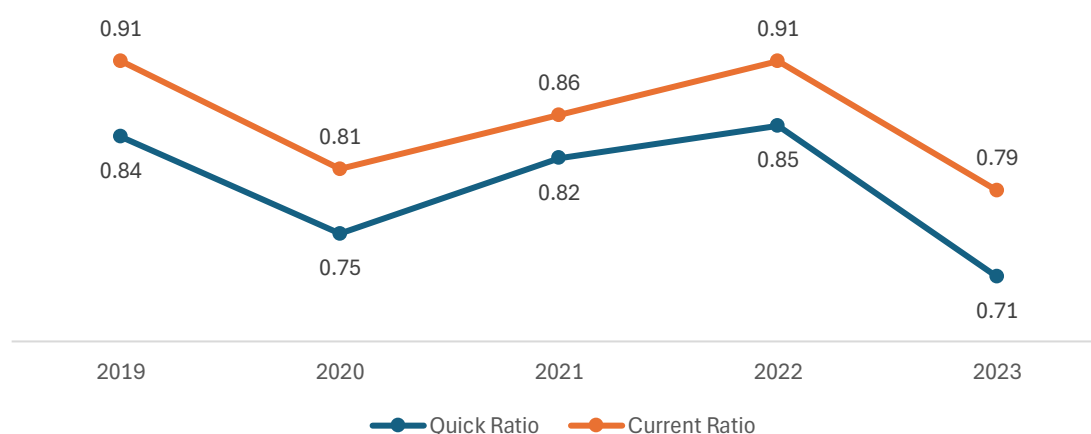


Figure 3.11. *Quick and Current Ratios (2019 – 2023)* | Source: Company reports and own calculations

A quick analysis allows to conclude that currently, and for the past 5 years, Enel does not have enough current assets in its balance sheet to cover the amount of liabilities due in the short-term, given that these ratios are always below 1.00.

The current ratio measures the ability of the firm to settle its payables and outstanding debt within a year. Although it has undergone some variations, the ratio stays relatively stable all throughout the analyzed period, with the exception of 2023, mainly due to a large decreased in the firm's current assets.

Just like the current ratio, the quick ratio experiences fluctuations on par with the current ratio, as we can see in Figure 3.11. This occurs because it also measures liquidity, but it focuses more specifically on assets that can be quickly converted into cash. Unlike the current ratio, which considers all current assets, the quick ratio only includes highly liquid assets such as cash and cash equivalents, marketable securities, and accounts receivable.

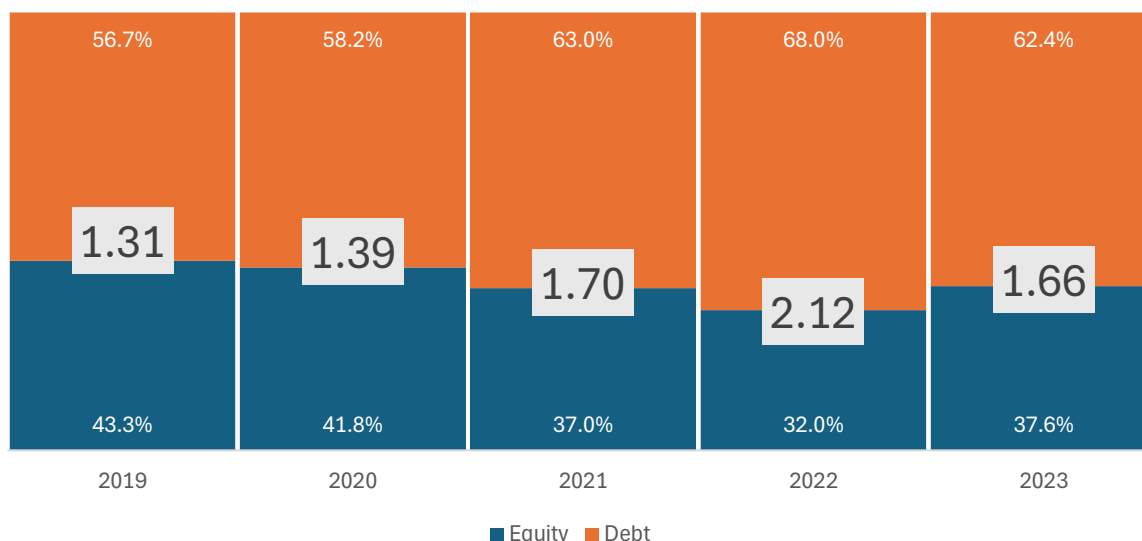


Figure 3.12. Capital structure of Enel (2019 – 2023, %)

Source: Company reports and own calculations

Regarding the capital structure, the firm has recorded a mild increase in the debt-to-equity ratio as a result of the two big increases of debt in 2021 and 2022 (Figure 3.12), caused by the following reasons:

- funding needs for investments in the period, including contract assets;
- the payment of dividends;
- transactions in non-controlling interests mainly related to the increase in the interest held in Enel Américas;
- the acquisition of ERG Hydro
- adverse exchange rate developments;
- an increase in lease liabilities;
- the payments and consolidation of debt connected with business combinations in Australia, Spain and Italy.

In 2023, Enel registered a total gross debt of €74,949 million, which translates into a decrease of €14,469 million when compared to the previous year but an increase of €13,402 million since 2019. Most of the debt taken by the company corresponds to long-term debt (approximately 94%), increasing from €57,583 million to €70,179 million during the last 5 years (an increase of 21.9%). There is also a substantial reduction of debt from 2022 to 2023 due to the substantial increase of the cost of debt.

The Equity remained relatively stable throughout the past 5 years. In 2023, the registered value of €45,109 million was 7% higher than 2022, mostly due to an increase of other reserves (€986 million due to the issuance of new bonds, €623 million due to changes in the consolidation scope related to holdings in Romania, Inversora Dock Sud and Central Dock Sud, and Enel Generación Costanera, and lastly developments in commodity prices). Additionally, the net depreciation of functional currencies used by foreign subsidiaries, particularly in Chile and the United States, against the euro (the Parent's presentation currency), contributed to this increase.

