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UNIVERSITÁRIO
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Equity Valuation: Iberdrola S.A. (IBE.MC).

Tiago Miguel Moura Vilhena

Master in Finance

Supervisor:

PhD, Pedro Manuel de Sousa Leite Inácio, Assistant Professor,
ISCTE Business School

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Department of Finance

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Resumo

Este projeto de mestrado tem como objetivo realizar uma avaliação do preço da ação da Iberdrola S.A. (IBE.MC) a 31 de dezembro de 2023, uma empresa de energia global líder, com sede em Bilbao, Espanha, e mais de 170 anos de história. Sendo um dos principais intervenientes no setor dos serviços públicos, a Iberdrola S.A. tem navegado habilmente nas transformações da indústria e posicionou-se com uma capitalização de mercado substancial. (Iberdrola S.A.,2024). É imperativo avaliar as empresas que são pioneiras à luz da mudança mundial para fontes de energia limpa devido às preocupações com os combustíveis fósseis, a escassez de combustível e a proteção ambiental.

A estimativa do preço da ação envolveu a aplicação do método de fluxos de caixa descontados (DCF). Utilizou-se o free cashflow to the firm que considera toda a estrutura de capital, incluindo dívida e capital próprio, refletindo assim o saldo disponível para todas as partes interessadas. Este método estabeleceu um valor para a ação da Iberdrola S.A. (IBE.MC) de 9,84 euros, comparado com um valor de 11,74 euros a 31 de dezembro de 2023, o que sugere que a ação está sobrevalorizada e tem uma margem de segurança negativa. Em seguida, foi analisado o setor para determinar se a avaliação por fluxos de caixa descontados está alinhada com os valores de mercado. Foram considerados dois múltiplos, mas o que se destacou foi o Valor da Empresa para EBITDA (EV/EBITDA), que sugere um valor da ação de 9,1 euros. Este múltiplo também foi usado para comparar com os preços de mercado atuais associados a transações de empresas semelhantes no setor de serviços públicos, demonstrando que o valor por fluxos de caixa descontados está em linha com o mercado.

Em conclusão, foi realizada uma análise de sensibilidade para abordar os fatores prospetivos que podem influenciar a avaliação, abrangendo as variáveis mais sensíveis, como a taxa de crescimento e o custo de capital, que afetam o preço da ação da Iberdrola S.A. (IBE.MC). As avaliações foram efetuadas com base em informações atuais do mercado, tendo sido analisadas as avaliações de outras empresas. As conclusões implicam que a avaliação, tendo em conta os muitos riscos e incertezas presentes no mercado, está em conformidade com as expectativas estabelecidas pelo mercado.

Classificação JEL: G00; G10; G30; G32

Palavras-chave: Iberdrola S.A (IBE); Setor de serviços públicos; Avaliação; Riscos de Mercado; Análise de sensibilidade.

Abstract

This master project aims to conduct an equity valuation analysis of Iberdrola S.A. (IBE.MC) on December 31, 2023, a leading global energy company headquartered in Bilbao, Spain, with over 170 years of history. As a major player in the utilities sector, Iberdrola S.A. has adeptly navigated industry transformations and positioned itself with a substantial market capitalization. (Iberdrola S.A.,2024). It is imperative to value companies that are game changers considering the worldwide shift towards clean energy sources due to worries about fossil fuels, fuel shortages, and environmental protection.

The share price estimation involved applying discounted cash flow (DCF) method. The free cash flow to the firm was used to consider the entire capital structure, including debt and equity, thus reflecting the cash available to all stakeholders. This method established a value for the Iberdrola S.A. share (IBE.MC) of 9.84 euros, compared to a value of 11.74 euros on December 31, 2023, which suggests that the share is overvalued and has a negative margin of safety. The sector was then analyzed to determine if the discounted cash flow valuation aligns with market values. Two multiples were considered, but the one that stood out was the Enterprise Value to EBITDA (EV/EBITDA), which suggests a share value of 9.10 euros. This multiple was also used to compare with current market prices associated with transactions of similar companies in the utilities sector, indicating that the discounted cash flow share is in line with the market.

In conclusion, a sensitivity analysis was carried out to mark the prospective factors that may influence the valuation, comprehensive the most sensitive variables such as the growth rate and the cost of capital that affect the share price of Iberdrola S.A. (IBE.MC). The valuations were carried out using current market information, and the valuations of other companies were reviewed. The findings imply that the valuation, considering the many risks and uncertainties present in the market, is in line with expectations set by the market.

JEL Classification Codes: G00; G10; G30; G32

Key Words: Iberdrola S.A (IBE); Utilities Sector; Valuation; Market Risks; Sensitivity analysis.

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Introduction

The energy sector is currently undergoing dramatic transitions, spurred by a growing worldwide awareness of environmental issues and the urgent need to move to more sustainable energy sources. The need for decarbonization has grown unavoidably because of worries about the environment, resource scarcity, and reliance on fossil fuels. In this regard, utility firms are essential in spearheading this shift through the implementation of ESG (environment, social, and governance) compliant plans and active participation in programs like Green Financing that assist low-carbon project funding. As a result, the valuation of businesses operating in this crucial and developing industry has grown in significance.

This project, submitted in fulfillment of the requirements for the degree of master's in finance, aims to conduct a valuation of Iberdrola S.A. (IBE.MC) as of December 31, 2023, a leading global company in the utilities sector, and to provide insights into the most commonly used valuation practices. The study seeks to offer investors an understanding of the current macroeconomic environment, the prospects of the industry in which the company operates, and the specific performance of Iberdrola S.A. (IBE.MC), thereby enabling them to make informed investment decisions, although it does not constitute an investment recommendation for periods other than the valuation date.

This project is structured into five main sections, each addressing a different aspect of the valuation of Iberdrola S.A. (IBE.MC). The first chapter, dedicated to the literature review, explores the theoretical foundations of valuation, with a focus on the discounted cash flow (DCF) method and relative valuation, including the intermediate steps required for executing these two valuation methods. The second chapter provides a macroeconomic overview, demonstrating to the reader how broader economic indicators, such as economic growth, inflation, population growth, and geopolitical challenges, may influence the performance of Iberdrola S.A. (IBE.MC).

The third chapter presents an overview of the industry in which the company operates, discussing the sector size, the challenges and opportunities it faces, and the key drivers of its development. This is followed by a fourth chapter characterized by an in-depth analysis of Iberdrola S.A., surrounding its operational activities, strategic plans, financial performance, and sustainability initiatives.

Finally, the last chapter of this project details the main projections developed using the DCF model, beginning with the income statement and extending to the balance sheet, to derive the intrinsic value per share. This section is followed by a sensitivity analysis of the most critical variables, alongside a relative valuation that serves to complement the DCF model, ultimately culminating in the final valuation results.

Chapter 1: Literature Review

1.1 Valuation Purpose

Valuation, as determined by renowned members of the CFA community, *“is the estimation of an asset’s value based on variables perceived to be related to future investment returns, on comparisons with similar assets, or, when relevant, on estimates of immediate liquidation proceeds. Skill in valuation is a very important element of success in investing”*. (Pinto, 2010, p. 1).

The complexity of establishing the value of a corporate entity cannot be overestimated. This valuation approach focuses on the complex relationship of objective, situational, and subjective aspects, requiring the development of a set of informed assumptions. A appropriate valuation process requires access to precise and detailed information about not only the target firm, but also the larger external environment, which includes economic conditions as well as sector trends.

Central Role in Finance

Damodaran profound statement in 2003 summarizes the essence of valuation in the financial landscape, considering *“Valuation as the heart of finance”* (Damodaran, 2006, p. 3). This designation underlines the insightful significance of business valuation as a key instrument in financial decision-making. When viewed through the prism of corporate finance, valuation serves as a means of assessing the need for strategic changes to a company financial structure, encompassing adjustments to dividend policy, investment strategies and modifications to the capital structure. Alternatively, when used in the context of portfolio management, valuation plays a key role in discriminating whether the market price of a given stock correctly reflects its intrinsic value, thus enabling better investment decisions.

“Understanding what determines the value of a firm and how to estimate that value seems to be a prerequisite for making sensible decisions” (Damodaran, 2006, p. 3).

According to the perspectives of (Fernandez, 2006) the pursuit of various objectives underpins the importance of valuation in financial contexts. These objectives encompass assessing the Ask/Bid price for mergers and acquisitions, evaluating the valuation status of publicly listed companies to determine whether their shares are undervalued or overvalued, facilitating informed investment strategies, aiding in strategic decision-making, and planning, substantiating the initial public offering (IPO) pricing, and identifying key value drivers. Consequently, it is imperative to emphasize that a sound valuation serves as an essential prerequisite for making well-informed financial decisions. This assertion underscores the central contention within the analytical domain, which revolves around the selection of an appropriate valuation methodology, given the existence of a multitude of methods designed to enhance the precision and accuracy of financial valuations.

Table 1:

Different Models of valuation by Damodoran 2003, and Fernandez 2006 (Author Adjust).

Accounting Valuation:	Book Value; Adjusted Book Value; Liquidation Value; Substantial Value; Market Value Added
Relative Valuation:	Price to Earnings; Enterprise Value to EBITDA; Enterprise Value to Sales; Other Multiples
Discounted Cashflow Valuation:	Free Cashflow to the firm; Free Cashflow to Equity; Adjusted Present Value
Contingent Claim Valuation (Options):	Black Sholes model; Binomial Options model

In the following sections, the methodologies used to value the target company will be explored in greater depth. Specifically, the focus will be on two different methods: Relative Valuation and Discounted Cash Flow Valuation. In addition, the elements necessary for the effective implementation of these methods will be presented in detail.

1.2 Enterprise Value

The Discounted Cash Flow (DCF) methodology uses Enterprise worth (EV) to assess a company intrinsic value. It refers to a company business value after accounting for all its predicted future cash flows. These cash flows include all operations income and expenses but specifically omit financial activities like interest payments and debt repayments. Furthermore, EV eliminates non-operating investment activities, focusing solely on capital expenditure required for the company day-to-day operations, and does not include profits from the sale of unrelated assets or purchases of unrelated businesses. (Mota, 2020).

To compute the Enterprise Value, it is necessary to consider the free cash flow to the company (FCFF) or the free cash flow to equity (FCFE) methods. These two methods differ in their discount rates due to different capital structure considerations.

The Free cash flow to the company represents the cash flows available to both creditors and shareholders. As such, the discount rate applied must reflect the company capital structure. Consequently, FCFF is discounted at the weighted average cost of capital (WACC), which considers the cost of debt and equity financing, weighted by their respective proportions in the capital structure. The Free Cash Flow to Equity represents the cash flow available exclusively to shareholders, without

considering the influence of the capital structure. Thus, the discount rate applied is the rate of return required from investors, reflecting the risk associated with the company leverage.

$$EV = \sum_{t=1}^n \frac{FCFF_t}{(1+WACC)^t} ; EV = \sum_{t=1}^n \frac{FCFE_t}{(1+re)^t} \quad (1)$$

With $n \neq \infty$

The EV therefore serves as the basis for valuating using the DCF methodology, capturing the overall value of the company and considering its expected future cash flows. The choice between FCFF and FCFE depends on considering the company capital structure when determining the appropriate discount rate, with the WACC for FCFF and the rate of return required by investors for FCFE. In the following chapters, only the free cash flow to the firm will be analyzed, as it will be the basis for the valuation of Iberdrola S.A. (IBE.MC), thus the value of the company will consider all stakeholders.

1.3 Terminal Value

As mentioned above, the determination of enterprise value (EV) is the present value of the future cash flows generated by the company through the application of a discount rate, which depends on the methodology selected. The fundamental question turns around the optimal duration for which cash flows should be discounted to determine the intrinsic value of the company. A critical aspect in this regard is establishing an appropriate time horizon, which can be approximated by predicting the sustainability of cash flow growth. Although the usual approach tends to favor a five-year horizon, this can sometimes produce misleading results. It is therefore advisable to set the time horizon as long as possible. This highlights the terminal value, which is an infinitely perpetual period that emerges during periods of stability.

Adopting a perpetual time horizon mitigates the potential for errors in the time horizon assumption and aligns closely with most of a company value, which is dependent on factors such as the dynamics of the sector and its investment strategies. Essentially, companies operating in sectors characterized by substantial initial investments or with expansionary investment strategies in the short term may experience periods of zero or negative cash flows, with their only value coming from perpetual cash flows. On the other hand, sectors with less immediate capital needs or with containment investment strategies may allow for a more precise definition of the time horizon through the period of the most accurate company information, although with a greater susceptibility to inaccuracies.

To calculate the Terminal Value, we must consider the last cash flow at the beginning of the stability period and establish a sustainable growth rate (g):

$$TV_n = \frac{FCFF_{n+1}}{WACC - g} \quad (2)$$

Where:

$$FCFF_{n+1} = FCFF_n \times (1 + g) \quad (3)$$

With $g = g_n = g_{n-1}$

Then we just need to add this to the previous equation to consider the Enterprise Value with perpetual cashflow streams. The main limitation of this method is the accuracy of the perpetual growth rate. If we assume a growth rate last forever fixed, the firm will grow more than the economy which operate. (Damodaran, 2020)

“No firm can grow forever at a rate higher than the growth rate of the economy in which it operates. In fact, a simple rule of thumb on the stable growth rate is that it should not exceed the risk-free rate used in the valuation; the risk-free rate is composed of expected inflation and a real interest rate, which should equate to the nominal growth rate of the economy in the long term. As firms move from high growth to stable growth, we need to give them the characteristics of stable growth firms.” (Damodaran, 2020, p. 67).

Moreover, based on what has been mentioned above, it is possible to formulate a new equation for enterprise value, considering the perpetuity time horizon or terminal value:

$$EV = \sum_{t=1}^n \frac{FCFF_t}{(1 + Wacc)^t} + \frac{TV_n}{(1 + WACC)^n} \quad (4)$$

Considering that $n \neq \infty$.

1.4 Equity Value

The equity value is calculated by subtracting all non-equity claims, such as interest-bearing debt and debt equivalents from the enterprise value. The value of non-operating assets is then included to determine the comprehensive equity valuation. (Koller, 2020).

After identifying the enterprise value of the company, with the exclusion of non-operating assets (NOA) and non-equity claims, excluding working capital, the value of the company's shares and loans must also be determined. This value, known as Equity Value (EQV), reflects the level of ownership that shareholders bring to the business. (Koller, 2020).

Starting with non-operating assets (NOA), these assets usually include cash and near-cash investments. These investments can involve risk-free or relatively low-risk instruments, which are often made by companies with large cash reserves. NOA can also include investments in shares and bonds of other companies, either for investment or strategic reasons. It can include participation in private or public companies, as well as company assets that do not generate cash flows. (Damodaran,

1995). To calculate Non-Operating Assets (NOA), estimate the market value of each asset separately and add it to the enterprise value net of taxes. (Koller, 2020).

From this point forward, the following formulas defines the process for computing the equity value of the target company.

$$NOA = Market\ value + (Market\ Value - Book\ Value) * (1 - t_c) \quad (5)$$

Where:

t_c – Corporate Tax Rate

$$EQV = EV + NOA - (Non - Equity\ Claims) \quad (6)$$

Considering that EV equals Enterprise Value of equation (4).

1.5 Discounted Cashflow

In the valuation of companies through the discounted cash flow method, the determination of the asset value is based on the present value of prospective cash flows attributable to the asset. These cash flows experience discounting at a rate corresponding to the assessed level of risk associated with them (Damodaran, 2006).

This model embraces a dynamic perspective in assessing a firm value, emphasizing its capacity to generate future cashflows rather than employing a static approach. (Mota et al., 2020).

In the subsequent section, various methodologies associated with this model will be elucidated. Following this, there will be a subsequent exploration into the acquisition of input data, the formulation of assumptions, and the interpretation of resultant outputs.

1.5.1 Free Cashflow to the Firm

The first stage in developing a discounted cash flow (DCF) model is to define the valuation time horizon. Cash flows are typically estimated over a five-year timeframe. However, to reduce the possibility of errors, it is best to expand the temporal horizon by include a perpetual value. (Damodaran, 1995).

The next step is to precisely estimate the target company free cash flow (FCFF), which is a vital component of the valuation process. Accurate FCFF estimation is critical, and achieving this requires an extensive understanding of the target company operating processes. In this aspect, the income statement is the primary source for estimating FCFF. (Damodaran, 1995).

The free cashflow to the firm is the cashflow created by operations, regardless of how the company is financed. It is the amount of money available in the company after paying for fixed asset investment (CAPEX) and working capital requirements, assuming no debt and consequently no financial expenses. (Fernández, 2002).

The Free Cash Flow to the Firm (FCFF) technique measures the funds received by the operations of a business, excluding investments. It represents the value available to stakeholders and may be calculated using the following formula:

$$FCFF = EBIT \times (1 - t_c) + \text{Depreciations \& Amortization} - CAPEX - \Delta WC \quad (7)$$

Concerning the discount rate, the company's weighted average cost of capital (WACC) is suggested. The FCFF indicates the cash flow available to creditors and shareholders, so the discount rate must include the cost of all external funds, both debt and equity. The WACC, which reflects the existing capital structure, or a planned WACC can be used, particularly in scenarios involving a potential buyer with a different financial strategy. This ensures an accurate picture of the cost of money. (Mota, 2020).

