Nifty50

Nifty 50
Valuation Report
As on June 29,2023

Prepared By : Haritika Chhatwal
Guided By: Parth Verma

Nifty50

1.Introduction

Nifty50

1.1 Background

- The NIFTY 50 is the flagship index on the National Stock Exchange of India Ltd. (NSE). The Index tracks the behavior of a portfolio of blue chip companies, the largest and most liquid Indian securities.
- The NIFTY 50 covers major sectors of the Indian economy and has been trading since April 1996 and is well suited for benchmarking, index funds and index-based derivatives.

.

1.2 Key Stats

- Amidst volatility, the markets ended June expiry on a negative note. Although bulls did spring to life in the morning session, but on the backdrop of negative global cues, familiar fears of more interest rate increases and the risk of recession, the benchmarks slipped hard and, most importantly, ended on a negative note.
- It includes 50 of the approximately 1600 companies listed on the NSE, captures approximately 65% of its float-adjusted market capitalization and is a true reflection of the Indian stock market.
- The Average historical CAGR returns provided by the index for various periods are
  a) 15Years CAGR Return-10.21%
  b)10Years CAGR Return-9.21%
  c)7Years CAGR Return-9.28%
  d)5Years CAGR Return-9.29%

1.Introduction

1.3 Composition of Nifty50

- There are 50 number stocks included in this index. These are the largest and the most traded (liquid) companies in their sectors.
- Few Notable companies are –Asian Paints, Reliance, TCS, Ultratech, HDFC Bank, Bharti Airtel etc.
- The index comprises of wide range of sector namely Technology, Financial Services, Energy, Telecom, Metals Automobile, Infrastructure ,Consumer Durables etc.

1.4 Sector wise contribution in Nifty50

Sector	Weightage(%)
Financial Services	37.92%
Information Technology	13.01%
Oil,Gas& Consumable Fuels	12.07%
Fast Moving Consumer Goods	9.97%
Automobile and Auto Components	5.82%
Healthcare	3.70%
Metals and Mining	3.43%

Sector	Weightage(%)
Construction	3.28%
Consumer Durables	3.22%
Telecommunication	2.56%
Power	2.00%
Construction Material	1.90%
Services	0.69%
Chemicals	0.44%

2. Context of Valuation

Nifty50

2.1 Context of Valuation

The FY 2022-23 entailed lot of events posing economic risk to the world economies ranging from tightening of interest rates to Russia-Ukraine crisis.
The global uncertainties posed its repercussion on Indian equity markets largely where the S&P BSE Sensex appreciated by meagre of 0.72%.As on June 29,2023, The S&P BSE Sensex ended at 57,570.25, up 712.46 points (1.25 per cent), while the Nifty 50 rallied 228.65 points (1.35 per cent) to settle at 17,158.25.
The top gainers were Hindalco, Tata Steel, SBI, Bajaj FinServ, JSW Steel, Tata Motor ,HCL Technologies ,Sun Pharma, Titan and Bajaj Finance
The Valuation report aims to determine valuation of the index in the above context.
This calls for revisiting the valuation of Nifty 50. This paper deliberates on the approach and methodology of valuing index by considering dividends ,buybacks, earnings growth of Nifty 50 sectors ,equity risk premium and 10 years Indian government yield .
The valuation of Nifty 50 in this deck is based on the methodology used by Prof. Aswath Damodaran(Dean-Valuations, NYU) and his teachings on Discounted Cashflows (DCF)method. The said methodology has been improvised to calculate the value of the index in context of the India capital market practices.
Alike other valuation this paper also used assumptions and understanding which makes it subjective for interpretation of the users. The report provides a broader idea on whether BSE Sensex is overvalued , undervalued or fairly valued.
The index valuation date will be "June 29,2023" and all the data used for the purpose of valuation will be till June 29,2023.

3. Approaches and Methodolgy

3.1 Free Cash Flow to Equity Holders

- Cash flows being one of the key ingredient in DCF Valuation implies the extent of equity shareholders right ob the cash flows . Cash flows implies free cash flows to equity .

- However it becomes laborious task to derive FCFE of all the companies in the Index and hence a proxy convenient and effective approach has been followed where the Dividend pay-outs and Buybacks are substituted for FCFE being the ultimate cashflows in the hands of the shareholders .

