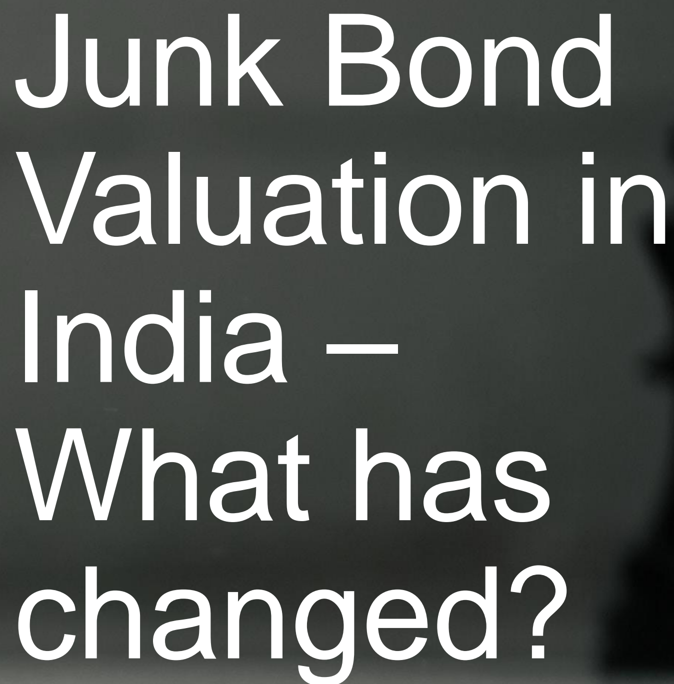

Junk Bond Valuation in India – What has changed?

An approach note for valuation of non-investment grade bonds

April 2019

incwert
Valuation | Research

“In order to have uniformity and consistency across the Mutual Fund industry on valuation of money market and debt securities rated below investment grade…All money market and debt securities which are rated below investment grade shall be valued at the price provided by valuation agencies…”, Securities and Exchange Board of India (SEBI) Circular SEBI/HO/IMD/DF4/CIR/P/2019/41 dated 22 March 2019

Foreword

We believe amongst many other factors which we have laid down in our approach note to value junk bonds in India, important reference points derived from actual recoveries for distressed companies that defaulted and underwent insolvency proceedings with The National Company Law Tribunal (NCLT), quasi-judicial body in India that adjudicates issues relating to Indian companies can be analysed for addressing recovery ratios.

Based on data published by The Insolvency and Bankruptcy Board of India (IBBI), the regulator for overseeing insolvency proceedings in India, average recoveries for financial creditors which yielded resolution under Corporate Insolvency Resolution Process (CIRP) since the inception in Dec 2016 until Dec 2018 has been around 48%. The regulatory body also mentioned that the recovery values via the resolution process were approximately 2x more than the liquidation values computed for such companies.

In the paper, we have discussed approaches and methodologies for valuing non-investment grade bonds.

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QUICK FACTS ON INDIAN CORPORATE DEBT MARKET

- Approximately INR 27.4 lakh crore (equivalent to USD 400 billion) corporate bond market at the end of FY2018
- More 85-90% are AAA and AA
- Corporate debt market is less than 20% of Indian GDP which is much lower versus other countries like 46% for Malaysia and 73% for South Korea

Source: a) Reference material from The Economic Times, https://economictimes.indiatimes.com/blogs/et-commentary/corporate-bond-market-india-incs-five-find-outers/
b) Crisil publication https://www.crisil.com/en/home/newsroom/press-releases/2019/02/global-national-AAA-ratings-not-comparable-says-crisil.html

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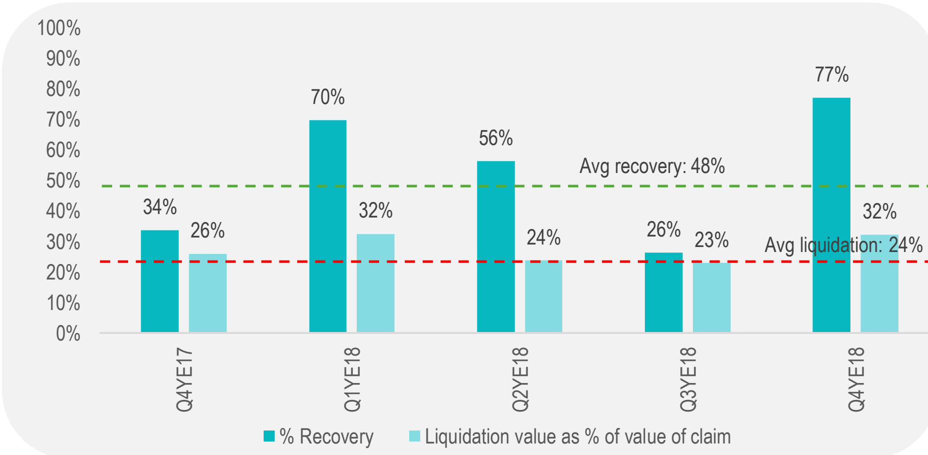
1.1

