Index Funds and ETFs

VP Blr Session
16-June-19

by
Nitin Goyal

Agenda

- About myself and my journey
- What is Indexing?
- Index Funds and ETFs
  - Differences
  - Indexing Terms - Expense Ratio and Tracking error
  - Funds to Consider
- Common Myths about Indexing
- Indexing in India
  - Taxation
  - SPIVA and Fund Performance Stats
- Challenges with Indexing
- QnA

Questions for Audience

- How many of you invest in Direct Mutual Fund?
- In Index funds?
- In ETFs?

Myself and My Indexing Journey

- Founder of:
    - Tretcoin.com - a blockchain based rewards & loyalty program
    - Neyberz.com - A food sharing app in the community.
- BTech. IIT (Roorkee, First Class Honours), MBA (1st Rank) from XIM, Bhubaneswar
- Hobbies – Reading, investing and tech (blockchain/bitcoin).
- Indexing since 2008 - Influenced by Jack Bogle and Charlie Munger's philosophy

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Indexing Fundamentals

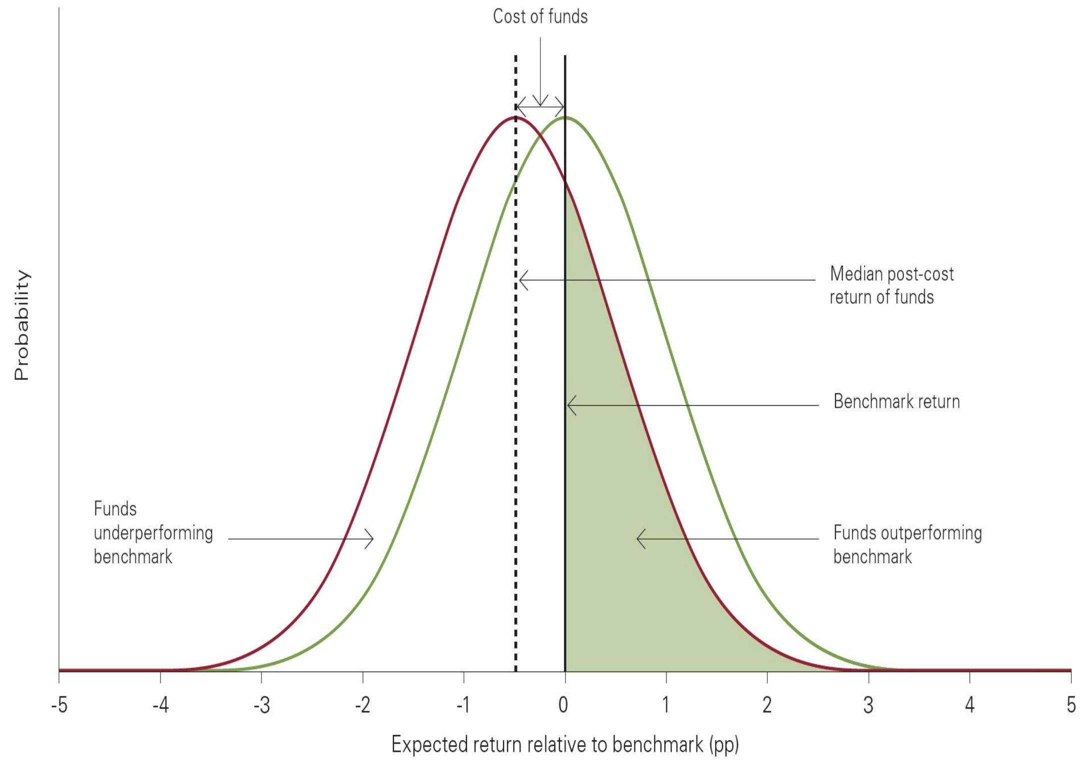
Investing is an overall zero-sum game for all investors

At any one time, the holdings of all investors in a particular market make up that market.

As a result, for every invested rupee that outperforms the total market over a given period, there must by definition be another rupee that underperforms.

Another way of stating this :
The ***asset-weighted performance*** of all investors, both positive and negative, will equal the ***overall performance*** of the market.

Indexing Fundamentals



Investors pay costs (commissions, fees, taxes) all of which combine to reduce realised returns over time. The result of these costs shifts the curve to the left.

Although a portion of the after-cost, asset-weighted performance continues to lie to the right of the market return (the green region), a much larger portion of the red curve is now to the left of the solid black line. ***So, after costs, most of the asset-weighted performance of investors now falls short of the aggregate market return.***

Indexing Fundamentals

Return of Market (R) = Weighted Average of returns all participants

But all participants incur costs - brokerage, commissions, spread with every purchase or sale (estimated to be 2-3%), fund fees (additional 1-2%).

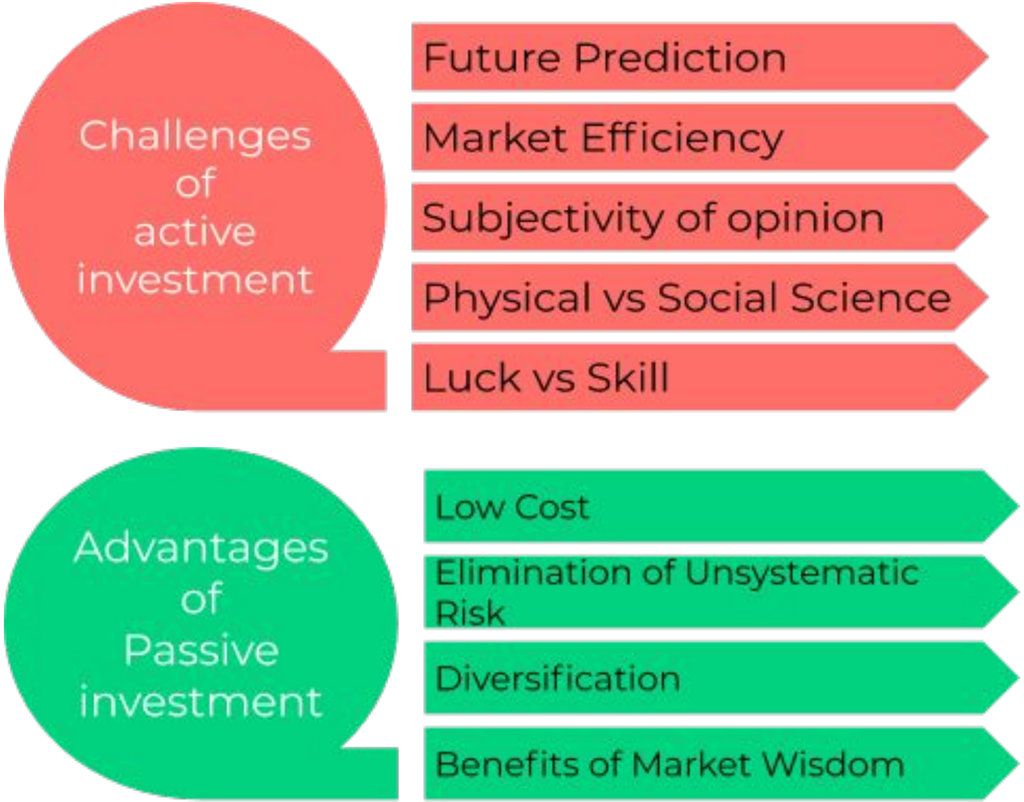
R = Weighted Average of returns all participants before fees

