

Article

A Comparative Study on Risk and Returns in Corporate and Government Bonds

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Abstract

Fixed-income securities are financial instruments that provide investors with regular, predictable income through periodic interest or dividend payments, as well as the return of principal at maturity. Corporate bonds and government bonds are fundamental components of fixed income securities and play a significant role in the financial markets due to their size, stability, and the diversity of options they provide to investors. This research aims to analyze the risk-return tradeoff between corporate and government bonds. The methodology includes various quantitative analytical techniques like- bond valuation analysis, price sensitivity analysis, coupon rate analysis and yield curve analysis. The data was collected from 'Moneycontrol', selecting 10 corporate bonds and 10 government bonds of varying maturities, all with semi-annual interest payments. The research area of this study is India. Results indicate corporate bonds show slightly higher volatility and wider price variations compared to government bonds due to the additional credit risk. Corporate bonds also demonstrate slightly higher price sensitivity to YTM adjustments than government bonds. Findings highlight that corporate bonds offer higher returns at the cost of increased risk, while government bonds offer a safer investment but with lower returns. According to the research, government bonds are ideal for risk-averse investors, offering stability and lower risk, while corporate bonds are better suited for those willing to take on increased risk in exchange for potentially higher returns.

Keywords: Fixed income securities; Corporate bonds; Government bonds; Bond valuation; Yield curve; Coupon rate; Price sensitivity.

1. INTRODUCTION

Diversification of the portfolio is essential to a profitable investing plan. The ups and downs of the financial journey can be managed and decent returns can be obtained by distributing investments over a variety of assets. Whether the goal is capital preservation or wealth accumulation, keeping a well-balanced asset mix is essential. Specifically, fixed income securities offer a feeling of stability and security. Investors are drawn to bonds as fixed-income securities because of their consistent yields, but these returns come with variable levels of risk. It is crucial to remember that corporate and government bonds are an essential part of any diversified portfolio. Among fixed-income instruments, these bonds are the titans.

The Reserve Bank of India (RBI) issues government bonds, also referred to as government securities (Gsecs). Investing in these bonds essentially amounts to lending money to the government for a predetermined amount of time in exchange for interest payments that are

guaranteed. They serve as standards for the price of other debt products and can be viewed as risk-free investments in the Indian financial markets. Additionally, banks, mutual funds, pension funds, and other financial entities that invest in government securities are included in the list.

Businesses issue bonds to raise capital for operational expansion and other company requirements. Purchasing a corporate bond entails making a direct loan to a business. Investors need a higher yield to balance the credit risk associated with corporate bonds. Because of this, corporate bonds typically have higher yields, which attracts investors looking for income.

Investors looking to maximize portfolio performance must consider the risk-return trade-off between government and corporate bonds. Because the government guarantees their backing, government bonds are considered one of the safest fixed-income investments. G-secs are typically regarded as high-liquidity securities, making them rather simple to purchase and sell on the secondary market. These are appropriate for cautious investors who want to make steady profits while protecting their wealth. They are also appropriate for long-term investors with specific goals, including saving for retirement. Conversely, corporate bonds come in a variety of forms to accommodate investors' requirements and preferences. These differ according to the coupon structure, maturity date, industry sector, and the issuing company's credit rating. Buying corporate bonds entails the risk of credit, interest rate risk, liquidity risk, and market risk, which are all linked to fluctuations in the bond's performance or value. Investors diversify their bond portfolios based on several companies from various industries and credit ratings in an effort to lower these risks.

This research paper's objective is to thoroughly examine the risk-return characteristics of government and corporate bonds. Through an analysis of variables like default risk, interest rate risk, and liquidity, this research aims to offer a thorough grasp of how these aspects affect the performance of every kind of bond. This study's research field is limited to India. India's economy is now dealing with currency instability, inflationary pressures, and shifting Reserve Bank of India interest rate policy. Bond yields, especially for government securities, are greatly impacted by the RBI's monetary policy actions, which in turn have an effect on the bond market as a whole.