Recoveries - reflection of value left in junk bond

Quick facts about debt recoveries under CIRP of IBBI

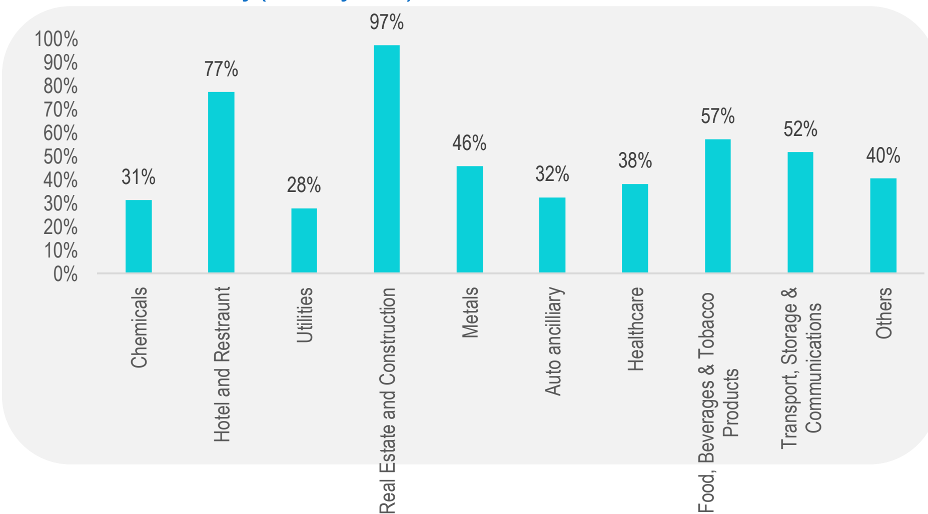
- 48% average recoveries over the last two years with 77% in the most recent quarter ended December 2018 (Chart 1)
- Recoveries are 2x liquidation value (Chart 1)
- Recoveries recorded highest in Real Estate sector (97%) and lowest in Utilities (28%) as seen in Chart 2

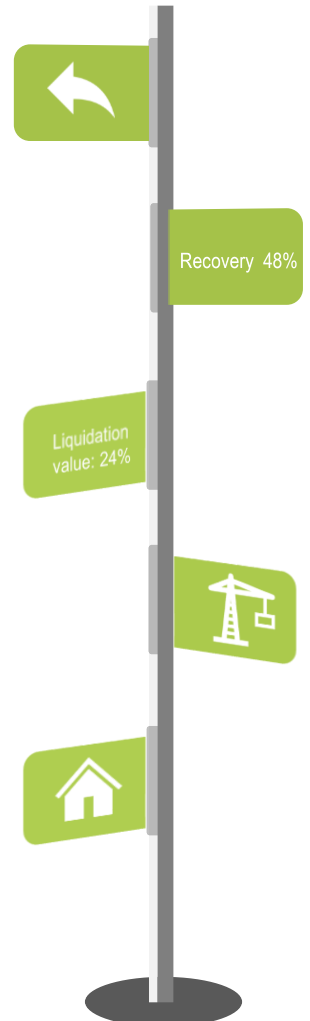
Chart 1 – Recovery % (Quarter wise)



Note: a) Recovery % represents amount realisable by FCs as a percentage of their claims admitted.

