

STOCK VALUATION

16 June 2023

Is value picking really effective?

 Fairly valued stocks deliver better returns than both over- and undervalued scrips, per our analysis of forward PE and stock returns Kumar Manish research@bobcaps.in

- Additionally, the performance of overvalued stocks tends to be better than those that are undervalued
- While past performance is not a template for future outcomes, this data does put a question mark on value picking

Background: Most market participants and investors expect cheaper stocks (low forward valuation multiple) to outperform expensive ones (high forward multiple). We evaluated this hypothesis on India's top 100 stocks over the last decade. Note, the one-year forward PE (Price to Earnings) multiple of the Nifty 50 has expanded over the last decade to 19x currently. Forward multiples for most companies have also expanded during this time. That said, some stocks have expanded more than the Nifty 50 and others have expanded less than the benchmark.

Methodology: For our analysis, we have used a daily time series to calculate the ratios of forward PE multiples of individual stocks to that of the Nifty 50 for the past ten years. We then used the distance from mean in terms of standard deviation to categorise the stocks as overvalued, undervalued and fairly valued. Thereafter, we evaluated the individual stock performance for these three categories over the next one year from the date of their classification. This exercise has been repeated for each of the last 8 years to capture trends, if any, except for the Covid shutdown year of 2020-21.

Fairly valued basket marks the sweet spot: Interestingly, we find that the average returns of fairly valued stocks have been higher than those of both overvalued and undervalued stocks on most occasions. This goes against conventional market wisdom of value buying where stocks with lower PE multiples are expected to outperform others.

The extremes: We also find that a few stocks have consistently figured in the overvalued and undervalued buckets, underscoring the absence of change in their extreme multiples. The stocks that have seen steady expansion in multiples include PIDI, HAVL, SRF, DIVI and RIL, while those that have seen consistent contraction versus the index include BPCL, IOCL, GAIL, AXSB, COAL, and DRRD. We list the stocks that are currently in the fairly valued bucket in Figure 3.





Valuation multiple unpacking

Methodology

We use the ratios of the one-year forward PE multiples of individual stocks to that of the Nifty 50 as the main determinant for categorisation into value baskets. We are calling this ratio 'Relative Forward Multiple' (RFM) for the purpose of this note. We then evaluate the RFM's mean and standard deviation over its daily data from the last 10 years. For classifying a stock on a given day, we have calculated the standard deviation of the RFM for that day from its mean. We are calling this value 'sigmaX'.

- RFM of a stock on a given day = PE1_{stock}/PE1_{Nifty50}
- PE1_{stock} = One-year forward PE multiple of the stock based on its closing price on that day
- PE1_{Nifty50} = One-year forward PE multiple of Nifty 50 based on its closing value on that day
- SigmaX of a stock on a given day = (Stock's RFM on a given day Mean of RFM of a stock)/Standard deviation of RFM's time series

We further used the values in Fig 1 for our final classification of stocks as overvalued, fairly valued or undervalued.

Fig 1 - Decision matrix

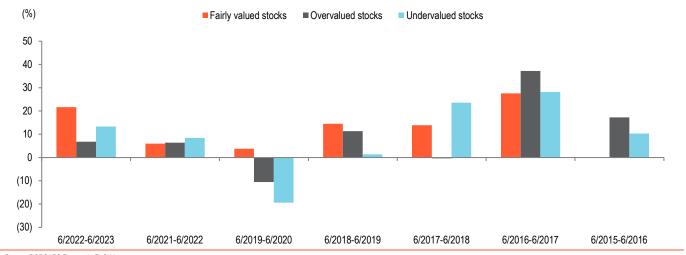
•	
>+1	Overvalued
Between +1 & -1	Fairly valued
<-1	Undervalued

Source: BOBCAPS Research

Conclusion

The chart below clearly shows that fairly valued stocks delivered a better performance on average for most years while both overvalued and undervalued stocks had a mixed run.

Fig 2 - Returns in one year following the date on which stocks were classified into one of the three categories



Source: BOBCAPS Research, Refinitiv



Current classification

Based on data from last week (7 Jun 2023), the current classification of stocks using the last 10-year time series and current sigma is displayed below.

