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Do ETF Investors Earn Different Returns Across Exchanges? Evidence from Trade-Price Based ETF Performance on NSE and BSE

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Abstract

ETF's return based on trade prices rather than the return based on NAVs reflets true return earned by the investor.It is pertinent to assess the relative returns earned by the ETFs, when ETFs tradeon multiple exchanges. Such returns earned by the ETFs on multiple exchanges may differ and underscore the competitive edge of the exchanges.The present paper attempts to figure out the competitive edge of two national stock exchanges in India NSE, and BSE where ETFs are traded.The study forms the sample of six prominent ETFs that traded on both exchanges for a duration of 60 months and examines the statistical significance of the difference between the returns earned on both exchanges.Although the difference between monthly mean returns on both exchanges was not noticeable, the disparities in total returns of the ETFs were noted over the study period that represents relatively a medium to longer investment horizon.

Keywords:- *ETF Returns, Trade Price, NAV, Stock Exchange.*

1.Introduction

ETFs are trackers whose prime objective is to mimic the performance of the target index and generate returns that closely resemble those of the index. While return is the yield that a security provides over time through capital appreciation and profit distribution,the ETF's trading price on the stock exchange or the NAV announced by the fund house can both be used to calculate its return.AMCs, analysts, and researchers typically use the NAV to determine the return of an ETF. The NAV, or the net asset value, is the ETF's intrinsic worth, which is based on the total market value of the underlying assets it holds. Unlike trading prices, it is unaffected by the exchange's supply and demand dynamics and market depth. As a result, a return based on NAV guarantees objectivity in determining the return and facilitate the comparison with other securities and peer ETFs.Two major exchanges, the BSE and NSE, list ETFs for trading in the Indian market.It is important to determine the comparative returns

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produced by the ETFs on various exchanges where ETFs are listed and traded when the return on an ETF is determined by its trading price.

2.Literature Review

Exchange Traded Funds (ETFs) were originally designed to replicate the performance of benchmark indices at low cost and with high transparency. Globally, researchers such as Rompotis (2006, 2012) and Harper, Madura, and Schnusenberg (2006) confirmed that ETFs generally follow their benchmarks, but premiums and discounts relative to Net Asset Value (NAV) are common. Lin and Chou (2006) in Taiwan and Petajisto (2017) in the U.S. demonstrated that market-traded returns often diverge from NAV-based returns due to factors such as liquidity, transaction costs, and replication methodology. These studies emphasize that what investors realize in practice is the return based on market-traded prices rather than the theoretically reported NAVs.

Chang and Kruger (2012) added further evidence, showing that country-specific ETFs often suffer from larger inefficiencies, especially in less liquid markets. Such global evidence highlights that ETF pricing efficiency is not uniform across exchanges or geographies, and investors' realized returns depend heavily on the market of trade.

In the Indian context, studies have similarly documented persistent premiums and discounts. Shanmugham and Zabiulla (2012) analyzed Nifty BeES and found significant and sustained deviations between market price and NAV. Aditya and Desai (2015) concluded that Indian ETFs are less price-efficient compared to developed markets, with deviations reducing the reliability of NAV as a performance measure. Garg (2014) and Purohit and Malhotra (2015) observed tracking errors and inefficiencies across different Indian ETFs, while Kevin (2013) highlighted price discrepancies between ETFs, index futures, and stock indices. Swathy (2014) further noted that sectoral ETFs traded with higher inefficiency than diversified ones.

A key insight from Indian research is that ETFs are listed and traded on both the Bombay Stock Exchange (BSE) and National Stock Exchange (NSE). Despite their identical underlying portfolios, returns may diverge depending on the exchange, reflecting differences in liquidity, investor participation, and market microstructure. Such deviations make it crucial to examine whether ETF performance in India should be evaluated primarily through NAV-based measures or through the relative returns that investors actually experience on different exchanges.

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2.1 Relevance to the Present Study

The reviewed evidence—both global and Indian—underscores that ETF returns realized by investors depend not only on NAV but also on the exchange-traded prices, which may diverge systematically across markets. The present study addresses this gap by analyzing the relative returns of ETFs on BSE and NSE, thereby highlighting whether Indian investors face materially different outcomes depending on their trading venue. This adds a unique dimension to ETF performance analysis in India, where dual exchange listings are common but largely unexplored in prior literature.