Overall, as previously mentioned, Enel has seen a slight increase in the debt-to-equity ratio, with an average of 1.20 from 2019 to 2023. Regarding future forecasts, the company states in the Strategic Plan for 2024 to 2026 that its objective is to try to reduce slightly the debt levels, but most importantly, achieve a lower cost of debt, with a target of 3.8% in the next two years.

3.6. Stock Performance

Enel shares are listed on the Borsa Italiana (the Italian Stock Exchange) under the ticker symbol [ENEL.MI], and have been actively traded since 1999 following the company's IPO. Figure 3.13 shows the performance of Enel's share price against the EURO STOXX Utilities (SX6E) and FTSE-MIB Index (FTMIB), with a base value set as of January 2019.

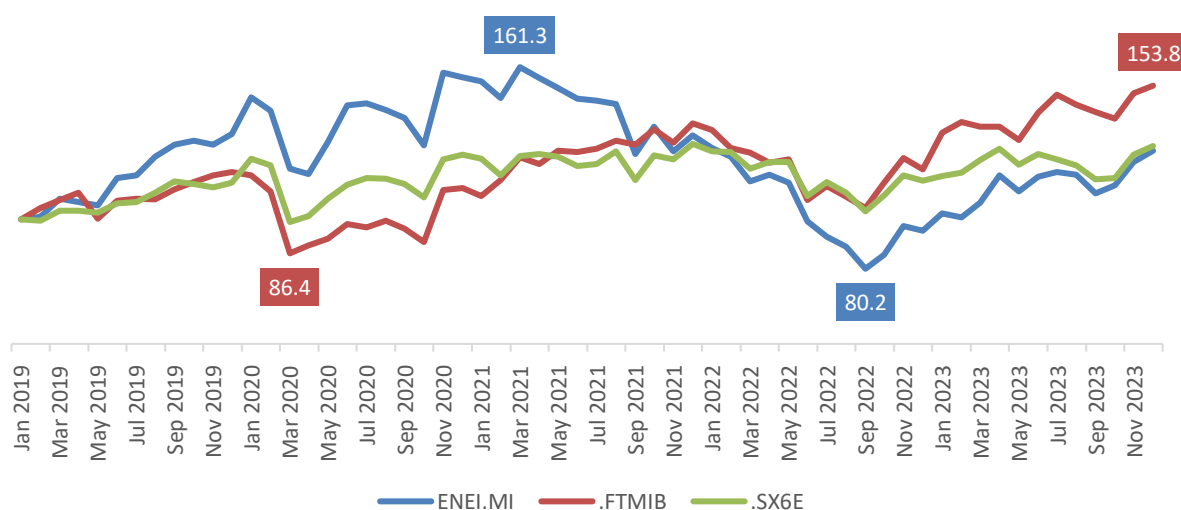


Figure 3.13. Enel share price, EURO STOXX Utilities and FTSE-MIB Index (2019 – 2023, 2019 = 100)

Source: Refinitiv Eikon (LSEG)

From 2019 to 2023, Enel's share price experienced a 27.8% growth, reflecting a price increase of €1.46. When comparing this performance to the FTSE MIB (Milano Indice di Borsa, the benchmark stock market index for the Italian national stock exchange) and the EURO STOXX Utilities Index (a sector-specific index representing the utilities sector of the Eurozone), we observe that over the last

five years, Enel shares have generally tracked the movements of both indices. However, in terms of relative performance, Enel outperformed both indices until September 2021, after which its performance fell below them. It only began to recover toward the end of 2023.

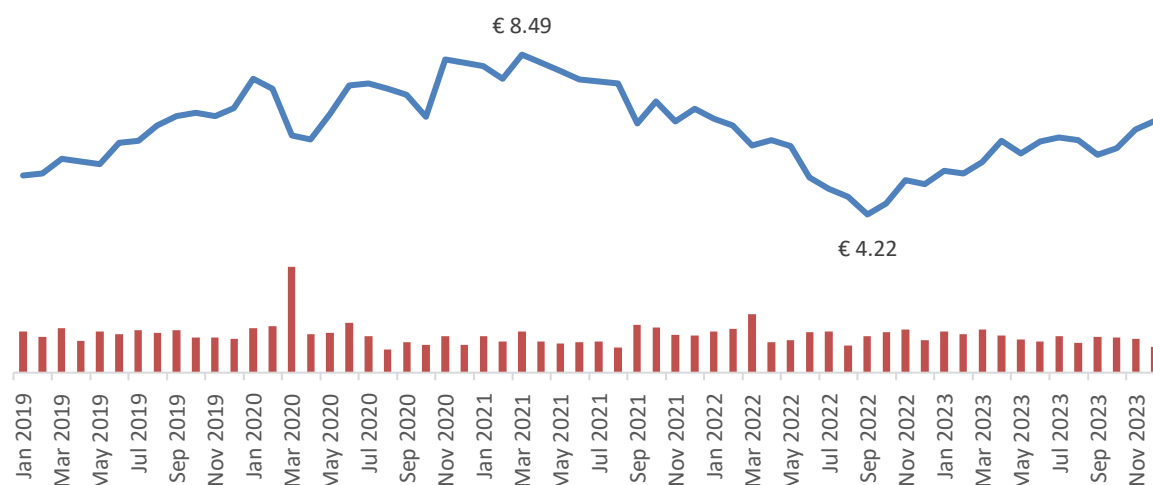


Figure 3.14. Enel monthly price performance (January 2019 – December 2023, €)

Source: Refinitiv Eikon (LSEG)

As of December 31st, 2023, Enel's market capitalization reached €68.41 billion, representing a €17.58 billion increase compared to the previous year, though still below the peaks of €71.59 billion in 2021 and €84.11 billion in 2020.

In terms of its 2023 performance alone, Enel ended the year with a share price of €6.73, marking a 34% appreciation from the end of 2022. Throughout the year, the stock fluctuated between a low of €5.07 on January 2nd and a high of €6.77 on December 14th.

CHAPTER 4

Valuation

As discussed previously, in this chapter we determine the share fair value of Enel at the end of 2023 with the support of two valuation methods: the discounted cash flow approach using the free cash flow to the firm methodology and the relative valuation, using the multiples method.

