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A Deep Dive into The World of Bonds – A Qualitative Analysis

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ABSTRACT

The bonds have emerged as an interesting safe haven asset for retail investors in 2025 as other market-based investments have generated poor returns over past 2 years. Bonds aren't something new, they are part and parcel of the economic structure of nations and have been the backbone in leveraging a country to great heights, but bonds are also a tool that should be used with great care as when it's mismanaged, the outcomes have backfired. The history has repeated the same story time and time again and through this study the idea that would be conveyed would be the "How Bond Markets have Implication on wider Financial Markets and also Economies of Nations?". Through this study the readers would be educated about the basic's terminologies of bonds, how bond markets work, how bond yields get determined, the parallel working of equity markets and bond markets, its implication on the economy and the cases of failing bond markets on global markets and the economy with Russia and Greece as examples. They together form a complete picture for a layman to understand about the bond markets and its functioning and its broader implications as a whole.

Keywords – Bond Markets, Broader Implication, Basics Terminologies of Bond, Russia & Greece, Parallel Working of Equity & Bond Markets

INTRODUCTION

2025 has been a tipsy year for Indian Economy internally as well as externally. The macros have underperformed when it was expected to perform well, has overperformed when it was expected to perform badly, the inflation numbers are suspiciously low with the sort of growth numbers we are seeing (RBI, 2025). The equity markets have seen phases of poor performances followed up by great recoveries all whilst balancing the record high outflows of foreign portfolio investors & record inflows of domestic institutional investors, the commodity markets of gold & silver have skyrocketed at unsustainable growth rates with extreme volatility all thanks to the high level of global uncertainty we are seeing with wars across the globe, disrupted supply chains, heightening tensions, sanctions, import & export quotas and tariffs, and the wildest uncertainty element of all - Mr. Donald Trump (47th & Current President of United States of America), who is throwing all sorts of geopolitical bombs which nations quite frankly struggle to deal with.

So, due to all these uncertainties, corporate bonds have taken the spotlight for the right reasons as it sorts of provides risk-free stable-returns for the bond holders, but the risk-free part is debatable as it lies on a relatively scaling. Although Credit rating agencies like ICRA, CARE, Crisil in India and Moody's, Fitch, S&P globally do provide a sense of credit repayment capacity of the issuing institute, still one can

never really tell what could go wrong or when it could go wrong with peak example being Russia defaulting on its federal treasuries in 1998 (Owyang, 2002), which sent shockwaves to global markets which back then believed that a country could never default on its treasuries.

The Russian federal treasury default in 1998 was one of those instances which proved everyone wrong as there is general consensus in the markets that treasury bonds are amongst the safest assets in the world (Owyang, 2002). Even today US federal treasury is considered as the benchmark risk free return rate used by every organization due to USA's stellar track record of never defaulting in its payments. But hypothetically if USA defaults, markets would collapse, grow back and take a new form where it would completely change the course of structure of modern-day financial markets. Some experts have opinions that bond markets are far more critical than equity markets, although the arguments are debatable, bond markets have proven its magnanimous importance from time to time, establishing itself at the core of financial markets.

PROBLEM STATEMENT

The research objective is to investigating into "How the wider Financial Markets are very much correlated with Bond Markets and how failing Bond Markets can send shock waves in the wider Financial Markets and also Economies of nations?". The study will address this major question by decoding the basics into how bonds function, its wider implications with its heavy linkages with the Equity Markets and finally how historic cases of failing Bond Markets have had contagion effect on the wider Financial Markets, Economies of Nation and how it has helped to reshape the modern outlook on Bond Markets.

OBJECTIVES OF THE STUDY

- The primary goal of this research is to illustrate about the bond market's functioning and its broader implications for global financial stability.
- To explain basic bond terminologies and market mechanics such as defining types of bonds (secured, unsecured, fixed, floating, etc.) and the roles of intermediaries like investment banks and underwriters.
- To differentiate between Primary and Secondary Bond Markets which illustrates on how bonds are issued for the first time via underwriters and how subsequent price discovery occurs on secondary platforms.
- To analyse about the determination of Bond Yields by inspecting the inverse correlation between market price and yield, and the impact of benchmark rates like India's Repo Rate or the US Federal Funds Rate.
- To find the correlation between Bond Markets and wider financial markets including the Equity Markets, by testing the validity of the Fed Model which suggests stocks and bonds are competing assets whose yields often move in unison during periods of inflation.
- To investigate the greater impact of bonds in financial markets and economics by specifically analysing the Russian default of 1998 and the Greek financial collapse to understand the mechanisms of debt-driven contagion**.**

REVIEW OF LITERATURE

Regarding G-Sec and influencing variables behind it influencing its movement, (Singh, 2014) explains about the topic with study of Yields in India in an Empirical Approach. The study focused on the secondary market yields on Government securities on a residual maturity basis. The determinants that were considered include the policy rate (repo rate), money supply growth, inflation, interest rate and liquidity. The study narrows down and identifies five factors to be specific to fluctuation in G-Sec. The result of analysis shows that these variables can explain the movements of the G-Sec. yields to the extent of 75.6%. The study does agree that there are grey areas in relation to other fundamental and technical areas which influence G-Sec yields but this provides a general base for analysing the movement of yields based on the underlying variables.

