

# UNION QUANT RESEARCH

Fallacy of using Index Price Earnings  
Multiple as a valuation benchmark

One of the most popular (and probably an ice breaker) question I get as an Investment Manager is – What’s your take on market or “market kya lagta hai?”. I have always answered it in two parts - my view on macro economy and market valuation. Since macro is not the discussion topic of this article, we shall focus on the second factor – market valuation. Typically, the answer to market valuation is guided by where was the Index Price Earnings (PE) multiple in relation to its historical average. If current market PE is higher than historical average, market was supposed to be expensive, and vice-versa.

Nifty 50 Index current trailing twelve month (ttm) PE is at 28.1x, which is at 46% premium to its 18-year average based on data provided by Bloomberg. Even excluding loss-making companies, Nifty trades at a ttm PE multiple of 26.5x, which is also at a 46% premium to its 18-year average.

However, this is an incorrect way of looking at market valuations. At Union Mutual Fund, we have identified the Fallacy of using the Index PE Multiple as a benchmark for valuation.

Before we start our discussion, an important note – the index providers are accurate in the way they calculate the Index Earnings Per Share (EPS) or Price Earnings (PE) multiple. What we are highlighting in this note is the fallacy in its interpretation as a fair valuation benchmark by investors.

**REASON NO.1: ARITHMETIC OF INDEX NUMBERS**

So let’s start by constructing a hypothetical index which has just two constituents: 1) a Bank which normally trades at 10x P/E (Price Earning Multiple), and 2) an FMCG company, which normally trades at 50x P/E. The index earnings shall be aggregate profits of both companies. The index market capitalisation shall be aggregate market capitalisation of both companies.

**CASE 1: INDEX IS EXPENSIVE**

In base period, FMCG company has a net profit of Rs.10 crs and the Bank has net profit of Rs.50 crs

Our Index looks as follows in base period:

*Base Period*

NO.	COMPANY	PAT (RS. CR)	PE	MARKET CAP (RS. CR)
1	FMCG	10	50	500
2	BANK	50	10	500
TOTAL		60	16.7	1000

One year later, assume the FMCG company’s profits grow at 50% and Bank’s profits stay flat. Then our Index would look as follows in the one-year forward period:

*One-Year Forward Period*

NO.	COMPANY	PAT (RS. CR)	PE	MARKET CAP (RS. CR)
1	FMCG	15	50	750
2	BANK	50	10	500
TOTAL		65	19.2	1250
% CHANGE		8%	15%	25%

Now, carefully note the changes in the index parameters.

- The Index earnings have grown at 8%, while the Index has delivered a 25% return.
- Its PE multiple has increased from 16.7x in base period to 19.2x in one-year forward period.

**CASE 2: INDEX IS CHEAP**

The base period, remains the same - FMCG company has a net profit of Rs.10 cr and the Bank has net profit of Rs.50 cr.

Our Index looks as follows in base period:

*Base Period*

NO.	COMPANY	PAT (RS. CR)	PE	MARKET CAP (RS. CR)
1	FMCG	10	50	500
2	BANK	50	10	500
TOTAL		60	16.7	1000

One year later, assume the FMCG company's profits stay flat, while Bank's profits grow at 50%. Then our Index would look as follows in the one-year forward period:

*One-Year Forward Period*

NO.	COMPANY	PAT (RS. CR)	PE	MARKET CAP (RS. CR)
1	FMCG	10	50	500
2	BANK	75	10	750
TOTAL		85	14.7	1250
% CHANGE		42%	-12%	25%

Now, carefully note the changes in the index parameters.

- The Index earnings have now grown at 42%, while the Index has delivered a 25% return.
- Its PE multiple has reduced from 16.7x in base period to 14.7x in one-year forward period.

Thus, we can draw the following conclusion from the above hypothetical example:

- If high PE companies are growing earnings at a faster pace than low PE ones, the Index earnings growth appears abnormally weak and Index PE multiple apparently expands as was the case in Case 1
- If low PE companies are growing earnings at a faster pace than high PE ones, the Index earnings growth appears abnormally strong and Index PE multiple apparently contracts, as was the case in Case 2
- The reason this anomaly happens is because higher PE companies have a lower weightage in Index earnings compared to their weight in the benchmark and vice versa.