4.1. Assumptions

For the execution of the valuation process and the respective financial model, several key assumptions will be discussed in the following sections of this chapter. Furthermore, an historical period stretching back to 2019 was taken into consideration, due to the impact of the pandemic on the company's balance sheet and income statement. This way, it is possible to analyze the performance of Enel during a period which was also affected by a major macroeconomic event, and compare it to the present period of recovery and growth into the pre-pandemic levels of operation.

Regarding future estimates, considering the time-interval and the quality of information available on Enel and the energy industry, a forecasted period of 5 years was assumed for this analysis (2024F - 2028F).

4.2. Discounted Cash Flow Approach

This section covers the Discounted Cash Flow (DCF) approach method for valuing Enel based on its future cash flows. We start by looking at the company's growth forecasts, including key financial metrics such as EBITDA, revenues, depreciation, capital expenditures (CAPEX), and working capital.

Next, we calculate the Free Cash Flow to the Firm (FCFF). We then discuss the discount rate, looking at the cost of debt, capital structure, and cost of equity. This includes factors like the risk-free rate, country risk premium, market risk premium, and betas. Using this information, we determine the weighted average cost of capital (WACC), which is applied to the cash flows.

Finally, we calculate the enterprise value and equity value, followed by an estimate of the share price and a recommendation based on our findings. The chapter ends with a sensitivity analysis to see how different factors affect the overall valuation.

4.2.1. Growth Forecasts

To streamline the process of forecasting the company's growth, we have opted to follow management's consensus by assuming a uniform compound annual growth rate (CAGR) across all

sectors. This approach is taken to maintain consistency with the company's strategic outlook. While analyzing each business area individually can offer more detailed insights, this method has been chosen for its efficiency and clarity in decision-making. The assumption of a constant CAGR provides a straightforward baseline that reflects the overall market conditions and the company's historical performance as a whole. This method reduces complexity and ensures a consistent framework for planning, avoiding the potential uncertainties that could arise from varying sector-specific forecasts.

However, it is important to acknowledge that this approach comes with certain limitations. By relying on past performance, we assume that historical trends will continue into the future, which may not always hold true, especially in a rapidly changing market. Additionally, this approach overlooks potential macroeconomic and sector-specific developments that could significantly impact growth trajectories. While we have not explicitly accounted for these factors in our forecast, they have been considered in our decision to use historical data as a reasonable estimate for future performance. Given the company's diverse portfolio, we believe that this assumption balances potential fluctuations between faster and slower-growing segments, allowing for a manageable yet realistic growth trajectory, even though it may not fully capture the nuances of sector-specific dynamics or future market shifts.

EBITDA and Revenues

That being said, an EBITDA forecast of the company was performed based on estimates made by Enel on the 2024-2026 Strategic plan for a period starting in 2024, as showcased in Table 4.1. An estimated CAGR of 5% was assumed, based on those exact estimates.

Table 4.1 *Historical (H), Forecasted (F) and perpetual EBITDA (2019 – 2028, Million €)*

	2019 H	2020 H	2021 H	2022 H	2023 H	2024 F	2025 F	2026 F	2027 F	2028 F	Perpetuity
EBITDA	17,704	16,903	17,169	19,918	20,255	21,268	22,331	23,448	24,620	25,851	26,316

Source: Company reports and own estimates

Assuming a 5% CAGR makes sense because according to the company management, the overall balance of the company's sectors supports this growth trajectory, despite variations within individual segments. For instance, the thermal generation and trading sector is expected to decline due to global efforts to reduce reliance on fossil fuels and the increasing competitiveness of cleaner energy sources. However, this decline is more than offset by the robust growth in Enel Green Power, which is capitalizing on the surging demand for renewable energy, driven by government incentives and the global transition to sustainable energy solutions.

Similarly, Enel Grids is experiencing solid growth as modernization of grid infrastructure becomes essential to accommodate the electrification of transport and the integration of renewable energy into the grid. On the other hand, the end user markets are facing a slight decrease due to growing competition and improvements in energy efficiency, but the impact on the company's overall growth remains modest. Meanwhile, the holding and services segment is expected to maintain steady performance, potentially experiencing moderate growth as it continues to support the company's broader operations.

After having estimated the EBITDA for the company, it is possible to forecast the revenues based on the historical levels of EBITDA as % of revenues (Table 4.2).

Table 4.2. Historical (H), Forecasted (F) and perpetual Revenues, EBITDA and EBITDA Margin (2019 – 2028, Million €, %)

	2019 H	2020 H	2021 H	2022 H	2023 H	2024 F	2025 F	2026 F	2027 F	2028 F	Perpetuity
Revenues	80,327	66,004	85,719	140,517	95,565	107,222	112,583	118,212	124,123	130,329	132,675
EBITDA	17,704	16,903	17,169	19,918	20,255	21,268	22,331	23,448	24,620	25,851	26,316
EBITDA Margin	22.0%	25.6%	20.0%	14.2%	21.2%	19.8%	19.8%	19.8%	19.8%	19.8%	19.8%

Source: Company reports and own estimates

To achieve this, an arithmetic average was calculated for the period between 2019 and 2023, resulting in an estimated EBITDA as a percentage of revenues at 19.8%, which was assumed for the following years of operation. The future revenues can be projected just by dividing the correspondent EBITDA by the obtained rate.

Regarding perpetuity, a growth rate of 1.8% was assumed in all areas of the business, which can be justified with the expectations for inflation for Italy and Europe in the future, which represent almost 75% of the revenue of the company.

Depreciation and Amortization

Tangible and intangible assets with a finite life are depreciated using the straight-line method starting from the time they become available for use. These assets primarily include power plants and generation facilities, transmission and distribution infrastructure, technical equipment like turbines and transformers, transportation equipment, buildings, telecom systems, software and IT infrastructure, as well as intangible assets such as licenses and contractual rights.