Due to a move toward safer investments in the face of market volatility, fixed-income investments are growing in popularity. Investors can optimize their portfolios to incorporate bonds that match their risk tolerance and return expectations by analyzing the risk-return characteristics.

In order to examine the risk-return characteristics of corporate and government bonds, this research study analyzes the risk-return trade-off between corporate and government bonds utilizing a variety of analytical techniques. This study adds to the body of knowledge on fixed-income investments and provides scholars and practitioners with insightful information to help them improve their investment strategies.

2. LITERATURE REVIEW

A review of the key studies in bond risk and return indicates several influencing factors are found across the various types and markets of bonds. Identified as the key drivers for risk-adjusted returns within real estate mutual funds are market correlation, the expense ratio, and tax efficiency—all positive contributing factors to equity mutual fund portfolios (Gullett

and Redman, 2005). Dahiya (1997) examines the risk-return profile of Brady bonds and concludes that even though they yield relatively lower returns and exhibit greater volatility than U.S. assets, Brady bonds provide diversification benefits even in the face of currency devaluation, such as Mexico's Peso crisis. In an examination of the performance of South Korea's firms, Lim and Mali (2024) establish that the connection between Tobin's Q and credit rating is more intricate than merely a positive connection; for instance, higher Tobin's Q ratios negatively influence credit ratings when the Tobin's Q ratio becomes larger than a particular value. Díaz and Escribano (2022) analyses the corporate bond market in the U.S. and reveal that metrics of liquidity that use the tightness criterion successfully classify investment-grade from high-yield bonds, and that transaction-cost proxies are also good predictors of high-yield bonds with investment-grade characteristics in terms of liquidity.

Titman and Warga (1986) analysed the returns of REITS and evaluated their performance using the CAPM and the APT. Their findings indicated that the rankings of the InVITs are not sensitive to the risk-adjusted measures. Redman and Manakyan (1995) applied the mutual fund performance measures on REITS based on the period 1986 to 1990 for a period of five years. Using Sharpe ratio as the dependent variable and financial ratios as the independent variable, for equity funds, they ran a regression of the same. Their findings indicated that financial performance (especially the cash flow and asset size), region of properties and categories of real estate investment impact the Sharpe ratio. Martin and Cook (1991) undertook a comparative study of the returns generated by investment made in traditional equity REITs, Finite life equity REITs, the listed limited partnership firms and equity mutual funds. They applied the generalized stochastic dominance (GSD) tool and found that the risk averse investors found the performance of closed ended mutual funds were better than the other sampled asset classes. Kallberg et al (2009) empirically tested REITs mutual funds, by undertaking the cross sectional determinants of standard alpha and time varying alphas and found that both improve when increased asset and portfolio turnover. They suggested that time varying alphas do better in bearish real estate markets. Gallo et al (1991) examines the monthly returns for all sixty five real estate mutual funds from Morning Star performance of real estate mutual funds for the period 1991 to 1997 and found that the funds outperformed the benchmark (Wilshire Real Estate Securities Index) by more than five percentage. The samples funds have a better Sharpe ratio and that the asset allocation of fund managers was superior which led to a better Sharpe ratio.

Ling et al. (2024) study the Chinese mixed-ownership reform by stating that equity acquisition through SOEs eases the financing constraint and increases tax and accounting benefits of innovation of non-SOEs. Berndt et al. (2018) investigates credit risk premia of CDS and EDF data, finding the premium significantly countercyclical and sensitive to the movement of macroeconomic conditionality, especially on the side of investment-grade issuers in the period of the market-wide distress. Zhao (2018) measures implicit government guarantees in European financial institutions, finding that support varies by institution type and increases during financial crises, which in turn affects sovereign default risk. Wu et al. (2022) identify liquidity premiums as key to corporate bond spreads in China's bond markets, with stronger impacts during financial crises, while interactions between liquidity and credit risk vary by market type and fluctuate over time.