3.Objective

There may be sizable or insignificant variations in the return that ETFs generate when traded on different exchanges.The efficiencies offered and market depth for the securities at each exchange determine the relative returns the ETF earns across several exchanges.Even if the return based on NAV is more objective, the return based on trade prices shows the actual return that the ETF has produced because it is the return that the investor actually realises.The ETFs are traded on the BSE and NSE, two national exchanges in India. ETFs may trade on either of the exchanges or both.In the case of ETFs that trade on both markets, it is pertinent to compare the return earned on each exchange.In the current study, six prominent ETFs that trade on both exchanges are identified, formed into a sample, and the return produced by each exchange is examined.In addition to separately determining the relative return earned by the ETF on both exchanges,the paper proposes to reveal the competitive advantage of exchanges in generating returns, if any.

4.Research Design and Methods

The ETFs' close trading prices are taken into account when calculating the ETF return. Using continuous compounding, the following formula determines the return on an ETF.

$$\boldsymbol{R = LN \frac{TP_t}{TP_{t-1}}}$$

$\boldsymbol{R}$ = ETF return

$\boldsymbol{LN}$ = Natural log

$\boldsymbol{TP_t}$= Trading price at time t

$\boldsymbol{TP_{t-1}}$= Trading price at time t-1

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Based on changes in daily trading prices, daily return is determined. As log returns are tractable, they are favoured over simple returns because they may be continuously added across intervals like monthly, yearly, and so forth. For all sample ETFs on both exchanges, monthly returns are calculated for 60 months based on daily log returns.To compare the return earned by the ETF on both exchanges, the study tests the significance of the difference between the return earned on each exchange.Accordingly, the alternative hypothesis supports the difference while the null hypothesis claims that there is no difference.The difference is measured with descriptives under the test (refer table).The confidence interval is 95% and the P-value is 0.05, which is the threshold for statistical significance.The Jamovi software was used to convert the Excel data files in CSV format as programme files for the purpose of testing the hypothesis and creating descriptive tables.

Null Hypothesis (H0): There is no significant difference in the return generated by ETF traded on BSE and ETF traded on NSE.

Alternative Hypothesis (H1): There is significant difference in the return generated by ETF traded on BSE and ETF traded on NSE.

- H_0: $\mu_1 - \mu_2 = 0$
- H_1: $\mu_1 - \mu_2 \neq 0$

Trading prices on both exchanges may vary based on the market depth, and supply and demand dynamics on each exchange; nonetheless, trading prices on both exchanges are correlated with the NAVs announced by the fund houses.The hypothesis is therefore tested using the paired t-test. The Shapiro-Wilk test is used to determine whether the data are normal, and if not, a different nonparametric Wilcoxon test is used.

5.Results and Discussion:

Table 1: Descriptive Statistics for Hypothesis

Descriptives	N	Mean	Median	SD	Sum	Mean Diff NSE-BSE	Sum Diff NSE-BSE
Nifty CPSE NSE	60	-0.05%	0.98%	5.65%	-2.77%	-0.006%	-
Nifty CPSE BSE	60	-0.04%	0.79%	5.63%	-2.44%	-	-0.33%
Nifty Nippon NSE	60	0.68%	0.16%	3.88%	40.95%	0.003%	-
Nifty Nippon BSE	60	0.68%	0.44%	3.88%	40.76%	-	0.19%

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Nifty Kotak NSE	60	0.65%	0.67%	3.88%	38.98%	-0.005%	-
Nifty Kotak BSE	60	0.66%	0.85%	4.20%	39.30%	-	-0.31%
Nifty ICICI NSE	60	0.65%	0.42%	3.94%	38.94%	-0.008%	-
Nifty ICICI BSE	60	0.66%	0.07%	5.34%	39.45%	-	-0.51%
NPSUB Kotak NSE	60	-0.76%	-0.03%	9.33%	-45.57%	0.018%	-
NPSUB Kotak BSE	60	-0.78%	-0.25%	9.52%	-46.63%	-	1.05%
NPSUB Nippon NSE	60	-0.66%	-0.11%	9.34%	-39.53%	0.010%	-
NPSUB Nippon BSE	60	-0.67%	-0.69%	9.48%	-40.08%	-	0.55%

