NSE Indices

WHITE PAPER
SERIES #18

NIFTY 50

The torch bearer of Indian equities market for last 25 years

April 2019

Introduction

The year 2019 marks NSE's silver jubilee anniversary and throughout this journey NSE has been a driving force of capital markets in India. Over these years, NSE has emerged as one of the largest exchanges in the world and has built a strong global reputation - something only few institutions in India have managed to build. As an institution of national importance, NSE plays a critical role in working with regulators, government and market participants in development of the capital markets.

India's premier index, the NIFTY 50 over years has successfully become the 'stock of the nation' helping investors gauge the pulse of Indian capital market. It has lived up to its core purpose of providing a fair representation of the Indian equity market focusing on portfolio diversification, liquidity and replicability. With 50 blue chip companies as a part of its composition, the NIFTY 50 represents ~67% of the total free float market capitalisation of all listed equity companies on NSE as on March 29, 2019. NIFTY 50 stocks account for ~53% of the total liquidity of all listed equity stocks on NSE based on 6 month average as on March 29, 2019. The NIFTY 50 portfolio provides a sector exposure pattern that is broadly similar to one provided by all listed equity stocks on NSE as depicted in Exhibit 1.

Exhibit 1: Attributes of NIFTY 50 viz a viz all listed equity stocks on NSE

Attributes	NIFTY 50	All listed equity stocks on NSE
Free Float Market capitalisation (%)	~67%	100%
Average Daily Traded Volume (%)	~53%	100%
Sector Exposure	**NIFTY 50 (%)**	**All listed equity stocks on NSE (%)**
FINANCIAL SERVICES	38.85	33.34
CONSUMER	17.91	19.04
ENERGY	15.30	12.29
IT	13.67	10.60
COMMODITIES	6.05	7.74
MANUFACTURING	3.66	8.55
HEALTHCARE	2.42	5.02
TELECOMMUNICATIONS	1.51	1.40
SERVICES	0.64	2.02
Total	100.00	100.00

**All data as on March 29, 2019 except Average Daily Traded Volume (%) is based on 6 month average data ending Mar 2019.*
Source : NSE database.

NIFTY 50's simple rules-based portfolio review strategy has significantly outperformed a 'buy and hold' strategy over the last 10 years

NIFTY 50 tracks the performance of top 50 large cap companies selected based on Free Float Market capitalisation (subject to other index criteria) akin to most popular global indices – and as a part of its semi-annual review, removes stocks that would have fallen in market cap and adds emerging stocks that would have increased in market cap thereby increasing the exposure of the index to emerging stocks and sectors. Thanks to this methodical and dynamic rules-based portfolio review approach, the NIFTY 50 total return index delivered returns of 15.98% per annum during the previous 10 year period (as on March 29, 2019). Interestingly, these returns also converge with India's GDP growth which has shown a 10-year CAGR of ~13% in nominal terms (Gross Domestic Product at Current Prices) over the same period (FY09 - 19E) –

validating the long-term behaviour of equity markets delivering returns aligned with the income growth trajectory of the nation.

Someone tracking the NIFTY 50 index for investments should keep the portfolio aligned with the periodic changes in NIFTY 50. This can also be achieved by investing in NIFTY 50 linked ETFs or Index funds offered by Asset Management Companies in India. Conversely, instead of regularly tracking the portfolio changes in NIFTY 50 across time in one's portfolio, if someone had followed a "Fill it – Shut it - Forget it" strategy by buying the 50 stocks part of NIFTY 50 index 10 years ago (in April 2009) in the proportion of their free-float market capitalisation at that point in time and had held them as-is for next 10 years[-1], the return would have been only ~11.46% per annum. Further, the return on an equal weighted portfolio (2% weight to each stock) in these 50 stocks at that point of time would have been further lower at ~7.71% per annum. This highlights the value that the simple rules-based portfolio review mechanism followed by NIFTY 50 has added at least ~4% per annum to the overall return of the investors (15.98% return of NIFTY 50 TRI as compared to 11.46% return of buy and hold strategy).