When it comes to works focusing on investigating the relationship between bond yields and equity market yields, (Aronson et al., 2002) does the work by focusing on investigating the relationship between bond yields and price to earnings of the US stock markets (P/E is a direct measurement of equity market yields). The study mentions that there is a strong consensus amongst non-academic community that the basic comparison underlying the Fed Model is valid. Fed model is a model which argues that stocks and bonds are competing assets, so when the yield on bonds falls, so should the yield on stocks fall (and the P/E rises).

The study also states that the more quantitative Fed Model supporters can show us that historically (at least for the last 30-40 years) “stock market P/Es and interest rates have indeed tended to move together, with P/Es being reliably higher when interest rates are lower and vice versa, exactly as the Fed Model would augur” (Aronson et al., 2002). The study also states that there is ensuing conclusion that the Fed Model is valid.

Russian default was one of the most important chapter in shaping the modern day bonds markets as one had never seen such a humongous nation failing to clear of its federal debt and (Owyang, 2002)’s work explains about the Russian Default of 1998 and its implications on money market, liquidity, currency market and financial markets. The study explains how the annual yields on Ruble denominated bonds were more than 200 percent, how the stock market had to be closed for 35 minutes as prices plummeted since shares fell 65% in a single day and how between January and August the stock market had lost more than 75 percent of its value. The Study explains the reasons for the crisis as it states that during the summer of 1998, the Russian economy was primed for the onset of a currency crisis and talks in depth about the. The study also states that “First, it exacerbated Russia's revenue problems. Its debt grew rapidly as interest payments mounted. This put pressure on the exchange rate because investors feared that Russia would devalue to finance its non-denominated debt. Second, high government debt prevented firms from obtaining loans for new capital and increasing the interest rate did not increase the supply of lending capital available to firms. At the same time, foreign reserves held by the CBR were so low that the government could no longer defend the currency by buying Rubles.” (Owyang, 2002).

Bond Market yield shocks are pretty common after just like other financial markets especially after release of some key information like unemployment data, inflation data or rate cut announcement. The study of (Fleming & Remolona, 1997) & its findings suggest that the largest price shocks and the greatest surges in trading activity in the bond market stem from the arrival of public information is

reassuring. Over the August 23, 1993, to August 19, 1994, sample period, each of the twenty-five sharpest price changes and each of the twenty-five

greatest surges in trading activity can be associated with a just-released announcement. These results suggest that U.S. Treasury securities prices react largely to the arrival of public information about the economy. Moreover, the study also says that "we find that the bond market's reactions depend on the unexpected component of a given announcement and on conditions of uncertainty. Taking account of the surprise component in a report's announced numbers extends our list of announcements that significantly affect bond prices from nine to thirteen, longer than any such list in previous studies" (Fleming & Remolona, 1997). This presents the idea of - Greater the market uncertainty, stronger market response, particularly in the form of increased trading activity.

The interesting study of (Vihar & Jena, 2020) which is about monetary policy transmission suggests that, the impact of short-term yields (91-day Treasury bills) is significantly higher than the Repo rate. Therefore, the RBI could consider moving to a similar framework as in the US Fed where it sets a target range for the US Federal Securities as an instrument to set interest rates in the economy. This makes sense given that government securities serve as a benchmark for corporate debt and cost of capital in the country. The low transmission of changes in Repo rate as compared with 91-day Treasury bills is due to multiple factors including the policy of small savings rate that impacts the long end of the yield curve.

The dominance of G-Sec bonds in Indian Market and PSU Bonds being viewed as a 'Pseudo G-Sec Bond' is explained by the study of (BIS, 2002). The says that the PSU bonds are generally treated as surrogates for sovereign paper, sometimes due to explicit guarantees and often due to the comfort of public ownership. Some of the PSU bonds are tax-free, unlike most other bonds, including government securities. The study claims that the government securities market is the overwhelming part of the overall debt market in terms of both outstanding securities and trading volumes. "Nearly 80% of the INR 7,500 billion of outstanding debt securities as at end-March 2001 was accounted for by government securities" (BIS, 2002). Their yields serve as a benchmark for the financial markets and the RBI increasingly uses them for open market operations.

The claims made by (Fleming & Remolona, 1997) was to be confirmed by the report of (RBI, 2025) i.e., the Monetary policy. The report suggests similar price movements in bond markets coinciding with a public announcement of major news. The 10-year G-sec yield moved in the range of 6.62 to 6.86 per cent during the second half of FY25 with major movements coinciding with the movements in US yields and the rise in crude oil prices. Yields, however, softened amidst positive sentiments on the inclusion of Indian Government Bonds in the Emerging Market Government Bond Index (EMGBI). There is also the mention of yields softening due to sharp fall of gross domestic product (GDP) growth estimates of Q2 and anticipation of an early easing of monetary policy cycle. The yields followed similar pattern of hardening and softening with expectations based on the Federal Reserve Rate Cuts, Repo Rate Cuts, Inclusion of Indian government bonds in Emerging Markets Local Currency Index (EMLCI) and also by the market liquidity conditions.

