

Financial Market (EC503)

Satyendra Kumar Gupta

Department of Economics

January 6, 2026

Course Overview

Course Focus: Comprehensive understanding of asset pricing, portfolio choice, and the dynamics of financial markets.

Approach: Blending theory with empirical evidence, exploring how financial decisions impact markets.

Target Audience: MA students in Economics, including potential PhD candidates.

Learning Outcomes: Mastery in financial decision-making theories, practical portfolio management, and critical analysis of market behavior.

Textbooks

Slides and classnotes are the must for this course. Beyond that for your better understanding

Guiding Textbook: Campbell, J. Y. (2017). Financial decisions and markets: a course in asset pricing. Princeton University Press.

Supporting Textbooks:

1. Back, K. (2010). Asset pricing and portfolio choice theory. Oxford University Press.
2. Cochrane, J. H. (2005). Asset Pricing. Princeton University Press. Princeton, New Jersey.
3. Hull, J. C., & Basu, S. (2016). Options, futures, and other derivatives. Pearson Education India.

More material will be shared for relevant topics through Google classroom.

Logistics

Grading:

- ▶ **End term theory exam:** 90 as per university timetable.
- ▶ **Internal assessment:** 30
- ▶ **Tutorial:** 40 (Continuous assessment).

For IA of 30 marks, 6 marks shall be for attendance, 12 marks for class test and 12 marks for Assignments/Presentations

Out of 40 marks allocated for Continuous Assessment of tutorial, 5 marks shall be for attendance

This course is not about “How to become rich” or “Equity market trading”.

This course is not about CFA or MBA in Finance.

Types of Financial Markets

Equity Market:

- ▶ The equity market, often known as the stock market, is where shares of publicly traded companies are issued and traded.
- ▶ India's primary equity markets are the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE).

They facilitate raising of capital by companies and provide a platform for investors to buy and sell ownership in companies.

- ▶ The market is regulated by the Securities and Exchange Board of India (SEBI).

Index Heatmap

BSE DOLLEX 200 2,133.42 +7.10 +0.33%	BSE 200 EQUAL WEIGHT IND. 12,693.28 +55.41 +0.44%	BSE POWER & ENERGY 3,728.49 +11.16 +0.30%	BSE SELECT BUSINESS GRO... 4,123.33 +24.42 +0.60%
BSE Commodities 7,182.97 +15.91 +0.22%	BSE Diversified Financials Re... 1,430.90 +9.79 +0.69%	BSE Consumer Discretionary 9,936.15 +67.53 +0.68%	BSE India Infrastructure Index 609.02 +9.61 +0.60%
BSE Energy 10,988.91 +39.74 +0.36%	BSE India Manufacturing Index 993.98 +5.34 +0.54%	BSE Fast Moving Consumer ... 20,857.44 +85.52 +0.41%	BSE CPSE 3,693.40 +16.07 +0.44%
BSE Financial Services 11,442.93 +58.55 +0.51%	BSE PSU 18,937.00 +67.53 +0.36%	BSE Healthcare 45,465.94 +189.36 +0.42%	BSE Industrials 15,086.10 +174.12 +1.17%

Stock Watch

Gainers	Losers	Top Turnover	Recently Viewed	My watchlist
Security	LTP	Change	% Change	
MURAE-RE1	0.07	0.02	40.00	
GRAVISSHO	65.41	10.90	20.00	
JUMBO	54.48	9.08	20.00	
SAMYAKINT	50.22	8.37	20.00	
ENCODE	14.40	2.40	20.00	
CHOKSILA	90.08	15.01	19.99	
3INFOFOLTD	33.68	5.61	19.99	
PROZONER	33.14	5.52	19.99	
HBLEAS	18.63	3.10	19.96	
LAHL	12.03	2.00	19.94	

Equity Derivatives

Equity Derivatives - Most Active Contracts											As on 01 Jan 2025 15:31 Close		
Contract	LTP	Strike Price	Best Bid Qty	Best Bid Price	Best Ask Price	Best Ask Qty	Spread	Volume (Contracts)	Traded Value (₹ Cr.)	OI	No. of Trades		
SENSEX2510380000CE	89.20	80,000.00	1020	87.20	89.20	400	2.00	746168	59761.79	30999	165175		
SENSEX2510378000PE	257.00	78,000.00	—	—	—	—	—	669642	52478.32	23358	251317		
SENSEX2510378000CE	257.00	78,000.00	1020	256.20	257.00	400	0.80	207462	40746.20	150425	100000		

Trending @ BSE



Equity Derivatives

Equity Derivatives - Most Active Contracts											As on 01 Jan 2025 15:31 Close		
Contract	LTP	Strike Price	Best Bid Qty	Best Bid Price	Best Ask Price	Best Ask Qty	Spread	Volume (Contracts)	Traded Value (₹ Cr.)	OI	No. of Trades		
SENSEX2510380000CE	89.20	80,000.00	1020	87.20	89.20	400	2.00	746168	59761.79	30999	165175		
SENSEX2510378000PE	257.00	78,000.00	—	—	—	—	—	669642	52478.32	23358	251317		
SENSEX2510378500CE	629.90	78,500.00	10	625.05	630.00	250	4.95	629158	49745.09	13943	289899		
SENSEX2510379000CE	369.75	79,000.00	20	369.00	369.80	360	0.80	625186	49601.02	31676	242147		
SENSEX2510378500PE	424.15	78,500.00	30	420.00	423.90	20	3.90	547061	43223.07	20928	233083		



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BSE is issuing this Investor Alert to warn investors about leagues/schemes/ competitions etc (hereinafter referred to as "schemes") offered by third party or group company /associate of stock broker, which may involve distribution of prize monies....