On rolling return basis, NIFTY 50 has consistently delivered healthy absolute returns

Further, based on daily rolling return analysis of NIFTY 50 index performance over last 19 years since June 1999, someone investing in NIFTY 50 index with an investment horizon of 5 year or more has never witnessed a loss. For longer investment horizon of 7 and 10 years, NIFTY 50 index has delivered an annualised return of more than 15% per annum for 48% and 60% of the times respectively. This also serves as a reminder that in long run, even a simple, rules based investment strategy followed by NIFTY 50, which has no subjectivity, emotions or behavioural bias involved in stock-picking, has the potential of generating market returns that one typically expects from equity markets.

Exhibit 2: Daily Rolling Return Analysis of NIFTY 50 Index for various investment horizon

Absolute Return delivered by NIFTY 50 Total Return Index (% of instances)						
Investment Horizon	>15%	10% to 15%	5% to 10%	0% to 5%	Negative return	Total instances
10 year	60%	24%	16%	-	-	100%
7 years	48%	30%	22%	-	-	100%
5 years	40%	33%	21%	6%	-	100%
3 years	40%	22%	20%	10%	8%	100%
2 years	48%	9%	11%	11%	21%	100%
1 year	47%	10%	9%	8%	27%	100%

Based on return analysis for period June 30, 1999 till Mar 29, 2019

Outperforming the NIFTY 50 benchmark index by large cap funds has increasingly become more difficult

Active mutual funds that previously managed to generate reasonable alphas by outperforming the benchmark, now find it difficult to beat the benchmark. This is specifically true for active large – cap funds, specifically after the recent standardisation and recategorisation of funds by SEBI and when compared to the Total Return Index variant (Total Return Index incorporates dividend reinvestment).

([-1] Stocks that were merged, amalgamated or delisted subsequent to March 2009 are assumed to be held as cash till March 2019)

Exhibit 3 shows the calendar year wise underperformance of various large cap funds as compared to NIFTY 50 TRI since 2009. It is observed that ~68% of the funds have not been able to beat the benchmark over the last 10 years.

Exhibit 3: Calendar year wise analysis of underperformance of funds as compared to NIFTY 50 TRI.

Calendar Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Average
Total no. of funds analysed^	17	21	27	29	31	34	38	38	40	42	-
No. of funds underperforming the NIFTY 50 TRI	14	20	12	19	23	18	16	28	23	39	-
% funds Underperforming NIFTY 50 TRI	82%	95%	44%	66%	74%	53%	42%	74%	58%	93%	68%

NAV Source : AMFI. ^ These are large cap funds with NAV availability from the beginning of the corresponding calendar year

Exhibit 4: Daily rolling return based analysis of underperformance of funds as compared to NIFTY 50 TRI.

Investment horizon	% no of large cap funds underperforming the NIFTY 50 TRI for more than half the times
1 Year	79%
2 Year	73%
3 Year	66%
5 Year	65%
7 Year	70%

NAV Source : AMFI. Based on large cap funds with NAV availability more than the corresponding investment horizon.

Exhibit 4 shows the % number of large cap funds underperforming the NIFTY 50 TRI for 5 different investment horizons including 1,2,3,5 and 7 year analysed during the last 10 years on a rolling return basis. It is observed that 65% to 79% of the funds underform the NIFTY 50 TRI for more than 50% of the instances across different investment horizons.

One possible reason for such underperformance, could be substantial increase in asset under management across the equity mutual fund scheme flowing into large cap funds resulting in more money chasing a handful number of stocks. Also with financial markets becoming informationally more efficient with reduction in information asymmetry, specifically for well researched large cap stock and with standardisation of fund categories by the regulator, generating alphas by consistently beating the benchmark has exceedingly become difficult.

Over the years, world has witnessed a gradual shift from active to passive investments

Globally, more and more investors have adopted passive investment vehicles as a building block in asset allocation. The recent underperformance of Large – Cap funds in last decade or so, has resulted in rise of passive investment via index funds and through Exchange Traded Fund (ETF). While the global ETF industry grew at healthy ~18% CAGR in last 11 years, Indian ETF industry grew faster ~28% CAGR in last 11 years. Over the last 10 years, number of ETFs linked to equity and debt indices in India has increased by 8 times from 8 in 2008 to 65 in February 2019. As of February 2019, total AUM of around ₹ 1138 billion in India is being invested across equity and debt ETFs.