There are plenty of risks associated with bonds, one of the major ones is the liquidity risk which is present in secondary markets, which could potentially make a bond illiquid in the secondary markets if

the holder is looking to exit it actively. The study done by (Flanagan, 2019) strongly suggests (sample size - 4,049 bonds issued between 2010 & 2017) that secondary market liquidity plays an important role in determining the potential gains from primary market allocations. Due to the liquidity costs that investors save by avoiding acquiring bonds through secondary market trading, gains from primary market allocations can far exceed the observed under-pricing. They go on to say that gains from primary market allocations are highly concentrated in a small number of investors, those who have trading ties with underwriters, are favoured in the primary market and the effects of past trading on underwriters' initial allocation decisions also increases illiquidity of the bonds in the secondary market.

To understand the technical terms in layman's language, the study of (NISM, 2025) acts as an excellent option to get to know about the various types of bonds that are available in the market such as Fully convertible debentures (FCD), Partly convertible debentures (PCD), Optionally convertible debentures (OCDs), Commodity Linked Debentures (CLDs), Equity Linked Debentures (ELDs), Mortgage Backed Securities (MBS) and Asset Backed Securities (ABS) all in layman terms.

The study of (Borg & Cortis, 2020) follows the study of (NISM, 2025) by explaining various types of bonds such as Secured//Unsecured Bonds, Green Bonds, Callable bonds, Putable Bonds, Corporate Bonds, Sovereign Bonds, Discount Bonds, Fixed Rate Bonds, Inflation Bonds, Floating Rate Bonds, Sukuk Bonds, etc. The study also goes on the lines of various risks associated with bonds such as Interest Rate Risk, Reinvestment Risk, Market Risk, Inflation Risk, Liquidity Risk & Credit Risk (which has 3 sub divisions – Default Risk, Credit Spread Risk, Downgrade Risk).

On the lines of liquidity, the study of (Fleming, 2001) claims that both high and low levels of trading activity are associated with periods of poor liquidity and goes onto explains that trading volume and trading frequency are only weakly correlated with the other measures, suggesting that they are poor proxies of liquidity. In contrast the study says that the Quote and trade sizes correlate modestly with the other liquidity measures and with the episodes of poor liquidity in the expected manner, as do yield spreads between on-the-run and off-the-run securities. The study claims that the correlations of the liquidity measures across securities "suggest a commonality in liquidity and price determination is prevalent in the Treasury market, so that models of price changes should account for cross-security order flow (following Hasbrouck and Seppi (2001))". It also suggests that an analysis of the determinants of liquidity – including the role of issuance sizes and frequencies – might provide useful policy guidance for the Treasury to adjusts its debt management policies (Fleming, 2001).

The idea of higher issue of treasury bonds i.e., higher sovereign debts leading to worsening GDP has been discussed in the study of (Choi & Robatto, 2024). It says that higher debt to GDP reduces banks' liabilities and bank lending and, ultimately, lead to a reduction in investments and a worsening of labour market conditions. In the theoretical analysis, they have presented a simple dynamic model that rationalizes this result. The study mentions that "A crucial element of the model is that government debt and bank deposits provide liquidity services to households and are substitute. Hence, an increase in government debt crowds out bank deposits and, as a result, bank lending, investments, and GDP" (Choi & Robatto, 2024).

The depth of Greek Financial Crisis has been investigated by the study of (Georgios, 2010) and it majorly attributes the crisis to the evolution of public debt from the early 1970s to the present time in relation to the political regime and the different governments in office. They observed that the debt/GDP ratio was constant until 1979 and at very low levels, about 25%. The inauguration of the socialist government implemented an economic policy programme that was mainly based on inducing the income of the average Greek household through extensive borrowing from the markets (Georgios, 2010). This borrowing was completely streamlined to higher consumption levels in an effort to raise the standard of living of households.

This process was also fuelled by the incoming capital flows from the EU in the form of agricultural subsidies and from the financing of infra structure within the broader framework of the convergence and cohesion policies of the EU (Georgios, 2010). The study says the reasons were all interlapped and it was a culmination of issues of that the lack of the necessary fiscal consolidation during the years running up to the crisis when the growth rates were falsely reported to be higher than actual which led to higher budgets, along with withdrawal of heavily dependent European subsidies and mainly the massive sovereign public debt that grew to unsustainable levels and finally all of it culminated to cause the crisis.

RESEARCH METHODOLOGY

The research is qualitative in nature and sources of data include the Reserve Bank of India Monetary Policy Report, Ministry of Statistics and Program Implementation (MoSPI), US Federal Reserve Reports, Public Access Journals, Research Papers, Research Articles and other Research Articles & other internet academia sources.

RESULTS AND DISCUSSION

1. BASICS INTO BONDS

“Bonds are specialised borrowing agreements that bind a lender (investor) and borrower (issuer) that give the former a claim to periodic streams of income transferred by the borrower. Bonds form part of a wide array of different debt obligations together with mortgage-backed securities, asset-backed securities, and bank loans, to name a few.” (Borg & Cortis, 2020)

We might get a general idea of what a bond is from the above quote – it is a financial security issued by a company or a government that essentially binds the issuer and the lender into an agreement of loan, where the issuer borrows money from the prospective lender who gives money for in exchange for receiving bondholder certificate which guarantees return of the principle amount after a certain tenure, or maybe even with a premium during redemption as a bonus for the lender, along with interest for the capital lent which is usually fixed, but could be flexible also (based on certain benchmark), which could be payable on monthly instalments or quarterly or semi-annually or annually or cumulatively at end of the set tenure, with or without the option for getting interest on the interest that is cumulated. That’s the simplest way we could explain what a bond is in layman language but bonds are far complex than what it seems to be, it involves various intermediary parties apart from the issuer and the lenders, some of the examples being like Registrar and Transfer Agents, underwriter, distributors, Investment banks, etc. To understand what their role is we need to first understand the basic difference between how primary bond markets and how secondary bond markets work.