5.1 Descriptive Statistics:

(Refer to Table 1) Six sample ETFs are covered under the study and each sample records 60 data points. CPSE ETF *(BSE -0.04%. NSE -0.05%)* and Both ETFs tracking Nifty PSUB *(Nippon BSE -0.67%, Nippon NSE -0.66% and Kotak BSE -0.78%, Kotak NSE -0.76%)* index recorded negative monthly mean return on both the exchanges. Three ETFs tracking Nifty 50 index *(Nippon BSE 0.68%, Nippon NSE 0.68%; Kotak BSE 0.65%, Kotak NSE 0.65% and ICICI BSE 0.66%, ICICI NSE 0.65%)* recorded similar monthly mean return on both the exchanges with an exception of ICICI ETF with a trivial margin. However, the difference between total return earned by the ETFs on BSE and NSE for the study period is clearly evident. Remarkably, extreme variability is observed in monthly mean returns of all the ETFs trading at both the exchanges due to blend of positive and negative data points

From the Table 2, it is observed that p values for three ETF variables (N50 Kotak, N50 ICICI, Kotak PSUB) are less than Critical p value 0.05. Hence, we reject null hypothesis and data is not normally distributed in each of these cases. In case of Nifty CPSE, N50 Nippon, and Nippon PSUB, p values are greater than critical p value 0.05. Hence, we retain null hypothesis and data is normally distributed.

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From the analysis of normality test we may reveal that in the case of three ETFs for which data is not normally distributed, we use paired samples non-parametric Wilcoxon test **'W'** test for testing the significance of difference between the return earned on BSE and NSE by the ETFs. In three cases data is normally distributed. In these cases, we use paired samples parametric 't' test for testing the significance of such difference.

Table 2: Details of Normality Test (Shapiro-Wilk) for Hypothesis

ETF Variable	Null for Normality test	P value	Result of normality test
Nifty CPSE	The distribution of Nifty CPSE is normal	0.054	Retain null hypothesis
N50 Nippon	The distribution of N50 Nippon is normal	0.394	Retain null hypothesis
N50 Kotak	The distribution of N50 Kotak is normal	< .001	Reject null hypothesis
N50 ICICI	The distribution of N50 ICICI is normal	< .001	Reject null hypothesis
Kotak PSUB	The distribution of Kotak PSUB is normal	0.001	Reject null hypothesis
Nippon PSUB	The distribution of Nippon PSUB is normal	0.081	Retain null hypothesis

From the Table 3, it is observed that p values in regards with **pair sample 'W' test** for ETF variables N50 Kotak, N50 ICICI, and Kotak PSUB are greater than Critical p value 0.05. Hence, we retain null hypothesis in these cases and there is no significant difference in the in the return earned by these ETFson BSE and NSE.

Table 3: Details of pair sample 'W' test of ETFs for testing the Hypothesis

Null hypothesis	Test statistics ('W' value)	P value	Result of Wilcoxon 'W' test
There is no significant difference in the return earned by **N50 Kotak** ETF traded on BSE and NSE.	926	0.938	Retain null hypothesis
There is no significant difference in the return	996	0.553	Retain null

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earned by **N50 ICICI** ETF traded on BSE and NSE.			hypothesis
There is no significant difference in the return earned by **Kotak PSUB** ETF traded on BSE and NSE.	963	0.727	Retain null hypothesis

From the Table 3, it is observed that p values in regards with **pair sample 'W' test** for ETF variables N50 Kotak, N50 ICICI, and Kotak PSUB are greater than Critical p value 0.05. Hence, we retain null hypothesis in these cases and there is no significant difference in the in the return earned by these ETFson BSE and NSE.

