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Final Thesis

How Corporate Hybrid Bonds Support Strategic Financing Objectives: A Case Study of Enel S.p.A.'s January 2026 Perpetual Hybrid Bonds Issuance

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Table of Contents

Declaration on the Use of Artificial Intelligence Tools **7**

Chapter 1. Introduction **8**

1.1. Overview of Hybrid Securities Market 8

1.1.1. History of Hybrid Financial Instruments 8

1.1.2. Convertible Bonds 9

1.1.3. Preferred Shares 10

1.1.4. Mezzanine Financing 11

1.1.5. Motives for the Use of Hybrid Instruments 13

1.2. Objectives and Research Question 13

1.2.1. Research Questions 13

1.2.2. Empirical Analysis 14

1.3. Structure of the Thesis 15

Chapter 2. Research Methodology **18**

2.1. Research Design and Rationale for a Single Case Study Approach 18

2.1.1. Rationale for a Case Study Design 18

2.1.2. Justification for a Single Case 18

2.1.3. Depth Against Breadth 19

2.2. Case Selection: Enel S.p.a. 19

2.2.1. Case Selection Framework 19

2.2.2. Issuance History 19

2.2.3. Ownership Structure and Governance 20

2.2.4. Scale and Capital Intensity of the Investment Programme 20

2.3. Data Sources and Analytical Framework 20

2.3.1. Data Sources 20

2.3.2. The Comparative Financial Model 21
2.3.3. Forward-looking Rates and Probabilistic Extension 22
2.4. Limitations of the Methodology 22
Chapter 3. Literature Review 25
3.1. Hybrid Bonds in Capital Structure Theory 25
3.1.1. Modigliani-Miller and the Trade-off Theory 25
3.1.2. The Pecking Order Theory 26
3.1.3. Agency Theory 27
3.2. Gaps in Existing Literature and Research Contribution 27
3.2.1. Valuation of Hybrid Securities 28
3.2.2. Market Reaction to Hybrid Issuance 29
3.2.3. Taxation and Classification 30
3.2.4. Motives for Issuance 31
3.2.5. Capital Structure and Corporate Strategy 33
3.2.6. The Capital Structure of Regulated Utilities 34
3.2.7. The Identified Gap and the Contribution of This Thesis 34
Chapter 4. Corporate Hybrids: Structure and Market Data 37
4.1. Corporate Hybrids Structure and Functioning 37
4.1.1. Defining Characteristics 37
4.1.2. Seniority in the Capital Structure 38
4.1.3. Comparison with AT1 and CoCo Instruments 39
4.2. Credit Rating Considerations 40
4.2.1. Moody's Methodology 40
4.2.2. Standard & Poor's Methodology 42
4.2.3. Fitch's Methodology 44
4.2.4. A real example: Eni S.p.A. 44

4.3. Accounting and Tax treatment 45
4.3.1. Accounting Classification under IAS 32 45
4.3.2. Tax Treatment and Anti-Hybrid Rules 46
4.3.3. The Italian Tax Regime 47
4.4. Market Status and Trends 48
4.4.1. Market Size and Growth 48
4.4.2. Issuer Credit Quality and Geographic Distribution 50
4.4.3. Sector Composition 51
Chapter 5: Contextual Background 54
5.1 The European Financing Environment 54
5.1.1. Monetary Policy and the Rate Cycle 54
5.1.2. Transmission to Credit Markets 55
5.1.3. Equity Market Conditions 57
5.1.4. Implications for Corporate Financing Choices 58
5.2. Trends in the European Utilities sector 58
5.2.1. Investment Needs and the Policy Framework 59
5.2.2. The Regulated Asset Base Mechanism 61
5.2.3. Regulatory Lag and Its Asymmetry 62
5.2.4. Renewable Generation Outside the RAB 63
5.3. Utilities market financial metrics 63
5.3.1. Capital Expenditure Trends 63
5.3.2. Interest Coverage 64
5.3.3. Hybrids in the Sector Funding Mix 65
Chapter 6: The Case of Enel S.p.a. 67
6.1 Case Study Roadmap 67
6.2. Enel's hybrid bond program: a descriptive overview 68

6.3. January 2026 issuance: description of the transaction 74
6.3.1. Legal Structure and Subordination 74
6.3.2. Terms of the Two Tranches 76
6.3.3. Pricing the Extension Risk 77
6.3.4. Redemption Architecture 78
6.3.5. Features Supporting Equity Credit 78
6.4. The transaction in the context of the 2026-2028 Strategic Plan 79
6.4.1. The 2026-2028 Strategic Plan 79
6.4.2. Preservation of Credit Metrics 79
6.4.3. Cost Relative to the Funding Mix 80
6.4.4. Call Architecture and the Maturity Wall 81
6.5. Debt Capacity and Credit Metrics 81
6.5.1. Scenario Construction 82
6.5.2. Results 83
6.5.3. Interpretation through the Trade-off Theory 84
6.6. Earnings Generation and the Cost of Capital 85
6.6.1. Accounting Treatment and Reported Earnings 85
6.6.2. The True After-Tax Cost 86
6.6.3. The Cost of Equity Credit 86
6.6.4. Weighted Average Cost of Capital 87
6.6.5. Comparison with the Regulatory WACC 89
6.7. Investment Capacity 90
6.7.1. Headroom Against Rating Thresholds 91
6.7.2. Implied Debt Capacity in Euro Terms 92
6.7.3. Interpretation: Underinvestment and Flexibility 93
6.8. Risk Distribution Among Capital Providers 93

6.8.1. The Subordination Premium at Issuance 93
6.8.2. Evolution of the Premium Since Issuance 94
6.8.3. The Liquidation Waterfall 95
6.9. Forward-Looking Rate Risk: A Monte Carlo Simulation of the Coupon Reset 96
6.9.1. Calibration of the Vasicek Process 97
6.9.2. Estimation Results 98
6.9.3. Forward Simulation and Simulated Reset Coupons 100
6.10. Discussion: Hybrid Capital, Capital Structure Theory and Enel's Strategic Plan 102
6.11. Summary of Findings 103
Chapter 7. Conclusions 105
7.1. Main Findings and Answer to Research Questions 105
7.2. Implications for Corporate Finance Theories 107
7.3. Limitations of the Research 109
7.4. Suggestions for Future Research 110
7.5. Concluding Summary 111
Appendixes 112
A.1. Enel S.p.a.'s Reported Consolidated Income Statement 112
A.2. Enel S.p.a.'s Equity Detail 113
A.3. Enel S.p.a.'s Reported Consolidated Balance Sheet 114
A.4. Vasicek Calibration 115
A.5. Monte Carlo simulation results (2,000 trials) 116
Exhibits and Equations 117
References 119

Declaration on the Use of Artificial Intelligence Tools

The undersigned Luigi Coccolo, student ID number 891427, enrolled at Ca' Foscari in the Master's Degree programme in Global Accounting and Finance, author of the final master's thesis " How Corporate Hybrid Bonds Support Strategic Financing Objectives: A Case Study of Enel S.p.A.'s January 2026 Perpetual Hybrid Bonds Issuance", supervisor Anastasia Giakoumelou, aware of the sanctions provided for by Article 76 of the Consolidated Law, Presidential Decree No. 445 of 28/12/2000, and of the forfeiture of benefits provided for by Article 75 of the same Consolidated Law in the event of false or misleading statements, under their own personal responsibility pursuant to Articles 46 and 47 of Presidential Decree No. 445 of 28/12/2000,

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that I have used generative artificial intelligence technologies to support various aspects of the research and writing of my master's thesis, in particular Claude Sonnet 5 (Anthropic, version released in June 2026), which was used for the revision and optimisation of the text in order to improve its clarity and coherence, as well as to support the automated drafting of sentences, throughout the thesis. Moreover, artificial intelligence technologies were used to support and counter-check the financial model built in Microsoft Excel. The correctness, quality and reliability of any information and text generated were verified through a systematic review of every piece of content produced, by directly checking it against the primary sources used in the research, as well as through an independent and detailed verification of the accuracy of the bibliographic references and citations of the academic literature included in the text.

FURTHER DECLARE

that all material generated by AI has been carefully verified, reviewed and reworked by the author, who assumes full responsibility for the quality, accuracy and scientific integrity of the work.

Chapter 1. Introduction

1.1. Overview of Hybrid Securities Market

1.1.1. History of Hybrid Financial Instruments

Stemming from the growing importance that hybrid securities are gaining in the corporate finance field due to the increasingly complex environment firms operate in, this research is specifically focused on corporate hybrid bonds, i.e. debt securities issued by non-financial corporations that present features which bring them closer to equity than to standard corporate debt. Corporate hybrids are largely employed to fund projects such as growth by acquisitions or high-scale investment plans, following logics that go beyond mere financial considerations. In this thesis we are going to analyse the utilization of corporate hybrids by Enel S.p.a., the Italian national energy provider, in the context of their infrastructural and eco-sustainable expansion. The adoption of a strategic perspective alongside the financial one will help us in developing a comprehensive understanding of the security analysed and of the motives behind its issuance.

Before delving deeper into the analysis corporate hybrid bonds, we will make some considerations about the universe of hybrid financial instruments. We generally identify as HFI any instrument that blends some features of equity and debt financing structures. Companies began utilizing hybrid financial instruments (specifically, convertible bonds), in the middle of 19th century, when railways corporations started to look for more flexible ways to finance capital-heavy railroads expansions in the US. The first documented issuance of convertible bonds dates back to 1868, during the so-called "Erie war", a conflict among several financiers for the control of the Erie Railroad Company. Since court's injunctions were limiting the company's board in the issuance of equity and bonds, directors opted for convertible bonds to grant the company the funding needed to operate and expand the railway. Soon, this type of security started to be utilized more widely by other companies across different industries. Convertibles represented an efficient type of security especially considering the underdevelopment of equity markets compared to today, limiting firms' opportunities to gather new share capital. Since then, HFIs have evolved and developed in multiple forms and structures, with the goal of supporting the issuer's strategic objectives maintaining a sound financial balance.

1.1.2. Convertible Bonds

Nowadays, it is possible to identify lots of diverse types of securities placed in the debt-equity continuum which present different financial structures or are regulated by peculiar contractual agreements that may vary from case to case. Still, we can identify specific groups of hybrid financial instruments which are commonly used by practitioners. Convertible bonds, as discussed here above, represented a pioneering tool in corporate finance. A convertible bond is a corporate debt security that grants the holder the right, but not the obligation, to convert the bond into a predetermined number of the issuer's common shares, typically at the holder's discretion and within a specified conversion window. It combines a straight bond component paying periodic coupons and returning principal at maturity if unconverted, with an embedded call option on the issuer's equity, whose value increases as the underlying share price rises. This dual nature allows issuers to offer investors potential equity upside in exchange for accepting a lower coupon than a comparable non-convertible bond, while investors retain the downside protection of a fixed-income instrument until conversion is exercised. Analyzing convertible bonds' issuances, United States' market has a share of roughly 80%, followed by Europe around 10%, then China and other Asian countries for 8%, as per Allianz Research (2025). The convertible bonds market has an estimated size of $300 billion[1], against a broader corporate bonds market value of ca. $44.9 trillion at the end of 2025. The issuance amount is led by US players, where volumes are increasing year over year from 2015 till 2025 with a CAGR of 10.42%, starting from a value of $40b arriving to roughly $120b (Calamos, 2025). European market totalled around $14.2b in convertible bonds issuance volumes during 2025, a figure that indicates an underuse of this security compared to the U.S. market. 2026 started even more strongly, with $92.3 billion in global convertible notes issuances at the end of May, twice the amount of the same period in the previous year (Morgan Stanley, 2026). Exhibit 1 shows the historical trend of issuance volume from 2014 to 2025 across EUR, USD and GBP, highlighting how U.S. is the most represented market.

[1] Clearly Gottlieb, 22nd of January 2026

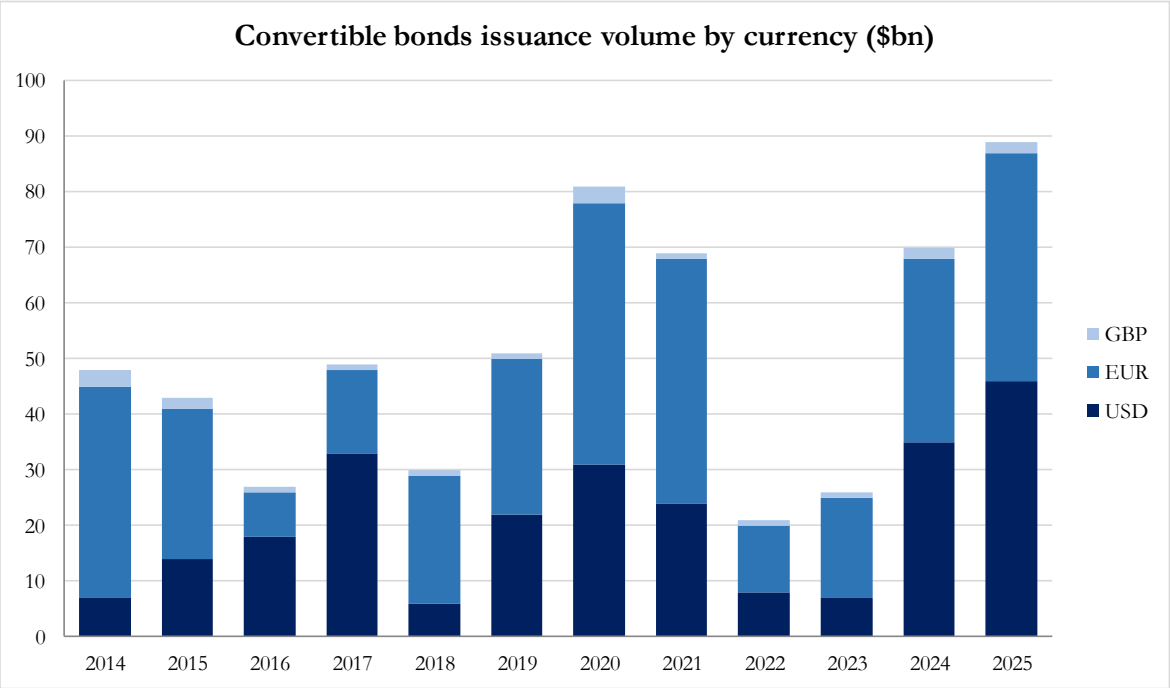


Exhibit 1: Convertible bond issuance volume across currencies. Source: Allianz Research, Calamos

Looking at the industries which more significantly rely on convertible bonds, Allianz Research (2025) shows how tech, biotech and consumer internet firms account for a much larger share of the global convertible universe than they do of standard equity or credit indices, reflecting issuance moved toward sectors where upside is easier to sell than balance sheet strength. Firms with a compelling equity story but without strong and predictable cash flows find the structure of convertible bonds more favourable for getting cheap financing while offering potential equity upside to investors.

1.1.3. Preferred Shares

Another significant type of hybrid financial instrument is represented by preferred shares, i.e. equity instruments that ranks senior to common stock but junior to all forms of debt in the event of liquidation, and that typically entitles holders to a fixed or floating dividend paid before any distribution to common shareholders. Dividends on preferred shares are generally discretionary rather than contractually obligatory, and, unlike interest on debt instruments, are usually not tax-deductible for the issuer. Preferred shares may be perpetual or carry a call date at the issuer's option and can be issued with or without a conversion feature into common equity. Preferred shares are functionally comparable to corporate hybrid bonds, even though they are structurally distinct from those securities: regarding the seniority in capital structure, hybrids have priority over preferreds,

meanwhile the payment obligations for the issuer is more strict referring to hybrid bonds, since coupons can be deferred but are cumulated; on the other hand, preferred shares can indefinitely suspend dividends and not cumulating them if issued by financial institutions (Neuberger Berman, 2024). According to Cohen & Steers (2025), the global preferred shares market size stood at $1.3 trillion, with two distinct trading markets: the U.S. exchange-traded segment (where $25-par shares preferreds aimed at retail investors are traded) totals around $180 billion, and the larger, institutionally-traded OTC segment, which is valued at more than $1 trillion globally, with preferreds typically trading in $1 million blocks.

1.1.4. Mezzanine Financing

Mezzanine financing represents an interesting type of financing which groups several credit agreements that sits between subordinated debt and equity. It is typically structured as unsecured or junior-secured debt combined with an equity component, mainly warrants or conversion rights, that compensates lenders for the additional risk undertaken in their position. It is most frequently used to fund leveraged buyouts, growth capital needs, or acquisitions for middle-market companies that have exhausted their senior debt capacity but want to avoid equity dilution. Because of its subordination and equity-linked upside, mezzanine debt commands substantially higher yields than senior debt, and its terms (coupon, warrant coverage, covenants) are typically negotiated bilaterally rather than syndicated broadly, unlike public convertible or hybrid bond issuances. As per Deloitte Analysis (2025), mezzanine financing in the European corporate finance market has been recently sidelined in favour of uni-tranche debt packages in recent years; notwithstanding this, we might see an increase in the deployment of mezzanine capital with the maturity of loans with vintage in 2021, which may be refinanced with more equity-like financing in order to attract a broader group of investors. Exhibit 2 compares the main features of the HFIs here presented with the ones of corporate hybrid bonds.

	Preferred Shares	Convertible Bonds	Corporate Hybrid Bonds	Mezzanine Financing
Capital structure ranking	Equity instrument. Ranks senior to common equity but junior to all forms of debt in a liquidation.	Debt instrument. Ranks according to its contractual seniority (typically senior unsecured) until conversion is exercised.	Deeply subordinated debt. Ranks junior to senior and ordinary subordinated debt, but senior to preferred and common equity.	Subordinated debt, typically ranking junior to senior secured and unsecured bank debt but senior to equity, often combined with an equity kicker.
Coupon/dividend structure	Dividends, generally discretionary and non-cumulative, paid before common shareholders but not a contractual obligation.	Fixed, contractually mandatory coupon, typically set below the coupon of an equivalent straight bond to reflect the value of the embedded conversion option.	Coupon deferability at the issuer's sole discretion, generally cash-cumulative and compounding; perpetual or very long-dated maturity.	Fixed cash coupon, often combined with a payment-in-kind (PIK) component, commanding a higher yield than senior debt to compensate for subordination risk; terms are typically negotiated bilaterally.
IFRS accounting treatment (IAS 32)	Classified according to substance: equity if dividends are discretionary and there is no mandatory redemption; a liability if redemption is mandatory.	Compound instrument: distinguished between a liability component (the straight-bond cash flows) and an equity component (the conversion option), presented separately.	Binary, whole-instrument classification (100% equity or 100% liability), based on the absence of a fixed maturity and the discretionary and avoidable nature of coupon payments.	Classified as a financial liability: a fixed maturity and mandatory cash coupon mean it does not meet the equity-classification test; embedded warrants may require separate compound-instrument accounting.
Tax treatment	Dividend payments are generally not tax-deductible for the issuer, consistent with their treatment as a distribution of profit.	Coupon payments are generally tax-deductible as ordinary interest expense, consistent with the instrument's classification as debt.	Coupon payments can remain tax-deductible even where the instrument is treated as 100% equity for accounting purposes, subject to jurisdiction-specific conditions	Cash coupon payments are generally tax-deductible as ordinary interest expense; also, PIK components are typically deductible as it accrues.

Exhibit 2: Comparison between different forms of hybrid financial instruments. Source: own elaboration

1.1.5. Motives for the Use of Hybrid Instruments

The growing diffusion of these tools is explained also by practical considerations regarding the motives behind the decision to issue them. Thus, this makes it more interesting to study HIFs considering also the strategic context in which they are employed, why firms rely on them and how these securities contribute to the achievement of strategic goals. The increasing use of HFIs reflects firms' practical need for financing solutions that reconcile objectives often difficult to achieve simultaneously through the use of traditional debt and equity. Companies which are pursuing acquisitions or capital-heavy investment programmes want to avoid immediate shareholder dilution, preserving at the same time borrowing capacity. Similarly, corporations facing financial distress may employ hybrid instruments to facilitate restructuring while limiting cash outflows and securing an adequate level of financial flexibility.

1.2. Objectives and Research Question

1.2.1. Research Questions

Building upon these considerations, the goal of this paper is to investigate corporate hybrid bonds from a corporate financing perspective. Existing research has widely studied the financial, regulatory and accounting features of hybrid securities, whereas this work aims to understand how firms exploit the hybrid characteristics of these instruments to support specific corporate objectives, in situations where traditional financing alternatives may prove less effective.

This thesis is centered on a single, in-depth case study referred to January 2026 Enel S.p.A.'s hybrid bond issuance, examined in the context of the company's large-scale capital expenditure requirements linked to grid modernization and energy transition. Enel represents a particularly suitable subject for this analysis for three reasons. First, as one of the earliest and most active European non-financial issuers of hybrid capital, Enel offers a sufficiently long and repeated issuance history rather than a single and isolated deal, so that the January 2026 transaction can be read within an established program rather than as a one-off financing decision. Second, Enel's capital structure combines a partially state-owned shareholder base with a large international investor base, introducing a governance dimension to the financing decision that is absent from purely private or

fully state-controlled issuers. Third, the scale and capital intensity of Enel's investment program provide a clear strategic rationale in which the use of hybrid capital can be evaluated, specifically the need to fund legally committed infrastructure investment while preserving the credit metrics and ratings necessary to sustain continued access to capital markets.

The research is guided by the following question: "How does Enel S.p.A.'s January 2026 hybrid issuance support the funding of its 2026-2028 investment program and what are its quantifiable effects on the company's credit metrics, cost of capital, debt capacity and the allocation of risk among its capital providers, relative to an equivalent senior debt financing?" To address this matter thoroughly, the study is developed across three sub-questions: 1) what are the specific characteristics of hybrid bonds that differentiate them from pure debt or equity instruments; 2) how does Enel exploit these features to pursue its strategic objectives, considering the trade-offs involved relatively to a traditional senior debt alternative; 3) what quantifiable effects does the use of hybrid instruments generate on the issuer's financial structure, relative to an alternative scenario in which an equivalent senior debt stack had been used instead.

1.2.2. Empirical Analysis

The empirical core of the analysis consists of a financial model comparing Enel's actual capital structure, inclusive of its outstanding hybrid bond issuances, against a counterfactual scenario in which the same capital raise is delivered through senior debt financing. The model relies on Enel's reported financial data and publicly disclosed strategic objectives and evaluates the impact of the two scenarios across three dimensions: (i) debt capacity and credit metrics, measured through leverage and coverage ratios as assessed by the equity-credit treatment applied by rating agencies to hybrid instruments; (ii) earnings generation and cost of capital, comparing the after-tax cost of hybrid coupons to the cost of straight debt and the dilutive cost of new equity; (iii) investment capacity, translating the headroom against rating thresholds into the additional capital expenditure the company can fund without compromising its current ratings; and (iv) the distribution of risk among capital providers, examining how the subordination and deferability features of hybrid instruments reallocate downside risk relative to senior creditors and common shareholders. This comparison is then extended forward through a Monte Carlo simulation of the swap rate basing on which the two tranches reset, quantifying the issuer's interest rate exposure beyond the static comparison at issuance. Through this comparative framework, the analysis' goal is to assess the

specific mechanisms through which hybrid bonds create value for the issuer beyond the pure debt-equity dichotomy.

1.3. Structure of the Thesis

The research follows a structure where each paragraph builds on the previous one, giving in each step the elements to demonstrate how corporate hybrids are valuable to the firm. After this brief introduction on the topic, Chapter 2 describes the research methodology and explains the motives behind the adoption of a single, in-depth case study approach focused on Enel S.p.A. It discusses why Enel constitutes a particularly suitable subject for this analysis (namely its long and repeated history of hybrid bond issuance, its combination of state and international private ownership, and the scale of its capital expenditure programme tied to grid modernization and the energy transition) and outlines the financial model developed to compare Enel's actual capital structure against a counterfactual scenario in which the same financing needs are met through pure debt or pure equity.

Chapter 3 reviews the academic literature on hybrid financial instruments and the cornerstones of corporate finance theory that underpin their use. This paragraph begins with a discussion on four pillars of theoretical corporate finance[2] to better understand from where the need for hybrid financial instruments originates, following a step-by-step approach aimed at explaining the role of hybrids and the motives behind their utilization. Additionally, the chapter reviews existing research on HFIs and its main areas of focus, i.e. taxation, valuation, and issuance motives, highlighting the gap that motivates this thesis, which is the limited attention paid to how hybrid instruments are used as deliberate tools of corporate strategy, rather than as a technical financing choice alone.

Chapter 4 is dedicated to a detailed examination of corporate hybrid bonds specifically, combining a discussion of their structural features and functioning, including their position along the debt-equity continuum, coupon deferability, subordination, and the equity-credit treatment granted by rating agencies, with an overview of the European corporate hybrid market, its size, growth, and issuance trends over the period under review. This chapter provides the descriptive and market-based foundation necessary to understand the instrument at the centre of this thesis, before the discussion moves to a more theoretical part.

[2] Modigliani-Miller, Trade-off Theory, Pecking Order Theory and Agency Theory

Chapter 5 provides the broader economic and financial context in which Enel operates, discussing the evolution of European capital markets in recent years and the growing role of hybrid securities within corporate financing more generally. This paragraph also analyses the broader industry in which Enel operates, covering its main features and explaining typical dynamics which are fundamental to understand why such firms make certain strategic and financial decisions.

Chapter 6 represents the empirical core of the thesis. Through the in-depth analysis of Enel's hybrid bond programme, it examines how the firm employed hybrid financial instruments to support its long-term investment strategy, preserve financial flexibility, and manage its credit profile amid a capital-intensive transition. The chapter applies the financial model introduced in Chapter 2, comparing Enel's actual financing outcomes to the counterfactual pure-debt and pure-equity scenarios across debt capacity, earnings generation, and risk-distribution metrics, in order to identify the specific value created by the use of hybrid capital.

The final chapter, Chapter 7, summarizes the main findings, discusses their implications for corporate finance theory and practice, acknowledges the limitations of the research and outlines possible directions for future research on the use of corporate hybrid bonds.

Chapter 2. Research Methodology

2.1. Research Design and Rationale for a Single Case Study Approach

2.1.1. Rationale for a Case Study Design

This thesis follows a single, in-depth case study design, centered on Enel S.p.A.'s corporate hybrid bond programme. This paragraph justifies that choice before turning, in paragraph 2.2, to why Enel specifically represents an appropriate subject for the case study. Case study research is particularly well suited to research questions that ask 'how' and 'why' a phenomenon occurs within its real-world context, especially where the distinction between the phenomenon and its context is not sharply defined (Yin, 2009). This description fits closely with this thesis's central question of how a firm's use of hybrid bonds interacts with its broader strategic and financial environment. Where the objective is to build a detailed understanding of a mechanism rather than to test the statistical generalizability of an effect across a population, a small number of carefully selected, information-rich cases is preferable to a larger, more superficially analyzed sample (Eisenhardt, 1989). Flyvbjerg (2006) argues that predictive and universal theories cannot be the sole acceptable option in social sciences' research. Concrete and context-dependent knowledge thus represent a valuable tool which is able to capture real-life complexities; citing Kuhn (1987): "a discipline without a large number of thoroughly executed case studies is a discipline without systematic production of exemplars, and that a discipline without exemplars is an ineffective one". Additionally, as explained by Yin (2013), single-case research can be strengthened via investigating alternative causes and explanations rather than ignoring them, as well as triangulating data, meaning cross-verifying findings from different perspectives in order to better validate the study's conclusions.

2.1.2. Justification for a Single Case

The decision to concentrate on a single case, rather than a small comparative set, is directly referred to this project's research objective. The goal of the thesis is not to identify patterns that recur across different instruments and/or industries, but to develop a sufficiently detailed understanding of how one firm's use of a single instrument (the corporate hybrid bond) has evolved over time and interacted with its financing needs, credit profile, and investment strategy. Yin's (2009) typology of justifications for a single-case design identifies several rationales under which a single case is appropriate rather than a comparison. First, the revelatory case rationale, where the case offers

access to a phenomenon or a level of detail previously inaccessible to research; in this instance, the ability to trace a specific issuer's hybrid financing decisions basing on firm-level financial data over a multi-year period, rather than relying on the aggregate, cross-sectional evidence that mainly characterizes the empirical literature reviewed in Chapter 3. Second, the longitudinal case rationale, where the same case is studied at different points in time to reveal how conditions and outcomes change, factor here directly relevant given that Enel has issued hybrid bonds repeatedly since 2013, across markedly different interest rate, credit market, and rating-methodology environments, as documented in Chapter 5.

2.1.3. Depth Against Breadth

This design exchanges breadth for depth. A multi-case comparative design would have allowed for cross-case pattern identification but would have limited the depth of financial analysis achievable for any single issuer. Given that the research question concerns the specific mechanisms through which hybrid capital supports a firm's strategic objectives, rather than whether such mechanisms recur uniformly across industries, a deeply analyzed case better serves the thesis's objective. This limitation, and its implications for the generalizability of the thesis's findings, is discussed in paragraph 2.4.

2.2. Case Selection: Enel S.p.a.

2.2.1. Case Selection Framework

Referring to the case selection's framework developed by Gerring and Seawright (2008), Enel is defined as a typical case given its scale, capital intensity and ownership structure, allowing for an intensive examination focused on the understanding of a specific mechanism rather than to statistical generalization. If the strategic mechanisms this thesis investigates are not observable in a firm of Enel's scale and sophistication, they are unlikely to be observable in smaller or less active issuers of corporate hybrid bonds. The choice of Enel as the subject of this case study is based on three main considerations.

2.2.2. Issuance History

First, Enel is among the earliest and most active European non-financial issuers of corporate hybrid capital, with a hybrid bond programme going back to 2013. This provides a sufficiently long and repeated issuance history to study how the firm's approach to hybrid financing has evolved across

different phases of market and interest rate cycle, from the prolonged low-rate environment preceding 2022 through the subsequent hiking cycle described in Chapter 5.

2.2.3. Ownership Structure and Governance

Second, Enel's ownership structure featuring a large international investor base alongside a continuing, though partial, state shareholding creates room for a governance dimension that is largely absent from either purely private or state-controlled issuers and that significantly impacts its financing decisions. This connects the case directly to the literature reviewed in Chapter 3 on the relationship between ownership structure, regulatory independence, and capital structure in regulated European utilities (Bortolotti et al., 2011; Cambini and Rondi, 2016), including prior research that has itself used Enel as a sample firm in studying the relationship between privatization, regulation, and leverage (Cambini and Rondi, 2006).

2.2.4. Scale and Capital Intensity of the Investment Programme

Third, the scale and capital intensity of Enel's investment programme, which is concentrated on grid modernization and the broader energy transition, provides a clear strategic rationale basing on which the firm's use of hybrid capital can be evaluated: the need to fund long-dated infrastructure investment while preserving the credit metrics and rating necessary to sustain continued market access, a dynamic explored theoretically in Chapter 3's discussion of financial flexibility (Marchica and Mura, 2010; Byoun, 2011) and empirically for regulated utilities specifically (Cambini et al., 2012).

2.3. Data Sources and Analytical Framework

2.3.1. Data Sources

The empirical analysis is built upon the following categories of data. (a) Primary issuer disclosures: Enel's consolidated annual reports and financial statements, investor presentations, and the offering circular for the hybrid issuance under examination, sourced from the company's investor relations materials. (b) Hybrid and senior bond data: issuance terms (size, coupon, first call date, deferral mechanics, ranking) for the analyzed hybrid issuance and for the comparable senior unsecured bonds used to construct the counterfactual scenario, sourced from Bloomberg and cross-checked against the offering circular and bond-level documentation. (c) Rating agency material: rating actions, equity-credit assessments, and methodology publications from Moody's, S&P and Fitch

relevant to Enel's hybrid instruments and to the broader corporate hybrid asset class. (d) Market and macroeconomic data: the interest rate, corporate bond yield, and hybrid market data detailed in Chapters 4 and 5, used to contextualize the specific issuance analyzed in this study.

The empirical chapter begins with a descriptive analysis of Enel's full hybrid bond issuance history, with a structured overview of each issuance's date, size, currency, coupon, deferral structure, and first call date. This descriptive paragraph serves two purposes: first, it allows us to understand the firm's broader financing behaviour before moving to the subsequent deep-dive financial analysis; second, it gives a thorough description of issuance terms' evolution and its relationship with the macroeconomic and rating-methodology developments across the years.

2.3.2. The Comparative Financial Model

The core empirical contribution of this thesis is centered on a comparative financial model applied to Enel's €2 billion perpetual hybrid bond issuance of January 2026, structured in two tranches: a 6-year and a 9-year non-call tranche which are structurally identical in subordination and deferral features but differ in maturity and pricing. For each dimension of the analysis, the model compares Enel's actual financing outcome against a hypothetical scenario in which the same capital requirement is met through an equivalent issuance of senior unsecured debt, to assess how the firm takes advantage of relying on hybrid capital. Given their structural equivalence, the two tranches are treated as a single, size-weighted aggregate transaction for the first, second, and fourth element of the comparison, while their pricing differential is examined as market evidence for the third. The comparison is developed across four elements:

1. Debt capacity and credit metrics: applying the rating agencies' equity-credit treatment to Enel's actual capital structure, and recalculating leverage and coverage ratios under the hypothetical scenario in which the same instrument is deemed 100% debt.

2. Earnings generation and cost of capital: applying the IFRS rules described in Chapter 4, under the actual, equity-classified scenario coupon payments are recognized directly in equity and do not affect reported earnings; under the counterfactual debt scenario, the equivalent coupon accrues as interest expense under the effective interest method, reducing net income. Since interest expense is tax-deductible, this reduction is partially offset by a corresponding decrease in tax expense. The model computes this difference using Enel's reported financials and effective tax rate.

3. Investment capacity: assessing whether the full debt capital structure, with its correspondingly higher leverage ratio, would have limited Enel's ability to fund its actual capital expenditure programme without breaching covenants or rating thresholds, in order to concretely test, at the level of a specific firm and a specific transaction, the financial flexibility the firm obtains through the hybrid issuance.