Xie et al. (2022) showed that creditworthy rating agencies reduce the cost of borrowing in the China local government bond market for less opaque governments, providing support for credit analysis and policy regarding debt cost reductions. Fisher (1959) proposed that

corporate bond risk premiums are dependent on default risk, which is related to income variability, firm longevity, and equity-to-debt ratio, as well as marketability, which depends on outstanding bond value with a linear relationship in estimating bond prices. Together, these studies demonstrate the sophisticated interaction of the risk factors within the bond markets; therefore, these works guide not only theoretical models by scholars but also real-life investment strategies.

McMillan (2020) examined the behavioural patterns of stocks and bond markets in four countries namely Japan, Germany, UK and USA, by studying the volatility and correlations through a vector auto regression and to analyse the causality and noise. Their results indicate the presence of spillover effects within same assets across different countries increase over time but not their correlations. Presence of volatility spill overs very strongly present and had high variability. Beliaeva et al (2018) investigated the relationship between bond yields and forecasted performances of returns using diverse stochastic processes and model like Merton, Black and Cox Model Goldstein Model, etc. They derive the equation relating to returns of bonds for valuation and aforementioned models. Their findings indicated bonds yields are inversely correlated to expected returns and their maturities.

Kwon (2025) applied a structural VaR Model to investigate the impact of oil price volatility and US markets uncertainty on corporate bond markets. They found that bond yields of emerging economies vary significantly as a result if the oil price changes and US markets volatility. Generally oil supply shocks impact these economies, however, the impact of also volatile.

Baker and Wurgler (2009) undertook a study of the correlation of monthly returns between U.S. government bonds (excess returns) and equity stocks. Their sample covered all U.S stocks (code 10 and 11) for the period 1962 to 2005. They created four bond-return predictors by applying the Cochrane-Piazzesi and Campbell-Shiller style regression models to predict bond returns. Their findings indicated that Government bonds were positively correlated with large cap stocks which were more bonds-like and that they are co-predictable as well.

Rani et al (2019) tested the relationship between bonds and equity (ten international stock exchanges) based on returns, coefficient of variation and beta for the period 2011-2017. The hypothesis was tested using ANOVA-2 way method. Their finding indicated that lack of correlation between the exchanges in the equity as well as bond markets.

3. RESEARCH OBJECTIVES

RO1: To evaluate the risk-return tradeoff between corporate bonds and government bonds through yield curve analysis, identifying the impact of bond maturity and yield differentials.

RO2: To determine the intrinsic value of corporate and government bonds by conducting a bond valuation analysis and comparing these valuations against market prices.

RO3: To analyze price sensitivity and duration across corporate and government bonds, assessing how interest rate changes affect the bond prices of each type.

RO4: To examine the difference between the coupon rates and the YTM of both types of bonds.

4. RESEARCH METHODOLOGY

This study employs various methods of analyzing risk-return dynamics between corporate and government bonds based on yield curves, bond valuation, price sensitivity, and coupon rate analysis.

Yield Curve Analysis: An analysis of corporate and government yield curves provides insights regarding market expectations over interest rates and economic conditions and contrasts the risk-return profiles across sectors.

Bond Valuation Analysis: The bond valuation calculates the fair market price by discounting the cash flows received by the investor in the future. This comparison between calculated and market prices throws light on the price dynamics and perception among investors.

Price Sensitivity Analysis: The analysis provides measures of change in the value of a bond's price relative to 1% and 2% change in YTM and develops interest rate risk and volatility prices for each type of bond.

Coupon Rate Analysis: The coupon rate analysis studies whether every bond trades at a premium or a discount as determined by comparison of how its coupon rate compares with the YTM.

Sample Selection

The study uses data from Moneycontrol. 10 corporate bonds and 10 government bonds of varying maturities, all with semi-annual interest payments were selected, to provide a well-rounded market perspective.

Tools and Techniques

Microsoft Excel was used for data analysis and calculations of bond price valuations, plotting the yield curve, and sensitivity measurements.

This methodology enables a comparative analysis of bond behaviors across corporate and government sectors, highlighting their responses to market conditions.