Debt

Retail Corporate Debt Market Trading - F Group											As on 01 Jan 2025 16:00 (All Prices in ₹)		
Security Code	Security Name	Credit Rating		LTP/Close	Change	Change %	YTM % at LTP	Open	High	Low	Total Traded Volume	Total Turnover in (₹ Lacs)	
972657	1075IFC26A	CARE BB (Rating Watch with Developing Implications)		10675.00	24.00	0.23	9.27	10,661.00	10,675.00	10,651.00	370	39.43	
975520	1110ESFB31	CARE A		102412.74	-19.59	-0.02	—	102,412.74	102,412.74	102,412.74	30	30.72	
961779	871REC28	—		1106.92	0.49	0.04	5.77	1,105.00	1,108.00	1105.00	2,462	27.25	
936254	985ECL28	—		980.37	5.17	0.53	11.88	977.00	981.00	970.00	2,204	21.60	
957208	975UPPCL26	—		1025000.00	-5,000.00	-0.49	9.47	1,015,901.00	1,025,000.00	1,015,901.00	2	20.41	

Currency Derivatives

Currency Derivatives - Most Active Contracts											As on 31 Dec 2024 12:56 Open		
Contract	LTP	Strike Price	Best Bid Qty	Best Bid Price	Best Ask Price	Best Ask Qty	Spread	Volume (Contracts)	Traded Value (₹ Cr.)	OI	No. of Trades		
—	—	—	—	—	—	—	—	—	—	—	—		

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Types of Financial Markets

Bond Market:

- ▶ The bond market, also known as the debt market, is where issuers borrow funds by issuing bonds.
- ▶ The Indian bond market comprises government bonds (issued by the central and state governments) and corporate bonds.
- ▶ The Reserve Bank of India (RBI) plays a significant role in the government bonds market, both as a regulator and a participant.
 - ▶ For details read “Government Securities Market in India – A Primer”
<https://www.rbi.org.in/commonperson/English/Scripts/FAQs.aspx?Id=711>
- ▶ This market provides investors with less risky investment options compared to equities and allows issuers to finance long-term investments.

Debt Market Watch

Corporate Bond Trades-Reporting

- ▶ Corporate Bond – OTC Trades
- ▶ Interscheme Transfers by Mutual Funds
- ▶ Buy-Back in Corporate Bonds
- ▶ RFQ Market Watch
- ▶ RFQ Trades in Corporate Bonds
- ▶ RFQ Trades in CP/CDs
- ▶ RFQ Trades in G-sec/SDL/T-Bills

G - Sec Trade Reporting

- Settlement data for Corporate Bonds
- Retail Trading in Corporate Bonds
- Retail Trading in Government Bonds
- Central Trade Repository
- Trade and Settlement Data on Corporate Bonds
- Broker Trade Reporting – Corporate Bonds

New Debt Segment(BSE NDS)

- About Corporate Debt Repo
- Corporate Debt Repo Watch
- NDS Market Watch
- Bhav Copy

Non-Competitive Bidding

Historical Data

- Corporate Bond Trades-Reporting
- G-Sec Trades-Reporting
- Retail Debt Market
- Central Trade Repository
- Monthly / Yearly Reports

Debt Announcements

Listed Securities

- Central Govt Securities
- State Govt Securities
- Treasury Bill Securities
- Memorandum of Privately Placed Bonds
- Disclosure Document of Commercial Papers
- Disclosure Document of Municipal Bonds
- Disclosure Document of PNCPS/NCRPS/IPDI/ATI
- Disclosure Document of Private Placed REITs & InvITs
- Disclosure Document of Private Placed Securitised Debt Instruments
- List of Privately Placed Debt Instruments
- Debenture Trust Deed
- List of Debt Public Issues
- Sovereign Gold Bond

About NDS-RST

- About RDM
- ebidXchanges**
(fii debt limit auction)

Downloads

- Downloads
- Bhav Copy
- Market Making Statistics

Notices

About Debt Segment

- Debt Segment
- Recovery Expense Fund
- List of Debt Restructured ISIN
- List of Holidays
- Clean Price Booklet
- FAQ's on Debt Segment
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Market Watch - Traded On CM

9,000

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Category

Bonds

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Normal Market has Closed As on 20-Jan-2024 16:00:12 IST

Advances - 56

Declines - 42

Unchanged - 245

Download (.csv)

Value Convention

 Lakhs

 Crores

 Billions

SYMBOL	SERIES	BOND TYPE	COUPON RATE	FACE VALUE	LTP	%CHNG	VOLUME (Shares)	VALUE (₹ Crores)	CREDIT RATING	MATURITY DATE
HUDCO	N2	Regular	8.20	1,000.00	1,182.00	1.03	3,132	0.37	CARE AA+ / IND AA+	05-Mar-2027
NHBTF2014	N6	Regular	9.01	5,000.00	6,650.00	0.24	485	0.32	CRISIL AAA STABLE / CARE AAA / ICRA AAA STABLE	13-Jan-2034
IREDA	N5	Regular	8.80	1,000.00	1,220.00	0.55	1,800	0.22	CARE AAA (SO) / BWR AAA (SO) STABLE	13-Mar-2029
CHOLAFIN	NC	Regular	8.40	1,000.00	990.00	1.03	2,005	0.20	FITCH AA+ Stable/ ICRA AA + Stable	07-Dec-2025
IIFL	NE	Regular	10.00	1,000.00	1,061.00	0.57	1,609	0.17	CRISIL AA Negative / BWR A A+ Negative	24-Jun-2028
IRFC	NO	Regular	7.64	1,000.00	1,143.99	0.26	1,326	0.15	CRISIL AAA STABLE / CARE AAA / ICRA AAA	22-Mar-2031
NHAI	N2	Regular	8.30	1,000.00	1,107.14	-0.26	1,363	0.15	CRISIL AAA STABLE / CARE AAA / IND AAA STABLE	25-Jan-2027
NTPC	N6	Regular	8.91	1,000.00	1,271.00	0.07	787	0.10	CRISIL AAA / ICRA AAA STABLE	16-Dec-2033
IIFL	NS	Regular	8.65	1,000.00	937.99	0.40	1,008	0.09	CRISIL AA Stable / ICRA AA Stable	24-Jan-2028
IIFL	N5	Regular	9.60	1,000.00	971.00	-0.41	951	0.09	CRISIL AA Stable / BWR AA+ Negative	03-Nov-2028
RECLTD	N9	Regular	8.71	1,000.00	1,139.90	-0.10	810	0.09	CRISIL AAA STABLE / CARE AAA / ICRA AAA	24-Sep-2028

