Tracking Difference & Tracking Error

DSP
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What do these terms mean?

The terms Tracking Difference and Tracking Error are used interchangeably although both have significantly different meanings. Let's understand how!

Tracking Difference (TD) - difference between fund return and the index return i.e.

Return of the Index – Return of the mutual fund scheme

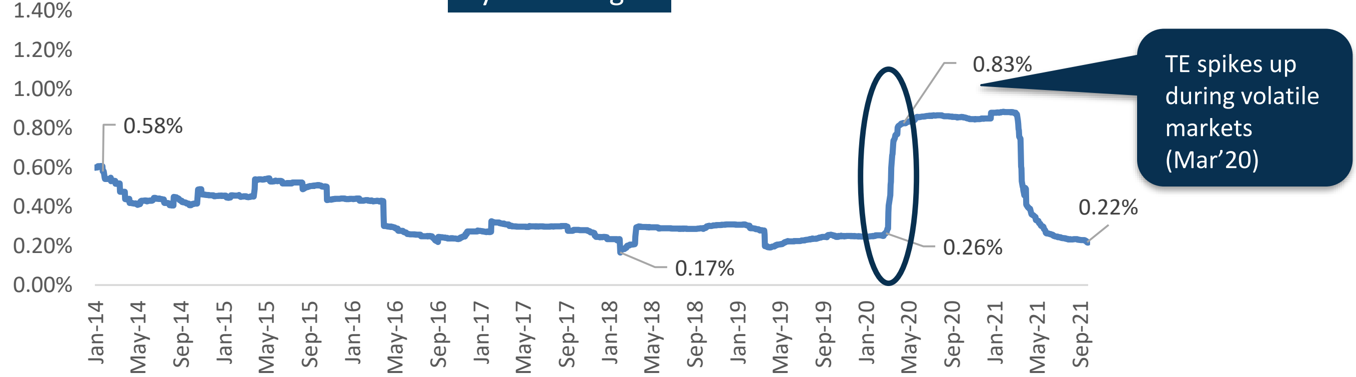
Positive TD means the fund has outperformed the benchmark and negative TD means vice versa.

Return	1 Year	2 Years	3 Years	5 Years
Category Nifty 50 Index Funds (A)	57.69	24.63	18.00	16.19
Nifty 50 TRI (B)	58.54	25.26	18.58	16.81
Tracking Difference (A – B)	**-0.85**	**-0.63**	**-0.58**	**-0.62**

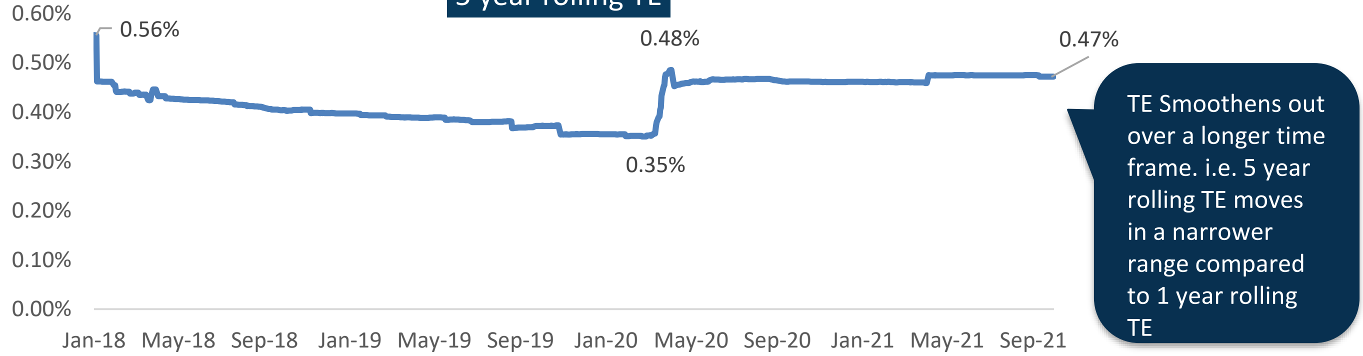
Source: MFIE, Internal. Data as on 30th Sep 2021

Tracking Error (TE) – it measures the **annualized standard deviation of daily TD** over a period of time. One can think of it as a measure of volatility of the daily TD of the fund and the underlying index for all observations in a given period.