Since the average non-indexed rupee pays higher costs than the average indexed rupee and the aggregate returns have to be the same:

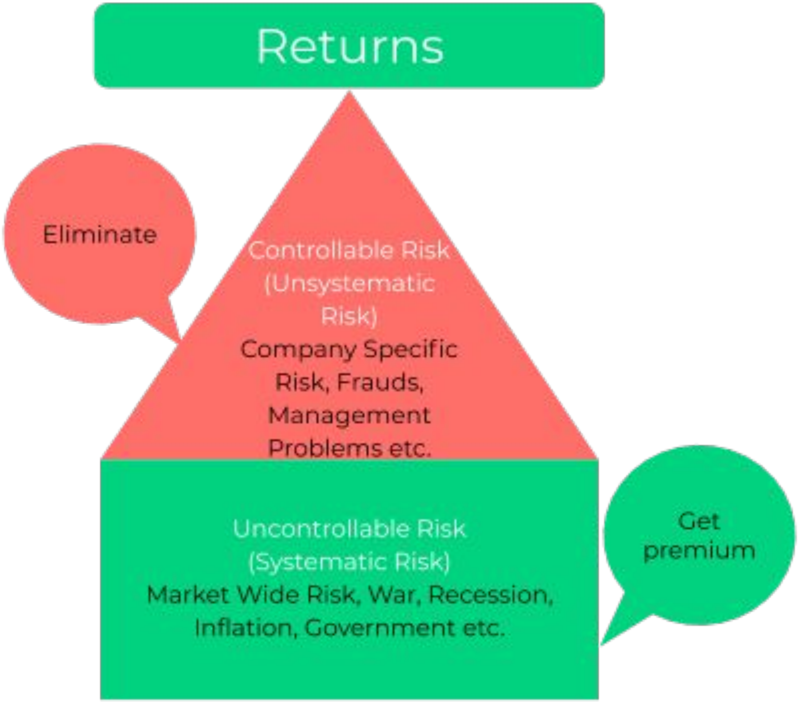
R = Market Cap Index Returns + low costs = Other participants + high costs