Market Session Open

As on Jan 23, 2024 10:43:38 AM IST

Reserve Bank of India												Negotiated Dealing System Order Matching Segment			
CG Mkt. Watch	SG Mkt. Watch	T-Bills Mkt. Watch	WT Mkt. Watch	Odd Lot Mkt. Watch	Market by Price	Individual Trades	Reported Deals	Mkt. Liquidity Indicators	Active Member List						
CG	14 T 10:27:05	♦ GOI FBB 2028 99.5900 7.8798 T 10:23:17	♦ 06.54 GS 2032 96.1500 7.1818 T 10:18:46	♦ 06.79 GS 2029 98.4900 7.1242 T 09:58:30	♦ 07.26 GS 2033 100.4200 7.1954 T 09:58:19	♦ 07.32 GS 2030 101.0750 7.1150 T 09:31:10									
SG/TB		♦ 364 DTB 02012025 7.1600 93.6785 T 10:20:36													

Refresh

:: Regular Market ::

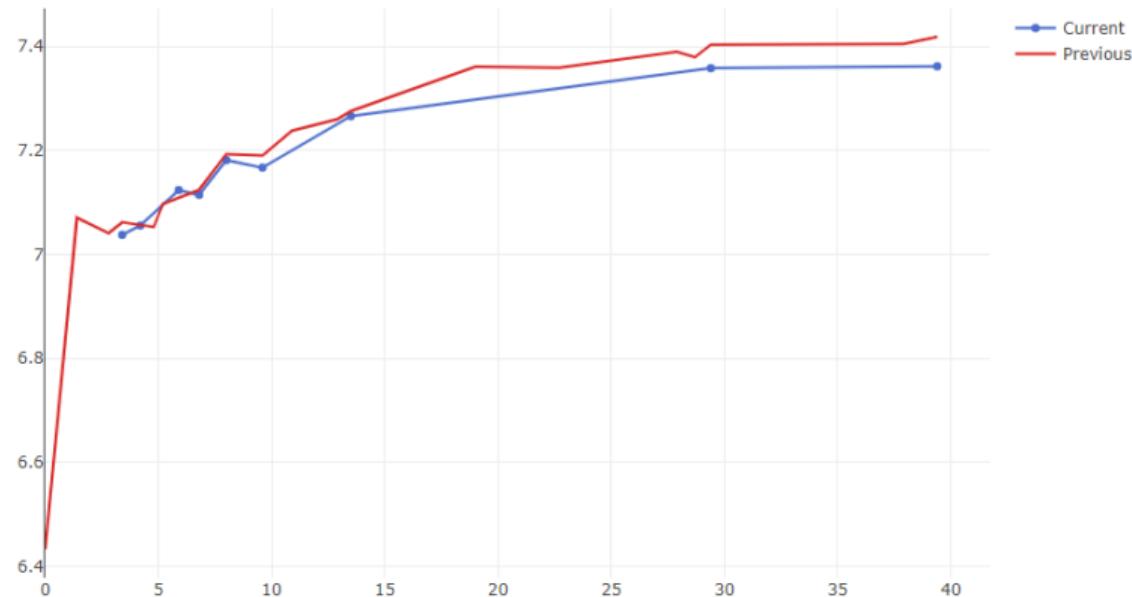
Security Description	Trades	TTA	Open	High	Low	LTP			LTY	
07.18 GS 2033	329	3485.00	100.0700	100.0900	100.0400	100.0800	†	T	7.1874	
07.18 GS 2037	455	1520.00	99.2300	99.2800	99.2200	99.2650	♦	T	7.2664	
07.25 GS 2063	12	155.00	98.4800	98.5500	98.4800	98.5900	♦	T	7.3624	
07.32 GS 2030	23	140.00	101.0750	101.0750	101.0750	101.0750	♦	T	7.1150	
07.38 GS 2027	9	120.00	101.0000	101.0100	101.0000	101.0100	♦	T	7.0380	
07.25 GS 2033	3	85.00	100.3900	100.4200	100.3900	100.4200	†	T	7.1954	
06.79 GS 2029	12	80.00	98.4000	98.4000	98.4000	98.4000	♦	T	7.1242	
07.30 GS 2053	8	60.00	99.2000	99.2875	99.2000	99.2875	†	T	7.3587	
GOI FBB 2028	3	50.00	99.5800	99.5800	99.5800	99.5800	♦	T	7.8798	
06.54 GS 2032	3	25.00	96.1500	96.1500	96.1500	96.1500	†	T	7.1818	
07.06 GS 2028	3	5.00	100.0000	100.0000	100.0000	100.0000	†	T	7.0558	
364 DTB 02012025	3	10.00	7.1600	7.1600	7.1600	7.1600	93.6785	↓	T	7.1600
Total	595	5735.00								

:: Odd Lot ::