Fig 3 - Current classification of top 100 stocks

Overvalued stocks	Fairly valued stocks	Undervalued stocks
Nestle, ICICI Prudential Life, Tata	Britannia Ind, Tata Motors, PI Industries, Hero Motocorp, Adani	BPCL, ICICI Lombard General Ins, IOCL, Bank of
Consumers, HAL, HDFC Life, Chola Fin,	Transmission, IRCTC, Apollo Hospital, Power Grid, SBI Life,	Baroda, Axis Bank, Nykaa, Coal India, LIC, Dr
ABB, Pidilite, SRF, Havells, Torrent	Marico, Canara Bank, L&T, Adani Wilmar, Tata Power, Page Ind,	Reddy,SBI, UPL, Bajaj Holdings, HDFC AMC, HDFC
Pharma, Adani Enterprise, Godrej	HUL, Info Edge, Siemens, Colgate, Dabur, TCS, United Spirits,	Bank, HDFC, Indusind Bank, GAIL, Motherson, ONGC,
Consumer, RIL, BEL, DIVI's Lab, Grasim,	Bharti Airtel, Wipro, Infosys, Bajaj Auto, NTPC, Bosch, JSW Steel,	Adani Green, Kotak Bank, ACC, Indus Tower
Ambuja Cement, Varun Beverages	Indigo, D Mart, Berger Paint, Eicher Motors, ITC, Asian Paints,	
	Titan, Tata Steel, HCL Tech, Maruti, Adani Ports, PGHH, Adani	
	Total Gas, Bajaj Finserv, Tech Mahindra, Vedanta, DLF, LTI	
	Mindtree, Hindalco, Muthoot, Ultratech, Sun Pharma, Bajaj	
	Finance, Cipla, SBI Card, Shree Cement, ICICI Bank, M&M	

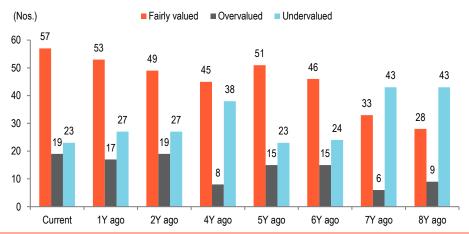
Source: BOBCAPS Research, Refinitiv

Note, our classification of some stocks is based on limited available time series data given their relatively recent listing dates.

Data tables & charts

The chart below shows the classification of stocks over the last decade. As mentioned, we have skipped the 2020-21 period due to heightened Covid-led volatility.

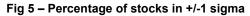
Fig 4 – Number of stocks in each category

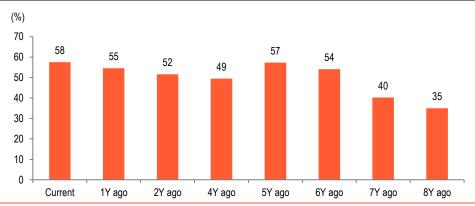


Source: BOBCAPS Research, Refinitiv

Fairly valued data has dominated in part due to the statistical nature of our assumptions. In a normal distribution, +/-1 sigma would contain 68% of the data. We observe lower percentages over our analysis period, but note a gradual increase.







Source: BOBCAPS Research, Refinitiv

Fig 6 - Classification of current top 100 stocks: 1Y ago

Overvalued stocks	Fairly valued stocks	Undervalued stocks
ICICI Pru Life, Tata Consumers, HAL, Adani Transmission, Chola Fin, Tata Power, Page Ind, Pidilite, SRF, Havell, Adani Enterprise, Asian Paints, Titan, Maruti, Adani Total Gas, RIL, DIVI's Lab	Britannia Ind, Nestle, Tata Motors, HDFC Life, PI Industries, Hero Motocorp, IRCTC, Apollo Hospital, Power Grid, SBI Life, ICICI Lombard General Ins, IOCL, Marico, Canara Bank, L&T, ABB, HUL, Info Edge, Siemens, Colgate, Dabur, TCS, United Spirits, Bharti Airtel, Wipro, Torrent Pharma, Infosys, Bajaj Auto, NTPC, Indigo, D	BPCL, Bank of Baroda, Axis Bank, Nykaa, Adani Wilmar, Coal India, Dr Reddy's, Bosch, JSW Steel, SBI, Tata Steel, Bajaj Holdings, PGHH, Vedanta, HDFC AMC, HDFC Bank, HDFC, Hindalco, Indusind Bank, GAIL, Ultratech, Motherson, ONGC, SBI Card.
Marul, Adam Total Gas, RIL, DIVIS Lab	Mart, Berger Paint, Eicher Motors, ITC, UPL, Godrej Consumer, HCL Tech, Adani Ports, Bajaj Finserv, Tech Mahindra, DLF, LTI Mindtree, BEL, Muthoot, Sun Pharma, Grasim, Bajaj Finance, Cipla, ICICI Bank, Ambuja Cement, M&M, ACC, Varun Beverages	Shree Cement, Kotak Bank, Indus Tower