5. DATA ANALYSIS AND RESULTS

5.1. Yield Curve Analysis

5.1.1 Government Bond Yield Curve Analysis

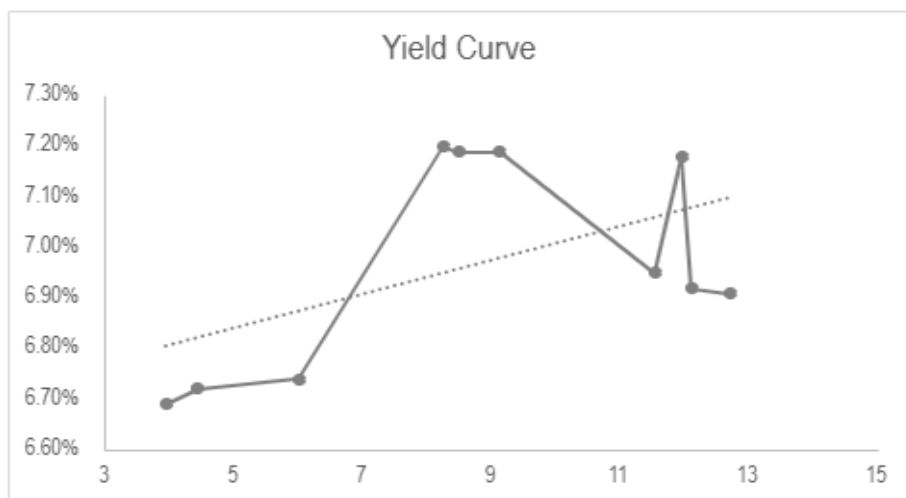


Figure 1 : Yield Curve for government bonds

The yield curve for government securities shows a gradual decrease in yield as the maturity increases. First, the yield is up to 6.69% on bonds with about 3.96 years to maturity growing slightly at 6.72% on bonds with 4.44 years till maturity. However, beyond a shoreline that ranges approximately 6 years, the yield reduces with only small increases and decreases around 6.91% to 7.20%. This means that regarding the issued government bonds, the yield structure remains more or less the same as it rises in maturity with just small fluctuations in the long issues. This yield curve implies a reasonably constant macroeconomic condition since government bonds are often at the risk-free rate.

5.1.2 Corporate Bond Yield Curve Analysis

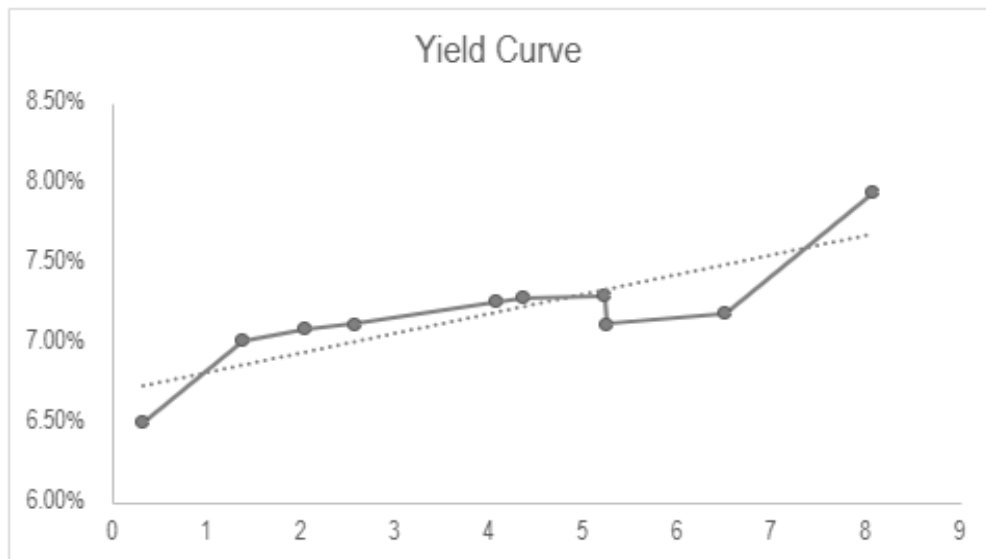


Figure 2: Yield Curve for corporate bonds

The yield curve for corporate bonds exhibits a more pronounced upward slope compared to the government securities curve. Starting at 6.50% for the briefest tenor of approximately 0.33 years, the yield progressively rises to 7.94% at the 8-year tenor. It can be observed that the yield of corporate bonds is always above that of government bonds, given the risks inherent in corporate borrowing are more than those of paying back sovereign debt.