Security Description	Trades	TTA	Open	High	Low	LTP			LTY
07.18 GS 2033	1	2.3000	100.0875	100.0875	100.0875	100.0875	†	T	7.1663
07.18 GS 2037	4	0.3500	99.1800	99.2400	99.1800	99.2400	†	T	7.2693
07.25 GS 2063	2	0.0110	98.5900	98.6900	98.6900	98.6900	♦	G	7.3513
09.47 TH SDL 2024	1	2.7100	100.3850	100.3850	100.3850	100.3850	♦	G	7.0877
364 DTB 09012025	1	0.0400	7.0800	7.0800	7.0800	93.6256	+	T	7.0800
Total	9	5.4110							



YTM Curve



Types of Financial Markets

Foreign Exchange Market

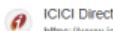
- ▶ The foreign exchange market (Forex) is the largest and most liquid market in the world, where currencies are traded 24/7.
- ▶ Essential for international trade and investment, influencing economic policies, inflation, and interest rates.
- ▶ **India's Forex Market:** An evolving landscape influenced by RBI policies, economic reforms, and global integration.
- ▶ **Market Participants:** Central banks, commercial banks, multinational corporations, institutional investors, and individual traders.
- ▶ **Key Concepts:** Exchange rates, currency pairs, speculation, hedging, and the impact of geopolitical and economic news.

Understand the mechanics of Forex markets, factors influencing exchange rates, and their implications for the global and Indian economy.(If time permits)



indian rupee slide

X | ⌂ | G | S



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INR tanks to 85.74 per US dollar as year end slide extends

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US Dollar After Strong
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spotlight on RBI's currency
strategy



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Despite Reserve Bank's
Strategic Moves



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<https://www.indiatoday.in> > Business

Rupee's slide: What it means for economy, markets, and you

4 Dec 2024 — The rupee's recent tumble to a record low of 84.73 against the US dollar has raised concerns about its impact on the economy and people's daily lives.



Business Standard
<https://www.business-standard.com> > Finance > News

Rupee volatility hits year-high, spotlight on RBI's currency ...

3 days ago — The rupee's one-month implied volatility versus the greenback rose to as much as 4.09 per cent, the highest since August 2023.

Types of Financial Markets

Derivative Instruments: Financial securities whose value is dependent on underlying assets like stocks, bonds, commodities, currencies, interest rates, and market indexes.

- ▶ Examples: futures, options, swaps, and forwards, each with unique characteristics and applications in hedging and speculation.
- ▶ Governed by SEBI in India, ensuring transparency and reducing systemic risk.
- ▶ Crucial for risk management in portfolios, allowing investors to hedge against price volatility and other financial risks.

Course Focus: Analyzing derivative pricing models, market mechanisms, and their role in modern financial systems.

Major Financial Market Institutions in India

Banks and Central Bank

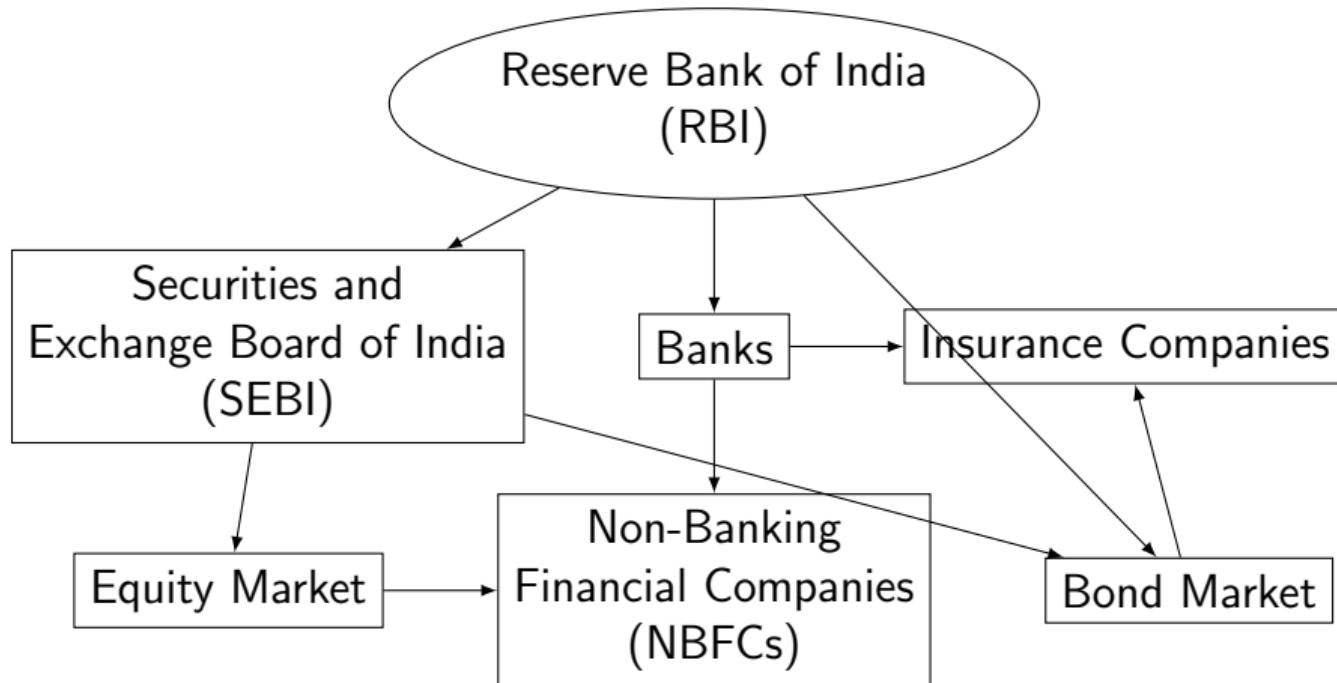
- ▶ Retail banks provide financial services to individuals and businesses, including deposit accounts, loans, and other services.
- ▶ The central bank of India, the Reserve Bank of India (RBI), regulates the monetary policy and banking operations.
- ▶ RBI's functions include supervising the banking sector, managing foreign exchange, and acting as the banker's bank and the government's bank.