1.1 Primary vs Secondary Bond Market

"The primary market is a market where securities are traded for the first time, before being listed on the Stock Exchange. Here, shares and other securities are offered for the first time to investors by Underwriters through Brokers who act as Stock Selling Agents. This process is commonly referred to as an Initial Public Offering (IPO)". (Fabiola & Ponno, EwaldoArie, 2020). In bond market, primary market is the place where for the first time the bond is issued for potential lenders to invest in, companies and government agencies use this platform to issue their bonds. All bond transactions are OTC and are not regulated by exchanges like NSE or BSE, thus there also exists a certain element of trust on the distributors, intermediaries, brokers who play a part in the transactions that happen.

"The secondary market is a place for buying and selling of shares among investors after the initial period of offering of shares in the primary market, no later than 90 days after the issuance of the issuance of permits, the securities must be listed on the exchange. With a secondary market investors can buy and sell securities at any time. While the benefits for companies, the secondary market is useful as a place to gather institutional and individual investors" (Fabiola & Ponno, EwaldoArie, 2020). Secondary market is where price discovery of securities takes place, it is the place where the real demand and supply get to discover the price as in the primary markets underwriters will take over and the issue will get subscribed regardless whether the public demand is good or poor. The secondary market in India has platforms like Goldenpi, BondsIndia, IndiaBonds, Wintwealth who not only distribute the primary issue and also have open offers for already listed bonds. To know more about how bonds work we need to understand the different types of bonds.

1.2 Types of Bonds

Secured Bond – "Bonds can be either secured or unsecured by the issuer. Secured bonds are generally those backed or collateralised by an asset (money or physical asset)" (Borg & Cortis, 2020). Secured bonds generally apart from giving the creditor the right to acquire the asset if the company defaults on its payment, it also gives the creditor the preference during insolvency in terms of payment. Secured bonds generally are preferred by lenders due to its rather safer appearance.

Unsecured Bond – Unsecured bonds are which that is not backed by the issuer with any security i.e. on default of any payment, the lender cannot claim for ownership for any assets of the issuer and has to wait till the issuer announce bankruptcy or insolvency. Unsecured bonds are generally listed at higher interest rate even if the company has a great rating and history of repayment, since it doesn't have a 100% backing by any asset, there also exists partly secured bonds, in which asset value is backed not to complete value of listing of bonds.

Fixed Rate Bond – "A fixed-rate bond is a type of debt security, which pays the same coupon payment at a pre-determined schedule. The issuer of this financial instrument is obligated to pay out a regular stream of income over the life of the bond, with the par value being repaid at maturity" (Borg & Cortis, 2020). A fixed rate bond will always stick to the coupon rate in which it is issued at.

Floating Rate Bond – "Floating rate bonds have a variable interest rate that fluctuates according to a chosen market interest rate benchmark, known as the reference rate" (Borg & Cortis, 2020). Floating rate bonds are very comparable to EBLR loans which banks use, where the benchmark rate is linked to Repo Rate usually in India, any change in the benchmark will have an impact on the coupon rate the bond holds and the bond holder will be transmitted the rate subsequently. Most of federal debt are

benchmark linked floating rate bonds with benchmark rate being Repo Rate in India, Federal Funds Rate in USA and comparable Central Bank – Commercial Bank rate across the nations.

Cumulative Bond – Cumulative bonds are fixed income securities which pay interest along with the principal at end of the tenure, cumulative bonds may or may not have the option of interest on interest accumulated. Cumulative bonds give the lender the option of receiving a single lumpsum return when the tenure completes.

Non-Cumulative Bond – Non cumulative bonds are bonds in which interest payment is regular and laid down during listing. The interest payment period could vary from issue to issue, it could be monthly, quarterly, semi-annually, annually but whatever be the interval is, the payment schedule is properly laid down before listing of those bonds.

Treasury Bond – Sovereign bonds or Treasury bonds are fixed income securities that are issued by the government body, which issues bonds in the name of its federal treasury. The are usually considered the safest forms of investments and are usually called G-Secs in India. They are usually linked with a benchmark rate like Repo Rate, with consistent issues through the year. They form the biggest part in many markets and are generally considered the risk-free rate due to the relatively low risk, but there have been instances of defaults in payment by big nations also.

Corporate Bond – Corporate fixed-income issuances provide companies the opportunity to raise funds needed by the organisation through the debt securities market. Some corporate bonds, unlike those issued by sovereigns, may give the investor the option to convert their holdings into shares of the company, through a convertible option (Bodie, Kane and Marcus, 2014).

Fully Convertible Debentures – "Fully convertible debentures are fully convertible into ordinary shares of the issuing company. The terms of conversion are specified at the time of issue itself" (NISM, 2025). These give the option for the lender to become the shareholder of the company, becoming part of its growth story and in essence vesting their interest together with the company's. It also gives the option for the investor to acquire shares at cheaper rate than market price, since the conversion details are all fixed at an earlier date. The company also benefits from it as the need for huge cash holding during redemption is bypassed, but at the cost of diluting the stake of the existing shareholder.

