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Green Bonds and Financing Costs: A Case Study of CATL

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Abstract. There is broad agreement in the literature that if a company's Environmental, Social, and Governance (ESG) performance is better, the cost of its debt financing will be lower. Because Contemporary Amperex Technology Limited (CATL) is the world's leading power battery enterprise, its green bond issuance has been highly active, and its relevant information is publicly and freely available, this company was selected as the case to compare the coupon rates of green bonds and conventional bonds. It was found that the average rate of CATL's 2026 green bonds is 1.56%, clearly below the 3.655% average for conventional bonds issued between 2019 and 2020. The mean spread is about 210 basis points. This substantial difference suggests that green bonds may indeed enjoy a pricing advantage over conventional bonds. The conclusion is that green bonds can generate substantial interest savings. Firms should value ESG disclosure, and regulators should support small and medium-sized enterprises in improving ESG capabilities and regulate green bonds to prevent greenwashing.

Keywords: ESG performance, Greenium, Green bonds, Financing costs, CATL

1. Introduction

Against the backdrop of the global Environmental, Social, and Governance (ESG) investment boom, ESG investment is expanding worldwide, and the green bond market is growing rapidly. A growing number of companies are paying attention to ESG performance. If better ESG results tend to be associated with lower debt financing costs, and if ESG performance can be seen as reflecting a company's capacity to generate value and execute effective strategies, then strong ESG performance may plausibly strengthen a company's brand image and stakeholder trust, make it more appealing to long-term institutional investors, and support higher employee retention and talent recruitment. On this basis, this study examines how ESG performance affects corporate financing costs.

It is worth noting that the relationship between ESG performance and financing costs may not be uniform across firms and market conditions. For firms with relatively weak information transparency, the signaling effect of ESG performance may be more pronounced, as investors rely more heavily on non-financial indicators to assess default risk and long-term value. In contrast, for firms already enjoying high credit ratings and strong market reputation, the marginal effect of improved ESG performance on financing costs may be limited. In addition, the green bond market itself is still evolving, and investor preferences, regulatory incentives, and market liquidity conditions can all influence the pricing of green bonds relative to conventional ones. These factors

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suggest that a single-firm, multi-period case study can offer valuable insights that large-sample regressions may overlook, by allowing a closer examination of how ESG performance interacts with financing costs over time and under changing market circumstances.

2. Literature review

It is now widely agreed in most research that a company's ESG performance is inversely related to its debt financing cost: the better the ESG results, the lower the cost of debt financing [1].

ESG performance also matters for financial intermediaries. Using a sample of 493 banks in 39 advanced and emerging economies over 2003–2020, Andrieș and Sprincean find that stronger ESG performance lowers banks' funding costs, with depositors valuing social performance and governance quality in particular [2]. Firms with low ESG scores are considered riskier, in the sense that they are exposed to liabilities related to environmental, social and governance factors that ultimately increase their probability of default. After controlling for other risk characteristics, the analysis shows that a better ESG rating is associated with a lower cost of unsecured debt in the primary bond market [3]. At the same time, it reduces information asymmetry between issuers and investors through fuller information disclosure, so investors are willing to accept a lower risk premium.

In the segmented pricing of green bonds, the literature has further found that green bonds mostly have a greenium; that is, their issue interest rate is lower than that of conventional bonds with the same credit rating and maturity. Some studies report an obvious greenium in the yields of green bonds compared with their conventional counterparts, reflecting a lower cost of borrowing for issuers [4]. However, the size of the premium is inconsistent across the markets of different countries and different periods, and some studies even find the premium to be insignificant [5].

In the Chinese market, it has been found that green bond issuance can significantly improve the ESG performance of corporates, on average increasing ESG scores by about 20.5% [6]. The mechanism test shows that green bond issuance can improve the ease of corporate financing, reduce financing costs and improve the maturity structure of corporate debt [6]. This signaling logic is further supported by previous evidence showing that firms' ESG signals in an interconnected environment promote brand valuation and stakeholder trust [7].

The remaining differences and gaps in the literature focus on three points: first, there is no conclusion on the size and stability of the green premium; second, most studies mainly use large-sample panel regression, so it is hard to show the pricing mechanism of a single firm in real issuance; third, there is a lack of case tracking of the dynamic chain from rating improvement to the resulting changes in bond yields.