This rising yield curve stems from the corporate bonds pricing that reflects the risk premiums demanded by investors against risks placed on them by corporate bond issuers such as default and economic cycles.

The curve representing the yields on corporate bonds remains higher than the curve representing the government bonds yields for all the maturities. This difference in the yield is mainly attributed to the fact that the corporates bonds typically carry a risk premium as they are more prone to default, liquidity risk and other market factors when compared to government bonds.

One more point worth noting is that in case of the long-term maturities, the government bond yield curve exhibits a slight drop, rather than the steepening of the corporate bond curve which suggests higher long-term returns for such long maturity as a compensation for the higher risks.

This analysis is concerned about the risk – return tradeoff in that corporate bonds provide more returns than risk while government bonds are low risk but provide low returns.

5.2 Bond Valuation Analysis

5.2.1 Corporate Bond Valuation Analysis

Table 1: Bond Valuation for corporate bonds

Name	YTM	Total Bond Price	Market Price
8.95% Indian Railway Finance Corporation Limited	6.50%	100.80	100.78
9.09% Indian Railway Finance Corporation Limited	7.02%	102.69	102.85
8.75% Indian Railway Finance Corporation Limited	7.09%	103.13	103.37
10.04% Indian Railway Finance Corporation Limited	7.12%	106.77	107.07
8.37% Rec Limited	7.26%	103.86	104.28
8.24% National Bank for Agriculture and Rural Development	7.29%	103.50	103.97
7.43% National Bank for Agriculture and Rural Development	7.30%	100.56	101.08
8.80% Indian Railway Finance Corporation Limited	7.12%	107.24	107.77
9.47% Indian Railway Finance Corporation Limited	7.19%	111.68	112.35
7.87% Mahanagar Telephone Nigam Limited	7.94%	99.59	100.45

The sample of corporate bonds comprises bonds of the Indian Railway Finance Corporation, REC Limited, and NABARD which have earnings of between 6.5% and 7.94%. The estimated prices of the bonds conform to the market prices quite well with only minor differences attributed to market conditions and demand for the bonds.

Minor differences in pricing of corporate bonds may be due to risks associated with the bond issuer, market liquidity, and the general attitude of investors towards corporate bonds. The strong correlation observed between the calculated prices and the market prices suggests that there exists efficiency in the pricing of corporates, but the prices depend on the underlying risks.

5.2.2 Government Bond Valuation Analysis

Table 2: Bond Valuation for government bonds

Name	YTM	Total Bond Price	Market Price
7.37% Government of India	6.69%	102.33	102.7
7.10% Government of India	6.72%	101.44	101.86
7.32% Government of India	6.74%	102.83	103.26
7.67% Government of Assam	7.19%	102.95	103.71
7.45% Government of Rajasthan	7.19%	101.63	102.41
7.66% Government of Tamil Nadu	7.20%	103.04	103.9
7.54% Government of India	6.92%	104.87	105.85
7.89% Government of Telangana	7.18%	105.64	106.67
7.41% Government of India	6.95%	103.73	104.72
7.18% Government of India	6.91%	102.26	103.25

The government bond sample includes bonds issued by the Government of India and by various states all having respective yields in the range of 6.69% to 7.2%. Like corporate bonds, market prices for these bonds were found to be in close proximity to the calculated bond prices, hence, there is relative assurance in the pricing of the governmental securities.

As expected, government bonds are usually marked up given their low-risk features and investing habits of risk-averse individuals. The little difference between the calculated prices and the market prices shows there is an efficient market for government bonds, with excess demand carrying the market prices upwards.