1.6 Cost of Capital

1.6.1 The Capital Asset Pricing Model (CAPM)

The Capital Asset Pricing Model was developed by Sharpe (1964), Lintner (1965), and Mossin (1966), based on the Markowitz model (1952). The model provides a framework that establishes a trade-off between the risk and return of a risky financial asset. (Miguel et al., 2018).

The model is supported in key assumptions: all investors are considered price takers, it operates within a single period, financial assets are perfectly divisible, there are no taxes or transaction costs, markets are efficient, it is possible to borrow or lend at a risk-free rate (r_f), investors exhibit risk aversion, are non-satiated in their preferences, base their investment decisions on expected return and associated risk, and investors' expectations are homogeneous. (Miguel et al., 2018).

As a result, all these preceding assumptions are rooted in Markowitz modern portfolio theory in defining a Security Market Line (a graphical representation), which illustrates efficient portfolios for different combinations of potential return and risk. Therefore, the CAPM defines investors return expectations as a function that combines the risk-free rate and the risk premium (the expected return of a risky portfolio) multiplied by the covariance measure, beta, which will be further explained.

$$E(r_i) = r_f + CRP + (E(r_m) - r_f) \times \beta_i \quad (8)$$

Where:

$E(r_i)$ – Expected return of security i

r_f – Risk free rate

$E(r_m) - r_f$ – Market risk premium of security market

β_i – Beta of security i

$(E(r_m) - r_f) \times \beta_i$ – Equity risk premium demanded by security i .

CRP – Country Risk Premium

Despite the empirical limitations of the CAPM due to its set of unrealistic assumptions, it will be utilized throughout this project because *“The attraction of CAPM is that it offers powerful and intuitively pleasing predictions about how to measure risk and the relationship between expected return and risk.”* (Fama and French, 2004, p. 1).

1.6.2 Beta

Beta is an essential risk metric for valuate an asset or security. It plays a significant role in the Capital Asset Pricing Model (CAPM), making it easier to quantify the responsiveness of an asset or security in terms of expected return to fluctuations in market returns. Ceteris Paribus, for each positive/negative variation in market returns, the expected return on the asset is expected to rise/fall by $B_i\%$. (Miguel et al., 2018).

$$B_i = \frac{COV(r_i; r_m)}{Var(r_m)} \quad (9)$$

“A risky asset’s return is uncorrelated with the market return – its beta is zero – when the average of the asset’s covariances with the returns on other assets just offsets the variance of the asset’s return. Such a risky asset is riskless in the market portfolio in the sense that it contributes nothing to the variance of the market return. When there is risk-free borrowing and lending, the expected return on assets that are uncorrelated with the market return must equal the risk-free rate.” (French & Fama, 2004, p. 6).

In this way, different assets or securities incorporate distinct beta coefficients, signifying diverse degrees of market or systematic risk. A higher value of the beta parameter corresponds to an elevated level of risk associated with the asset/security when compared to the market. A beta exceeding (falling short of) one signifies that the asset possesses a higher (lower) level of systematic risk in comparison to the market. Thus, a beta of one implies an equivalent risk profile as the market, while a beta of zero designates an asset as risk-free.

1.6.2.1 Beta Unlevered/Levered

Previously, the meaning of the beta coefficient has been illustrated. Despite of everything, multiple alternatives exist for beta parameter estimation, predominantly reliant on historical return-based metrics. Consequently, a continuous beta estimation approach is necessary to mitigate potential gaps in parameter estimation.

As a result, the application of the theory of bottom-up betas becomes pertinent, as it reflects the sector-specific attributes within which the company operates, encompassing its cost structure and debt profile. *“Breaking down betas into their business, operating leverage and financial leverage components provides us with an alternative way of estimating betas, where we do not need past prices on an individual firm or asset to estimate its beta.”* (Damodoran, 1999, p. 267).

Steps for this method:

1. Identification of the industry sector within which the target company operates, along with the selection of pertinent benchmarks. These benchmarks may include individual publicly traded companies that bear similarity to the company under analysis, industry averages, or peer group averages. The aim is to determine the leveraged beta (B_L).
2. Estimate the Beta unlevered (B_u) for the benchmark by the following formulas:

$$B_u = \frac{B_L + B_D \times \frac{D}{E} \times (1 - t)}{1 + \frac{D}{E} \times (1 - t)} \quad (10)$$

$$B_D = \frac{R_D - (r_f + CRP)}{MRP} \quad (11)$$

Where,

B_u – unlevered beta

B_L – levered beta

B_D – beta of debt

$\frac{D}{E}$ – debt to equity ratio

t – tax rate

R_D – Cost of debt

r_f – risk free rate

CRP – Country Risk Premium

MRP – Market Risk Premium

3. Assume that the previous beta unlevered or the average of peer group betas unlevered correspond to the beta unlevered of the target company.

4. Finally using the data of the target company, find the beta levered by using the following formula:

$$B_L = B_u + (B_u - B_D) \times \frac{D}{E} \times (1 - t) \quad (12)$$

As a result, this approach provides a more accurate beta estimation, without need to base in historical prices or regression, but considering the company business and cost and debt structure. The challenge arises when there are no publicly traded entities within the target company sector, necessitating the computation of industry averages or peer group averages with the risk of potentially overlooking outliers (Mota, 2020).

1.6.3 Risk-free Rate

“Most risk and return models in finance start off with an asset that is defined as risk free and use the expected return on that asset as the risk-free rate” (Damodaran, 1995, p. 211)

The risk-free rate represents the foundational consideration when employing the Capital Asset Pricing Model (CAPM). It is imperative to precisely define what qualifies as a risk-free asset and delineate the criteria governing this definition. According to Damodaran, there are two essential conditions for an asset to be considered risk-free. First, its expected return must equate to its concrete return. Additionally, the asset should not carry any default risk. Assets that potentially meet these criteria are predominantly government securities, not due to superior performance relative to corporations, but due to the government authority over currency issuance (i.e., money supply).

However, a challenge persists, related to the second condition, which requires the absence of reinvestment risk. Also, only bonds with a maturity matching the investment horizon should be considered, aligning their cash flows with the projected investment duration.

It is equally crucial to appreciate that the risk-free rate should be denominated in the same currency as the cash flows under consideration and it is advisable to employ the real risk-free rate, excluding the expected inflation rate, particularly for countries with economically unstable environments.

1.6.3.1 Country Risk Premium

The Country Risk Premium is the additional premium required to compensate investors for the increased risk of investing abroad. (Picardo, 2023).

The country risk premium incorporates the specific risk associated with the country in which a company conducts its operations. When employing a risk-free rate that does not align with the country's treasury bonds of operation, the addition of a premium becomes requisite. This adjustment serves to enhance the precision of the risk-return relationship within the framework of the Capital Asset Pricing Model (CAPM). The country risk premium may be sourced from Damodaran comprehensive database, which provides quantified risk premiums for various countries.

1.6.4 Market Risk Premium

“The market risk premium is the incremental return demanded by investors from equity above the risk-free rate.” (Fernández, 2002, p. 213). The market risk premium can be formally defined as the additional return expected by an investor for choosing to invest in the stock market, characterized as a risky asset, as opposed to the risk-free rate of return. This premium can be computed using the following formula:

$$\text{Market Risk Premium} = (E(r_m) - r_f) \quad (13)$$

“The market risk premium and the expected market return are the most important parameters in finance, but they are expectations and, therefore, non-observable parameters”. (Fernández, 2002, page 213). The issue surrounding the market risk premium calculation centers on the challenge of accurately estimating the expected market return. The approach is based on past returns versus the current

inflation. In this master's thesis, the emphasis lies on using empirical data to enhance precision. The approach prioritizes the use of real data and strives to obtain the most recent historical returns available, with a focus on comprehensive data sources like the Damodaran database for a precise market risk premium estimation.

Multiplying the beta of the target company by the market risk premium yields the equity risk premium, a crucial risk measure for estimating the cost of equity and the cost of debt, as well as, naturally, the cost of capital. As articulated in following formula:

$$\text{Equity risk premium} = (E(r_m) - r_f) \times \beta_i \quad (14)$$

“Building on the theme that the equity risk premium is the price for taking risk, it is a key component into the expected return that we demand for a risky investment. This expected return, is a determinant of both the cost of equity and the cost of capital, essential inputs into corporate financial analysis and valuation.” (Damodaran, 2020, p. 6).

1.6.5 Cost of Equity

The expected return on an investment in a company shares, considering the associated risk, is important for both share investors and the company management. From the investor perspective, this rate is the minimum return needed to justify the risk inherent in investing in the company shares. If, after careful analysis, investors believe that the estimated return is insufficient, they may decide not to proceed with the investment. On the other hand, if investors believe that the return is sufficient, they are more likely to make the investment. Normally, this return is compared to the risk-free rate, but factors such as country risk, market risk and volatility should also be considered. For the company management, the return required of investors to reach the return threshold for their investments in shares becomes the standard they should aim to exceed. Meeting or exceeding this return is key to avoiding investor dissatisfaction and potential conflicts. Essentially, this rate serves as a performance target for the return on equity investments in various projects, indicating the company cost of equity. (Damodaran, 1995).

The cost of equity (r_e) is the rate of return require by investors to market risks when investing in a company. It may be calculated using the equation below:

$$r_e = r_f + CRP + (E(r_m) - r_f) \times \beta_l \quad (15)$$

Where:

r_f – Risk free Rate

CRP – Country Risk Premium

$(E(r_m) - r_f)$ – Market Risk Premium

β_l – Beta Levered

The cost of equity is calculated using the Capital Asset Pricing Model (CAPM), while Beta is determined using the bottom-up methodology. The leveraged beta is used to calculate the cost of equity, as it is important for assessing the implications of debt when establishing the value of the target company's equity.

1.6.6 Cost of Debt

The cost of debt is a tool used to assess how much it currently costs a company to raise capital for projects. The risk-free rate, the default risk (as well as the company-related default spread) and the tax benefits of debt have a fundamental impact on the cost of debt. There is a linear relationship between these independent variables and the cost of debt. Damodaran (1995). The following formula can be used to calculate the cost of debt (r_D):

$$r_D = r_f + \text{Default Spread} \quad (16)$$

When a company has widely traded long-term bonds, the easiest way to estimate the cost of debt can be used. By calculating the market price, the coupon and the maturity of the bond, we can determine a yield that acts as the cost of debt. (Damodaran, 1995). But there are bonds from many companies that are not traded regularly. In these situations, since these companies usually have credit ratings, we can use these ratings and the associated default spreads to determine the cost of debt. (Damodaran, 1995).

1.6.7 Capital Structure & Tax Shield

A company capital structure is determined by the balance of debt, equity, and other securities it currently has in circulation. When companies seek funding from external investors, they face the decision of selecting the type of security to issue. The typical options involve either relying exclusively on equity for financing or opting for a mix of debt and equity. (DeMarzo & Berk, 1988).

The capital structure of a firm delineates the equilibrium between debt and equity concerning the company valuation. Subsequently, various ratios emerge as pivotal metrics in the computation of the cost of capital:

$$\frac{D}{E} = \text{Debt to Equity ratio} \quad (17)$$

$$\frac{D}{E + V} = \text{Debt to Value ratio} \quad (18)$$

$$\frac{E}{E + V} = \text{Equity to Value ratio} \quad (19)$$

According to the Modigliani-Miller I theorem with corporate income taxes, the value of a leveraged company exceeds that of an unleveraged company due to the present value of the interest tax shield (tD). The augmentation of indebtedness contributes to an increase in the company's value through the induced increment in the present value of the tax benefits associated with interest payments. (Mota et al., 2020).

$$V_L = V_u + tD \quad (20)$$

Thus, the theory suggests that the optimal capital structure would ideally be entirely debt-financed. However, given considerations of agency costs, distress costs, information asymmetry, and regulatory constraints, the necessity for equity capital always persists. Thus, the proposition of relying solely on 100% debt is deemed unrealistic. Consequently, one must be mindful of the limitations on debt utilization and recognize that certain business sectors may warrant higher debt levels than others.

This is exemplified by the utility industry, which requires a greater reliance on debt for operational development compared to the technology sector.

Moreover, considering the Modigliani-Miller II theorem, the tax benefit resulting from substituting equity for debt is not completely offset by the increased financial risk and higher return demanded by shareholders. Consequently, the cost of capital (WACC) decreases with increased leverage. Thus, it is imperative to incorporate the corporate tax rate in the computation of WACC, as will be demonstrated shortly. (Mota et al., 2020).

1.6.8 Weighted Average Cost of Capital

The discounting of cash flows to the weighted average cost of capital (WACC) is essential when using the discounted cash flow methodology to evaluate a target company, with special emphasis on the free cash flow for the company (FCFF) approach mentioned above. The weighted average cost of capital (WACC) is a measure of the expected returns that a company equity and debt holders expect to obtain when they invest their capital in a firm.

Their potential cost of capital is the term used to describe the lost return on investment. The term cost of capital is frequently used in conjunction with the projected return since investors in a firm stand to realize the cost of capital should the company satisfy expectations. The cost of equity, the after-tax cost of debt, and the company intended capital structure are the three main components that make up the WACC. (Koller, 2020).

$$Wacc = r_e \times \frac{Equity}{Equity + Debt} + r_D \times \frac{Debt}{Debt + Equity} \times (1 - T_c) \quad (21)$$

In the simplest form, the Weighted Average Cost of Capital can be computed by using formula (22).

1.7 Relative Valuation

Relative valuation works on the premise that comparable assets should have similar market prices.

This approach is commonly executed using price multiples, which are ratios comparing a stock's price to its underlying fundamentals. Examples include inspecting metrics such as the cash flow per share or employing enterprise value multiples, which consider the total value of common stock and debt net of cash and short-term investments in relation to a fundamental metric like operating earnings. (Pinto, 2010).

The primary assumption suggests that the market consistently and correctly prices stocks on average, while making errors in the valuation of individual stocks. Utilizing the comparison of multiples, these discrepancies are identified, with the expectation that corrective adjustments will naturally occur over time. (Damodaran, 1995).

The primary challenge in relative valuation lies in the subjective nature of selecting comparable firms and determining the appropriate multiple to apply. This inherent subjectivity underscores the use of relative valuation as a complementary tool rather than a substitute for other approaches. (Mota et al., 2020).

1.7.1 Multiples Valuation

A valuation multiple is the market value of a company divided by a relevant statistical measure, usually a ratio, which is thought to correlate with that value. This statistic, be it cash flow, profits or any other measure, needs to show a reasonable correlation with the observed market value to be meaningful. (Mota, 2020).

The *Table 2* below illustrates various types of multiples classified by (Fernández, 2002).

Table 2:

Multiples type classified by Fernández, 2002 (Author Adjust).

Price-Based Multiples	Price Earnings Ratio (PER); Price to Sales (P/S); Price to Book Value (P/BV)
Enterprise Value-Based Multiples	Enterprise Value to EBITDA (EV/EBITDA); Enterprise Value to Sales (EV/S); Enterprise Value to NOPAT (EV/NOPAT)
Growth-Referenced Multiples	PER to EPS growth (PEG); Enterprise Value to EBITDA Growth (EV/EG)

First, price-based multiples look at the equity worth and financial performance of a company to determine its market valuation. Because it is widely available and earnings per share is a key value

driver, the Price-to-Earnings Ratio (PER) stands out as one of the most used multiples. But care should be taken because some industries might have more appropriate multiples than others, and these measurements might be manipulated. (Fernández, 2002).

Multiples based on the value of the company are like those discussed above, but instead of emphasizing the value of equity, the company's total market capitalization and financial debt are considered to determine the value of the company. In this category, the value of the company in relation to EBITDA (EV/EBITDA) is the most used multiple. However, as it doesn't consider capital investments or changes in working capital requirements, EBITDA has some limitations. (Fernández, 2002).

High-growth industries including technology, telecommunications, health care, and luxury goods frequently use the growth-referenced multiples. (Fernández, 2002)

1.7.2 Peer Group

Multiple evaluation can be carried out in two ways. Finding a company that shares characteristics with the target company is the first option. The second, more popular option is to choose a sector average that is relevant to the research and apply it to a group of peers. (Mota, 2020). Peer groups, which are often used as a set of comparative assets, are businesses that are involved in the same industry as the target company. Utilizing a peer group has advantages because the constituent companies typically have comparable business compositions to the company being studied. This approach is consistent with the relative valuation concept, which holds that similar assets typically have similar market prices. (Pinto, 2010).

Selecting the right peer group is essential for determining a reasonable multiple valuation. (Koller, 2020). Therefore, to normalize the multiples into a more comparable format, attempts can be made to change the individual multiples observed. Alternatively, if the observed value is noticeably outside a reasonable range, often referred to as an outlier, a particular company can be removed from the peer group for that multiple. (Mota, 2020). Consequently, it is imperative that the following methods, established based on Professor António Mota, are followed to exclude outliers:

1. Any number that is equal to one standard deviation or more, or equal to the average minus one standard deviation, should be excluded.
2. Take out of the peer group any company that has two or more outliers.
3. Remove any multiple that yields a valuation that is one standard deviation above or below the average, plus or minus one standard deviation.

Chapter 2: Macroeconomic Overview

This chapter aims to provide an overview of the macroeconomic environment, with a particular focus on the utilities industry, in which Iberdrola S.A. is involved. This chapter provides background information and acts as a contextual basis, adding to the fundamental assumptions that support the valuation of Iberdrola S.A.