Partly Convertible Debentures – "Partly convertible debentures (PCDs) are partly convertible into ordinary shares of the issuing company under specified terms and conditions as specified at the time of issue itself. The nonconvertible part of these debentures is redeemed as happens in any other vanilla debenture" (NISM, 2025). Partly convertible debentures gives all the benefits of fully convertible debenture but at partial impact, it gives the lender the benefit to get some amount back during redemption, it also gives the company the advantage of dilution lesser stake of existing shareholders.

Non-Convertible Debentures – "Non-Convertible Debentures (NCDs) are pure debt instruments without a feature of conversion. The NCDs are repayable/redeemable on maturity" (NISM, 2025). These are generally the most issued debentures as companies and lenders view debt separately apart from equity and it straight up keeps bonds as bonds. There won't be any dilution of existing shareholder stake, nor there would be any vested interest of lender in the company beyond the tenure of the debenture.

Foreign Currency Bond – "Foreign currency bonds are bonds issued by a company in a currency that is different from the currency of its home country. Companies in emerging markets may prefer to issue bonds in USD or currencies of other economically matured countries as they carry significantly lower interest rates" (NISM, 2025). For example, in 2020 Adani issued USD based bonds, which was more

attractive for investors since the company not only paid the interest but also the appreciation of USD over INR also adding value to the interest amount and final repayment.

External Bond – "External bonds, also referred as Euro bonds, are bonds issued in a currency that is different from the currency of the country in which it is issued" (NISM, 2025). It is similar to foreign currency bonds since the issue of bond is in terms of another nation's currency. The major problem is the currency risk that is associated with such bonds, any devaluation would spike up interest payment. The bonds issued in Indian Denomination is called Masala Bonds.

Discount Bond – "Discount bonds are debt instruments which are issued and traded below their par value. The yield-to-maturity on a discount bond is higher than the coupon rate, which is attributable to the bond trading at a sub-par price" (Borg & Cortis, 2020). For Example, the Treasury bills of Indian government are often discount bonds which offer the bond for short term at a discount on the principal amount and the difference between the discounted principal amount and the actual principal amount which will be repaid acts as the coupon rate of those securities.

Green Bond – "The creation of green bonds, which refer to any type of bond instrument, has thus provided a means to earmark the raised funds by the issuer toward financing or to re-finance eligible Green Projects" (Borg & Cortis, 2020). Green bonds are usually issued to finance environmentally friendly projects or for building infrastructure projects like solar energy, wind energy or CSR projects. This gives the advantage for lender to be environmentally and socially responsible and also move closer towards ESG goals.

1.3 How Bond Yields are Determined?

To understand how bond yields are determined, we need to understand a few terminologies. The principal value of the bond is called the face value, the interest rate per annum is the coupon rate per annum. The face value is different from the market value, as face value is based on accounting and basically the integral value of the bond. The market value is the speculative value of the bond, based on how the demand and supply of the bond is, essentially allowing the bond to discover its price in the market. Usually, the market value of bonds moves as volatile as stock values but still there is a headroom for extreme movements when the market feels that the bond is extremely junk or extremely stellar and there goes a huge inflow or outflow of demand and supply for that bond. For example, during a war time, a defence sector-based company's bond will have huge demand due to speculation as the market might think, defence sector will be the stellar sector during such time. The yield of the bond is essentially the coupon rate divided by the market price of bond.

There exists an inverse correlation between the market price and the yield of the bond, when the market price reduces, the yield increases and when the market price goes up, the yield reduces. For a better understanding we also have to look at the dynamics, imagine a 1000/- rupee face valued bond, it holds 10% coupon rate, suppose due to an unfortunate news about the company, the credit rating reduces for the company and the market reacts by selling the bond, with lower demand on the other side. This meant that the bond price in the market reduces to 900/- rupees, then if someone who is buying at 900/- rupees is still getting 10% interest on 1000/- rupees face value which is 100/- rupees per annum, but at an investment sum of rupees 900/-, so his yield essentially is 100/900 = 11.11% yield just on interest, so he gets better return on investment, on top of it, he will be received the additional 100/- rupees on repayment of capital since he will receive the whole 1000/- principal repayment.

These dynamics are market dynamics, but also there is the dynamics of interest rates, since majority of federal debt is floating rate bonds and are often linked with the benchmark rate. In India the benchmark rate is Repo Rate, in USA it is the Federal Funds Rate. So, when the Central banks reduce or increase their rates, the coupon of the existing floating rate bonds rise or fall, and the issue of new fixed rates also rise or fall. There also exists the dynamics of arbitrage between risk free rates of nations, so when USA has its Treasury rates at suppose 3.5%, and Indian Treasury Bond rates are at 5.5%, the 2% arbitrage might be attractive for the lender to lend in Indian Treasury Bonds to set-off the risk premium. As a final nail in the coffin, there also exists the currency risk, which is the arbitrage between valuations of different currencies and its movements. Suppose the 5.5% Indian Treasury Bonds are denominated at Indian Currency, and the Indian Rupee depreciates 5% against US dollars with horizon looking poor for the currency, then the investing even with a 2% arbitrage doesn't make sense due to the currency risk. Subsequently the demand of the bonds falls in secondary markets, whilst seeing selling pressure and the yields go higher in the market, making the bonds more attractive at those valuations, bringing in better demand. This cycle might keep continuing with the changes in benchmark rates.