- The rationale behind the above consideration is that whatever the cash a firm generates ,it shall be ultimately paid to the shareholders in the long run either on liquidation or after the firm has attained maturity in its business verticals either through dividends or buybacks.

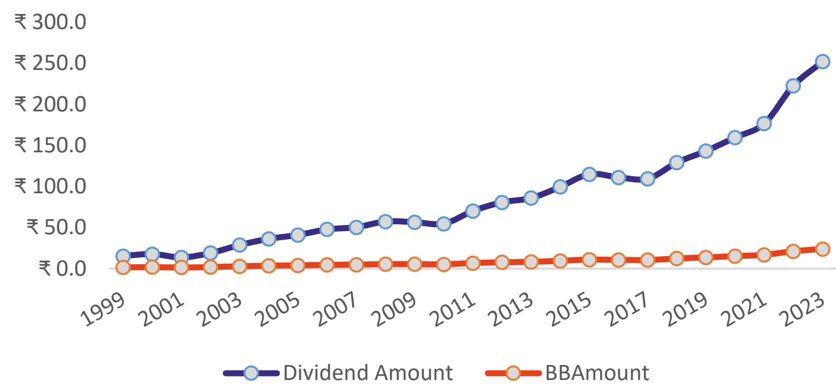
- The dividend yield has been sourced from NSE website and since the buybacks in emerging economies are miniscule , they are not readily available.
- Hence the buyback data has been sourced from Prof.Aswath Damodaran's website which has been consolidated based on the sectoral buybacks conducted.

- As buybacks do not contribute a big chunk of cash flows ,using sectoral buyback yield doesn't cause a major fluctuations in the valuation results.

Historical Average Yields of Nifty 50

Years	Dividend Yield(%)	BuyBack Yield(%)	Total Yield
20 Years	1.36%	0.13%	1.49%
15 Years	1.30%	0.12%	1.43%
10 Years	1.29%	0.12%	1.41%
5 Years	1.29%	0.12%	1.42%
3 Years	1.26%	0.12%	1.38%
Latest	1.40%	0.13%	1.53%

Historical Dividends and Buybacks



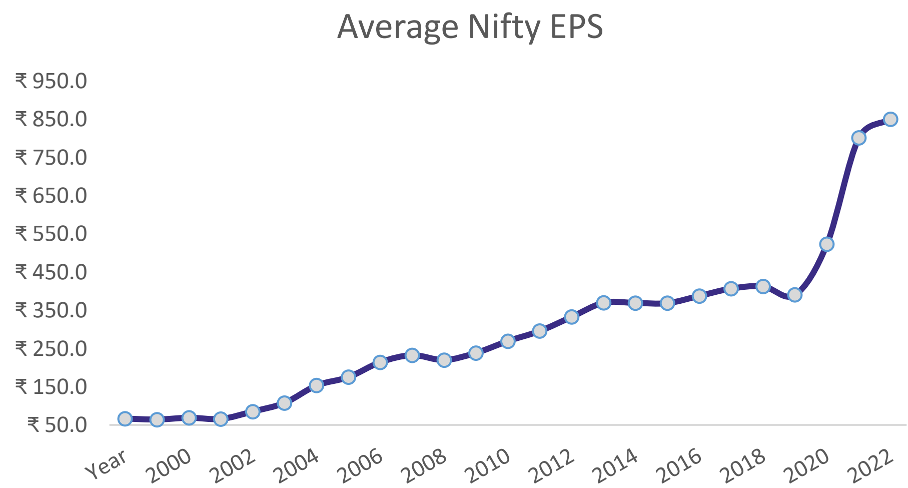
3. Approaches and Methodolgy

3.2 Expected Growth and Nifty Earnings

- Earnings of SENSEX can be derived by dividing the PE Ratios of an Index with its absolute level.
- PE Ratios and Index are obtained from the NSE website and with minimal analysis ,earnings and its growth can be obtained.
- There could be an argument on which growth rate should be considered for the purpose of valuation. Since there is not much difference between 3 years and 20 years average compounded growth%(+/-1%),considering valuation to remain forward looking and based on current financial scenario ,earnings growth compounded for 3 years is used for the purpose of valuation in this paper.