Market Cap Index Returns after fees > Other participants returns after fees

Indexing Fundamentals



Indexing Fundamentals

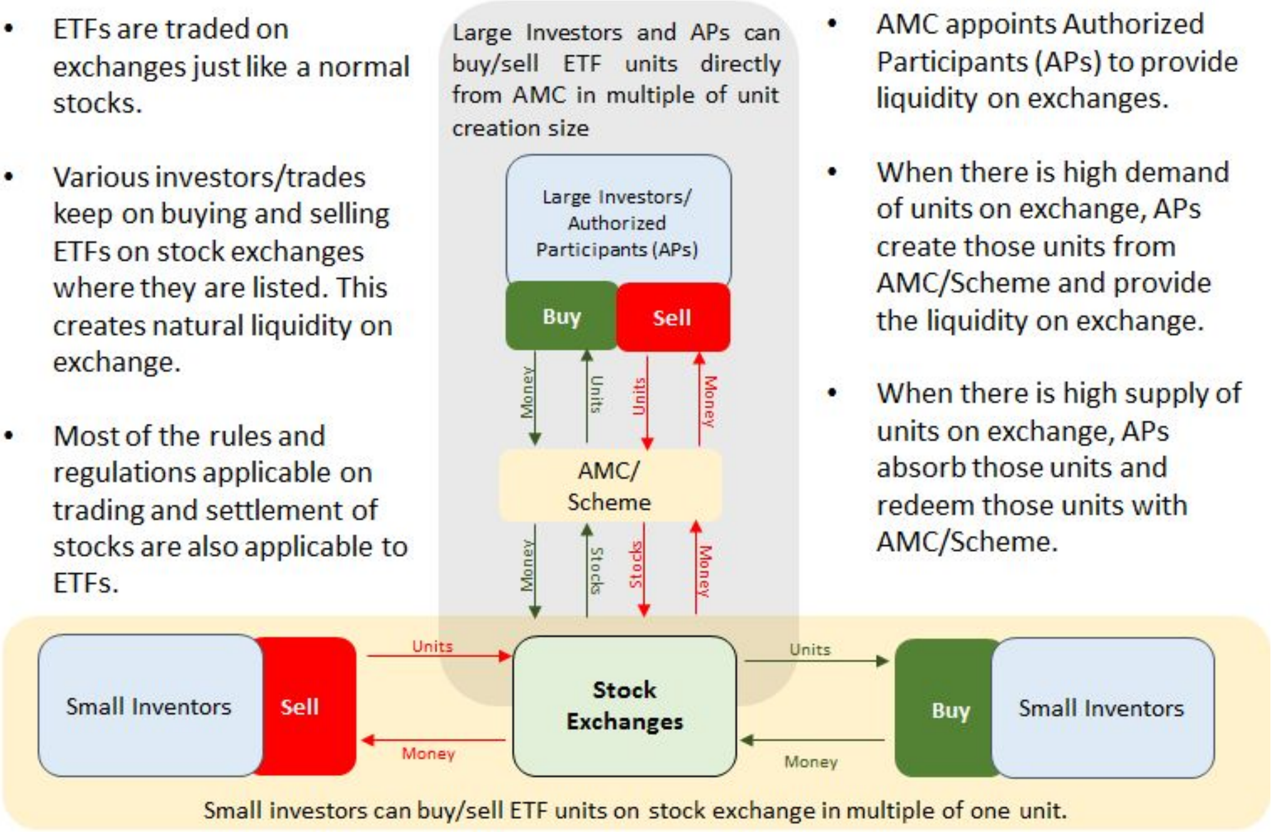


Index funds and ETFs

	Index Funds	ETFs
NAV	End of the Day	Real-time
Liquidity	Directly with Fund	APs/MMs & Fund Itself
Disclosure	Portfolio is disclosed monthly	Portfolio is disclosed daily
Transparency	Low	High
Cost Effectiveness	Transaction cost is spread across fund	Each investor bears own transaction cost
Holding	Demat and Physical	Only Demat form

How do ETFs work?

- ETFs are traded on exchanges just like a normal stocks.
- Various investors/trades keep on buying and selling ETFs on stock exchanges where they are listed. This creates natural liquidity on exchange.
- Most of the rules and regulations applicable on trading and settlement of stocks are also applicable to ETFs.



- AMC appoints Authorized Participants (APs) to provide liquidity on exchanges.
- When there is high demand of units on exchange, APs create those units from AMC/Scheme and provide the liquidity on exchange.
- When there is high supply of units on exchange, APs absorb those units and redeem those units with AMC/Scheme.

Index Terms

Tracking Error

Tracking errors are calculated based on standard deviation of daily difference between scheme and it's total return index. **The lower the better.**

Net Asset Value - NAV

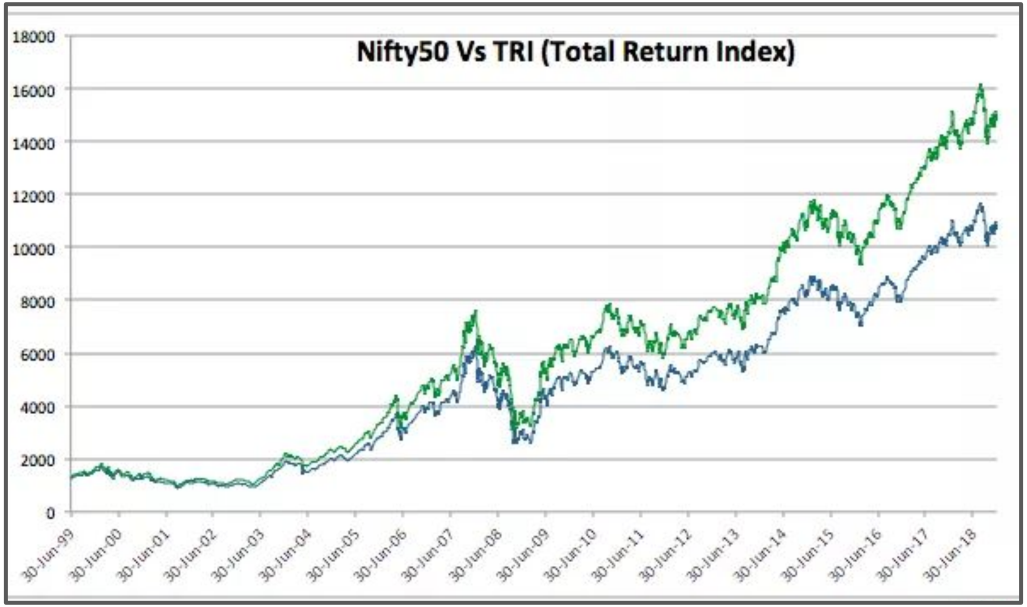
ETFs - real-time trade price, no significance of NAV

Index Mutual Funds - End of Day NAV

Expense Ratios

The fees charged by the fund house. Typically < 0.3% for most funds, Nifty index based funds have expenses as low as 0.07% to 0.10%

Index Terms



Dividends

Many ETFs distribute dividends when there is substantial gap between price index and NAV of an ETF.

Total Returns Index

The value of the index if all dividends received of the underlying stocks are reinvested.

DATE	NIFTY	NIFTY TRI
31-May-19	11,922	16,583

**SEBI has mandated all MFs to declare TRI as the benchmark of comparison for all schemes.*

Some Index Funds

Fund Name	Type	Underlying Index	TER	AUM in Rs. Crs.	1Y Tracking Error	1Y Scheme Return	1Y TRI Return
Reliance ETF Gold BeES	ETF	Gold	0.82%	2,281	NA	1.18%	2.22%
UTI Nifty Index Fund	Fund	Nifty 50	0.10%	1,321	0.05%	10.59%	10.84%
HDFC Index Fund-NIFTY 50 Plan	Fund	Nifty 50	0.10%	706	0.05%	10.56%	10.84%
SBI ETF Nifty 50	ETF	Nifty 50	0.07%	52,585	0.01%	10.79%	10.84%
UTI Sensex Exchange Traded Fund	ETF	Sensex	0.07%	4,350	0.04%	12.34%	12.40%
CPSE ETF	ETF	Nifty CPSE	0.01%	11,837	0.18%	-1.11%	-0.89%
ICICI Prudential Bharat 22 ETF	ETF	BSE Bharat 22	0.01%	8,266	0.09%	3.01%	3.06%
ICICI Pru Nifty Next 50 Index Fund	Fund	Nifty Next 50	0.39%	445	0.45%	-8.90%	-8.39%
UTI Nifty Next 50 Index Fund	Fund	Nifty Next 50	0.27%	360	NA	NA	-8.39%
Reliance ETF Junior BeES	ETF	Nifty Next 50	0.23%	1,145	0.38%	-8.63%	-8.39%
Reliance ETF Nifty Midcap 150	ETF	Nifty Midcap 150	0.31%	119	NA	NA	-10.45%
Motilal Oswal Midcap 100 ETF	ETF	Nifty Midcap 100	0.20%	25	0.36%	-13.02%	-12.72%
Kotak Banking ETF	ETF	Nifty Bank	0.18%	6,896	0.03%	16.77%	17.05%
Reliance ETF Bank BeES	ETF	Nifty Bank	0.19%	5,914	0.02%	16.90%	17.05%
SBI ETF Nifty Bank	ETF	Nifty Bank	0.20%	1,737	0.01%	16.88%	17.05%
Reliance ETF PSU Bank BeES	ETF	Nifty PSU Bank	0.52%	252	0.14%	6.08%	6.73%
Kotak PSU Bank ETF	ETF	Nifty PSU Bank	0.49%	135	0.54%	5.73%	6.73%