Major Financial Market Institutions in India

Regulators and Other Market Players

- ▶ The primary financial regulator in India is the Securities and Exchange Board of India (SEBI), which regulates the securities and commodity market.
- ▶ Other key players include insurance companies, pension funds, and non-banking financial companies (NBFCs).
- ▶ These institutions together with mutual funds and individual investors form the ecosystem of the financial market in India.

Diagram of Major Financial Market Institutions in India



Some Basics

Asset Pricing Methods

- ▶ Two methods of asset pricing: Absolute and Relative.
- ▶ Absolute Pricing Methods consider fundamentals.
- ▶ Relative Pricing uses prices of other assets as given and doesn't question how those prices were arrived at.
- ▶ Distinction between Discount Factor (e.g. SDF) and Portfolio View (e.g. CAPM).

Notations and Mathematical Derivations

There is mathematics involved in Finance.

- Understanding the notations and mathematical derivations of complex concepts is crucial.
- More important is to comprehend the concepts we are dealing with.
- There are enough resources to verify the math once you grasp the concepts.

Returns

- ▶ Capital R denotes gross return.
- ▶ $R = \frac{\text{Rs back}}{\text{Rs paid}}$ and is generally greater than 1.
- ▶ Net Return, small r , is $r_{t+1} = R_{t+1} - 1$.
- ▶ Percent return for small r_t is approximated as $r_t \approx \ln R_t$.

Compound Returns

- ▶ V_t denotes the value at time t .
- ▶ Compound Return: $V_1 = R \cdot V_0$; generalizing, $V_t = R \cdot V_{t-1}$.

Compound Returns Analysis

Carry on the analysis and we get

$$V_T = R^T \cdot V_0$$

where R^T is compound return.

- ▶ When the rate of return for each period is different, we get compound return as

$$R_1 \cdot R_2 \cdot R_3 \cdots R_T$$

for T periods.

- ▶ T -period log return is

$$\ln(R_1 R_2 \cdots R_T) = \ln(R_1) + \cdots + \ln(R_T)$$

- ▶ Within period compounding, e.g., 10

$$(1.05) \times (1.05)$$

Random Variables and Returns

- ▶ Random Variables take on a range of values, each with associated probabilities.
- ▶ Example of stock return values and their probabilities:

Value	Probability
1.15	1/5
1.05	1/5
1.00	2/5
0.00	1/5

- ▶ We conceptualize random variables as functions mapping states of the world to numbers.
- ▶ Probabilities describe the likelihood of different states of the world.
- ▶ Returns are typically modeled as discrete but understanding continuous systems is beneficial.

Normal Distribution and Moments

Common assumption: Returns are normally distributed, leading to the density function:

$$f(R) = \frac{1}{\sigma\sqrt{2\pi}} \exp\left(-\frac{(R - \mu)^2}{2\sigma^2}\right)$$

- ▶ Probability within 1 standard deviation (σ) of the mean in a normal distribution is about 68%.
- ▶ Probability within 2 standard deviations (2σ) is about 95%.
- ▶ This implies a low probability (5%) of a value lying more than 2σ away from the mean.

Moments of a Distribution

- ▶ Moments provide a way to understand the shape and properties of a distribution.
- ▶ The mean or expected value ($E[R]$) is the first moment, a measure of central tendency.
- ▶ Variance ($\sigma^2(R)$) is the second moment, measuring the spread of the distribution and risk.
- ▶ The equations for expected value and variance are:

$$E[R] = \sum \pi_i r_i$$

$$\sigma^2(R) = E[(R - E[R])^2] = \sum \pi_i (r_i - E[R])^2$$

Covariance and Correlation

- ▶ Covariance is defined as:

$$\text{Cov}(R^a, R^b) = E[(R^a - E[R^a])(R^b - E[R^b])]$$

- ▶ It measures the tendency of two returns to move together.
- ▶ Correlation normalizes covariance and is defined as:

$$\text{Corr}(R^a, R^b) = \frac{\text{Cov}(R^a, R^b)}{\sigma(R^a) \cdot \sigma(R^b)}$$

- ▶ For continuous variables, the expected value is:

$$E[R] = \int R f(R) dR$$

Properties of Expectation and Variance

Important properties to remember:

1. $E[c \cdot R^a] = c \cdot E[R^a]$
2. $E[R^a + R^b] = E[R^a] + E[R^b]$
3. $\text{Var}(c \cdot R^a + d \cdot R^b) = c^2\text{Var}(R^a) + d^2\text{Var}(R^b) + 2cd\text{Cov}(R^a, R^b)$

Covariance for constants c and d is:

$$\text{Cov}(c \cdot R^a, d \cdot R^b) = c \cdot d \cdot \text{Cov}(R^a, R^b)$$

Normal and Log-normal Distributions

- ▶ If R^a and R^b are normally distributed, then $R^p = cR^a + dR^b$ is also normally distributed.
- ▶ A variable R is log-normally distributed if $r = \ln(R)$ is normally distributed.
- ▶ Log-normal distribution is particularly important for modeling stock prices.

Expectations and Variance in Log-normal Distribution

The expected value $E[R]$ is not simply $e^{E[r]}$.

It can be shown that:

$$E[R] = e^{E[r] + \frac{1}{2}\text{Var}[r]}$$

$$\text{Var}[R] = (e^{\text{Var}[r]} - 1)e^{2E[r] + \text{Var}[r]}$$

For two log-normally distributed R_1 and R_2 , their product is also log-normally distributed. CHECK!!