Expected Growth(g)and Nifty 50 Earnings

Compunded Years	Earnings Growth(%)
10 Years	10.20%
7 Years	10.75%
5 Years	11.24%
3 Years	11.79%



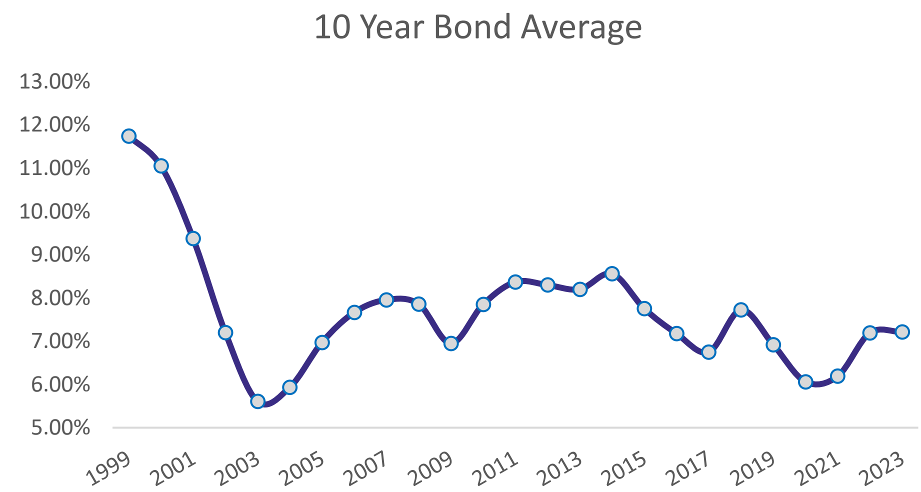
3. Approaches and Methodolgy

3.3 Risk Free Rate-10 Years Indian Govt Bond Yield

- The risk- free rate is the basic driver for DCF Valuation and is metric of the opportunity cost.
- It is a convention to use 10 years of government bond yields as the risk- free rate. However ,it can be further adjusted to country risk and default risk.
- But since there is lack of data for the emerging markets, it is tedious task to account for the same.
- There could be an argument on which rate should be considered for the purpose of valuation.
- Since emerging markets had witnessed government bond yield as high as 12% in early 90's and to ensure that valuation should be forward looking , the most recent rate (May ,2023)is used for the purpose of valuation in this paper.

10 Year Indian Govt Bond Yield Average

Compounded Years	10 Years Indian Govt Bond Yield(%)
20 Years	7.38%
15 Years	7.41%
10 Years	7.15%
5Years	6.71%
As on May 31,2023	7.21%



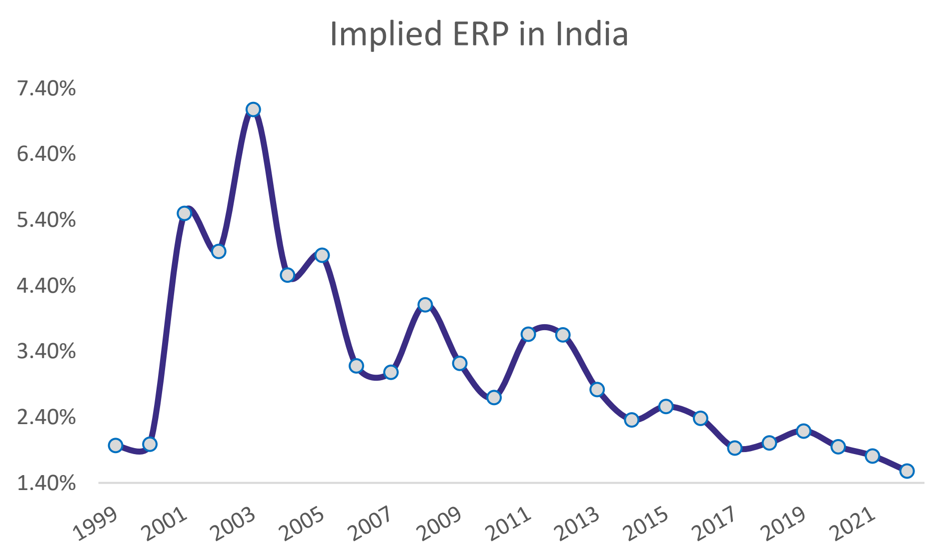
3. Approaches and Methodolgy

3.4 Implied Market Risk Premium

- The market risk premium is the additional return that's expected on an index or portfolio investments above the given risk free rate. The market risk premium is equal to the slope of the Security Market Line(SML).
- It is incentive to assume risk beyond government bond over equity markets in general.
- A higher MRP indicates a cautious market where the investors are defensive while investing in equities and represent their willingness to pay a lower price for the same cash flows and earnings.
- Implied MRP is reverse calculated by considering current index value and expected FCFF's.