4. Risk distribution among capital providers: examining how the hybrid instrument's subordination and deferral features reallocate downside risk between senior creditors, hybrid holders, and shareholders, relative to the senior-debt structure. Since the two tranches are priced identically in every aspect except from maturity, their coupon differential provides market evidence of the extension-risk premium included in the instrument's structure.

2.3.3. Forward-looking Rates and Probabilistic Extension

To better prove the practical significance of the corporate hybrids' flexibility here studied, the model is extended through a probabilistic simulation of the instrument's future cost. Since both tranches convert from a fixed coupon to a floating rate linked to the prevailing 5-year EUR swap rate at their respective first reset dates, this research includes a Monte Carlo simulation calibrated on the historical volatility of the EUR swap rate discussed in Chapter 6 to estimate the distribution of the coupon each tranche would face upon resetting, with the goal to measure the probability that this reset coupon exceeds the fixed rate determined at issuance. Because the hybrid's perpetual structure leaves the refinancing decision entirely at the issuer's discretion, while the senior-debt comparators used elsewhere in the model mature anyways and would require refinancing in whatever conditions then prevail, this extension makes explicit an asymmetry between the two structures, with the hybrid able to substitute a rollover exposure at maturity for a repricing exposure at each reset date.

2.4. Limitations of the Methodology

The research design choices for this thesis, which we discussed in this chapter insofar, come with some limitations that are acknowledged in the closing paragraph of this chapter.

First, the single-case design limits the statistical generalizability of this thesis's findings: conclusions drawn from Enel's specific experience may reflect firm-specific or sector-specific factors (e.g. regulated utility status, partial state ownership, investment-grade credit profile, which would not

necessarily extend to issuers with different characteristics). This limitation should, however, be considered within a context rather than treated as a weakness of the design itself. Flyvbjerg (2006) considers the assumption according to which one cannot generalize from a single case, and that a single case cannot contribute to scientific knowledge, as one of the most common misunderstandings about case-study research, arguing that the value of a well-executed case lies in the depth of causal understanding it produces rather than in its statistical representativeness. Yin (2013) further developed this point distinguishing the statistical generalization based on large-N studies from the analytic generalization that a case study is actually meant to produce: rather than applying findings to a population, a single case can be used to refine or challenge an underlying theoretical proposition, which subsequent research can then test across a broader sample. Consistent with the case-selection approach described in paragraph 2.2, Enel was chosen as a typical and most-likely case rather than a statistically representative one: since the strategic use of hybrid capital should be most clearly observable in a firm of Enel's scale and issuance history, the case constitutes a meaningful test of the phenomena under study, even though its findings cannot be statistically extended to other issuers without further research.

The second limitation regards the counterfactual financial model, which, as per most of the financial models developed by practitioners, relies on simplifying assumptions. Specifically, that the counterfactual senior debt issuance would have been priced at prevailing senior unsecured spreads for an issuer of Enel's credit profile at the relevant issuance date, holding all other financing decisions constant. To the extent that a significantly large debt issuance would itself have affected Enel's credit spreads or rating, the model may understate the true cost differential between the actual and counterfactual scenarios.

Chapter 3. Literature Review

3.1. Hybrid Bonds in Capital Structure Theory

Before diving deeper into the features of hybrid bonds, we will have a look at the pillars of capital structure theories, to better understand where the potential positive impact of hybrid bonds lies with reference to corporate finance's theory, and how this impact can be exploited by firms in specific situations.

3.1.1. Modigliani-Miller and the Trade-off Theory

We start from Modigliani and Miller (1958), which crucial proposition is that "the market value of any firm is independent of its capital structure and is given by capitalizing its expected return at a rate appropriate to its class". According to the scholars' model, this statement is true only if some conditions are verified: (1) firms' stocks and bonds are traded in a perfect market, where all bonds are perfect substitutes and sell at the same price per dollar worth of return, as well as yielding a constant income per unit of time, and this income is regarded as certain by all traders regardless of the issuer (thus implying the absence of information asymmetry in the market); (2) taxes are not included to simplify the model and the computation of the weighted average cost of capital[3]; (3) there is no mention of bankruptcy costs, i.e. penalties the market attributes to the firm which takes on excessive amount of debt[4]. Authors such as Baxter (1967), Myers and Robichek (1965) operated a reductio ab absurdum of the M&M theory, hypothesizing that the optimal capital structure would be composed by 99.9% of debt, thanks to interests' deducibility that lowers firms' cost of capital. This mechanism is very distant from real world, where firms need an "equity cushion" to borrow at a reasonable rate, above which the tax shield would be negatively offset by the increase in cost of debt.

Kraus and Litzenberger (1973) have reinforced this argument laying the basis for the widely known Trade-off Theory. Their theoretical pillar is that levered firms must balance a trade-off between debt tax advantages and bankruptcy penalties: if the firm's debt obligation exceeds its earnings in some

[3] "With a corporate income tax under which interest is a deductible expense, gains can accrue to stockholders from having debt in the capital structure, even when capital markets are perfect".

[4] We refer to the definition provided by White (1983), according to which bankruptcy costs represent the economic costs of the firm going bankrupt. White identified two types of bankruptcy costs: ex post costs incurred after the filing (i.e. transaction costs) and ex ante costs incurred before the bankruptcy, such as creditors' actions to limit their losses and managers' risk-taking behaviours attempted to increase equity returns.

cases, the firm's market value is not necessarily increasing along with its debt obligation. Kraus and Litzenberger derived a non-continuous function of firm value dependent on the leverage level that implies a reduction in the firm's market value if debt is increased to a state in which the firm would be solvent to one in which would be insolvent. Thus, increasing the debt level in the firm capital structure produces positive effects only until a certain threshold. This represents the first theoretical foundation to the limit of using pure debt, which increases the cost of capital for the firm in scenarios characterized by significant risk of insolvency.

3.1.2. The Pecking Order Theory

On the other hand, equity does not come without downsides for the issuer. Majluf and Myers (1984) studied the effects of equity issuances and the firms' preferences for different forms of financing. The cornerstone of their research regards the information asymmetry between the firm's management, which have to decide how to finance the firm, and external investors. Assuming managers have a better set of information than external parties and assuming they act in the interests of existing shareholders, a decision not to issue shares signals "good news" because the management believes the firm's assets are currently undervalued by the market (issuing new equity would not be convenient for the firm) and the equity dilution wouldn't be offset by the gains from new investment opportunities[5]. Consequently, issuing new shares is perceived as bad news by the rational investor. The model developed by the authors demonstrates that the decision to issue stock reduces the stock price due to the bad signalling effect, whereas a "no issue" decision signals that the true value of the existing assets and financial slack exceeds the price the market would have paid for new shares. Debt, on the other hand, is less sensitive than equity to information asymmetry: since it is a less risky security, debt does not carry an "information discount" as large as newly issued shares, thus the potential mispricing related to debt will be less expensive for the firm. The best option for the firm, according to the scholars, is having a financial slack (cash and marketable securities) which is suddenly available to be invested if a new investment opportunity comes out, avoiding any bad signalling outcomes. The Pecking Order Theory, as it has been named, shows some limits in using equity and explains why firms may opt for other sources of financing, leaving share issues as a last resort. Considering what these theories showed, we can assert that both equity and debt present elements that might limit capital structure efficiency. In this context, corporate hybrid bonds may

[5] Coherently with corporate finance literature, the researchers identified as "investment opportunity" any project with an NPV at least equal to zero, whereas projects with negative NPVs are not pursued.

allow firms to obtain part of the benefits associated with debt and equity financing while mitigating the downsides of both sources.

3.1.3. Agency Theory

The implementation of hybrid bonds is significant also with respect to Agency Theory. Originally developed by Jensen and Meckling (1976), this theory analyses the relationship and potential conflicts between the firm's capital providers and the managers, when separation between ownership and control exists. The focus here is on agency costs and on the capital structure that minimizes them. The authors identified three types of agency costs borne by the principal: (1) monitoring costs to limit the agent's aberrant activities; (2) bonding costs to ensure that the agent will act in the interest of the principal; (3) a residual loss which derives from an intrinsic divergence between the principal's welfare maximisation and the agent's action to maximize it. Considering an ownership structure composed by a combination of debt and equity, total agency costs will be the sum of equity agency costs and debt agency costs, with ones decreasing when the others are increasing. This is due to changes in manager's incentives depending on the capital structure of the firm: as the level of debt increases, managers will be prone to take on riskier projects with high potential payoff for equity holders but higher bankruptcy risk for bondholders; when levels of debt are lower, the incentive to exploit bondholders vanishes. On the other hand, since equity ownership is separated from control, managers will bear very little of the costs associated with residual loss, thus increasing the risk of management's free riding. The goal of the firm is to find the point in which the costs' function reaches its minimum balancing the two main financing options. Again, corporate hybrids can represent a useful tool to find the appropriate trade-off that better aligns incentives and reduces agency costs. By preserving headroom to finance future investment opportunities with conventional debt, hybrid bonds mitigate the underinvestment problem highlighted by agency theory. Traditional capital structure theories investigate the limitations firms may encounter when they are relying solely on debt or equity. Their acknowledgments are fundamental cornerstones of corporate finance, still, as it happens with almost every theoretical model, they need some adjustments when confronted with real-world situations.

3.2. Gaps in Existing Literature and Research Contribution

3.2.1. Valuation of Hybrid Securities

Despite being very extensive, hybrid financial instruments' literature is mainly focused on instruments' pricing and taxation issues. Convertible bonds are by far the most studied hybrid financial instrument, with a significant research stream initiated by Ingersoll (1977a), who applied for the first time Black and Scholes option pricing model to convertible securities and later expanded his analysis with studies on optimal call policies for convertibles (Ingersoll, 1977b). Brennan and Schwartz (1977 and 1980) also focused on convertible bonds' valuation, including in the model factors such as uncertainty in interest rates and the presence of senior debt in the firm capital structure, always treating the convertible bond as a contingent claim (Brennan and Schwartz, 1980). However, findings showed how firms were systematically delaying calls that forced conversion, with Several research works aimed at proposing explanations for convertibles' issuers delayed calls: Harris and Raviv (1985) developed a framework involving negative signalling effects on stocks' returns after convertible bonds' call announcement, Constantinides and Grundy (1986) focused on dividends policies, meanwhile Jaffee and Shleifer (1988) entailed the potential increase financial distress costs due to the failure of a forced conversion[6]. Authors such as Asquith (1995), contrarily, proved that that convertible bonds are called as soon as possible when there is a significant cash flow advantages for the issuer. More recent studies are committed to convertible bond valuation, with frameworks such as the one proposed by Fernandes and Tsiveriotis (1998), Ayache et al. (2003) and Ammann et al. (2003), who conducted empirical research on the French convertible bond market to evaluate their fair pricing.

Corporate hybrid bonds are studied with reference to securities' valuation as well, even if less extensively than convertible bonds. Menz (2010) proposed a pragmatic evaluation approach of hybrid corporate bonds focusing on qualitative-economic risk profiles and relative value analysis with the goal of identifying the risk-adjusted returns these instruments offer. A more practitioner-oriented but comprehensive treatment is offered by De Spiegeleer et al. (2014), whose "Handbook of Hybrid Securities" dedicates its fourth chapter specifically to corporate hybrid bonds, examining their structure along the dimensions of subordination, coupon deferability, replacement capital covenants, and issuer call provisions. As seen in Chapter 1, preferred shares are structurally close to corporate hybrids, thus it is relevant considering studies focused on these instruments in our

[6] A forced conversion fails if the issuer's stock price falls below a certain price thus making the bond out-of-the-money and no more convenient to be converted

literature review. Emanuel (1983) investigated valuation approaches for preferred shares using an option-hedging framework based on the Black-Scholes methodology, demonstrating that these securities act as debt-like instruments when dividends are current but transition into equity-like instruments as dividend arrearage increases (i.e. when firm value fall below a certain threshold). Ferreira et al. (1992) provided strong evidence that the option models, however, appear to price the seasoned issues better, whereas simple perpetuity model predicts more accurately the prices of new issues of preferred stocks. This option-based approach has been extended also to trust preferred shares (TPS), which are financial instruments designed to be classified as equity for financial statement's purposes and as debt for tax deductibility. Mjos and Persson (2007) developed a valuation methodology that uses barrier call options to account for bankruptcy risk before the exercise date. The exogenous decision by the company to omit coupons on hybrid capital impacts the valuation by increasing bankruptcy level and cost of capital across all claims. These features, together with the junior rank in liquidation, and coupon step-ups, are critical aspects to consider in order to have a valuation approach related to the common practices in the market.

3.2.2. Market Reaction to Hybrid Issuance

A parallel research stream on corporate hybrids examines how equity markets react to hybrid bond issuance. Vesala (2019) found a statistically significant average negative stock reaction of -0.6% around 36 Finnish hybrid bond issues, with the effect more pronounced for higher-coupon issues but unrelated to bankruptcy risk or maturity. This finding appears not to be always valid: Wang et al. (2021) similarly documented a negative market reaction to perpetual bond announcements among Chinese listed firms, which is in this case moderated by the issuer's solvency, whereas Manurung et al. (2025) found a significantly positive average reaction to perpetual bond announcements across ASEAN markets, moderated instead by the issuer's leverage. Taken together, this literature suggests that the market's interpretation of a hybrid bond issuance may depend on market-specific factors not yet fully reconciled. Similar studies has been undertaken with reference to preferred shares: Linn and Pinegar (1988) showed how industry-specific characteristics are the primary determinants of market reactions to preferred stock announcements, with an empirical study focused on utilities, industrials and financial institutions, whereas Krishnan and Laux (2005) studied the impact of issuance of trust preferred stock on the return of common stock.

3.2.3. Taxation and Classification

Research upon taxation applied to hybrid securities is mainly keen on identifying loopholes that advantage the issuers in specific jurisdictions and suggesting to authorities reforms to limit these tax planning opportunities for companies. Krahmal (2005) investigated the approach of U.S. tax authorities on the treatment of hybrids, assessing the impossibility of posing wide limitations on the utilization of these instruments because it may impede operations with an actual business reason beyond tax avoidance; the scholar advocates for a closer look for intra-group operations aimed at gaining interest deducibility and for cross-border operations. Rosenbloom (1999) adopted a straight-forward critical perspective on U.S. tax authority, citing lack of a clear purpose and of support by international tax conventions or national tax laws. Eberhartinger and Six (2007) focused on EU regulation, providing a comprehensive survey of the possible fiscal consequences of intra-group cross-border hybrid finance having analysed the relevant provisions in national, international and European tax law. The paper demonstrates that despite the various measures to prevent double taxation and ensure single taxation of remuneration of equity and debt within groups of companies, the use of hybrid instruments can still generate cases of double taxation as well as cases of double non-taxation. Aschauer et al. (2010) analysed the influence of the existence or non-existence of a double tax convention on the benefits of using hybrid finance, find that a double tax convention does not necessarily reduce the expected total tax burden. Barsch (2012) framed the taxation issue as a matter of classification of hybrid instruments by national tax authorities, pointing to a better international coordination about the classification and treatment of these instruments in order to avoid tax mismatches Similarly, Johannesen (2014) studied taxation differences among different countries, explaining how multinational firms can find opportunities to avoid or lower the tax due thanks to deductibility of interest payments. With a broader point of view, Bundgaard (2016) studied the treatment of hybrids both by domestic laws and international tax treaties, assessing the main challenges to the distinction between debt and equity in international tax law. Scholars also focused on policy-response tools against tax avoidance through hybrid financial instruments. Referring to OECD BEPS Action 2[7], de Boer and Marres (2015) argued that instrument-specific anti-hybrid rules

[7] OECD BEPS Action 2, part of the Base Erosion and Profit Shifting Project, targets hybrid mismatch arrangements, where cross-border differences in the tax treatment of a financial instrument (e.g. debt in one country, equity in another) produce a deduction without corresponding inclusion, or a double deduction. To neutralize this, it introduces linking rules that deny the deduction in the payer's country or require inclusion of the income in the recipient's country. These rules were later implemented by the EU through the Anti-Tax Avoidance Directive (ATAD) in 2016.

face significant implementation obstacles and proposes that a more general interest-deduction limitation, rather than a targeted hybrid mismatch rule, can more effectively contrast the double non-taxation outcomes that hybrid financial instruments generate, since most hybrid mismatches operate through the interest deduction mechanism. Peeters and Vanneste (2020) offer a critical comparison of the OECD BEPS Action 2 Hybrid Mismatch Rule for financial instruments and its transposition into the EU's Anti-Tax Avoidance Directive, arguing that the Directive's ambiguous wording risks incoherent implementation across Member States and produces a mechanical rule structure that departs from BEPS's principle of taxing income where it is generated. Adopting a more accounting-prone perspective, Flores et al. (2020) explained how hybrid financial instruments are used for aggressive tax planning by exploiting cross-border legal asymmetries to achieve double non-taxation and by diluting thin-capitalization indices[8], highlighting a critical need for harmonized international tax regulations with a specific focus on BEPS framework. Flores and Fasan (2024) more specifically focused on financial instruments with characteristics of equity (so-called FICEs) studying a large sample of issuers of those instruments and corroborating the hypothesis that companies seek either to increase their book equity value or lower their effective tax-rate through the issuance of these instruments. Bornemann and Farkas (2024) examine corporate hybrid bonds and finds that managers' choice of debt vs. equity classification is driven by reporting incentives (debt covenants, earnings targets), and that this classification affects how equity investors and analysts price the instrument. Fargher et al. (2018) discussed studies investigating the effects of the accounting classification requirements on firms' financing choices and on users' decision-making, proposing responses to the classification problem of hybrid instruments in the form of improvements to the definition of liability and to the separation of components.

3.2.4. Motives for Issuance

Beyond these regulative and technical research, studies on hybrid securities also investigated the reasons why firms issue hybrid financial securities, highlighting factors such as delayed equity dilution, financing flexibility, information asymmetries and signalling considerations. As already seen before, the largest and earliest literature's stream focuses on convertible bonds. Studies like the ones conducted by Pilcher (1955) and Brigham (1966) surveyed a number of American firms' managers asking why they were issuing convertible debt, finding delayed equity dilution and

[8] Thin Capitalization is referred to limitations on interest deducibility posed by tax authorities in order to contain the potential insolvency risk.

"sweetened debt" as the main factors; later, Green (1984) provided a theoretical grounding for Pilcher's and Brigham's findings. Preferred stocks were also subjected to several studies such as the ones of Moyers et al. (1987), who tested Donaldson (1962) hypothesis of preferreds being issued mainly by firms in financial difficulties. The empirical study indicates that industrial issuers of nonconvertible preferred stock have a lower relative market value, a lower interest coverage ratio, a lower level of retained earnings, and a lower equity ratio than do non-issuers, pointing to financial distress situations for issuers. Heinkel and Zeckner (1990) demonstrated that preferred stock has features that generate incentives for equity-holders to invest and enhance the firm's debt capacity (thus allowing the company to bear more debt alongside the preferred equity financing). Engel et al. (1999) studied the issuance of trusted preferred shares empirically measuring the costs firms are willing to incur to reduce their debt-to-asset ratio and the NPV of tax benefits from the issuance of TPS. Cornelli and Yosha (1998) explained why venture capitalists often choose preferred equity instead of straight debt when asymmetric information may emerge after the initial financing round, since debt's foreclosure feature can push entrepreneurs toward opportunistic behaviour. Barnea et al. (1980) analysed the relation between the issuance of complex financial instrument and agency costs, demonstrating that both features of corporate debt serve identical purposes in solving agency problems. Complex financial instruments are required because their call provisions and maturity structure to provide complete and costless solutions to the agency problems whereas markets generally fail. Thatcher (1985) provided empirical evidence for the theory, showing that firms which have early-redemption rights are systematically able to reduce the agency costs tied to future investment opportunities, informational asymmetry, and risk-shifting incentives thanks to the option of using call provisions. Bierey et al. (2024) focused on the motives behind corporate hybrids issuance citing a more favourable accounting treatment, which assigns equity nature to perpetual securities, and better rating agencies' scoring. Several empirical studies support Bierey's thesis. Levi and Segal (2011) focused on mandatorily redeemable preferred shares showing how once they had to be reclassified as a liability, their portion of new financing declined and the characteristics of issuing firms changed, showing that the reporting-classification incentive itself, not just the underlying economics, was driving issuance. Credit rating motives has been studied by Fracassi and Weitzner (2026), who demonstrated how rating agencies' risk assessments has a significant impact on firms' financing and security design decisions, analysing Moody's 2013 resolution of increasing the equity credit for high yield preferred shares thus triggering a stronger debt issuance by firms that wanted to restore their original debt ratio. Paisani et al. (2025) developed sector-specific research

in the insurance industry, covering 207 insurers in more than 25 countries around the world, finding that the likelihood of issuing hybrid bonds increases for larger insurance firms with higher costs of capital and leverage.

3.2.5. Capital Structure and Corporate Strategy

The connection between a firm's capital structure and its strategic goals has also been widely studied by scholars. Recent research has empirically proven links between financing decisions and the strategic implications they have on the firm. Rocca and Rocca (2007) advocated for an expansion of synergies between corporate finance and strategy research, arguing, in accordance with Williamson (1988) that equity and debt must be considered as financial instruments as well as strategic instruments of corporate governance, making a good integration between strategy and finance dimensions a significant competitive weapon. Li and Simerly (1999) empirically proved that the choice for an optimal capital structure is strictly linked to the corporate environment's dynamism, and how the match between the two elements influences the economic performance of the firm. Marchica and Mura (2010) demonstrated how low leverage levels help retaining more financial flexibility in the future, allowing firms to catch growth opportunities in the future through capital expenditure. Their research focused on the quality of investments that firms with increased financial flexibility manage to obtain, showing how on average they seem to get better returns on investments in the long run if leverage is kept below a certain threshold. Byoun (2011) developed a framework that links financial flexibility with the company's life-stage from start-up phase to maturity, showing how leverage adapts to the firm's strategic needs. Other authors focused on financing structures for special situations, mainly corporate takeovers: Martynova and Renneboog (2009) studied the implications that different financing sources have on the success of an M&A deal, reasoning on the bidder's pecking order preferences, its growth potential and corporate governance structure showing how the main concern for the bidder is lowering the cost of capital, consistently with its current capital structure and corporate governance. More recently, Abid and Triki (2023) modelled how CoCo bonds (with reference to Chapter 2, we explained how these instruments are structurally close but not equal to corporate hybrids) interacts with growth options and leverage policy, showing firms use hybrid capital specifically to preserve flexibility for future investment.

3.2.6. The Capital Structure of Regulated Utilities

An additional research stream worth citing regards academic works on the capital structure of regulated utilities, of which Enel S.p.a. is a significant example. Bortolotti et al. (2011) conducted extensive research on both privately and publicly controlled European utilities to assess how gearing levels are affected by the ownership's typology. Scholars' analysis reveals that privately controlled firms appear to have a higher leverage than state-controlled firms, provided that they are regulated by independent regulatory agencies, and that the increased leverage is associated with higher regulated prices and a higher market value for the firm, meanwhile a significant effect of leverage on prices and market values cannot be find in the case of state-controlled firms. These results provided evidence for the hypothesis that privately controlled regulated firms rely on debt financing as a way to shield themselves against the risk of future price reductions set by authorities once firms' investments become sunk. Cambini and Rondi (2006) focused on Italian utilities post-privatization with the goal of identifying patterns in the relationship between ownership type (private vs. state-controlled) and capital structure. Their model found out that regulated utilities are more leveraged than unregulated firms and appear to invest less; moreover, the investment rate began to decrease in the post-privatisation years, whereas private regulated utilities exhibit lower capital accumulation and higher leverage than state-controlled utilities. A similar approach has been followed in a later study by Cambini and Spiegel (2016), who specifically investigated how the degree of state ownership and regulatory independence influence firms' leverage, investment levels and utilities' prices. Their findings highlight how companies that are more privatized and work under an independent regulator generally benefit from higher regulated prices, issue more debt and invest more, with demonstrated advantages also for the social welfare. Research more keen on corporate governance also produced interesting findings related to the utilities industry: Gleason and Jiraporn (2007) found an inverse relationship between leverage levels and shareholders' rights, consistently with agency theory. This negative relation is not present within regulated firms such as utilities: the scholars argued that this happens because regulation already helps alleviate agency conflicts, thus mitigating the role of leverage in controlling agency costs.

3.2.7. The Identified Gap and the Contribution of This Thesis

Our research motive arose from the fact that the contributions reviewed above remain concentrated on four distinct perspectives. The valuation literature, from the option-pricing stream initiated for convertible bonds through to Menz's (2010) and De Spiegeleer et al.'s (2014) more instrument-

specific treatments of corporate hybrid bonds, investigates how these securities should be priced, but says little about the advantages a specific firm can have by choosing to issue them at a specific moment. The taxation literature, spanning the classification challenges documented by Johannesen (2014) and Bundgaard (2016) through to the policy response discussed by de Boer and Marres (2015) and Peeters and Vanneste (2020), is concerned with how hybrid instruments are treated across jurisdictions, rather than with their consequences for an individual issuer's financing strategy. The issuance-motives literature, starting from Barnea et al.'s (1980) foundational agency-theoretic rationale through to the classification- and rating-driven findings of Bierey et al. (2024) and Fracassi and Weitzner (2026), identifies why firms in general structure hybrid bonds the way they do, but do not quantify the resulting financial consequences for any one firm. Finally, the capital-structure and strategy literature, and its more recent extension to ownership structure and regulatory independence in European utilities (Bortolotti et al., 2011; Cambini and Spiegel, 2016), establishes the theoretical case for financial flexibility as a strategic objective, without quantifying that objective through to a measurable outcome.

Taken together, this body of work explains how hybrid bonds should be valued, how they are taxed, why firms issue them, and why flexibility matters strategically, but offers comparatively little evidence on the magnitude of the difference a hybrid issuance actually makes to a specific firm's balance sheet, earnings, and investment capacity, relative to the debt-financed alternative it displaced.

This thesis seeks to contribute to the literature by closing that gap: rather than examining hybrid bonds' valuation, tax treatment, or issuance motives in the abstract, it applies the mechanisms identified across these four streams to a single, in-depth case, i.e. Enel's January 2026 perpetual hybrid bond issuance, to quantify how the instrument's characteristics translate into measurable outcomes across debt capacity, earnings generation, risk distribution, and investment capacity, relative to a hypothetical senior-debt scenario. In doing so, the study aims to move from establishing that hybrid capital preserves financial flexibility in principle, to demonstrating concretely how much flexibility a specific transaction actually preserves, and at what cost.

Chapter 4. Corporate Hybrids: Structure and Market Data

4.1. Corporate Hybrids Structure and Functioning

Corporate hybrid bonds are subordinated debt instruments with equity-like features issued by investment grade non-financial corporations. Unlike convertible bonds, they carry no conversion right into equity; instead, their "hybrid" character derives from their very long maturity/perpetuity and the possibility the issuer has not to pay coupons regularly. Indeed, they receive a partial equity treatment from credit rating agencies (commonly 50%), which allows issuers to raise debt-like financing while preserving balance-sheet metrics and credit ratings associated with equity. Coupon payments on corporate hybrids remain tax-deductible for the issuer, distinguishing their tax treatment from that of preferred or common equity.

4.1.1. Defining Characteristics

We can identify six main characteristics that define hybrid bonds. As already mentioned, (i) maturity is one of the distinctive characteristics of these securities: corporate hybrids have perpetual or very long maturities which can get to 50 or 60 years. However, they are usually structured with a (ii) call option that allows investors to get their capital back after a non-callability period, typically lasting 5 or 10 years. In order to incentivize the issuer to call the hybrid security, indentures usually set forth (iii) coupon step-ups, i.e. increases in the coupon rate if the bond is not redeemed by the issuer. Interest rates for hybrid bonds usually are fixed in the non-callable period, then becoming floating in the subsequent reset periods with a step-up increasing its value at any reset period. A concrete example is the hybrid bond issued by Électricité de France on October 6th, 2025: the "5.5 Years Non-callable Perpetual Resettable Subordinated Green Notes" features a 4.375% p.a. fixed interest rate until the First Reset Date on the 6th of April 2031; after that date, EDF will bear an interest rate on the hybrid note equal to 2.074% p.a. plus the 5-year Mid-Swap as benchmark rate for other 5 years until the end of the first Reset Period. From 2036 till 2051 ("Second Reset Period"), the interest is equal to the benchmark plus 2.324% p.a. and from 2051 onwards 3.074% plus the benchmark, for a total step-up of 100 bps separated into two Step-up Dates (EDF, 2025). Exhibit 3 displays the step-up mechanism of this specific security, which is very common for most of the corporate hybrids being issued.

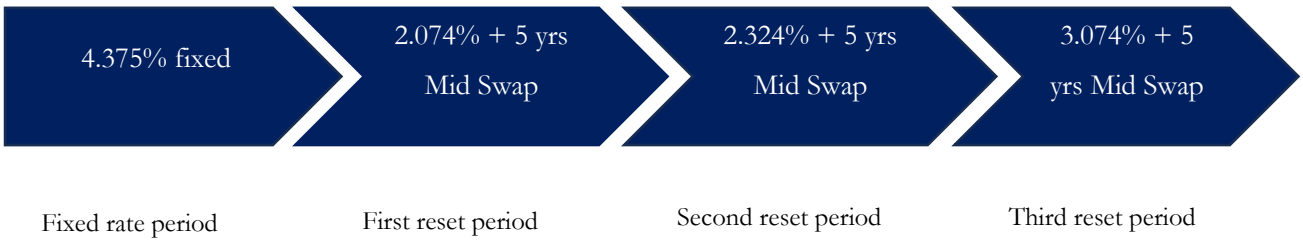


Exhibit 3: Coupon step-up mechanism of EDF's 5.5-year non-call perpetual green hybrid notes. Source: own elaboration based on EDF (2025).

The step-up mechanism appears to be very effective, considering that from 2013 until 2024, 99% of corporate hybrids from investment-grade issuers were called at the first call date, as per Neuberger Berman. Still referring to coupons, most hybrid bonds present (iv) coupon deferrals options, a feature that give the possibility to the issuer of postponing the coupon payment in case of financial difficulty. Deferred coupons are cumulative and any arrear must be paid in case dividends are paid to shareholders (so-called dividend pusher). Given the investment grade rating of hybrid bonds' issuers, it is very rare that coupons are deferred: as of March 2025, no coupon on hybrid bonds has been deferred (Neuberger Berman, 2025). Another component which is crucial in the structuring of the hybrid offering is the (v) replacement language covenant, which is an intent-based declaration by the issuer to replace the security only with instruments that have at least the same equity content; the replacement capital covenant can be in force from the issuance date, hence implying the perpetual presence of the hybrid bond in the capital structure, or after the first call date, when the bond may be redeemed.

4.1.2. Seniority in the Capital Structure

Another key element is the (vi) seniority in the capital structure, which has to be described through comparison with other financing instruments. Exhibit 4 displays the capital structure layers of the different financing instruments utilized by firms. As shown, corporate hybrid bonds occupy an intermediate position between conventional debt and equity, allowing firms to combine some of the advantages of both. Compared with senior debt, their subordinated and often equity-like characteristics can provide more protection to the issuer's balance sheet and support financial flexibility, while their debt-like nature allows firms to raise capital without the ownership dilution associated with common equity. Features such as long or perpetual maturity, coupon deferral and equity credit can make hybrid bonds particularly attractive when a firm needs to raise significant long-term capital while preserving debt capacity, credit metrics or shareholder control.

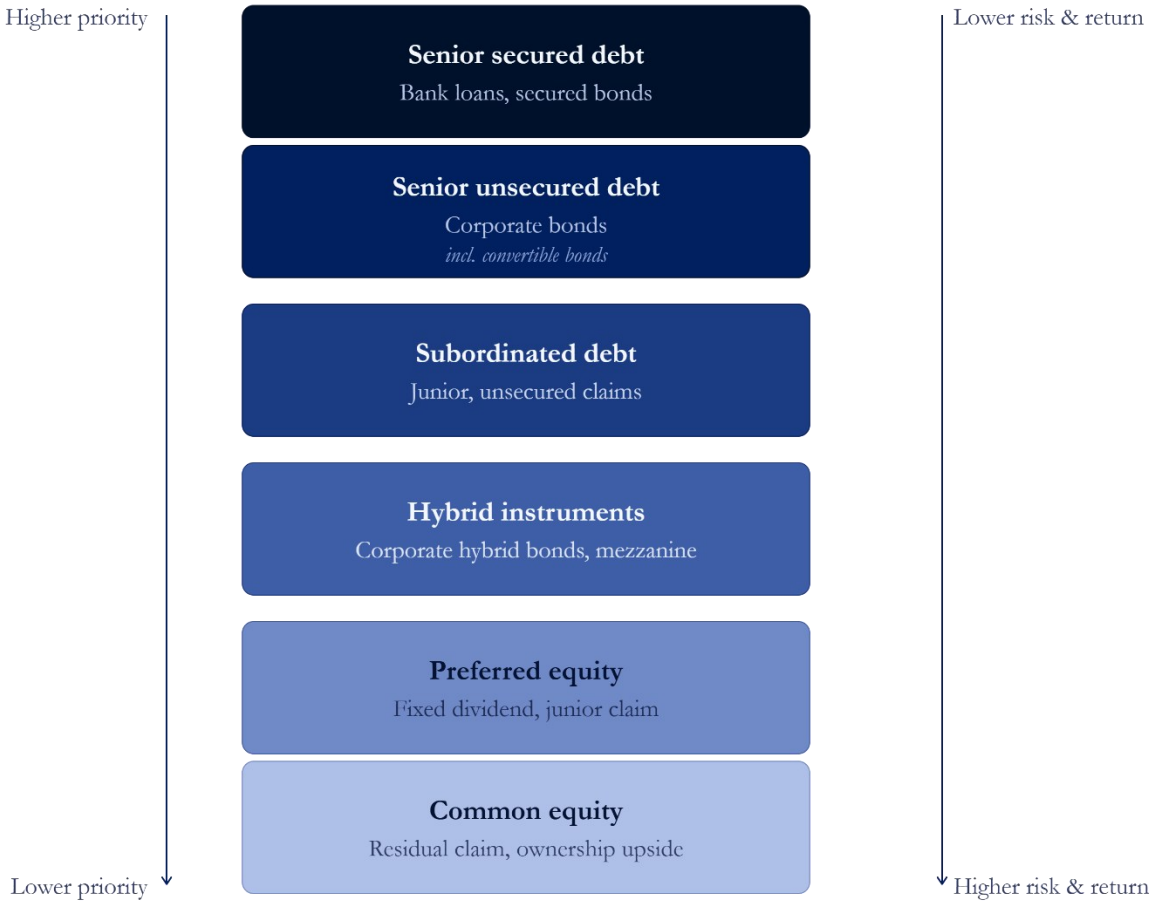


Exhibit 4: Capital structure layers. Source: own elaboration.