2.1 World Economic Outlook

The global economic recovery met significant challenges throughout 2023, and this trend persists into 2024 owing to the slow post-pandemic economic recovery and geopolitical instability. This instability is characterized by escalating competition and conflict, exemplified by the Russian invasion of Ukraine and conflicts between Israel and Palestine, among others. Projections suggest a deceleration in global growth from 2.5% in 2023 to 2.4% in 2024, falling below the historical average. Developed economies are expected to slow down in 2024, and emerging economies will also experience a decline, influenced by the real estate crisis in China as well as the conflict between China and Taiwan. (Economist Intelligence, 2024).

The diffusion of global power and uncertainty regarding the direction of US foreign policy underpin this rise in geopolitical risk. It is anticipated that competing blocs and alliances will form, leading to greater regionalization and fragmentation of the global economy. Additionally, the resurgence of industrial policy, including sanctions and the provision of new incentives, will pressure companies to adopt less efficient supply chains. This will fuel trade tensions in strategic sectors and make competition in the global market more challenging. The combination of these events, combined with rising interest rates, will reduce growth potential, resulting in global real GDP expanding at an average annual rate of 2.6% over the next five or more years, below the 3% mark of the previous decade. (Economist Intelligence, 2024).

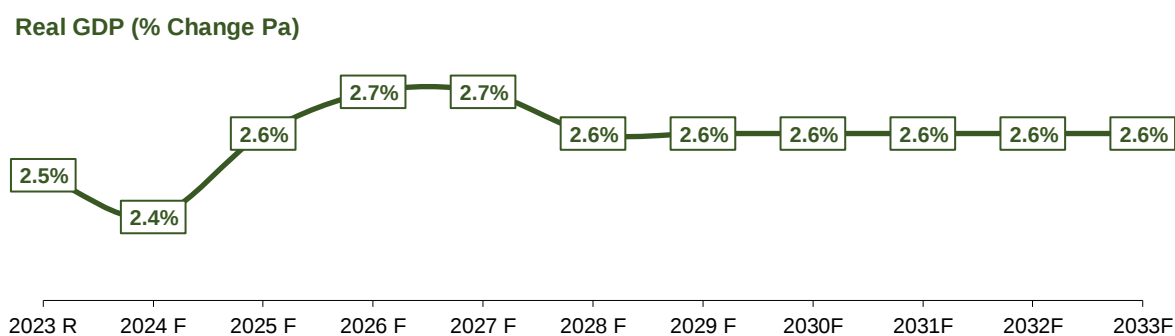


Figure 1: Real GDP (% Change Pa)

Source: The Economist Intelligence Unit (EIU)

Global inflation is not forecasted to return to the low levels seen before the pandemic or to the 2% target set by central banks in the next five or more years. World Conflicts are exerting pressure on prices, along with the migratory crisis in Europe, which is tightening the labor market, also affected by demographic changes. Climate change and the reconfiguration of supply chains are also driving prices higher. It is expected that inflation worldwide will continue to trend downwards due to the impact of restrictive monetary policy. However, central banks are postponing interest rate cuts until the end of 2024, which is crucial decision for the long-term health of the economy. The current uncertainty is causing them to be more cautious and deliberate in their monetary policy decisions, leading to pressure for domestic debt contraction and encouragement of foreign investment. (Economist Intelligence, 2024).

Consumer prices (% change pa; av)

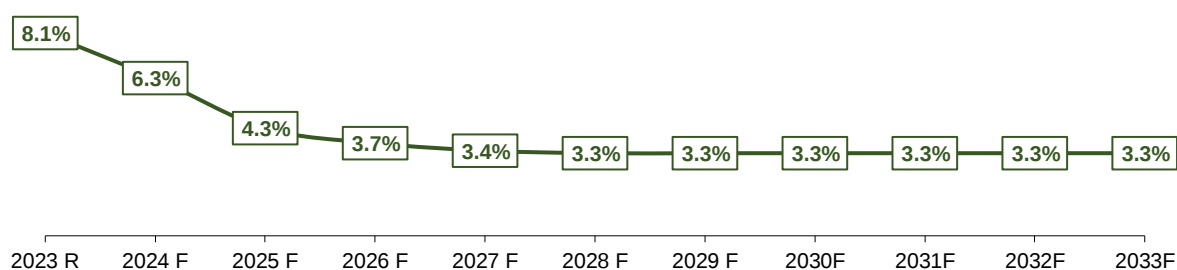


Figure 2: Consumer Prices (% Change Pa;av)

Source: The Economist Intelligence Unit (EIU)

Additionally, focusing on the utilities sector, it is crucial to analyze the growth of the global population as it is directly linked to increases in demand for utilities such as waste management, gas, water, and power. This places pressure on utility companies to meet this demand sustainably and efficiently. The complementary figure illustrates that the population continues to grow, although at a more gradual rate over the years, highlighting the need to address the demand for energy while also considering changes in consumer preferences and behavior, with a growing emphasis on sustainability and environmental concerns.

Utility companies must adapt to these shifts by offering innovative and environmentally friendly solutions that align with the evolving needs of their customers. The deceleration in population growth can be attributed to demographic challenges present in the world today, such as the increase in average life expectancy and the decline in the global fertility rate since 1950. This demographic challenge may reduce the willingness to engage in risky investments and decrease government income, which can affect the government ability to continue invest in the sector.

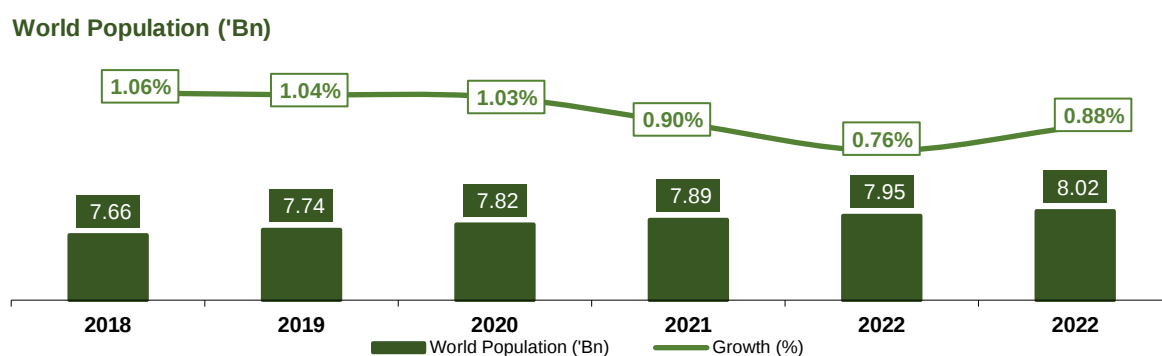


Figure 3: World Population ('Bn)

Source: World Bank Group

Finally, the imperative for effective policies is crucial. Central banks should seek stability, employing tools to alleviate financial stress. Fiscal policies must focus on rebuilding budgetary margins and implementing structural reforms to promote growth and workforce participation. Multilateral cooperation is vital for resolving debt issues and mitigating the impacts of climate change, facilitating a smooth green transition. However, it is noteworthy that 2024 is considered one of the most significant electoral years ever, with elections scheduled in Portugal, Taiwan, Iran, the United Kingdom, India, the European Union grappling with the rise of far-right movements, and the United States of America. Thus, besides being a year of major decisions, it will be a year of considerable uncertainties and political instability.

Chapter 3: Industry overview

The utilities sector plays a crucial role in modern times. Its services are essential for both private and public business, as well as for individuals. Countries are highly dependent on energy, and that is why this sector is deeply regulated. The supply and demand for energy is the most significant aspect to consider for this sector, as the countries relies heavily on energy for its day-to-day activities.

The utilities market can be divided into two types, namely fossil fuels and green energy. Fossil fuels such as coal, natural gas, and petroleum are commonly used sources for power generation, with coal and natural gas being the primary sources. Green energy includes various renewable sources such as solar and wind power, as well as the emerging technology of green hydrogen. Nuclear energy is also an option for power generation.

The utilities market consists of electricity retailing, transmission, and distribution. Efficient supply and distribution of electricity is a key requirement for this sector, the supply always must meet the demand.

Today, the utilities sector has undergone a huge change due to the pressing need to switch to more sustainable sources and the increased awareness of environmental issues around the world. Decarbonization is now considered necessary due to concerns about fossil fuels, fuel shortages and the effects they have on the environment. By 2050, the European Union wants to be carbon neutral.

Due to political and social pressure, utility companies are therefore key to leading this change by adopting investments, strategies and technological innovation that are in line with environmental, social and governance (ESG) strategies. They also actively participate in programmes such as Green Finance, which finance projects that support the low-carbon economy.

3.1 Market Size

The utilities sector market size was 5.804.955 million euros in 2023, and it is anticipated to grow to 6.194.799 million euros in 2024, with a compound annual growth rate (CAGR) of 6.9%. (The Business Research Company, 2024). This growth can be attributed to developments in emerging markets, advancements in technology, and the liberalization of the market.

In the forecasted period, the utilities market is expected to witness healthy growth, with an anticipated expansion to 7.950.006 million euros in 2028 at a compound annual growth rate (CAGR) of 6.4%. (The Business Research Company, 2024). This growth is expected to result from population growth, economic expansion, increased investment in renewable energy, and a focus on innovation and new technologies.

3.2 Trends

As world advances towards achieving net-zero emissions, a successful energy transition requires significant adjustments to overcome obstacles and meet the goals of the Paris Agreement. Key challenges include adapting to technological changes, geopolitical risks, and shifting consumer behaviors. Emission reductions must align with temperature increase limits of 1.5 to 2.3 degrees Celsius, requiring a decline in fossil fuel usage, particularly coal, by 2030. An increase in natural gas demand is projected until 2040, serving as a bridge to renewable energies until large-scale battery solutions become viable. (McKinsey & Company, 2023).

Renewable energies are poised for robust growth, driven by their cost competitiveness. Solar and wind power are expected to dominate, contributing 45 to 50% of global power production by 2030 and potentially reaching up to 85% by 2050. Despite this growth, challenges persist, including supply chain issues, bureaucratic hurdles in permitting, and network construction implications. Nuclear and carbon capture technologies may help alleviate pressure on renewables, but their adoption hinges heavily on political and cost factors. (McKinsey & Company, 2023).

An approach of phasing out coal is envisioned, while gas plants adapted to the use of hydrogen can ensure grid stability. However, the widespread adoption of green hydrogen faces significant challenges, mainly due to infrastructure needs and high investment requirements.

Investments should align with GDP growth, with higher investments in the energy sector offsetting reduced operating costs of coal and gas due to transitioning to capital-intensive renewable technologies. However, challenges such as land availability, infrastructure, and material shortages pose significant hurdles.

Strategies to navigate this energy transition include mergers, acquisitions, government initiatives, B2B services, technological innovation, and financing mechanisms. Overall, the business landscape anticipates increased capital expenditures in energy transactions, underscoring the fundamental role of adopting viable and sustainable investment strategies.

3.3 Demand Drivers

In terms of demand drivers, it is possible to divide in two main drivers, green energy demand and costs of renewable energy.

Beginning with Green Energy, due to concerns about climate change and the world dependency on fossil fuels, the world is increasing the demand for green energy such as renewables sources. These renewable energy sources are an environmentally friendly and sustainable alternative to fossil fuels because they don't release greenhouse gases during the electricity generation process. As can be seen in the *figure 4*, the market value of electricity generation worldwide by source, wind and solar power are expected to grow more than fossil fuels.

Market value of electricity generation worldwide growth by source

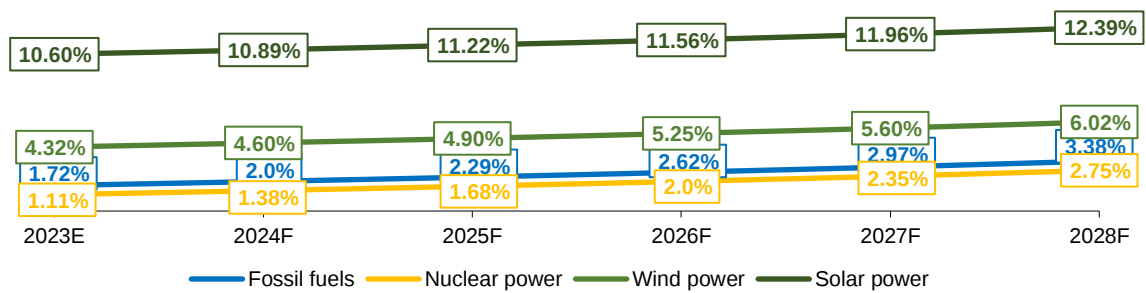


Figure 4: Market value of electricity generation worldwide growth by source

Source: Statista

According to the International Energy Agency (IEA), in 2023, renewable energy capacity increased by 507 GW, nearly 50% higher than in 2022. It is anticipated that renewables will continue this upward trajectory over the next five years, with solar photovoltaic (PV) and wind power accounting for 96% of new capacity during this period. The costs of renewables are declining, aided by governmental support, making them increasingly competitive compared to both fossil fuels and non-fossil fuel alternatives, particularly solar PV, as can be seen in Figure 5.

Average installed cost for solar photovoltaics worldwide (in U.S. dollars per kilowatt)

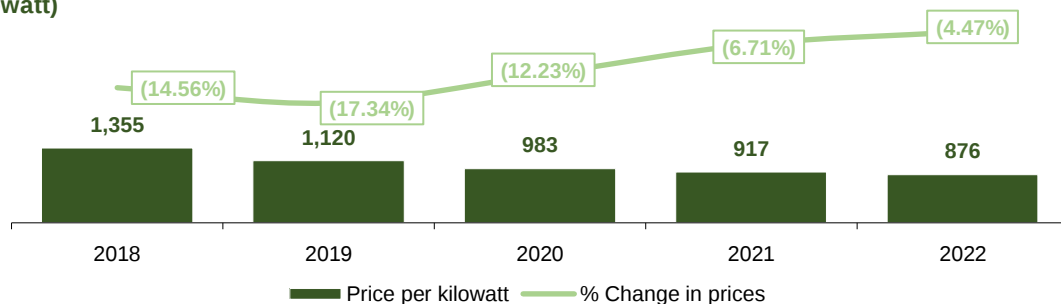


Figure 5: Average installed cost for solar Photovoltaics worldwide (in U.S. dollars per Kilowatt)

Source: Statista

To meet the expectations of the energy transition, efficiency gains will be necessary. According to the World Economic Forum (WEF), there are three primary methods for achieving this, enhancing energy efficiency through operational improvements, financed by reduced operating expenditures, as well as enhancing energy efficiency through capital expenditure. The third method involves "value chain collaboration" aimed at reducing carbon intensity. This entails direct collaboration between companies, suppliers, and other stakeholders to minimize energy impact, lower costs, and progress towards achieving net-zero emissions.

3.4 Supply Drivers

In terms of supply drivers, it is possible to define three main drivers, the government support on energy transaction, increase in the use of technology and the commodity prices.

The non-fossil fuels energy is receiving government support. The effect of the Paris Agreement on November 4, 2016, encouraged governments to institute incentives for investment in renewable energies and emerging technologies, such as green hydrogen, aimed at diminishing reliance on fossil fuels and mitigating the effects of climate change. Consequently, the pursuit of renewable or green energy sources emerges as a financially feasible investment, thereby reducing greenhouse gas emissions and helping the maintenance of temperature increases within the range of 1.5 to 2.3 degrees Celsius aim by the previous agreement. These initiatives rely on green finance and sustainable finance funding promote by countries governments.

The energy sector has been greatly impacted by the explosive rise of digital technology, particularly in terms of increased productivity, efficiency, safety, compliance, and dependability in the generation, transmission, and distribution of power. Smart meters give both the business and the customer more accurate and up-to-date power usage reports. Smart grids integrate digital communication technologies into power networks, enabling efficient management and distribution of electricity. Sensors monitor infrastructure parameters in real-time, facilitating proactive maintenance and optimizing performance. (The Business Research Company, 2024). Power plants are operating differently because of these technologies, which leads to improved asset management, planning, and execution as well as a quicker level of service and more customer satisfaction. All things considered, these technologies promote integration of renewable energy sources, increase grid dependability, and boost overall energy supply efficiency. (The Business Research Company, 2024). *Figure 6* illustrates how the share of low-carbon energy generation in power generation is rising.

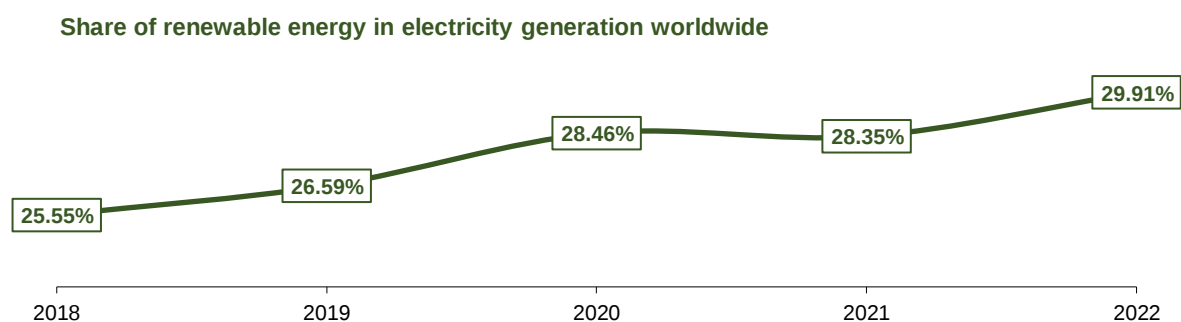


Figure 6: *Share of renewable energy in electricity generation worldwide*

Source: IEA

The energy sector continues to face the impacts of Russia's invasion of Ukraine in December 2022, triggering the largest global energy crisis and causing energy prices to reach historic highs. Europe was

heavily dependent on Russian natural gas, which represented about 70% of Russia's exports before the war. This dependency increased market instability, resulting in price volatility. Europe immediately faced an energy deficit that needed to be addressed.