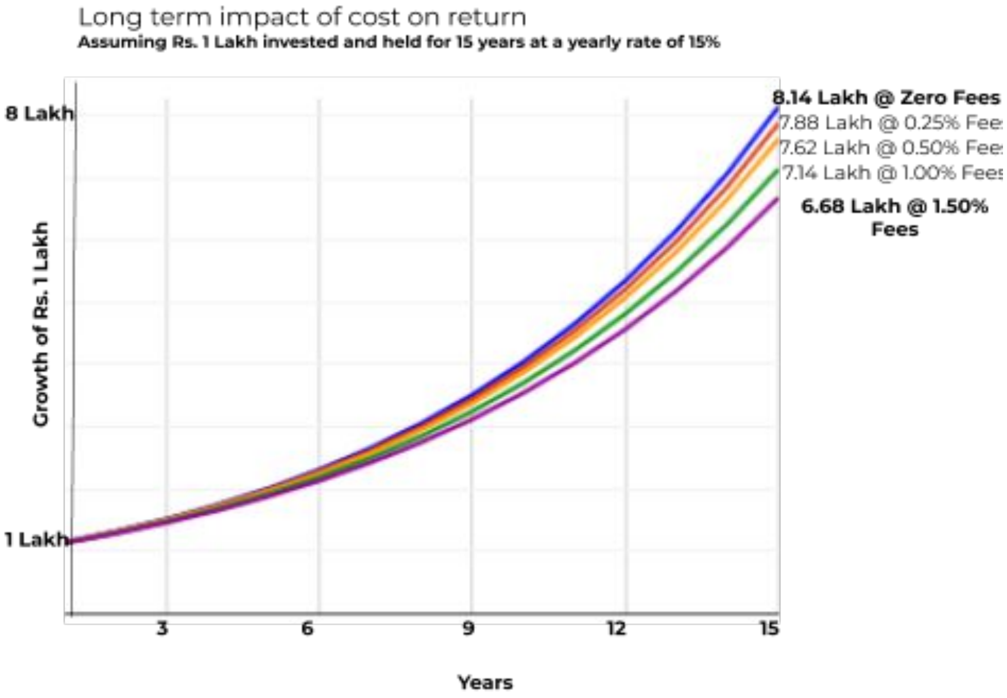
Some Index Funds

Fund Name	Type	Underlying Index	TER	AUM in Rs. Crs.	1Y Tracking Error	1Y Scheme Return	1Y TRI Return
DSP Equal Nifty 50 Fund	Fund	Nifty50 Equal Weight	0.39%	123	0.10%	2.56%	3.07%
Sundaram Smart NIFTY 100	Fund	Nifty100 Equal Wt	0.51%	23	0.98%	-2.72%	-3.69%
Principal Nifty 100 Equal Weight Fund	Fund	Nifty100 Equal Wt	0.72%	18	1.32%	-2.37%	-3.69%
Reliance ETF NV20	ETF	Nifty50 Value 20	0.16%	26	0.14%	20.32%	20.71%
ICICI Prudential Nifty Low Vol 30 ETF	ETF	Nifty100 Low Volatility 30	0.42%	25	0.27%	5.66%	5.93%
SBI ETF Quality	ETF	Nifty200 Quality 30	0.50%	17	NA	NA	5.23%
Kotak NV 20 ETF	ETF	Nifty50 Value 20	0.10%	9	0.28%	20.42%	20.71%
ICICI Prudential NV20 ETF	ETF	Nifty50 Value 20	0.15%	4	0.39%	19.68%	20.71%
LIC MF G-Sec Long Term ETF	ETF	Nifty 8-13 yr G-Sec	0.26%	75	1.25%	9.22%	10.15%
Reliance ETF Long Term Gilt	ETF	Nifty 8-13 yr G-Sec	0.04%	26	1.25%	9.48%	10.15%
Reliance ETF Liquid BeES	ETF	Nifty 1D Rate Index	0.65%	2,135	0.09%	4.12%	6.30%
ICICI Prudential Liquid ETF	ETF	S&P BSE Liquid Rate	0.50%	100	NA	NA	6.31%
DSP Liquid ETF	ETF	Nifty 1D Rate Index	0.61%	94	0.18%	3.07%	6.30%
Motilal Oswal Nasdaq 100 ETF	ETF	Nasdaq 100	0.54%	162	NA	22.67%	18.49%
Reliance ETF Hang Seng BeES	ETF	Hang Seng	1.13%	8	NA	2.90%	-3.60%

Impact of Costs & Expenses

- “The two greatest enemies of the equity fund investor are expenses and emotions.”

- "The grim irony of investing is that we investors as a group not only **don't get what we pay for**, we **get precisely what *we don't pay for***" — John C. Bogle, The Little Book of Common Sense Investing



Myths

- **All Index Funds have very Low Cost**
  Many exotic index funds are expensive. Even standard index funds have widely varying expense ratios

- **Index Funds are very safe and there is no risk of capital loss**
  Index funds move up and down in step with the underlying index. They suffer from the same volatility as the market baseline. Mid and Small Cap indices can be very volatile

- **Index Funds are always more Tax Efficient than equity**
  In some cases specific ETFs may be tax friendly, but not true generally

Myths

- **I don't want average returns with Index Funds**
  Average is pretty good most of the time for most people

- **Indexing does not work in India (inefficient market)**
  (Corollary => Indian Traders are Dumb)
  A market doesn’t have to be efficient for indexing to be the best option - indexing captures the return of a market at a low cost whether the market is efficient or not. Even if the Indian market **were** inefficient, the whole group of investors in the market would still get the market return minus their costs.