4.1.3. Comparison with AT1 and CoCo Instruments

A noteworthy consideration regards the comparison between corporate hybrid bonds res with and banks' Additional Tier-1 (AT1) capital and contingent convertible ("CoCo") instruments. Even though they share several structural features, e.g. long dated or perpetual maturity, issuer call options, subordination and deferrable coupons, the two types of instruments significant diverge in ways that causes different consequences. First, corporate hybrids carry a strong incentive for the issuer to call the instrument at the first call date, since failing to do so results in the loss of reputation favourable rating-agency equity treatment; CoCos are not subject to this same dynamic, since AT1 instruments are typically designed as more permanent components of a bank's regulatory capital base rather than instruments expected to be refinanced at the first opportunity. Second, if a corporate hybrid's coupon is deferred, the deferred amount is cash-cumulative and compounding, meaning the issuer remains obligated to eventually pay the accrued amount in cash; CoCo coupons, by

contrast, are typically non-cumulative, so a missed payment is simply lost rather than carried forward. Third, corporate hybrids are not subject to regulatory intervention: no supervisory authority can prevent a corporate issuer from paying a hybrid coupon, oblige a issuer to call back its securities or force a conversion of the instrument into equity, whereas CoCos are explicitly designed to be triggered by a banking regulator in the event the issuing bank's capital ratios breach a specified threshold[9]. This regulatory-intervention risk is a key driver of CoCos' materially higher volatility relative to corporate hybrids, compounded by the fact that corporate hybrids benefit from inclusion in major fixed income indices, which affords them greater secondary-market liquidity. Also, these differences are reflected directly in credit ratings: corporate hybrids are typically notched only one or two levels below the issuer's senior rating, while CoCos are typically notched three levels below, reflecting the additional loss-absorption and regulatory-trigger risk embedded in the bank instrument (Neuberger Berman, 2025).

4.2. Credit Rating Considerations

The way corporate hybrid bonds are treated by rating agencies for credit rating purposes is one of the most significant features of this type of securities, since it represents one of the key advantages for the issuer. Rating agencies, determine potential "notch downs" of a hybrid security if it has more equity-like features, thus carrying more risk.

4.2.1. Moody's Methodology

Moody's recently took the spotlight modifying the mechanisms to assess the equity content in U.S. corporate hybrids. The new system adopted by the rating agency increases the equity content of corporate hybrids from 25% to 50%, aligning it with preferred shares' treatment and also simplifying the equity-content baskets to just three categories (0%, 50% and 100%). This had a widespread positive effect on the issuance of corporate hybrids by American corporations, whereas European firms historically dominated the market. Exhibit 5 depicts the flowchart used by Moody's to assess in which basket, low, medium or high, the hybrid security issued by an investment grade company falls, depending on the satisfaction of certain requirements.

[9] One of the most notable cases in which a regulator intervened on a bank's AT1 capital in Credit Suisse's crisis in 2023, when FINMA (i.e. the Swiss market supervisory authority) ordered the financial institution to fully write down its CHF 16b AT1 bonds invoking a viability event materialized through extraordinary government support given to the bank.

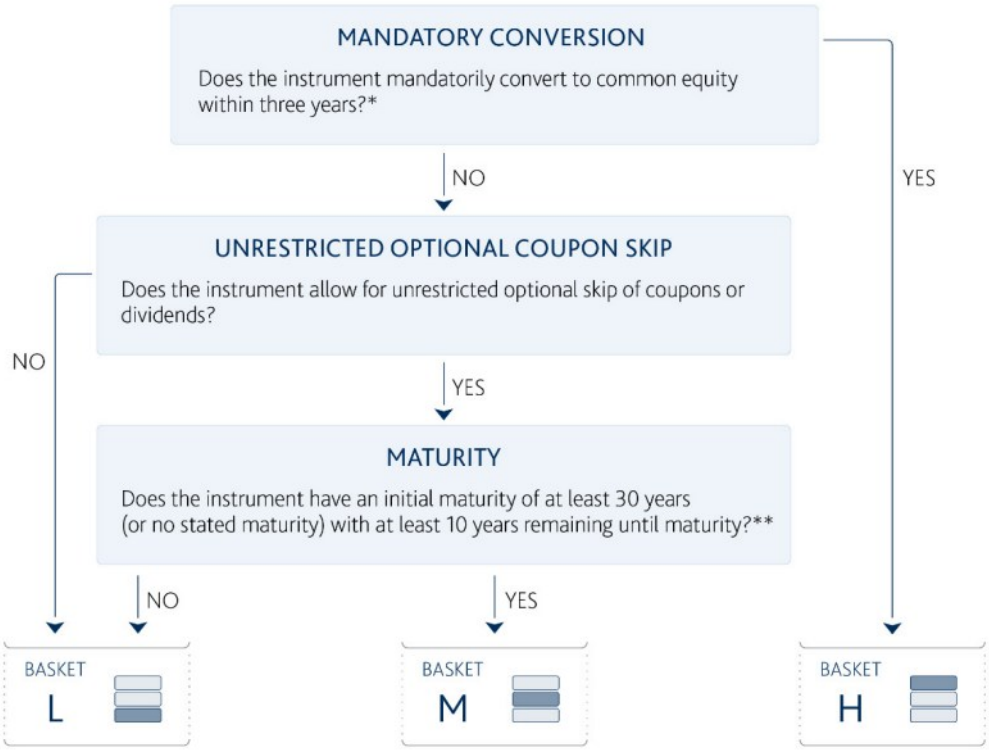


Exhibit 5: Equity credit assessment of investment grade hybrid securities by Moody's. Source: Moody's

The three elements taken into account for the evaluation are (a) mandatory conversion into equity within three years, a condition not satisfied by corporate hybrids; (b) unrestricted optional coupon skip, which as discussed before is a feature most of the hybrids present. Though, if there's a dividend pusher valid for more than six months, then the hybrid security cannot be included in the 50% equity credit basket and falls in the 0% one. (c) Maturity is assessed as a final element considering also potential coupon step-ups: if the security has a "Yes" answer to the second question but "No" to the third one, but the hybrid presents meaningful[10] coupon step-ups the stated maturity is replaced with the first call date as effective maturity, since the agency views the step-up as a strong economic incentive to redeem the hybrid early. For speculative grade issuers, Moody's implements a simpler methodology which involves only Basket L and Basket H, using an approach strictly referred to the treatment of the security in case of a bankruptcy. Under this framework, if an instrument contractually grants holders creditor rights in bankruptcy or the ability to trigger bankruptcy, it is

[10] A step-up is considered meaningful if it occurs within 10 years from issue date. Otherwise, a step-up is considered meaningful if it exceeds 100 basis points. For instruments that convert from a fixed to floating rate we assess whether a meaningful step-up exists based on whether the contractual interest rate spread over the risk-free rate (at the time that the rate resets) exceeds 100 basis points from the initial contractual interest rate spread. (Moody's, 2023)

treated entirely as debt (Basket L). If it contractually provides neither of these rights, it receives full equity credit (Basket H).

4.2.2. Standard & Poor's Methodology

Standard & Poor's pivots its analysis on the instrument's ability to absorb losses and/or conserve cash for a sufficiently long period of time. The result of this analysis can lead to three different scenarios: high equity content, intermediate equity content or no equity content, according to the possibility for the issuer to absorb losses or conserve cash through the hybrid instrument. S&P typically assigns high equity content to mandatory convertible securities and/or to hybrids held solely or on behalf of a government which can absorb losses in stress scenarios; intermediate equity content is referred to securities non-callable for a specific amount of time and with a minimum maturity period and/or with the ability to absorb losses without triggering a default of the issuer for a certain period of time. No equity content hybrids are the ones not included in the previous two definitions. Exhibit 6 displays the flowchart utilised by S&P for determining the equity content of a hybrid security.

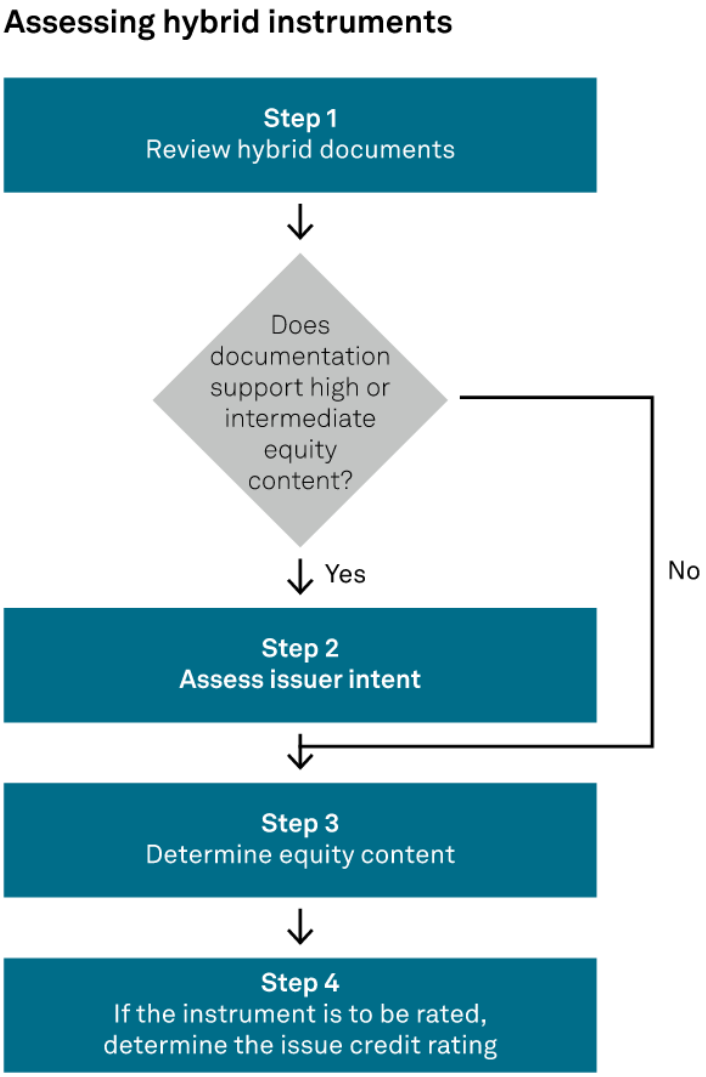


Exhibit 6: S&P flowchart for hybrid instruments' assessment. Source: S&P Global

The classification is assessed looking at the terms and conditions of the hybrid security examined, as well as the issuer intent in adopting that hybrid, also considering its past behaviour and overall capital strategy. Issuer credit rating (ICR) is crucial in determining the equity content according to S&P methodology: maturity requirements for "Intermediate" equity content are at least 20 years if the ICR is BBB- or higher, 15 years for the BB category, and 10 years for the B category or lower. Following the same logic, a step-up is considered of material significance if it is above 100 bps for issuers rated BBB- or higher, or above 200 bps for issuers rated BB+ or lower. S&P requires the issuer to have the ability to defer payments for at least 5 years without triggering a default to grant the hybrid an intermediate equity content, as well as having terms that discourage deferral (i.e. dividend pushers) restricted to a period of 1 year or less. Generally, Moody's seems to be more stringent than S&P on the security's features to grant equity credit, whereas S&P poses stricter limitations on the

issuer's balance sheet, setting a cap of hybrids' total nominal value as 15% of a corporate issuer's capitalization[11]; Moody's allows for a higher quota, equal to 30%.

4.2.3. Fitch's Methodology

Fitch's methodology allocates securities into 0%, 50%, or 100% equity credit baskets, focusing strictly on preserving an issuer's ongoing viability, which means that equity credit will be assigned to instruments subordinated to senior debt and that have an unconstrained ability for at least five years of consecutive coupon deferral without triggering a default. Compared to its peers, Fitch is more lenient on maturity and volume limits; it requires a remaining effective maturity of only five years, far shorter than S&P's 20-year threshold or Moody's proposed 30-year initial limit and imposes no percentage caps on total hybrid concentration on the balance sheet. Coupon step-ups receive a similar treatment compared to Moody's, with the call date being treated as maturity if cumulative step-up exceeds 100 bps. However, Fitch is severely stringent on payment terms, capping cumulative optional coupon structures at a maximum of 50% equity credit and reserving the 100% equity basket for non-cumulative instruments. In contrast, cumulative versus non-cumulative status does not restrict intermediate equity credit classification under S&P's criteria or basket placement under Moody's methodology.

4.2.4. A real example: Eni S.p.A.

As an example of agencies' ratings methods' implementation, we take Eni S.p.a. (rated A- by S&P and Fitch, A3 by Moody's) €1b perpetual, non-call 6.25-year subordinated hybrid bond issued on January 12th, 2026 (Eni S.p.a., 2026). The bond will pay an annual coupon of 4.125% until first reset date on April 19th, 2032. From the first reset date, the coupon resets every five years to the five-year Euro Mid Swap rate plus an initial margin of 163.7 bps, stepping up by 25 bps from 19 April 2037 and by a further 75 bps from 19 April 2052. Applying Moody's flowchart, Eni's investment-grade issuer rating places the security under the M basket. There is no mandatory conversion feature, and the coupon can be skipped at Eni's sole discretion, so the security clears the first two tests without falling into the 0% basket. On the maturity test, the perpetual structure satisfies the long-dated requirement, meanwhile regarding the coupon step-up's "meaningfulness" the instrument again meet the agency's requirements: since the first step-up occurs roughly 11 years after issuance and

[11] Standard & Poor's defines the corporate capitalization as total debt plus equity less goodwill that exceeds 10% of total adjusted assets (S&P Global, 2019).

the cumulative step-ups do not exceed 100 bps, the security lands in Basket M. Under S&P's methodology, Eni's A- issuer rating sits above the BBB- threshold, requiring at least 20 years of effective maturity for "Intermediate" equity content, again met by a perpetual instrument, while the step-up materiality bar for BBB- or higher issuers is "above 100 bps," a level the cumulative 100 bps increase does not cross. Combined with the optional deferral feature, this is consistent with Intermediate classification, meaning 50% equity content assigned to the bond. Fitch's viability-preservation test is satisfied by the same features: subordination, an optional deferral right well in excess of five years, and an effective maturity (perpetual) that is not shortened to the call date, since the cumulative step-up again fails to exceed the 100 bps trigger. Given that Fitch reserves 100% equity credit for non-cumulative deferral structures and caps cumulative ones at 50%, the fact that Eni's bond was assigned exactly 50% is consistent with a cumulative Arrears-of-Interest mechanism of the kind standard in European corporate hybrids. Notably, the rating notching is uniform across all three agencies: two notches below the issuer rating in every case: S&P and Fitch both went from A- to BBB, while Moody's notched down from A3 to Baa2.

4.3. Accounting and Tax treatment

4.3.1. Accounting Classification under IAS 32

The key reference point to assess how firms must account corporate hybrids for is IAS 32 – Financial Instruments. What matters for IFRS classification is not the legal form in which the financial instrument is structured, rather its contractual substance: quoting IAS 32 provisions, “The substance of a financial instrument, rather than its legal form, governs its classification in the entity’s statement of financial position. […] IAS 32 requires the issuer of a financial instrument to classify the instrument in accordance with the substance of the contractual arrangement.” (IFRS Foundation, 2024). Considering the classification of financial instruments presented by IAS 32, a financial liability is classified as any contractual obligation to deliver cash or another financial asset to another entity, whereas an equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities. If the issuer of an instrument has a contractual obligation to deliver cash or another financial asset to the holder, then that instrument cannot be qualified as equity and will be registered in the balance sheet as 100% debt. Furthermore, if the entity does not have an unconditional right to avoid delivering cash, the instrument is again a financial liability. Considering the typical feature of corporate hybrids, coupon deferability is valid for an equity

classification only if payments can be postponed indefinitely and at the issuer's unconditional discretion; similarly, a perpetual hybrid can be classified as equity instrument only if no contractually obliged payments are set forth with the holder. Thus, equity classification for a corporate hybrid depends jointly on the absence of a fixed maturity and the discretionary, unconditionally avoidable nature of the coupon payments, with the two features operating as complements, not substitutes. The classification of a hybrid bond as debt or equity has a significant implication in the issuer's income statement: if the instrument is classified as a liability, it gives rise to coupon payments which reduce the profit before taxes, whereas an equity treatment would imply that payments to holders are dividend distributions, thus not impacting P&L. Hybrid bonds have a binary classification according to IFRS rules, either 100% debt or 100% equity, thus differentiating from rating agencies' classification which leaves room for intermediate equity content. The compound instrument approach provided for by IAS 32 does not apply to hybrid bonds, as it happens on the other hand for convertible bonds, which can be split into a liability component (the straight-bond cash flows, valued as if it had no conversion option) and an equity component (the residual value of the conversion option), presented separately on the balance sheet.

Additionally, IFRS 9 refers to hybrid contracts as a contract that contains an embedded derivative linked to a non-derivative host, i.e. a financial instrument which can be attributable or non-attributable to the "financial asset" category described by IFRS 9. An example can be a plain vanilla bond - a financial asset from the investor's point of view – which gets an inflation-linked return thanks to an embedded derivative. This derivative causes the cash flows of the otherwise stand-alone host to change according to a specified factor (e.g. interest rate, commodity price, etc.). For our research purposes, we won't consider this definition since it is mostly related to short-term securities used for financial risk management rather than for corporate financing goals.

4.3.2. Tax Treatment and Anti-Hybrid Rules

Regarding the tax treatment of hybrid bonds, since in most jurisdictions the coupons on corporate hybrids are fully tax-deductible from the issuer's perspective, authorities' efforts have been mainly directed to containing interest-deduction tax avoidance. The OECD's BEPS Action 2 report, finalized in 2015, was transposed into binding EU law through the Anti-Tax Avoidance Directive (ATAD, 2016) and ATAD II (2017), which introduced anti-hybrid mismatch rules across all EU member states covering both intra-EU arrangements and mismatches with non-EU jurisdictions. Alongside this, ATAD introduced a general interest deduction limitation rule applicable to all corporate debt,

capping the deductibility of net borrowing costs at 30% of EBITDA, with a minimal amount of €3 million; as of January 1, 2024, all EU member states apply this rule uniformly, following a transition period during which a handful of states were permitted to retain pre-existing national limitation regimes. Some countries such as France and Germany already had stand-alone rules limiting interest deducibility. Italy has implemented the ATAD framework through Legislative Decree No. 142/2018, which both codified the 30%-of-EBITDA interest limitation rule under Article 96 of the Italian Income Tax Code (TUIR) and introduced domestic anti-hybrid mismatch provisions coherent with BEPS Action 2. Italian tax law's earlier identified "debt-equivalent securities" under which deductibility depended on the presence of a defined maturity, with issuers of perpetual hybrid instruments generally addressing this through a maturity linked to the company's statutory life. The United States follows a different framework, since it sits outside the EU/ATAD regime entirely. Debt-versus-equity characterization for U.S. tax purposes is governed by Internal Revenue Code Section 385, which considers factors such as the presence of an unconditional promise to pay a fixed sum, the subordination to other indebtedness, the issuer's debt-to-equity ratio and convertibility into stock. These factors, which usually represent a hybrid bond's structural features (subordination, deferability, long or perpetual maturity) need to be evaluated and assessed on a case-by-case basis, without a bright-line rule comparable to IAS 32's classification test. Separately, the Tax Cuts and Jobs Act of 2017 introduced Section 267A, the U.S. counterpart to BEPS Action 2, which denies a deduction for interest or payments made to a related party under a hybrid transaction where the payment is not correspondingly included in the recipient's taxable income. Section 267A's scope is expressly limited to related-party payments, meaning that hybrid bonds placed with unrelated public market investors generally fall outside its reach.

4.3.3. The Italian Tax Regime

A specific consideration applies to Italian issuers, since the tax qualification of a hybrid instrument does not follow its accounting classification. Art. 5, paragraph 1, of the Ministerial Decree of 8 June 2011 establishes that, irrespective of the qualification and classification adopted in the financial statements, financial instruments meeting the requirements of Article 44 (2) (a) of the TUIR are treated as similar to shares, while those meeting the requirements of Article 44 (2) (c) are treated as similar to bonds. The provision expressly derogates from the principle of direct tax relevance of accounting qualifications set out in Article 83 of the TUIR. A perpetual subordinated hybrid therefore remains bond-like for income tax purposes provided that it contains an unconditional

obligation to pay a sum at maturity and confers no participation rights, pursuant to Article 44 (2) (c) (2), while the deductibility of its remuneration is governed by Article 109 (9) (a) of the TUIR, which denies the deduction only where the payment entails, even indirectly, a participation in the issuer's economic results. The Italian Revenue Agency confirmed this reading in its ruling No. 291 of 31 August 2020, holding that perpetual subordinated notes issued by listed non-financial companies qualify as securities similar to bonds for income tax purposes even where IAS/IFRS require them to be presented as equity instruments.

4.4. Market Status and Trends

4.4.1. Market Size and Growth

As of December 31st, 2025, corporate hybrids' issued by non-financial institutions market size is estimated around $340b globally spread across 148 issuers, with an expected growth of $20b every year over the medium-long term (Nomura Asset Management, 2026). This growth will be driven by increased Capex by utilities and energy companies, expected surge in M&A activity and a boost in issuances from U.S. corporations especially thanks to the aforementioned modification in Moody's rating method, which from February 2024 gives U.S. hybrid bonds an equity credit equal to 50% compared to a previous quota of 25%. This creates advantages for issuers in terms in terms of credit rating, financial metrics and consequently cost of debt. Nonetheless, corporate hybrids have historically been a European-centered security, as shown by Exhibit 7, whereas American market participants usually relied on preferred shares.

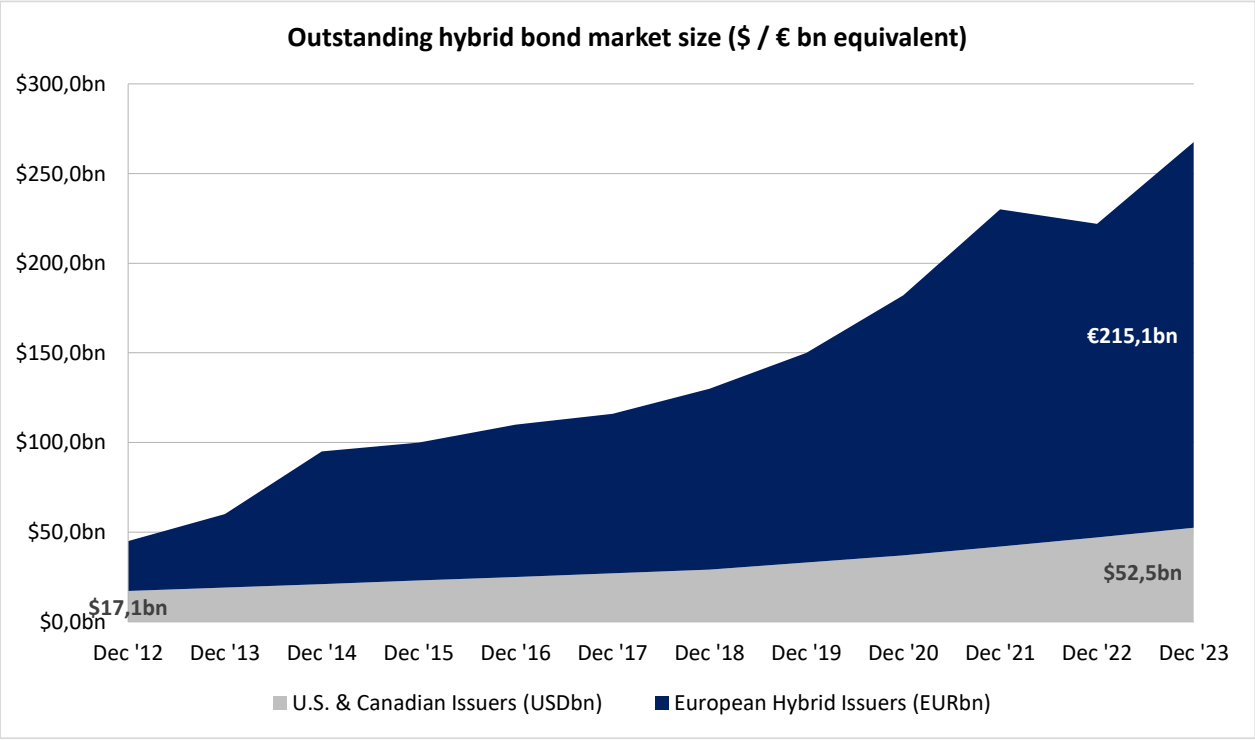


Exhibit 7: U.S. and Canadian vs. European corporate hybrids issuers. Source: Neuberger Berman, Bloomberg

The trend is changing in the past two years, with a strong increase in USD hybrid bonds' issuances, which in 2025 exceeded EUR denominated ones for the second year in a row (Edmond de Rothschild, 2026). As per Edmond de Rothschild (2026), total issuance volumes, including both financial and non-financial firms, surged from around $42b in 2015 to $90b in 2025, recording a significant CAGR of 7.92% and surpassing 2020's then record figure of roughly $81b.

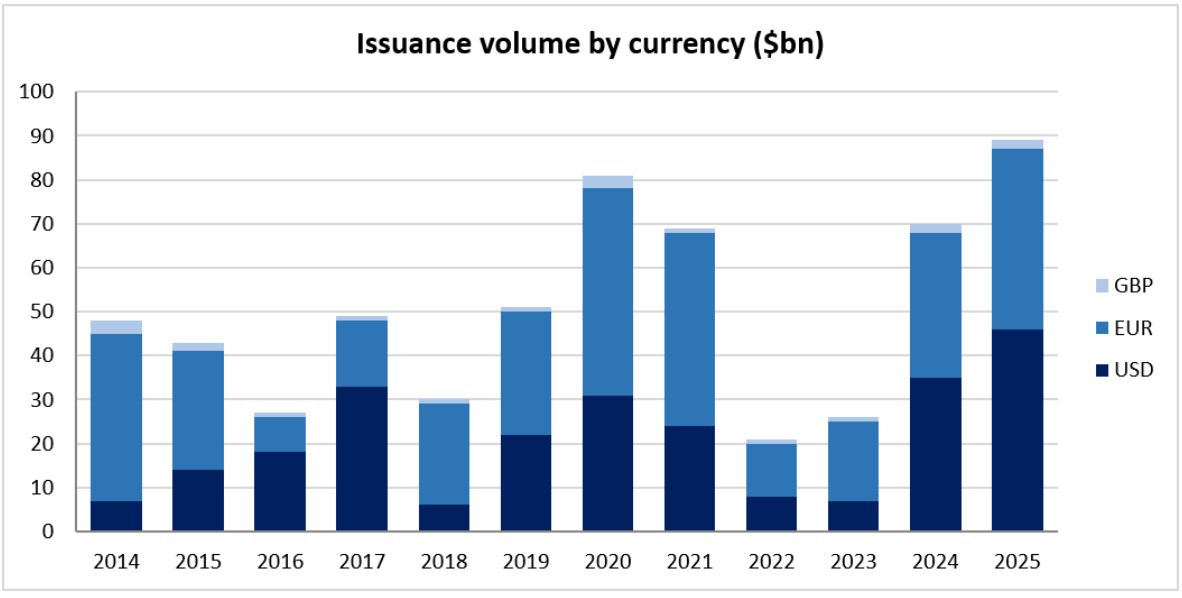


Exhibit 8: Corporate hybrids issuance volume by currency. Source: Edmond de Rothschild

4.4.2. Issuer Credit Quality and Geographic Distribution

As seen in the credit rating's paragraph, issuers of corporate hybrid bonds are investment grade firms with reliable credit profiles. As we can see from Exhibit 9, most of the issuers have a BBB/BBB- grade, which, according to Standard & Poor's corresponds to an adequate capacity to meet financial commitments, but more subject to adverse economic conditions, indicating a moderate risk. Geographically speaking, the distribution of issuers is skewed towards North-European countries, which generally have a higher number of large-cap corporations. Besides North America, whose role in the incoming years has already been discussed, the Asian market is emerging as a potentially relevant player in the medium term, considering its constant evolution and some notable examples in recent times including MTR Corp in Hong Kong and Japan Tobacco in Japan (Societe Generale, 2025).

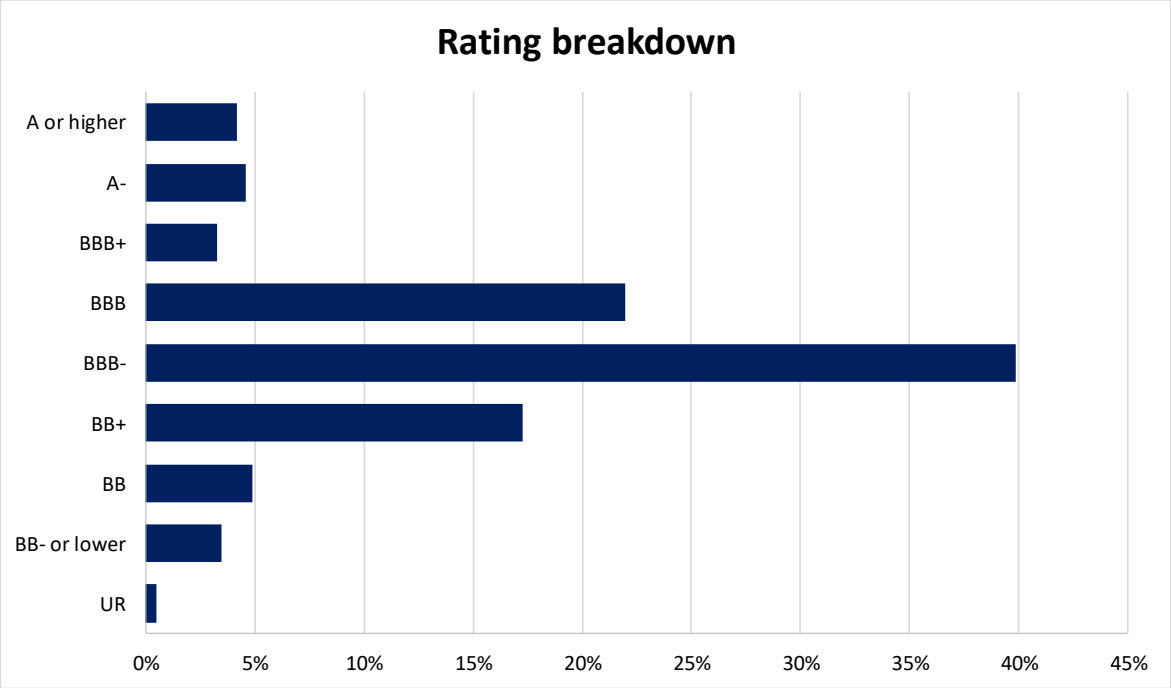


Exhibit 9: Corporate hybrids' issuers rating. Source: Nomura Asset Management

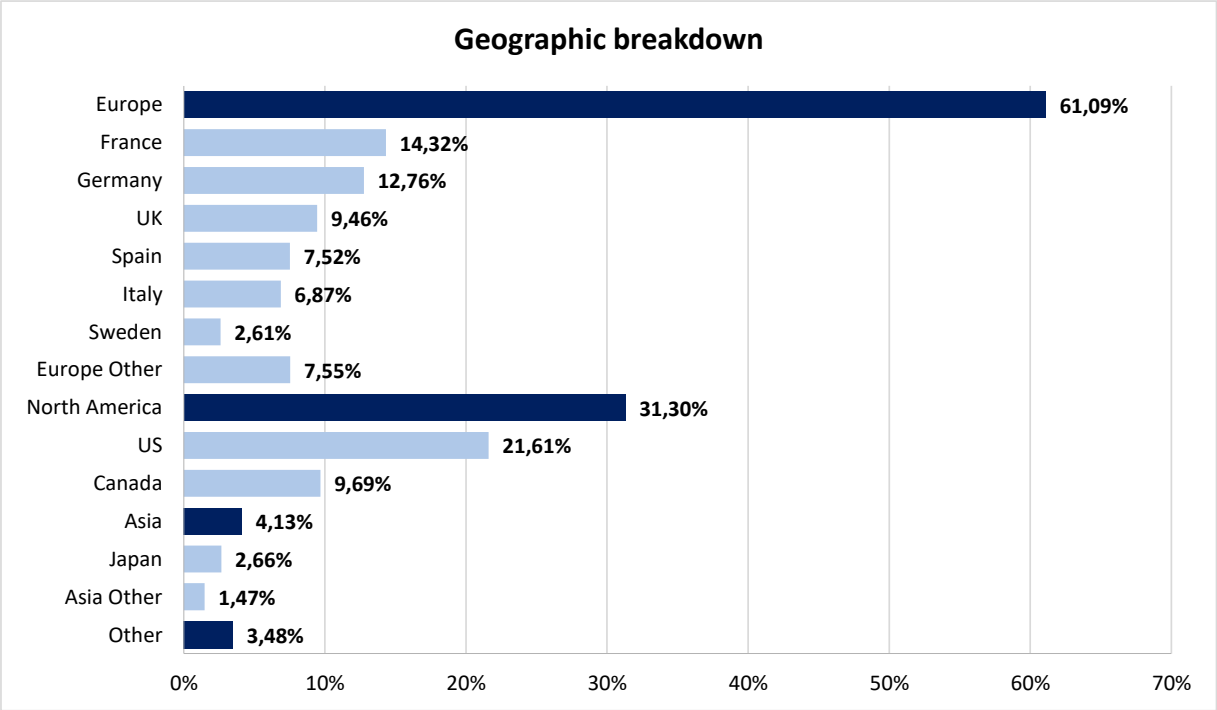


Exhibit 10: Corporate hybrids' geographic distribution. Source: Nomura Asset Management

4.4.3. Sector Composition

Both in Europe and in the U.S., utilities dominate corporate hybrid issuance by a wide margin, accounting for 43% of 2025 issuance and 39.06% of the broader sector composition shown in the two charts respectively. The next-largest contributors diverge slightly: telecommunication ranks second in the 2025 issuance snapshot (19%), while energy takes the second position in the breakdown (20.72%), with telecommunications closing behind (16.72%). Exhibits 11 and 12 clearly depict this pattern.