This challenge led Europe to seek imports from other countries, such as the United States, through liquefied natural gas (LNG). Additionally, Europe began investing in its own energy production, reducing its dependence on this fossil fuel.

This historic event in the energy sector has sparked significant change, with governments worldwide increasing support for renewable energy production to bolster internal energy security. The prices of fossil fuels, as well as greenhouse gas emissions, are no longer economically viable compared to renewable energy production, despite the need for aggressive investments. Although renewable energies still face some challenges, they reduce countries dependence on external sources, positively impacting global sustainable development.

3.5 Players

Considering the industry landscape is crucial for conducting an equity valuation of Iberdrola S.A., as well as to access the risks and challenges of the sector. A key aspect is the selection of its competitors to conduct an accurate multiples valuation. In this regard, the focus is based on companies within the utilities sector with significant market capitalization from both the United States and Europe, reflecting Iberdrola S.A. primary operational presence.

Table 3:

Peers Iberdrola S.A., Source: Eikon Reuters Plataforma.

Identifier (RIC)	Company Name	Country of Exchange
IBE.MC	Iberdrola SA	Spain
ENEL.MI	Enel SpA	Italy
NTGY.MC	Naturgy Energy Group SA	Spain
ELE.MC	Endesa SA	Spain
EDP.LS	EDP Energias de Portuga	Portugal
EDPR.LS	EDP Renovaveis SA	Spain
REDE.MC	Redeia Corporacion SA	Spain
ELE.MC	Endesa SA	Spain
EONGn.DE	E ON SE	Germany
ENGIE.PA	Engie SA	France
SO	Southern Co	United States of America
EXC.O	Exelon Corp	United States of America
ENAG.MC	Enagas SA	Spain

Applying this list present of *table 3*, will be identify outliers in chapter 5 based on the peer group selection approach mentioned earlier.

Chapter 4: The Company

4.1 Profile

Iberdrola S.A. (IBE.MC) is a renowned worldwide energy company headquartered in Bilbao, Spain, with over 170 years of experience. Iberdrola, a prominent player in the utilities sector, has expertly handled industry transitions and positioned itself with a significant market capitalization of 6.062.400 million euros and a market share of 8,5% of utilities market by the end of 2023. (Iberdrola S.A., 2023).

Serving as the parent company of a group engaged in various key activities, Iberdrola primary functions include the production of electricity, sale and purchase of electricity and gas, transmission and distribution of electricity, retail supply of electricity, gas, and energy-related services, along with non-energy sector-related activities. (Iberdrola S.A., 2023).

Established in 1992 through the merger of Hydroelectrical Española and Iberduero, Iberdrola S.A. has evolved over the past three decades, predominantly conducting operations in Spain, United Kingdom, United States of America, Mexico, Brazil and Continental Europe. Today, the company boasts a Total Installed Capacity of 62,883 MW and a Total Net Production of 168,599 GWh at the end of 2023, as outlined in *Table* below. (Iberdrola S.A., 2023).

Table 4:

Installed Capacity (MW) & Net Production (GWh), Source: Company Integrate report 2022 & 2023

Installed Capacity & Net Production				
	Installed Capacity (MW)		Net Production (GWh)	
	2022H	2023H	2022H	2023H
Total Group	60 761,00	62 883,00	163 031,00	168 599,00
Spain	29 013,00	30 807,00	56 698,00	61 263,00
United Kingdom	3 008,00	3 002,00	7 823,00	7 459,00
United States	9 541,00	9 673,00	22 711,00	23 326,00
Mexico	11 197,00	11 197,00	55 938,00	56 797,00
Brazil	5 101,00	4 395,00	14 751,00	13 653,00
Iberdrola Energía International	2 900,00	3 809,00	5 111,00	6 102,00

4.1.1 Iberdrola Group and Geographical Presence

Iberdrola S.A. organizes its operations through holding companies based on their geographical locations and specific activities. These include entities like Iberdrola España, S.A.U., Scottish Power Ltd., and Iberdrola México, S.A. de C.V., which manage business segments within their respective countries. Avagrid, Inc. (US) and Neoenergia, S.A. (Brazil) are publicly traded companies listed on their respective stock exchanges. (Iberdrola S.A., 2023).

Iberdrola Energía Internacional, S.A.U., a sub-holding company, extends its presence across Australia, Cyprus, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Poland, Portugal, Taiwan, and Romania. (Iberdrola S.A., 2023).

Furthermore, Iberdrola owns Iberdrola Ingeniería y Construcción, S.A.U., overseeing the engineering and construction activities of the group, and Iberdrola Inmobiliaria, S.A.U., responsible for the group real estate transactions. (*Annex A*).

4.1.2 Business Description

Dividing its business activities into four segments, the Customers Business involve energy retail and supply operations across various regions including Spain, the United Kingdom, Brazil, Mexico, Ireland, the United States, and continental Europe. In FY2023, this segment accounted for 61% of the company turnover. (Iberdrola S.A., 2023).

The Networks Business includes all energy transmission and distribution activities, primarily focusing on gas and electricity, along with other regulated activities. It manages distribution activities in Spain and transmission and distribution activities in the United Kingdom, the United States, and Brazil. Additionally, it oversees regulated energy retail supply in the United States and Brazil, along with other regulated activities conducted by the group in these four countries. In FY2023, this segment represented 37.2% of the company turnover. (Iberdrola S.A., 2023).

Regarding the Renewables and Sustainable Generation Business, it comprehends the generation of electricity from renewable sources such as onshore and offshore wind, photovoltaic, and hydroelectric power. Moreover, it manages long-term power purchase agreements with major enterprises or governmental entities in Spain, the United Kingdom, the United States, Mexico, Australia, Germany, and France. In FY2023, this segment contributed 18.8% to the company turnover. (Iberdrola S.A., 2023).

Lastly, the company engages in other non-energy sector activities including real estate, engineering, and technology, such as the production of hydrogen from renewable sources. The company financial statements also account for corporation costs, involving the expenses of the holding structure, and adjustments, which collectively amounted to -13.15% of turnover in 2023. (Iberdrola S.A., 2023).

4.1.3 Shareholder Structure

In terms of Shareholder structure Iberdrola S.A has a total of 6,350.278 million shares outstanding, by the end of 2023. The principal shareholder is the Qatar Investment Authority holding an 8.71% stake in the company. Other significant stakeholders include BlackRock, Inc. with a 5.30% owning, and Norges Bank Investment Management with a 3.45% stake. Furthermore, the Board of Directors collectively owns 0.26% of the company. (Iberdrola S.A., 2023).

4.1.4 Share Price Performance

In Figure 7, the closing price of Iberdrola S.A. stock over the past ten years is depicted, along with its variation compared to the main benchmark index of the Spanish stock market (IBEX 35).

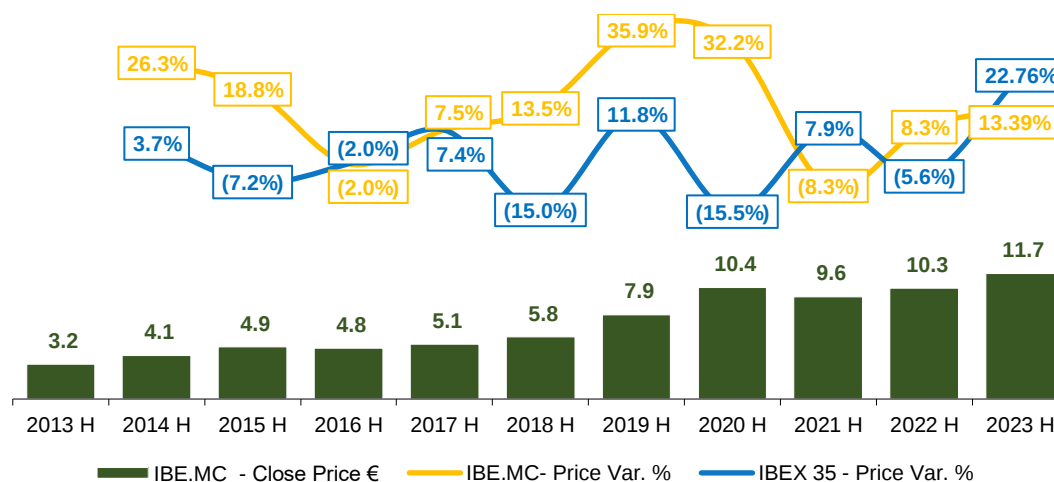


Figure 7: Iberdrola S.A. (IBE) Share Price

Source: Eikon Reuters platform

During this period, Iberdrola S.A. stock achieved a CAGR of 13.7%, in contrast to the 0.19% of the Spanish stock market index. The company outperformed the Spanish index in nearly every year, except in 2021, when it was more affected by the impact of COVID-19 due to its market risk exposure and lack of diversification. It is also evident that investor expectations for the company are positive, with the stock price showing an upward trend, discounting occasional events.

Although the stock price is daily and subject to more volatility than an index, it is important to note that as of December 31, 2023, the closing price of Iberdrola S.A. stock (IBE.MC) was 11.7 euros, according to the EIKON Reuters platform, representing a growth of 13.4% compared to December 31, 2022.

4.2 Company Strategic Vision

The world dependency on energy, more concrete on fossil fuels is growing the global awareness. The scarcity of fossil fuels and their environmental impact challenge the urgent need to transition to more sustainable sources. Due to climate change, the quest for decarbonization has become an unavoidable imperative. The European Union aims to be climate neutral by 2050, with political and social pressure as well as the rapid growth of technology, made low-emission energy production possible and economically viable. Therefore, with the right strategies and investments, decarbonization represents a major creative opportunity that can be seized by renewable energy companies. (Iberdrola S.A., 2023).

Two decades ago, Iberdrola S.A anticipated the previous challenge and invested 140,000 million euros to adapt its business model with a goal of achieving a more competitive, secure and carbon neutral energy model based on electrification. Their vision is based on four pillars, combining the decarbonization process of the global economy with energy self-sufficiency by investing in grids, renewables, storage and green hydrogen, meeting on technological innovation, responding to consumer demands for clean and affordable energy through digitalization and maintaining a solid financial structure. Iberdrola S.A recognize electricity as the heart of energy transaction and to meet the growing demand intend to increase Investments in renewables which, according to IEA could reach two thirds of total electricity generation by 2040. (Iberdrola S.A., 2023).

According to IEA and Iberdrola S.A, to be successful on this objective, will require efficient, smart and flexible grids for transmission, distribution and energy storage infrastructure. So, by 2030, will be needed to double the investment in grids and triple in 2040. Moreover, to achieve complete decarbonization, it is also important to maximize the use of clean energy sources such as green hydrogen for sectors that are difficult to electrify and presence in high credit rating markets with significant demand growth prospects allows to maintain leadership in renewable generation, networks, and storage. (Iberdrola S.A., 2023).

2023-2025 Plan

The global crisis triggered by the 2022 invasion of Ukraine, made clearer than ever that the energy transaction needs to be ramped up as the most efficient way to reduce the global dependency on fossil fuels. Iberdrola S.A revised its strategic plan of 2023 to 2025 by focusing on investing EUR 47,000 million to boost the energy transition. These investing will be allocated to Networks business EUR 27,000 million to reach an asset base of EUR 56,000 million by 2025, to Renewable business EUR 17 000 that will improve capacity by 12,100 MW, with a focus on offshore wind, onshore wind, solar PV, and energy storage reaching 52,000 MW by 2025. In terms of Geography, the United States will be the main investment target, receiving 47% of total investments and the other 53% of total investment will be invested in United Kingdom, Spain, Latina America, Europe, and Australia. (Iberdrola S.A., 2023).

The strategic plan 2023-2025 aims to target an EBITDA between EUR 16,500 and 17,500 million by 2025 and a net profit between EUR 5,200 and 5,400 by 2025. These plan combines financial health, solid credit rating levels, sustainable finance minimizing financial risk and adopt green funding and active liquidity management. (Net debt to EBITDA ratio of 3,4x). It is important to refer that Iberdrola plans to stands by its policy of increasing shareholder remuneration in line with earnings performance and maintaining a fixed number of shares in circulation with Iberdrola Retribución Flexible program. This plan also integrates social and environmental factors, aiming for carbon neutrality by 2040 and a net positive impact on biodiversity by 2030 and intends to recruit 12,000 employees over the next three years to support more than 500,000 jobs globally by 2030. (Iberdrola S.A., 2023).

Lastly, Iberdrola inform the strategic pillars contains forward-looking information with inherent risks and advises carefulness in decision-making based on these estimates and projections. (Iberdrola S.A., 2023).

4.3 Financial Statements Analysis

In this subsection, an analysis of the financial statements of Iberdrola S.A. is conducted, focusing specifically on the balance sheet and the income statement. This analysis is segmented into different stages: profitability and value creation, solvency, and liquidity.

To begin with, an analysis of the profitability of Iberdrola S.A. is undertaken. As evidenced in *Figure 8*, the compound annual growth rate (CAGR) of turnover between 2019 and 2023 stood at 7.9%. The company faced significant challenges due to the COVID-19 pandemic in 2020. However, by 2022, there was a recovery of 48.1% of pre-pandemic levels, driven by the global energy crisis that resulted in historically high energy prices. In 2023, despite the stabilization of prices and ongoing geopolitical uncertainty, turnover experienced a decline of approximately 8.6% but surpassed pre-pandemic levels. It is anticipated that with the recovery of the sector following these occasional events, turnover will maintain a growth trend, although at a moderate pace due to recent developments.

Regarding the EBITDA margin, the company positioned itself above the sector average, reaching 25.5% in 2023, according to EIKON Reuters platform. This indicates efficient management of operational costs. It is expected that, due to the before mentioned events, this margin will remain above the sector average and continue to experience positive, even though gradual, growth. Historical financial statements of the company can be observed in *Annexes B and C*.

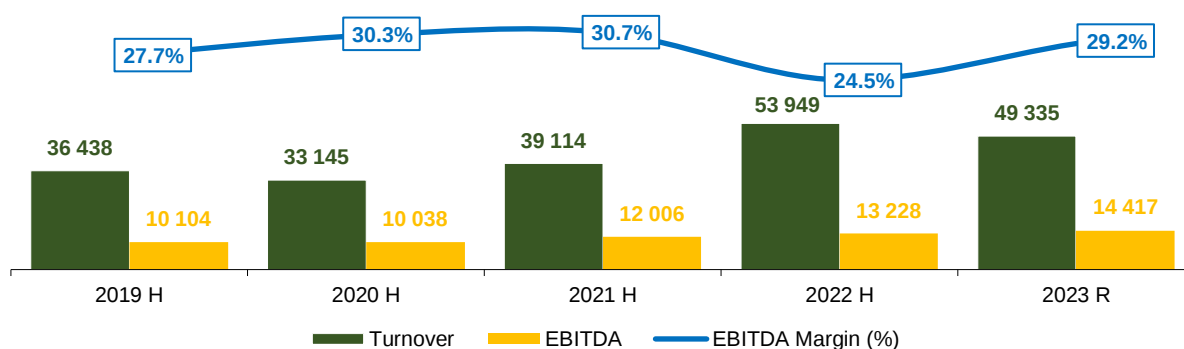


Figure 8: Iberdrola S.A (IBE) Turnover & EBITDA

Source: Company Annual reports 2019,2020,2021,2022 & 2023

When it comes to the primary profitability ratios, the company finds itself slightly lagging its industry peers, which may be attributed to its intensive investment in renewable energies, the results of which are yet to fully materialize. Through *Figure 9*, it can be observed that the company is gradually improving the efficiency of its assets in generating profit. In 2023, the Return on Assets (ROA) stood at

3.61%, 1.9% lower than the industry average for the same year, according to the EIKON Reuters platform.

Regarding the Return on Equity (ROE), it is evident that the company is enhancing its financial performance by more efficiently remunerating its equity capital. In 2023, the ROE recorded a value of 8.98%, 2.1% below the industry average for the same year, as reported by Reuters.

Concerning the Return on Invested Capital (ROIC), the company continues to gradually increase this indicator, exhibiting a more efficient allocation of capital in new projects or investments. In 2023, this ratio was 4.91%.

However, the ROIC is lower than the cost of capital associated with the company, indicating that the company is not creating value for its shareholders, meaning the Economic Value Added (EVA) is negative. Nevertheless, considering the company's intensive investments focused on energy transition, it is likely that this ratio will gradually increase, while the Weighted Average Cost of Capital (WACC) may decrease with the cessation of restrictive monetary policies imposed by central banks to control inflation.