Chart 2 - % Recovery (Industry wise)





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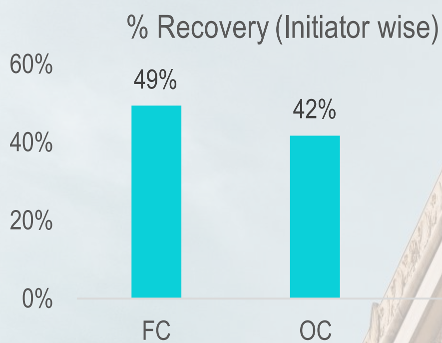
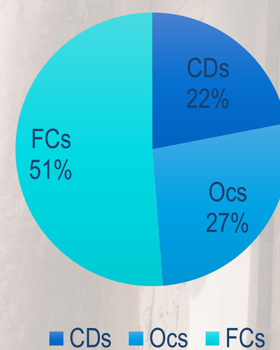
1.2

Recoveries - reflection of value left in junk bond

- Under Insolvency Bankruptcy Code (IBC), insolvency can be initiated by either financial creditors (FC) or operational creditors (OC) or corporate debtor (CD)
- CIRP initiated majorly by FCs (51%) followed by OCs (27%) and remainder by CDs (22%)
- Recoveries were highest in CIRPs initiated by FCs at 49% followed by situations in which OCs initiated (42% recovery) and lowest at 30% recovery when CDs themselves filed for insolvency





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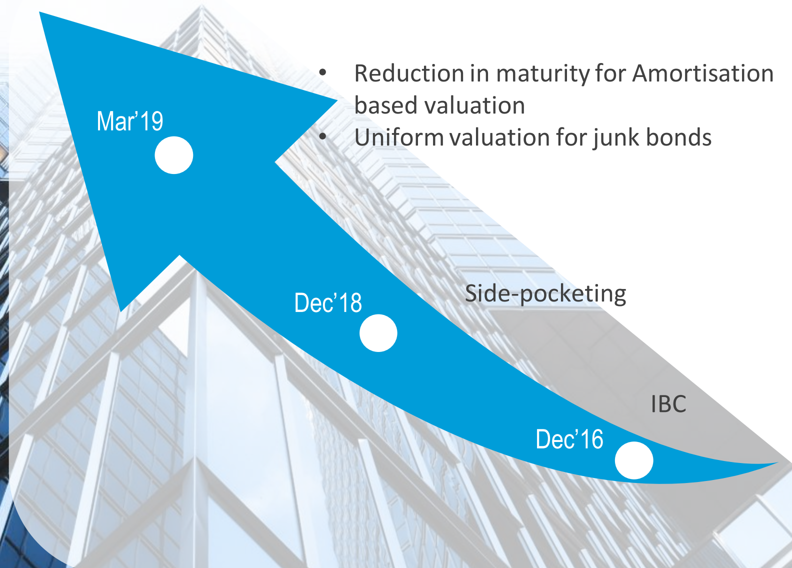
2.1

Background

- Any debt security that is rated below BBB- by S&P's or Baa3 by Moody's is known as junk bond or non-investment grade bond. There is an interesting history on why non-investment grade bonds are also known as junk bonds: Michael Milken, one of the well-known Wall Street investment banker of the 1980s, allegedly coined the term "junk bonds" to describe the portfolio of low-grade bonds owned by one of his early clients. Companies issue low-grade, also called "high-yield" bonds, at high interest rates because of the associated high risk of non-payment. Junk bond can be further split into two sub-categories:
  - **Fallen Angels** – Bonds which were once investment grade, but got downgraded to junk driven by the weak credit quality of the borrower
  - **Rising Stars** – Opposite of fallen angels, i.e. upgraded to investment grade from earlier junk status
- If we reflect upon the changes made in the Indian corporate debt market over the last three years, we will notice that there is a trend to make this market, especially non-investment grade credit, more credible. **Four reforms that underscore these changes** are: i) The Insolvency and Bankruptcy Code (IBC), 2016, ii) mutual funds side-pocketing allowed in December 2018, iii) amortization-based valuation for residual maturity reduced from 60days to 30days in March 2019 and iv) uniform valuation by mutual funds for non-investment grade debt securities in March 2019. The last three reforms have been brought by the Securities and Exchange Board of India (SEBI), the regulator for the securities market in India



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2.2 Bearing of reforms on non-investment grade bonds

The four reforms mentioned above have one point in common: all of them have a bearing on non-investment grade debt (junk debt) as explained below:

- IBC aims to create a credible resolution for lenders where the borrower has defaulted. Such defaulted securities would have been into junk rating before defaulting
- Mutual funds side pocketing rules allow the mutual funds to split their funds along with their respective Net Asset Values (NAVs) into two portions: performing assets (liquid) and stressed assets (illiquid). The side pocket is a ring-fenced structure where stressed junk bonds can be parked
- Amortisation based valuation rule is now applicable to only such debt securities whose maturity is less than 30 days from an earlier threshold of 60 days. This reduction in the maturity period ensures that traded debt securities including junk debt securities are marked-to-market earlier. Thus NAVs would get recorded based on a valuation provided by a valuation agency for any instrument whose maturity is more than 30 days
- Valuations for non-investment grade bonds will have to be uniform and in-line with prices as provided by valuation agencies. Valuation agencies will be appointed by the Association of Mutual Funds in India (AMFI).