- **ETFs brokerage costs means they are worse than Index Funds**
  Not really. One off brokerage charges of ~0.2% **which do not compound** may be better than a more expensive fund in the long run.

Myths

- **Indexing is the best route for every investor**
  Many investors (value investors, traders) may be able to do better than indexes - indexing does not bypass portfolio allocation (gold, real estate, bonds)

- **All Index Funds are identical**
  Funds have varying expenses and exposure depending upon strategy. The same Index can have multiple funds with different expense ratios and tracking errors.

- **You get what you pay for - Index funds are cheap, so they underperform**
  On the contrary, fee based active funds underperform the markets most of the time. Further their costs compound over time.

Taxation

- **Tax Loss Harvesting**
  Switch ETFs ⇔ Index funds or Index Funds ⇔ Index funds. All the index products are nearly identical.
  Ex. sell HDFC Sensex and buy SBI NIFTY ETF to harvest loss
  => STCL can be offset against your other earnings.

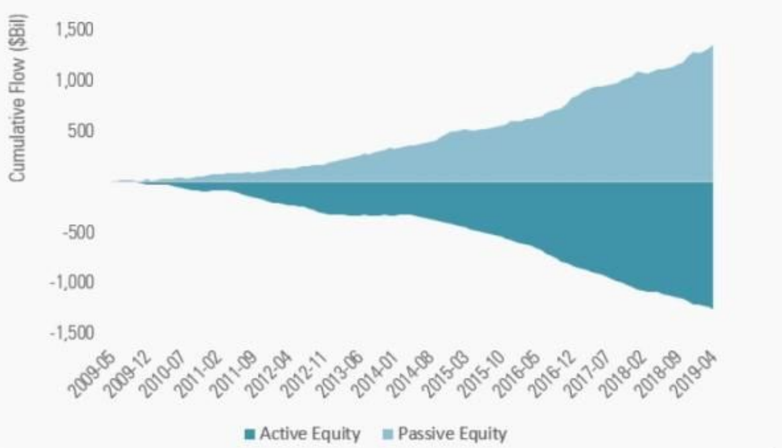
- **Gold ETFs**
  Gold ETFs are subject to 20% LTCG tax (with indexation). However, there is *no additional GST/VAT or wealth tax.*
  Other advantages - ***storage, purity, liquidity, smaller unit size, SIP***

- **International Funds**
  Direct International funds and ETFs are taxed like debt funds—20% LTCG tax with indexation benefits for > 36 months holding period.

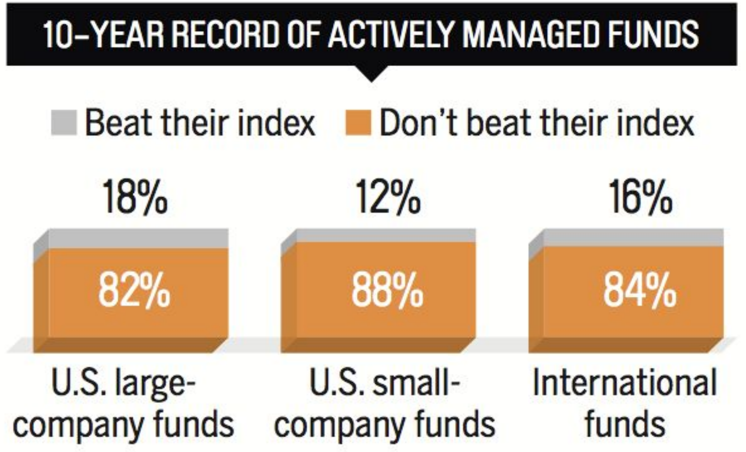
Indexing Trends

Scheme Name	Net Inflow (+ve)/Outflow (-ve) for the month of May 2019
Open ended Schemes	
Growth/Equity Oriented Schemes	
Multi Cap Fund	648.43
Large Cap Fund	52.88
Large & Mid Cap Fund	278.78
Mid Cap Fund	1,272.68
Small Cap Fund	1,415.86
Dividend Yield Fund	-28.13
Value Fund/Contra Fund	-9.43
Focused Fund	1,199.73
Sectoral/Thematic Funds	60.57
ELSS	516.39
	5,407.75
Other Schemes	
Index Funds	219.65
GOLD ETF	
Other ETFs	2,432.40

Exhibit 1 10-Year Cumulative Flows for Active-Passive U.S. Equity



Source: Morningstar Direct Asset Flows. Data as of April 30, 2019.



Fund Performance in Indian Markets - SPIVA

Exhibit 1: Percentage of Funds Outperformed by the Indices

FUND CATEGORY	COMPARISON INDEX	1-YEAR (%)	3-YEAR (%)	5-YEAR (%)	10-YEAR (%)
Indian Equity Large-Cap	S&P BSE 100	91.94	90.50	57.55	64.23
Indian ELSS	S&P BSE 200	95.45	88.10	40.54	51.52
Indian Equity Mid-/Small-Cap	S&P BSE 400 MidSmallCap Index	25.58	56.52	39.68	55.26
Indian Government Bond	S&P BSE India Government Bond Index	81.58	71.43	88.00	96.43
Indian Composite Bond	S&P BSE India Bond Index	94.44	90.97	96.64	83.33

Source: S&P Dow Jones Indices LLC, Morningstar, and Association of Mutual Funds in India. Data as of Dec. 31, 2018. Past performance is no guarantee of future results. Table is provided for illustrative purposes.[i]

Fund Survivorship - SPIVA

Report 2: Survivorship and Style Consistency of Indian Equity Funds

FUND CATEGORY	NO. OF FUNDS AT START	SURVIVORSHIP (%)	STYLE CONSISTENCY (%)
ONE-YEAR			
Indian Equity Large-Cap	66	95.45	42.42
Indian ELSS	43	95.35	95.35
Indian Equity Mid-/Small-Cap	45	100.00	73.33
Indian Government Bond	41	70.73	65.85
Indian Composite Bond	140	95.71	91.43
THREE-YEAR			
Indian Equity Large-Cap	97	85.57	26.80
Indian ELSS	39	94.87	94.87
Indian Equity Mid-/Small-Cap	46	97.83	67.39
Indian Government Bond	53	52.83	49.06
Indian Composite Bond	144	88.19	83.33
FIVE-YEAR			
Indian Equity Large-Cap	156	80.77	17.95
Indian ELSS	36	94.44	94.44
Indian Equity Mid-/Small-Cap	66	84.85	39.39
Indian Government Bond	52	50.00	46.15
Indian Composite Bond	116	85.34	81.03
TEN-YEAR			
Indian Equity Large-Cap	137	67.88	13.14
Indian ELSS	30	90.00	90.00
Indian Equity Mid-/Small-Cap	75	66.67	26.67
Indian Government Bond	59	32.20	28.81
Indian Composite Bond	90	66.67	54.44