3. Methodology

This study selects Contemporary Amperex Technology Limited (CATL), a global leader in power batteries, as the case company. CATL is chosen for three reasons. First, as a globally leading power-battery enterprise and a representative firm in the new energy industry, its ESG performance has attracted considerable attention from investors and other stakeholders. Second, its green bond issuance activity has been relatively active. Between 2019 and 2026, CATL issued multiple green bonds and conventional bonds, providing a rare multi-period sample for in-depth case analysis. Third, the required bond information is accessible through publicly available market disclosure materials, which allows the study to construct a comparable sample of green and conventional bonds. The sample is divided into two groups, namely green bonds and conventional bonds, for

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comparative analysis. According to publicly disclosed ESG rating information, CATL's MSCI ESG rating remains at a high and stable level, with an AA rating that ranks relatively high within the electrical equipment and power-battery industry. This indicates that the firm-level comprehensive ESG rating, as the core explanatory variable, is high and relatively stable. Such a pattern supports the case selection, because it allows bond coupon rates to be examined under a relatively stable ESG performance background.

4. Results

Table 1 describes the sample of CATL's bond issues used for the empirical analysis [8]. The final dataset comprises nine green medium-term notes (MTN) issued in 2026 and two conventional corporate bonds issued between 2019 and 2020.

The green bond group totals 35.5 billion RMB in issuance volume, with issuance dates ranging from 6 February 2026 to 26 August 2026. Overall, the coupon rates show a downward trend. Among these notes, MTN001, the first tranche issued in February 2026, carries the highest coupon rate of 1.70%. The rate gradually fell in subsequent issuances and reached its minimum of 1.48% for MTN004A in late June, a drop of about 22 basis points over nearly five months. The coupon rates then fluctuated moderately within the range of 1.48% to 1.60%. MTN006A, issued at the end of August, returned to 1.50%, close to the lowest point.

The interest-rate gap between tranche A and tranche B within the same issuance is relatively small (e.g., MTN006A at 1.50% vs MTN006B at 1.55%). This suggests that the market's pricing of CATL's green bonds has become increasingly consistent and efficient.

Finally, coupon rates remained persistently low: all green bonds issued in 2026 have coupon rates within the stable interval of 1.48%–1.70%, substantially lower than the 3.63% level observed in 2020.

Table 1. CATL green bond issuance overview (2026)

Serial Number	Bond Abbreviation	Issue Date	Issue Size	Coupon Rate	Credit Rating
1	MTN006A	2026.08.26	58	1.50%	AAA
2	MTN006B	2026.08.26	12	1.55%	AAA
3	MTN005A	2026.07.23	70	1.52%	AAA
4	MTN005B	2026.07.23	10	1.58%	AAA
5	MTN004A	2026.06.25	45	1.48%	AAA
6	MTN004B	2026.06.25	10	1.60%	AAA
7	MTN003	2026.05.28	50	1.50%	AAA
8	MTN002	2026.04.29	50	1.57%	AAA
9	MTN001	2026.02.06	50	1.70%	AAA

Note: Issue size is measured in RMB 100 million

To estimate the interest savings, a bond issuance size of 5 billion RMB is assumed, on which basis the implied annual interest saving is approximately 105 million RMB. With a five-year bond maturity, the simulated cumulative interest savings can reach 525 million RMB. In an upper-bound comparison scenario (using the maximum interest rate in the earlier period, 3.68%, versus the

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minimum interest rate in the recent period, 1.48%), the cumulative interest savings over a five-year maturity reach 550 million RMB.

The estimated total interest savings for all nine green bonds issued in 2026 are presented below: a total issuance volume of 35.5 billion RMB; a rate reduction relative to the average of conventional bonds of approximately 2.10 percentage points (3.655% − 1.56% ≈ 2.10%); and an annual total interest saving of 35.5 billion RMB × 2.10% ≈ 740 million RMB (cumulative 3.7 billion RMB over a five-year maturity). These figures are calculated on a like-for-like coupon-rate basis, and therefore measure the observed interest-cost differential between green and conventional bonds rather than isolating the portion attributable to ESG performance per se. This calculation suggests the substantial impact of lower financing costs on the firm's financial condition. Table 2 provides an overview of CATL's conventional bond issuances during 2019–2020.