In this paper, we will discuss the fourth bullet on non-investment grade valuations in greater detail, concerning the valuation approaches and methodologies.

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2.3

Trigger to SEBI's mandate for uniform non-investment grade bond valuation

- **Trigger to SEBI's mandate for uniform non-investment grade bond valuation**: After Infrastructure Leasing & Financial Services Limited (IL&FS) defaulted in mid-2018, the company was downgraded by various rating agencies over next few months/quarters to below investment grade. Considering that prices are not available by rating agencies for non-investment grade bonds, various mutual funds that were holding IL&FS paper, provided their haircut based on their internal valuation to value the security to calculate and publish NAV. This approach resulted in a wide price range for the same underlying instrument held by various mutual fund managers.
- Finally, in **March 2019**, SEBI came up with a circular on the valuation of money market and debt securities which are rated below investment grade. The regulator has told that going forward such valuation will be uniform and will be based on the pricing provided by valuation agencies. SEBI has provided valuation agencies **90 days** to develop a framework for valuing below investment grade debt securities.
- In the interim, we have come up with our thought paper to discuss the various valuation methodologies and approaches for valuing non-investment grade debt securities from a fundamental analysis viewpoint.

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3.1

Non investment grade bond valuation

How is Investment Grade (IG) bond being valued in India?

- For investment grade bonds, there are two different methodologies which are primarily utilised: one administered by the Fixed Income Money Markets and Derivatives Association (FIMMDA) and the other by credit rating agencies.
- FIMMDA provides a comprehensive pricing framework for IG bonds under various scenarios like availability of rating – for self (in the past) or similar borrower's current rating etc. One such scenario is for non-traded but rated bonds. It says that the pricing will be based on Government securities (G-Sec) yield + mark-up. Such mark-up is based on a matrix of a) sectors, b) ratings and c) maturities and the mar-up will be at least 50 basis points (bps) wider versus similar maturity of the G-Sec yield.

How do asset managers value non-investment grade bonds in developed credit markets?

- **Liquid bonds or High Yield (HY) bonds**: Credit markets are highly developed in western countries like the US with ample liquidity for non-investment grade bonds too. In addition to the pricing for plain vanilla bonds, many other credit derivatives like credit default swaps (CDS) also have a liquid market which allows for efficient price discovery.
- **Illiquid bonds and loans** - There are pockets of credit instruments which are relatively illiquid – for example leveraged loans, distressed debt and direct lending.
- **Valuation process** - Irrespective of whether the asset manager is valuing liquid or illiquid bonds, the process is a mix of art and science. The process should be considered as a prism where we need to look through various perspectives and then draw a meaningful conclusion. It requires analysing idiosyncratic as well as systematic factors. To name a few, from idiosyncratic perspective asset managers look at the capital structure, organisation structure, free cash flow projections, deleveraging potential, covenant analysis, rating migration risk, relative value analysis and recovery analysis. From a macroeconomic perspective, variables like interest rates, inflation, GDP forecast and other credit-related factors are considered.

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3.2

Our approach

Indianisation of sophisticated credit valuation approach of developed markets to meet domestic specs for valuing non-investment grade bonds

Let us start with basics which do not changes irrespective of geography or credit rating: the value of a bond is the present value of the expected cash flows on the bond, discounted at an interest rate that is appropriate to the riskiness of that bond.