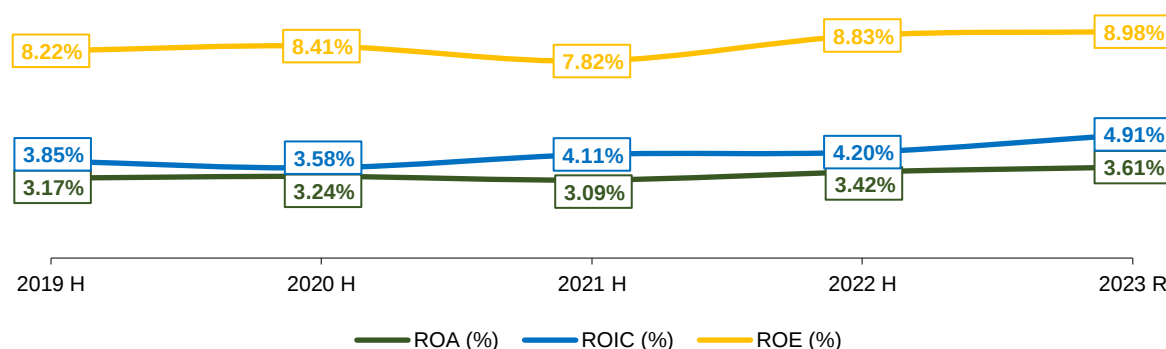


Figure 9: Iberdrola S.A (IBE) Profitability ratios

Source: Company Annual reports 2019,2020,2021,2022 & 2023

In the analysis of solvency, the company ability to meet its medium-term and long-term credit obligations can be assessed. The Net Debt to EBITDA ratio indicates how many years it would take for the company to pay off its debt, if net debt and EBITDA remain constant. In this context, the company has consistently reduced this indicator, a positive sign that suggests convergence with the industry average, as illustrated in *figure 10*.

The interest coverage ratio is a measure of a company's ability to pay interest on its debt. A higher ratio indicates a greater ability to meet financial obligations. The company shows improvements in this ratio until 2022, indicating an increasing ability to meet its debt obligations, after which it is affected by the restrictive monetary policy, as shown in *Figure 10*.

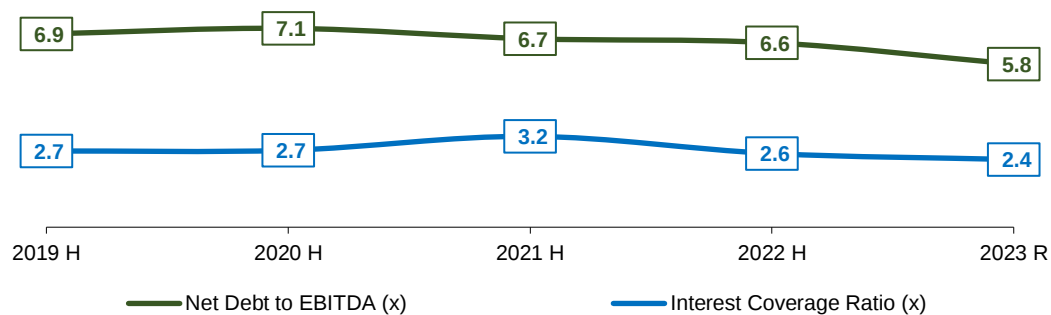


Figure 10: Iberdrola S.A. (IBE) Solvency ratios

Source: Company Annual reports 2019,2020,2021,2022 & 2023.

The analysis of *figure 11* allows for a valuation of the company liquidity and its ability to meet short-term obligations. Regarding the current ratio (general liquidity), the company is below the industry average, which, according to the Eikon Reuters platform in 2023, is 1.09, indicating a higher risk of distress. However, in the long term, it is expected that this ratio will significantly improve with the energy transition and the stabilization of assets and liabilities.

Concerning the quick ratio, which is a more conservative measure than the current ratio as it assesses the ability to meet current obligations without needing to sell inventory or obtain additional financing, the company is also below the industry average, set at 0.98 in 2023, according to the Eikon Reuters platform.

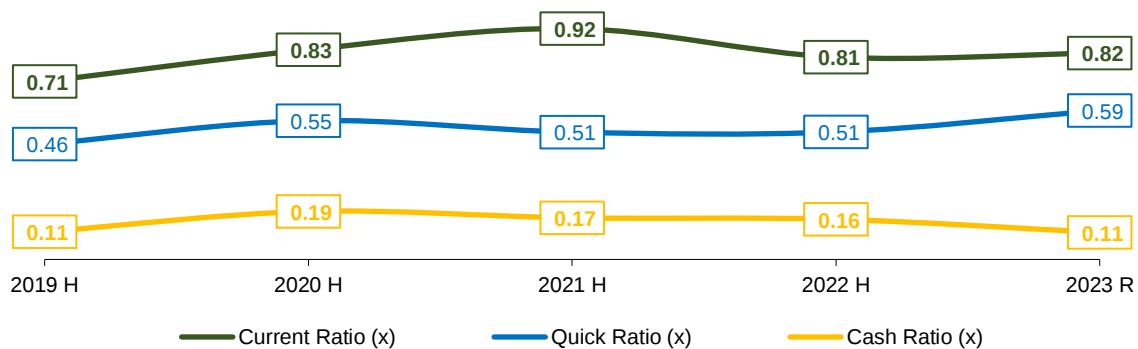


Figure 11: Iberdrola S.A (IBE) Liquidity ratios

Source: Company Annual reports 2019,2020,2021,2022 & 2023

Finally, the cash ratio demonstrates the company ability to cover short-term obligations using only cash and its equivalents. With a current ratio below 1, it is inferred that the company has more short-term debt than cash and equivalent assets.

4.4 Financial Statements Analysis by Region

The analysis of financial statements by region is a crucial step in the valuation of Iberdrola S.A. To simplify the process and avoid detailed analysis of each individual company financial statements, only the analysis of revenue by region is considered, which is essential for developing the assumptions underlying the valuation.

As illustrated in *Annex D*, Spain is the country where Iberdrola S.A. operations in terms of turnover hold the greatest weight, accounting for approximately 38.03% in 2023. Following Spain, the United Kingdom represents 21.84%, the United States 4.85%, Brazil 18.17%, Mexico 6.08%, and the rest of the world 2.03%.

Additionally, it is evident that from 2018 to 2023, the share of revenue in Spain has been decreasing, from 41.20% in 2019 to 37.03% in 2023. This trend aligns with the company strategic vision, which aims to increase investments in countries with better credit ratings, such as the United States and the United Kingdom.

In conclusion, this analysis is a critical step in establishing the assumptions for the valuation of Iberdrola. Spain, where the company is headquartered and where most of its operations are based, will be used, for simplification purposes, as the basis for applying the Spanish corporate tax rate. Additionally, these revenue distribution percentages by country will be employed to construct a weighted factor considering inflation, GDP, and country risk premium.

4.5 Risk Management

In terms of risk management, Iberdrola S.A. faces several critical factors. The analysis of the company Integrated Report 2023 allows these risks to be categorized into price and demand risks, resource risks, financial risks, and other risks.

Regarding price and demand risks, the company faces the risk of changes in electricity prices. To mitigate this risk, Iberdrola utilizes Power Purchase Agreements (PPA), which help diversify exposure to price fluctuations. Additionally, the company faces risks related to changes in electricity demand.

In terms of resource risks, Iberdrola S.A. energy production is directly dependent on weather conditions, as the company relies on renewable energy sources. (Iberdrola S.A.,2023).

Concerning financial risks, the company is subject to interest rate variations due to the capital-intensive nature of its sector. Iberdrola manages this risk by diversifying its debt structure between fixed and variable interest rates. Furthermore, it faces exchange rate risks due to its presence in various geographies, mitigating these risks using derivative instruments. (Iberdrola S.A.,2023).

Finally, among other risks, Iberdrola S.A. deals with credit risks, operational risks, regulatory and political risks, as it operates in a highly regulated sector, as well as climate risks, which will be discussed in more detail in this chapter.

4.5.1 ESG Risks

Iberdrola S.A are expose to direct and indirect economic risks that are caused by external events or inadequate internal processes. In terms of Environmental, Social and Governance the company are expose to several risks, that can be of a varied nature, both in economic and reputational terms.

Beginning with Environmental, the company is expose to climate change representing a significant concern for the company. The rising temperatures, more frequent extreme weather events, and changing rainfall patterns could all potentially impact Iberdrola facilities and overall business operations. The company is mitigating these risks by designing future assets to be more climate-resilient, renewing existing assets over time, and taking out insurance coverage. Additional, Iberdrola S.A. is complying with local rules on critical infrastructure protection in the countries where it operates.

In terms of Social, the principal risk is the health and safety of people, including employees and stakeholders. Risks related to fraud and corruption also come under this category. To mitigate these risks, Iberdrola has a Compliance System in place that aims to guarantee ethical conduct and compliance with applicable legal provisions. (Iberdrola S.A.,2023).

Moreover, concerning to Governance risks for Iberdrola S.A in this domain include regulatory compliance, the reliability of financial and non-financial information, and issues related to cybersecurity and data protection. The company is actively managing these risks by implementing specific mechanisms and strategies such as cybersecurity training, international insurance programs for assets and liabilities, and compliance with the General Data Protection Regulation (GDPR) in Europe and other countries. (Iberdrola S.A.,2023).

Finally, Iberdrola approach to ESG risk management involves continuous monitoring and identification of risks, timely reporting of such risks both internally and externally, and the establishment of policies and procedures aiming to control and mitigate these risks. It has policies aligned with best practices for governance, compliance, fraud prevention, and anticorruption and has made provision for legal and tax risks related to regular business activities. (Iberdrola S.A.,2023).

4.6 ESG Finances

Iberdrola S.A is deeply committed to ESG financing across the regions where it operates, utilizing a variety of instruments and formats for financial sustainability. This approach serves has threefold purpose, beginning with aligning financial strategy with its purpose, values, and investment strategy, followed by optimizing the cost of its debt, and finally, diversifying its sources of financing. Through ESG financing, Iberdrola transforms sustainability into both an end and a means to achieve the financial strength that characterizes it. (Iberdrola S.A., 2023).

In 2023, Iberdrola S.A. financed itself with a total of EUR 12.643 million in ESG finance, contributing to a robust ESG Financing portfolio totaling EUR 54.449 million by the end of FY2023. The breakdown by product can be seen above in *Table 5*:

Table 5:

ESG Financing of Iberdrola S.A., 2023; Source: Company Sustainable report 2022 & 2023

ESG Financing of the group 2023			
	New financing 2023	Portfolio at year - end 2023	% of Total Financial Debt 2023
Green	7.344	33.071	40,9%
Bonds	3.637	20.239	25,1%
Bank Loans	28	390	0,5%
Multilateral Loans	1.655	4.517	5,6%
Loans with development	930	3.563	4,4%
Structured financing	1.094	4.362	5,4%
Sustainable	5.300	21.377	26,5%
Credit facilities	5.300	15.132	18,7%
Loans	-	1.245	1,5%
Commercial paper programmes	-	5.000	6,2%
ESG total	12.644	54.448	67,4%

The target company practices ESG financing through Green Finance and Sustainable Finance. Green financing directs funds towards environmentally beneficial projects such as renewable energy, expanding and digitalizing electricity transmission and distribution networks, researching new and more efficient generation technologies, and promoting smart mobility. The company commits to providing transparent annual reports on the environmental impact of these projects to all investors. Funds are allocated based on specific environmental and sustainable development criteria outlined in the Green Financing Frameworks of Iberdrola, AVANGRID, or NEOENERGIA. These frameworks adhere to the Green Bond Principles (GBP) set by the International Capital Markets Association (ICMA) and undergo independent verification for alignment with these principles. (Iberdrola S.A.,2023).

In 2023, Iberdrola S.A. executed new green finance transactions totaling EUR 7.343 million, resulting in a total green finance amount of EUR 33.071 million by the end of FY2023. (Iberdrola S.A.,2023).

Finally, sustainable financing extends its focus beyond environmental considerations to include social and governance factors. Iberdrola S.A. has dedicated itself to this type of financing through KPI-linked loans, which are loans that link their cost or certain structural aspects to the achievement of a set of sustainable objectives, at least one of which is related to environmental concerns. These loans include the credit lines used by Iberdrola S.A. and the commercial paper program implemented by the group to effectively manage its liquidity. Like green financing operations, KPI-linked loans are subject to certification by an independent expert. This certification assesses the sustainability indicators

selected and guarantees compliance with the corresponding LTSA Sustainability-Linked Loan Principles (SLLP) or ICMA Sustainability-Linked Bond Principles (SLBP). The company executed new sustainable finance transactions totaling EUR 5.300 million, resulting in a total sustainable finance amount of EUR 21.377 million by the end of FY2023. (Iberdrola S.A.,2023).

Chapter 5: Valuation

The valuation of Iberdrola S.A. is based on the discounted cash flow method, requiring the estimation of the company future cash flows, which will be discounted at the cost of capital as of the valuation date, December 31, 2023. The historical consolidated financial statements from 2018 to 2023 were used as a basis for projecting the future years from 2024 to 2033, providing a ten-year temporal horizon for the valuation.

Following the application of the discounted cash flow method, the equity value of the company will be determined, and consequently, the value of the share will be calculated. Subsequently, a relative valuation will be conducted to ensure that the valuation falls within a reasonable range. Additionally, multiples of similar transactions will be analyzed to avoid errors and to enable a direct comparison of the valuation with the market values prevailing in 2023.

5.1 Discounted Cashflow

5.1.1 Assumptions

Regarding the assumptions, these can be categorized into four distinct parts: macroeconomic assumptions, operational assumptions, profit and loss statement assumptions, and balance sheet assumptions.

For the macroeconomic assumptions, an inflation and gross domestic product (GDP) weight was applied based on the turnover percentage from each country where the company operates, as detailed in *Annex E*. In terms of tax rates, the corporate tax rate of Spain was considered, since most of the company revenue is generated in that country.

Regarding operational assumptions, the growth of net production (GWh), total installed capacity (MW), and kilometers of lines were projected based on the historical data in the company integrated report and projected according to the compound annual growth rate (CAGR) from 2018 to 2023. The respective CAGRs and projections can be found in *Annex F*.

Finally, the assumptions for the profit and loss statement, along with the balance sheet assumptions, are the most critical for projecting future cash flows and will be described in the following subsections.

5.1.2 Income Statement

Turnover

Through the analysis of the company annual report, along with the integrated report, it was possible to project the turnover of Iberdrola S.A. based on the historical data from 2018 to 2023 of the previously mentioned business segments, as illustrated in *Table 6*.

Initially, the customer segment was estimated based on its unit cost, calculated by dividing turnover by net production (GWh). The historical average adjusted for inflation was considered in the future turnover projection for this segment. Given the impact of the pandemic in 2021 and the energy crisis in 2022, the weight of this segment was reduced as it is still recovering from these irregular events.

Regarding the renewables segment, the estimate was also based on its unit cost. The only difference lies in the method of future projection, considering the company forward-looking statements, which indicate strong investment in this segment. Therefore, conservatively, the unit cost of 2023 was used as the basis for the future projection, adjusted by its respective inflation rate.

The networks segment was estimated based on the unit cost per kilometer of lines. According to the company forward-looking statements, there is significant investment in this sector. Consequently, conservatively, the unit cost of 2023 was used, adjusted by the projected annual inflation rate.

Finally, the others segment, which has been predominantly negative in recent years, was considered with a fixed value over the projected years, based on the 2023 value.

Table 6:

Revenue Projections (2024-2033) - Author Analysis, Source: Company Integrate and Annual Reports

€000 000	Assumptions	2018 H	2019 H	2020 H	2021 H	2022 H	2023 H	2024 F	2025 F	2026 F	2027 F	2028 F	2029 F	2030 F	2031 F	2032 F	2033 F
Turnover		35 076	36 438	33 145	39 114	53 949	49 335	48 322	50 999	53 806	56 684	59 695	62 922	66 270	69 855	73 613	77 538
Growth (%)			3.88%	(9.04%)	18.01%	37.93%	(8.55%)	(2.05%)	5.54%	5.50%	5.35%	5.31%	5.41%	5.32%	5.41%	5.38%	5.33%
Customers		29 992	29 728	18 385	23 764	34 938	30 087	27 663	29 922	30 473	31 964	33 528	35 208	36 952	38 824	40 790	42 848
Turnover (%)		59.85%	56.88%	55.23%	60.76%	64.78%	60.99%	57.21%	58.91%	56.63%	56.39%	56.17%	55.90%	55.76%	55.58%	55.41%	55.26%
Growth (%)			(1.27%)	(11.68%)	29.82%	47.02%	(13.89%)	(8.12%)	4.99%	5.0%	4.90%	4.89%	5.01%	4.96%	5.07%	5.07%	5.05%
Unit Price	0.16		0.14	0.14	0.11	0.14	0.21	0.18	0.16	0.16	0.17	0.17	0.18	0.18	0.19	0.19	0.20
Growth (%) - Inflation			(5.27%)	(17.69%)	28.70%	46.14%	4.69%	(3.16%)	2.46%	2.46%	2.36%	2.36%	2.47%	2.42%	2.53%	2.53%	2.51%
Renewables		4 045	3 834	4 181	8 969	10 322	9 281	9 811	10 301	10 815	11 345	11 900	12 498	13 115	13 780	14 472	15 208
Turnover (%)		11.53%	10.52%	12.55%	22.93%	19.13%	18.81%	20.30%	20.20%	20.10%	20.01%	19.93%	19.86%	19.79%	19.73%	19.67%	19.61%
Growth (%)			(8.22%)	8.53%	115.55%	15.09%	(10.09%)	5.71%	4.99%	5.0%	4.90%	4.89%	5.01%	4.96%	5.07%	5.07%	5.05%
Unit Price	0.06		0.03	0.03	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07
Growth (%) - Inflation			(9.06%)	1.14%	113.68%	15.96%	4.69%	(3.16%)	2.46%	2.46%	2.36%	2.36%	2.47%	2.42%	2.53%	2.53%	2.51%
Networks		12 881	14 210	12 990	16 887	18 355	18 363	19 264	20 072	20 814	21 771	22 863	23 818	24 588	25 648	26 742	27 872
Turnover (%)		36.67%	39.0%	38.92%	38.06%	34.02%	37.22%	39.87%	39.36%	38.87%	38.41%	37.96%	37.53%	37.12%	36.72%	36.33%	35.95%
Growth (%)			10.49%	(8.22%)	15.40%	23.30%	0.04%	4.91%	4.19%	4.20%	4.10%	4.09%	4.21%	4.16%	4.27%	4.27%	4.25%
Networks/Km of lines																	
Growth (%) - Inflation	0.01		0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
			8.85%	(10.38%)	12.30%	20.91%	4.69%	(3.16%)	2.46%	2.46%	2.36%	2.36%	2.47%	2.42%	2.53%	2.53%	2.51%
Others		(2 823)	(2 332)	(2 221)	(8 506)	(8 667)	(8 396)	(8 396)	(8 396)	(8 396)	(8 396)	(8 396)	(8 396)	(8 396)	(8 396)	(8 396)	(8 396)
Growth (%)			(17.38%)	(4.76%)	282.98%	13.65%	(13.15%)	-	-	-	-	-	-	-	-	-	-

Supplies

This item of the income statement relates to direct costs associated with energy production, energy purchases from third parties, raw material purchases used in non-renewable energy production, and CO2 licenses. Considering the company substantial investments in the renewable energy sector, it is anticipated that these costs will decrease in the long term. Consequently, a constant percentage of turnover, equivalent to that of the last fiscal year (2023), has been conservatively assumed. (Table 7).