Table 4: Details of paired sample 't' test of ETFs of ETFs for testing the Hypothesis

Null hypothesis	**Test statistics ('t' value)**	**Degree of freedom (d.f.)**	**P value**	**Result of one sample 't' test**
There is no significant difference in the return earned by **Nifty CPSE** ETF traded on BSE and NSE.	0.1148	59.0	0.909	Retain null hypothesis
There is no significant difference in the return earned by **N50 Nippon** ETF traded on BSE and NSE.	-0.0811	59.0	0.936	Retain null hypothesis
There is no significant difference in the return earned by **Nippon PSUB** ETF traded on BSE and NSE.	-0.0192	59.0	0.985	Retain null hypothesis

From the Table 4, it is observed that p values in regards with **paired sample 't' test** for ETF variables Nifty CPSE, N50 Nippon, and Nippon PSUB are greater than Critical p value 0.05.

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Hence, we retain null hypothesis in these cases and there is no significant difference in the return earned by these ETFson BSE and NSE.

6.Conclusion

The monthly mean returns of the ETFs traded at the two exchanges did not show any statistically significant variation.It can be concluded that there is no competitive advantage of one exchange over another in producing the return, and that the relative returns earned by the ETFs on both exchanges are not noticeably different.However, disparities in total return on both exchanges were noted when monthly mean returns were added to determine the ETFs' total return over the study period (a longer investment horizon).With a margin ranging from 0.19% to 1.05%, three ETFs trading on the BSE and three ETFs trading on the NSE outperformed their counterpart exchanges.It should be understood, however, that choosing an exchange to trade on cannot just be based on the return an ETF receives from the exchange.When choosing an ETF, it is important to consider the liquidity and pricing efficiency of the ETFs because these two characteristics can vary greatly between exchanges.

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Annexure:

Annexure 1

Monthly Mean Returns of CPSE, Nifty Nippon, Nifty Kotak on NSE and BSE

Month	Nifty CPSE NSE	Nifty CPSE BSE	Nifty Nippon NSE	Nifty Nippon BSE	Nifty Kotak NSE	Nifty Kotak BSE
Oct-14	7.13%	7.37%	4.12%	3.83%	5.14%	4.94%
Nov-14	-2.46%	-2.23%	3.29%	3.47%	0.55%	0.68%
Dec-14	-2.60%	-3.12%	-3.58%	-3.65%	-3.21%	-3.09%
Jan-15	-0.12%	0.76%	6.47%	6.25%	6.67%	6.54%
Feb-15	-0.36%	-1.00%	-0.04%	0.22%	1.02%	1.21%
Mar-15	-2.73%	-2.48%	-5.00%	-5.19%	-4.81%	-4.93%
Apr-15	-2.17%	-2.71%	-3.35%	-2.59%	-3.33%	-3.37%
May-15	6.30%	6.59%	2.84%	2.28%	2.26%	2.10%
Jun-15	-1.00%	-0.96%	-0.32%	-0.73%	-0.17%	0.03%
Jul-15	-1.49%	-1.90%	2.40%	2.52%	1.96%	2.20%
Aug-15	-13.55%	-13.42%	-6.65%	-6.64%	-6.35%	-6.36%
Sep-15	-3.26%	-3.03%	-0.82%	-0.71%	-0.59%	-0.72%
Oct-15	1.00%	0.77%	2.05%	2.80%	2.24%	1.79%
Nov-15	1.18%	1.33%	-1.89%	-2.60%	-1.83%	0.73%
Dec-15	1.03%	1.08%	-0.04%	-0.14%	-0.12%	-2.43%
Jan-16	-6.39%	-6.89%	-5.20%	-4.66%	-4.92%	-4.92%