5.2.3 Comparison of Corporate and Government Bond Valuations

The result indicates that corporate bonds as well as government bonds are both rated about their derived values. In addition, however, the pricing changes of the corporate bonds are rather wider in scope and fluctuations are more pronounced than that of the government bonds, which variations is attributable to the extra credit risk and the influence of external international market conditions on the corporate bond issuers. In contrast, government bonds tend to have a consistent pricing policy due to the lower risk and more assurance on their demand from the risk-averse investors.

5.3 Price Sensitivity Analysis

Table 3: Price Sensitivity for corporate bonds

Name	New Price at following changes in YTM				
	-2.00%	-1.00%	0.00%	1.00%	2.00%
8.95% Indian Railway Finance Corporation Limited	100.79	100.78	100.78	100.78	100.77
9.09% Indian Railway Finance Corporation Limited	102.88	102.86	102.85	102.84	102.82
8.75% Indian Railway Finance Corporation Limited	103.41	103.39	103.37	103.35	103.33
10.04% Indian Railway Finance Corporation Limited	107.11	107.09	107.07	107.05	107.03
8.37% Rec Limited	104.35	104.31	104.28	104.25	104.21
8.24% National Bank for Agriculture and Rural Development	104.04	104.01	103.97	103.93	103.90
7.43% National Bank for Agriculture and Rural Development	101.16	101.12	101.08	101.04	101.00
8.80% Indian Railway Finance Corporation Limited	107.85	107.81	107.77	107.73	107.69
9.47% Indian Railway Finance Corporation Limited	112.44	112.40	112.35	112.30	112.26
7.87% Mahanagar Telephone Nigam Limited	100.56	100.51	100.45	100.39	100.34

Table 4: Price Sensitivity for government bonds

Name	New Price at following changes in YTM				
	-2.00%	-1.00%	0.00%	1.00%	2.00%
7.37% Government of India	102.77	102.73	102.70	102.67	102.63
7.10% Government of India	101.94	101.90	101.86	101.82	101.78
7.32% Government of India	103.35	103.31	103.26	103.21	103.17
7.67% Government of Assam	103.83	103.77	103.71	103.65	103.59
7.45% Government of Rajasthan	102.53	102.47	102.41	102.35	102.29
7.66% Government of Tamil Nadu	104.03	103.96	103.90	103.84	103.77
7.54% Government of India	106.00	105.92	105.85	105.78	105.70
7.89% Government of Telangana	106.83	106.75	106.67	106.59	106.51
7.41% Government of India	104.88	104.80	104.72	104.64	104.56
7.18% Government of India	103.41	103.33	103.25	103.17	103.09

It is noted that price changes in corporate bonds are marginal when the yield to maturity (YTM) is altered. The price of the 8.95% Indian Railway Finance Corporation bond, for example, does not exhibit any substantial changes and is only in the range of 100.78 (for 0% YTM change) and 100.77 (for +0.01 YTM change), and remains 100.77 (for +0.02 YTM change). Bonds classified as high coupon rates have even lower response to YTM changes. For example, the price of the 10.04% Indian Railway Finance Corporation bond remained in the range of 107.11 at -0.02 YTM and 107.03 at +0.02 YTM due to the stability brought about by higher periodic cash flows. However, there are slight differences in prices for lower coupon bonds such as 7.87% Mahanagar Telephone Nigam Limited which price fall from 100.56 at – 0.02 YTM to 100.33 at + 0.02 YTM.

The government bond sample demonstrates similar yield-to-maturity (YTM) adjustments, allowing for a comparative analysis of price sensitivity relative to corporate bonds. Generally, government bonds exhibit slightly lower price volatility in response to YTM shifts. For example, the 7.37% Government of India bond shows modest price changes from 102.77 at -0.02 YTM to 102.63 at +0.02 YTM, reflecting a narrower spread than most corporate bonds. Higher-coupon government bonds, like the 7.89% Government of Telangana bond, display even greater price stability, with prices ranging from 106.83 at -0.02 YTM to 106.51 at +0.02 YTM. In contrast, lower-coupon government bonds are somewhat more sensitive to YTM changes; for instance, the 7.18% Government of India bond changes from 103.41 at -0.02 YTM to 103.08 at +0.02 YTM. In general, government bonds exhibit stable price changes under YTM changes, aligning with their low-risk profile and investor preference for safety.