Source: BOBCAPS Research, Refinitiv

Fig 7 - Classification of current top 100 stocks: 2Y ago

Overvalued stocks	Fairly valued stocks	Undervalued stocks
ICICI Pru Life, Tata Consumers, PI Industries, Adani Transmission, Info Edge,	Britannia Ind, BPCL, Nestle, Tata Motors, HAL, HDFC Life, IRCTC, Apollo Hospital, SBI Life, ICICI Lombard General Ins, Marico,	Hero Motocorp, Power Grid, IOCL, Bank of Baroda, L&T, Axis Bank, Coal India, Colgate, United Spirits,
Pidilite, SRF, Havell, Wipro, Adani Enterprise, D Mart, Berger Paint, Asian	Canara Bank, Chola Fin, Tata Power, Page Ind, ABB, HUL, Siemens, Dabur, TCS, Dr Reddy, Bharti Airtel, Torrent Pharma,	NTPC, Bosch, SBI, Eicher Motors, ITC, Tata Steel, Bajaj Holdings, Vedanta, HDFC Bank, Indusind Bank,
Paints, Titan, Adani Total Gas, LTI Mindtree, RIL, DIVI's Lab, Bajaj Finance	Infosys, Bajaj Auto, JSW Steel, Indigo, UPL, Godrej Consumer, HCL Tech, Maruti, Adani Ports, PGHH, Bajaj Finserv, Tech Mahindra, DLF, HDFC AMC, HDFC, Hindalco, BEL, Muthoot,	GAIL, Ultratech, ONGC, Ambuja Cement, M&M, ACC, Indus Tower, Varun Beverages
	Motherson, Sun Pharma, Grasim, Cipla, SBI Card, Shree Cement, ICICI Bank, Kotak Bank	

Source: BOBCAPS Research, Refinitiv

Fig 8 – Classification of top 100 stocks: 4Y ago

rig o - classification of top 100 stocks. 41 ago		
Overvalued stocks	Fairly valued stocks	Undervalued stocks
ICICI Lombard General Ins, Info Edge,	Britannia Ind, Nestle, Tata Motors, ICICI Pru Life, Tata Consumers,	BPCL, HAL, Hero Motocorp, Apollo Hospital, Power
Pidilite, Havells, Indigo, Titan, PGHH,	PI Industries, Adani Transmission, Marico, Canara Bank, Axis Bank,	Grid, SBI Life, IOCL, Bank of Baroda, L&T, Chola Fin,
Bajaj Finserv	ABB, HUL, SRF, Dabur, TCS, Dr Reddy , Bharti Airtel, Wipro,	Coal India, Tata Power, Page Ind, Siemens, Colgate,
	Torrent Pharma, Infosys, Adani Enterprise, Berger Paint, ITC, Asian	United Spirits , Bajaj Auto, NTPC, Bosch, JSW Steel,
	Paints, UPL, Godrej Consumer, HCL Tech, Maruti, Bajaj Holdings,	SBI, D Mart, Eicher Motors, Tata Steel, Adani Ports,
	Tech Mahindra, HDFC AMC, LTI Mindtree, RIL, HDFC Bank, HDFC,	Vedanta, DLF, Hindalco, BEL, Indusind Bank, GAIL,
	Muthoot, Ultratech, DIVI's Lab, Bajaj Finance, Cipla, Shree Cement,	Motherson, Sun Pharma, ONGC, Grasim, M&M, ACC,
	ICICI Bank, Ambuja Cement, Kotak Bank, Varun Beverages	Indus Tower

Source: BOBCAPS Research, Refinitiv



Fig 9 - Classification of top 100 stocks: 5Y ago

Overvalued stocks	Fairly valued stocks	Undervalued stocks
Britannia Ind, ICICI Pru Life, Canara Bank,	Nestle, Tata Consumers, PI Industries, Hero Motocorp, Adani	BPCL, Tata Motors, Apollo Hospital, Power Grid, ICICI
Axis Bank, Page Ind, HUL, Pidilite, SRF,	Transmission, SBI Life, Marico, Bank of Baroda, L&T, Chola Fin,	Lombard General Ins, IOCL, Coal India, Tata Power,
Bharti Airtel, D Mart, Asian Paints, Titan,	Info Edge, Colgate, Havell, Dabur, TCS, United Spirits, Wipro,	ABB, Siemens, Dr Reddy's, Bajaj Auto, NTPC, Bosch,
Bajaj Finserv, DLF, LTI Mindtree	Torrent Pharma, Infosys, Adani Enterprise, JSW Steel, SBI, Indigo,	Eicher Motors, HCL Tech, Vedanta, BEL, Sun Pharma
	Berger Paint, ITC, UPL, Tata Steel, Godrej Consumer, Maruti, Bajaj	ONGC, Cipla, ACC, Indus Tower
	Holdings, Adani Ports, PGHH, Tech Mahindra, RIL, HDFC Bank,	
	HDFC, Hindalco, Indusind Bank, GAIL, Muthoot, Ultratech, DIVI's	
	Lab, Motherson, Grasim, Bajaj Finance, Shree Cement, ICICI Bank,	
	Ambuja Cement, Kotak Bank, M&M, Varun Beverages	