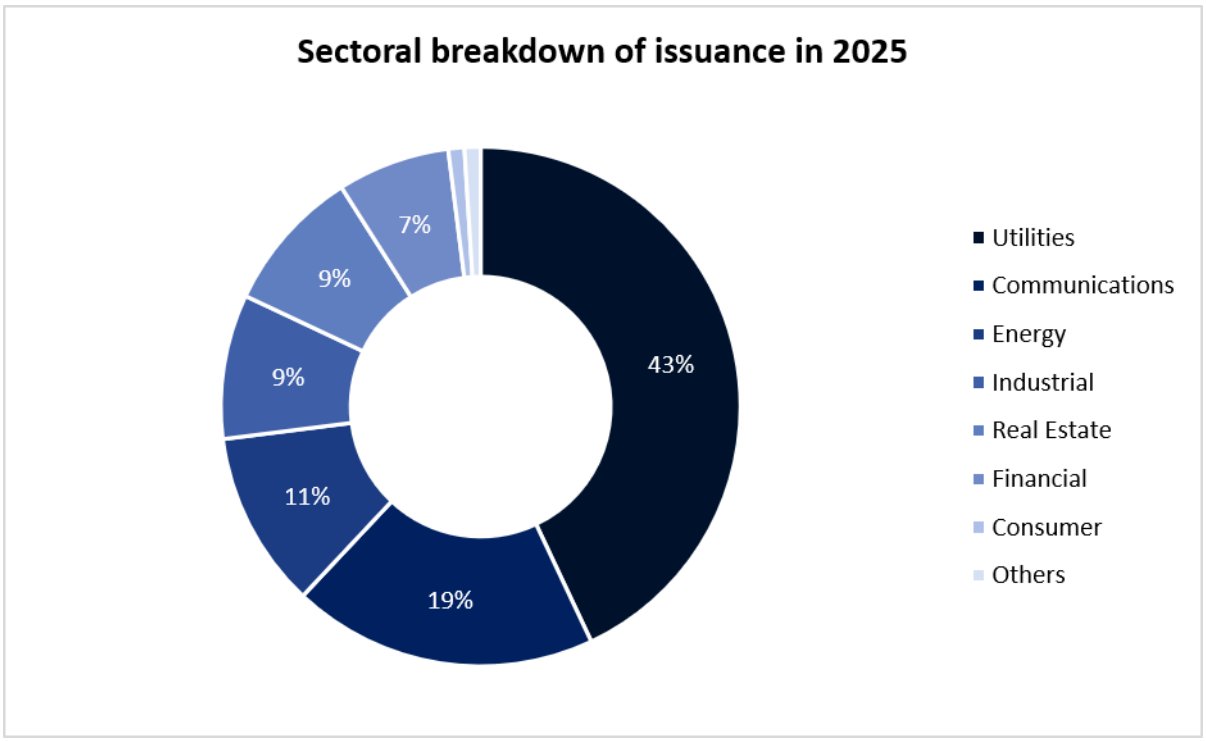


Exhibit 11: Sector breakdown of issuance in 2025. Source: Edmond de Rothschild

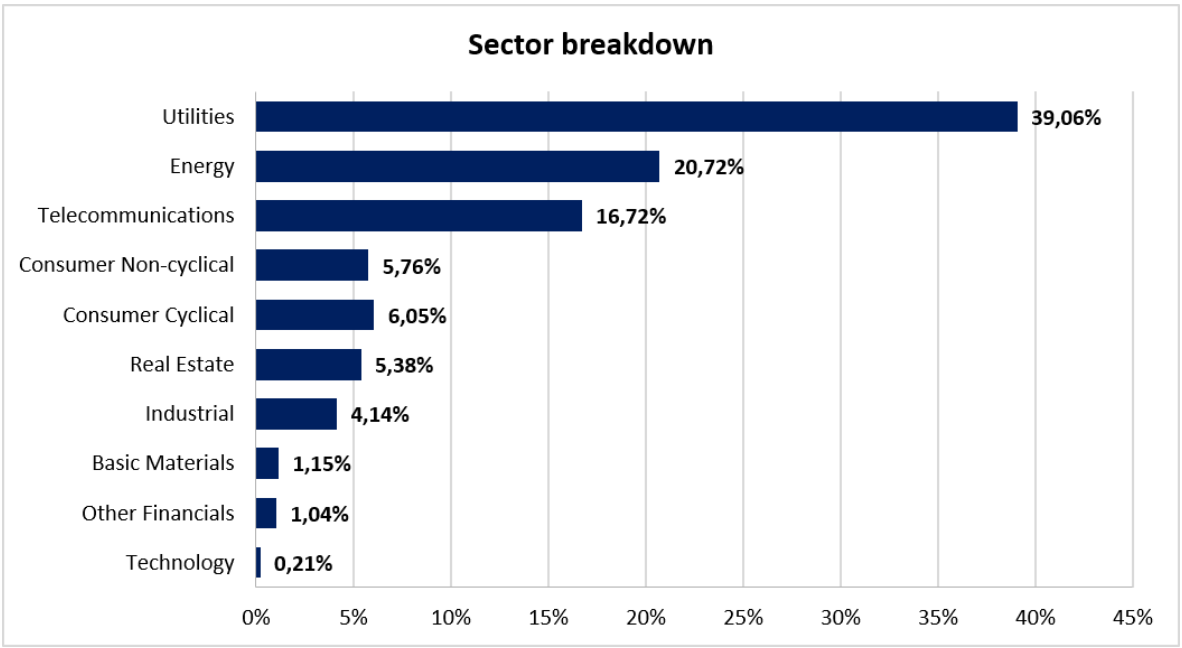


Exhibit 12: Outstanding hybrid bonds by sector. Source: Nomura Asset Management

Combined, utilities and either communications or energy account for more than 60% of issuance volumes in both charts, demonstrating the concentration among capital-intensive or infrastructure-heavy sectors discussed earlier. The remaining categories are represented by sectors which still present capital-intensive firms, such as industrials and real estate companies.

Chapter 5: Contextual Background

5.1 The European Financing Environment

5.1.1. Monetary Policy and the Rate Cycle

Interest rates in the EU economy have been low or even negative for a long period of time during the 2010s, given the attempts by the ECB to contrast poor growth by nudging banks to pour money into the economy. COVID-19 pandemic disrupted an already weak economic environment producing a highly unusual recession (Lagarde, 2020) which accentuated the growth problem and obliged central banks to increase the money supply. ECB intervened in the first weeks of the pandemic both through the strengthening of its Asset Purchase Program (APP), focused on the purchase of financial securities (mainly government bonds) and the fostering of Long-Term Refinancing Operations programme, aimed at providing financing to credit institutions. ECB's final goal was to prevent a much larger disinflationary shock and the risk of triggering a deflationary spiral (Benigno et al., 2021). Exhibits 13 and 14 display the 2021-2026 trend of ECB Deposit Rate and main Refinancing Rate, respectively.

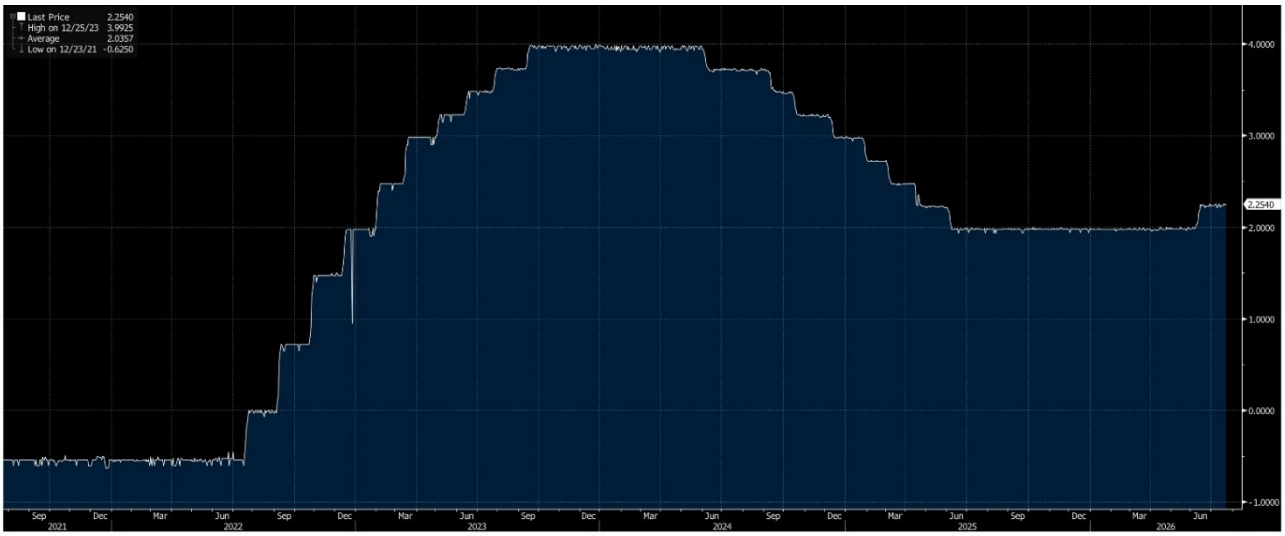


Exhibit 13: ECB Deposit Facility Rate. Source: Bloomberg

As shown, the Deposit Facility Rate, i.e. the rate banks get for overnight deposits at the central bank, increased significantly in July 2022, going from -50 bps to 200 bps by the end of the same year after four consecutive hikes of 50 or 75 bps each. The Main Refinancing Operations rate, which is set on the Deposit Rate, followed a similar trend, climbing from 0 to 200 bps between July and December

2022 ECB meetings, as displayed in Exhibit 14. The Main Refinancing Operations (MRO) rate is the interest rate at which the European Central Bank lends short-term funds (typically one week) to commercial banks against adequate collateral, through its weekly refinancing auctions. Since banks can always rely on these fundings from the ECB, the MRO directly impacts the interbank and money market interest rate, which in turns influence other short-term borrowing rates.

From the end of 2023 onwards, ECB rates progressively declined along with a slow-down in inflation rate, with the Deposit Facility Rate stabilizing in June 2025 on 200 bps and the MRO on 220 bps. The global energy crisis caused by the outburst of war in Iran, with a subsequent closure of Hormuz Strait and a severe blockade of oil supplies, as well as the prolonging Russian-Ukrainian conflict, are putting increasingly more pressure on prices, leading to the ECB's decision of hiking rates by 25 bps in their June 2026 meeting, with expectations of a hold in September meeting, as per the Financial Times (2026).

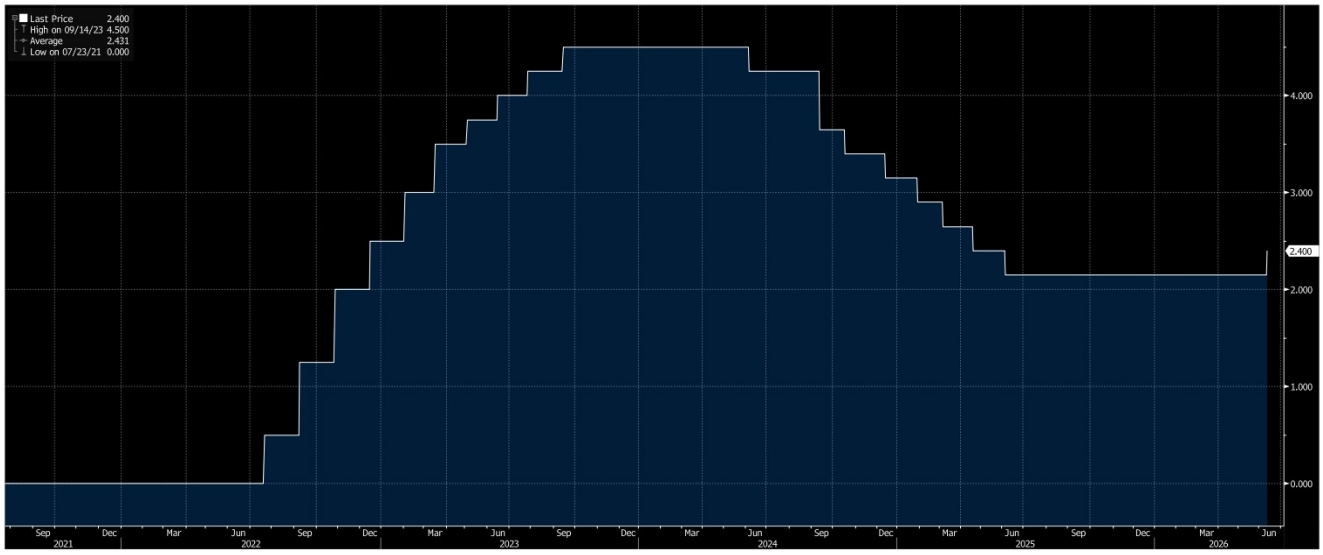


Exhibit 14: ECB Main Refinancing Operations Rate. Source: Bloomberg

5.1.2. Transmission to Credit Markets

The increase in the cost of financing faced by financial institutions had a cascade effect on the broader financial market. In order to maintain a minimal level of interest margin, banks set higher costs for lending money to individuals and corporations. The cost of borrowing[12] for non-financial corporations, which was 1.79% p.a. in July 2022, reached a maximum of 5.28% p.a. in October 2023,

[12] These data are referred to Euro area non-financial corporations' balance sheet items that produce borrowing costs

gradually declining and stabilizing around 3.6-3.7% from June 2025 onwards (European Central Bank, 2026). Considering the broad surge in the cost of borrowing, bond market followed the same path: the iBoxx € Corporates 10-15, which tracks the annual yield of Euro-denominated, investment grade (mainly A and BBB rated) corporate bonds recorded a 10-year high of 4.75% in October 2022, whereas at the beginning of the same year it was just slightly above 1.10%. Looking at the risk-free rate, expressed by the German 10-year Bund, its yield climbed from 1.34% at the beginning of July 2022 to 2.57% in December 2022.

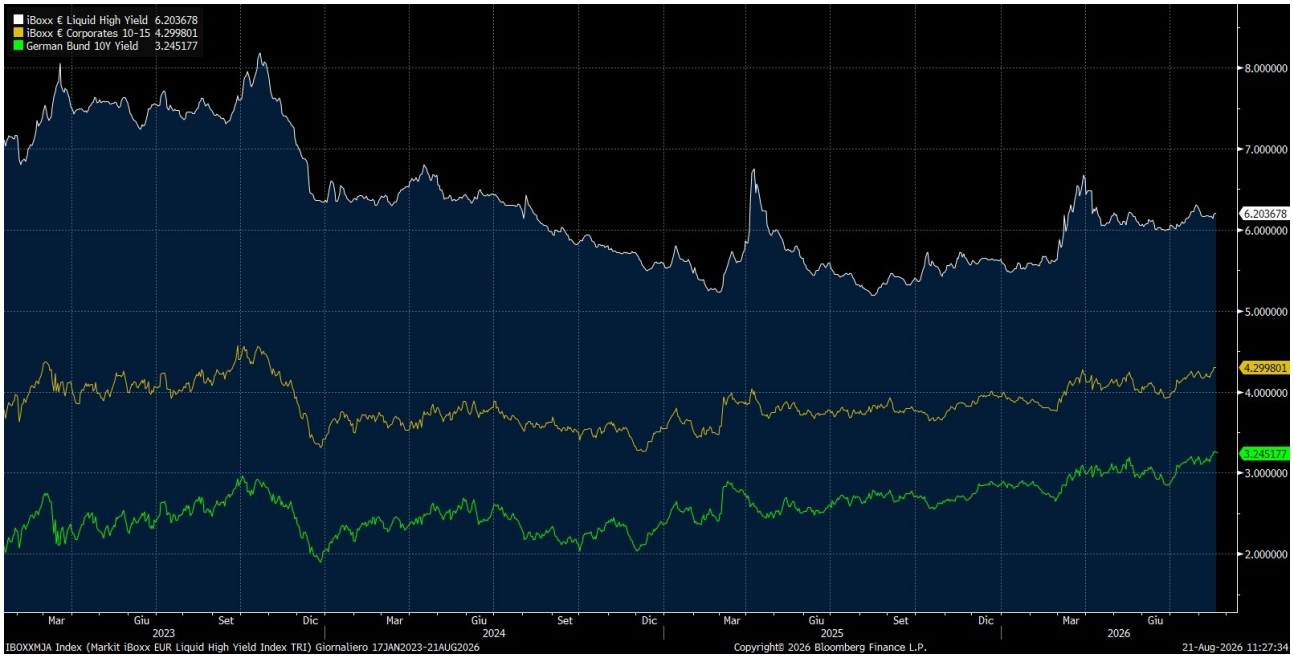


Exhibit 15: Risk-free, corporate investment grade and high yield bond returns comparison. Source: Bloomberg

Considering European bond market performance as a whole, PwC UK (2024) shows that in 2022 there has been a slowdown in the number of issuances compared to the previous year. In 2021 the corporate debt deal-count totalled 1,326, decreasing to 993 in 2022 and recovering in 2023 to 1,292 deals. Total value moved similarly, with €799b raised in 2023 against €644b the year before; through these figures we can compute the average deal size, equal to around €648m in 2022 and €618m in 2023. The rebound in issuance volume, despite rates remained substantially high, suggests that many issuers moved to refinance existing debt in anticipation of rate cuts, rather than because financing conditions had actually eased. According to AFME's research, high yield bonds reached €168.3bn in proceeds from issuances in 2024, decreasing to €148.9bn in 2025[13]. European investment grade issuance reached €311.4 billion in Q1 2024 alone, more than two-and-a-half times the volume

[13] Suarez, J. (2026), available at AFME

of the preceding quarter and the strongest quarterly figure since 2010, as issuers moved to secure long-dated financing while investor appetite for high-quality credit remained strong (White & Case, 2024). This activity mirrored a broader global pattern: according to LSEG data, global investment-grade corporate debt offerings totalled over $5.6 trillion in 2024, up 14% year-on-year, rising further to a record $5.8 trillion in 2025 (+13% YoY), with Euro-denominated offerings specifically growing 16% over the same period (LSEG, 2026). High-yield issuance followed a similarly trajectory, up 74% year-on-year globally in 2024, though European high-yield activity moderated somewhat into 2025, with AFME recording €28.8 billion in Q1 2025 proceeds, a 29% year-on-year decline (AFME, 2025)[14].

5.1.3. Equity Market Conditions

The tightening cycle discussed above had also effects on European equity markets, which experienced a significant repricing throughout 2022. The STOXX Europe 600 declined 21% over the year from its January 2022 record high, as investors priced in recession risk alongside the aggressive rate hikes. 2023 was already a recovery year, with a price increase equal to 19.2%. From 2024 until today, the index surged by an impressive 42.4%, Notwithstanding this, across this time period the market witnessed several episodes of heightened volatility: the 2022 bear market, driven by aggressive central bank rate hikes and by the full-scale invasion of Ukraine, which cause a record-high peak in the VSTOXX (as displayed by Exhibit 16), came alongside the 2023 banking crisis, Trump's aggressive policy on tariffs in April 2025 and, more recently, the escalation in Iran.

[14] The utilization of different data providers and different reference periods in this section is due to the absence of a consistent availability of data regarding yearly corporate bond issuances in the European market. Figures are therefore taken from the most reliable source available for each specific data point.

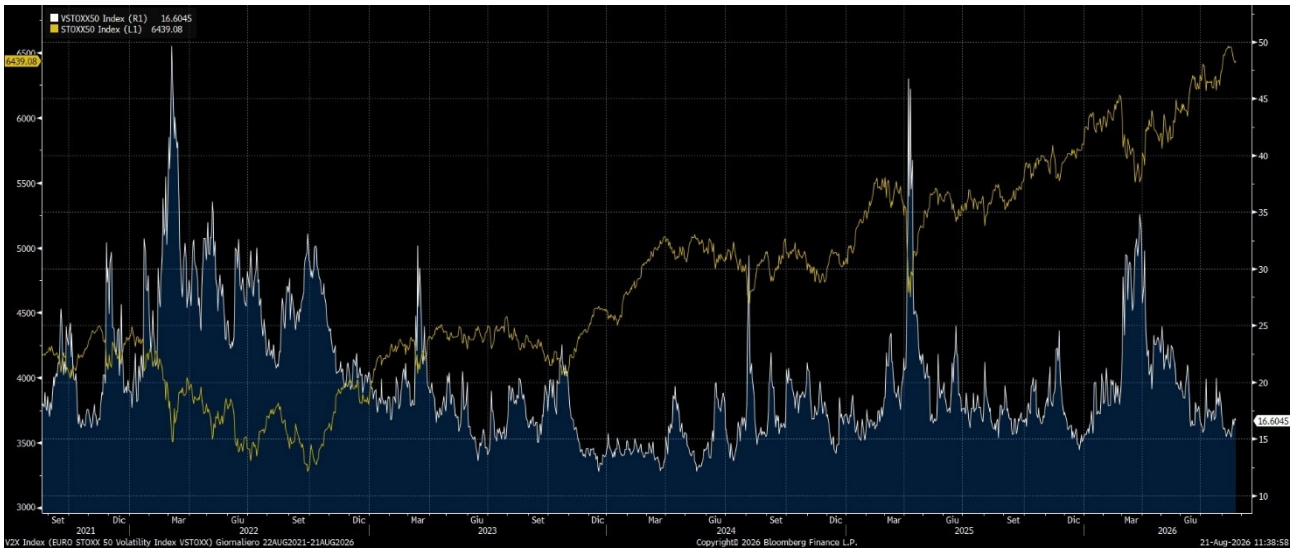


Exhibit 16: European stock market price and volatility. Source: Bloomberg

5.1.4. Implications for Corporate Financing Choices

The combined effect of rising bond yields and significant equity market volatility restricted the range of favourable financing conditions available to European corporates: debt became more expensive, as shown above, while equity issuance became a less predictable and potentially more dilutive option amid depressed and volatile valuations. European corporates increasingly turned to instruments capable of bridging the gap between costly debt and unattractive equity issuance. Hybrid corporate bonds, combining features of both asset classes, offered a convenient response to this environment: they enabled issuers to raise long-term capital while preserving credit metrics and rating agency treatment more favourable than those associated with senior debt, mitigating the impact of higher base rates on their overall cost of capital. This shift is consistent with the broader capital structure literature discussed above, which frames financing choices as strategic decisions shaped by prevailing market conditions rather than static preferences. As the relative cost of pure debt and pure equity increased while their predictability weakened, hybrid instruments offered issuers a mechanism to preserve financial flexibility while still meeting their capital needs.

5.2. Trends in the European Utilities sector

This paragraph will analyse trends in the European utilities sector, of which Enel represents a key player, the third biggest by market capitalization just behind Orsted and Iberdrola. Our main focus will be on CapEx and financing needs, to have a broader understanding of the context in which Enel invests resources and makes decisions on its financial structure.

5.2.1. Investment Needs and the Policy Framework

European utilities currently sit at a crucial point for the future energy development of the region. The coexistence of ambitious climatic goals and the need for an energy sovereignty, severely exposed by recent geopolitical tensions, poses a strategic challenge for the region, with energy companies that will have to deploy huge amounts of capital in infrastructure needed to pursue relevant objectives. The European Commission estimates that to achieve significant goals the energy sector will have to invest annually €600bn from 2026 to 2030 and almost €700bn from 2031 to 2040, three times the amount invested in the previous decade (European Commission, 2026). As highlighted by Deloitte (2026), Europe has to undertake a significant transformation of its energy system aiming at intensive decarbonization and electrification, in order to reduce dependence from other regions, better sustain energy shocks and grant more affordability to firms and households. Deloitte's analysis takes LNG as an example, showing how two thirds of the global gas supply will come just from U.S. and Qatar after the current wave of new infrastructure investments will be completed. This will make Europe heavily subjected to the prices set by these two importers[15], thus making investments in our domestic energy infrastructures inevitable for the future economic survival and thriving of Europe.

This push towards a renewed energy infrastructure is stressed also by the European legislator through several climate reform packages presented in recent years. The European Council's project Fit for 55, which aims to reduce carbon emissions in 2030 by 55% compared to 1990 levels, now became a binding measure for Member States. The reform, presented in 2021, regards a deep transformation of the European energy landscape, with a strong emphasis on renewable sources, alternative fuels, energy efficiency and so on. In the context of the REPowerEU Plan, in November 2023 the Renewable Energy Directive introduced targets to almost double the existing share of renewable energy in the EU: the objective is to increase the share of renewables in the EU's overall energy consumption, raising the binding target for 2030 to 42.5% (European Commission, 2026). Directly pointing to electricity grids, the Commission presented the European Grid Packages in December 2025, with the goal of making European electric networks more digitalised, decentralised and flexible. Including a strong increase in the cross-border energy transmission and a necessary

[15] Especially by the United States, which is going to take an increasingly prominent role in the LNG supply after the damages suffered by Qatari facilities in the Iranian war.

renovation of old infrastructure, €584bn in investments will be needed to meet the goals set out in the European Grid Action Plan, as per the European Commission (2026).

The national transposition of EU plans into single Member States takes place with National Energy and Climate Plans (NECPs), which obliges countries to prepare a detailed report that outlines precise actions and policies to achieve the 2030 climate and energy targets. The Integrated National Plan for Energy and Climate published by the Italian government in July 2024 includes reducing greenhouse gas emissions by 62% in the ETS sector and 43.7% in Effort Sharing sectors compared to 2005 levels, bringing the overall renewable energy share to 39.4%. This transition requires significant investments in technologies, processes and infrastructure estimated around €825bn[16] between 2024 and 2030, of which €529bn for transport vehicles, €94bn for the residential sector and €82bn for electricity generating installations among the others. The Italian NECP identifies Enel as the leading national producer with a 17.9% share of gross national generation in 2022. According to the Plan, Enel will play a crucial role in this transition by managing the decommissioning of coal and fossil fuel facilities, as well as being involved directly in supporting the Plan's flexibility and grid integration goals.

Beyond this national and supernational regulations, utilities firms will have to deal with a skyrocketing increase in the demand for electricity driven by AI-related data centres. Hyperscalers such as AWS, Microsoft Azure and Google Cloud are committing huge amount of capital in the deployment of high-performance accelerated servers, with the biggest five tech companies surpassing $400bn in data centres aggregated investments in 2025. According to the International Energy Agency (2026), electricity consumption from data centres is estimated to amount to about 1.5% of global electricity consumption in 2024. It has grown at 12% per year over the last five years, and as per IAE's projections the data centres' electricity yearly consumption can grow by around 15% per year, more than four times faster than the growth of total electricity consumption from all other sectors. This poses a problem of readiness and development of the electricity infrastructure for European countries, as highlighted by the European Commission (2025) which stated the importance of improving the efficiency of energy usage, especially considering that this is demand utilities cannot decline servicing, compounding the expected Capex in the following years.

[16] This amount would represent over €174bn of additional investment compared to the pre-INPEC policy scenario.

5.2.2. The Regulated Asset Base Mechanism

The combination of ambitious policy targets and surging demand from data centres has created room for potentially the most massive investment cycle since the 1990s liberalization for European utilities. This becomes even more stringent for energy firms if we consider the regulatory binding rules regarding utilities' Regulated Asset Base (RAB). RAB is a financial and regulatory model that defines how private investment in essential public infrastructure, such as electricity networks, water and transport, **is** remunerated. This mechanism balances the private investors' need to recover their investments over time with the consumers' right to have utilities' prices controlled by the regulator. Equation 1 displays how RAB is computed.

$$RAB_t = RAB_{t-1} + Capex_t - Depreciation_t \pm Adjustments_t$$

Equation 1: Regulated Asset Base computation

RAB_t amount is fundamental in determining the Allowed Revenue for each year t. Equation 2 shows the Allowed Revenue's formula, where *Allowed WACC* is the cost of capital as established by the regulator, which multiplied by the RAB itself gives the Return on Regulated Asset Base, while Depreciation accounts for the recovery from the degradation of the asset over time and *Allowed Opex* are the recurring maintenance costs required by infrastructures.

$$Allowed\ Revenue_t = (RAB_t \times Allowed\ WACC) + Depreciation_t + Allowed\ Opex_t$$

Equation 2: Allowed Revenue formula

The regulatory thresholds for the values utilized in these formulas are set forth in each Member State by national authorities, which the EU Directive 2019/944 requires to be created by governments in each MS. The national regulatory authority has, among the others, the duty to establish network tariffs for consumers, which are neither deliberately chosen by management nor negotiated commercially. Thus, the remuneration for utilities is set by a public authority rather than the single firms. Moreover, Art. 51 of the Directive requires Transmission System Operators[17] to submit to the regulatory authority at least every two years a ten-year network development plan: if the plan is not implemented as stated, the national authority has the power to oblige the TSO to invest or to raise new capital to pursue the plan. A similar rule applies to Distribution System Operators, i.e. firms

[17] A transmission system operator (TSO) is an entity entrusted with transporting energy in the form of natural gas or electrical power on a national or regional level, using fixed infrastructure. The procedure to be certified by European authorities as a TSO is set forth by Art. 52 of EU Directive 2019/944 and by Art. 51 of EU Regulation 2019/943.

which manage the energy distribution as Enel: Art. 32 of EU Dir. 2019/944 obliges DSOs to develop a transparent network development plan which must be published at least every two years, with a focus on the medium and long-term flexibility services needed, and setting out the planned investments for the next five-to-ten years.

5.2.3. Regulatory Lag and Its Asymmetry

This framework creates a regulatory lag where returns are set on a multi-year basis from backward-looking data, which is the reason the 2022 rate shock hit the cost side without affecting the revenue side. ARERA (Autorità di Regolazione per Energia Reti e Ambiente), which is the Italian regulation authority, represents a clear example for this. In 2021 ARERA established the TIWACC 2022-2027, containing the criteria for determining the allowed return on capital for infrastructural services in the gas and electricity industries. The regulatory period is then divided into two sub-periods (2022-24 and 2025-27), with the parameters being revised at the passage from one period to the other. The main problem is that returns are re-adjusted and calibrated basing on backward-looking windows rather than when capital is actually raised. ARERA acknowledges this issue allowing for revisions within a single sub-period, where WACC is recomputed using the actual risk-free rate, inflation rate, credit spread and bond yields; if the resulting WACC has a difference of 50 bps or larger than the already set one, then the cost of capital is updated for all the services within the regulation scope. Both in 2022 (delibera 654/2022/R/COM) and in 2025 (delibera 476/2025/R/COM), ARERA confirmed the same WACC already established for those sub-periods. Since the mechanism is threshold-based and is applied with delay, it actually mitigates the mismatch rather than eliminating it. A significant asymmetry emerges from the intra-sub-periods revision, published through the delibera 513/2024/R/COM, which revised allowed returns downwards for the 2025-27 sub-period whereas financing cost eased; meanwhile, when market rates surged in 2022, the allowed return remained fixed as established by the first delibera.

The asymmetry is extended by the different speed at which the two sides adjust: the allowed return applies to the whole regulated asset base, thus repricing the entire revenue stream as soon as it is revised, whereas interest expense reflects the coupons of bonds issued at different dates, so that the debt raised in 2022 and 2023 continues to weigh on the income statement until it matures and is refinanced. Within this framework none of the variables is actually at the disposal of the operator: Capex is imposed by European and national plans, allowed revenues are determined by regulators and cannot be adjusted as in a free market, and the cost of capital is set by global financial markets.

The only remaining degree of freedom for utilities is the composition of the capital structure, which can be engineered to sustain the planned investments while respecting constraints imposed by European and national authorities.

5.2.4. Renewable Generation Outside the RAB

The RAB framework is still not sufficient to describe the whole European utilities' capital program. A significant portion of the sector's investment, as explicitly set out by EU policies, is directed towards renewable generation, which is outside of the network regulation's scope. However, the underlying economic mechanism is closely comparable. Revenue on a renewable asset is usually fixed ex ante, at the moment of the signature of a Contract for Difference (CfD) or of a long-term Power Purchase Agreement (PPA) and remains fixed for fifteen to twenty years. Since almost the entirety of the cost of a wind or solar plant is incurred upfront, project returns depend on the cost of the capital at the moment in which the infrastructure was built. The regulatory lag here sits in a revenue fixed ex ante over long horizons against a cost of capital that reprices with market movements. RAB network remuneration is one mechanism through which that fixing occurs, while auctions, Contracts for Difference and Power Purchase Agreements are another. Both apply to the vast majority of European utilities and to Enel, and both leave the financing structure as the only variable really under the firm's control.

5.3. Utilities market financial metrics

We will now look at several financial metrics applied to a sample including the 25 biggest European utilities operators by market capitalization. The sample contains companies from the whole region, also considering non-EU and non-Eurozone countries. For companies reporting in currencies other than EUR, the relevant annual average exchange rate is applied.

5.3.1. Capital Expenditure Trends

As seen in paragraph 5.2., Capex is subjected to thorough controls by national regulators, which evaluates the correct implementation of the outlined plans both for TSOs and DSOs. If Capex would respond to financing conditions, we would expect a decline in the amount of capital invested during the 2022-23 rate increases. What we see from our group's selection is a steady increase of Capex from 2019 to 2025 (excluding FY2020 characterized by the outburst of COVID-19 pandemic), with a CAGR equal to 12.93%, as shown in Exhibit 17.