**REASON NO.2: SUM OF THE PARTS (SOTP)**

One more error happens when looking at just reported Index PE multiples. Some constituent companies may have incubated valuable businesses, which may not be contributing significantly to bottomline, but market has already started ascribing value to such businesses future. Such companies may appear expensive based on reported PE multiples. Thus companies where sum-of-the-parts (SoTP) valuation is important, would lead to erroneous conclusions for an analyst analysing the index PE. For example, within the index constituents, a company with large index weight may have incubated a successful telecom business, which currently contributes little to earnings, but significantly to the overall company's market capitalisation.

In summary, the Index PE approach assumes that low PE is cheap, and high PE is expensive. If index earnings are driven by high PE companies, the index PE expands as was the case in Case 1. If index earnings are driven by low PE companies, the index PE contracts as was the case in Case 2. Note that in both the Cases, the index PE changed without any change in PE multiples of its constituents. However, as we discuss later, companies which trade at higher multiples may deserve to trade at such multiples, and vice versa.

Thus, some of the analytical errors, which can be deduced by an analyst from an Index PE are:

- a) He would conclude that the index has become expensive if the overall earnings growth of high PE companies is greater than low PE ones.
- b) He would conclude that the index has become cheap if the overall earnings growth of low PE companies is greater than high PE ones.

## FAIR VALUE APPROACH

The Investment Team at Union Mutual Fund has devised an approach to arrive at a relevant index valuation benchmark, which according to us can serve as a directionally more accurate metric. We call this method the Fair Value Approach.

Based on this approach, we derive the Fair PE multiples of companies, which are driven by four factors:

- Earnings growth: All other things being equal, higher the sustainable earnings growth, higher would be the Fair Value multiple and vice versa.
- Return on Equity: All other things being equal, higher the sustainable return on equity, higher would be the Fair Value multiple and vice versa.
- Riskiness of underlying business: Investors would want higher compensation to invest in riskier businesses compared to less risky ones. This compensation manifests itself in the form of lower Fair Value multiple for riskier business compared to less risky ones.
- Risk free rate: Just like bonds, equities have an inverse relation with interest rates. Higher the interest rate, lower would be the Fair Value multiple and vice versa.

Using the above approach, the Team derives a Fair Value for each of the index constituent, which then is aggregated to arrive at the Index Fair Value.

To understand the impact of this approach on valuation comparisons, let's continue with our earlier hypothetical index, with a few additional assumptions as follows: 1) suppose the FMCG company should command a Price Earnings Fair Value Multiple of 55x, and 2) suppose the Bank should command a Price

Earnings Fair Value Multiple of 9x. Thus, when the FMCG company trades at 50x multiple, it is actually cheaper than its Fair Value. When the bank trades at a 10x multiple, it is expensive than its Fair Value.

### CASE 3: INDEX IS UNDERVALUED

In base period, FMCG company has a net profit of Rs.10 cr and the Bank has net profit of Rs.50 cr. The base period index has a market value of Rs.1000cr, while its Fair Value is also at Rs.1000 cr. Thus, the index is being fairly valued in base period.

Our Index looks as follows in base period:

#### *Base Period*

NO.	COMPANY	PAT (RS. CR)	PE	MARKET CAP (RS. CR)	FAIR VALUE PE MULTIPLE	FAIR VALUE
1	FMCG	10	50	500	55.0	550
2	BANK	50	10	500	9.0	450
TOTAL		60	16.7	1000		1000
PRICE / VALUE						1.00

One year later, assume the FMCG company's profits grow at 50% and Bank's profits stay flat.

Then our Index would look as follows in the one-year forward period:

#### *One-Year Forward Period*

NO.	COMPANY	PAT (RS. CR)	PE	MARKET CAP (RS. CR)	FAIR VALUE PE MULTIPLE	FAIR VALUE
1	FMCG	15	50	750	55.0	825
2	BANK	50	10	500	9.0	450
TOTAL		65	19.2	1250		1275
% CHANGE		8%	15%	25%	PRICE / VALUE	0.98

Note the changes in the index parameters.