2. IMPACT OF TREASURY BONDS ON THE FINANCIAL MARKETS AND THE ECONOMY

2.1 Impact of Treasury Bonds on the Financial Markets:

Bonds market performs a vital role in influencing the stability, the stakeholder's behaviour and performance of the financial markets. Constant changes occurring in the bond yields, liquidity aspects, risk premiums and the debt issued by the Government significantly impacts the share markets, money markets and capital inflows and outflows. The primary way through which bonds impact the financial markets risk premiums and how the Government pricing its debts. The spread on the Government bonds increases during financial instability. It is at that time when there is a financial crisis, investors usually demand higher risk premiums for holding the Government bonds of fiscally weaker nations which will ultimately lead to higher borrowing costs and volatility in the market. The constant growth in the Government bond yields often projects higher default or credit risk which will eventually impacts the investors trust in the equity and the banking sectors. So bond markets do acts as early warning indicator of financial stress prevailing in the market (Hagen & Paper, 2010).

The other primary aspects include the liquidity as well as the funding conditions. During the crisis period, the change in treasury issuance and programs carried out by Federal Reserve programs directly impacts the repo rates. The securities of the Treasuries are often used as collateral in the money market. The fluctuation in their supply influences the short-term interest rates and also the liquidity in the market. It simply indicates that bond markets maintains the stability in the financial system (Hrung & Seligman, 2011).

Bond markets responds heavily to the changes frequently occurring in the macroeconomics. There is direct relationship on how the treasury yields adjusts rapidly after the release of any ground breaking or major economic news releases. It is noticeable that the changes in the yield curve impacts the stock prices of shares or securities, investors trust in the financial markets across the globe and reassesses the overall expectations from the market (Pierluigi Balduzzi, Edwin J Elton, 1997).

It is misconception that stock market as well as the bond market moves in the opposite direction. During the periods when inflation is high or when monetary policies are tightened, both the markets may decline due to higher interest rates, increased discount rates and reduction in the asset values. When economy slowdowns, bonds perform better as investors resort to safer assets which leads to negative correlation.

So it may vary from term to term. The dynamic interaction impacts the portfolio diversification, strategies for risk management and the volatility in the market. Therefore, understanding the correlation between the stock and bonds are essential for the stakeholders in order to maintain the financial stability (Dimic et al., 2014).

2.2 Impact of Treasury Bonds on the Economy:

It can be noticed that when the economy of a country or even at a global level grows faster than the interest rate levels on the Government debts, the debt burden can be easily managed over time. The Government must allocate a larger chunk of the revenue to its interest payments, should also limit the spending on developmental projects when the growth rate remains lower than the interest rate levels. Bond yields has the capacity to directly impact the Government's ability to support economic expansion over the long term (Kogan et al., 2015).

The deposits in the banks and supply of loans are reduced when there is high supply of Treasury securities. Limited resources are available for the purpose of lending to the firms, when banks allocate more funds to hold the Government bonds. The decline in credit ultimately reduces the investment in businesses which eventually to leads to slower economic growth. Issuance of bonds can have significant effect towards the labour market as it affects the employment rate and lower labour income (Choi & Robatto, 2024).

The spread between the corporate bonds and the treasury bonds will indicate changes in the industrial production. When the spread expands, the cost of borrowing for the firms will increase which discourages both investment as well as the production. It often occurs before economic slowdowns, since the conditions of the bond market are connected to outputs being driven (Faqeerzai, 2023).

The key saving and investment decisions are affected when Government debts are reduced as when the supply of safe assets starts declining, investors prefer to move towards other assets and that impacts the long-term capital formation and financing of debt to the private sectors. It will ultimately reshape the economic growth rate in the long run (Reinhart & Sack, 2000).

The changes in the monetary policies in nations will reshape the entire yield curve. Since interest rate determines the borrowing costs for the major sectors of the economy that is the households and the businesses, change in the yield of bonds directly influences the consumption, house investments and corporate expansion. Bond market acts as a channel only through which the key policy decisions impacts the economic activity (Personal & Archive, 2017).

3. CASE STUDY ANALYSIS

3.1 The Russian Default and its Impact on the Financial Markets.

On December 8th 1991, the Communist model USSR collapsed and it made sure that there was no model that could counter the modern day Neo-Liberal Capitalist Economics. The follow-up was USSR was formally split into 15 Federal Nations among which Russia was the biggest one. When we investigate the fall of USSR, we would know that apart from failed Political reforms, decades of financial mismanagement and poor economic growth were also the main reason for the agitation of people which led to the eventual fall. The same fate continued for the newly formed Russia, which defaulted on its Federal Debt and announce Moratorium on Foreign creditors in 1998. This action was not something unintentional but it was deliberate after years of mismanagement of the Russian Ruble and the Federal Debt. (Owyang, 2002)