5.3.1 Comparative Findings

Comparing the two types of bonds, corporate bonds indicate a slightly higher sensitivity in terms of price compared to government bonds when there are changes to YTM. This is largely attributed to the additional credit risk in corporate bonds. In this respect, corporate bonds' price sensitivity corresponds to what an investor expects; that is, higher yield for more price volatility. Being relatively less risky, government bonds have lesser sensitivities when it comes to change in YTM and can attract conservative investors.

5.4 Coupon Rate Analysis

Table 5: Coupon Rate Comparison for corporate bonds

Name	YTM	Coupon Rate	Comparison	Price Status
8.95% Indian Railway Finance Corporation Limited	6.50%	8.95%	Above YTM	Premium
9.09% Indian Railway Finance Corporation Limited	7.02%	9.09%	Above YTM	Premium
8.75% Indian Railway Finance Corporation Limited	7.09%	8.75%	Above YTM	Premium
10.04% Indian Railway Finance Corporation Limited	7.12%	10.04%	Above YTM	Premium
8.37% Rec Limited	7.26%	8.37%	Above YTM	Premium
8.24% National Bank for Agriculture and Rural Development	7.29%	8.24%	Above YTM	Premium
7.43% National Bank for Agriculture and Rural Development	7.30%	7.43%	Above YTM	Premium
8.80% Indian Railway Finance Corporation Limited	7.12%	8.80%	Above YTM	Premium
9.47% Indian Railway Finance Corporation Limited	7.19%	9.47%	Above YTM	Premium
7.87% Mahanagar Telephone Nigam Limited	7.94%	7.87%	Below YTM	Discount

The corporate bonds analyzed generally have coupon rates above their YTM, indicating that investors are willing to pay a premium for these bonds. For instance, corporate bonds with coupon rates exceeding their YTM, such as the 8.95% Indian Railway Finance Corporation Limited bond with an YTM of 6.50%, are trading at a premium. This indicates that bondholders are likely to pay a price higher than its nominal value due to the more favorable coupon payment. Most corporate bonds in this sample demonstrate similar features, which is the case in which coupon rates are greater than YTM. This indicates that because excessive coupon payments are in high demand by investors, resultant prices for the bonds are often premium to face value. There are, however, some exceptions from the sampled corporate bonds, one of which is the 7.87% Bond of Mahanagar Telephone Nigam Limited, which even though has a coupon rate below its YTM 0.94% trades at a fraction discount. This relatively low coupon rate that is lower than the YTM makes this bond less appealing, thus its price is

lower than the par value. In general, regarding the issuance of most of the Corporate Bonds under consideration, several of them are quoted at a discount to the market YTM primary because the coupon rate is greater than the YTM, as is the tendency of investors wanting more return for more purchasing capital.

Table 6: Coupon Rate Comparison for government bonds

Name	YTM	Coupon Rate	Comparison	Price Status
7.37% Government of India	6.69%	7.37%	Above YTM	Premium
7.10% Government of India	6.72%	7.10%	Above YTM	Premium
7.32% Government of India	6.74%	7.32%	Above YTM	Premium
7.67% Government of Assam	7.19%	7.67%	Above YTM	Premium
7.45% Government of Rajasthan	7.19%	7.45%	Above YTM	Premium
7.66% Government of Tamil Nadu	7.20%	7.66%	Above YTM	Premium
7.54% Government of India	6.92%	7.54%	Above YTM	Premium
7.89% Government of Telangana	7.18%	7.89%	Above YTM	Premium
7.41% Government of India	6.95%	7.41%	Above YTM	Premium
7.18% Government of India	6.91%	7.18%	Above YTM	Premium