- While index has increased by 25%, its Fair Value has increased at a faster pace of 27.5%.
- Thus index has actually become about 2% cheaper than in based period.
- This is consistent with components. Cheaper company grew, while expensive stayed flat. Hence the blend of both is cheaper.

### CASE 4: INDEX IS OVERVALUED

Similar to Case 3, in base period, FMCG company has a net profit of Rs.10 cr and the

Bank has net profit of Rs.50 cr. The base period index has a market value of Rs.1000 cr, while its Fair Value is also at Rs.1000 cr. Thus, the index starts by being fairly valued in base period.

Our Index looks as follows in base period:

#### Base Period

NO.	COMPANY	PAT (RS. CR)	PE	MARKET CAP (RS. CR)	FAIR VALUE PE MULTIPLE	FAIR VALUE
1	FMCG	10	50	500	55.0	550
2	BANK	50	10	500	9.0	450
TOTAL		60	16.7	1000		1000
PRICE / VALUE						1.00

One year later, assume the FMCG company's profits stay flat, while Bank's profits grow at 50%. Then our Index would look as follows in the one-year forward period:

#### One-Year Forward Period

NO.	COMPANY	PAT (RS. CR)	PE	MARKET CAP (RS. CR)	FAIR VALUE PE MULTIPLE	FAIR VALUE
1	FMCG	10	50	500	55.0	550
2	BANK	75	10	750	9.0	675
TOTAL		85	14.7	1250		1225
% CHANGE		42%	-12%	25%	PRICE / VALUE	1.02

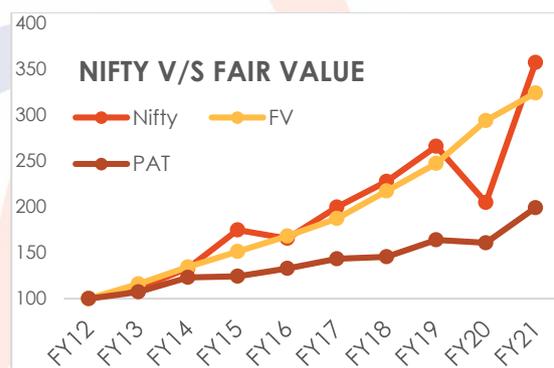
Note the changes in the index parameters.

- While index has increased by 25%, its Fair Value has increased at a slower pace of 22.5%.
- Thus index has actually become about 2% expensive than in based period.
- This is consistent with components. Expensive company grew, while cheap company had no growth. Hence the blend of both is expensive.

### INDIAN MARKET VALUATION FROM THE LENS OF FAIR VALUE APPROACH

We have seen reams of paper being used up in discussing how the market has become expensive over the past nine years. According to our internal research, markets have remained broadly efficient and have delivered returns in line with growth in Fair Values. Following are our findings for the period between 31<sup>st</sup> March 2012 to 31<sup>st</sup> March 2021:

- Adjusted Nifty Index (Index returns computed from 31<sup>st</sup> March 2012 to 31<sup>st</sup> March 2021, assuming same constituents as on 31<sup>st</sup> March 2021) delivered a compounded return on 15.2%.
- Nifty Index Fair Value (Index Fair Values computed internally by Union AMC, from 31<sup>st</sup> March 2012 to 31<sup>st</sup> March 2021, assuming same constituents as on 31<sup>st</sup> March 2021) grew at a compounded growth of 14.0%.
- Nifty Index Earnings (Index Earnings sourced from Bloomberg, computed from 31<sup>st</sup> March 2012 to 31<sup>st</sup> March 2021, assuming same constituents as on 31<sup>st</sup> March 2021) grew at a compounded growth of 8.0%.



Source: Union AMC research, all data indexed to FY12 base.

#### CONCLUSION:

Investors should not depend on index PE multiples to make judgements about overall market valuations. India's market over the last nine years appears to have turned expensive based on PE multiples, as companies which deserve to trade at high multiples have delivered superior earnings growth compared to most cyclical companies which deserve to trade at lower multiples. Also, the reported PE multiples of the Index has been distorted due to Sum of the Parts Valuation for some of the large index weights

According to our research, Fair Value approach is the directionally correct and consistent approach to make judgements on market valuation.

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