Table 4.3. *Historical, Forecasted and Perpetual Tangible Assets and Intangible Assets (2019 – 2028, Million €, %)*

	2019 H	2020 H	2021 H	2022 H	2023 H	2024 F	2025 F	2026 F	2027 F	2028 F	Perpetuity
Tangible Assets											
Property, plant and Equipment	4,481	4,118	4,259	4,472	4,674	5,331	5,598	5,877	6,171	6,480	6,596
% Revenue	5.6%	6.2%	5.0%	3.2%	4.9%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Investment Property	3	2	3	2	2	3	3	3	3	4	4
% Revenue	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Intangible Assets											
Intangible Assets	1,266	1,223	1,330	1,612	1,677	1,690	1,775	1,864	1,957	2,055	2,092
% Revenue	1.6%	1.9%	1.6%	1.1%	1.8%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
Tangible Assets	4,484	4,484	4,484	4,484	4,484	4,484	4,484	4,484	4,484	4,484	4,484
Intangible Assets	1,266	1,223	1,330	1,612	1,677	1,690	1,775	1,864	1,957	2,055	2,092
Total	5,750	5,343	5,592	6,086	6,353	7,024	7,375	7,744	8,131	8,538	8,692

Source: Company reports and own estimates

The forecasted depreciation and amortization were computed based on the historical percentage of depreciation and amortization to revenues. For property, plant and equipment approximately 5.0%, for investment property close to 0.0% and for the intangible assets 1.6% (Table 4.3).

CAPEX

To project capital expenditures (CAPEX), we assumed that CAPEX will grow in line with depreciation, based on historical data. Specifically, the forecasted CAPEX is calculated by determining the historical average ratio of CAPEX to depreciation and applying this multiple to future depreciation estimates (Table 4.4). This approach aligns with the company's historical investment patterns relative to asset wear and tear, offering a consistent framework for asset maintenance and expansion needs.

Table 4.4. *Historical, Forecasted and Perpetual CAPEX (2019 – 2028, Million €, x, %)*

	2020 H	2021 H	2022 H	2023 H	2024 P	2025 P	2026 P	2027 P	2028 P	Perpetuity
CAPEX	9,548	12,201	13,242	12,768	13,718	14,404	15,124	15,880	16,674	16,974
x Depreciation and Amortization	1.79 x	2.18 x	2.18 x	2.01 x	1.95 x	1.95 x	1.95 x	1.95 x	1.95 x	1.95 x
% Revenue	14.5%	14.2%	9.4%	13.4%	12.8%	12.8%	12.8%	12.8%	12.8%	12.8%

Source: Company reports and own estimates

While this method simplifies the forecasting process by avoiding detailed year-by-year projections, it comes with certain risks. One key risk is the assumption that the company's future growth and investment policies will mirror those of the past. This carries the potential uncertainty that future strategic shifts, market conditions, or investment priorities may deviate from historical trends.

However, based on our prior analysis of the company and its operating environment, we have not identified any significant factors suggesting a major departure from historical CAPEX patterns. By using historical averages, we aim to balance the risk of over- or under-estimating CAPEX, acknowledging that while this method provides stability, it may overlook potential changes in future investment strategies. Therefore, we believe this approach offers a reasonable estimate, in line with the company's established behavior, while recognizing the inherent limitations of relying on past data.

Working Capital

The working capital of Enel was computed based on the difference between its operating current assets and its operating current liabilities, considering the items included in the company's balance sheet (Table 4.5).

Table 4.5. Historical, Forecasted and Perpetual Working Capital (2019 – 2028, Million €, %)

	2019 H	2020 H	2021 H	2022 H	2023 H	2024 F	2025 F	2026 F	2027 F	2028 F	Perpetuity
Trade Receivables	13,083	12,046	16,076	16,605	17,773	17,950	18,848	19,790	20,780	21,819	22,212
% Revenues	16.3%	18.3%	18.8%	11.8%	18.6%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%
Inventories	2,531	2,401	3,109	4,853	4,290	3,937	4,134	4,340	4,557	4,785	4,871
% Revenues	3.2%	3.6%	3.6%	3.5%	4.5%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%
Net Receivables due from institutional market operators	(3,775)	(2,755)	(762)	(1,083)	(4,317)	(3,227)	(3,389)	(3,558)	(3,736)	(3,923)	(3,994)
% Revenues	(4.7%)	(4.2%)	(0.9%)	(0.8%)	(4.5%)	(3.0%)	(3.0%)	(3.0%)	(3.0%)	(3.0%)	(3.0%)
Net Other current assets/(liabilities)	(7,282)	(6,977)	(10,953)	(10,959)	(9,907)	(10,846)	(11,389)	(11,958)	(12,556)	(13,184)	(13,421)
% Revenues	(9.1%)	(10.6%)	(12.8%)	(7.8%)	(10.4%)	(10.1%)	(10.1%)	(10.1%)	(10.1%)	(10.1%)	(10.1%)
Trade Payables	(12,960)	(12,859)	(16,959)	(17,641)	(15,821)	(18,123)	(19,029)	(19,980)	(20,979)	(22,028)	(22,425)
% Revenues	(16.1%)	(19.5%)	(19.8%)	(12.6%)	(16.6%)	(16.9%)	(16.9%)	(16.9%)	(16.9%)	(16.9%)	(16.9%)
Net Working Capital	(8,403)	(8,144)	(9,489)	(8,225)	(7,982)	(10,309)	(10,825)	(11,366)	(11,934)	(12,531)	(12,757)
% Revenues	(10.5%)	(12.3%)	(11.1%)	(5.9%)	(8.4%)	(9.6%)	(9.6%)	(9.6%)	(9.6%)	(9.6%)	(9.6%)
ΔWC	n.a.	259	(1,345)	1,264	243	(2,327)	(515)	(541)	(568)	(597)	(597)
% Growth Rate	n.a.	n.a.	(619.3%)	(194.0%)	(80.8%)	(1 057.8%)	(77.9%)	5.0%	5.0%	5.0%	5.0%

Source: Company reports and own estimates

As showcased in Table 4.5, even during the pandemic, the company maintained an extremely stable weight of every component of the working capital as a % of revenue. Both the operating current assets and the operating current liabilities suffered from a decrease, as a percentage of revenue, in the year of 2022 that was caused by the big increase in revenues. Both these arguments allow as to say that is possible, despite the uncertainty, to foresee that the average percentage of revenues is a reasonable method to forecast the components of the working capital.