Table 7:

Supplies Projections (2024-2033) - Author Analysis, Source: Company annual reports

€000 000	Assumptions	2018 H	2019 H	2020 H	2021 H	2022 H	2023 H	2024 F	2025 F	2026 F	2027 F	2028 F	2029 F	2030F	2031F	2032F	2033F
Supplies		(19 641)	(20 175)	(17 000)	(22 052)	(33 750)	(26 033)	(25 498)	(26 911)	(28 392)	(29 911)	(31 500)	(33 202)	(34 969)	(36 861)	(38 844)	(40 915)
Turnover (%)	52,77%	56,0%	55,37%	51,29%	56,38%	62,56%	52,77%	52,77%	52,77%	52,77%	52,77%	52,77%	52,77%	52,77%	52,77%	52,77%	52,77%
Growth(%)			2,72%	(15,74%)	29,72%	53,69%	(22,87%)	(2,05%)	5,54%	5,50%	5,35%	5,31%	5,41%	5,32%	5,41%	5,38%	5,33%

Operational Expenses & Taxes

Regarding the items of operating expenses and taxes in the income statement, it was conservatively assumed that these expenses will grow in line with the percentage of 2023 turnover. The taxes item refers to fees imposed on operations by regulatory authorities, covering energy production, social tariffs, and mechanisms to ensure market competitiveness. The decision to use the 2023 rate as a reference is based on Iberdrola S.A. expansion objectives and the current uncertainty. (Table 8).

Table 8:

Operational Expenses & Taxes Projections (2024-2033) - Author Analysis, Source: Company annual reports

€000 000	Assumptions	2018 H	2019 H	2020 H	2021 H	2022 H	2023 H	2024 F	2025 F	2026 F	2027 F	2028 F	2029 F	2030F	2031F	2032F	2033F
Operational Expenses		(4 155)	(4 330)	(4 286)	(4 227)	(5 209)	(6 136)	(6 010)	(6 343)	(6 692)	(7 050)	(7 424)	(7 826)	(8 242)	(8 688)	(9 156)	(9 644)
Turnover (%)	12,44%	11,85%	11,88%	12,53%	10,81%	9,66%	12,44%	12,44%	12,44%	12,44%	12,44%	12,44%	12,44%	12,44%	12,44%	12,44%	12,44%
Growth(%)		4,21%	(1,02%)	(1,38%)	23,23%	17,80%	(2,05%)	5,54%	5,50%	5,35%	5,31%	5,41%	5,32%	5,41%	5,38%	5,33%	
Taxes		(1 931)	(1 829)	(1 821)	(829)	(1 762)	(2 749)	(2 693)	(2 842)	(2 998)	(3 159)	(3 326)	(3 506)	(3 693)	(3 892)	(4 102)	(4 321)
Turnover %	5,57%	5,51%	5,02%	5,49%	2,12%	3,27%	5,57%	5,57%	5,57%	5,57%	5,57%	5,57%	5,57%	5,57%	5,57%	5,57%	5,57%

Impairments

Annually, the company conducts impairment tests on its tangible and intangible assets. In the event of a material impairment test, the company will recognize an impairment loss in its income statement. Given the scale of its assets, Iberdrola S.A. has recorded an impairment loss every year, prompting a conservative approach where the percentage of this item from the 2023 turnover is projected to grow in line with the expected inflation associated with sales growth for future projections. (Table 9).

Table 9:

Impairments Projection (2024-2033) - Author Analysis, Source: Company annual reports

€000 000	Assumptions	2018 H	2019 H	2020 H	2021 H	2022 H	2023 H	2024 F	2025 F	2026 F	2027 F	2028 F	2029 F	2030F	2031F	2032F	2033F
Impairments		(254)	(298)	(381)	(369)	(470)	(618)	(605)	(639)	(674)	(710)	(748)	(788)	(830)	(875)	(922)	(971)
Turnover (%)	1,25%	0,72%	0,82%	1,15%	0,94%	0,87%	1,25%	1,25%	1,25%	1,25%	1,25%	1,25%	1,25%	1,25%	1,25%	1,25%	1,25%
Growth(%)			17,48%	27,85%	(3,15%)	27,37%	31,49%	(2,05%)	5,54%	5,50%	5,35%	5,31%	5,41%	5,32%	5,41%	5,38%	5,33%

Depreciation and Amortization

Regarding depreciation and amortization, due to a lack of specific detail, a conservative approach has been taken, projecting that these expenses will grow in line with the 9.78% of turnover established in 2023. (Table 10).

Table 10:

Depreciation and Amortization Projections (2024-2033) - Author Analysis, Source: Company annual reports.

€000 000	Assumptions	2018 H	2019 H	2020 H	2021 H	2022 H	2023 H	2024 F	2025 F	2026 F	2027 F	2028 F	2029 F	2030F	2031F	2032F	2033F
Depreciation and Amortization		(3 656)	(3 929)	(4 093)	(4 294)	(4 774)	(4 826)	(4 727)	(4 989)	(5 263)	(5 545)	(5 839)	(6 155)	(6 483)	(6 833)	(7 201)	(7 585)
Turnover (%)	9.78%	10.42%	10.78%	12.35%	10.98%	8.85%	9.78%	9.78%	9.78%	9.78%	9.78%	9.78%	9.78%	9.78%	9.78%	9.78%	9.78%
Growth(%)			7.47%	4.17%	4.91%	11.18%	1.09%	(2.05%)	5.54%	5.50%	5.35%	5.31%	5.41%	5.32%	5.41%	5.38%	5.33%

In summary, after projecting the items described above, it is possible to forecast the EBIT over the valuation period of Iberdrola S.A., essential for conducting the free cash flow to firm analysis. The EBIT can be visualized in the following *Table 11* along with the NOPLAT.

Table 11:

EBIT and NOPLAT Projections (2024-2033)- Author Analysis, Source: Company annual reports.

€000 000	Assumptions	2018 H	2019 H	2020 H	2021 H	2022 H	2023 H	2024 F	2025 F	2026 F	2027 F	2028 F	2029 F	2030F	2031F	2032F	2033F
EBIT		5 439	5 877	5 564	7 343	7 984	8 973	8 789	9 276	9 786	10 310	10 857	11 444	12 053	12 705	13 369	14 103
EBIT margin (%)		15.51%	16.12%	16.79%	18.77%	14.80%	18.19%	18.19%	18.19%	18.19%	18.19%	18.19%	18.19%	18.19%	18.19%	18.19%	18.19%
NOPLAT	22.92%	4 193	4 530	4 289	5 660	6 154	6 917	6 775	7 150	7 543	7 947	8 369	8 821	9 291	9 793	10 320	10 871

It is important to note that Spain corporate tax rate is 25%, however, to account for the company tax benefits, an effective tax rate of 22.92% for 2023 and the projection period has been considered.

5.1.3 Balance Sheet

Capital Expenditures

Regarding the calculation of historical CAPEX investment, it was determined based on net fixed assets, which include tangible and intangible fixed assets recorded on the balance sheet at their book value. The change in net fixed assets, along with the depreciation and amortization for the period, establishes the fixed capital value for the corresponding year. As for the future projection of fixed capital investment, it was considered that this would grow proportionally to the increase in sales. It can be observed that the CAPEX per installed capacity remains almost constant, which is a conservative approach, and an indicator of operational consistency as can be seen *Table 12*.

Table 12:

Capex Projections (2024-2033) - Author Analysis, Source: Company annual reports.

€000 000		Assumptions	2018 H	2019 H	2020 H	2021 H	2022 H	2023 H	2024 F	2025 F	2026 F	2027 F	2028 F	2029 F	2030F	2031F	2032F	2033F
Capex			10 258	2 629	14 469	11 438	6 576	6 441	6 798	7 172	7 556	7 957	8 387	8 833	9 311	9 812	10 335	10 858
Turnover (%)		-	28.15%	7.93%	36.99%	21.20%	13.33%	13.33%	13.33%	13.33%	13.33%	13.33%	13.33%	13.33%	13.33%	13.33%	13.33%	13.33%
Growth (%)								(2.05%)	5.54%	5.50%	5.35%	5.31%	5.41%	5.32%	5.41%	5.38%	5.33%	5.33%
Installed Capacity MW			46 694	52 082	55 111	58 320	60 761	62 883	66 081	69 442	72 974	76 680	80 586	84 685	88 992	93 518	98 275	103 273
Δ capacity added			46 694	5 388	3 029	3 209	2 441	2 122	3 198	3 361	3 532	3 712	3 900	4 099	4 307	4 526	4 756	4 998
CAPEX per MW				1.9	0.9	4.5	4.7	3.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1

Working Capital

The historical Working Capital was calculated by subtracting current liabilities from current assets, defining each category based on the company operational activity. For the projection, the year 2023 was used as the base, with growth proportional to the increase in turnover. This measure is important for calculating the variation in working capital, which impacts the company cash flow positively or negatively. The calculation can be evidenced in *Table 13*.

Table 13:

Working Capital Projections (2024-2033)- Author Analysis, Source: Company annual reports.

€000 000	Assumptions	2018 H	2019 H	2020 H	2021 H	2022 H	2023 H	2024 F	2025 F	2026 F	2027 F	2028 F	2029 F	2030F	2031F	2032F	2033F
Working capital - Asset		9 967	11 013	11 033	14 591	14 374	13 750	13 468	14 214	14 996	15 798	16 637	17 537	18 470	19 469	20 517	21 610
Turnover (%)		28.42%	30.22%	33.29%	37.30%	26.64%	27.87%	27.87%	27.87%	27.87%	27.87%	27.87%	27.87%	27.87%	27.87%	27.87%	27.87%
Inventories		2 174	2 542	2 443	2 639	2 159	2 550	2 498	2 636	2 781	2 930	3 085	3 252	3 425	3 611	3 805	4 008
Trade Receivables		6 855	7 499	7 664	10 956	11 220	10 039	9 833	10 378	10 849	11 535	12 147	12 804	13 485	14 215	14 979	15 778
Nuclear Fuel		273	306	260	267	259	278	272	287	303	319	336	355	373	394	415	437
Current tax assets		566	566	566	728	738	583	565	513	563	1 015	1 068	1 128	1 188	1 250	1 318	1 388
Working capital - Liability		(6 879)	(6 778)	(6 195)	(7 958)	(8 111)	(7 335)	(7 184)	(7 582)	(8 000)	(8 428)	(8 875)	(9 355)	(9 853)	(10 386)	(10 945)	(11 528)
Turnover (%)		19.61%	18.60%	18.69%	20.35%	15.03%	14.87%	14.87%	14.87%	14.87%	14.87%	14.87%	14.87%	14.87%	14.87%	14.87%	14.87%
Current Provisions		(580)	(660)	(573)	(788)	(922)	(920)	(901)	(951)	(1 003)	(1 057)	(1 113)	(1 173)	(1 236)	(1 303)	(1 373)	(1 446)
Trade Payables		(5 299)	(5 098)	(5 138)	(5 964)	(5 927)	(5 112)	(5 007)	(5 284)	(5 573)	(5 874)	(6 185)	(6 500)	(6 867)	(7 238)	(7 628)	(8 034)
State and Other Public Entities		(1 039)	(1 020)	(678)	(1 205)	(1 262)	(1 303)	(1 276)	(1 347)	(1 421)	(1 487)	(1 577)	(1 662)	(1 750)	(1 840)	(1 944)	(2 048)
Net Working Capital		3 088	4 235	4 838	6 633	6 263	6 415	6 283	6 631	6 996	7 371	7 762	8 182	8 617	9 083	9 572	10 082
Growth (%)			37.14%	14.24%	37.10%	(5.59%)	2.43%	(2.05%)	5.54%	5.50%	5.35%	5.31%	5.41%	5.32%	5.41%	5.36%	5.33%
Δ NWC		-	1 147	603	1 795	(379)	152	(132)	348	365	374	391	420	435	466	489	510

Net Debt

Regarding Net Debt, the cash and historical short-term and long-term debt presented on the company balance sheet were considered. For the future projection, cash was assumed to grow proportionally to the increase in turnover. Short-term debt was projected to grow in line with the increase in working capital, while long-term debt was projected to grow in accordance with the increase in capital expenditures. (*Table 14*).

Table 14:

Net Debt Projections (2024-2033) - Author Analysis, Source: Company annual reports.

€000 000	Assumptions	2018 H	2019 H	2020 H	2021 H	2022 H	2023 H	2024 F	2025 F	2026 F	2027 F	2028 F	2029 F	2030F	2031F	2032F	2033F
Net Debt		(64 127)	(69 592)	(71 128)	(80 636)	(86 948)	(83 793)	(82 072)	(86 619)	(91 387)	(96 276)	(101 389)	(106 869)	(112 556)	(118 645)	(125 029)	(131 695)
Cash and cash equivalents		2 801	2 113	3 427	4 033	4 508	3 019	2 957	3 121	3 293	3 469	3 653	3 850	4 055	4 275	4 505	4 745
Financial debt		(61 326)	(67 479)	(67 701)	(76 605)	(82 340)	(80 774)	(79 115)	(83 498)	(88 094)	(92 807)	(97 736)	(103 019)	(108 500)	(114 370)	(120 524)	(126 950)
Long Term Debt		(52 945)	(56 043)	(57 369)	(61 272)	(63 161)	(61 669)	(60 403)	(63 749)	(67 256)	(70 856)	(74 619)	(78 653)	(82 837)	(87 319)	(92 017)	(96 923)
Short Term Debt		(8 381)	(11 436)	(10 332)	(15 333)	(19 179)	(19 105)	(18 713)	(19 749)	(20 836)	(21 951)	(23 117)	(24 366)	(25 663)	(27 051)	(28 507)	(30 027)

Non-operating assets

Regarding non-operating assets, the items considered are presented in the table illustrated below.

Table 15:

Non-operating assets projections (2024-2033) - Author Analysis, Source: Company annual reports.

€000 000	Assumptions	2018 H	2019 H	2020 H	2021 H	2022 H	2023 H	2024 F	2025 F	2026 F	2027 F	2028 F	2029 F	2030 F	2031 F	2032 F	2033 F
Non Operating Asset and Liabilities		15 899	17 917	19 510	24 887	26 760	20 999	20 999	20 999	20 999	20 999	20 999	20 999	20 999	20 999	20 999	20 999
Other Non Operating Assets		15 899	17 917	19 510	24 887	26 760	20 999	20 999	20 999	20 999	20 999	20 999	20 999	20 999	20 999	20 999	20 999
Investment Property		429	342	301	310	307	431	431	431	431	431	431	431	431	431	431	431
Non-Current financial investments		5 191	5 819	5 461	6 499	10 650	9 740	9 740	9 740	9 740	9 740	9 740	9 740	9 740	9 740	9 740	9 740
Other financial assets		3 979	3 211	4 605	8 387	9 421	5 476	5 476	5 476	5 476	5 476	5 476	5 476	5 476	5 476	5 476	5 476
Non-current trade and other receivables		815	2 851	3 161	3 764	4 614	3 343	3 343	3 343	3 343	3 343	3 343	3 343	3 343	3 343	3 343	3 343
Deferred tax assets		5 486	5 694	5 982	5 917	1 768	2 009	2 009	2 009	2 009	2 009	2 009	2 009	2 009	2 009	2 009	2 009
Other Non Operating Liabilities		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

In the projection years, the historical values from 2023 were kept constant to ensure consistency throughout the modeling process.