1 year rolling TE



5 year rolling TE



Source: Bloomberg, Internal. Data from 1st Jan 2013 to 30th Sep 2021.
Direct Plan Growth option of all Index Funds replicating the Nifty 50 TRI existing at that time are considered for calculation. **Past performance may or may not sustain in future and should not be used as a basis for comparison with other investments**. There is no assurance of any returns/capital protection/capital guarantee to the investors in any mutual fund scheme

Main causes of tracking difference

TER (Total Expense Ratio)	•For e.g.. if an Index fund or ETF charges 0.50% to track a benchmark, then excluding other factors, fund returns ought to lag benchmark returns by 0.5%.
Rebalancing costs	•To reflect the current composition and weight of constituents in the index, index funds have to undergo periodic rebalances. •On an average, approximately 5-10% of the fund is rebalanced quarterly. During such large transactions, the fund incurs trading costs, regulatory charges like STT and cash drag etc. adds to tracking difference.
Corporate actions	•Certain corporate actions like rights issue and bonus debentures etc. may result in holding of securities in the portfolio that do not form part of the Index, adding to the tracking difference.
Unusual regulatory events	•E.g. In Mar' 20, Yes Bank was removed from the Nifty 50 Index. An ~ 137% *increase in the stock during the gap between its removal from the Index and its removal from the Index funds and ETFs tracking the Index contributed to a large tracking difference across the funds.
Cash Drags	•A few examples of causes of cash drag include: •**Unrealized Cash (e.g. Dividends)** - Huge dividends declared by companies can remain as cash receivables in index funds and ETF portfolios, translating to cash drag and tracking difference. •**Instances of Non-realization of cash** – Before realization based NAVs were introduced by the Regulator (SEBI), non-realization of cash from switch transactions contributed to tracking difference in index funds.

Source: NSE, Internal. *13th Mar, 20 to 18th Mar, 20.

How does cash drag during periods of extreme market volatility translate to sharp tracking difference?

In times where markets moved sharply both up and down, even a small cash drag of 0.5-0.75% of the AUM would result in sharp tracking differences. *For e.g. A fund has a cash drag of 0.75% of the AUM and if the market moves up by ~10%, it would result in a negative tracking difference of ~0.08%. Cash drag could be favorable in falling market times.*

	Falling Market (1 Sept 2008 to 31st Oct 2008)	Rising Market (1 April 2009 to 31 March 2010)
Category Nifty 50 Index Funds	-37.0%	69.1%
Nifty 50 TRI	-37.9%	73.2%
Tracking Difference	0.8%	-4.1%

- During the sharp fall in markets in 1 Sept - 31 Oct 2008, most of these Nifty 50 Index Funds outperformed the Nifty 50 TRI Index in absolute terms.
- When the market bounced back in 1 April, 2009 – 31 Mar, 2010, most of these Nifty 50 Index Funds underperformed the benchmark in absolute terms.

Source: MFIE, Internal. Direct Plan Growth option of all Index Funds replicating the Nifty 50 TRI existing at that time are considered for calculation.

What is done to reduce Tracking Difference?

At DSP, we have a dedicated dealing desk that constantly works towards reducing the tracking difference in Index Funds. Some of the practices we have adopted are outlined below:

Usage of securities lending opportunities

- The securities lending mechanism on NSE and BSE give us the opportunity to lend idle shares from Index Funds portfolios.
- The lending fee received from this activity directly contributes to appreciation of the scheme NAVs.

Careful planning and execution of quarterly/Half yearly rebalances

- We try to ensure minimum cash drag by advance planning and careful tracking of cash flows.
- Trades are split according to market volumes of underlying securities to try and ensure minimal deviation.

Automated trade flow

- Our trade flow from order generation to execution is automated.
- We engage with global and local brokers with sophisticated trading algorithms to achieve execution at closing prices.

Realization based NAV

- New SEBI guidelines w.e.f Feb 1, 2021 for Realization Based NAV for all transactions (including those below Rs. 2 lakhs) ensures reduced cash drag in the portfolio.