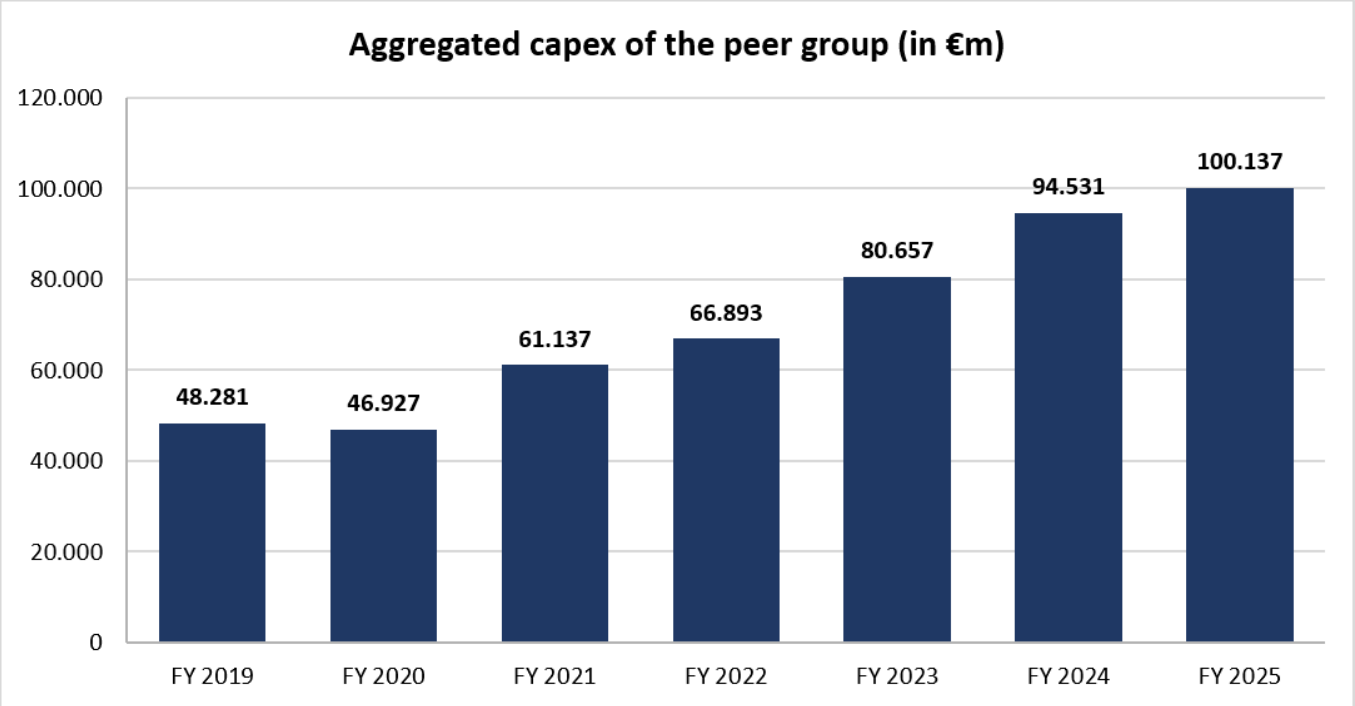


Exhibit 17: Aggregated utilities Capex 2019-25. Source: Bloomberg, companies' filings.

It is important to note that Capex absolute levels are also affected by inflation, which contributes to enlarge the nominal Capex figures. Looking at the construction producer price index (CPPI[18]), in 2021 materials' prices in the EU rose rapidly at a 5.8% rate, with the trend accelerating in 2022, when most countries displayed double digit rates of change. Prices continued to increase rapidly also in 2023 but not as intensively as in the year before. In 2024 and 2025 prices increased further but at a slower pace, respectively with a 2.3% and 1.3% growth rate (Eurostat, 2026). Computed, the CAGR 2019-25 amounts to around 4.9%, against a nominal capex increase of 12.93%, which makes the real capex figure equal to roughly 8%. Thus, inflation partly explained the magnitude of capex's increase, but not the timing: a utility responding to financing conditions would have cut nominal spend in 2022–23 when input costs were peaking, and none did.

5.3.2. Interest Coverage

The second metric considers the cost of funding investment plans. Exhibit 18 reports the median ratio of EBITDA to interest expense across the peer group: coverage stood at 9.4x in 2019 and peaked at 10.8x in 2021, when market rates were still at their historical lows, before falling to 7.2x in 2022

[18] We take CPPI as a reference even if it is related to the construction of new residential buildings as a proxy for utilities capital expenditures, since it is the most suitable EU-wide metric available appliable to utilities Capex.

and settling at 6.8x and 6.7x in the two subsequent years. The ratio deterioration is thus concentrated in the years of the tightening cycle described in paragraph 5.1., and it has not been recovered since.

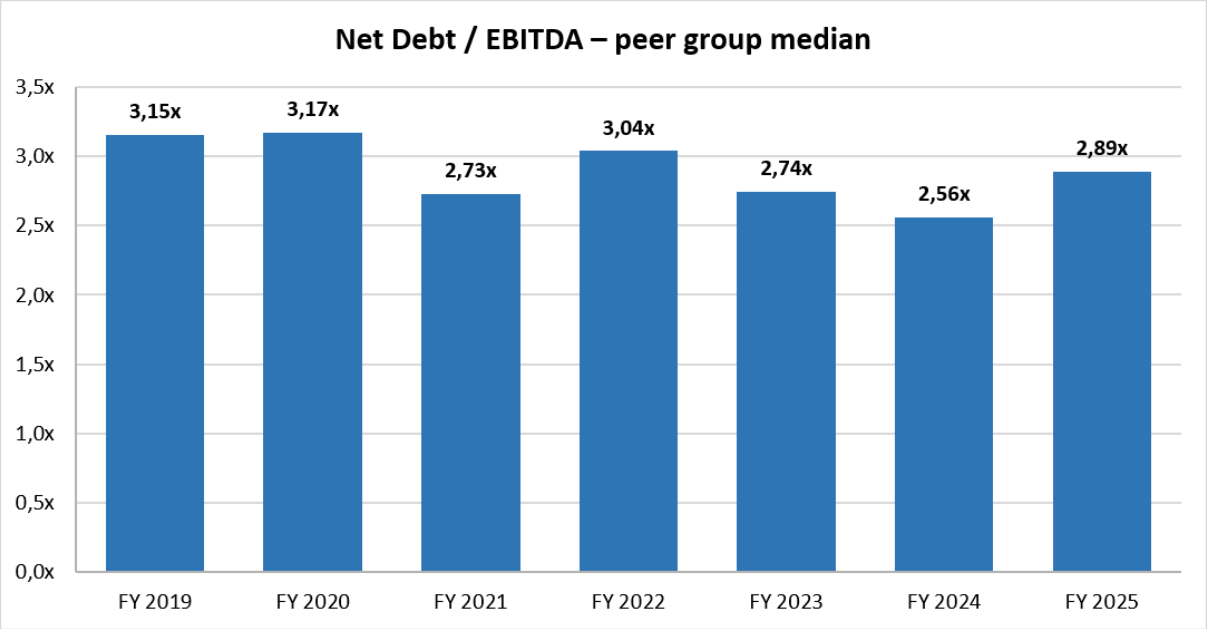


Exhibit 18: European utilities' EBITDA on Interest expense 2019-25. Source: Bloomberg, companies' filings

This ratio concretely describes the regulatory lag discussed above: the numerator reflects revenues which are administratively capped, since allowed returns are fixed for each regulatory sub-period on backward-looking windows and, as seen in ARERA's delibera 654/2022/R/COM, were left unchanged when market rates surged; the denominator, by contrast, reflects the coupons of bonds priced by the market at the moment of each issuance and refinancing. The deterioration is therefore not a matter of operating performance or managerial choice: the two sides of the ratio adjust at different speeds and under different authorities. Still, coverage remains within investment grade tolerance in absolute terms, but the direction of the trend defines the constraint under which the financing decision is taken, since every additional euro of senior debt consumes a numerator which regulation prevents from growing in step.

5.3.3. Hybrids in the Sector Funding Mix

Corporate hybrids represent a structural component of the sector's funding mix rather than an occasional expedient. As shown in Exhibit 12, utilities account for the largest share of the outstanding European hybrid stock, a concentration which reflects both the relatively cheap

financing these instruments provide compared to senior debt and the favourable treatment granted by rating agencies.

Taken together, what has been discussed in this chapter describes a sector whose financing choices are dictated by regulation rather than by financing conditions, whose revenues adjust to the cost of capital only with a delay, and for which the composition of the capital structure is consequently the only degree of freedom left to management. Enel represents the most complete case in which to examine how this constraint translates into an actual financing decision: it is one of the largest European utilities by market capitalisation, a large share of its activities falls under the ARERA framework discussed above, and it has constantly relied on hybrid instruments throughout the period considered. Chapter 6 shifts the analysis from the sector to the single firm, reconstructing Enel's investment plan and capital structure and examining the role corporate hybrids have played within them.

Chapter 6: The Case of Enel S.p.a.

6.1 Case Study Roadmap

This chapter applies the analytical framework presented in Chapter 2 to a single transaction: Enel's €2 billion perpetual hybrid bond issuance of January 2026. The purpose of the chapter is to move the discussion from the general properties of corporate hybrids, described in Chapter 4, and from the market and macroeconomic conditions described in Chapter 5, to the level of a specific firm and its own financing decision, and to quantify the impacts of that decision. The central question addressed here is whether, and through which channels, the hybrid structure delivered financial outcomes that an economically equivalent senior unsecured issuance would not have delivered, thus helping the firm in pursuing its objectives while maintaining financial balance.

The chapter is organized in three different moments: description, quantification, and interpretation. The descriptive part establishes the empirical setting. Paragraph 6.2 reconstructs Enel's hybrid bond programme in full, covering the date, size, currency, coupon, deferral mechanics and first call date of each issuance, so that the transaction examined here can be considered within the issuer's financing behaviour and the evolution of market conditions over the time analysed. Paragraph 6.3 then narrows the focus to the January 2026 issuance itself, analysing the terms of its two tranches, along with the rating treatment and the stated use of proceeds.

The quantitative part rests on a comparative model built in Excel, whose construction and assumptions are documented in Paragraph 6.4. The model holds the firm's capital requirement constant and replaces the hybrid instrument with an equivalent senior unsecured issuance, so that every result reported in this chapter is a difference between the actual outcome and the hypothetical one rather than a standalone figure. Paragraph 6.4 also explains why the two tranches are treated as a single size-weighted transaction for most of the analysis, and where their pricing differential is instead used as direct market evidence.

The comparison is then developed across four dimensions. Paragraph 6.5 examines debt capacity and credit metrics, applying the rating agencies' equity-credit treatment to the actual capital structure and recalculating leverage and coverage ratios under the assumption that the instrument is treated as full debt. Paragraph 6.6 discusses earnings generation and the cost of capital. It quantifies the effect of the IFRS equity classification on reported net income and, because the coupon

remains tax-deductible in Italy, quantifies the pre-tax coupon premium over senior debt against the narrower after-tax cost gap that this deductibility produces. The comparison is then widened from two funding routes to three, adding common equity alongside the hybrid and the senior unsecured alternative, so that the instrument is costed against both of the pure claims it sits between. The paragraph closes with the weighted average cost of capital under each structure, treated here as a component of the cost of capital rather than as a separate dimension, and explains why the finding that the hybrid raises WACC is consistent with the flexibility argument advanced in this thesis rather than evidence against it. Paragraph 6.7 addresses the distribution of risk among capital providers, examining how subordination and coupon deferral reallocate downside risk between senior creditors, hybrid holders and shareholders, and discussing how the coupon differential between the two tranches represents a market price for the recovery risk. Paragraph 6.8 closes the quantitative part by testing investment capacity, asking whether the higher leverage of the counterfactual structure would have constrained Enel's ability to fund its declared capital expenditure program without breaching covenants or rating thresholds.

Paragraph 6.9 extends the analysis forward in time. Because the economic cost of a perpetual hybrid is determined not only at issuance but also at the first reset date, this paragraph uses a Monte Carlo simulation to model the reset coupons of the two tranches at the end of their respective non-call periods. The output is the full distribution of each tranche's post-reset coupon and the probability that it exceeds the fixed coupon secured at issuance. This shifts the perspective to a range of possible outcomes and provides the basis for assessing the forward-looking rate risk that the instrument leaves with the issuer.

Paragraph 6.10 brings the results together and discusses how the findings relate to Enel's stated strategic plan, in particular to the financing of its investment program and to the maintenance of its credit ratings. Paragraph 6.11 summarizes the findings dimension and sets the path forward to the conclusions of the thesis.

6.2. Enel’s hybrid bond program: a descriptive overview

Before turning to the transaction at the centre of this chapter, it is useful to understand Enel's historical record as an issuer of hybrid capital. Enel entered the asset class in 2013, among the first European corporates to do so, and has returned to it in almost every year in the last 10 years, thus covering each phase of the interest rate cycle. The instrument analysed in this paragraph are

therefore not a sequence of isolated funding exercises but a continuously managed programme, in which new issuance is regularly paired with the exchange, tender or early redemption of outstanding securities, and in which the structural features have converged towards a standard template as rating agency methodology and investor expectations settled.

Exhibit 19 reports the terms of the hybrid securities issued by Enel from 2013 onwards, as disclosed in the company's filings and in the offering circulars for each transaction. The table is organized by tranche rather than by transaction: the operations of 4 September 2013, 8 January 2014, May 2018, March 2021, January 2023 and January 2025 each placed two securities simultaneously, differing either in currency or in non-call period, so that the sixteen tranches reported correspond to ten issuance operations, the US dollar instrument of 18 September 2013 having been priced separately from the euro and sterling tranches of two weeks earlier. Coupons are stated on a euro-equivalent basis, which for that US dollar tranche means the 7.500% obtained after the euro swap rather than its 8.750% dollar coupon. The tranche sizes shown for 2018 are those set at launch, before the increase described below.

Issue date and tranche	Size	Issue Price	Initial coupon (in EUR)	First call and reset date	Reset margin over the 5 year swap rate	Legal maturity
4 September 2013, tranche 1 of 2	EUR 1,250m	98.956%	6.500%	10 January 2019	Benchmark +524.2bps, with step-ups of 25bps from 10 January 2025 and 75bps from 2040	10 January 2074
4 September 2013, tranche 2 of 2	GBP 400m	98.698%	7.000%	10 September 2020	Benchmark +566.2bps, with step-ups of 25bps from 10 September 2025 and 75bps from 2040	10 September 2075
18 September 2013, USD tranche	USD 1,250m	99.183%	7.500%	24 September 2023	Benchmark +588bps, with step-ups of 25bps from 24 September 2023 and 75bps from 2043	24 September 2073

Issue date and tranche	Size	Issue Price	Initial coupon (in EUR)	First call and reset date	Reset margin over the 5 year swap rate	Legal maturity
8 January 2014, tranche 1 of 2	EUR 1,000m	99.368%	5.000%	15 January 2020	Benchmark + 364.8 bps, with step-ups of 25bps from 15 January 2025 and 75bps from 2040	15 January 2075
8 January 2014, tranche 2 of 2	GBP 500m	99.317%	5.600%	15 September 2021	Benchmark + 408.9 bps, with step-ups of 25bps from 15 September 2026 and 75bps from 2041	15 January 2076
15 May 2018, tranche 1 of 2	EUR 500m	99.375%	2.500%	24 November 2023	Benchmark + 209.6 bps, with step-ups of 25bps from 24 September 2023 and 75bps from 2043	24 November 2078
15 May 2018, tranche 2 of 2	EUR 750m	99.108%	3.375%	24 November 2026	Benchmark + 258.0 bps, with step-ups of 25bps from 24 November 2031 and 75bps from 2046	24 November 2081
15 May 2019	EUR 300m	99.337%	3.500%	24 May 2025	Benchmark + 356.4bps, with step-ups of 25bps from 24 May 2030 and 75bps from 2045	24 May 2080
10 September 2020	EUR 600m	99.262%	2.250%	10 March 2027	Benchmark + 267.9bps, +292.9bps from 10 March 2032, +367.9bps from March 2047 thereafter	Perpetual
5 March 2021, tranche 1 of 2	EUR 1,250m	99.233%	1.375%	8 September 2027	Benchmark + 171.9bps, +196.9bps from 8 September 2032, +271.9bps from	Perpetual

Issue date and tranche	Size	Issue Price	Initial coupon (in EUR)	First call and reset date	Reset margin over the 5 year swap rate	Legal maturity
					September 2047 thereafter	
5 March 2021, tranche 2 of 2	EUR 1,000m	98.932%	1.875%	8 September 2030	Benchmark + 201.1bps, +226.1bps from 8 September 2035, +301.1bps from September 2050 thereafter	Perpetual
12 January 2023, tranche 1 of 2	EUR 1,000m	100.00%	6.375%	16 July 2028	Benchmark + 348.6bps, +373.6bps from 16 July 2033, +448.6bps from July 2048 thereafter	Perpetual
12 January 2023, tranche 2 of 2	EUR 750m	100.00%	6.625%	16 July 2031	Benchmark + 377.4bps, +402.4bps from 16 July 2036, +477.4bps from July 2051 thereafter	Perpetual
23 February 2024	EUR 900m	99.454%	4.750%	27 May 2029	Benchmark + 212.9bps, +237.9bps from 27 May 2034, +312.9bps from May 2049 thereafter	Perpetual
10 January 2025, tranche 1 of 2	EUR 1,000m	99.442%	4.250%	14 April 2030	Benchmark + 200.9bps, +225.9bps from 14 April 2035, +300.9bps from April 2050 thereafter	Perpetual
10 January 2025, tranche 2 of 2	EUR 1,000m	99.180%	4.500%	14 January 2033	Benchmark + 219.6bps, +244.6bps from 14 January 2038, +319.6bps from	Perpetual

Issue date and tranche	Size	Issue Price	Initial coupon (in EUR)	First call and reset date	Reset margin over the 5 year swap rate	Legal maturity
					January 2053 thereafter	

Exhibit 19: Enel hybrid securities issued from 2013 onwards. Source: Enel company filings and offering circulars.

Three patterns emerge from the exhibit. The first concerns pricing, which tracks the rate environment described in Chapter 5 rather than any change in Enel's credit standing. On a euro-equivalent basis the programme opens between 6.500% and 7.500% across the three tranches of September 2013, falls through the low-rate years to a trough of 1.375% on the non-call 6.5 tranche of March 2021, jumps to 6.375% and 6.625% on the two tranches of January 2023 at the height of the hiking cycle, and then eases to 4.750% in February 2024 and to 4.250% and 4.500% in January 2025. The reset margins move in the same direction but with a far narrower amplitude once the early instruments are set aside, from 171.9bps on the 2021 tranche to 348.6bps in January 2023 and back to 200.9bps in January 2025, against 524.2bps and 588bps on the euro and dollar tranches of 2013. The swing in headline coupons is therefore driven mainly by the level of the underlying swap rate, while the much larger compression of margins between 2013 and 2018 reflects the maturing of the asset class and Enel's establishment as a repeat issuer rather than the rate cycle.

The second pattern is the standardization of the structure. The early instruments were dated securities with legal maturities of sixty years or more, first call dates between five and ten years after issue, and placement across three currencies, euro, sterling and US dollar, whereas every issuance from September 2020 onwards is a perpetual euro security with a non-call period of between five and a quarter and nine and a half years. The reset mechanics converge on a single template: a margin over the five-year swap rate of the relevant currency at the first reset date, a 25bps step-up at the reset date falling roughly eleven to twelve years after issue, and a further 75bps at the reset date some fifteen years later. This is the structure that supports the 50% equity credit treatment discussed in Chapter 4, and the convergence indicates an issuer optimizing within the constraints of rating agency methodology rather than experimenting with instrument design.

The third pattern is the combination of multi-tranche issuance with active liability management. Enel adopted a multi-tranche format from the outset, pairing euro and sterling securities in September 2013 and in January 2014, and from May 2018 onwards it paired a shorter and a longer non-call period within a single euro transaction, as in March 2021, January 2023 and January 2025.

New issuance was also systematically used to retire older instruments: the May 2018 transaction was accompanied by an exchange offer that lifted the November 2078 tranche from €500m to €750.019m and by a cash tender for €731.744m of the €1,250m security callable in January 2019, the May 2019 issuance was paired with a further exchange offer on the two earliest euro instruments, and in December 2019 Enel exercised the optional redemption of the residual €410m of the 2014 security at its first call date. The programme is therefore managed as a revolving layer of the capital structure, in which the outstanding stock of hybrid capital is maintained while individual instruments are refinanced at each call date.

Exhibit 20 displays the nominal issuance per year and the related volume-weighted initial coupon. Issuance activity does not appear to be steady, with peaks of roughly €2.6bn in 2013, €2.2bn in 2021 and €2.0bn in 2025 separated by years of limited or no issuance, while the weighted average initial coupon falls from close to 7% in 2013 to below 2% in 2021, rebounds above 6% in 2023 and settles at around 4.3% in 2025. The two series move largely independently of one another: the heaviest placements occur at both ends of the cost spectrum, which is explained by the fact that the size of each transaction is governed by the refinancing calendar and by the quantity of equity credit required at the time rather than by the level of rates then prevailing.

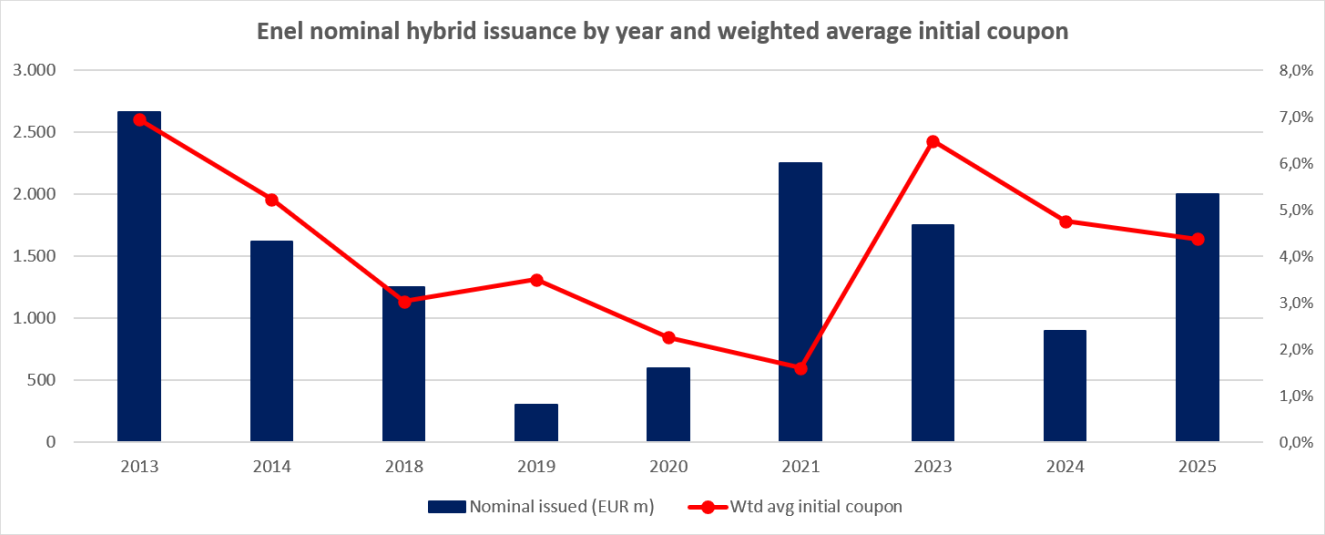


Exhibit 20: Enel hybrid bonds' issuance volume and related fixed nominal coupon. Source: Company filings

Before the January 2026 issuance here analysed, Enel's stack of hybrid bonds amounts to €8,219m on the 31st of December 2025. The hybrid layer is accounted for in the balance sheet as a "reserve for equity instruments – perpetual hybrid bonds", thus being part of the "equity attributable to owners of the Parent", coherently with IFRS classification of hybrid bonds. As specified by Enel's Notes to

Consolidate Financial Statements, "during 2025 coupons were paid to holders of perpetual hybrid bonds for €266 million", resulting in an effective interest expense of 3.24% computed on the whole stack.

Read together, these patterns show that hybrid capital has been a permanent rather than opportunistic component of Enel's funding mix for more than a decade, and that the issuer has consistently accepted higher coupons on subordinated paper in exchange for equity credit and the retention of call optionality. The January 2026 issuance examined in the remainder of this chapter is the most recent step in this sequence, and its two-tranche structure, perpetual form, five-year swap reset and step-up profile place it squarely within the template established since 2020. Paragraph 6.3 sets out its terms in detail.

6.3. January 2026 issuance: description of the transaction

6.3.1. Legal Structure and Subordination

On 14 January 2026 Enel returned to the hybrid market with a dual-tranche transaction that raised a total amount of €2,000m in perpetual subordinated hybrid capital: €1,250,000,000 of Perpetual 6 Year Non-Call Capital Securities (referred to below as the NC6 tranche) and €750,000,000 of Perpetual 9 Year Non-Call Capital Securities (the NC9 tranche). Each series was established by a separate trust deed[19] dated 14 January 2026, entered into between Enel as issuer and BNY Mellon Corporate Trustee Services Limited as trustee, with The Bank of New York Mellon, London Branch acting as principal paying agent and agent bank under paying agency agreements of the same date. Both series were issued in London on the issue date in the form of temporary global securities exchangeable for permanent global securities on and after 23 February 2026. Enel applied and got approval for the listing and trading both on Euronext Dublin and Borsa Italiana in the MOT segment.

[19] A trust deed represents a key legal structure of a bond issue in English law practice. Rather than contracting individually with each investor, the issuer gives its payment and other covenants to a trustee, which holds the benefit of them on trust for the holders; the terms and conditions of the securities are scheduled to the deed and take effect through it. This mechanism allows (a) centralised enforcement, since the trustee alone can sue the issuer, acting on behalf of a defined majority of holders, which prevents individual investors from enforcing autonomously, and (b) grant the trustee the right to exercise powers such as the waiver of breaches and consent to modifications without a holders' meeting, provided that those actions are not materially prejudicial to holders. For a deeply subordinated perpetual instrument the choice is significant, because the subordination, interest deferral and equity credit protection provisions of the instruments are administered and enforced through a single fiduciary rather than by dispersed holders.

As stated by Condition 16.1 of the Offering Circular, the Trust Deed, the Securities and the Coupons are governed by English law except Conditions 3.1 and 3.2, which are governed by Italian law, while Condition 13.1 and the Trust Deed provisions on holder meetings are subject to compliance with Italian law. Specifically, Condition 3.1 provides that the Securities and the Coupons constitute direct, unsecured and subordinated obligations of the Issuer, ranking and at all times ranking pari passu without any preference among themselves and with the Issuer's payment obligations in respect of any Parity Securities, and states expressly that the Securities constitute obbligazioni pursuant to Articles 2410 et seq. of the Italian Civil Code. Thus, the offering confirms that the securities are debt instruments issued under Italian company law rather than a form of share capital, which is the premise both of the tax treatment and of the protection built into the definition of a Tax Deductibility Event, under which the Issuer may redeem if a change in Italian law causes interest payments to cease to be deductible for Italian corporate income tax purposes. Condition 3.2 then sets out the liquidation waterfall. In the event of the winding-up, insolvency, dissolution or liquidation of the Issuer, the obligations to make payment of principal, premium and interest on the Securities and the Coupons, including any obligations in respect of Arrears of Interest, rank senior only to the Issuer's payment obligations in respect of any Junior Securities, pari passu among themselves and with the Issuer's payment obligations in respect of any Parity Securities, and junior to all other payment obligations of the Issuer, present and future, whether subordinated, expressly including claims under the first paragraph of Article 2411 of the Italian Civil Code, or unsubordinated, in each case except as otherwise required by mandatory provisions of applicable law. The clause preserves the costs, charges, expenses and remuneration of the Trustee and the Agents from the effects of the subordination. This means that the hybrid is structurally junior not only senior creditors but also to other subordinated Italian debt as well, so that the securities sit just above the share capital in the capital hierarchy. It is important to note that the subordination operates only on a liquidation of the Issuer and does not function as an ongoing payment block, with the deferral of interest being normed under Condition 4; it is reinforced by Condition 3.3, under which holders are deemed to waive any right of set-off, counterclaim, compensation or retention against the Issuer, and under which the Issuer may not set off its own claims against its obligations on the Securities. Conditions 3.1 to 3.3 are drafted identically for both tranches, so the NC6 and NC9 securities rank equally with each other and with the outstanding Enel’s hybrid stock.

6.3.2. Terms of the Two Tranches

The description that follows is taken from the temporary global securities and the terms and conditions of the two series, which differ from one another only in size, in the length of the non-call period and in the pricing elements that follow from it. Exhibit 21 displays the two tranches side by side.

Term	NC6 tranche	NC9 tranche
Instrument	€1,250,000,000 Perpetual 6 Year Non-Call Capital Securities	€750,000,000 Perpetual 9 Year Non-Call Capital Securities
ISIN	XS3271042098	XS3271042254
Issue date	14 January 2026	14 January 2026
Legal maturity	Perpetual	Perpetual
Initial coupon (to first reset date)	4.125% per annum	4.500% per annum
Interest payment dates	14 January annually, from 14 January 2027	14 January annually, from 14 January 2027
First par call date	14 October 2031	14 October 2034
First reset date	14 January 2032	14 January 2035
Reset margin over the 5 year EUR swap rate	+165.8bps for the reset period to 14 January 2037	+182.1bps for the reset period to 14 January 2040
First step-up (25bps)	+190.8bps for the reset periods commencing 2037, 2042 and 2047	+207.1bps for the reset periods commencing 2040, 2045 and 2050
Second step-up (75bps)	+265.8bps for reset periods after 14 January 2052	+282.1bps for reset periods after 14 January 2055
Interest deferral	Optional and in whole at the Issuer's discretion; arrears do not themselves bear interest	Optional and in whole at the Issuer's discretion; arrears do not themselves bear interest
Ranking	Subordinated; senior only to junior securities, pari passu with the outstanding hybrids, junior to all other obligations	Subordinated; senior only to junior securities, pari passu with the outstanding hybrids, junior to all other obligations
Listing and governing law	Euronext Dublin; English law	Euronext Dublin; English law

Exhibit 21: Terms of the two tranches of the January 2026 issuance. Source: Company filings.

6.3.3. Pricing the Extension Risk

The first element to note is the price of the additional three years of call protection. The NC9 tranche carries an initial coupon of 4.500% against 4.125% on the NC6 tranche, a differential of 37.5bps. This differential can be decomposed using the deal's own pricing convention, since each tranche's fixed coupon equals the euro swap rate at its own tenor plus that tranche's reset margin, as shown in Equation 3:

$$r(T) = C_T - M_T$$

Equation 3: Implied swap rate at pricing

Reverse-computing the implied swap rates from the published figures gives the values reported in Equation 4:

$$r(6Y) = 4.125\% - 1.658\% = 2.467\%,\ r(9Y) = 4.500\% - 1.821\% = 2.679\%$$

Equation 4: Implied swap rates for the two tranches

The total coupon differential between the two tranches then splits into a curve-slope component and a margin component, as set out in Equation 5:

$$\Delta C = [r(9Y) - r(6Y)] + [M_{NC9} - M_{NC6}] = \Delta r_{curve} + \Delta M$$

Equation 5: Decomposition of the coupon differential

Of the 37.5bps gap between the two coupons, approximately 21.2bps, or 57%, reflects the slope of the euro swap curve between the 6-year and 9-year points at pricing, while the remaining 16.3bps, or 43%, corresponds to the differential between the two tranches' reset margins. The latter is the cleaner measure of how the market priced the additional three years of call protection itself, since it is unaffected by the shape of the underlying rate curve: at 16.3bps for three extra years of non-call, the market's compensation for extension risk on this instrument was modest.

Measured against the January 2025 transaction described in Paragraph 6.2, where the two tranches priced at 4.250% and 4.500% on margins of 200.9bps and 219.6bps, the January 2026 issuance was placed at a comparable headline coupon but on tighter reset margins: a compression of 35.1bps on the NC6 tranche and 37.5bps on the NC9 tranche within a single year. The similarity in magnitude across both tenors suggests a broadly parallel downward shift in Enel's hybrid margin curve over the period, rather than a change in its shape.

6.3.4. Redemption Architecture

The second element is the redemption system, which is identical in structure across the two tranches and differs only in its dates. None of the tranches has a fixed maturity: they become due only on a liquidation event date, that is on the winding up, dissolution or liquidation of the Issuer, with the law setting the corporate horizon on 31st December 2100. Optional redemption at par is available on any date in the 3-month window running from the first par call date to the first reset date, from 14 October 2031 to 14 January 2032 for the NC6 tranche and from 14 October 2034 to 14 January 2035 for the NC9 tranche and on any interest payment date thereafter, in each case on ten to sixty days' notice. Before that window the Issuer retains a make-whole call, exercisable at the greater of par and the present value of the remaining payments to the first par call date discounted at the redemption rate plus 30bps, along with the special-event calls following a withholding tax event, a tax deductibility event or a rating methodology event, and a clean-up call when at least 75% of the original principal amount has been purchased and cancelled.

6.3.5. Features Supporting Equity Credit

The third element is the set of features that support the 50% equity credit treatment discussed in Chapter 4. Alongside perpetuity and the absence of any investor put, interest is deferrable in whole, but not in part, at the Issuer's sole discretion on five to thirty business days' notice, and deferred amounts constitute arrears of interest which remain outstanding but do not themselves bear interest. Deferral is constrained only by a dividend pusher and stopper mechanism, under which outstanding arrears are due in full on the occurrence of a mandatory arrears of interest settlement event, principally the declaration of a dividend (which can be assimilated to a coupon paid by a more junior security, i.e. common equity) or the repurchase of junior or parity securities. In liquidation the securities rank senior only to the ordinary and other share capital of the Issuer, pari passu with the outstanding hybrid stock and junior to every other obligation of the Issuer, whether subordinated or unsubordinated. The step-up mechanism is structured to follow the same end: 25bps at the reset date falling roughly eleven years after issue and a further 75bps some fifteen years later, thresholds chosen so as not to breach the effective maturity limits applied by the rating agencies. The concern to preserve equity credit is explicit in the drafting, since the benchmark replacement provisions expressly bar the adoption of any successor rate, adjustment spread or consequential amendment which in the Issuer's determination could reasonably be expected to cause a reduction in or loss of equity credit.