5.1.4 Free Cashflow to the firm

After projecting the previous items, it is possible to estimate the free cash flow to the firm (FCFF) required for the DCF analysis based on equation (7) and (3), as shown in *Table 16*.

Table 16:

Free cashflow to firm projections (2024-2033)- Author Analysis, Source: Company annual reports.

DCF	2023 H	2024 F	2025 F	2026 F	2027 F	2029 F	2030 F	2031 F	2032 F	2033 F	TV
€000 000											
Turnover	49 335	48 322	50 999	53 806	56 684	59 695	62 922	66 270	69 855	73 613	74 832
Change (%)	26,1%	(10,4)%	3,4%	5,5%	5,3%	5,3%	5,4%	5,3%	5,4%	17,0%	
Gross margin	23 302	22 824	24 068	25 414	26 773	28 195	29 719	31 301	32 994	34 769	
Gross margin (%)	47,2%	47,2%	47,2%	47,2%	47,2%	47,2%	47,2%	47,2%	47,2%	47,2%	
EBITDA	14 417	14 121	14 903	15 724	16 565	17 444	18 387	19 366	20 413	21 512	21 868
EBITDA margin (%)	29,2%	29,2%	29,2%	29,2%	29,2%	29,2%	29,2%	29,2%	29,2%	29,2%	
Impairments	(618)	(605)	(639)	(674)	(710)	(748)	(788)	(830)	(875)	(922)	
Depreciation & amortization	(4 826)	(4 727)	(4 989)	(5 263)	(5 545)	(5 839)	(6 155)	(6 483)	(6 833)	(7 201)	
EBIT	8 973	8 789	9 276	9 786	10 310	10 857	11 444	12 053	12 705	13 389	13 610
Operational taxes	(2 056)	(2 014)	(2 126)	(2 243)	(2 363)	(2 488)	(2 623)	(2 762)	(2 912)	(3 068)	(3 403)
Tax rate (%)											
NOPLAT	6 917	6 775	7 150	7 543	7 947	8 369	8 821	9 291	9 793	10 320	10 208
Depreciation & amortization (add back)	4 826	4 727	4 989	5 263	5 545	5 839	6 155	6 483	6 833	7 201	
Capex	(6 576)	(6 441)	(6 798)	(7 172)	(7 556)	(7 957)	(8 387)	(8 833)	(9 311)	(9 812)	
Δ Working capital	152	(132)	348	365	374	391	420	435	466	489	
FCFF	5 319	4 929	5 689	6 000	6 310	6 643	7 009	7 375	7 782	8 198	8 333

Depreciation and Capex follow the same sustainable long-term growth, so no adjustments are needed.

5.2 Cost of Capital

In terms of cost of capital, two different weight average cost of capital (WACC) were estimated to account for the company tax benefits based on equations (8) to (21). The WACC used in the projections from 2024 to 2033 considers a corporate tax rate of 22.92%, while the WACC for the terminal value uses a tax rate of 25%. As a result, two costs of capital were obtained: 7.90% for the projection period and 7.82% for the terminal value. (*Table 17*).

Table 17:

Cost of capital - Author Analysis, Source: Eikon Reuters platform & Damodaran Website.

WACC for forecast years with tax benefit			Wacc for Terminal Value		
	Min	Max		Min	Max
Risk free	2,08%	2,08%	Risk free	2,08%	2,08%
Country Risk Premium	2,15%	2,15%	Country Risk Premium	2,15%	2,15%
Market Risk Premium	6,00%	6,00%	Market Risk Premium	6,00%	6,00%
Beta Levered	0,73	0,73	Beta Levered	0,72	0,72
Beta Unlevered	0,48	0,48	Beta Unlevered	0,48	0,48
D/E	67,74%	67,74%	D/E	67,74%	67,74%
E/(D+E)	59,62%	59,62%	E/(D+E)	59,62%	59,62%
D/(D+E)	40,38%	40,38%	D/(D+E)	40,38%	40,38%
Alpha factor	0,00%	1,00%	Alpha factor	0,00%	1,00%
Corporate Tax Rate	22,92%	22,92%	Corporate Tax Rate	25,00%	25,00%
Cost of Equity	8,61%	9,61%	Cost of Equity	8,57%	9,57%
Interest rate swap	2,52%	2,52%	Interest rate swap	2,52%	2,52%
Default spread	3,00%	4,00%	Default spread	3,00%	4,00%
Cost of Debt	5,52%	6,52%	Cost of Debt	5,52%	6,52%
WACC	6,85%	7,76%	WACC	6,78%	7,68%
WACC	7,30%		WACC	7,23%	

Regarding the discount rate parameters presented, the following aspects are highlighted:

- **Risk-Free Rate:** The risk-free rate was based on the yields of 10-year European bonds with a AAA rating (*Annex G*).
- **Market Risk Premium:** A value of 6% was considered, based on the most recent data published by Duff & Phelps, which aligns with historical literature typically comprising a range between 5% and 6% for this parameter in Europe.
- **Country Risk Premium:** A weighted average of the default spread of each country where the company operates was considered, based on the percentage of revenues in each location (*Annex H*).
- **Leverage (D/E) and Unlevered Beta:** These parameters were based on the company values in 2023 according to Eikon Reuters platform.
- **Specific Risk Premium (Alpha Factor):** The alpha factor refers to the “company-specific risk premium.” Its application results from the valuation specialist’s experience due to implicit risks in the business plan, particularly uncertainties and potential deviations in the realization of projections. However, it is usually associated with liquidity and size premiums. Therefore, no alpha was considered at the minimum, and a maximum of 1% was considered due to the current geopolitical uncertainty.

- **Cost of Debt:** For the calculation of the cost of debt, it was considered reasonable to use the 10-year Euro interest swap rate, added to the spread corresponding to Iberdrola S.A. (*Annex I*).

These parameters were carefully selected to accurately reflect the risks and market conditions, ensuring a robust and well-founded assessment of the company cost of capital.

5.3 Enterprise Value

The Enterprise Value represents the present value of all future cash flows generated by the company, discounted at the cost of capital as of the valuation date, December 31, 2023. The Enterprise Value is divided into two phases: the first phase involves the projected cash flows, and the second phase involves the terminal value. The terminal value assumes that the cash flow of the last projected year grows at a growth rate of 1.66%, which corresponds to the long-term GDP growth, weighted by the turnover percentage from all the countries where Iberdrola operates.

Thus, based on equations (1) to (3), it is possible to calculate the value of Iberdrola S.A., as illustrated in *Table 18*.

Table 18:

Enterprise Value- Author Analysis.

DCF											
€000 000	2023 H	2024 F	2025 F	2026 F	2027 F	2029 F	2030 F	2031 F	2032 F	2033 F	TV
FCFF	5 319	4 929	5 689	6 000	6 310	6 643	7 009	7 375	7 782	8 198	8 333
Growth rate											
Timing factor		0,5	1,5	2,5	3,5	4,5	5,5	6,5	7,5	8,5	
Discount rate		0,97	0,90	0,84	0,78	0,73	0,68	0,63	0,59	0,55	
Terminal value										149 496	
Discounted FCFF		4 758	5 118	5 030	4 931	4 837	4 756	4 664	4 586	86 609	
Enterprise Value	125 289										
EV/EBITDA (x)	8,7x										

Finally, based on Table 18, the company has an enterprise value of €125,289 million, with an EV/EBITDA multiple of 8.7x.

5.4 Equity value and Share Price

After applying equation (1) from the literature review, it is necessary to adjust the Enterprise Value to represent the true value of Iberdrola S.A. held by shareholders, considering its non-operating assets and respective non-equity claims as per Equation (6).

As previously analyzed, the non-operating assets amount to €20.999 billion, and the non-equity claims correspond to the net debt, which was previously analyzed and stands at €83.793 billion as of the valuation date. Thus, the equity value (EQV) can be determined according to Equation (6) from the literature review:

$$EQV = EV + NOA - (Non - Equity Claims) = 125,289 + 20,999 - 837 = 62,495B \quad (22)$$

Moreover, as mentioned earlier, the number of outstanding shares of Iberdrola S.A. as of the valuation date was 6,350 million. Therefore, the share price can be determined by dividing the equity value by the number of shares outstanding:

$$\text{Share Price} = \frac{EQV}{\#shares\ outstanding} = \frac{62,495B}{6,350M} = €9,84 \quad (23)$$

Finally, the intrinsic share price value of Iberdrola S.A. (IBE.MC) as of December 31, 2023, is €9.84, based on the discounted cash flow model.

5.5 Sensitivity Analysis

To complete the discounted cash flow method, a sensitivity analysis should be conducted on the most important variables inherent to the model, specifically the cost of capital and the growth rate assumed in perpetuity.

Table 19:

Sensitivity analysis - Author Analysis.

Growth rate terminal (%)	WACC (%)				
	6,30%	6,80%	7,30%	7,80%	8,30%
1,16%	9,99	9,34	8,72	8,12	7,55
1,66%	11,20	10,51	9,84	9,20	8,59
2,16%	12,66	11,91	11,19	10,49	9,83

By adjusting the values of these two variables, investors can ease the share price under different scenarios, accounting for the uncertainties associated with the growth rate and the Weighted Average Cost of Capital (WACC). The impact of these estimates on the valuation outcome can be significant.

As shown in *Table 19*, both inputs were subjected to two positive and two negative variations of 0.5%.

According to the scenarios presented, Iberdrola S.A. share price could fluctuate between a minimum of €7.55 and a maximum of €12.66. This represents an increase of 28.6% and a decrease of 23.3% compared to the price derived from the free cash flow to the firm analysis.

Based on the values in the center of the table, which do not represent extreme cases, it can be concluded that Iberdrola shares are trading above their intrinsic value. Consequently, the recommendation for investors is to sell or reduce their positions, as the current margin of safety, derived from the sensitivity analysis, is negative of 19,3% . It is important to note that this recommendation is specific to the period under analysis, 31 December 2023, and should not be applied to any other time frame. Furthermore, it should be recognized that this assessment is inherently subjective, relying on the assumptions made by the author, which may not necessarily reflect reality.

5.6 Relative Valuation

5.6.1 Multiples Valuations

In this subchapter, the valuation by multiples is conducted, with the primary objective of testing and validating the projections made to calculate the free cash flow to the firm (FCFF), as well as the outcome of this method. This way, the valuation by multiples allows concluding whether the valuation is within the range of reasonableness based on industry prices as of the valuation date.

To perform the relative valuation, the most common and practiced multiples in the world of valuations and by analysts were chosen: Enterprise Value to EBITDA (EV/EBITDA) and Enterprise Value to EBIT (EV/EBIT), with the former being the most known and used multiple.

In the industry analysis, the first step, which was selecting the appropriate peer group for the industry in which the company operates, has already been completed. After this selection, it is necessary to identify the outliers based on the data provided by the Eikon Reuters platform, which allows calculating the multiples for each selected company. The outliers are identified based on the range of Average plus Standard deviation and Average minus Standard deviation, with multiples outside this range being excluded from this analysis. As a result, two companies were identified as outliers: EDP Renováveis, with an EV/EBITDA of 20.08, and E ON SE, with an EV/EBITDA of 2.59, as shown in *Annex J*.

Thus, by eliminating the outliers, it is possible to proceed with the multiples valuation as demonstrated in *Table 20*.

Table 20:

Multiples Valuation - Author Analysis

Multiples Valuation		
	EV/EBITDA	EV/EBIT
Multiple	8,4x	14,1x
Historic EBITDA	14 417	-
Historic EBIT	-	8 973
Enterprise Value	120 607	126 336
Net Debt	(83 793)	(83 793)
NOA	20 999	20 999
Equity Value	57 813	63 542
# Shares Outstanding	6 350	6 350
Share Price	9,10	10,01

Finally, it is possible to verify that the valuation through the discounted cash-flow method falls within the range of reasonableness. In terms of multiples, the stock price will heavily depend on the chosen multiple. However, since the most widely used multiple in the financial world is EV/EBITDA, it will be given the most relevance. This multiple suggests that as of 31 December 2023, the share price

is overvalued, with a negative margin of safety. It is therefore recommended to sell or reduce the position at this time, while considering that this analysis is based solely on the financial results for 2023 and pertains exclusively to the end of that year, not to other periods.

5.6.2 Similar Market transactions

To ensure accuracy and determine whether the previous multiple-based valuation aligns with market transaction prices in the sector throughout 2023, multiples from transactions in Europe, the United States, and Canada were considered for the Iberdrola S.A. sector. Using the Merger market platform, 1,673 results were retrieved based on transaction sector and country criteria. Through analysis of transaction types, companies involved, and transaction dates, 16 transactions were selected that best reflect potential scenarios if Iberdrola S.A. were to be bought or sold.

Annex K indicates that the multiples valuation and discounted cash flow (DCF) model for Iberdrola S.A. are consistent with market transaction prices observed throughout 2023. The EV/EBITDA multiple is 8.6x, slightly higher than the multiple indicated in the previous analysis because of the control premium demanded by companies during acquisition. This is also reflected in the EV/EBIT multiple.

Conclusion

The primary objective of this project was to conduct a valuation of the share price of Iberdrola S.A. (IBE.MC) using the discounted cash flow (DCF) method, followed by a comparison with the closing price as of December 31, 2023. To ensure a rigorous and precise valuation, a long-term horizon was adopted, as recommended by the literature review, and complemented by the relative valuation method. The relative valuation was conducted using multiples from key industry competitors and comparable transactions within the sector, allowing for a direct comparison to assess whether the DCF valuation aligns with the multiples observed among Iberdrola S.A. (IBE.MC) competitors and within the market.

The study determined an intrinsic value of €9.84 per share for Iberdrola S.A., consistent with the prices observed among competitors and within the market. However, when compared to the closing price on December 31, 2023, it was found that the share price was overvalued, with a negative margin of safety of 19.3%.

Given the current macroeconomic environment, characterized by geopolitical instability, declining purchasing power, demographic challenges, and the industry challenges to achieving decarbonization by 2050, it is prudent to adopt a conservative posture regarding investment in Iberdrola S.A. Accordingly, a recommendation is made to sell or reduce position in the company. The analysis of Iberdrola S.A. financial statements and forward-looking statements underscores the need for caution, particularly considering the substantial capital investment required to meet industry expectations and the company reliance on strategies aligned with ESG principles and sustainability, which are directly linked to green financing support.

It is important to acknowledge that, despite efforts to ensure the accuracy of the calculations, this study has limitations related to the prediction of future cash flows, which depend on macroeconomic and operational assumptions. Additionally, only publicly available information was used, limiting the precision of the operational projections, as there was no direct contact with the company management team.

This valuation is based on data as of December 31, 2023. Future updates to all macroeconomic and operational assumptions, the cost of capital, and the company financial statements will be necessary to validate these conclusions.

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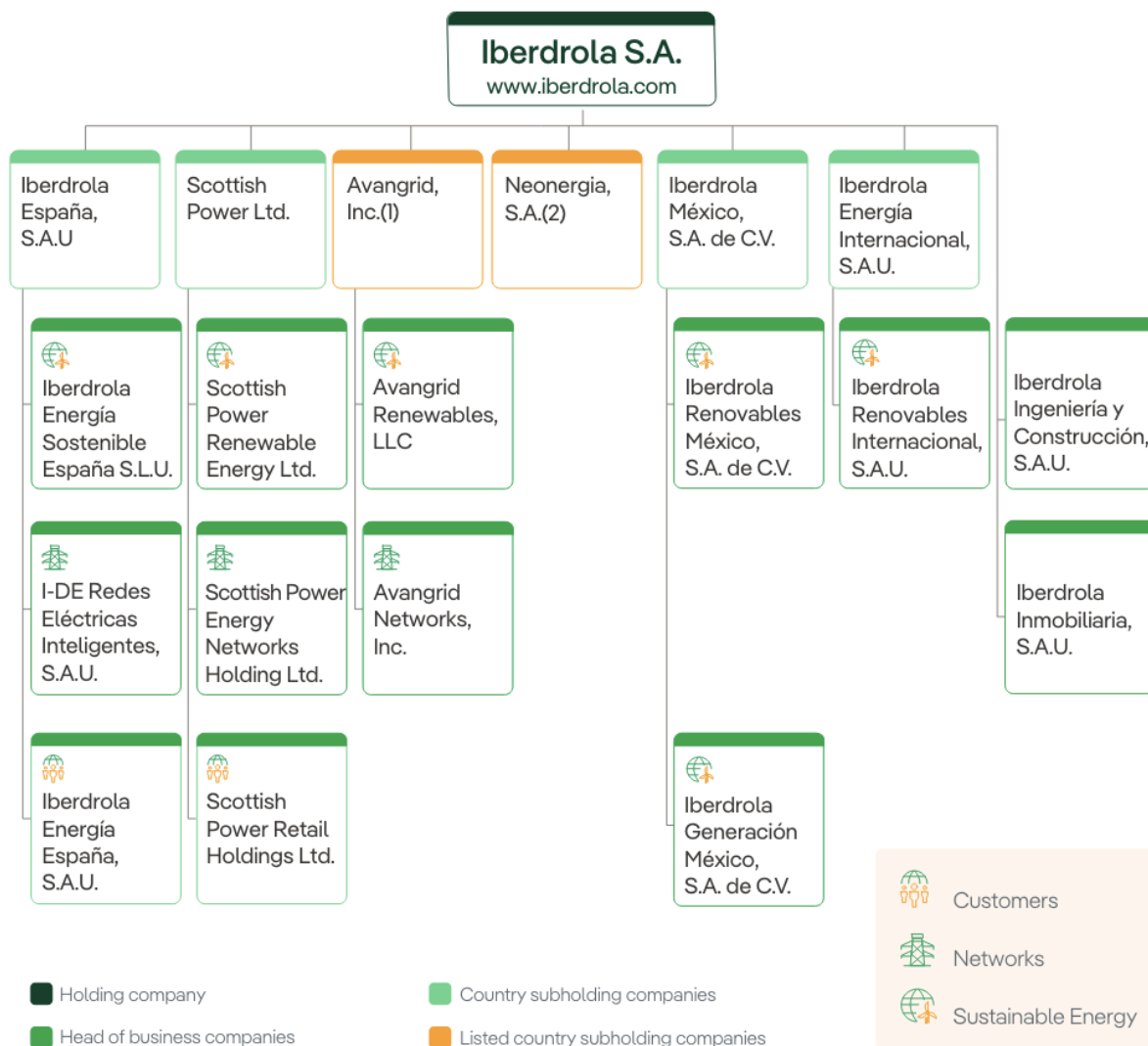
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Annexes

Annex A:

Corporate Structure of the Group, source: Company Website



¹ Avangrid, Inc. is 81.50% owned by Iberdrola, S.A.