The evaluation of the rates of coupon of government bonds shows a trend of premium observable in the entire sample since coupon rates are greater than YTM and hence, they are sold at a premium. Such trend is also observable in all other government bonds studied, where values are priced above face value due to higher coupon rates than YTM. For example, the 7.37% Government of India bond; YTM 6.69% is trading at a premium, which is evidence that investor's pay a premium when investing in funds that provide a more secure and consistent income stream in the form of government bonds. In the same light, the yield volatility exhibited by government securities is less than that of the corporate bonds owing to the reduced YTM and coupon rate differential. The constancy in yield-to-coupon ratios brings out the lower risk profile of government bonds which justifies the premium at which bonds are generally available in this sample. The analysis has shown that in the sample provided, both corporate and government bonds tend to trade in excess of par value on account of higher coupon rates than their respective YTM.

6. FUTURE RESEARCH AGENDA

The present study forms the preliminary grounding of the risk-return characteristics of corporate and government bonds, on which further research could be dug deeper to add more elements for providing greater insight into bond market dynamics. Future research may, for instance, expand the scope of the analysis by adding high-yielding bonds, green bonds, and the inflation-indexed bonds-emissions of each enjoying special yield curves and risk profiles. A comparative approach across different economies, especially between emerging and developed markets, would give a wider view of global market conditions and investor expectations. It would also serve well to consider the assessment of macroeconomic and geopolitical factors influencing not just the yield curve but also price sensitivity and investor behaviour in the bond market, such as inflation rates and geopolitical tensions, among other aspects. Other areas of research could pertain to the psychology and sentiment of fixed-income investors, especially during economic downturns or rate hike cycles, in an effort to understand how behavioural factors propel bond price instability. Finally, building sophisticated machine learning models that price bonds and predict yields could better the

accuracy of valuations, especially in turbulent markets—a data-informed approach to understanding and forecasting bond market trends.

7. CONCLUSION AND LIMITATIONS

The underlying study comprehensively accesses the risk-return trade-offs between corporate and government bonds in India's bond market with respect to essential variables such as yield curves, bond valuation, price sensitivity, and coupon rates. Furthermore, it emerges from the analysis that corporate bonds generally offer higher yields with a steeper yield curve than government bonds due to the higher risk related to corporate issuers. On the other hand, government bonds are less volatile and react to the rise and fall in prices less noticeably, thus becoming more attractive for conservative investors. Evidently, the fact that premium pricing occurs for both kinds of bonds is because coupon rates are much higher than the YTM level, thus reflecting investors' desire for a stable income. Yet, the contribution of these findings from that study is invaluable in terms of light it throws on how characteristics of bonds impact investment decisions and, therefore, fixed-income investment strategies in India.

There are therefore a few limitations that must be considered in interpreting the findings of the present study. First, the limited sample size of 10 corporate and 10 government bonds used may poorly reflect all aspects of bond characteristics from different sectors and maturities, which can limit the generalizability of the results. Second, the analysis in the paper is solely based on information sourced from Moneycontrol. This makes the leads a bit narrow and less robust, since prices of bonds and yields might vary across sources. Another limitation is assuming that there is stability in the economic environment—in a case where market volatility is high, the assumption may not be valid, which could impact significantly on bond prices and yield trends. This study focuses only on Indian bonds; therefore, the application of this study to other markets, more so for countries with different economic and regulatory environments, becomes very tenuous. Finally, tax implications or inflation-adjusted returns are not included in this study, factors that are considered crucial since they can substantially affect real returns and investor decisions in bond markets.

In conclusion, while this study offers a nuanced perspective on the dynamics of corporate and government bonds in India, these limitations suggest that the findings should be approached with caution. Future studies incorporating more bonds into the dataset, along with data sources and economic conditions of various kinds, might also include additional financial influences such as taxes and inflation. Cumulatively, these limitations and recommendations make for a comprehensive approach to bond analysis, therefore giving weight to the discussion of the fixed-income strategy in financial investment decisions in India.

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