Source: S&P Dow Jones Indices LLC, Morningstar, and Association of Mutual Funds in India. Data as of June 30, 2018. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Large CAP: Only 82/137 survived

Only 18/137 remained large cap

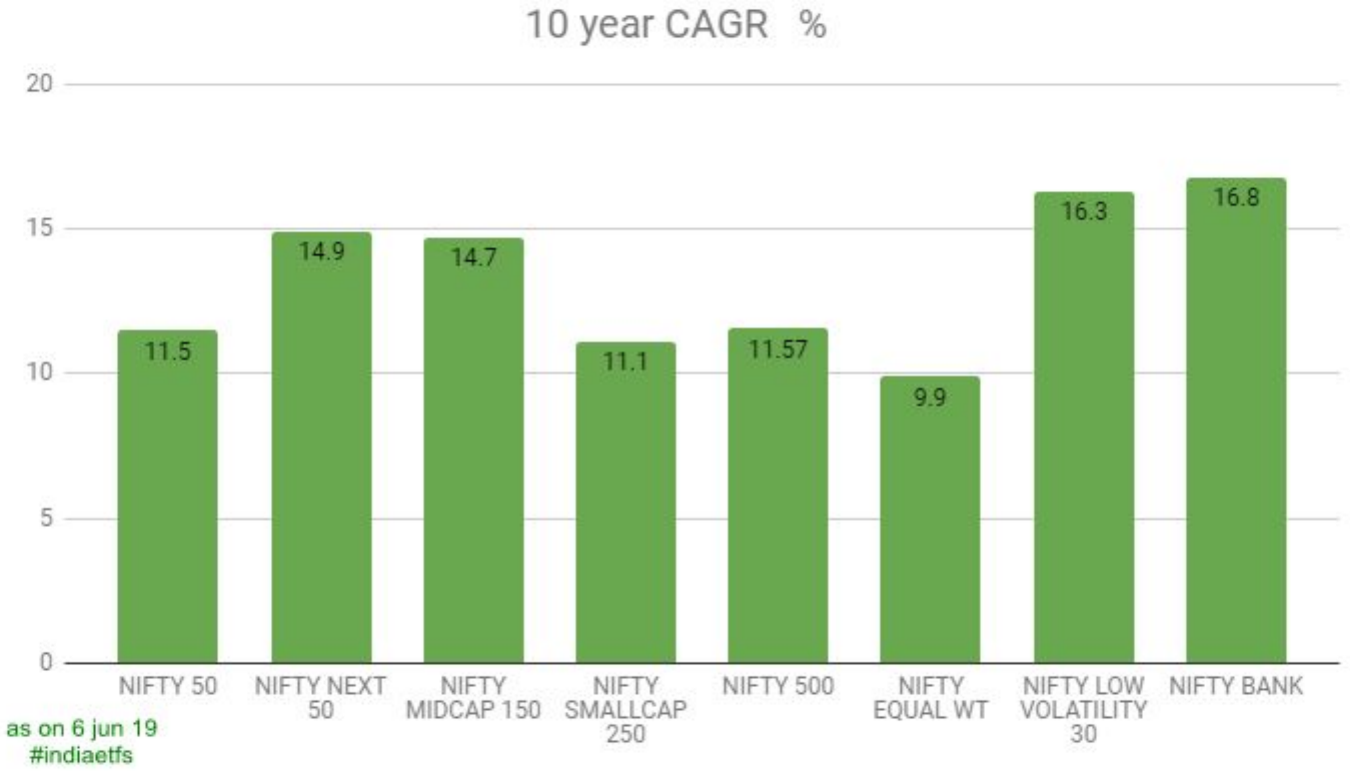
SPIVA Findings

- **Survivorship Bias**
  33.33% of the 123 large cap funds (i.e. 41 funds) ceased to exist as independent funds by year-end 2018. Usually the worst performing funds are often merged into better performing larger funds. When this happens, we no longer notice the performance data of these 41 funds

- **Weighted Average**
  The average ‘Indian Equity Large-Cap’ (Active) fund’s returns were marginally lower than the index but for all practical purposes, the two are almost equal.

- **No outperformance in mid/small caps**
  While the active mid & small-cap funds marginally outperformed the BSE mid & small-cap index, they marginally underperformed the comparable NSE mid & small-cap index.

Annualised Return – Total Return Indices



SIP Returns in the Index (as on 31-May-19)

	3 Year	5 Year	10 Year	15 Year
NIFTY NEXT 50 (NN50) Returns	4.10%	8.70%	12.84%	13.72%
NIFTY Returns	14.26%	12.28%	12.03%	12.61%
Total No. of MFs	345	300	218	97
No. of MFs outperforming Nifty Next 50 Index	282	180	96	34
No. of MFs outperforming Nifty Index	36	45	120	51
% of MF outperforming Nifty Next 50	82%	60%	44%	35%
% of MF outperforming Nifty	10%	15%	55%	53%
Average Returns for the Period (ALL FUNDS)	8.10%	9.07%	12.07%	12.84%
Average Return for all funds outperforming NIFTY	16.50%	13.68%	14.39%	12.77%
Average Return for all funds under performing NIFTY	7.19%	8.23%	9.18%	10.76%
Average Return for all funds outperforming NN50	9.88%	11.34%	14.87%	15.47%
Average Return for all funds underperforming NN50	0.56%	5.63%	9.83%	11.39%

SIP Returns in the Index (as on 23-Apr-17)