² Neonergia, S.A. is 50% + 1 share indirectly owned by Iberdrola, S.A.

Annex B:

Company historic Balance Sheet, Source: Company Annual Reports

Balance Sheet Consolidated						
€000 000	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23
Intangible assets	21 000	20 368	18 222	19 909	20 118	20 255
Goodwill	7 838	8 153	7 613	8 312	8 189	8 375
Other intangible assets	13 162	12 215	10 609	11 597	11 929	11 880
Investment property	429	342	301	310	307	431
Property, plant and equipment	66 109	71 289	71 779	79 981	86 326	87 821
Property, plant and equipment in use	58 518	63 448	64 879	70 919	74 813	73 466
Property, plant and equipment under construction	7 592	7 841	6 900	9 062	11 513	14 355
Right-of-use assets	-	1 782	1 974	2 260	2 370	2 488
Non-current financial investments	5 191	5 819	5 461	6 499	10 650	9 740
Equity-accounted investees	1 710	1 957	1 145	1 058	999	1 306
Non-current equity investments	69	86	38	25	32	29
Other non-current financial assets	2 685	3 020	2 909	3 995	5 958	7 208
Derivative financial instruments	727	756	1 369	1 421	3 661	1 197
Non-current trade and other receivables	815	2 851	3 161	3 764	4 614	3 343
Current tax assets	666	666	666	729	736	883
Deferred tax assets	5 486	5 694	5 982	5 917	1 768	2 009
NON-CURRENT ASSETS	99 696	108 811	107 546	119 369	126 889	126 970
Assets held for sale	62	-	-	124	166	4 720
Nuclear fuel	273	306	260	267	259	278
Inventories	2 174	2 542	2 443	2 639	2 159	2 550
Current trade and other receivables	6 855	7 499	7 664	10 956	11 220	10 039
Current tax assets	253	318	564	367	453	351
Other public administration receivables	503	507	623	2 406	898	782
Current trade and other receivables	6 098	6 674	6 477	8 183	9 869	8 906
Current financial assets	3 979	3 211	4 605	8 397	9 421	5 476
Other current financial investments	572	693	578	1 533	2 964	1 679
Derivative financial instruments	606	405	600	2 831	1 849	778
Cash and cash equivalents	2 801	2 113	3 427	4 033	4 608	3 019
CURRENT ASSETS	13 342	13 558	14 972	22 383	23 225	23 063
TOTAL ASSETS	113 038	122 369	122 518	141 752	150 114	150 033
Parent company	36 582	37 678	35 412	40 479	41 119	43 111
Subscribed capital	4 798	4 771	4 762	4 775	4 772	4 763
Valuation adjustments	(32)	(544)	(242)	547	(932)	2
Other reserves	32 732	33 522	34 420	35 911	36 839	37 699
Treasury shares	(1 010)	(1 436)	(1 985)	(1 860)	(1 756)	(1 465)
Translation differences	(2 919)	(2 101)	(5 154)	(2 779)	(2 143)	(2 691)
Net profit for the year	3 014	3 466	3 611	3 885	4 339	4 803
Non-controlling interests	7 394	9 517	11 806	15 647	16 995	17 181
EQUITY	43 977	47 195	47 218	56 126	58 114	60 292
Other provisions	2 848	3 329	3 518	3 738	2 999	3 080
Non-current financial liabilities	31 779	33 639	35 096	37 175	44 216	41 775
Bank borrowings, bonds and other marketable securities	30 752	30 126	30 334	31 179	36 129	36 319
Equity instruments having the substance of a financial liability	141	193	334	525	576	561
Derivative financial instruments	387	471	991	1 673	3 690	1 285
Leases	-	1 614	1 927	2 253	2 287	2 408
Other non-current financial liabilities	499	1 235	1 510	1 545	1 534	1 202
Other non-current liabilities	375	408	262	418	309	435
Current tax liabilities	180	261	285	300	362	387
Deferred tax liabilities	9 043	9 359	9 607	11 364	7 129	7 379
TOTAL NON-CURRENT LIABILITIES	52 945	56 043	57 369	61 272	63 161	61 669
Liabilities linked to assets held for sale	1	-	-	-	27	1 097
Current provisions	580	660	579	789	922	920
Provision for pensions and similar obligations	23	25	23	27	42	40
Other provisions	557	635	556	762	880	880
Current financial liabilities	8 380	11 436	10 332	15 333	19 152	18 008
Bank borrowings, bonds and other marketable securities	6 575	8 800	7 703	9 984	10 458	11 959
Equity instruments having the substance of a financial liability	37	22	57	100	87	110
Derivative financial instruments	448	478	297	2 111	3 398	1 352
Leases	-	153	131	158	151	184
Trade payables	5 259	5 098	5 138	5 964	5 927	5 112
Other current financial liabilities	1 320	1 983	2 144	2 980	5 058	4 403
Other current liabilities	1 896	1 937	1 882	2 268	2 811	2 935
Current tax liabilities	349	243	1 226	227	156	332
Other public administration payables	1 039	1 020	478	1 205	1 262	1 303
Other current liabilities	508	674	178	836	1 393	1 300
TOTAL CURRENT LIABILITIES	16 116	19 131	17 931	24 354	28 839	28 072
TOTAL EQUITY AND LIABILITIES	113 038	122 369	122 518	141 752	150 114	150 033

Annex C:

Company historic Income Statement (2018-2023), Source: Company Annual Reports

P&L Consolidated						
€000 000	FY18	FY19	FY20	FY21	FY22	FY23
Revenue	35 076	36 438	33 145	39 114	53 949	49 335
Supplies	(19 641)	(20 175)	(17 000)	(22 052)	(33 750)	(26 033)
GROSS INCOME	15 435	16 263	16 145	17 062	20 199	23 302
Personnel expenses	(2 679)	(2 841)	(2 810)	(3 002)	(3 365)	(3 824)
Capitalised personnel expenses	659	695	661	716	847	864
Net Personnel Expenses	(2 020)	(2 146)	(2 149)	(2 286)	(2 518)	(2 960)
External services	(2 797)	(2 843)	(2 841)	(2 936)	(3 602)	(4 000)
Other operating income	662	659	704	995	911	824
Net external services	(2 135)	(2 184)	(2 137)	(1 941)	(2 691)	(3 176)
Net operating expenses	(4 155)	(4 330)	(4 286)	(4 227)	(5 209)	(6 136)
Taxes	(1 931)	(1 829)	(1 821)	(829)	(1 762)	(2 749)
GROSS OPERATING PROFIT (EBITDA)	9 349	10 104	10 038	12 006	13 228	14 417
EBITDA Margin(%)	26,65%	27,73%	30,29%	30,69%	24,52%	29,22%
Impairment losses, trade and other receivables	(254)	(298)	(381)	(369)	(470)	(618)
Amortisation, depreciation and provisions	(3 656)	(3 929)	(4 093)	(4 294)	(4 774)	(4 826)
OPERATING PROFIT (EBIT)	5 439	5 877	5 564	7 343	7 984	8 973
EBIT Margin(%)	15,51%	16,13%	16,79%	18,77%	14,80%	18,19%
Result of equity-accounted investees	56	14	480	(39)	146	239
Finance income	840	864	1 038	1 265	1 204	1 535
Finance expense	(1 996)	(2 164)	(2 029)	(2 268)	(3 042)	(3 722)
Gains on disposal of non-current assets	48	206	-	-	-	-
Losses on disposal of non-current assets	(40)	(3)	-	-	-	-
PROFIT BEFORE TAX	4 348	4 794	5 053	6 301	6 292	7 025
Income tax	(959)	(914)	(1 083)	(1 914)	(1 161)	(1 610)
NET PROFIT FOR THE YEAR FROM CONTINUING OPERATIONS	3 389	3 880	3 970	4 387	5 131	5 415
NET PROFIT/(LOSS) FOR THE YEAR FROM DISCONTINUED OPERATIONS (NET OF TAXES)	(51)	(66)	(18)	(35)	(71)	(21)
Non-controlling interests	(323)	(348)	(341)	(467)	(721)	(591)
NET PROFIT FOR THE PERIOD ATTRIBUTABLE TO THE PARENT	3 014	3 466	3 611	3 885	4 339	4 803
BASIC EARNINGS PER SHARE IN EUROS FOR CONTINUING OPERATIONS	0	1	1	1	1	1
DILUTED EARNINGS PER SHARE IN EUROS FOR CONTINUING OPERATIONS	0	1	1	1	1	1
BASIC AND DILUTED EARNINGS PER SHARE IN EUROS FOR DISCONTINUED OPERATIONS	(0)	(0)	(0)	(0)	(0)	(0)

Annex D:

Company Turnover by Region, Source: Company Integrate annual reports.

Turnover by Region					
€000 000	2019 H	2020 H	2021 H	2022 H	2023 H
Spain	15 013	12 657	16 039	22 876	18 268
UK	6 121	6 082	6 155	9 769	10 775
USA	4 929	4 789	5 737	7 871	7 325
Mexico	2 257	2 482	3 480	4 061	3 000
Brazil	6 699	5 571	7 148	8 574	8 963
Rest of the World	1 418	1 563	556	798	1 003
Total	36 438	33 145	39 114	53 949	49 335

Turnover by Region %					
	2019 H	2020 H	2021 H	2022 H	2023 H
Spain	41,20%	38,19%	41,01%	42,40%	37,03%
UK	16,80%	18,35%	15,74%	18,11%	21,84%
USA	13,53%	14,45%	14,67%	14,59%	14,85%
Mexico	6,19%	7,49%	8,90%	7,53%	6,08%
Brazil	18,38%	16,81%	18,27%	15,89%	18,17%
Rest of the World	3,89%	4,72%	1,42%	1,48%	2,03%
Total	100,0%	100,0%	100,0%	100,0%	100,0%

Annex E:

Macroeconomic Assumptions, Source: The Economist Intelligent Unit

1. Macroeconomic assumptions																	
€000 000	Assumptions	2018 H	2019 H	2020 H	2021 H	2022 H	2023 H	2024 F	2025 F	2026 F	2027 F	2028 F	2029 F	2030F	2031F	2032F	2033F
GDP																	
Weighted		2.14%	1.72%	(7.84%)	6.31%	4.34%	2.10%	1.50%	1.81%	1.87%	1.84%	1.78%	1.72%	1.70%	1.63%	1.65%	1.66%
Inflation																	
Weighted		2.62%	2.02%	1.27%	4.43%	6.34%	4.63%	3.16%	2.46%	2.46%	2.36%	2.36%	2.47%	2.42%	2.53%	2.53%	2.51%
Taxes																	
Corporate tax	25.0%						22.9%	22.9%	22.9%	22.9%	22.9%	22.9%	22.9%	22.9%	22.9%	22.9%	22.9%

Annex F:

Operational assumptions (2018-2033), Source: Company Integrate Reports

2. Operational Assumptions																	
€000 000	Assumptions	2018 H	2019 H	2020 H	2021 H	2022 H	2023 H	2024 F	2025 F	2026 F	2027 F	2028 F	2029 F	2030F	2031F	2032F	2033F
Total Installed Capacity (MW)	5.09%	46 694	52 082	55 111	58 320	60 761	62 883	66 081	69 442	72 974	76 686	80 586	84 685	88 992	93 518	98 275	103 273
Net Production (GWh)	2.47%	145 605	151 758	162 842	164 266	163 031	168 599	172 770	177 044	181 424	185 912	190 511	195 224	200 054	205 003	210 074	215 271
Km of Lines	1.69%	1 173 672	1 191 288	1 206 783	1 240 137	1 264 641	1 276 519	1 298 146	1 320 139	1 342 504	1 365 249	1 388 378	1 411 900	1 435 820	1 460 146	1 484 883	1 510 040

Annex G:

Yield Curve Spot rate, 10-year maturity Euro area, Source: ECB Data Portal

DATE	Yield curve spot rate, 10-year maturity - Government bond, nominal, all issuers whose rating is triple A - Euro area
2024-01-02	2,12%
2023-12-29	2,08%
2023-12-28	2,0%
2023-12-27	1,99%
2023-12-22	2,02%
2023-12-21	2,05%
2023-12-20	2,05%
2023-12-19	2,09%
2023-12-18	2,16%
2023-12-15	2,11%
2023-12-14	2,21%
2023-12-13	2,25%
2023-12-12	2,31%
2023-12-11	2,34%
2023-12-08	2,35%
2023-12-07	2,24%
2023-12-06	2,28%
2023-12-05	2,33%
2023-12-04	2,39%
2023-12-01	2,48%

Annex H:

Country Risk Premium as % of Turnover, Source: Damodaran Website

Country Risk Premium		
	Turnover %	CRP
Spain	37,03%	0,87%
UK	21,84%	0,19%
USA	14,85%	-
Mexico	6,08%	0,17%
Brazil	18,17%	0,80%
Rest of the World	2,03%	0,12%
Total	100,0%	2,15%

Annex I:

Interest Rate Swap, Euro area (EURAB6E10Y=), Source: Eikon Reuters Platform

Spot 29/12/2023	Avg. 1M	Avg. 6M	Avg. 1Y	Avg. 2Y
2,44%	2,5%	3,1%	3,0%	2,7%

Annex J:

Multiples Valuation - Author Analysis, Source: EIKON Reuters Platform

Identifier (RIC)	Company Name	Country of Exchange	EV / EBITDA		EV / EBIT	
			FY0		FY0	
IBE.MC	Iberdrola SA	Spain		10,12		15,39
ENEL.MI	Enel SpA	Italy		6,54		10,55
NTGY.MC	Naturgy Energy Group SA	Spain		7,32		10,71
ELE.MC	Endesa SA	Spain		4,44		6,04
EDP.LS	EDP Energias de Portugal	Portugal		9,64		17,93
EDPR.LS	EDP Renovaveis SA	Spain		20,08		49,70
REDE.MC	Redeia Corporacion SA	Spain		9,08		14,36
ELE.MC	Endesa SA	Spain		4,44		6,04
EONGn.DE	E.ON SE	Germany		2,59		2,98
ENGIE.PA	Engie SA	France		4,56		6,51
SO	Southern Co	United States of America		12,90		24,07
EXC.O	Exelon Corp	United States of America		10,33		19,36
ENAG.MC	Enagas SA	Spain		12,65		23,91
Average				8,82		15,97
Median				9,08		14,36
Std				4,71		12,24
Average - Std				4,12		3,73
Average + Std				13,53		28,20
Average w/ outliers				8,37		14,08

Annex K:

Multiples of similar company transactions - Author Analysis, Source: Merger Market Platform

Transactions in alternative energy, electrical power generation and electrical power transmission sectors.			
€M	Country	EV / EBITDA	EV / EBIT
Smart Metering Systems plc (100% Stake)	United Kingdom	20,5x	42,5x
Cosmo Energy Holdings Co., Ltd. (19.87% Stake)	Japan	8,1x	14,7x
Hammerhead Energy Inc (100% Stake)	Canada	4,7x	6,9x
Pioneer Natural Resources Co (100% Stake)	USA	6,0x	7,7x
Earthstone Energy Inc (100% Stake)	USA	2,9x	4,0x
Pipestone Energy Corp (100% Stake)	Canada	1,7x	2,4x
Denbury Inc (100% Stake)	USA	5,6x	6,9x
TransAlta Renewables Inc (40.15% Stake)	Canada	16,1x	37,2x
Groupe Arverne (100% Stake)	France	15,5x	15,5x
MVV Energie AG (6.8% Stake)	Germany	3,6x	4,7x
Egdon Resources plc (58.6% Stake)	United Kingdom	3,7x	7,7x
GreenVolt - Energias Renovaveis SA (16.64% Stake)	Portugal	21,3x	67,5x
Hess Midstream LP (1.5% Stake)	USA	9,7x	11,9x
Tion Renewables AG (82.1% Stake)	Germany	14,2x	37,4x
Prax Upstream Ltd (100% Stake)	United Kingdom	1,2x	5,1x
Ranger Oil Corp (100% Stake)	USA	3,3x	4,7x
Average		8,6x	17,3x
Median		5,8x	7,7x