Taken together, the terms of the January 2026 issuance conform closely to the patterns identified for other issuances in paragraph 6.2. Both tranches are perpetual euro securities carrying a 5-yrs swap reset, a 25bps step-up at approximately year 11 and a further 75bps step-up at approximately year 26, placed in a two-tranche format with a short and a long non-call period, and constituted under the same trust deed and agency structure Enel has used since 2020. The transaction is therefore to be considered not as an isolated funding decision but as the most recent rollover of an existing layer of the capital structure, executed into a materially tighter subordinated spread environment than the comparable transaction of twelve months earlier. These features represent the basis for the assessment of pricing, rating treatment and funding rationale that follows.

6.4. The transaction in the context of the 2026-2028 Strategic Plan

6.4.1. The 2026-2028 Strategic Plan

The terms described in the previous paragraph can be better understood when we consider the funding program they were designed to serve. Enel presented its 2026-2028 Strategic Plan to the market shortly after the issuance (on the 23rd of February 2026), the most capital-intensive of the last decade: total investments of €53bn over the three years, against €37bn envisaged at the 2022 capital markets day, of which more than €26bn is allocated to grids and approximately €20bn to renewables, with the grid regulated asset base expected to rise from €47bn in 2025 to €58bn in 2028 (Enel, 2026). Shareholder remuneration is expected to absorb €23bn, comprising a dividend per share increase and a share buy-back programme of up to €3.5bn at Enel S.p.A. level.

Against €76bn of committed uses, the plan identifies funds from operations of €47bn to €49bn and a second source line of €9bn named partnerships, asset rotation, grants and hybrids, with the residual met by an increase in net debt described in the plan as debt increase and flexibility. The January 2026 issuance is a direct component of that €9bn line, with the €2,000m amount accounting for around 22% of the planned line, clearly demonstrating how the transaction should be read as a plan instrument rather than an opportunistic funding exercise.

6.4.2. Preservation of Credit Metrics

The first function of the instrument within this framework is the preservation of credit metrics under a larger capital programme. Enel entered the plan period having reduced net debt from €60bn in 2022 to €57bn in 2025 and having lifted funds from operations over net debt from 15% to 26%, with

net debt over EBITDA falling from 3.1 times to 2.5 times over the same period. That improvement is the balance sheet capacity the plan proposes to spend; total investments rise by more than 40% against the previous cycle while shareholder distributions grow, and the residual is met by an increase in net debt. Because rating agency methodology attributes 50% equity credit to instruments of the kind described in paragraph 6.3, the €2bn raised in January 2026 contributes approximately €1bn of notional equity to the adjusted capital structure, and only the remaining half is treated as debt in the leverage and coverage ratios that the plan targets. The transaction therefore buys around €1bn of metric headroom for a cash cost of about €85m a year, and it does so at the front end of the plan, before the majority of the capital expenditure is committed.

6.4.3. Cost Relative to the Funding Mix

The second function concerns the composition of the funding mix rather than its size. The plan illustrates a gross debt position of €48.1bn at an expected blended cost of 4.3%, split between €41.0bn of centralized debt at 3.5% and €7.1bn raised at country level at 9.2%. The two hybrid tranches, at 4.125% and 4.500%, therefore price above the marginal cost of centralized senior funding but broadly in line with, and in the case of the NC6 tranche below the blended cost of the existing stock. Read in that light the subordination premium Enel accepted is narrow: it is paying something in the order of 60-to-100 bps over its centralized senior curve to obtain equity credit on half the proceeds, which compares favourably with the alternative of raising common equity in a plan that simultaneously contemplates retiring up to €6bn of it at group level through buybacks.

As a third point, the 2026-2028 plan is explicitly a re-levering plan: it uses balance sheet flexibility accumulated between 2022 and 2025 to fund growth acceleration while returning capital to shareholders, with hybrid capital as the most efficient tool to pursue this goal since it supplies equity-like support to the credit metrics without dilution, transfer of voting rights and, given the tax treatment discussed in Paragraph 4.3, at a coupon that remains deductible.

The plan also supplies a specific pressure the instrument helps absorb. The preliminary assessment of the Italian energy decree presented alongside the plan quantifies a cumulative net debt impact of €1.8bn over 2026-2028, together with an EBITDA effect of up to €0.4bn a year and a net income effect of €0.3bn to €0.4bn a year. The equity credit generated by the January 2026 issuance is of a comparable order of magnitude to that cumulative net debt drag, so the transaction can reasonably

be read as pre-funding regulatory and fiscal deterioration that was already visible to management when the securities were priced in the second week of January 2026.

6.4.4. Call Architecture and the Maturity Wall

Finally, the call architecture aligns the instrument with the plan's own horizon. The NC6 tranche becomes callable at par between 14 October 2031 and 14 January 2032 and the NC9 tranche between 14 October 2034 and 14 January 2035, so neither first call falls within the 2026-2028 plan period, and both sit beyond the €25.6bn of long-term senior maturities scheduled across 2026 (€8.8bn), 2027 (€8.3bn) and 2028 (€8.5bn). The maturity wall presents its densest cluster running from 2027 to 2031, while the perpetual hybrids stack, of approximately €10.3bn, represents the hybrid layer into which the January 2026 tranches were placed. This being considered, the call architecture avoids the years of greatest pressure only in part: both first calls sit beyond the plan horizon and beyond the 2029 peak, but the NC6 window falls in a year that itself carries around €4.5bn of redemptions, so the instrument defers rather than removes the overlap between hybrid refinancing and the senior wall. Still, the perpetual bond has not to be mandatorily called back by Enel, which can opt to maintain the hybrid security on its balance sheet paying the interests due starting from the First Reset Date.

The two tranches extend the weighted average maturity of the capital structure at the point of greatest refinancing pressure, while the split between a six and a nine-year non-call period separates the eventual refinancing decision across two distinct plan cycles. Taken together with the pricing and structural analysis of Paragraph 6.3, this places the January 2026 issuance as the marginal financing instrument of Enel's growth acceleration: the cheapest available source of rating agency equity in a plan that requires equity support and has chosen, simultaneously, to return capital to its shareholders.

6.5. Debt Capacity and Credit Metrics

This paragraph applies the rating agencies' equity-credit treatment described in Chapter 4 to Enel's actual capital structure and recalculates leverage and coverage ratios under the hypothetical scenario in which the January 2026 issuance is instead treated as fully debt.

The analysis began with a full pro-forma reconstruction of Enel's consolidated balance sheet under each scenario, rather than on a direct adjustment of summary ratios. Each scenario rebuilds assets, liabilities and equity from the FY2025 reported consolidated financial statements, and every scenario

is checked to confirm that total assets equal total liabilities and equity before its resulting ratios are used.

The comparative model reconstructs net debt from the consolidated Balance Sheet computed as shown in Equation 6, giving a figure of €58,773m on 31 December 2025:

$$NetDebt = STFinancialDebt + LTBorrowings + CurrentportionofLTBorrowings - CashandCashEquivalents - Securities - Otherfinancialassets$$

Equation 6: Net Financial Debt

The calculation included the financial assets and liabilities that Enel identifies as part of the Net Financial Debt, not counting some financial assets such as equity investments in other entities or service concessions agreements which cannot be considered liquid financial assets. Derivative assets and liabilities are excluded on both sides so that the measure stays symmetric, and lease liabilities remain outside debt. No adjustments to the reported financial items are taken in account, in order to grant simplicity and not to distort reported figures.

6.5.1. Scenario Construction

Two distinct groups of scenarios are constructed. The first group isolates the January 2026 issuance on its own, comparing four cases: (1) the reported position immediately before the issuance; (2) the position under IFRS, where the securities meet the equity classification test and sit entirely in equity; (3) the position under the treatment actually applied by Moody's, S&P and Fitch, where 50% of the €2.0bn is recognised as debt; (4) a fictitious counterfactual in which the entire proceeds are treated as senior debt, with the coupon reclassified in full as interest expense. Two actual Enel S.p.a.'s senior unsecured bonds are used as the benchmark: the first (ISIN: XS3358330663), carries a fixed coupon of 3.500% and matures on 26 May 2030; the second (ISIN: XS3358330820) carries a fixed coupon of 3.875% and matures on 26 May 2033. Both were priced on 19 May 2026; the 2030 line was offered at 99.681%, equivalent to a yield at issuance of 3.587%[20]. This first group regards the marginal effects of the specific transaction on Enel's metrics. The second group repeats the same logic across Enel's entire outstanding hybrid stock of €8,219m rather than the 2026 tranche alone, comparing the

[20] The reference bonds are not perfectly maturity-matched to the hybrid call dates: the 2030 and 2033 maturities fall roughly 18 months short of the January 2032 and January 2035 first reset dates, so the differential is measured against slightly shorter senior tenors and, given an upward-sloping swap curve, is a slightly conservative estimate of the true subordination premium. Also, the two offerings were not priced on the same day, the seniors having come to market some months after the hybrid; the comparison therefore holds issuer and ranking constant but not the level of rates.

reported, rating-agency, and fully-debt treatments at the level of the whole programme. This second family was added because the marginal transaction, at €2.0bn against €21.0bn of EBITDA, is too small on its own to move headline leverage metrics by a material amount, thus looking only at the single-issuance comparison could reasonably lead to the conclusion that the equity credit obtained is immaterial. It is only at the level of the cumulative stock, built up through a decade of repeated issuance, that the effect becomes visible in the metrics rating agencies actually monitor.

Considering the whole-stock scenarios, the securities issued before January 2026 are not repriced at current market rates; each legacy tranche continues to carry its own historical coupon, exactly as actually paid, and only the incremental notional from the 2026 issuance is priced at the rate that transaction actually achieved. The alternative, applying today's swap curve and today's margins to bonds priced in, for instance, 2013 or 2018, would systematically overstate what the whole stack "really" costs by importing current market conditions into a comparison that should reflect what Enel actually pays. This convention is the reason the whole-stack scenarios can be compared meaningfully to the single-issuance scenarios at all: both are built from the same principle of pricing only the increment being examined at the terms that increment actually carries.

These two families of scenarios, and the net debt convention underlying them, are the basis for the debt capacity, earnings, and investment capacity analysis in Paragraphs 6.5, 6.6 and 6.7. The risk distribution analysis in Paragraph 6.8 draws on a related but distinct construction, comparing the two January 2026 tranches directly against matched-maturity senior bonds at the level of individual securities rather than the consolidated balance sheet, for reasons explained at the point that comparison is introduced.

6.5.2. Results

Three reference points describe the January 2026 issuance on its own. Under IFRS, the securities meet the equity classification test discussed in Paragraph 4.3 and sit entirely within equity, so that the transaction leaves reported net debt unaffected at issuance beyond the cash raised. Under the treatment applied by Moody’s, S&P and Fitch, 50% of the €2.0bn is instead recognised as debt for the purpose of the leverage and coverage ratios each agency publishes. Under the counterfactual scenario of a full-debt issuance, the entire proceeds are treated as senior debt, with the coupon reclassified in full as interest expense. Exhibit 22 reports the resulting balance sheet and leverage metrics for FY2025, pro-forma for the issuance under each of the three treatments, together with two

further scenarios that extend the same logic to Enel's entire outstanding hybrid stock of €8,219m rather than to the 2026 tranche alone.

Metric	Reported (pre-issuance)	IFRS (100% equity)	Rating agencies (50%/50%)	Fictitious (100% debt)	Whole stack, rating agencies	Whole stack, 100% debt
Net debt (€m)	58.773	56.773	57.773	58.773	62.883	66.992
Net debt / EBITDA	2,80x	2,70x	2,75x	2,80x	2,99x	3,19x
Total debt / Capital (%)	59,5	58,5	59,3	60,2	63,1	66,6
EBITDA / interest	7,38x	7,38x	7,27x	7,17x	7,05x	6,75x

Exhibit 22: Pro-forma leverage and coverage metrics under alternative treatments of the hybrid. Source: own elaboration, Enel FY2025 consolidated financial statements.

Two results emerge. First, the actual, rating-agency treatment of the January 2026 issuance alone moves Net debt / EBITDA by only 0.05 compared to the fully debt-financed counterfactual (2.75x against 2.80x), while the fully debt-financed counterfactual for the same transaction would have added a further 0.05 turns on top of that. Therefore, the single transaction is too small relative to Enel's €21.0bn of EBITDA to materially move headline leverage on its own: its significance lies less in the metric it moves today than in the metric it protects as the stock of hybrid capital is rolled forward. Second, when the same treatment is extended to the entire €8,219m hybrid stack outstanding at year-end 2025, the gap widens considerably: Net debt / EBITDA rises from 2.80x as reported to 3.19x if every outstanding hybrid were instead senior debt, a difference of 0.39, and total debt to capital rises by more than 7%. Reported equity falls by the full €8,219m in this scenario, since the rating-agency equity credit is not itself an IFRS concept and the accounting position moves with the reclassification.

6.5.3. Interpretation through the Trade-off Theory

This asymmetry between the marginal transaction and the cumulative programme is best read through the trade-off theory set out in Paragraph 3.1. Kraus and Litzenberger's central result is that firm value is not monotonically increasing in leverage: debt's tax advantage is progressively reduced, and eventually reversed, as the probability of financial distress rises with the debt burden. A firm operating widely inside that trade-off, as Enel does on the metrics reported here, does not need every individual financing decision to go beyond the threshold; what it needs is for the stock of leverage-sensitive capital to remain, cumulatively, on the favourable side of the trade-off as the investment programme described in paragraph 6.4 is financed. Hybrid capital is the instrument that allows Enel to add €8.2bn of the "equity cushion" Baxter (1967) and Myers and Robichek (1965) identified as the missing ingredient in an unconstrained tax-shield-maximising capital structure,

without either diluting shareholders or foregoing the coupon's tax deductibility discussed in Paragraph 6.6.

6.6. Earnings Generation and the Cost of Capital

6.6.1. Accounting Treatment and Reported Earnings

Under the IFRS-equity-classified treatment, the coupon on the January 2026 issuance is recognised directly in equity as a distribution and does not affect the income statement. With reference to IAS 32, as seen in par. 4.3, an entity shall classify an instrument as equity only if certain conditions are met. Enel's hybrid securities satisfy the equity classification test in IAS 32 (paragraphs 11, 15 and 16) not just because they are perpetual, since paragraph AG6 of the accounting standard confirms that a perpetual instrument with fixed, non-avoidable interest still constitutes a financial liability, but because the coupon deferral mechanism gives Enel an unconditional right to avoid the cash payment at each interest date. The special redemption triggers e.g. Withholding Tax, Accounting, Rating Methodology and Tax Deductibility Events do not disturb this classification under paragraph 25, since each operates as an issuer-optional call right rather than a circumstance obliging Enel to redeem. Perpetual maturity and discretionary, cumulative coupon deferral therefore operate jointly, not as substitutes for one another, in taking the instrument outside the definition of a financial liability under paragraph 16(a).

On the other hand, under the counterfactual senior-debt treatment, the same cash flow would accrue as interest expense, thus reducing pre-tax profit. Because Italian tax law assesses the deductibility of the hybrid coupon independently of its IFRS classification, and because the coupon satisfies the conditions for debt-equivalent tax treatment discussed in Paragraph 4.3, both the actual and the counterfactual coupon are deductible against Enel's Italian corporate income tax (IRES) at the statutory rate of 24%. This produces a divergence between the accounting effect of the classification and its economic effect, which Exhibit 23 sets out.

Item	Hybrid (as issued)	Senior debt (same size)	Common equity (same cash payout)
Cash paid to investors (€m p.a.)	85,3	72,8	85,3
Deductible for tax purposes	Yes	Yes	No
Tax shield generated (€m p.a.)	**20,5**	**17,5**	**-**
After-tax cash cost (€m p.a.)	64,8	55,3	85,3
Charged to the income statement as interest	No	Yes	No
Impact on reported net income (€m p.a.)	**20,5**	**(55,3)**	**-**
Impact on profit attributable to ordinary shareholders (€m p.a.)	**(64,8)**	**(55,3)**	**(85,3)**
Impact on basic EPS (€)	**-0,0065**	**-0,0055**	**-0,0085**

Exhibit 23: Reported versus true economic cost of the January 2026 issuance, actual and counterfactual. Source: own elaboration.

6.6.2. The True After-Tax Cost

Read only from the income statement, the hybrid appears strictly favourable: reported net income is €75.8m a year higher than it would be under the counterfactual, simply because the coupon bypasses the income statement. This is the source of the "best of both worlds" description often attached to corporate hybrids, and it is real in accounting terms. Because the counterfactual senior coupon would itself generate a tax shield of €17.5m a year, while the hybrid coupon, despite being tax-deductible in cash terms, correspondingly reduces income tax expense by a comparable €20.5m without ever having been charged against pre-tax profit, the two forms of financing receive the same treatment when placed on an after-tax cash basis. The hybrid's true after-tax cost is €64.8m a year against €55.3m for the senior alternative: a gap of €9.5m, or approximately 47.5 bps on the €2.0bn raised, which is narrower than the 62.5 bps pre-tax coupon premium we would take from the offering circular alone. On a purely after-tax cash basis, therefore, the hybrid is not the cheaper instrument; it costs Enel a modest but real premium over the senior alternative once the accounting and tax effects are both correctly isolated.

6.6.3. The Cost of Equity Credit

Equivalently, the cost of the equity credit created by the transaction can be stated per unit of equity credit purchased. The €2.0bn issuance creates €1,000m of rating-agency-recognised equity content at a pre-tax cash cost of 125 bps per euro of equity credit, or 95 bps after applying the Italian statutory tax rate to both sides of the comparison.

Item	Tranche 1 (NC6)	Tranche 2 (NC9)	Total / blended
Hybrid notional (€m)	1.250	750	2.000
Hybrid coupon to first reset	4,125%	4,500%	4,266%
Senior unsecured coupon	3,500%	3,875%	3,641%
Hybrid premium over senior (bp)	**+62,5 bp**	**+62,5 bp**	**+62,5 bp**
Annual coupon paid on the hybrid (€m)	51,6	33,8	85,3
Annual coupon if funded with senior debt (€m)	43,8	29,1	72,8
Incremental annual cash cost of the hybrid (€m)	**7,8**	**4,7**	**12,5**
Rating agency equity content	50%	50%	50%
Rating agency equity credit created (€m)	**625**	**375**	**1.000**
Cost of the equity credit (% p.a. of equity created)	**1,25%**	**1,25%**	**1,25%**
Cost of the equity credit (bp p.a.)	**125 bp**	**125 bp**	**125 bp**
Equity credit obtained per €1 of incremental annual cost (€)	**80,0x**	**80,0x**	**80,0x**

Exhibit 24: Cost of the Equity Credit. Source: own elaboration.

Exhibit 24 breaks this figure down by tranche, alongside an equivalent way of expressing the same result: the amount of rating-agency equity credit generated per euro of incremental annual cost. NC6 and NC9 each carry an incremental annual cash cost of €7.8m and €4.7m respectively, against €625m and €375m of equity credit created, so that both tranches generate exactly €80 of equity credit per €1 of incremental cost, i.e. 125 bps. That the two tranches produce an identical figure despite their different sizes, coupons and call dates echoes the tranche-invariant subordination premium already found in Paragraph 6.7: the market is pricing Enel's subordination and deferral features as a flat, structural characteristic of the instrument as a whole, rather than as a premium that scales with the size or tenor of any individual tranche.

6.6.4. Weighted Average Cost of Capital

Priced at the level of the instrument, the hybrid is the more expensive of the two funding routes; but the equity credit it purchases also changes the capital structure weights, and the trade-off framework described in paragraph 3.1 requires that premium to be assessed against the cost of capital of the firm as a whole rather than against the senior alternative alone. Exhibit 25 below reports the resulting weighted average cost of capital under three treatments of the existing hybrid stack, holding total capital constant and varying only the equity/debt split that follows from each treatment.

Each component of the WACC calculation is built before being combined into the three scenario-specific WACC figures. The cost of debt is directly related to the two senior unsecured comparator bonds already introduced in Paragraph 6.3, the one due 26 May 2030 paying a 3.500% coupon and the 2033 tranche with a 3.875% coupon, equally weighted given their identical €1.25bn size, giving

a pre-tax cost of debt of 3.688%[21]. Applying Enel's Italian statutory tax rate of 24%, consistent with the treatment used throughout Paragraph 6.6, yields an after-tax cost of debt of 2.803%, held constant across all three scenarios since it does not depend on how the hybrid stack is classified.

$$r_{d,after-tax} = (w_{bond\ 2030} \times c_{bond\ 2030} + w_{bond\ 2033} \times c_{bond\ 2033}) \times (1 - t)$$

Equation 7: After-tax cost of debt

The cost of equity is estimated using the Capital Asset Pricing Model, with the 10-year Italian BTP yield (4.35%) as the risk-free rate and an equity risk premium of 6.69% and an unlevered European utilities sector beta of 0.38, both sourced from Damodaran (2026). Beta is re-levered separately for each of the three scenarios using its own debt-to-equity ratio

$$\beta_L = \beta_U \times [1 + (1 - t) \times \frac{D}{E}]$$

Equation 8: Re-levered equity beta

so that the resulting cost of equity,

$$r_e = r_f + \beta_L \times ERP$$

Equation 9: Cost of equity (CAPM)

differs modestly across the three treatments even though the risk-free rate and equity risk premium are held constant. Finally, the capital structure weights are computed from the book value of common equity (€38,586m) rather than market capitalisation, plus the equity or debt portion of the €10,219m hybrid stack attributable to each scenario, against Enel's reported gross debt of €68,761m; book value is used here as a pragmatic substitute given the reliability of the underlying financial-statement figures already used throughout this chapter, though market capitalisation would be the theoretically preferred input. The three components are then combined as

[21] A more financial statements-related way to compute the cost of debt would have been the effective interest rate method, which use the interest expense figure reported in the Income Statement divided by the book value of interest-bearing debt. But WACC is meant to be the discount rate for new investment decisions, i.e. the return the firm must offer to raise the next euro of capital. The two senior bonds provide for the current market-priced coupons on debt Enel could actually issue today. The effective interest rate would be a measure of embedded historical cost, not forward-looking marginal cost. Also, a financial-statement-derived rate would exceed the market-based figure, reflecting the blend of older debt and higher-cost subsidiary-level borrowing (notably at Enel's Latin American operations) embedded in the consolidated total, neither of which is representative of the marginal cost of new, investment-grade-rated, EUR-denominated debt the WACC calculation is intended to capture. Finally, for consistency reasons with the rest of the analysis, we opted for the senior bonds' reference since they serve as the counterfactual for the whole model here developed.

$$WACC = \frac{E}{V} \times r_e + \frac{D}{V} \times r_d \times (1 - t)$$

Equation 10: Weighted Average Cost of Capital

Item	With hybrids – agency view (50% equity credit)	With hybrids – IFRS (100% equity)	Without hybrids (all senior debt)
Hybrid equity credit (%)	50%	100%	0%
Equity (E) = common equity + hybrid equity portion (€m)	43.696	48.805	38.586
Debt (D) = senior debt + hybrid debt portion (€m)	73.871	68.761	78.980
Total capital (V = E + D) (€m)	117.566	117.566	117.566
E / (E+D)	37,2%	41,5%	32,8%
D / (E+D)	62,8%	58,5%	67,2%
Pre-tax cost of debt (senior coupon blended with hybrid coupon)	3,670%	3,688%	3,655%
After-tax cost of debt	2,789%	2,803%	2,778%
D / E (x)	1,69	1,41	2,05
Unlevered (asset) beta	0,38	0,38	0,38
Relevered equity beta	0,87x	0,79x	0,97x
Cost of equity	0,102	0,096	0,109
WACC	**5,530%**	**5,632%**	**5,428%**

Exhibit 25: Capital structure weights and after-tax cost of debt by treatment of the hybrid stack. Source: own elaboration.

Exhibit 25 reports the resulting weighted average cost of capital under three treatments of the existing hybrid stack. WACC is lowest under the fully debt-financed counterfactual, at 5.428%, and highest under the IFRS treatment, at 5.632%, with the rating agency-recognised structure sitting between the two at 5.530%. Relative to the full debt scenario, the actual structure carries a WACC premium of only 10.2 bps, while full IFRS equity treatment would imply a premium of 20.4 bps, almost exactly twice as large: the 50% equity credit the rating agencies extend to the hybrid again behaves as a genuine mid-point rather than merely a label, delivering roughly half of the balance-sheet benefit of full equity treatment at almost exactly half of its WACC cost. Because cost of equity is re-levered rather than held constant across the three scenarios, consistent with Modigliani and Miller's framework where equity holders demand a higher return as leverage rises, this result already reflects the offsetting effect of higher equity risk under lower leverage, rather than overstating the counterfactual's apparent advantage.

6.6.5. Comparison with the Regulatory WACC

This result has to be considered within the regulatory context in which Enel's core network investment takes place. ARERA's regulatory WACC is not calculated from any regulated company's own actual capital structure; consistent with standard European network-regulation practice, it is instead based on a notional gearing ratio set uniformly for the regulated service category, so that a company's real financing choices, and how it classifies them for accounting or rating purposes, play no role in determining the rate itself. For electricity distribution and metering, Enel's own regulated

activity, this notional-structure benchmark is set at 5.60% for the 2025-2027 sub-period (Resolution 513/2024/R/COM). Because this benchmark is fixed independently of Enel's own choices, comparing the firm's own actual cost of capital against it is informative because the classification of the hybrid, not any assumption made by the regulator, is what determines where Enel sits. On this measure, Enel's actual, blended cost of capital under the rating-agency-recognised treatment, 5.530%, sits 7.0 bps below the benchmark, while the fully IFRS-equity-classified alternative, at 5.632%, crosses 3.2 bps above it. Since the RAB is set to grow from €47bn to €58bn over the 2025-2027 Strategic Plan period, discussed in Paragraph 6.4, this threshold determines whether that growth creates or destroys shareholder value: every euro invested at a cost of capital below the regulatory rate earns a genuine spread, while every euro invested above it earns less than its cost. The finding that the accounting classification of the hybrid alone is enough to move Enel from one side of that fixed threshold to the other shows that the rating-agency treatment is not only a favourable mechanism for credit purposes, but a condition for the RAB growth strategy to remain value-accretive against a benchmark the firm cannot itself influence.

This finding can be better considered through the mechanism described in Paragraph 5.2.2. Since Allowed Revenue is computed as RAB × Allowed WACC plus depreciation and allowed operating costs (Equation 2), the regulatory return Enel earns on its expanding network is fixed by the regulator's own WACC, not by the firm's actual cost of financing it. The spread between the two, positive when Enel's own cost of capital sits below the regulatory rate, negative otherwise, accrues directly to shareholders as the difference between what the regulator pays for the RAB and what raising the corresponding capital actually costs. Paragraph 5.2.3 further established that capital expenditure is set by policy, allowed revenue is set by the regulator, and the market cost of capital is set exogenously, leaving capital structure composition as the only variable genuinely within the firm's control. The comparison developed in this section represents a concrete empirical test of that remaining degree of freedom: the 10.2 bps gap between the rating-agency-recognised and fully-debt-financed treatments of the hybrid is not a peripheral financing detail but the precise lever Paragraph 5.2.3 identifies as the only one available to a regulated utility seeking to keep RAB growth value-accretive against a benchmark it cannot itself move.

6.7. Investment Capacity

6.7.1. Headroom Against Rating Thresholds

The third dimension of the comparison tests whether the higher leverage implied by the, fully debt-financed capital structure would have constrained Enel's ability to fund the capital expenditure programme described in Paragraph 6.4 without breaching a covenant or rating threshold. The relevant benchmark is the one S&P has published: the 20% adjusted FFO / debt level the agency has stated as the threshold for a potential upgrade of Enel's issuer rating, discussed in Paragraph 4.2. Exhibit 26 reports FFO /Net Debt under each of the scenarios introduced in Paragraph 6.5, together with the resulting headroom against this threshold.

Metric	Reported FY2025 (pre-issuance)	Scenario 1 – IFRS accounting (100% equity)	Scenario 2 – Rating agencies (50% debt / 50% equity)	Scenario 3 – Fictitious (100% debt)
Reported FFO – CFO less change in net working capital (€m)	15.242	15.242	15.242	15.242
Less: hybrid coupon treated as cash interest (€m)	-	-	(43)	(85)
Scenario FFO (€m)	**15.242**	**15.242**	**15.199**	**15.157**
Net financial debt – net of cash and financial assets (€m)	58.773	56.773	57.773	58.773
FFO / Net debt (%)	**25,9%**	**26,8%**	**26,3%**	**25,8%**
S&P upside threshold – FFO / Debt (%)	20,0%	20,0%	20,0%	20,0%
Gap to S&P upside threshold (pp)	**5,9**	**6,8**	**6,3**	**5,8**
Clears the S&P upside threshold?	**Yes**	**Yes**	**Yes**	**Yes**

Exhibit 26: FFO/Net Debt and headroom against S&P's stated upside threshold, scenarios 1-3. Source: own elaboration; threshold from S&P Global Ratings.

Metric	Scenario 4 – Whole stack, agency view (50% debt / 50% equity)	Scenario 5 – Whole stack as pure senior debt (100% debt)	Scenario 6 – Whole stack + 2026 issuance as pure senior debt
Reported FFO – CFO less change in net working capital (€m)	15.242	15.242	15.242
Less: hybrid coupon treated as cash interest (€m)	(133)	(266)	(351)
Scenario FFO (€m)	**15.109**	**14.976**	**14.891**
Net financial debt – net of cash and financial assets (€m)	60.883	66.992	66.992
FFO / Net debt (%)	**24,8%**	**22,4%**	**22,2%**
S&P upside threshold – FFO / Debt (%)	20,0%	20,0%	20,0%
Gap to S&P upside threshold (pp)	**4,8**	**2,4**	**2,2**
Clears the S&P upside threshold?	**Yes**	**Yes**	**Yes**

Exhibit 27: FFO/Net Debt and headroom against S&P's stated upside threshold, scenarios 4-6. Source: own elaboration; threshold from S&P Global Ratings.

Every scenario examined, including the most severe counterfactual in which the entire outstanding hybrid stock is treated as senior debt, still clears the 20% threshold on this measure. Still, the finding is informative, since the headroom varies materially across scenarios: from 5.9% as reported down

to 2.2% points under the full-debt stack scenario, a compression by a factor of nearly three. A second, corroborating reference sharpens the picture further. Against S&P's own 2027 forecast of 3.3x debt to EBITDA, the reported and IFRS treatments retain a small positive margin, but the rating-agency actual treatment of the January 2026 issuance already shows slightly negative headroom (–0.02x), and every scenario that extends debt treatment to the wider hybrid stock shows a widely negative margin, reaching –0.46x under the fully debt-financed counterfactual for the whole stack. The two metrics are not measuring the same things, S&P's own methodology weights adjusted FFO to debt more heavily than the leverage multiple, but their divergence is itself a useful finding: on a leverage basis, Enel's margin against S&P's own forecast is much thinner than the FFO headroom suggests. This makes the equity credit obtained through the hybrid structure more significant for the issuer.

6.7.2. Implied Debt Capacity in Euro Terms

The percentage headroom can be translated into an implied euro capacity, by asking what level of net debt would exactly exhaust the 20% FFO/debt headroom at each scenario's own FFO level.

$$Net\ Debt_{max} = FFO\ /\ 20\%$$

Equation 11: Maximum sustainable net debt

Applied to the reported position, this implies a maximum sustainable net debt of approximately €76.2bn against the actual €58.8bn outstanding, or €17.4bn of additional debt capacity before the threshold is exhausted. Considering IFRS accounting, the debt's headroom would about to €19.4bn, including the cash proceeds generated by the hybrid issuance which are not offset by additional debt. Applied to the most severe scenario, in which the entire hybrid stack together with the January 2026 issuance is treated as senior debt, the same calculation yields a maximum sustainable net debt of approximately €74.5bn against €67.0bn already outstanding, or only €7.5bn of remaining capacity. The gap between the two, approximately €10bn, is itself comparable in magnitude to close to one-quarter of the entire €43bn capital expenditure envelope of the 2026-2028 Strategic Plan discussed in Paragraph 6.4, and it exists purely as a function of how the outstanding hybrid stock is classified rather than of any change in Enel's underlying cash generation. Exhibits 28 and 29 display the different debt headroom for each scenario.

Metric	Reported FY2025 (pre-issuance)	Scenario 1 – IFRS accounting (100% equity)	Scenario 2 – Rating agencies (50% debt / 50% equity)	Scenario 3 – Fictitious (100% debt)
Scenario FFO, after tax (€m)	15.242	15.242	15.210	15.177
Net financial debt (€m)	58.773	56.773	57.773	58.773
Maximum net debt at the 20% FFO / debt threshold (€m)	76.210	76.210	76.048	75.886
Headroom on the FFO / debt constraint (€m)	**17.437**	**19.437**	**18.275**	**17.113**

Exhibit 28: Implied maximum sustainable net debt and remaining debt capacity by scenario, scenarios 1-3. Source: own elaboration.

Metric	Scenario 4 – Whole stack, agency view (50% debt / 50% equity)	Scenario 5 – Whole stack as pure senior debt (100% debt)	Scenario 6 – Whole stack + 2026 issuance as pure senior debt
Scenario FFO, after tax (€m)	15.141	15.040	14.975
Net financial debt (€m)	60.883	66.992	66.992
Maximum net debt at the 20% FFO / debt threshold (€m)	75.705	75.199	74.875
Headroom on the FFO / debt constraint (€m)	**14.822**	**8.207**	**7.883**

Exhibit 29: Implied maximum sustainable net debt and remaining debt capacity by scenario, scenarios 4-6. Source: own elaboration.

6.7.3. Interpretation: Underinvestment and Flexibility

This is the empirical counterpart to the underinvestment problem central to the agency-theoretic literature discussed in Paragraph 3.1, and to the financial-flexibility research discussed in Paragraph 3.2 (Marchica and Mura, 2010; Byoun, 2011). Myers and Majluf's (1984) pecking order predicts that a firm facing a positive-NPV investment opportunity, but lacking headroom to fund it with debt or internal cash, faces a genuine choice between forgoing the investment and raising equity at a discount that reflects the market's adverse-selection concern. What Exhibits 28 and 29 quantify is the size of that headroom Enel has preserved, in euro terms, specifically because its outstanding hybrid stock is not treated as ordinary debt by the agencies whose ratings govern its cost and availability of capital market access.