From the first ETF launched in India in December 2001 that was benchmarked to it, the NIFTY 50 today has 21 ETFs of which 16 are listed in India and 5 in international markets with more than $ 9 billion of Asset Under Management. India' largest equity mutual fund scheme (SBI - ETF NIFTY 50) tracks the NIFTY 50. Additionally, 12 index funds track the NIFTY 50 index. Insurance companies, Investment banks and NBFCs in domestic and international markets offer financial products such as Market Linked Debentures, Structured products, Swaps and Warrants linked to the NIFTY 50. NIFTY 50 based index derivatives are listed on 4 exchanges globally viz. National Stock Exchange of India Limited (NSE), Singapore Exchange Ltd. (SGX), Taiwan Futures Exchange (TAIFEX) and NSE IFSC Limited.

NIFTY 50 reflects the changing trends in equity market with increasing representation of emerging sectors

With Indian equity market witnessing multiple structural reforms during the past decades, the NIFTY 50 composition also has undergone several alterations reflecting the true dynamics of the Indian economy and financial markets – thus accomplishing its purpose of being the resilient benchmark for the Indian equity markets. For instance, one of the central drivers for economic development of an emerging economy is establishment and prominence of banks and financial institutions that facilitates development of robust and resilient financial system providing credit facilities which in turn accelerates growth of the nation. This is also reflected in the NIFTY 50 composition, where exposure to financial services sector has increased from ~20% at inception in 1995 to ~27% in Mar 2014 and to ~39% in Mar 2019. Further, Information Technology sector which was crawling in 1995 having no presence in NIFTY 50 index has today emerged as one of the key drivers of the economy with its weight in NIFTY 50 increasing to ~14% in Mar 2019.

Exhibit 5 – Change in sector exposure of NIFTY 50 index since inception

Sector	Inception 1995*	Mar 2009*	Mar 2014	Mar 2019
FINANCIAL SERVICES	19.7	11.78	27.45	38.85
ENERGY	12.6	40.74	14.31	15.30
IT	-	9.05	16.34	13.67
CONSUMER GOODS	18.8	6.42	12.63	11.29
AUTOMOBILE	12.4	3.31	8.82	6.08
CONSTRUCTION	4.3	3.88	4.97	3.66
METALS	11.6	5.44	4.80	3.69
TELECOM	-	9.78	1.68	1.51
PHARMA	2.5	2.49	5.23	2.42
CEMENT & CEMENT PRODUCTS	2.2	1.90	3.08	1.62
INDUSTRIAL MANUFACTURING	0.5	5.20	0.69	-
MEDIA & ENTERTAINMENT	-	-	-	0.53
FERTILISERS & PESTICIDES	1.8	-	-	0.75
SERVICES	2.7	-	-	0.64
CHEMICAL	5.4	-	-	-
TEXTILE	5.5	-	-	-
Total	100	100	100	100

**Sector weights for inception and Mar 2009 are based on full market capitalization, since the index was calculated on Full Market capitalization method prior to June 26, 2009. Sector weights for Mar 2014 and Mar 2019 are free-float market cap weighted.*

Existing divergence in sector-distribution between Indian equity market and nation's GDP presents an interesting perspective

While it may not be entirely appropriate to compare the sector composition of NIFTY 50 with that of Indian GDP, as not all entities contributing towards GDP are present in the listed equity space, the comparison definitely provides us with an interesting and exciting perspective. As can be seen in Exhibit 6, many entities contributing towards the Indian GDP, incremental to those listed in Indian equity market, are from manufacturing or services sectors.

Exhibit 6: Sector distribution of NIFTY 50 and Indian GDP using Gross Value Added method (at Current Prices)

Sectors	Weightage in NIFTY 50 (%)	Weightage in NIFTY 500 (%)	Contribution to GDP (%)
FINANCIAL SERVICES	38.85	34.15	20.60%*
CONSUMER	17.91	19.02	18.00%@
ENERGY	15.30	12.65	2.60%
IT	13.67	10.82	-
COMMODITIES	6.05	7.32	2.40%
MANUFACTURING	3.66	7.93	24.30%^
HEALTHCARE	2.42	5.04	-
TELECOMMUNICATIONS	1.51	1.32	1.9%
SERVICES	0.64	1.75	30.30%#
Total	100	100	100%