	1 Year	3 Year	5 Year	10 Year
NIFTY NEXT 50 Returns	34.3%	23.7%	20.3%	13.6%
NIFTY Returns	16.2%	11.2%	12.7%	9.3%
Total No. of MFs	416	351	324	205
No. of MFs outperforming Nifty Next 50 Index	52	67	54	56
No. of MFs outperforming Nifty Index	286	276	241	155
% of MF outperforming Nifty Next 50	13%	19%	17%	27%
% of MF outperforming Nifty	69%	79%	74%	76%
Average Returns for the Period (ALL FUNDS)	21.6%	17.3%	15.7%	11.7%
Average Return for all funds outperforming NN50	39.7%	28.6%	24.3%	15.7%
Average Return for all funds underperforming NN50	18.9%	14.7%	14%	10.1%

Annualised Return (Monthly Rolling) Comparison – 10 Years Total Return Indices

	N50 = Nifty 50	Nxt50 = Nifty Next 50	N500 = Nifty 500	EQW50 = NIFTY50 Equal Weight	MC150 = NIFTY Mid Cap 150	LV50 = NIFTY Low Volatility 50	SC250 = NIFTY Small Cap 250
Rank	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Jan-19	Nxt50 (21%)	MC150 (20%)	LV50 (20%)	SC250 (17%)	N500 (16%)	N50 (15%)	EQW50 (14.%)
Feb-19	Nxt50 (22%)	MC150 (21%)	LV50 (21%)	SC250 (18%)	N500 (17%)	N50 (16%)	EQW50 (16%)
Mar-19	Nxt50 (23%)	MC150 (22%)	LV50 (21%)	SC250 (19%)	N500 (17%)	N50 (16%)	EQW50 (16%)
Apr-19	Nxt50 (22%)	MC150 (22%)	LV50 (20%)	SC250 (18%)	N500 (17%)	N50 (16%)	EQW50 (15%)
May-19	MC150 (19%)	Nxt50 (19%)	LV50 (19%)	SC250 (16%)	N500 (15%)	N50 (14.%)	EQW50 (13%)

PE - does it matter?

Note: Returns are calculated considering **Nifty 50 Total Return Index** closing value on first working day of the month
"PE" - Price to Earing Ratio. "L" - Lumpsum. "S" - SIP

How to read this data - You can see {PE26, L14 - S22} in "Jan" Column of "2010" Row. This means 10 years back i.e. on Jan-2000 PE was 26. If someone had invested, his/her CAGR would have been 14% on Jan-2010 & If someone have done monthly SIP for those 10 years, his/her CAGR would have been 22%

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2009							PE18 L16 - S19	PE20 L16 - S21	PE21 L14 - S20	PE22 L16 - S22	PE20 L15 - S20	PE22 L16 - S22
2010	PE26 L14 - S22	PE25 L14 - S20	PE27 L13 - S21	PE25 L15 - S22	PE20 L16 - S21	PE22 L16 - S20	PE23 L15 - S21	PE21 L17 - S22	PE22 L18 - S22	PE19 L19 - S23	PE18 L20 - S23	PE19 L19 - S23
2011	PE19 L19 - S23	PE22 L17 - S20	PE20 L17 - S21	PE17 L20 - S21	PE15 L19 - S21	PE15 L19 - S20	PE16 L20 - S20	PE15 L20 - S19	PE15 L19 - S17	PE13 L20 - S16	PE14 L20 - S18	PE15 L18 - S16
2012	PE15 L18 - S15	PE17 L19 - S17	PE19 L18 - S17	PE18 L18 - S16	PE18 L19 - S16	PE16 L18 - S14	PE16 L19 - S15	PE14 L20 - S15	PE15 L20 - S15	PE14 L21 - S16	PE14 L21 - S15	PE14 L20 - S16
2013	PE15 L20 - S15	PE14 L21 - S15	PE14 L20 - S14	PE13 L21 - S14	PE11 L22 - S14	PE12 L21 - S13	PE12 L20 - S13	PE13 L19 - S12	PE15 L17 - S11	PE16 L17 - S11	PE18 L16 - S13	PE18 L16 - S12
2014	PE21 L14 - S12	PE20 L15 - S11	PE22 L14 - S12	PE21 L15 - S13	PE17 L16 - S12	PE12 L19 - S14	PE13 L19 - S14	PE14 L18 - S14	PE14 L19 - S15	PE15 L18 - S14	PE15 L18 - S15	PE16 L17 - S15
2015	PE16 L16 - S14	PE14 L17 - S15	PE15 L17 - S15	PE15 L17 - S14	PE13 L17 - S13	PE14 L16 - S13	PE14 L16 - S13	PE14 L15 - S13	PE15 L14 - S11	PE16 L13 - S11	PE14 L14 - S11	PE16 L13 - S11
2016	PE17 L12 - S10	PE18 L11 - S9	PE19 L10 - S8	PE21 L10 - S9	PE20 L9 - S9	PE17 L12 - S10	PE19 L12 - S10	PE18 L12 - S11	PE20 L11 - S11	PE21 L11 - S11	PE20 L10 - S10	PE21 L9 - S9
2017	PE21 L9 - S9	PE20 L9 - S10	PE18 L10 - S11	PE17 L11 - S11	PE20 L10 - S11	PE20 L10 - S12	PE21 L10 - S12	PE20 L10 - S12	PE20 L10 - S12	PE23 L8 - S12	PE26 L7 - S13	PE26 L7 - S12
2018	PE28 L7 - S13	PE23 L9 - S13	PE21 L9 - S12	PE21 L9 - S12	PE22 L9 - S13	PE20 L10 - S13	PE17 L12 - S12	PE19 L11 - S13	PE18 L12 - S14	PE17 L12 - S13	PE13 L14 - S11	PE12 L16 - S12

Challenges with Indexing

- SIP challenges
  - No suitable funds for most categories (ex. Small Cap)
  - Poor Broker support for Equity SIPs into ETFs
- EPFO invests 15% corpus every month in SBI and UTI Nifty ETFs, distorting prices
- Some people believe Indian Indexes are not well constructed

HIGH STOCK CONCENTRATION

In market cap terms, the concentration in Nifty is high: the top 10 Nifty stocks account for 54% of the index. The problem is in other indices as well. Even in the broader BSE 500, the top 10 stocks account for 36% of the index.