Table 2. CATL conventional bond issuance overview (2019–2020)

Serial Number	Bond Abbreviation	Issue Date	Issue Size	Coupon Rate	Credit Rating
1	20CATL01	2020.01.16	30	3.63%	AAA
2	19CATL01	2019.10.28	15	3.68%	AAA

Note: Issue size is measured in RMB 100 million

In examining the limitations of comparisons between green and conventional bonds, this study finds that the average coupon rate of green bonds (2026) is lower than that of conventional bonds (2019–2020), with a mean spread of approximately 210 basis points. Several issues should nevertheless be noted. First, there is a timing mismatch: conventional bonds were mainly issued in 2019–2020, whereas all green bonds were issued in 2026, so the issuance periods do not overlap. This study therefore does not include a same-period comparison between green and non-green bonds, and the overall decline in market interest rates acts as an important confounding factor. Second, with respect to sample classification, 20CATL01 is assigned solely to the conventional-bond group and is not double-counted among green bonds. As a result, the table compares green bonds with conventional bonds issued in different periods; the yield spread thus obtained is not measured within the same time window and therefore cannot be interpreted as a greenium. Third, the two groups have identical credit ratings: both carry an AAA rating, which means that credit rating alone cannot explain the interest rate difference. Future studies should therefore include bonds with varying credit ratings in order to identify the separate influence of the green label.

5. Discussion

This study analyzes the relation between ESG performance and the cost of green bond financing. The comparison shows that green bonds carry notably lower financing costs than conventional bonds, and this cost advantage persists even as CATL's own coupon rates decline and then stabilize within a narrow range. This trajectory in the issuer's own coupon rates is distinct from the overall decline in market interest rates, the latter acting as a confounding factor in the Results section. The observed pattern is consistent with improved market pricing efficiency and a possible greenium effect [9]. Previous evidence shows that green bond issuance can serve as a credible signal of a firm's environmental commitment, with issuers subsequently exhibiting improved environmental

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performance and attracting greater ownership by long-term and green investors, although a significant yield differential between green and conventional bonds is not always observed [10].

Why can a new-energy company such as CATL obtain financing-cost advantages through green bonds? First, natural ESG benefits arise from industry attributes: the power battery and new-energy industries are supported by China's dual-carbon strategy, and firms' ESG performance matches industry features well, so investors recognize their green labels more readily. Second, the leading-firm effect amplifies signal value: as the global leader in power batteries, CATL releases sufficient ESG disclosures, and its ESG ratings carry stronger signaling content, making investors more likely to trust the genuine improvement in its ESG performance. Third, cumulative policy benefits apply: China has released green-finance policies such as the Catalogue of Green Bond Supported Projects, which for the first time unifies the definition of green projects across regulatory authorities and reduces the issuance, trading and management costs of green bonds [11]. Firms with strong ESG performance can make better use of these policy advantages.

6. Conclusion

The results show that CATL's green bonds enjoy a persistent financing-cost advantage over its conventional bonds, an advantage that survives the issuer's own coupon trajectory and is consistent with improved market pricing efficiency and a greenium effect driven by industry-level ESG attributes, leading-firm signaling and cumulative policy benefits. This study collected CATL's composite ESG ratings from multiple institutions in 2025. However, continuous annual rating data from 2019 to 2025 are missing, so the data only support cross-sectional evidence that high ESG ratings correspond to low interest rates. This research cannot fully prove the dynamic causal chain through which rating upgrades gradually reduce interest rates; further research could strengthen this conclusion with complete time-series data. In addition, no econometric model test is conducted. Restricted by the small sample size, this study does not run multiple regression analysis to control for other factors that may affect interest rates, such as bond maturity, issuance scale and market liquidity; future research could carry out regression tests with a larger sample.

Some managerial implications can be drawn. Enterprises' ESG spending is not an extra cost but an investment that can reduce financing costs. As the CATL case shows, green bonds can generate substantial interest savings, so firms should value ESG disclosure. Investors may refer to ESG ratings for green-bond selection and default-risk assessment. Regulators should support small and medium-sized enterprises in improving ESG capabilities and should regulate green bonds against greenwashing to make the market more credible.

In the CATL case, the lower coupon rates of green bonds are consistent with ESG signaling, industry attributes and policy support. Its high ESG ratings send reliable low-risk signals to investors, and together with dual-carbon policies and its leading position in the new-energy sector, these factors are associated with lower coupon rates even though both groups carry the same AAA rating.

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