Recall, we had spoken around the prism approach to valuing bonds. Taking this forward, we have laid three broad approaches to valuing non-investment grade bonds:

- Fundamental approach and
- Relative value approach
- Option model approach

(1/3) Fundamental approach: We should look at the following factors to develop a methodology for valuing a junk bond:

- Capital Structure: This is the first step to get an overall sense of the position of bond in terms of its risk and return profile versus other debt pieces in the capital structure
    - Leverage – As defined by dividing gross (or net) debt by EBITDA gives a view on how high or low is the risk. This parameter is always better understood by comparing it to its historic levels as well as the peer averages. By calculating leverage at all the critical intra-capital structure nodes, allows gauging riskiness at the bond level. Hence, it may be essential to calculate leverage at senior debt and junior (non-investment grade) debt levels
    - Subordination – Ranking and seniority are critical in gauging the value of a bond. Consider this as a queue where you are standing based on your ranking, and the distributor is holding a 'pie'. Only after senior commitments are paid off who are ahead of you in the queue, your turn will come to ask for your dues. Equity lies last in the line and will take the entire residual after everyone else is paid off. It is also possible that though a junk bond is junior at the obligor level (which happens to be an operating company, i.e. OpCo) but at a consolidated level, it will enjoy seniority versus senior debt raised at holding company (HoldCo).
    - Equity Cushion – A junk bond is subordinated to secured debt but senior to equity. Hence, larger is the equity cushion, lesser is the chance of value erosion at the junk bond level in a scenario of some credit event getting triggered
    - Maturity – Longer is the maturity, greater will be the expected return (yield)

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- Deleveraging potential: Leverage is defined as debt/EBITDA. Deleveraging refers to a reduction of leverage in a company over a forecasted period in future. This can happen by either reducing debt or increasing EBITDA. Reducing debt is known as absolute deleveraging, and increasing EBITDA is known as relative deleveraging. Absolute deleveraging can happen by generating free cash flows and paying off debt as per amortisation schedule or voluntarily prepaying debt. This analysis requires FCF projections over the next 5-10 years and then evaluate whether the company will generate enough EBITDA and FCF for deleveraging.

- Scenario analysis: Knowing that the credit risk of a non-investment grade borrower is high, downside scenario is always run to test specific ‘what-if’ analysis like zero-growth, same EBITDA margin or loss of a critical customer or increase in competition. Sophisticated frameworks would break-up the components of capital expenditure (capex) to gauge the capacity of management of a company to postpone any growth capex to manage FCF and meet their commitments to debt holders – interest payment and promised principal repayments

- Covenant analysis: Covenants are promises in any credit agreement. There are two kinds of covenants – a) negative or restrictive covenants which do not allow the borrower from doing certain activities like additional indebtedness and b) positive or affirmative covenants which binds the borrower to meet certain requirements such as net leverage not exceeding a specific threshold level. Breach of such covenants will trigger default by the borrower with a rating downgrade by a credit rating agency.

- Enterprise Valuation (EV): This is one of the most important fundamental analysis which is performed to determine the size of the ‘pie’. EV can be calculated utilising various approaches like market approach, income approach and the cost approach. If the company is listed, and there is sufficient liquidity for its debt, then EV as available from market databases which might be used as a quick reference point. However, in most cases, debt may not be listed or despite being listed, may not have enough liquidity. Hence, EV/EBITDA multiple of comparable companies might be taken after applying an adjustment to such peer median multiple which makes it suitable for the borrower. EV can be computed by multiplying the multiple with estimated EBITDA.

- Similarly, transaction multiple could also be used to arrive at EV. We can also use the discounted cash flow (DCF) methodology to calculate EV. Hard asset coverage or book value methodology could be applied to get a view on the EV.

- Recovery analysis – Recovery analysis is a waterfall analysis to find the value of non-investment grade bond by first allocating the ‘pie’ to meet the commitments of senior debt and other structurally senior debt-like items and then calculating the residual value left for the junior or non-investment grade debt.

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3.2

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(2/3) Relative value approach – Starting point could be to find similarly rated bonds of similar maturity by similarly sized issuers in a related industry. After analysing the set of such companies, we need to find the yield to maturity (YTM) or yield to worst (YTW) and then make appropriate upward or downward adjustments to find a discount rate that is required to be taken for discounting future cash flows of the non-investment grade bond.

Another approach could be to build the discount rate from the building blocks – i.e., identify short-term default-free rate (Government securities) and then adding default premium and maturity premium. The discount rate used to calculate the present value of the bond will vary from bond to bond depending upon default risk, with higher rates used for riskier bonds and lower rates for safer ones.