4.2.2. Free Cash Flow to the Firm

After having forecasted the items susceptible to growth, it is possible to build the DCF-FCFF model accordingly, using the following formula, as presented in section 1.1.1:

$$FCFF = EBIT \times (1 - t) + DA - \Delta WC - CAPEX \quad (10)$$

Table 4.6. Forecasted and Perpetual Free Cash Flow to the Firm (2019 – 2028, Million €)

	2024 F	2025 F	2026 F	2027 F	2028 F	Perpetuity
Revenues	107,222	112,583	118,212	124,123	130,329	132,675
EBITDA	21,268	22,331	23,448	24,620	25,851	26,316
Depreciation & Amortization	(7,024)	(7,375)	(7,744)	(8,131)	(8,538)	(8,692)
EBIT	14,243	14,956	15,703	16,489	17,313	17,625
Taxes	(2 756)	(2 927)	(3 107)	(3 295)	(3 493)	(4 230)
NOPLAT	11,487	12,028	12,597	13,193	13,820	13,395
Depreciation & Amortization	7,024	7,375	7,744	8,131	8,538	8,692
Operational Cash Flow	18,511	19,404	20,341	21,325	22,358	22,358
CAPEX	(13,718)	(14,404)	(15,124)	(15,880)	(16,674)	(16,974)
ΔWC	2,327	515	541	568	597	226
Free Cash Flow to the Firm	7,121	5,515	5,758	6,013	6,281	5,338

Source: Own estimates

4.2.3. Discount Rate (WACC)

In this section, we will calculate the discount rate used in our valuation model, specifically focusing on the weighted average cost of capital (WACC). WACC is crucial for determining the required return on investment, as it represents the average rate of return that the company needs to generate to meet the expectations of its investors. We will begin by calculating the cost of debt, considering the interest rates on borrowed funds and the associated tax benefits. Next, we will assess the capital structure to establish the proportions of debt and equity financing. Finally, we will compute the cost of equity, taking into account factors such as the risk-free rate, country risk premium, market risk premium, and beta. By accurately calculating these components, we will establish a reliable WACC that will inform our valuation of Enel.

4.2.3.1. Cost of Debt

In analyzing the cost of debt for Enel, we opted not to use the company's actual cost of debt, calculated by dividing the total interest expense by the sum of short-term and long-term debt. Instead, we referred to the Energy sector benchmark cost of debt from Damodaran (2024b) and incorporated the 10-year, 6-month Euribor rate. This decision was driven by the complexity of Enel's financial structure, which includes extensive use of securities and futures to hedge against energy price fluctuations due to its contractual obligations. These financial instruments can obscure the true cost of debt by affecting the interest expense and overall debt profile. Using Damodaran's reference, alongside the Euribor rate, provides a clearer and more standardized basis for comparison, reflecting a more accurate measure of the company's cost of debt in the context of its diverse financial activities.

Table 4.7. *After-tax Cost of Debt variables (2023, %)*

Euribor 6M 10 year	1.7%
Default Spread	1.9%
Cost of Debt	3.6%
After-tax Cost of Debt	2.7%

Source: Refinitiv Eikon (LSEG), Damodaran (2024a)

The tax rate used in the model corresponds to the statutory tax rate of 24%, making us achieve a after tax cost of debt of 2.7%.

4.2.3.2. Capital Structure

Determining the capital structure and the debt-to-equity ratio is crucial for calculating the cost of equity and the WACC. In this model, we considered two primary approaches to establish the capital

structure. One option was to analyze Enel's historical capital structure, either by calculating an average debt-to-equity (D/E) ratio or identifying trends over time. This would have offered insights based on the company's past financing decisions.

However, we chose a more comprehensive approach by utilizing Damodaran's industry benchmark for the Green and Renewable Energy sector. This benchmark incorporates the D/E ratios of a wide range of companies within the industry, including Enel, providing a broader reference point that reflects typical financial practices. By using the industry average D/E ratio of 1.41, we aim to ensure that the capital structure in our model aligns with the overall dynamics of the sector.

While we recognize that Enel may have specific characteristics that differentiate it from other companies, this approach helps mitigate potential distortions caused by company-specific factors or short-term fluctuations. The rationale for this choice lies in the understanding that, in a competitive market, companies tend to gravitate towards industry norms over time to optimize their capital costs and maintain financial stability. Furthermore, using an industry benchmark allows us to factor in broader market trends and economic conditions that may affect all companies within the sector, thereby providing a more realistic and balanced view of the capital structure.

4.2.3.3. Cost of equity

To determine the cost of equity, we will reference the Capital Asset Pricing Model (CAPM), which we discussed in section 1.1.4. This model calculates the expected return on equity based on the risk-free rate, market risk premium, and the company's beta. The following sections will break down each component of the cost of equity, starting with the risk-free rate, which serves as the foundation for this calculation.

Risk Free Rate

As stated in section 1.1.4, it is general practice to use a 10-year government bond in mature markets for the risk-free rate. In Europe, the most common practice is to use the yield of the 10-year German Bond, due to its investment grade classification as an AAA country.

Given the current macroeconomic conditions, the yield of the bond closed at 2.0% on December 31st, 2023. It is important to note that this value comes from an increasing tendency that started in 2022, due to the inflationary pressures experienced in Europe.

To accurately estimate the risk-free rate, a daily average was performed for 2023 in order to reach a feasible rate that can be applied to the model in perpetuity. Considering this, an estimate of 2.4% was assumed to compute the cost of equity.

Country Risk Premium

The country risk premium is a variable used to account for the additional risk an investor sustains by investing in a country with a higher degree of macroeconomic risk factors. As such, a premium must be added to the discount rate in order to compensate the investor.

A common method to compute this variable is by simply taking the yield of the 10-year government bond of the AAA country, in this case, Germany, and subtract it to the yield of the 10-year government bond of the country in which the company is inserted, Italy. Due to the fact that the company operates in several geographies, we decided to take a different approach in order to take into account the risk of each of those geographies. Using Damodaran's country risk premiums (Damodaran, 2024a), we decided to perform a weighted average of each geography where the company operates based on the historical revenues over the last 3 years. Through this weighting, and using Damodaran's rates, we obtained a country risk premium of approximately 2.0%. More details in Appendix A.