Index weights as on Mar 29, 2019.
Source: NSE, RBI, [link: https://dbie.rbi.org.in], Ministry of Statistics and Program Implementation (MoSPI). *Data ended December 31, 2017. Sectors are classified as per AMFI classification standard.*
** Financials, Real Estate and Professional Services (which includes IT services).*
 # includes Services excluding Financials, Real Estate, Professional Services (which includes IT services) and Telecom.
^ Includes Manufacturing and Construction.
@ includes Agriculture & allied activities

India is not unique to witness such divergence between representation of sectors in listed equity space and country's GDP. Similar trends are observed in economies like the US, UK/England and Germany. In USA, entities from consumer discretionary sector contribute significantly towards nation's GDP (~38%), however have only ~10% share in listed equity space and in its flagship index – the S&P 500. Further, large entities like Cargill (Commodities conglomerate), Koch (Petroleum/Energy), Dell (Computers), Mars (Candies/Confectionaries), Albertsons (Feed markets/Retail), Bechtel (EPC/Construction), Deloitte/PWC/EY (Consulting) contribute significantly towards nation's GDP, however are yet not listed and hence also not part of equity indices.

Likewise, in UK/England and Germany, Industrial Sector contributes significantly towards their respective GDPs (~26% and 42% respectively), however has far lower representation in the listed equity space and consequently in their flagship equity indices (6.9% in the FTSE 100 and 12.41% in the DAX 30 respectively).

In India, many unlisted entities that are either largely from SMEs/unorganised sectors or are start-ups contribute reasonably towards the GDP. These entities also include consumer-oriented technology enabled companies such as Ola, Flipkart, Make My Trip, Zomato, Rentomojo and others which are gaining prominence in the retail space catering to the diversed needs of modern India. Such entities, most of which, may be presently in 'cash-burn' stage, are typically funded through expensive private equity route that have the muscles and ability to fuel such ventures who initially focus on customer acquisition and creating markets for their product or services. Once these entities achieve their respective operating break-even points, they may plan for IPOs to access public money and enter the mainstream listed equity space. Retail and institutional investors may then get a chance to ride on the India GDP growth bandwagon as well. How the equity markets (and consequently the equity indices) undergo any structural changes due to such development yet needs to be seen.

Signing Off…

The NIFTY 50, tracking 50 blue chip companies across 13 sectors, represents ~67% of the total free float market capitalisation and ~53% of total liquidity of all listed equity companies on NSE as on March 29, 2019. It serves the purpose of providing a fair representation of the Indian equity market focusing on portfolio diversification, liquidity and replicability. The simple rules-based portfolio review strategy of the index has outperformed a 'buy and hold' strategy over the last 10 years by delivering total returns of 15.98% per annum . On a rolling return basis, NIFTY 50 has given returns of more than 15% per annum 60% of the times for 10 year investment horizon. ~68% of the active funds which use NIFTY 50 as their benchmark have not been able to beat the index over the last 10 years. Currently, NIFTY 50 has 21 ETFs of which 16 are listed in India and 5 in international markets. India's premier index, the NIFTY 50 over years has successfully become the 'stock of the nation' helping investors gauge the pulse of Indian capital market.

About NSE Indices Limited:

(Formerly known as India Index Services & Products Limited-IISL)

NSE Indices Limited, a subsidiary of NSE, provides a variety of indices and index related services for the capital markets. The company focuses on the index as a core product. The company owns and manages a portfolio of indices under the NIFTY brand of NSE, including the flagship index, the NIFTY 50. NIFTY equity indices comprises broad-based benchmark indices, sectoral indices, strategy indices, thematic indices and customised indices. NSE Indices Limited also maintains fixed income indices based on Government of India securities, corporate bonds, money market instruments and hybrid indices. Many investment products based on NIFTY indices have been developed within India and abroad. These include index based derivatives traded on NSE, NSE IFSC, Singapore Exchange Ltd. (SGX) and Taiwan Futures Exchange (TAIFEX) and a number of index funds and exchange traded funds. The flagship 'NIFTY 50' index is widely tracked and traded as the benchmark for Indian Capital Markets.

For more information, please visit: www.niftyindices.com

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