Source: BOBCAPS Research, Refinitiv

Fig 10 - Classification of top 100 stocks: 6Y ago

Overvalued stocks	Fairly valued stocks	Undervalued stocks
Adani Transmission, Canara Bank, Bank of Baroda, Axis Bank, Havell, Bharti Airtel, UPL, Bajaj Finserv, DLF, Muthoot,	Britannia Ind, BPCL, Nestle, Tata Motors, Tata Consumers, PI Industries, Hero Motocorp, Apollo Hospital, IOCL, Marico, L&T, Chola Fin, ABB, HUL, Pidilite, Siemens, SRF, Dr Reddy's, Wipro,	Power Grid, Coal India, Tata Power, Page Ind, Info Edge, Colgate, Dabur, TCS, United Spirits, Torrent Pharma, Infosys, NTPC, D Mart, HCL Tech, Tech
Ultratech, Bajaj Finance, Shree Cement, Ambuja Cement, ACC	Bajaj Auto, Adani Enterprise, Bosch, JSW Steel, SBI, Indigo, Berger Paint, Eicher Motors, ITC, Asian Paints, Titan, Tata Steel, Godrej Consumer, Maruti, Adani Ports, PGHH, LTI Mindtree, RIL, HDFC Bank, HDFC, Hindalco, BEL, GAIL, Motherson, Grasim, ICICI Bank, Kotak Bank	Mahindra, Vedanta, Indusind Bank, DIVI's Lab, Sun Pharma, ONGC, Cipla, M&M, Indus Tower, Varun Beverages

Source: BOBCAPS Research, Refinitiv

Fig 11 - Classification of top 100 stocks: 7Y ago

Overvalued stocks	Fairly valued stocks	Undervalued stocks
Bank of Baroda, Chola Fin, Havell, UPL, Tata Steel, Bajaj Finance	Britannia Ind, Nestle, Tata Motors, PI Industries, Marico, Axis Bank, Page Ind, Pidilite, SRF, Bharti Airtel, Infosys, Bosch, JSW Steel, Indigo, Berger Paint, Asian Paints, Titan, Godrej Consumer, Bajaj Finserv, Vedanta, DLF, Hindalco, BEL, GAIL, Muthoot, Ultratech, Motherson, ONGC, Grasim, Shree Cement, Ambuja Cement, M&M, ACC	BPCL, Tata Consumers, Hero Motocorp, Adani Transmission, Apollo Hospital, Power Grid, IOCL, Canara Bank, L&T, Coal India, Tata Power, ABB, HUL, Info Edge, Siemens, Colgate, Dabur, TCS, United Spirits, Dr Reddy, Wipro, Torrent Pharma, Bajaj Auto, Adani Enterprise, NTPC, SBI, Eicher Motors, ITC, HCL
		Tech, Maruti, Adani Ports, PGHH, Tech Mahindra, RIL, HDFC Bank, HDFC, Indusind Bank, DIVI's Lab, Sun Pharma, Cipla, ICICI Bank, Kotak Bank, Indus Tower

Source: BOBCAPS Research, Refinitiv

Fig 12 - Classification of top 100 stocks: 8Y ago

Overvalued stocks	Fairly valued stocks	Undervalued stocks
PI Industries, Chola Fin, Page Ind, Adani Enterprise, Bosch, UPL, PGHH, Bajaj Finance, Shree Cement	Britannia Ind, Marico, L&T, Axis Bank, Coal India, ABB, Info Edge, Pidilite, Siemens, Colgate, SRF, Havell, United Spirits, Dr Reddy's, Torrent Pharma, Eicher Motors, Titan, HCL Tech, Adani Ports, Bajaj Finserv, Vedanta, BEL, Muthoot, Motherson, Sun Pharma, Grasim, Cipla, Indus Tower	BPCL, Nestle, Tata Motors, Tata Consumers, Hero Motocorp, Apollo Hospital, Power Grid, IOCL, Canara Bank, Bank of Baroda, Tata Power, HUL, Dabur, TCS, Bharti Airtel, Wipro, Infosys, Bajaj Auto, NTPC, JSW Steel, SBI, Berger Paint, ITC, Asian Paints, Tata Steel, Godrej Consumer, Maruti, Tech Mahindra, DLF, RIL, HDFC Bank, HDFC, Hindalco, Indusind Bank, GAIL, Ultratech, DIVI's Lab, ONGC, ICICI Bank, Ambuja Cement, Kotak Bank, M&M, ACC

Source: BOBCAPS Research, Refinitiv

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Registered office Address: 1704, B Wing, Parinee Crescenzo, G Block, BKC, Bandra East, Mumbai 400051

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