Market Risk Premium

The market risk premium, as previously mentioned in section 1.1.4, refers to the additional return investors require for choosing to invest in an asset from the market portfolio rather than in a risk-free asset.

The methodology used to estimate the market risk premium consists of two steps. First, assess the country's rating according to Moody's and then add the market premium of a mature market. But, just like previously mentioned, due to the fact that the company operates in more than one geography, we weighted once again the market risk premium of each geography, using the methodology described above in the country risk premium.

A market risk premium of 7.3% was estimated by considering the values provided by Damodaran on the NYU Stern Business School website (Damodaran, 2024a). More details in Appendix A.

Betas

The last variable to compute the discount rate consists of the levered beta. As defined in section 1.1.4, the best way of computing it is through the Bottom-up approach. According to Damodaran's data of European Industry Betas available on the NYU Stern Business School website (Damodaran, 2024c), for the Green and Renewable Energy, the unlevered beta stands at 0.58. It was computed by identifying an industry benchmark comprised of 66 companies from Europe and performing a weighted average of their Betas.

After having the unlevered beta of the industry, it is possible to assume that it coincides with the unlevered beta of Enel, given that the peer group has as similar business risk of the targeted company.

To compute the levered beta, we use the following formula:

$$\beta_L = \beta_U \times \left[1 + (1 - t) \times \left(\frac{D}{E} \right) \right] = 0.58 \times [1 + (1 - 0.24) \times (1.41)] = 1.2 \quad (11)$$

where,

- β_L = Beta levered
- β_U = Beta unlevered
- t = tax rate
- D = Debt
- E = Equity

Cost of Equity

After having computed the variables above, the cost of equity can be estimated according with the CAPM , using the equation 6 from section 1.1.4 and the values in Table 4.8, we get a cost of equity of 13.2%.

Table 4.8. *Cost of Equity variables (2023, %)*

Risk-free interest rate	2.4%
Country Risk Premium	2.0%
Market Risk Premium	7.3%
Levered Beta	1.2
Unlevered Beta	0.58
Cost of Equity	13.2%

Source: Eikon Refinitiv (LSEG), Damodaran (2024a, 2024c)

4.2.3.4. Weighted Average Cost of Capital

The WACC reflects the cost of financing through both debt and equity, weighted according to their proportional use, thereby capturing the risk associated with the firm's financial structure. Using the previously calculated inputs shown in Table 4.9, the WACC can now be computed, as outlined in Equation (5) from section 1.1.3.

Table 4.9. *Discount Rate (WACC) variables (2023, %)*

D/E	141.4%
Cost of Equity	13.2%
After-tax Cost of Debt	2.7%
Discount Rate (WACC)	7.1%

Source: Own estimates

4.2.4. Enterprise Value

The enterprise value represents the present value of the company's future cash flows. These cash flows are divided into two key components: the first includes short-term cash flows projected based on the expected growth of the business for the time period between 2024 and 2028, while the second is the terminal value, which encompasses the cash flows expected to be generated indefinitely after 2028. The terminal value assumes a continuous growth rate applied in perpetuity. As outlined in section 4.2.1, a perpetual growth rate of 1.8% has been used for these calculations.

After calculating the cash flows in section 4.2.2, as we can see in table 4.10, we proceeded to discount them using the discount factor and the number of the period in question.

Table 4.10. Forecasted and Perpetual Free Cash Flow to the Firm discounted (2024 – 2028, Million €)

	2024 F	2025 F	2026 F	2027 F	2028 F	Perpetuity
Free Cash Flow to the Firm	7,121	5,515	5,758	6,013	6,281	5,338
Terminal Value not Discounted						101,174
Discount Period	1.00	2.00	3.00	4.00	5.00	
Discount Factor	0.93	0.87	0.81	0.76	0.71	0.71
Free Cash Flow to the Firm discounted	6,650	4,811	4,690	4,574	4,462	71,881

Source: Own estimates

Once the values have been adjusted, the Enterprise Value is easily obtainable, as can be seen in Table 4.11.

Table 4.11. Enterprise Value (2023, Million €)

	31.12.2023	% EV
Forecasted CashFlow [2024-2028]	25,188	26%
Perpetuity	71,881	74%
Enterprise value	97,069	100%

Source: Own estimates

4.2.5. Equity Value

In order to compute the equity value, we need to adjust the enterprise value in to showcase what is the exact value of Enel that is owned by its shareholders. To do so, as mentioned in section 1.2, we need to adjust the enterprise value with the non-operating assets and the non-equity claims of the firm.

Starting with the non-operating assets, due to the complex balance sheet of the company, we decided to take a different approach and remove, from the total assets (€195 224 million), the value of the operating assets, mainly comprising property plant and equipment, intangible assets, non-current and current contract assets and trade receivables (€151 685 million), which brought us to a value of non-operating assets at the 31st of December of 2023 of €43 539 million.

Regarding the Non-equity Claims, these correspond to the Short-term and Long-term Debt seen earlier in this chapter, which amounted to €65 854 million by the end of 2023.

As we can see in Table 4.12, the equity value amounted to €74 754 million.

Table 4.12. Equity Value computation from Enterprise Value (2023. Million €)

Enterprise value	97,069
Total Assets	195,224
Operating Assets	151,685
Non-operating Assets	43,539
Short-term Debt	4,769
Long-term Debt	61,085
Non-equity Claims	65,854
Equity value	74,754

Source: Own estimates

4.2.6. Share Price and Recommendation

After having computed the Equity Value, the discounted cash flow model using the free cash flow to the firm methodology is almost complete, and the only thing left to do is to determine the target price of Enel's shares. This can be done by simply dividing the equity value obtained by the total amount of shares outstanding at the end of 2023, using the following formula:

$$\text{Share price} = \frac{EQV}{\#Shares\ Outstanding} = \frac{74,754\ million}{10,166,679,946} = 7.35 \quad (12)$$

As mentioned in section 3.3, the total number of shares outstanding is 10 166 679 946, which gives us a share price of €7.35.