6.8. Risk Distribution Among Capital Providers

6.8.1. The Subordination Premium at Issuance

Paragraph 6.3 decomposed the 37.5 bps coupon differential between the NC6 and NC9 tranches into a curve-slope component and a margin component, attributing the latter to the market's pricing of the additional three years of call protection. A related question is how the market priced the hybrid's subordination and deferral features per se, regardless of tranches' maturities. This is measured by

comparing each tranche's coupon not to the other tranche, but to the matched-maturity Enel senior unsecured bond previously analysed.

Item	Tranche 1 (NC6)	Tranche 2 (NC9)
Hybrid coupon to first reset	4,125%	4,500%
Matched-maturity senior unsecured coupon	3,500%	3,875%
Subordination + deferral premium (bp)	**+62,5 bp**	**+62,5 bp**
Call protection (years)	6 yrs	9 yrs
Premium per year of call protection (bp)	10,4 bp	6,9 bp

Exhibit 30: The subordination and deferral premium over matched-maturity senior debt, by tranche. Source: own elaboration, Issuance Details.

The premium is identical at 62.5 bps on both tranches. Since this figure is invariant across two instruments differing only in tenor, it is evidence that the market priced Enel's subordination, coupon deferability and perpetual structure as a structural feature of the instrument rather than as a premium that grows with the length of call protection offered; on a per-year-of-protection basis, the compensation actually declines, from 10.4 bps for the NC6 tranche to 6.9 bps for the NC9 tranche. The finding is consistent with the reading of Paragraph 6.3: the term structure of Enel's hybrid coupons is driven predominantly by the shape of the underlying swap curve, while the structural premium for subordination itself is a constant markup applied on top of it.

6.8.2. Evolution of the Premium Since Issuance

Exhibit 31 reports current yields on both tranches and their senior comparators, sourced via Bloomberg. The subordination premium has widened materially since issuance: from 66.5 bps and 67.0 bps on the two hybrid tranches at pricing to 112.2 bps on the NC6 tranche and 108.5 bps on the NC9 tranche as of September 9th, 2026, an increase of 49.7 and 46.0 bps respectively.

Instrument	Yield at issuance	Current yield (YAS)
Hybrid – Tranche 1 (NC6)	4,250%	4,866%
Hybrid – Tranche 2 (NC9)	4,625%	5,175%
Senior unsecured 2030	3,585%	3,744%
Senior unsecured 2033	3,955%	4,090%
Subordination premium at issuance (bp)	+66,5 bp	+67,0 bp
Subordination premium today, on yields (bp)	+112,2 bp	+108,5 bp
Change in the premium since pricing (bp)	+45,7 bp	+41,5 bp
Market's revised assessment of subordination risk	Widened – repriced higher	Widened – repriced higher

Exhibit 31: Subordination premium variations based on market yields. Source: Bloomberg, own elaboration

Yield at issuance for the two hybrid tranches is stated in the offering circular, which specifies a Yield Date-to-First-Reset-Date figure of 4.250% for the NC6 tranche and 4.625% for the NC9 tranche, calculated by the issuer on the basis of each tranche's issue price of 99.350% and 99.096% of par respectively. No equivalent figure is stated for the two senior unsecured comparators, so their yield at issuance is estimated using the standard bond-yield approximation, which combines the coupon with the annualised gain to par implied by the discount at which each bond was issued, as shown by Equation 12:

$$r \approx \frac{[C + (P_0 - P) / n]}{[(P_0 + P) / 2]}$$

Equation 12: Bonds' Yield-at-Issuance

where C is the coupon, P_0 is par value (100), P is the issue price, and n is the number of years from issuance to the relevant call or maturity date. Applied to the senior 2030 comparator (coupon 3.500%, issue price 99.681%, four years to call) this gives a yield at issuance of 3.585%; applied to the senior 2033 comparator (coupon 3.875%, issue price 99.513%, seven years to call) this gives 3.955%.

6.8.3. The Liquidation Waterfall

A market-priced spread, however, only measures what investors are compensated for; it does not show where losses actually fall if the compensation proves insufficient. Exhibit 32 addresses this constructing a simplified liquidation waterfall on Enel's pro-forma FY2025 balance sheet, inclusive of the January 2026 issuance, and comparing the recovery obtained by senior creditors, hybrid holders and common equity under the securities' actual subordinated ranking ("Case A") against a counterfactual in which the entire €10,219m hybrid stack instead ranked pari passu with senior creditors ("Case B"), across a range of hypothetical asset recovery rates.

Asset recovery assumption	Recovery value available (€m)	Case A - senior recovery	Case A - hybrid recovery	Case B - senior recovery (hybrids senior)	Senior uplift, A less B (%)	Loss absorbed by hybrids (€m)	Loss absorbed (% of hybrid claims)
84,0%	151.752	100,0%	100,0%	100,0%	-	-	0,0%
82,0%	148.139	100,0%	100,0%	100,0%	-	-	0,0%
80,0%	144.526	100,0%	100,0%	100,0%	-	-	0,0%
78,0%	140.912	100,0%	88,7%	99,2%	+0,8	1.159	11,3%
76,0%	137.299	100,0%	53,3%	96,6%	+3,4	4.772	46,7%
74,0%	133.686	100,0%	17,9%	94,1%	+5,9	8.385	82,1%
72,0%	130.073	98,7%	0,0%	91,6%	+7,1	10.219	100,0%

Exhibit 32: Recovery rates for senior creditors and hybrid holders under the actual subordinated structure (Case A) and the counterfactual senior-ranking structure (Case B), across a range of hypothetical asset recovery rates. Source: own elaboration.

Case A and Case B are constructed with identical total assets and identical total claims at every recovery rate examined; only the ranking of the €10,219m hybrid stack differs. Thus, the hybrids do

not reduce the total loss the enterprise absorbs in a severe stress, they redistribute it. At an asset recovery rate of 72%, the most severe scenario modelled, senior creditors recover 98.7% of their claim under the actual structure against 91.6% under the hypothetical, a recovery increase of more than 7%, purchased at the cost of a complete wipeout for hybrid holders, who recover nothing once common equity has already been exhausted. Across the range of recovery rates modelled, the full €10.2bn of the hybrid stack is capable of absorbing loss before senior claims are touched at all.

This is the mechanism Jensen and Meckling (1976) describe in general terms as the reallocation of default-state payoffs among a firm's capital providers. The 50% equity credit that drives the debt capacity result in Paragraph 6.5 is not an arbitrary rating-agency convention; it is the agencies' own quantification of the loss-absorption capacity demonstrated here. Senior lenders extend credit to Enel on materially better terms, and rating agencies extend the headroom quantified in Paragraph 6.7, precisely because the hybrid layer extends the shock the balance sheet can absorb before the point at which shareholder-creditor conflict would otherwise be resolved at the senior creditor's expense. It is worth noting that both measures in this paragraph capture only one of the two loss-absorption channels the instrument provides. Coupon deferral, examined in Paragraph 4.1 and confirmed in the specific terms of the January 2026 securities, protects the issuer's liquidity as a going concern, before any question of default or winding-up arises; the structural buffer and waterfall above capture only the second, more severe channel, the allocation of principal loss in an actual wind-up. The 62.5 bps premium priced at coupon level compensates investors for both channels jointly, not for the waterfall mechanism alone.

6.9. Forward-Looking Rate Risk: A Monte Carlo Simulation of the Coupon Reset

The dimensions studied so far describe the instrument’s effect at a single point in time, i.e. the pro-forma position at issuance, whereas the perpetual hybrid’s economic cost is only partially determined at issuance: because both tranches convert from a fixed coupon to a floating rate linked to the prevailing 5-year EUR swap rate at their respective first reset dates, 14 January 2032 for the NC6 tranche and 14 January 2035 for the NC9 tranche, the instrument leaves the issuer exposed to the level of interest rates prevailing at the time of the reset dates scheduled by the instruments’ terms. This paragraph studies that exposure using a Monte Carlo simulation of the swap rate the two tranches will reset against.

6.9.1. Calibration of the Vasicek Process

The simulation draws the swap rate prevailing at each reset date from its terminal distribution under a mean-reverting process, calibrated to the EUR EURIBOR-linked ICE Swap Rate curve, the benchmark specified in the offering circular's own definition of the reset mechanism, using 1,305 daily mid-price observations (Bloomberg ticker: EUSA5 Curncy) starting from 10 September 2021 to 10 September 2026.

The estimation follows from the discretisation of the continuous-time Vasicek process assumed for the underlying instantaneous rate, which is computed basing on Equation 13:

$$dr(t) = a\big(\theta - r(t)\big)dt + \sigma dW(t)$$

Equation 13: Stochastic differential equation for instantaneous interest rate

Since we only have the historical rates once a day across the series, we are not able to observe a continuous process, thus Equation 14 serves as the discrete-time approximation turns Equation 13 into something that predicts one day's change from the previous day's level under a small time step Δt, showing that the result is already in the shape of an ordinary straight-line regression (a constant term plus a coefficient times a lagged rate). In this way, we can use a simple linear regression at all.

$$\Delta r(t) = a\big(\theta - r(t-1)\big)\Delta t + \epsilon(t) = a\theta\Delta t - a\Delta t \cdot r(t-1) + \epsilon(t)$$

Equation 14: Discrete-time approximation

The resulting regression formula is then expressed by Equation 15,

$$\Delta r(t) = \alpha + \beta r(t-1) + \epsilon(t)$$

Equation 15: Interest rates' historical regression formula

where the slope β corresponds to $-a\Delta t$, the intercept α to $a\theta\Delta t$, and the standard deviation of the residuals to the model's own instantaneous volatility, scaled by the time step. More specifically, the term *a* shows how quickly a deviation from the long-run mean θ shrinks over time; it represents the conversion from β to the mean-reversion speed, basing on the on the identity $1 + \beta = e^{(-a\Delta t)}$: a continuously mean-reverting process closes a given gap from its long-run mean by a constant proportion of that gap each period, which is the same exponential logic behind continuous compounding. The logarithm is therefore the exact inverse of this relationship, as expressed by Equation 16:

$$a = -ln(1 + \beta)/\Delta t$$

Equation 16: Mean-reversion speed's conversion

Since $\alpha = a\theta\Delta t$ and $\beta = -a\Delta t$, dividing one by the other cancels out both a and Δt, leaving θ on its own and letting us extract the long-run mean as shown by Equation 17:

$$\theta = -\frac{\alpha}{\beta}$$

Equation 17: Long-run mean extraction

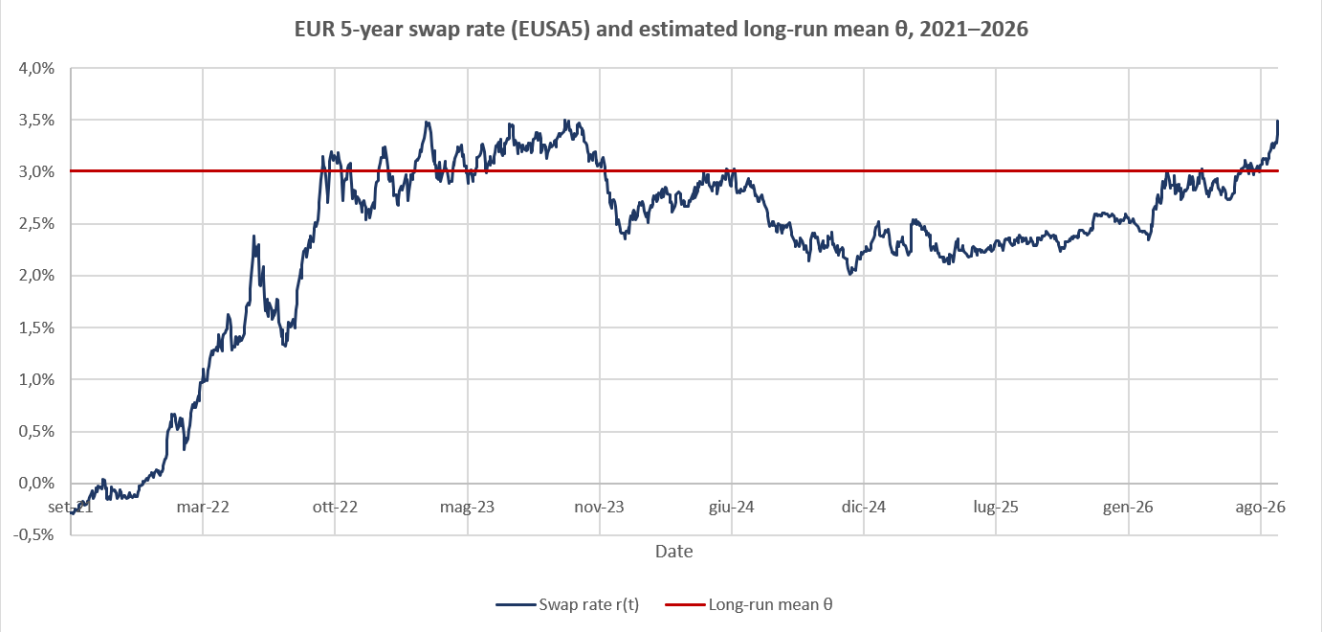


Exhibit 33: Swap rate historical series and long-run mean. Source: Bloomberg, own elaboration.

6.9.2. Estimation Results

Estimating this regression over the full sample gives a slope of β = −0.0042955, with standard error equal to 0.0016213, t-statistic −2.65, significant at the 1% level, hence rejecting the null of no mean reversion; the intercept α is equal to 0.0001292. The regression's R^2 sits at 0.5%, which is an expected result considering that at daily frequency, the great majority of the variance in interest rate changes is attributable to short-term noise rather than to the mean-reverting drift, so a low R^2 is standard in these cases even where the mean-reversion coefficient itself is highly statistically significant. This specification is the standard one in the empirical short-term rates literature: Chan et al. (1992) compare alternative models of the short-term interest rate using the same discrete-time regression of the rate change on its lagged level, extended in their case by a level-dependent volatility term that is not required here. Their work also identifies a limitation of the approach, which is the fact that mean-reversion parameters estimated in this way are imprecisely identified and vary substantially

across studies and sample periods, so the speed of reversion that we find in this study should be read as an indicative central estimate rather than a precise one.

Since the underlying data is daily, the time step Δt used to annualise these coefficients is taken from the sample itself, 1,305 observations over a span of 4.999 years, implying approximately 261 observations per year and Δt = 1/261, rather than the more conventional assumption of 252 trading days per year; the two conventions produce closely similar results (a = 1.124 under the data-implied convention against a = 1.085 under the 252-day convention), so the choice is not material to the result. The mean-reversion speed and long-run mean are recovered using the conversion seen before, giving a = 1.124 and θ = 3.007%, while the annualised volatility is recovered from the regression's residual standard error as shown by Equation 18, giving σ = 0.858%.

$$\sigma = s(\epsilon) \times \sqrt{(1/\Delta t)}$$

Equation 18: Annualised volatility

The resulting regression is displayed by Exhibit 34, which plots each day's change in the 5-year Swap rate against the previous day's level together with the fitted line. The fit is visibly shallow, as it must be for a daily coefficient of β = −0.0043, and the cloud of observations is dominated by short-term noise of ±10bps around it; the downward tilt becomes economically material once annualised, since a = 1.124 implies a half-life of roughly seven months (ln2/a ≈ 0.62 years) for a deviation from the long-run mean. The observations are clustered in two groups, near zero for the 2021 sample and between roughly 2% and 3.5% thereafter, so the estimated long-run mean of 3.007% is identified largely from the post-2022 repricing rather than from repeated cycles around a stable level.

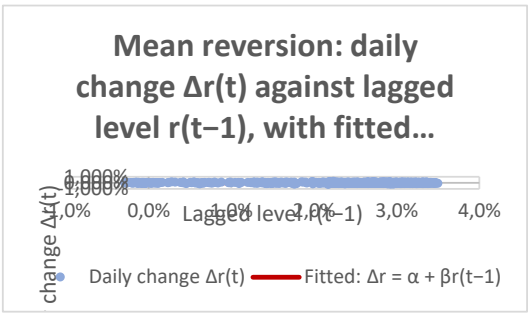


Exhibit 34: Mean reversion of EURIBOR 5yrs Swap rate. Source: Bloomberg, own elaboration.

6.9.3. Forward Simulation and Simulated Reset Coupons

For the forward simulation, the computation has been grounded on the 5-yrs mid-swap rate curve, with prevailing rates at the First Reset Dates, which correspond to the duration of the tranches' non-call periods. The 11-year and 14-year have been included for the forward-rate calculation' requirement: since each tranche resets to a 5-year rate, the forward rate applicable at the first reset date is derived from the swap curve moment at that reset's own maturity along with the point 5 years further (11-year and 14-year respectively). The simulation is limited to each tranche's first reset date, since later resets are conditional on Enel not exercising its call option at the first opportunity, which is a decision not taken yet. Considering the calibrated mean-reversion speed, the distribution at any later reset would in any case converge to the same stationary distribution already captured at the first reset horizon, limiting the additional information a further extension would provide.

Tenor	Annual mid-swap rate
6-year	3,30%
9-year	3,39%
11-year	3,45%
14-year	3,51%

Exhibit 35: EUR EURIBOR ICE Swap Rate curve. Source: Bloomberg.

Two thousand simulated draws were generated for the rate prevailing at each reset date, converted into a simulated post-reset coupon by adding the fixed margin each tranche carries over its first reset period, i.e. 165.8 bps for the NC6 tranche and 182.1 bps for the NC9 tranche, both fixed contractually at issuance (Exhibit 21 for reference). Exhibit 36 summarises the resulting distributions.

Metric	NC6 tranche (reset Jan 2032)	NC9 tranche (reset Jan 2035)	Whole transaction
Mean simulated reset coupon	**5,289%**	**5,566%**	**5,393%**
Median simulated reset coupon	5,280%	5,575%	5,391%
5th percentile	4,388%	4,571%	4,457%
95th percentile	6,225%	6,482%	6,321%
Current fixed coupon	4,125%	4,500%	4,266%
Mean step-up versus current coupon (bp)	116,4	106,6	112,7
Probability reset coupon exceeds current coupon	98,3%	96,4%	97,6%
Incremental annual coupon at the mean (€m p.a.)	14,5	8,0	22,5
Incremental annual coupon at the 95th percentile (€m p.a.)	26,2	14,9	41,1

Exhibit 36: Summary of the simulated post-reset coupon. Source: own elaboration.

The central estimate in both cases sits above the coupon fixed at issuance, and the simulation assigns a probability of 98.3% on the NC6 tranche and 96.4% on the NC9 tranche to the reset coupon exceeding today's fixed rate, or 97.6% across the transaction as a whole. This demonstrates how a fixed-to-reset structure prices the option-like value of the fixed period into the initial coupon, and a forward curve that structurally embeds a rising path for rates over the relevant horizon will consequently generate this results in the simulated outcomes. What the exercise adds is a forward-looking, probabilistic view of a specific risk the static comparisons in Paragraphs 6.5 through 6.8 do not capture: the coupon secured in January 2026 is not the coupon Enel should expect to be paying on this capital once the first reset dates arrive.

The comparison with the senior unsecured bonds becomes even more interesting considering these simulation on forward rates: the perpetual hybrid faces only a coupon reset at each of its two horizons, so the principal is never due for repayment, allowing the issuer to retain full discretion over whether to call and refinance the instrument or allow it to reset and continue. The matched-maturity senior comparators used in this chapter, by contrast, mature outright in 2030 and 2033, at which point Enel would need to refinance the full principal in whatever market conditions then prevail, a rollover obligation that the perpetual structure never creates. A full parallel simulation of that refinancing risk would require three further points on the swap curve beyond those already sourced, and has not been built here. The result would be a qualitative asymmetry on the risks that

hybrids and senior unsecured bonds carry: the senior structure carries rate risk and rollover risk jointly at its maturity dates, while the hybrid carries only the former at its reset dates.

6.10. Discussion: Hybrid Capital, Capital Structure Theory and Enel's Strategic Plan

The sub-questions set out in Paragraph 1.2 asked, in turn, what distinguishes a hybrid bond from pure debt or pure equity, how a firm exploits that distinction to pursue its strategic objectives, and what quantifiable effect the instrument generates relative to the alternative it displaces. Paragraphs 6.5 to 6.9 answer the third of these questions directly, and in doing so give the first two questions a concrete, firm-specific content that the theoretical discussion in Chapter 4 could only establish in general terms.

The characteristics identified in Chapter 4 as distinguishing hybrid capital, its position along the debt-equity continuum, its subordination, and its coupon deferability, are not abstractions in the case examined here: they are the specific contractual features, discussed in detail in Paragraph 6.3, that produce the 50% rating-agency equity credit described in Paragraph 6.5, the tight but still positive after-tax cost premium quantified in Paragraph 6.6, the reallocation of default-state loss discussed in Paragraph 6.8 and the preserved investment headroom quantified in Paragraph 6.7. Each dimension traces a distinct mechanism back to a distinct capital structure theory reviewed in Paragraph 3.1. The debt-capacity result is a direct empirical illustration of the trade-off theory's equity cushion: Enel obtains 50% equity credit on an €8,219m hybrid stock without a share issuance, worth approximately €4.1bn of rating-recognised equity and 0.39x of reported leverage – Net debt / EBITDA of 2.80x against the 3.19x the same stack would produce if it were treated as senior debt – keeping the firm further from the insolvency-risk region Kraus and Litzenberger's model identifies as value-destroying. The earnings result restates Modigliani and Miller's (1958) tax-shield extension in a setting the original theorem does not contemplate, an instrument that is simultaneously debt for tax purposes and equity for accounting purposes, showing that the interest deductibility gains from having debt in the capital structure their model identifies survive, in modified form, even where the instrument generating them does not appear as debt on the balance sheet at all. The risk-distribution result illustrates Jensen and Meckling's (1976) agency framework, showing in euro terms how much default-related loss the hybrid layer is capable of absorbing before senior creditors are exposed. The investment-capacity result is the clearest empirical statement of the underinvestment logic their

theory, and Myers and Majluf's (1984) pecking order, both predict: a firm that lacks headroom to fund a positive-NPV opportunity with debt faces a real cost of capital constraint that a hybrid instrument is specifically structured to relax.

Read against Paragraph 6.4, these results also answer why Enel chose this instrument, and this size, at this specific moment. The 2026-2028 Strategic Plan commits €53bn of investment against €47-49bn of internally generated funds from operations, leaving a financing gap the plan itself allocates partly to hybrid capital, partly to asset rotation and partly to a further increase in net debt. Paragraph 6.7's finding, that the actual capital structure preserves more than twice the debt headroom against S&P's stated upgrade threshold that the fully debt-financed counterfactual would, is the quantitative content behind the plan's own description of hybrid issuance as a source of "debt increase and flexibility." Paragraph 6.6's finding, that this flexibility is purchased at a modest but real after-tax premium rather than at zero cost, is equally consistent with the plan: Enel is not just minimising its cost of capital, it is rather purchasing capacity to fund €53bn of investment, sustain €23bn of shareholder remuneration, and preserve the path toward a rating upgrade – or at least its preservation – simultaneously, which no single pure-debt or pure-equity instrument could achieve on its own without breaching one of the other three constraints.

One qualification follows from Paragraph 6.9, and it bears on the durability of this reading rather than on its substance. The flexibility the instrument buys is priced, but it is not fixed: because both tranches convert to a floating rate linked to the prevailing 5-year EUR swap rate at their first reset dates, the after-tax premium quantified in Paragraph 6.6 describes the cost of this capital only until January 2032 and January 2035 respectively. The simulated distributions assign a probability of 98.3% on the NC6 tranche and 96.4% on the NC9 tranche to the reset coupon exceeding the coupon fixed at issuance, so the narrow premium observed today is better read as the current, rather than the permanent, price of the equity credit. The perpetual structure leaves the refinancing decision entirely at Enel's discretion, while the senior debt comparators expire in 2030 and 2033 and would have to be refinanced in whatever conditions then prevail. Thus, the hybrid moves a rollover exposure to a repricing exposure, which is the form of financial flexibility the literature reviewed in Paragraph 3.2 (Marchica and Mura, 2010; Byoun, 2011) deem as valuable.

6.11. Summary of Findings

Exhibit 37 draws together the headline result from each of the four dimensions examined in this chapter, together with the forward-looking extension of Paragraph 6.9, before the turning to Chapter 7 where conclusions, limitations and directions for further research are discussed.

Dimension	Headline finding
Debt capacity and credit metrics	Whole hybrid stack (€8.2bn) lowers Net debt/EBITDA by 0.39x (2.80x actual vs 3.19x if fully senior debt)
Earnings and cost of capital	True after-tax cost premium of the hybrid over senior debt is €9.5m p.a. (≈47.5bp), materially narrower than the 62.5bp pre-tax coupon premium; hybrids therefore structurally raise WACC
Risk distribution	Constant 62.5bp subordination premium on both tranches; waterfall shows up to €10.2bn of senior-creditor loss absorbed by hybrid holders in a severe stress
Investment capacity	Actual structure with hybrids preserves ≈€17.4bn of debt capacity against S&P's upside threshold, versus ≈€7.5bn under the fully debt-financed counterfactual
Forward-looking rate risk	97.6% probability across the transaction that the reset coupon exceeds the rate fixed at issuance (98.3% NC6, 96.4% NC9), calibrated to 1,305 daily ICE Swap Rate observations under a Vasicek process

Exhibit 37: Summary of findings by dimension. Source: own elaboration.

Taken together, these findings demonstrate how in the Enel case, hybrid capital generated identifiable benefits relative to the modeled senior-debt alternative, specifically in debt capacity, risk allocation and investment flexibility, while carrying a measurable financing premium. The January 2026 issuance did not deliver its value through cost minimisation, as shown in Paragraph 6.6, but through the all-in-one preservation of rating headroom, a favourable allocation of default-state risk, and investment capacity that a same-sized senior debt issuance would not have delivered. Whether these findings extend beyond the specific transaction and issuer studied will be discussed in Chapter 7.

Chapter 7. Conclusions

7.1. Main Findings and Answer to Research Questions

This thesis investigated how corporate hybrid bonds can support firms in pursuing specific strategic objectives, analysing the case of Italian utility giant Enel S.p.A, moving from the intermediate position occupied by hybrid bonds between conventional debt and equity and examining the possibility that their contractual and financial characteristics may allow firms to address constraints that cannot be overcome through traditional financing instruments. The empirical analysis of Enel's hybrid bond programme, and in particular the comparison between the firm's actual hybrid-inclusive capital structure and a counterfactual structure based on equivalent senior debt financing, provides evidence that the principal advantage of hybrid capital does not lie in minimizing the direct cost of financing. Rather, its value derives from the simultaneous effects it produces on debt capacity, risk allocation, financial flexibility and the firm's ability to sustain its investment programme.

The central research question, i.e. how corporate hybrids support Enel in achieving specific strategic corporate objectives, can be answered by identifying hybrid capital as a mechanism for reconciling competing financing requirements. Enel operates in a highly capital-intensive environment in which maintaining access to external capital is essential to the execution of its long-term investment programme, meanwhile maintaining a credit rating above a certain level. A conventional debt-financed structure would provide the required funding but would consume a substantially larger amount of debt capacity, while an equivalent equity-financed structure would strengthen the balance sheet but at the cost of diluting existing shareholders. Hybrid bonds occupy an intermediate position: their contractual characteristics expose hybrid investors to risks that are closer to those borne by equity holders, while their treatment by rating agencies allows part of the capital raised to support the issuer's credit metrics without requiring an equivalent increase in common equity.

The quantitative analysis provides concrete evidence of this mechanism. The €8.2 billion hybrid stack considered in the analysis reduces Enel's Net Debt/EBITDA ratio from the 3.19x implied by the fully senior-debt counterfactual to 2.80x under the actual capital structure, while preserving approximately €17.4 billion of additional debt capacity relative to the relevant rating threshold, compared with around €7.5 billion under the hypothetical senior-debt structure. Hence, the benefit does not consist in eliminating the cost associated with raising capital: the hybrid carries a

measurable premium over senior debt. Instead, Enel pays this premium in exchange for characteristics that conventional debt cannot provide to the same extent.

The findings can be organized around the four dimensions identified in the analytical framework, together with the forward-looking extension developed in Paragraph 6.9. First, the equity-credit treatment of hybrid bonds reduces the impact of the issuance on reported leverage and therefore preserves debt capacity. Second, although hybrid capital entails a higher financing cost than senior debt, the deductibility of the coupon narrows the gap significantly: the true after-tax premium over an equivalent senior issuance is approximately €9.5 million per annum, or around 47.5 bps, against a pre-tax coupon premium of 62.5 bps, with a premium which is materially smaller than the headline spread suggests, while still raising the firm's weighted average cost of capital. Third, the subordination and coupon-deferral features transfer part of the downside risk away from senior creditors and common shareholders towards hybrid investors: the waterfall analysis indicates that up to €10.2 billion of losses that would otherwise fall on senior creditors are absorbed by hybrid holders in a severe stress scenario, increasing the loss-absorption capacity of the capital structure. Fourth, the resulting preservation of debt capacity provides Enel with greater room to finance its capital expenditure programme without approaching the leverage levels associated with its rating constraints. Fifth, the forward-looking simulation indicates a 98.3% probability for the NC6 tranche and a 96.4% probability for the NC9 tranche that the reset coupon would exceed the rate fixed at issuance, or 97.6% across the transaction as a whole, so the flexibility obtained at issuance carries an identifiable expected future cost rather than being free. Together, these mechanisms explain why the instrument can have strategic value even when its direct coupon cost is higher than that of conventional debt.

From a corporate finance perspective, the findings suggest that hybrid bonds should be evaluated as instruments for managing constraints rather than simply as alternative sources of funding, with their suitability depends on the interaction between the issuer's investment requirements, existing leverage, credit-rating objectives, shareholder structure and tolerance for future refinancing and coupon-reset risk. For a highly capital-intensive issuer such as Enel and energy/utilities firms, the ability to preserve debt capacity while avoiding an immediate increase in common equity represents a relevant strategic benefit. However, this benefit must be weighed against the higher coupon cost and the risks embedded in the hybrid's long-term structure. The case therefore supports a decision framework in which the choice between senior debt, equity and hybrid capital is based not only on

the nominal cost of financing, but also on the effect of each instrument on the firm's future financial flexibility.

In relation to the literature gaps identified in Paragraph 3.2, the contribution of this thesis is to quantify, at the level of a single transaction, a trade-off that the existing literature has largely treated either qualitatively or in aggregate: by constructing an explicit senior-debt counterfactual, the analysis converts the debt-capacity, earnings and risk-allocation effects of hybrid issuance into comparable figures for one issuer at one point in time, showing that these effects can be material even where the instrument is more expensive on a coupon basis. The contribution is therefore methodological as well as empirical: it offers a transaction-level framework through which the strategic rationale for hybrid capital can be assessed, rather than inferred from market-wide issuance patterns.

7.2. Implications for Corporate Finance Theories

The Enel case also provides a concrete interpretation of the capital structure theories discussed in the theoretical framework. The Trade-off Theory provides the most direct explanation: the firm faces a balance between the advantages of debt financing and the costs associated with excessive leverage and reduced financial flexibility. Hybrid capital modifies this trade-off by introducing an additional financing layer whose treatment is partly debt-like and partly equity-like, illustrating how the optimal financing decision cannot always be represented as a binary choice between debt and equity.

The findings are also consistent with the intuition underlying the Pecking Order Theory, although they do not imply that hybrid bonds should be considered a universal alternative to debt or equity. When internal resources are insufficient to meet large investment requirements, external financing in the form of debt or equity may involve either additional leverage or shareholder dilution. Hybrid capital provides a further alternative when both consequences are strategically undesirable, and its position in the hierarchy is not arbitrary: because the instrument is subordinated and only partially equity-treated, its pricing is more sensitive to issuer-specific information than senior debt but considerably less so than common equity. The Enel case suggests that the financing hierarchy has to be read as a continuum of information sensitivity than as three distinct sets and that instruments with intermediate characteristics occupy intermediate positions within it.

The implications for Agency Theory are more indirect: the contractual characteristics of hybrid bonds modify the distribution of risks and incentives among shareholders, hybrid investors and

senior creditors, particularly through subordination and coupon deferral. While the present analysis does not directly estimate agency costs, the case demonstrates that instrument design can affect the allocation of financial risk among different capital providers and therefore represents a relevant dimension of the broader agency relationship.

A governance dimension follows directly from this: Enel's shareholder base combines a partially state-owned holding with a large international free float, and this structure constrains the equity route in a way that a purely private issuer would not face: an equity issuance of comparable size would either dilute the public shareholder's stake or require that shareholder to subscribe additional capital. Hybrid issuance avoids this choice, since hybrid investors receive no voting rights and the instrument leaves the ownership and control structure unchanged. The governance relevance applies to coupon policy as well: the discretion to defer coupons belongs to the management, but it is contractually linked to distributions to shareholders through the dividend stopper and pusher mechanism described in Chapter 6. Deferral is therefore not a costless option exercised in isolation, as it is constrained by the same distribution policy that shareholders monitor most closely, which aligns the interests of hybrid investors and common shareholders more than subordination alone would suggest. The Enel case can thus be read as a financing decision taken partly under governance constraints, in which the ability to raise capital without reopening the question of control is itself part of the instrument's value.

Two further theoretical perspectives are relevant. Market-timing and signalling considerations suggest that the decision to accept a 62.5 bps subordination premium in January 2026 reflected in part a judgement about the availability of the hybrid market at that moment, so that the timing of the issuance is itself an object of analysis rather than a neutral background condition. Moreover, the results support a financial-flexibility interpretation of capital structure, in which firms hold and pay for optionality over future financing decisions. This being considered, the hybrid premium is best understood as the price of an option to preserve rating headroom and to defer coupons under stress, with the Enel transaction providing an estimate of what one large investment-grade issuer was willing to pay for that option.