Sample Mean and Variance

- Unfortunately, we do not know probabilities of events.
- Neither we have mean or variance.
- We need to live with sample mean and variances.
- The average or sample mean \bar{R} is $\frac{1}{T} \sum_{t=1}^T R_t$, sample data $\{R_0, R_1, \dots, R_T\}$.

Remember sample mean and population mean are not same all the time.

Toss of a coin:

- ▶ Population mean or probability of getting head = $\frac{1}{2}$.
- ▶ Mean of a bet on a coin = 0, as $\frac{1}{2}(+1) + \frac{1}{2}(-1)$.
- ▶ But sample can have $\{H, H, T, H, T\}$, $\text{Prob}(H) = \frac{3}{5}$, $\text{Prob}(T) = \frac{2}{5}$.
- ▶ Sample mean = $\frac{3}{5}(+1) + \frac{2}{5}(-1) = \frac{1}{5}$, not equal to population mean.

As the sample size increases, sample mean \rightarrow population mean, this property is called consistency.

Sample Mean and Variance

Sample Variance:

$$s^2 = \hat{\sigma}^2 = \frac{1}{T-1} \sum_{t=1}^T (R_t - \bar{R})^2$$

- ▶ Variance measures the randomness of sample moments.
Sample mean and variance are random variables and vary from sample to sample.
- ▶ If a fund manager claims a mean return different from the BSE SENSEX return, we question whether it's by chance or represents the population mean.
- ▶ Sample mean \bar{R} is an **unbiased estimator** of the population mean μ .
- ▶ **Consistency** As the sample size increases, \bar{R} converges to μ .

Sample Variance

Sample Variance:

$$s^2 = \frac{1}{T-1} \sum_{t=1}^T (R_t - \bar{R})^2$$

Variance indicates the variability of sample moments.

Properties of Sample Variance: When drawn from the same distribution, the sample mean is an unbiased estimate of the population mean.

$$E[\bar{R}] = \mu$$

As sample size increases, \bar{R} converges to μ (**Law of Large Numbers**).

Risk: Subjectivity and Financial Implications

Risk involves **exposure** and **uncertainty**.

Subjective nature: Different investors may perceive the same asset differently.

Key financial institution activities:

- ▶ Identify risks
- ▶ Manage and control risks

In finance, **exposure** is typically identified with potential for **monetary loss**.

Examples of Risk

Example 1: Certain Loss

If an asset will definitely lose 20% of its value tomorrow, there is a monetary loss but **no risk** (since there is no uncertainty).

Example 2: Uncertain Gain

If the price of an asset might increase by 10% to 20% tomorrow, there is uncertainty but **no exposure**.

- ▶ Hence, **no risk**.

Qualifying Risk

Risk is an **asymmetric phenomenon** focused on the potential for loss.

Risk Categories:

1. **Market Risk:** Portfolio exposure to movements of market variables (equities, interest rates, exchange rates, commodities).
2. **Credit Risk:** The risk of a debtor failing to fulfill the terms of a loan.
3. **Operational Risk:** Risks arising from inadequate or failed internal processes, people, and systems.



VENTIVE HOSPITALITY LIMITED

(FORMERLY KNOWN AS ICC REALTY (INDIA) PRIVATE LIMITED)

Our Company was incorporated as "O4D Realty (India) Private Limited" as a private limited company under the Companies Act, 1956 at Mumbai, Maharashtra and a certificate of incorporation was granted by the Registrar of Companies, Maharashtra, Mumbai on February 12, 2002. Thereafter, the name of our company was changed to "ICC Realty (India) Private Limited" as per the resolution of the Board and a fresh certificate of incorporation was issued by the Registrar of Companies, Maharashtra, Mumbai on February 27, 2003. Thereafter, the name of our Company was further changed to "Ventive Hospitality Private Limited" again pursuant to a re-branding exercise, and a fresh certificate of incorporation was issued by the Registrar of Companies, Central Processing Centre on July 8, 2024. Our Company was subsequently converted into a public limited company and the name of our Company was changed to "Ventive Hospitality Limited" and a fresh certificate of incorporation dated August 28, 2024 was issued by Registrar of Companies, Central Processing Centre, see "History and Certain Corporate Matters" on page 287 of the red herring prospectus dated December 14, 2024 ("RHP" or "Red Herring Prospectus") filed with the RoC.

Registered and Corporate Office: 2nd Floor, Tower D, Tech Park One, Yerwada - 411 006, Maharashtra, India; Contact Person: Pradip Bhataktarkar, Company Secretary and Compliance Officer; E-mail: CS@ventivehospitality.com; Website: www.ventivehospitality.com; Telephone: +91 20 6906 1900; Corporate Identity Number: U45201PN2002PLC143638



(Please scan this QR code to view the RHP)

THE PROMOTERS OF OUR COMPANY ARE ATUL I. CHORDIA, ATUL I. CHORDIA HUF, PREMSAGAR INFRA REALTY PRIVATE LIMITED, BRE ASIA ICC HOLDINGS LTD AND BREP ASIA III INDIA HOLDING CO VI PTE. LTD.

INITIAL PUBLIC OFFER OF UP TO [•] EQUITY SHARES OF FACE VALUE OF ₹1 EACH ("EQUITY SHARES") OF VENTIVE HOSPITALITY LIMITED (FORMERLY KNOWN AS ICC REALTY (INDIA) PRIVATE LIMITED) ("COMPANY") FOR CASH AT A PRICE OF ₹[•] PER EQUITY SHARE OF FACE VALUE OF ₹1 EACH (INCLUDING A SECURITIES PREMIUM OF ₹[•] PER EQUITY SHARE) ("ISSUE PRICE"), AGGRGATING UP TO ₹16,000 MILLION ("FRESH ISSUE" OR "THE ISSUE"). THE ISSUE SHALL CONSTITUTE [•]% OF THE POST-ISSUE PAID-UP EQUITY SHARE CAPITAL OF OUR COMPANY.