As discussed in the stock performance section 3.6, the share price of the company fluctuated between €5.07 and €6.77 throughout 2023. Considering the results from this valuation method, a share price of €7.35 suggests that the shares of Enel were slightly undervalued at the period under analysis, and therefore the final recommendation would have been for potential investors to buy the company's shares.

Furthermore, by looking at Table 4.13, we can examine the recommendations of various analysts as of December 2023 and see that, out of a sample of 26 analysts, 7 recommend a strong buy, 15 a buy and 4 a hold, with an average target price of 7.78.

Table 4.13. *Analyst's Recommendations as of 25th December 2023*

25.12.2023	
Strong Buy	7
Buy	15
Hold	4
Sell	0
Strong Sell	0
Price Target Mean	€7.78
# Analysts	26

Source: Refinitiv Eikon (LSEG)

Based on this information, it is possible to conclude that there was a general consensus that the share price of Enel was undervalued at the chosen date. Although this is not the target price for the 31st of December of 2023, we can conclude that if a large part of these analysts see growth potential in the stock, then our valuation and buy recommendation is strengthened.

4.2.6.1. Sensitivity Analysis

To enhance this discounted cash flow valuation, a sensitivity analysis was conducted focusing on two critical variables: the perpetuity growth rate and the discount rate (WACC). Adjusting those two variables enables investors to estimate the share price under various scenarios, considering the uncertainties related to the growth rate and the WACC, and the influence these estimates have on the valuation outcome.

Table 4.14. *Sensitivity Analysis (€, %)*

		WACC								
		6.18%	6.48%	6.78%	7.08%	7.38%	7.68%	7.98%		
g ₀	1.35%	€8.29	€7.70	€7.17	€6.70	€6.28	€5.89	€5.54	1.35%	
	1.50%	€8.58	€7.96	€7.40	€6.91	€6.46	€6.06	€5.69	1.50%	
	1.65%	€8.90	€8.23	€7.65	€7.12	€6.66	€6.23	€5.85	1.65%	
	1.80%	€9.23	€8.53	€7.90	€7.35	€6.86	€6.42	€6.02	1.80%	g ₀
	1.95%	€9.60	€8.84	€8.18	€7.60	€7.08	€6.61	€6.19	1.95%	
	2.10%	€9.98	€9.18	€8.47	€7.85	€7.30	€6.81	€6.37	2.10%	
	2.25%	€10.40	€9.54	€8.78	€8.13	€7.55	€7.03	€6.57	2.25%	
		6.18%	6.48%	6.78%	7.08%	7.38%	7.68%	7.98%		
		WACC								

Source: Own estimates

Table 4.15. *Sensitivity Analysis as % of target price (%)*

		WACC								
		6.18%	6.48%	6.78%	7.08%	7.38%	7.68%	7.98%		
no	1.35%	13%	5%	(2)%	(9)%	(15)%	(20)%	(25)%	1.4%	
	1.50%	17%	8%	1%	(6)%	(12)%	(18)%	(23)%	1.5%	
	1.65%	21%	12%	4%	(3)%	(9)%	(15)%	(20)%	1.7%	
	1.80%	26%	16%	8%	-	(7)%	(13)%	(18)%	1.8%	no
	1.95%	30%	20%	11%	3%	(4)%	(10)%	(16)%	2.0%	
	2.10%	36%	25%	15%	7%	(1)%	(7)%	(13)%	2.1%	
	2.25%	41%	30%	19%	11%	3%	(4)%	(11)%	2.3%	
		6.18%	6.48%	6.78%	7.08%	7.38%	7.68%	7.98%		
		WACC								

Source: Own estimates

The perpetuity growth was subject to positive and negative variations of 0.15%, while the WACC was subject to positive and negative increases of 0.30%, as showcased in Tables 4.14 and 4.15.

Considering the scenarios presented, the price of Enel's shares ranged from a low of €5.54 to a high of €10.40, reflecting approximately a 25% decrease and a 41% increase compared to the discounted cash flow valuation. Additionally, it can be concluded that, in most scenarios, the results still indicate that the stock is undervalued, leading to a recommendation for potential investors to buy the company's shares at that time.

4.3. Relative Valuation

As stated in the section 1.3, the multiples approach is most useful on the second stage of a valuation, as it allows us to validate and test the estimations of the discounted cash flow model, as well as strengthen and complement the overall valuation results.

The multiples chosen to perform the Relative Valuation correspond to the Price-to-Earnings ratio and the EV/EBITDA, as they are the most commonly used.

The initial step in this approach involved identifying a peer group to benchmark Enel against, based on similarities in services, products and performance.

As illustrated in Table 4.16, this analysis includes a peer group of eight companies from the Energy and Renewables sector. The P/E and EV/EBITDA multiples data were sourced from Eikon, focusing on the fiscal year 2023.

To ensure a reliable sample for each multiple, outliers were identified by calculating the standard deviation around the peer group's average. Consequently, any figures equal to or above the average plus one standard deviation, and equal to or below the average minus one standard deviation, were excluded.

Table 4.16 *Enel peers P/E and EV/EBITDA (2023)*

Company Name	Country	P/E	EV/EBITDA
Enel SpA	Italy	17.95	5.73
Iberdrola SA	Spain	15.87	10.05
Endesa SA	Spain	26.33	4.44
E On Se	Germany	69.57	3.08
RWE AG	Germany	21.13	-
Edp SA	Portugal	18.77	9.58
Corporacion Acciona Energias Renovables SA	Spain	17.50	10.51
Snam SpA	Italy	13.76	13.33
Engie SA	France	18.40	4.45
Average		25.17	6.93
Standard Deviation		18.33	4.56
Average + Standard Deviation		43.49	11.49
Average - Standard Deviation		6.84	2.37
Average excluding outliers		18.82	7.02

Source: Refinitiv Eikon (LSEG)

As a result, one company was excluded from the P/E ratio, giving us an average Price-to-Earnings ratio of 18.82x. For the EV/EBITDA multiple, the exclusion process refined the sample to a peer group of six companies, one of which was excluded due to the lack of data, resulting in a multiple of 7.02x.

Once both multiples have been calculated, the relative valuation can be performed.