Carrying the load of Soviet image along with Soviet era Debt, Russia was tasked not only with clearing the Soviet Debt but also negotiate without the ball in its park due to the Soviet image, all whilst facing the challenge of low growth of Real GDP. The primary reason for the default was that people lost faith in the Russian Federal Treasury which had high amount of yield beyond its coupon rate. How it happened was not due to a single reason but due to culmination of multiple factors. It all kicked off when Russia was tasked with clearing the debt acquired by the Soviets. After the negotiation with Paris & London Club, Russia successfully restructured the legacy debts and it presented a very positive outlook for Russia which had its exports growing especially oil and also its credit rating got improved. But the Paris Club's recognition of Russia as a creditor nation was based upon questionable qualifications. One-fourth of the assets considered to belong to Russia were in the form of debt owed to the former Soviet Union by countries such as Cuba, Mongolia, and Vietnam. Recognition by the Paris Club was also based on the old, completely arbitrary official Soviet exchange rate of approximately 0.6 rubles to the dollar (the market exchange rate at the time was between 5 and 6 rubles to the dollar). (Owyang, 2002)

Alongside to the Paris & London Club agreement, Russia also expected a payment from IMF for the economic reforms it carried out in post-Soviet era. The trigger point was “The Asian Crisis” which led to Russia losing valuable but scarce foreign reserves. Along with the under reported Federal debt, many Russian banks held off Balance sheet Liabilities. This triggered a Ruble Devaluation Crisis as Foreign Nations began to lose trust in the Russian markets and the Government. The crisis worsened when the IMF payment was delayed along with the falling price of oil in the global markets, impacting the Russian exports and foreign reserves. As people began to lose faith in the Russian markets, the demand for Treasury bonds which are essentially treated as Risk free Assets began to fall. It was a very bad sign of things to come but it indicated that people lost faith in the Government. Russia in a hurry began to sort something out as a last ditch effort but all went in vain. At the same time, the IMF left Russia, unable to reach an agreement with policymakers on a 1998 austerity plan. Word spread of these incidents, and big investors began to sell their government bond portfolios and Russian securities, concerned that relations between the United States and Russia were strained. (Owyang, 2002)

As the demand for the Russian Treasury fell, the yield shot up due to availability of those assets at cheap rates in the financial markets. Russia tried to defend this by shooting up the lending rate to 30% subsequently to 50% and finally till 150% since the Russian exchange rate was deteriorating very fast and people failed to believe in the Government. Finally the crisis reached the boiling point and Russia devalued its foreign exchange deliberately accepting its fate and defaulted on its treasury bonds and announced the moratorium on its foreign creditors. The aftermath was the stock market fell from the 1996 heights and it reached record lows in the second half of 1998 after the Russian default. After the default, the GDP recorded a negative 4.9% growth and the Ruble devalued from 5 Ruble to 6 Ruble per USD till upto 35 Ruble per USD by December 2000, finally coming in line with the actual valuations of the Federal debt that Russia owed.

The study of (Dungey et al., 2002) showed that from the period February 1998 to the end of that year, show evidence of contagion from the Russian shock, as a credit risk shock, to both the developed and developing markets. In proportionate terms, contagion effects from Russia were particularly substantial for Brazil, Bulgaria, the Netherlands and the United States, and less so for Thailand and Poland. Contagion effects from the U.S. based LTCM near-collapse, as a liquidity risk shock, were also substantial for a number of countries. “In proportionate terms, contagion effects from this shock were

particularly important for Argentina, Russia, Poland, Thailand, Brazil and the Netherlands" (Dungey et al., 2002). We also when investigating the U.S market, we noticed that the benchmark index S&P 500 and Dow Jones Industrial Average, both fell close to 20% between June and October 1998, this showed the contagion impact of Russian default on U.S companies and financial markets. Also when investigating the bond yields of U.S. Federal Treasury bonds of 1 year and 5 year, between June and October 1998, the bond yields fell upto 120 – 150 basis points, instilling the confidence in U.S. Federal Treasury bonds and reiterating the unshakeable image of US Federal Debt as the most important benchmark risk free asset. We also could notice the general theory of inverse relationship between equity markets and debt markets, that the Fed model says, when Equity markets perform well, debt market yields increase and when the Equity Markets perform badly, the Yield of Bond markets drops.

3.2 The Greek Debt Crisis and its impact on the financial markets.

One of the most significant sovereign bond crisis that Eurozone ever saw was the Greek Debt Crisis. It simply defined how bond markets can impact and destabilize the existing financial systems. As we understand how global financial crisis during the period 2007 – 2009 resulted in increased public debt across economies, the Greek debt crisis was the outcome of weaker fiscal position than previously reported, which later emerged in late 2009 (Kouretas, 2010).

Greece experienced a significant decline in the borrowing costs after its adoption of Euro in year 2001. It reflected strong investor confidence and the belief that Eurozone membership meant stability both in the short as well as the long term, when interest rate spreads between Greek and German Government bonds narrowed down at a larger pace. The government expenditure as a part of GDP grew significantly, while Greece maintained high fiscal deficits (Kouretas, 2010).

The deficits were persistent that eventually led to accumulation of public debt which accompanied weakness in the structure of the economy and ineffectiveness on the part of fiscal governance. In addition to the issues being faced, the country suffered from serious competitiveness problems like the current account deficits grew at a greater pace and was at the peak in 2008 at around 14% of the country's GDP, which clearly indicated the structural issues in the production and also the external trade performance (Causes et al., 2012).

The deterioration of the macroeconomic fundamentals between the period 2001 and 2009 reached levels inconsistent with the long-term participation in the European Monetary Ministry or union (EMU). It led to a shift in the expectations demanded by the market as the markets moved from an assumption of an implicit EMU guarantee of Greek debt to pricing in substantial default risk (Michael et al., 2010).