Ventive Hospitality Limited is predominantly a hospitality asset owner primarily focused on luxury offerings across business and leisure segments.

The Issue is being made through the Book Building Process in accordance with Regulation 6(2) of the SEBI ICDR Regulations

QIB Portion: Not less than 75% of the Net Issue | Non-Institutional Portion: Not more than 15% of the Net Issue | Retail Portion: Not more than 10% of the Net Issue

Employee reservation portion : upto [•] Equity Shares aggregating up to ₹ 10 Million.

PRICE BAND: ₹ 610 TO ₹ 643 PER EQUITY SHARE OF FACE VALUE OF ₹1 EACH.

THE FLOOR PRICE AND THE CAP PRICE ARE 610 TIMES AND 643 TIMES THE FACE VALUE OF THE EQUITY SHARES, RESPECTIVELY.

BIDS CAN BE MADE FOR A MINIMUM OF 23 EQUITY SHARES OF FACE VALUE OF ₹ 1 EACH AND IN MULTIPLES OF 23 EQUITY SHARES OF FACE VALUE OF ₹1 EACH THEREAFTER.

THE PRICE TO EARNINGS RATIO ("P/E") BASED ON DILUTED EPS ON A RESTATED BASIS FOR FISCAL 2024 FOR THE COMPANY AT THE UPPER END OF THE PRICE BAND IS 40.39 TIMES AND AT THE LOWER END OF THE PRICE BAND IS 38.32 TIMES. THE PRICE TO EARNINGS RATIO ON A PROFORMA BASIS IS NOT CALCULABLE GIVEN THAT THE PROFORMA DILUTED EPS FOR FISCAL 2024 IS NEGATIVE.

WEIGHTED AVERAGE RETURN ON NET WORTH FOR LAST THREE FINANCIAL YEARS IS 54.18% ON A RESTATED BASIS AND (1.48%) ON A PROFORMA BASIS.

A DISCOUNT OF ₹ 30 PER EQUITY SHARE IS BEING OFFERED TO ELIGIBLE EMPLOYEES BIDDING IN THE EMPLOYEE RESERVATION PORTION

In accordance with the recommendation of the Independent Directors of our Company, pursuant to their resolution dated December 16, 2024, the above provided price band is justified based on quantitative factors/ KPIs disclosed in the 'Basis for Issue Price' section on page 157 of the RHP vis-a-vis the weighted average cost of acquisition ("WACA") of primary and secondary transaction(s), as applicable, disclosed in 'Basis for Issue Price' section on page 157 of the RHP.

In making an investment decision and purchase in the Issue, potential investors must only rely on the information included in the RHP and the terms of the Issue, including the merits and risks involved and not rely on any other external sources of information about the Issue available in any manner.

In relation to price band, potential investors should only refer to this price band advertisement for the Issue and should not rely on any media articles/reports in relation to the valuation of the Company as these are not endorsed, published or confirmed either by the Company or by the BRLMs.

RISK TO INVESTORS

For details refer to section titled "Risk Factors" on page 44 of the RHP

- Risk related to recent acquisitions:** Until August 2024, our portfolio comprised of an integrated hospitality-led development comprising JW Marriott, Pune, ICC Offices, Pune and ICC Pavilion, Pune. Our Company acquired the New Portfolio (comprising 14 of our 17 properties) recently (in Fiscal 2025) from our Promoters. Thus, our group on a consolidated basis does not have an operating history by which our overall performance may be evaluated. Also, the Pro Forma Financial Information included in the Red Herring Prospectus is presented for illustrative purposes only to illustrate the impact of acquisition of New Portfolio as if the acquisition had taken place at the beginning of the applicable period/year and may not accurately reflect our future financial condition or results of operations.
- Dependence on third parties:** All our hospitality assets are operated by or franchised from third-party brands, such as Marriott, Hilton, Minor and Atmosphere. As at September 30, 2024, our Portfolio comprised 11 operational hospitality assets comprising 2,036 keys, of which six are operated by or franchised from Marriott, two are operated by or franchised from Hilton, one is operated by Minor, one is operated by Atmosphere Core and one is operated by Oakwood. Any adverse impact on the reputation of the brands under which our hospitality assets operate could adversely affect our business, results of operations and financial condition.
- Losses in the past and no consolidated operating history:** Our Company acquired the New Portfolio (comprising 14 of our 17 properties) recently (in Fiscal 2025) and thus we do not have a consolidated operating history. Also, we incurred losses of ₹ 207.62 million on a restated consolidated basis during the six months ended September 30, 2024. In addition, we have losses on a pro forma basis as set forth below:

Particulars	Six months ended September 30, 2024	FY24	FY23	FY22
	(₹ million, unless otherwise stated)			
Pro forma profit/(loss) for the period/year	(1,378.28)	(667.46)	156.75	(1,461.97)

- 4. Operator concentration Risk:** Most of our hospitality assets are operated by or franchised from Marriott and Hilton, collectively comprising 8 out of 11 operational hospitality assets. Details of contribution of our hospitality assets operated by or franchised from Marriott or Hilton to our pro forma total income are set forth below. While we have entered into long term agreements with such third party operators or franchisors, if these agreements are terminated or not renewed, our business, results of operations, cash flows and financial condition may be adversely affected.