Implied Market Risk Premium

Compounded Years	Implied Market Risk Premium(%)
20 Years	3.08%
15 Years	3.82%
10 Years	3.58%
5 Years	3.21%
1 Year	2.82%



4.Valuation of Nifty 50 as on June 29,2023

Nifty50

Valuation of Nifty 50			16253.50
Key Inputs		Assumptions	Overvalued
Date	29-06-2023	29-06-2023	The Market Implied fair value of Sensex is 16254.The Sensex is currently trading at 18973. A 14.33% correction is expected from this level.
Current Sensex Level	18,972.10	18,972.10	
Total Yield	20 Years	1.49%	
Expected Growth	3 Years	11.79%	
Risk-free Rate	Latest	7.17%	
Equity Risk Premium	Latest	2.82%	
Cost of Equity		9.99%	
Year	**Expected Dividends and Buybacks**	**Cumulative PV Factor(Risk Free Rate +Equity Risk Premium)**	**Present Value of Expected Dividends and Buybacks**
2023	₹ 315.8	0.9091	₹ 287.09
2024	₹ 353.0	0.8265	₹ 291.77
2025	₹ 394.6	0.7514	₹ 296.52
2026	₹ 441.1	0.6832	₹ 301.36
2027	₹ 493.1	0.6211	₹ 306.27
2028	₹ 551.2	0.5647	₹ 311.26
2029	₹ 616.2	0.5134	₹ 316.33
2030	₹ 688.8	0.4667	₹ 321.49
2031	₹ 770.0	0.4243	₹ 326.73
2032	₹ 860.8	0.3858	₹ 332.05
2032- ∞	₹ 34,121.4	0.3858	₹ 13,162.64

Disclaimer

Nifty50

This information is for educational purpose and is not a investment recommendation nor to be representative of professional expertise but to be used as forum for opening discussions around trading. All examples and analysis used herein are for illustrations purposes only, and of the personal opinions of the Author. All examples and analysis are intended for these purposes and should not be considered as specific investment advice. The risk of loss in trading can be substantial. User of this paper must consider all relevant risk factors including their own personal financial situation before trading .You understand and acknowledge that there is a very high degree of risk involved in trading securities. The Author assumes no responsibility or liability for your trading investment results. Further, it should not be assume that the methods, techniques or indicators presented in these products will be profitable or that they will not result in losses.

5.References and Sources

- Damodaran, A. (2022). Equity risk premiums (ERP): Determinants, estimation, and implications – the 2022 edition. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.4066060
- Damodaran, A. (2023, June 18). *Damodaran Online: Home Page for Aswath Damodaran*. Nyu.edu. https://pages.stern.nyu.edu/~adamodar/
- Fenebris.com, F. (2019, August 18). *IN - Market Risk Premia*. Market-Risk-Premia.com. http://www.market-risk-premia.com/in.html
- *Historical - Indices*. (2023, June 18). Www.bseindia.com. https://www.bseindia.com/Indices/IndexArchiveData.html
- *India 10-Year Bond Historical Data*. (2023, June 18). Investing.com India. https://in.investing.com/rates-bonds/india-10-year-bond-yield-historical-data
- Mukherji, S. (2011). The capital asset pricing model's risk-free rate. *The International Journal of Business and Finance Research* , *5*(2).
- *Nifty 50 returns - 20 years worth of powerful data*. (n.d.). https://primeinvestor.in/nifty-50-returns/
- Sharpe, W. F. (1964). American Finance Association. *The Journal of Finance* , *19*(3), 425–442. http://efinance.org.cn/cn/fm/capital%20asset%20prices%20a%20theory%20of%20market%20equilibrium%20under%20conditions%20of%20risk.pdf

Suggestions

For any queries ,suggestions ,recommendations ,constructive criticism please feel free to mail at haritika74@gmail.com