Nifty 50

	Index weight	Market cap weight	Free float (%)
1 to 10	53.7	42.3	73
11 to 20	19.9	22.2	53
21 to 30	12.5	19.5	41
31 to 40	8.6	9.3	52
41 to 50	5.2	6.7	44

BSE 500

	Index weight	Market cap weight	Free float (%)
1 to 100	81.2	75.3	49
101 to 200	10.0	12.7	43
201 to 300	4.7	5.9	45
301 to 400	2.7	3.7	39
401 to 500	1.4	2.3	34

S&P 500

	Index weight	Market cap weight	Free float (%)
1 to 100	65.1	64.6	96
101 to 200	16.0	16.2	95
201 to 300	9.5	9.5	95
301 to 400	5.9	6.0	95
401 to 500	3.5	3.6	95

Source: Bloomberg

Challenges with Indexing

- Markets are cyclic - midcap / small cap / large cap choice is hard
- Many ETFs have poor liquidity leading to high bid-ask spread.
  - Most ETFs have AUM of <10 crores
- There is no suitable NIFTY500 Index fund to cover broad market.
- Gold based Fund of Funds offer liquidity/SIP at higher costs
- Only International Fund ETF is MoST Nasdaq100 ETF.
  - Feeder funds have higher expenses (both sides)

Final Comments

To achieve satisfactory investment results, is easier than most people realize; to achieve superior results is harder than it looks.

- Benjamin Graham, The Intelligent Investor

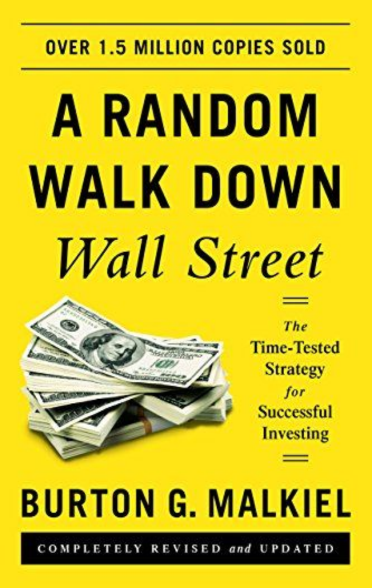
Simplicity should not be confused for stupidity.

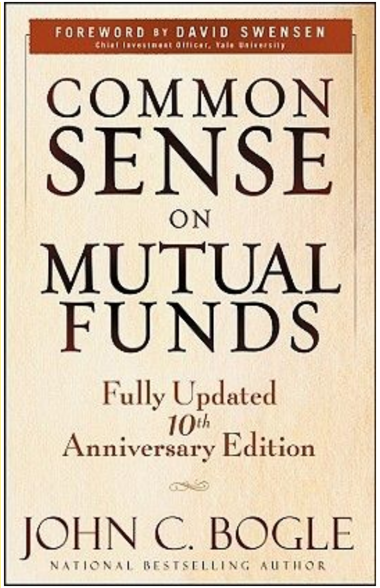
- John Bogle

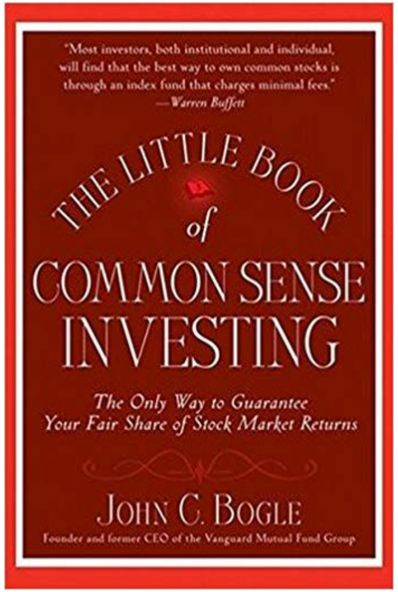
It is remarkable how much long-term advantage people like us have gotten by trying to be consistently not stupid, instead of trying to be very intelligent.

- Charlie Munger

Further Reading







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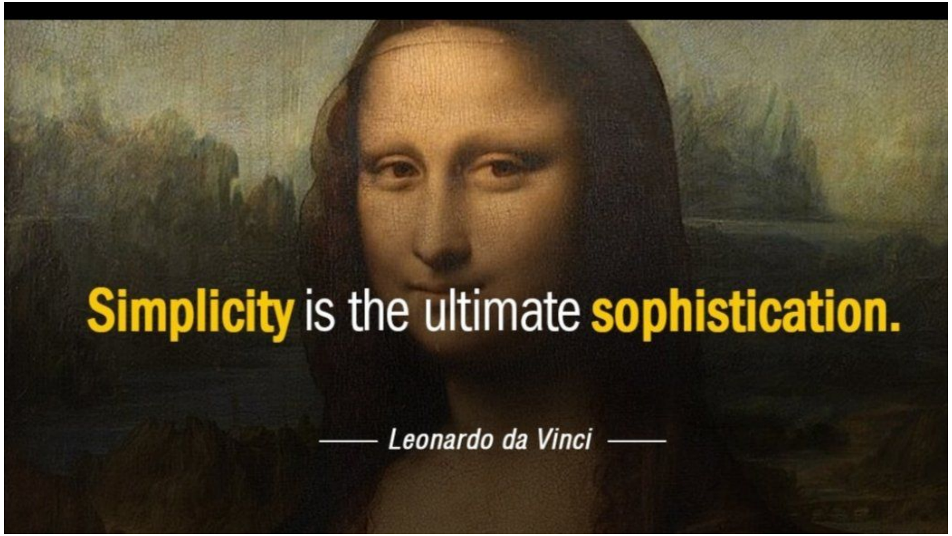

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What if everyone indexed?

Less than ~1% of the Indian market is indexed today

If 90% of the market were indexed, 10% of the shares will change hands very frequently.

Average holding times are lesser for tradable securities than index funds

More *skilled* investors than *lucky* ones will remain

We are victims of bad behaviour

Investors will still buy for the fear of missing out, and sell for the fear of losing it all. As equity markets give us bumpy returns, the fraction of indexing too, will ebb and flow. When sectors (such as Technology or Energy) beat the market for a few years at a time, capital will chase performance and follow.