An important implication of the analysis is that the economic value of hybrid capital should not be assessed exclusively through its initial financing cost. The premium paid by Enel over comparable senior debt partially represents the price of flexibility. The hybrid structure allows the issuer to defer coupons under the contractual conditions of the instrument and, in the case of the perpetual tranche,

avoids a mandatory principal repayment at maturity, hence replacing part of the refinancing exposure associated with conventional debt with exposure to future coupon repricing. The forward-looking simulation also suggests that the flexibility obtained at issuance does not come at zero costs and its value must be assessed against the future interest-rate environment and the issuer's ability to manage the instrument over time.

7.3. Limitations of the Research

This research and its findings present several limitations which need to be acknowledged. First, the single-case design means that the results cannot be statistically generalized to the broader population of corporate hybrid issuers. Enel presents specific characteristics, including its scale, partially state-owned ownership structure and exposure to capital-intensive infrastructure investment, that may make the strategic value of hybrid capital particularly visible and not mathematically replicable in any other corporate hybrids' issuer. The case therefore provides analytical rather than statistical generalization.

Second, the counterfactual analysis necessarily relies on assumptions regarding the financing terms that Enel would have faced under an equivalent senior-debt issuance. In particular, the model assumes that the counterfactual debt could have been priced at the prevailing senior unsecured conditions as established by the May 2026 senior bond's offering. A debt issuance different in size or terms could have affected the firm's credit profile, so that the model may underestimate the true cost of the counterfactual structure.

Third, the debt-capacity results are conditional on the equity credit granted by the rating agencies. The analysis assumes that a defined share of the hybrid stack is treated as equity for the purposes of the relevant credit metrics, in line with current agency methodology. This treatment is a policy choice rather than a contractual entitlement: agencies may revise their criteria or withdraw equity credit if the instrument's features or the issuer's conduct change. A methodological change of this kind would reduce or eliminate the preserved debt capacity identified here without any change in the underlying transaction.

Fourth, the analysis is a time-specific assessment based on modelled outcomes rather than observed market responses: no study of the announcement's effect on Enel's share price or senior credit spreads is conducted, so the strategic value identified in this thesis is demonstrated analytically rather than confirmed by market pricing.

Fifth, the after-tax cost advantage depends on the deductibility of the hybrid coupon under the applicable tax framework, which is favourable in Italy as discussed. This treatment is jurisdiction-specific and subject to legislative change; if deductibility were restricted, the after-tax premium would widen towards the pre-tax coupon premium and the cost comparison presented here would change accordingly.

Finally, the forward-looking Monte Carlo simulation are dependent on the historical interest-rate and corporate-yield distributions used for calibration. They should be interpreted as scenario analyses rather than forecasts of future market conditions, since the purpose is to illustrate the sensitivity of the alternative capital structures to changes in financing conditions, rather than to establish a precise probability of future financial outcomes.

7.4. Suggestions for Future Research

Future research could extend the analysis in several ways. (1) A multi-case study could investigate whether the mechanisms identified in the Enel case are also present in other large corporate hybrid issuers operating in different industries and regulatory environments. (2) A study of hybrid issuance announcements would test whether the benefits modelled here are recognised in market pricing, complementing the analytical approach adopted in this thesis with evidence from equity and credit markets. (3) A larger empirical sample could test whether the relationship between hybrid issuance, equity credit, leverage and investment capacity observed in this case holds systematically across issuers, allowing for a more robust statistical generalization. (4) Studies which examine the same variable during an extended period of time could evaluate how the strategic rationale for hybrid financing changes across different interest rate, credit market and investment environments. (5) Future studies could investigate more directly the interaction between hybrid capital and corporate investment decisions, including whether the preservation of debt capacity generated by hybrid issuance translates into measurable differences in investment timing or scale. (6) Research could test the governance interpretation directly, by examining whether hybrid issuance is more frequent among firms with concentrated, state or family ownership, where the cost of dilution is borne by an identifiable shareholder, than among firms with dispersed ownership of comparable leverage and rating.

7.5. Concluding Summary

Overall, the Enel case suggests that the strategic relevance of corporate hybrid bonds lies in their ability to go beyond the limitations posed by a pure debt-equity framework. The instrument does not eliminate the costs associated with external financing, nor is it better than conventional debt or equity across all dimensions, instead its true value derives from the combination of characteristics that allows the issuer to distribute financial risk differently, preserve part of its debt capacity and maintain greater flexibility in pursuing long-term investment objectives. For Enel, these characteristics appear particularly relevant given the scale and duration of its investment requirements. The findings therefore support viewing corporate hybrid bonds not merely as technically complex securities, but as instruments through which firms can shape their capital structure in response to strategic and financial constraints.

Appendixes

A.1. Enel S.p.a.'s Reported Consolidated Income Statement

Consolidated Income Statement

Millions of euro	Notes	2025	of which with related parties	2024	of which with related parties
Revenue					
Revenue from sales and services	10.a	78,057	*5,967*	73,914	*5,328*
Other income	10.b	2,289	*7*	5,033	*82*
	[Subtotal]	**80,346**		**78,947**	
Costs					
Electricity, gas and fuel	11.a	33,869	*7,854*	30,282	*8,714*
Services and other materials	11.b	19,455	*3,969*	19,240	*3,820*
Personnel expenses	11.c	4,740		4,938	
Net impairment/(reversals) on trade receivables and other receivables	11.d	1,106		1,323	
Depreciation, amortization and other impairment losses	11.e	9,434		7,249	
Other operating costs	11.f	4,215	*236*	3,940	*212*
Capitalized costs	11.g	(3,259)		(3,042)	
	[Subtotal]	**69,560**		**63,930**	
Net results from commodity contracts	12	**747**	*13*	**477**	*3*
Operating profit		**11,533**		**15,494**	
Financial income from derivatives	13	871		2,720	
Other financial income	14	4,169	*103*	2,409	*209*
Financial expense from derivatives	13	3,092		1,023	
Other financial expense	14	5,180	*88*	7,828	*100*
Net income from hyperinflation	14	163		321	
Share of profit/(loss) of equity-accounted investments	15	(74)		(210)	
Pre-tax profit		**8,390**		**11,883**	
Income taxes	16	2,773		3,654	
Profit from continuing operations		**5,617**		**8,229**	
Attributable to owners of the Parent		4,261		7,016	
Attributable to non-controlling interests		1,356		1,213	
Profit/(Loss) from discontinued operations	7	**(36)**		**-**	
Attributable to owners of the Parent		(36)		-	
Attributable to non-controlling interests		-		-	
Profit for the year (owners of the Parent and non-controlling interests)		**5,581**		**8,229**	
Attributable to owners of the Parent		4,225		7,016	
Attributable to non-controlling interests		1,356		1,213	
Earnings per share	17				
Basic earnings per share	17				
Basic earnings per share		*0.39*		*0.67*	
Basic earnings per share from continuing operations		*0.39*		*0.67*	
Basic earnings per share from discontinued operations		-		-	
Diluted earnings per share	17				
Diluted earnings per share		*0.39*		*0.67*	
Diluted earnings per share from continuing operations		*0.39*		*0.67*	
Diluted earnings per share from discontinued operations		-		-	

Source: Enel Annual Report 2025.

A.2. Enel S.p.a.'s Equity Detail

36.1 Equity attributable to owners of the Parent – *€32,068 million*

Millions of euro	at Dec. 31, 2025	at Dec. 31, 2024	Change
Share capital	**10,167**	**10,167**	**-**
Negative reserve for treasury shares held	**(1,077)**	**(78)**	**(999)**
Other reserves	**7,001**	**5,651**	**1,350**
Share premium reserve	7,496	7,496	-
Reserve for equity instruments - perpetual hybrid bonds	8,219	7,145	1,074
Legal reserve	2,034	2,034	-
Other reserves	3,406	2,363	1,043
Translation reserve	(8,215)	(6,352)	(1,863)
Hedging reserve	(1,797)	(2,228)	431
Hedging costs reserve	159	182	(23)
Reserve from measurement of financial instruments at FVOCI	94	132	(38)
Reserve from equity-accounted investments	(41)	(404)	363
Remeasurement of net liabilities/(assets) for defined-benefit plans	(1,009)	(1,092)	83
Reserve from disposal of equity interests without loss of control	(2,448)	(2,405)	(43)
Reserve from acquisitions of non-controlling interests	(897)	(1,220)	323
Retained earnings	**15,977**	**17,991**	**(2,014)**
Equity attributable to owners of the Parent	**32,068**	**33,731**	**(1,663)**

Source: Enel Annual Report 2025.

Millions of euro					
ASSETS	**Notes**	**at Dec. 31, 2025**		**at Dec. 31, 2024**	
			of which with related parties		*of which with related parties*
Non-current assets					
Property, plant and equipment	18	93,675		94,584	
Investment property	21	29		30	
Intangible assets	22	15,132		15,837	
Goodwill	23	13,051		12,850	
Deferred tax assets	24	8,830		9,025	
Equity-accounted investments	25	1,317		1,456	
Non-current financial derivative assets	26	1,170	-	2,003	*2*
Non-current contract assets	27	632		523	
Other non-current financial assets	28	8,472	*1,103*	7,607	*864*
Other non-current assets	30	2,064	*108*	1,937	*3*
	[Total]	**144,372**		**145,852**	
Current assets					
Inventories	32	3,301		3,643	
Trade receivables	33	14,555	*1,018*	15,941	*1,486*
Current contract assets	27	135		193	
Income tax assets		399		787	
Current financial derivative assets	26	2,408	-	3,512	
Other current financial assets	29	3,941	*958*	4,854	*1,964*
Other current assets	31	3,386	*38*	3,891	*102*
Cash and cash equivalents	34	5,065		8,051	
	[Total]	**33,190**		**40,872**	

Source: Enel Annual Report 2025

A.3. Enel S.p.a.'s Reported Consolidated Balance Sheet

Millions of euro					
LIABILITIES AND EQUITY	**Notes**	**at Dec. 31, 2025**	*of which with related parties*	**at Dec. 31, 2024**	*of which with related parties*
Equity attributable to owners of the Parent					
Share capital		10,167		10,167	
Negative reserve for treasury share held		(1,077)		(78)	
Other reserves		7,001		5,651	
Retained earnings		15,977		17,991	
	[Total]	**32,068**		**33,731**	
Non-controlling interests		**14,737**		**15,440**	
Total equity	36	**46,805**		**49,171**	
Non-current liabilities					
Long-term borrowings	37	56,983	*747*	60,000	*651*
Employee benefits	38	1,127		1,614	
Provisions for risks and charges (non-current portion)	39	6,273		6,501	
Deferred tax liabilities	24	7,813		7,951	
Non-current financial derivative liabilities	26	3,314	*3*	2,915	*8*
Non-current contract liabilities	27	5,495	*19*	5,682	*17*
Other non-current financial liabilities	41	565		205	
Other non-current liabilities	43	3,219		3,287	
	[Total]	**84,789**		**88,155**	
Current liabilities					
Short-term borrowings	37	2,975	*9*	3,645	*9*
Current portion of long-term borrowings	37	8,803	*119*	7,439	*111*
Provisions for risks and charges (current portion)	39	1,276		1,333	
Trade payables	40	11,827	*1,502*	13,693	*2,736*
Income tax liabilities		541		1,589	
Current financial derivative liabilities	26	2,343	-	3,584	*6*
Current contract liabilities	27	2,833	*59*	2,448	*37*
Other current financial liabilities	42	910	*3*	845	*1*
Other current liabilities	44	14,799	*36*	15,087	*42*
	[Total]	**46,307**		**49,663**	
Liabilities included in disposal groups classified as held for sale	35	**756**		**150**	
Total liabilities		**131,852**		**137,968**	
TOTAL LIABILITIES AND EQUITY		**178,657**		**187,139**	

Source: Enel Annual Report 2025.

A.4. Vasicek Calibration

Observations (n)	1.305
First observation date	10/09/2021
Last observation date	10/09/2026
Average observation interval, years (Δt)	0,00383
Historical mean level	2,334%
Historical standard deviation of the level	0,908%
Regression of daily change on lagged level	
Slope (= –a × Δt)	-0,004295
Intercept (= a × θ × Δt)	0,000129
Residual standard error (per interval)	0,000531
Mean-reversion speed a = –slope / Δt	**1,1204**
Long-run mean θ = –intercept / slope	**3,007%**
Annualised volatility σ = residual s.e. / √Δt	**0,0086**

Source: own elaboration.

A.5. Monte Carlo simulation results (2,000 trials)

Metric	NC6 tranche (reset Jan 2032)	NC9 tranche (reset Jan 2035)	Whole transaction
Simulated trials	2.000	2.000	2.000
Mean-reversion speed (a)	1,120	1,120	
Annualised volatility (σ)	0,858%	0,858%	
Years to reset (T)	5,35	8,35	
Forward 5Y swap rate at reset (distribution mean)	3,616%	3,744%	
Standard deviation at the horizon	0,573%	0,573%	
Post-reset margin (offering circular)	1,658%	1,821%	
Notional (€m)	1.250	750	2.000
Simulation outcomes			
Mean simulated reset coupon	**5,276%**	**5,551%**	**5,379%**
Median simulated reset coupon	5,283%	5,530%	5,376%
5th percentile	4,294%	4,682%	4,440%
95th percentile	6,232%	6,488%	6,328%
Current fixed coupon	4,125%	4,500%	4,266%
Mean step-up versus current coupon (bp)	115,1	105,1	111,3
Probability reset coupon exceeds current coupon	97,5%	97,5%	97,5%
Incremental annual coupon at the mean (€m p.a.)	14,4	7,9	22,3
Incremental annual coupon at the 95th percentile (€m p.a.)	26,3	14,9	41,2

Source: own elaboration.

Exhibits and Equations

Exhibits

Exhibit 1: Convertible bond issuance volume across currencies 10
Exhibit 2: Comparison between different forms of hybrid financial instruments..... 13
Exhibit 3: Coupon step-up mechanism of EDF's 5.5-year non-call perpetual green hybrid notes 38
Exhibit 4: Capital structure layers 39
Exhibit 5: Equity credit assessment of investment grade hybrid securities by Moody's 41
Exhibit 6: S&P flowchart for hybrid instruments' assessment 43
Exhibit 7: U.S. and Canadian vs. European corporate hybrids issuers..... 49
Exhibit 8: Corporate hybrids issuance volume by currency..... 49
Exhibit 9: Corporate hybrids' issuers rating 50
Exhibit 10: Corporate hybrids' geographic distribution 51
Exhibit 11: Sector breakdown of issuance in 2025..... 52
Exhibit 12: Outstanding hybrid bonds by sector..... 52
Exhibit 13: ECB Deposit Facility Rate 54
Exhibit 14: ECB Main Refinancing Operations Rate 55
Exhibit 15: Risk-free, corporate investment grade and high yield bond returns comparison..... 56
Exhibit 16: European stock market price and volatility 58
Exhibit 17: Aggregated utilities Capex 2019-25..... 64
Exhibit 18: European utilities' EBITDA on Interest expense 2019-25 65
Exhibit 19: Enel hybrid securities issued from 2013 onwards..... 72
Exhibit 20: Enel hybrid bonds' issuance volume and related fixed nominal coupon..... 73
Exhibit 21: Terms of the two tranches of the January 2026 issuance..... 76
Exhibit 22: Pro-forma leverage and coverage metrics under alternative treatments of the hybrid 84
Exhibit 23: Reported versus true economic cost of the January 2026 issuance, actual and counterfactual 86
Exhibit 24: Cost of the Equity Credit 87
Exhibit 25: Capital structure weights and after-tax cost of debt by treatment of the hybrid stack 89
Exhibit 26: FFO/Net Debt and headroom against S&P's stated upside threshold, scenarios 1-3..... 91
Exhibit 27: FFO/Net Debt and headroom against S&P's stated upside threshold, scenarios 4-6..... 91
Exhibit 28: Implied maximum sustainable net debt and remaining debt capacity by scenario, scenarios 1-3 93

Exhibit 29: Implied maximum sustainable net debt and remaining debt capacity by scenario, scenarios 4-6 93
Exhibit 30: The subordination and deferral premium over matched-maturity senior debt, by tranche 94
Exhibit 31: Subordination premium variations based on market yields 94
Exhibit 32: Recovery rates for senior creditors and hybrid holders under the actual subordinated structure (Case A) and the counterfactual senior-ranking structure (Case B), across a range of hypothetical asset recovery rates 95
Exhibit 33: Swap rate historical series and long-run mean 98
Exhibit 34: Mean reversion of EURIBOR 5yrs Swap rate 100
Exhibit 35: EUR EURIBOR ICE Swap Rate curve 100
Exhibit 36: Summary of the simulated post-reset coupon 101
Exhibit 37: Summary of findings by dimension 104

Equations

Equation 1: Regulated Asset Base computation 61
Equation 2: Allowed Revenue formula 61
Equation 3: Implied swap rate at pricing 77
Equation 4: Implied swap rates for the two tranches 77
Equation 5: Decomposition of the coupon differential 77
Equation 6: Net Financial Debt 82
Equation 7: After-tax cost of debt 88
Equation 8: Re-levered equity beta 88
Equation 9: Cost of equity (CAPM) 88
Equation 10: Weighted Average Cost of Capital 89
Equation 11: Maximum sustainable net debt 92
Equation 12: Bonds' Yield-at-Issuance 95
Equation 13: Stochastic differential equation for instantaneous interest rate 97
Equation 14: Discrete-time approximation 97
Equation 15: Interest rates' historical regression formula 97
Equation 16: Mean-reversion speed's conversion 98
Equation 17: Long-run mean extraction 98
Equation 18: Annualised volatility 99

References

AFME (2025), AFME Q1 2025 European High Yield and Leveraged Loan Report

Ammann et al. (2003), Are Convertible Bonds Underpriced? An Analysis of the French Market, in *Journal of Banking & Finance* 27 (4), pp. 635-653

Aschauer, Ewald et al. (2010), Cross-Border Hybrid Finance and Tax Planning: Does International Tax Coordination Work?

Asquith, Paul (1995), Convertible Bonds are not Called Late, in *Journal of Finance* 50 (4), pp. 1275-1289

Ayache, Elie et al. (2003), Valuation of Convertible Bonds with Credit Risk, in *The Journal of Derivatives* 11 (1), pp. 9-29

Barnea, Amir et al. (1980), A Rationale for Debt Maturity Structure and Call Provisions in the Agency Theoretic Framework, in *The Journal of Finance* 35 (5), pp. 1223-1234

Barsch, Sebastian-Engelbert (2012), Taxation of Hybrid Financial Instruments and the Remuneration Derived Therefrom in an International and Cross-border Context, published by *Springer*

Baxter, Nevins D. (1967), Leverage, Risk of Ruin and the Cost of Capital, in *The Journal of Finance* 22 (3), pp. 395-403

Benigno, Pierpaolo et al. (2021), The ECB's Measures in Support of the COVID-19 Crisis, published by *European Parliament*, Policy Department for Economic, Scientific and Quality of Life Policies

Bierey, Martin et al. (2024), Why Do Firms Issue Hybrid Bonds?, in *European Accounting Review* 33 (5), pp. 1747-1785

Bornemann, Tobias and Novotny-Farkas, Zoltán (2024), Does the Accounting Classification of Hybrid Financial Instruments as Debt or Equity Matter?, published by *SSRN*, Working Paper n. 4821642

Bortolotti, Bernardo et al. (2011), Capital Structure and Regulation: Do Ownership and Regulatory Independence Matter?, in *Journal of Economics & Management Strategy* 20 (2), pp. 517-564

Bradtke, Nils et al. (2025), Convertible Bonds: The financial roadster for dynamic markets, Allianz Research

Brennan, Michael J. and Schwartz, Eduardo S. (1977), Convertible Bonds: Valuation and Optimal Strategies for Call and Conversion, in *The Journal of Finance* 32 (5), pp. 1699-1715

Brennan, Michael J. and Schwartz, Eduardo S. (1980), Analyzing Convertible Bonds, in *The Journal of Financial and Quantitative Analysis* 15 (4), pp. 907-929

Brigham, Eugene F. (1966), An Analysis of Convertible Debentures: Theory and Some Empirical Evidence, in *The Journal of Finance* 21 (1), pp. 35-54

Brune, Julien (2025), Corporate Hybrid Bonds: A Strategic Tool in Constant Evolution, Societe Generale, available at: https://wholesale.banking.societegenerale.com/en/news-insights/all-news-insights/news-details/news/corporate-hybrid-bonds-a-strategic-tool-in-constant-evolution/

Bundgaard, Jakob (2016), Hybrid Financial Instruments in International Tax Law, published by *Wolters Kluver*

Byoun, Soku (2011), Financial Flexibility and Capital Structure Decision, published by *SSRN*, Working Paper n. 1108850

Calamos (2026), US Convertible Market Snapshot

Cambini, Carlo and Rondi, Laura (2006), The Interaction among Capital Structure and Investment in Regulated Industries: Evidence from the Italian Experience, in *Politica Economica* (3), pp. 317-360

Cambini, Carlo and Spiegel, Yossi (2016), Investment and Capital Structure of Partially Private Regulated Firms, in *Journal of Economics & Management Strategy* 25 (2), pp. 487-515

Cambini, Carlo et al. (2012), Investment and the Strategic Role of Capital Structure in Regulated Industries: Theory and Evidence, in Harrington, Joseph E. and Katsoulacos, Yannis (eds.), *Recent Advances in the Analysis of Competition Policy and Regulation*, published by Edward Elgar

Chan, K. C. et al. (1992), An Empirical Comparison of Alternative Models of the Short-Term Interest Rate, in *The Journal of Finance* 47 (3), pp. 1209-1227

Claesson, Linus and Usson, Robin (2024), Corporate Hybrids Take the World Stage, Neuberger Berman

Claesson, Linus et al. (2025), Corporate Hybrids: What Are They?, Neuberger Berman

Constantinides, George M. and Grundy, Bruce D. (1986), Call and Conversion of Convertible Corporate Bonds: Theory and Evidence, in *Proceedings - Seminar on the Analysis of Security Prices*, pp. 35-69

Cornelli, Francesca and Yosha, Oved (1997), Stage Financing and the Role of Convertible Debt, published by *London Business School*, IFA Working Paper n. 253-1997

Council of the European Union (2016), Council Directive (EU) 2016/1164 of 12 July 2016 Laying Down Rules against Tax Avoidance Practices that Directly Affect the Functioning of the Internal Market, in *Official Journal of the European Union* L 193, pp. 1-14

Council of the European Union (2017), Council Directive (EU) 2017/952 of 29 May 2017 Amending Directive (EU) 2016/1164 as Regards Hybrid Mismatches with Third Countries, in *Official Journal of the European Union* L 144, pp. 1-11

Damodaran, Aswath (2026), Damodaran Online: Data, published by *NYU Stern School of Business*

de Boer, Reinout and Marres, Otto (2015), BEPS Action 2: Neutralizing the Effects on Hybrid Mismatch Arrangements, in *Intertax* 43 (1), pp. 14-41

De Spiegeleer, Jan et al. (2014), The Handbook of Hybrid Securities: Convertible Bonds, CoCo Bonds and Bail-In, published by *Wiley*

Deloitte (2025), Private Debt Deal Tracker Spring 2025

Deloitte (2026), Future of Power in Europe

Donaldson, Gordon (1962), In Defense of Preferred Stock, in *Harvard Business Review* 40 (4), pp. 123-136

Eberhartinger, Eva and Six, M. (2007), Taxation of Cross–Border Hybrid Finance. A Legal Analysis, published for *Discussion Papers SFB International Tax Coordination*, n. 27

EDF (2025), EDF Announces the Success of its Green Hybrid Bond Issue for a Nominal Amount of 1.25 Billion Euros, press release of 29th September 2025

Edmond de Rothschild (2026), Corporate Hybrid Bonds: Why 2026 is Already a Historic Year?

Eisenhardt, Kathleen M. (1989), Building Theories from Case Study Research, in *Academy of Management Review* 14 (4), pp. 532-550

Emanuel, David (1983), A Theoretical Model for Valuing Preferred Stocks, in *The Journal of Finance* 38 (4), pp. 1133-1155

Enel (2026), 2026-2028 Strategic Plan, presented on 23rd February 2026

Engel, Ellen et al. (1999), Debt-Equity Hybrid Securities, in *Journal of Accounting Research* 37 (2), pp. 249-274

Eni S.p.A. (2026), Eni: Hybrid Bond in Euros Successfully Launched, press release of 12th January 2026, available at: https://www.eni.com/en-IT/media/press-release/2026/01/eni-hybrid-bond-in-euros-successfully-launched.html

European Central Bank (2026), Composite Cost-of-Borrowing Indicator for Non-Financial Corporations, ECB Data Portal

European Commission (2025), Assessment of the Energy Performance and Sustainability of Data Centres in EU, published by *Publications Office of the European Union*, available at: https://energy.ec.europa.eu/news/focus-data-centres-energy-hungry-challenge-2025-11-17_en

European Commission (2026), Clean Energy Investment Strategy, COM(2026) 116, available at: https://energy.ec.europa.eu/topics/funding-and-financing/clean-energy-investment_en

European Commission (2026), European Grids, available at: https://energy.ec.europa.eu/topics/infrastructure/european-grids_en

European Commission (2026), Renewable Energy Directive: Targets and Rules, available at: https://commission.europa.eu/topics/energy/repowereu_en

Eurostat (2026), Construction Producer Price and Construction Cost Indices Overview, Statistics Explained, available at: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Construction_producer_price_and_construction_cost_indices_overview

Fargher, Neil et al. (2018), Accounting for Financial Instruments with Characteristics of Debt and Equity: Finding a Way Forward, in *Accounting & Finance* 59 (1), pp. 7-58

Fernandes, Chris and Tsiveriotis, Kostas (1998), Valuing Convertible Bonds with Credit Risk, in *The Journal of Fixed Income* 8 (2), pp. 95-102

Ferreira, Eurico J. et al. (1992), Pricing New-Issue and Seasoned Preferred Stocks: A Comparison of Valuation Models, in *Financial Management* 21 (2), pp. 52-62

Flores, Eduardo and Fasan, Marco (2024), Financial Instruments with Characteristics of Equity: Outcomes and Value Relevance, in *Journal of Financial Reporting and Accounting*

Flores, Eduardo et al. (2021), Instrumentos Financeiros com Características de Patrimônio e Potenciais Implicações Tributárias de sua Contabilização, in *Contabilidade Vista & Revista* 32 (2), pp. 184-204

Flyvbjerg, Bent (2006), Five Misunderstandings About Case-Study Research, in *Qualitative Inquiry*, 12 (2), pp. 219-245

Fracassi, Cesare and Weitzner, Gregory (2026), What's in a Debt? Rating Agency Methodologies and Firms' Financing and Investment Decisions, in *The Review of Corporate Finance Studies*

Gerring, John and Seawright, Jason (2008), Case Selection Techniques in Case Study Research, in *Political Research Quarterly* 61 (2), pp. 294-308

Green, Richard C. (1984), Investment Incentives, Debt, and Warrants, in *Journal of Financial Economics* 13 (1), pp. 115-136

Harris, Milton and Raviv, Artur (1985), A Sequential Signalling Model of Convertible Debt Call Policy, in *The Journal of Finance* 40 (5), pp. 1263-1281

Heinkel, Robert and Zechner, Josef (1990), The Role of Debt and Preferred Stock as a Solution to Adverse Investment Incentives, in *Journal of Financial and Quantitative Analysis* 25 (1), pp. 1-24

IFRS Foundation (2024), IAS 32 Financial Instruments: Presentation

Ingersoll, Jonathan E. (1977), A contingent-claims valuation of convertible securities, in *Journal of Financial Economics* 4 (3), pp. 289-321

Ingersoll, Jonathan E. (1977), An Examination of Corporate Call Policies on Convertible Securities, in *The Journal of Finance* 32 (2), pp. 463-478

International Energy Agency (2025), Energy and AI, available at: https://www.iea.org/reports/energy-and-ai/energy-demand-from-ai

Jaffee, Dwight and Shleifer, Andrei (1988), Costs of Financial Distress, Delayed Calls of Convertible Bonds and the Role of Investment Banks, published by *National Bureau of Economic Research*

Jensen, Michael C. and Meckling, William H. (1976), Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure, in *Journal of Financial Economics* 3, pp. 305-360

Jiraporn, Pornsit and Gleason, Kimberly C. (2007), Capital Structure, Shareholder Rights, and Corporate Governance, in *The Journal of Financial Research* 30 (1), pp. 21-33

Johannesen, Niels (2014), Tax Avoidance with Cross-Border Hybrid Instruments, in *Journal of Public Economics* 112, pp. 40-52

Krahmal, Andrey (2005), Hybrid Instruments: Jurisdiction Dependent Characteristics, in *Houston Business and Tax Law Journal*, Vol. 5, pp. 1-31

Kraus, Alan and Litzenberger, Robert H. (1973), A State-Preference Model of Optimal Financial Leverage, in *The Journal of Finance* 28 (4), pp. 911-922

Krishnan, CNV and Laux, Paul (2005), Misreaction, in *Journal of Financial and Quantitative Analysis* 40 (2), pp. 403-434

Kuhn, S. Thomas (1987), What are scientific revolutions?, in *The Probabilistic Revolution* (1), pp. 7-22

La Rocca, Maurizio and La Rocca, Tiziana (2007), Capital Structure and Corporate Strategy: An Overview, published by *SSRN*, Working Paper n. 1023461

Lagarde, Christine (2020), Monetary Policy in a Pandemic Emergency, keynote speech at the ECB Forum on Central Banking, published by *European Central Bank*

Levi, Shai and Segal, Benjamin (2015), The Impact of Debt-Equity Reporting Classifications on the Firm's Decision to Issue Hybrid Securities, in *European Accounting Review* 24 (4)

Linn, Scott C. and Pinegar, J. Michael (1988), The Effect of Issuing Preferred Stock on Common and Preferred Stockholder Wealth, in *Journal of Financial Economics* 22 (1), pp. 155-184

LSEG (2026), Global Debt Capital Markets Review: Full Year 2025

Majluf, Nicholas S. and Myers, Stewart C. (1984), Corporate Financing and Investment Decisions when Firms Have Information that Investors Do Not Have, published by *National Bureau of Economic Research*

Manurung, E. and Rulindo, R. (2025), Do Investors React to Perpetual Bond Announcements in ASEAN? Evidence from an Event Study

Marchica, Maria-Teresa and Mura, Roberto (2010), Financial Flexibility, Investment Ability, and Firm Value: Evidence from Firms with Spare Debt Capacity, in *Financial Management* 39 (4), pp. 1339-1365

Marks, Julian (2026), Corporate Hybrid Bonds White Paper, Nomura Asset Management

Martynova, Marina and Renneboog, Luc (2009), What Determines the Financing Decision in Corporate Takeovers: Cost of Capital, Agency Problems, or the Means of Payment?, in *Journal of Corporate Finance* 15 (3), pp. 290-315

Menz, Klaus-Michael (2010), Models and Methods for Evaluation of Hybrid Corporate Bonds - A Critical Overview

Miller, Merton H. and Modigliani, Franco (1958), The Cost of Capital, Corporation Finance and the Theory of Investment, in *The American Economic Review* 48 (3), pp. 261-297

Mjøs, Axel and Persson, Svein-Arne (2007), Bundled financial claims: A model of hybrid capital, published by *The Norwegian School of Economics and Business Administration*, Working Paper 1

Morgan Stanley Investment Management (2026), Monthly Commentary of Global Convertible Bond Fund

Moyer, R. Charles et al. (1987), Nonconvertible Preferred Stock Financing and Financial Distress: A Note, in *Journal of Economics and Business* 39 (1), pp. 81-89

Myers, Stewart C. and Robinchek, Alexander A. (1965), Optimal Financing Decisions, published by *Englewood Cliffs N.J.*

Paisano, Bruno et al. (2025), Determinants of the Issuance of Hybrid Securities by Insurers from the Perspective of IAS 32, in *Revista Contabilidade & Finanças* 36 (97), e2123

Peeters, Bart and Vanneste, Lars (2020), The Hybrid Financial Instruments: The Effects of the OECD BEPS Action 2 Report and the ATAD, in *Intertax* 48 (1)

Pilcher, C. James (1955), Raising Capital with Convertible Securities, published by *University of Michigan, Bureau of Business Research*

PwC UK (2024), Debt Watch Europe 2023 Annual Review

Rosenbloom, H. David (2000), International Tax Arbitrage and the "International Tax System", in *Tax Law Review* 53 (2), pp. 137-166

S&P Global (2019), Corporate Methodology: Ratios and Adjustments

Simerly, Roy L. and Li, Mingfang (2000), Environmental Dynamism, Capital Structure and Performance: A Theoretical Integration and an Empirical Test, in *Strategic Management Journal* 21 (1), pp. 31-49

Thatcher, Janet S. (1985), The Choice of Call Provision Terms: Evidence of the Existence of Agency Costs of Debt, in *The Journal of Finance* 40 (2), pp. 549-561

Triki, Ons and Abid, Fathi (2023), Firms' Financial Structure with Contingent Convertible Debt, Risky Debt and Multiple Growth Options, in *China Finance Review International* 13 (2), pp. 230-262

Vesala, Markus (2019), Examining the structure of corporate hybrid bonds and the stock market reaction to their announcement in Finland

Wang, Jun and Xu, Ting (2021), Stock Market Reaction to the Announcements of Perpetual Bond Issues – An Empirical Study Based on Chinese Listed Companies, *International Conference on Management Science and Engineering Management* conference paper

White & Case (2024), Investors Flock to Investment Grade Debt Markets, Debt Explorer

White, Michelle J. (1983), Bankruptcy Costs and the New Bankruptcy Code, in *The Journal of Finance* 38 (2), pp. 477-488

Williamson, Oliver E. (1988), Corporate Finance and Corporate Governance, in *The Journal of Finance* 43 (3), pp. 567-591

Yin, Robert K. (2009), Case Study Research: Design and Methods, 4th and 5th ed., published by *SAGE*

Zaharis-Nikas, Elaine (2025), Income investing redefined: The case for preferred securities, Cohen & Steers

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