(3/3) Option model approach – CFA Institute [1] in one of its publications on HY analysis, explained the work of the Nobel Prize-winning economist Robert Merton. The institute noted that Merton had provided a theoretical groundwork that helps explain the weak connection between duration and price change in the speculative grade. He modelled a corporate bond as a package of a default-risk-free Treasury bond and a short position in a put option on the issuer's equity. The put is triggered when asset value declines to the point of being equivalent to the value of the company's liabilities, thereby reducing the value of the equity to zero. When that happens, the wiped-out shareholders see no benefit in continuing to pay debt service, so they put (surrender) the equity to the residual claimants, the bondholders. In other words, the company defaults on its debt. The closer the put is to being in the money, the more the bond's price is affected, leaving less room for the influence of duration. A speculative-grade bond is closer to default than an investment-grade bond; hence, the greater the impact the equity put option has on its price

Note 1: Source, CFA Institute's publication, "Foundations of High-Yield Analysis"
https://www.cfainstitute.org/-/media/documents/article/rf-brief/rfbr-v4-n5-1.ashx

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4.0 Conclusion

Irrespective of the approach or combination of multiple approaches and methodologies used, the junk bond valuation in India will have a high correlation with the recovery analysis for the underlying bond waterfall mechanism via ranking and subordination structure.

In India, junk bond rating is considered “taboo” and hence it has been seen that despite deterioration in credit metrics and business fundamentals, the issuers at times continue to enjoy investment grade rating. Hence, once a company is downgraded to BB category, it could swiftly move to C or D rating.

Accordingly, actual recoveries for distressed companies that had defaulted and underwent insolvency proceedings with NCLT could give a quick bird’s-eye view of the value left in the bond. This number should be then fine-tuned with a detailed bottoms-up recovery analysis on the single name.

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5.0

Appendix

Reference Material:

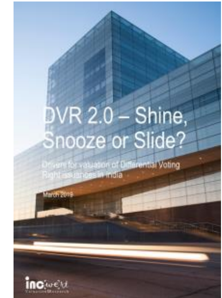
- IBBI
- SEBI
- FIMMDA
- The Economic Times, https://economictimes.indiatimes.com/blogs/et- commentary/corporate-bond-market-india-incs-five-find-outers/
- Crisil publication https://www.crisil.com/en/home/newsroom/press-releases/2019/02/global-national-AAA-ratings-not-comparable-says-crisil.html
- CFA Institute's publication, "Foundations of High-Yield Analysis" https://www.cfainstitute.org/-/media/documents/article/rf-brief/rfbr-v4-n5-1.ashx

Incwert Valuation Chronicles

Equity risk premium in India - Jan 2019

Valuation challenges in AIF (Pg. 69-80) - Feb 2019

Perspective on valuation of DVRs - Mar 2019



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Sunit has worked across a range of sectors such as Infrastructure, real estate, FMCG, retail, engineering, clean energy, healthcare, IT/ ITeS, and other manufacturing industries.

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Chartered Accountant (ICAI)
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Sunit has an overall experience of over 13 years with over 12 years in valuation advisory, transaction advisory and M&A advisory.

As a valuation professional, Sunit has undertaken valuation of businesses for transactions, fund raising, strategic decision making, and corporate restructuring. He has also undertaken valuation of intangible assets, option valuation, litigation support, private equity portfolio valuation and valuation for reporting purposes such as purchase price allocation and impairment test under IFRS and Indian GAAP.

In past he has worked with KPMG India (as Associate Director), BDO, Grant Thornton, KPMG UK, and DBDBS a boutique M&A advisory firm.

Sunit is also an active speaker on valuation at National Institute of Finance Management (NIFM).

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Advised client who is a $30Bn UK Hedge Fund on Collateralized Loan Obligation (CLO) vehicle; experience across leveraged loans, distressed debt, insolvency/bankruptcy situations and high-yield asset classes.

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Registered Valuer

Punit brings with him 15 years of experience in sell-side and buy-side advisory across equity and fixed income. He has worked on several bespoke valuations and lent research support to dozens of asset managers/investment bankers/brokers/consulting firms across the globe.

In the fixed income segment, he worked as a fundamental analyst across the capital structure: leveraged loans, distressed debt, insolvency/bankruptcy situations and high-yield asset classes. He has also helped sell-side & consulting firms increase their market presence by coming up with thematic and white label papers.

He started his career as an analyst with Zacks Investment Research & then was a part of a UK based CLO manager's research team. Then he moved on to set up research practices for couple of startups before moving onto become Global Head of Research at Southerland and then finally co-founded Incwert.

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