Particulars	Six months ended September 30, 2024		FY24		FY23		FY22	
	Amount (in ₹ million)	% of pro forma total income	Amount (in ₹ million)	% of pro forma total income	Amount (in ₹ million)	% of pro forma total income	Amount (in ₹ million)	% of pro forma total income
Pro forma total revenue from hospitality assets operated by or franchised from Marriott and Hilton	4,308.35	49.19%	9,712.28	50.92%	8,918.88	50.61%	4,096.98	41.72%

- 5. Segment concentration - Hotel operations:** A significant portion of our pro forma total income is derived from our pro forma revenue from hotel operations. Further, in our hotel operations, four of our largest hospitality assets being Anantara (Maldives), Conrad (Maldives), JW Marriott (Pune) and The Ritz-Carlton (Pune) contributed a significant portion of our pro forma total income. Details of the same are set forth below, on a proforma basis. Any adverse developments affecting such assets could have an adverse effect on our business, financial condition, cash flows and results of operations.

Particulars	Six months ended September 30, 2024		FY24		FY23		FY22	
	Amount (in ₹ million)	% of pro forma total income	Amount (in ₹ million)	% of pro forma total income	Amount (in ₹ million)	% of pro forma total income	Amount (in ₹ million)	% of pro forma total income
Pro forma revenue from hotel operations	5,997.65	68.47%	13,740.65	72.04%	12,812.80	72.71%	8,207.75	68.53%
Pro forma revenue from hotel operations from four of our largest hospitality assets	4,627.09	52.83%	11,111.96	58.26%	10,362.68	58.81%	7,270.09	60.71%

- 6. Geographical concentration:** Prior to the Acquisition Transactions, all our total income was derived from assets located in Pune and post the Acquisition Transactions, significant portion of all our total income was derived from assets located in Pune (10 out of 17 properties) and Maldives (3 out of 17 properties). Set forth below are details on a proforma basis. Any adverse developments affecting such assets or locations could have an adverse effect on our business, financial condition, cash flows and results of operations

Particulars	Six months ended September 30, 2024		FY24		FY23		FY22	
	Amount (in ₹ million)	% of pro forma total income	Amount (in ₹ million)	% of pro forma total income	Amount (in ₹ million)	% of pro forma total income	Amount (in ₹ million)	% of pro forma total income
Pro forma revenue from operations in Pune (Maharashtra, India) and Maldives	7,920.80	90.43%	17,457.84	91.53%	16,097.27	91.35%	11,395.02	95.15%

- 7. Seasonality and Cyclicity:** Our hospitality business is subject to seasonal and cyclical variations (given that the ARR and RevPAR for our hospitality assets are generally higher during the second half of each Financial Year relative to the first half of the Financial Year). This could result in fluctuations in our results of operations and cash flows. Set forth below are details on a proforma basis –

Particulars	ARR for our hospitality assets (in ₹)	RevPAR for our hospitality assets (in ₹)
Six months ended September 30, 2024	16,645.18	10,099.55
FY24		
First half FY24	16,083.97	8,806.88
Second half FY24	23,288.83	14,948.00
FY23		
First half FY23	14,464.47	9,306.41
Second half FY23	21,528.24	13,566.88
FY22		
First half FY22	17,875.47	4,204.43
Second half FY22	22,339.39	10,296.80

- 8. Conflict of interest:** Conflicts of interest may arise out of common business objectives shared by our Promoters and their respective associates/affiliates (namely Panchshil and Blackstone) and our Company. Both Panchshil and

Particulars	Company (Ventive Hospitality Limited) on restated basis	Company (Ventive Hospitality Limited) on Proforma basis	Average of Industry Peers
Net Asset Value per share (₹)	31.65	175.69 ⁽ⁱ⁾	67.03
EV / EBITDA*	56.03	19.36	27.44
Market Cap / Total Income*	30.35	7.87	9.67
Market Cap / Tangible Assets*	29.38	2.99	6.20

*At upper end of price band

(1) The RoNW (%), Net Worth and NAV per Equity Share reported above is inclusive of Non-Controlling Interest. RoNW (%) and NAV per Equity Share excluding Non-Controlling Interest is (3.65%) and ₹143.78 respectively.

(2) P/E ratio is computed basis restated EPS for FY24 which does not account for acquisitions undertaken subsequently

- 10.** The details of weighted average return on networth for the last 3 financial years is as follows :-

Particulars	Weighted average return on networth
Company (Ventive Hospitality Limited)	54.18%
Company (Ventive Hospitality Limited) on a proforma basis	(1.48%)

- 11. Average cost of acquisition for our Promoters**

The average cost of acquisition per equity shares of our Promoters is as follows:

Introduction to Risk Models

- Probabilistic models are constructed to understand underlying sources of risk, such as market or credit risks.
- The portfolio loss distribution is described through these models.
- Risk is quantified by a risk measure associating a real number with the portfolio loss distribution.

Quantifying Risk

Risk estimates can be **inaccurate** due to:

- ▶ Non-realistic probability model selection.
- ▶ Incorrect risk measure choice.

Each *risk measure* captures only a part of the risk, making all risk measures inherently incomplete.

Common Measures of Risk

- One of the most common measures of risk is the **standard deviation**, a measure of dispersion.
- It assumes that we have sufficient knowledge about the underlying distribution (often a normal distribution).

However, standard deviation may not capture extreme events (tail risk).

Common Measures of Risk

Value at Risk (VaR): A statistical measure to estimate the level of financial risk over a specific time period.

- ▶ Indicates the maximum expected loss with a certain confidence level (e.g., a 95% VaR).
- ▶ Used to determine the potential loss that will not be exceeded with high probability.

Conditional Value at Risk (CVaR): Also known as Expected Shortfall, focuses on the tail of the loss distribution.

- ▶ Provides the expected loss in the worst-case scenarios beyond the VaR threshold.
- ▶ More sensitive to the shape of the tail of the loss distribution, making it a crucial tool for understanding extreme risks.