When the markets realised the legit fundamentals in the late 2009, the investor's confidence towards the market declined significantly. After revealing the revised fiscal data, the stakeholders came to know that Greece's deficit in budget and public debt were under reported. As a result, the yield from the bonds increased and the spread against the German debt securities were expanded. The long tenure 10-year Greek Government bond's yields rised higher which ultimately indicated market under stress (Kouretas, 2010).

The crisis not only spread across Greece but created a contagion effect which impacted the whole of European financial markets. In countries such as Portugal, Ireland and Spain, the bond yields responded strongly to the news about the country and bailout negotiations. It reflected the connection the Eurozone bond markets and the structured importance of the investor's confidence. Also the European banks were fearing that a Greek default may trigger a wider banking crisis (Haan, 2013).

In order to prevent the default and systematic or structural collapse, Greece was provided with 110 billion Euros as a rescue package by the International Monetary Fund(IMF) and the European Union. However, the policy found to be less effective in restoring the lost confidence in the market and the economic contraction subsequently continued (Mix et al., 2011).

We could notice how the role of transparency and trust actually works in the financial markets. When data were not properly disclosed, the investor confidence in the market gets severely impacted in a negative manner. The financial markets depend upon reliable and

timely information and it's a usual trait of investors to demand higher returns for taking the subsequent level of risk.

CONCLUSION

Bonds do play a vital role in both the financial markets as well as in the broader economic sense. Right from their issuance in the primary market, being actively traded in the secondary market, it facilitates the capital formation, enables the various sectors in the economy to raise funds, and provide investors with the option to earn steady income. The discussion on the different types of bonds available in the market, facilitates how risk, liquidity, maturity, credit ratings, issuers profile impacts the decision of the investors in the market. Understanding how the bond yields are influenced through interest rate changes, inflation index, credit or default risk and many other macroeconomic factors indicates the connection between bond market and how it affects the economic fundamentals.

The analysis of bonds' impact on the financial market reflected how bond yields influence the stock valuations, liquidity, capital inflows and outflows within the economy. Movements occurring in the Government bond yields acts as a standard or a benchmark for fixing the prices of other financial instruments or typically assets, typically making the bond market a primary component of the existing financial system.

Also, the study of bonds' impact on the economy gives a clear image on how it performs its role in deciding the credit availability, investment decisions, employment rate and growth in the long term. Changing debt levels and bond spreads signals economic expansion and how it contributes to the financing stress based on the macroeconomic factors.

The Russian default of 1998 and the Greek debt crisis further illustrate the structural and systematic importance of the bond markets. These crises demonstrated how the Government debt can trigger the financial instability across the globe, increase the risk premium, weaken the banking system and reduces the investors' confidence and their expectations.

To conclude, bonds are not only fixed income securities but also transmits a powerful economic indication during major policy integration. It reflects the stakeholder's expectations about the inflation, growth, fiscal credibility all whilst shaping or structuring the borrowing costs, investment decisions, and performance of economic model. A stable, sustainable and well-regulated bond market is crucial for ensuring financial stability and promotion of sustainable economic development. Understanding bonds and their impacts, provides valuable insights required for functioning of modern-day financial systems and dynamics of economic systems.

SUGGESTIONS OF THE STUDY

- Through this study we would like to suggest that the bond markets and the financial markets are very much interrelated and that the model of bond yield vs equity performance correlation is valid.

- Through this study we would like to suggest that major financial crisis stems out of interest rate and federal debt mismanagement and since both elements are the same elements that define bonds, we would suggest mismanagement of bonds create crisis.
- The study would like to suggest that bonds are an integral element of an economy and has implications on various elements of the economy and similar to corporate bonds, treasury bonds also are leveraged equipment, which if not properly managed will have bad effects on the economy.
- The ultimate purpose of this study is to suggest to a layman how bond markets work and how the bond markets and the financial markets are correlated and how it impacts the economy. Through cases of Russia and Greece, we interpret the findings.

LIMITATIONS OF THE STUDY

- The study is predominantly pertained with qualitative statistics which has been derived from other studies, which means higher dependency on the level of quality of those research articles.
- The study does not investigate into depths of bond market yield curves and equity market performances of multiple nations across various timelines and depends on generic data of benchmark models such as USA's to validate results.
- The study does not discuss about the fed model in depth about discounting techniques, valuation techniques, cost of capital and other models which plays a part in decision making of redirecting the investments from equity markets to bond markets and vice versa.
- The study does not cover about the general dynamics of banking systems & the monetary policy basic and the transmission of the interest rates towards general credit, which has a way big implication on the economy and financial decision making which uses leverage.
- The study is only pertained to two major cases of failing bond markets but in reality there are plenty of cases that could be investigated, which were not touched upon in this article.

IMPLICATIONS OF THE STUDY

- The study deeply investigates into 2 major economic crashes which had direct causation due to failing bond market.
- The study aims to educate the audience about the basics of bond markets and the terminologies of the bond market to grasp the later parts of the discussion about the crisis that happened closely related to bond markets.
- The study discusses about the general impact of treasury bonds in the financial markets and explains about the dynamics between those two markets.
- The study discusses about the implications of treasury bonds against the economy and how deeply they are connected with each other i.e., macroeconomic and bond market dynamics.

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