Table 4.17. *Enel Share Price using the P/E multiple valuation method (Units in table)*

P/E	
Peer group average	18.82
<i>Millions of Euros</i>	
Enel Net Income	4,638
Equity Value	87,299
# Shares Outstanding	10 166 679 946
Share Price	€8.59

Source: Own estimates

Table 4.18. *Enel Share Price using the EV/EBITDA multiple valuation method*

EV/EBITDA	
Peer group average	7.02
<i>Millions of Euros</i>	
Enel EBITDA	20,255
Enterprise Value	142,164
Equity Value	119,849
# Shares Outstanding	10 166 679 946
Share Price	11.79

Source: Own estimates

Examining the outcomes of this valuation method reveals that the estimated share price is significantly influenced by the selected multiple. While both estimates suggest the stock is undervalued, the P/E valuation results in a share price approximately 27.3% higher than the market average of €6.73 at the end of 2023. The EV/EBITDA multiple is considerably above the market close, with a share price approximately 75.2% higher.

When compared to the share price derived from the discounted cashflow approach, the P/E ratio is €1.23 (16.8%) above the previously calculated €7.35, whereas the EV/EBITDA multiple results in a price €4.44 (60%) higher. Despite these variations, both prices are somewhat consistent with the discounted cashflow valuation findings.

Therefore, the final recommendation would be for investors to buy the company's shares. Both valuation estimates indicate that Enel's shares were undervalued during the period under analysis. This suggests a strong potential for future gains, making it a favorable investment opportunity.

Conclusion

This analysis was conducted with the goal of assessing the share value of Enel S.p.A. on the 31st of December of 2023, aiming to determine whether the stock was being traded at a fair market price. To achieve this, a comparison was made between the actual market trading price and the estimated value derived from a financial model.

The valuation of the company's shares was based on two distinct methodologies to ensure a robust and reliable estimate. The primary approach employed was the Discounted Cash Flow (DCF) method, specifically the Free Cash Flow to the Firm (FCFF) methodology, which was used to calculate the Equity Value of Enel. Following this, a Relative Valuation was applied as a secondary method to further support and refine the overall conclusions of the report.

Both valuation techniques produced consistent results, indicating that the stock price of Enel was undervalued during the period under review. The DCF-FCFF model generated a target price of €7.35, slightly higher than the market price of €6.73 recorded at the end of 2023. Additionally, sensitivity analysis, which explored 49 potential scenarios, showed that more than 67% continued to indicate the stock was undervalued. The Relative Valuation approach produced a P/E ratio that implied a price of €8.59, while the EV/EBITDA multiple suggested a target price of €11.79. Despite the differences in the target prices generated by these two multiples, they reinforced the results of the DCF model.

It is important to recognize that these conclusions are influenced by the inherent limitations of the valuation techniques and the assumptions applied. Additionally, while this assessment offers meaningful insights into Enel's current market valuation, future performance could shift due to changing market conditions. For instance, a faster-than-anticipated adoption of renewable energy could enhance Enel's profitability and reinforce its market leadership, potentially opening new growth opportunities.

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Appendix

Appendix A:

Revenues (Million €)	2021 H	2022 H	2023 H	Average % Revenues	Country Risk Premium Damodaran	Wheighted Country Risk Premium	Market Risk Premium (Damodaran)	Wheighted Market Risk Premium
Italy	33,304	57,859	39,724	42.03%	2.39%	1.00%	7.81%	3.28%
Iberia	18,896	30,535	21,799	23.02%	1.53%	0.35%	6.65%	1.53%
France	970	3,086	1,919	1.84%	0.54%	0.01%	5.32%	0.10%
Switzerland	2,918	6,791	1,936	3.55%	0%	0.00%	4.60%	0.16%
Germany	1,085	1,676	1,028	1.22%	0%	0.00%	4.60%	0.06%
Austria	245	189	75	0.17%	0.44%	0.00%	5.18%	0.01%
Slovenia	195	146	10	0.12%	1.31%	0.00%	6.35%	0.01%
Romania	-	3	4	0.00%	2.39%	0.00%	7.81%	0.00%
Greece	-	15	6	0.01%	2.73%	0.00%	8.26%	0.00%
Belgium	522	834	13	0.42%	0.65%	0.00%	5.48%	0.02%
Czech Republic	435	321	180	0.32%	0.65%	0.00%	5.48%	0.02%
Hungary	12	7	13	0.01%	2.07%	0.00%	7.38%	0.00%
Russia	3	-	-	0.00%	4.90%	0.00%	11.18%	0.00%
Netherlands	96	38	145	0.10%	0%	0.00%	4.60%	0.00%
United Kingdom	3,736	11,841	4,523	6.05%	0.65%	0.04%	5.48%	0.33%
Other Europea	1,160	1,551	2,152	1.63%	2.69%	0.04%	7.52%	0.12%
United States	601	779	864	0.75%	0%	0.00%	4.60%	0.03%
Canada	33	53	62	0.05%	0%	0.00%	4.60%	0.00%
Mexico	202	313	315	0.27%	2.07%	0.01%	7.38%	0.02%
Brazil	9,381	9,064	7,621	8.78%	3.28%	0.29%	9.00%	0.79%
Chile	3,151	4,434	4,369	3.94%	0.92%	0.04%	5.84%	0.23%
Peru	1,111	1,449	1,565	1.37%	1.74%	0.02%	6.94%	0.10%
Colombia	2,188	2,725	3,248	2.73%	2.07%	0.06%	7.38%	0.20%
Argentina	887	966	613	0.82%	13.07%	0.11%	22.15%	0.18%
Panama	150	177	200	0.18%	2.07%	0.00%	7.38%	0.01%
Costa Rica	14	17	17	0.02%	4.90%	0.00%	11.18%	0.00%
Guatemala	67	83	81	0.08%	2.73%	0.00%	8.26%	0.01%
Africa	114	132	96	0.11%	7.65%	0.01%	14.90%	0.02%
Asia	371	521	266	0.37%	0.77%	0.00%	11.95%	0.04%
Oceania	53	48	38	0.05%	0%	0.00%	9.96%	0.00%
Total	81,900	135,653	92,882	100%		1.99%		7.29%