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Feb-16	-10.23%	-9.41%	-7.33%	-7.80%	-7.36%	-7.55%
Mar-16	7.77%	8.50%	11.07%	11.07%	10.18%	10.45%
Apr-16	2.66%	1.94%	0.49%	0.45%	1.32%	1.14%
May-16	-1.10%	-1.04%	3.89%	3.72%	2.63%	2.73%
Jun-16	4.60%	4.15%	1.94%	2.06%	1.75%	2.06%
Jul-16	7.46%	7.38%	4.44%	4.49%	4.54%	4.11%
Aug-16	4.47%	4.86%	1.69%	1.74%	1.75%	1.59%
Sep-16	1.35%	1.14%	-1.98%	-2.10%	-2.08%	-1.60%
Oct-16	6.60%	6.72%	0.16%	0.44%	0.78%	0.48%
Nov-16	-0.31%	-0.79%	-4.75%	-4.91%	-5.02%	-4.55%
Dec-16	-0.75%	-0.32%	-0.51%	-0.39%	-0.79%	-0.69%
Jan-17	6.48%	6.36%	4.38%	4.36%	5.18%	4.22%
Feb-17	4.32%	4.32%	3.86%	3.83%	3.28%	3.89%
Mar-17	0.28%	0.35%	3.43%	3.13%	1.89%	3.01%
Apr-17	6.48%	6.45%	1.23%	1.49%	1.99%	0.97%
May-17	-5.08%	-5.18%	3.35%	3.60%	3.48%	3.37%
Jun-17	-9.91%	-9.89%	-0.64%	-0.84%	-0.92%	-1.46%
Jul-17	2.89%	2.97%	5.80%	5.65%	5.94%	6.20%
Aug-17	2.85%	2.66%	-1.24%	-1.62%	-2.00%	-1.69%
Sep-17	2.59%	2.45%	-1.14%	-0.43%	-1.03%	-0.20%
Oct-17	8.54%	8.47%	5.32%	5.04%	5.39%	4.71%
Nov-17	-3.96%	-3.70%	-0.73%	-0.78%	-0.22%	-0.63%
Dec-17	2.35%	2.22%	2.52%	2.60%	2.12%	2.67%
Jan-18	2.81%	2.82%	4.59%	4.57%	4.80%	4.86%
Feb-18	-4.11%	-4.05%	-4.39%	-4.38%	-4.63%	-4.34%
Mar-18	-6.16%	-6.35%	-3.51%	-3.36%	-3.50%	-3.71%
Apr-18	-0.86%	-0.83%	5.78%	5.59%	5.92%	6.41%
May-18	1.11%	1.15%	0.07%	0.46%	-0.64%	-1.61%
Jun-18	-8.90%	-8.61%	-0.06%	-0.51%	0.48%	0.96%
Jul-18	5.08%	4.79%	6.16%	6.34%	6.07%	5.70%
Aug-18	2.38%	2.49%	3.04%	3.25%	3.29%	3.82%
Sep-18	-4.09%	-3.88%	-6.58%	-6.44%	-6.43%	-7.43%
Oct-18	-6.21%	-6.09%	-5.09%	-5.51%	-5.74%	-4.59%
Nov-18	-8.44%	-8.43%	4.53%	4.86%	4.74%	4.59%
Dec-18	6.17%	5.91%	0.15%	-0.32%	0.25%	0.00%
Jan-19	-4.27%	-4.23%	-0.18%	0.15%	-0.46%	7.88%
Feb-19	4.88%	4.80%	-0.10%	-0.20%	-0.12%	-8.73%
Mar-19	10.36%	10.59%	7.40%	7.09%	7.48%	7.45%

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Apr-19	0.95%	0.80%	1.10%	1.08%	1.38%	-0.93%
May-19	2.51%	2.37%	1.48%	1.77%	0.94%	3.67%
Jun-19	1.09%	1.34%	-0.77%	-0.83%	-0.23%	-0.66%
Jul-19	-16.27%	-16.26%	-5.55%	-5.37%	-5.97%	-5.92%
Aug-19	-7.94%	-7.81%	-0.82%	-0.89%	-0.98%	-0.99%
Sep-19	6.28%	6.22%	4.16%	4.14%	5.05%	5.24%

Annexure 2

Monthly Mean Returns of Nifty ICICI, NPSUB Kotak, NPSUB Nippon, on NSE and BSE

Month	Nifty ICICI NSE	Nifty ICICI BSE	NPSUB Kotak NSE	NPSUB Kotak BSE	NPSUB Nippon NSE	NPSUB Nippon BSE
Oct-14	0.97%	-8.31%	10.92%	9.63%	5.20%	4.63%
Nov-14	4.46%	11.33%	5.21%	5.69%	15.93%	15.77%
Dec-14	-1.83%	21.36%	1.54%	1.70%	0.08%	-1.30%
Jan-15	9.52%	-14.35%	-4.36%	-4.59%	-3.78%	-1.92%
Feb-15	-3.13%	-1.34%	-3.07%	-2.38%	-6.61%	-7.89%
Mar-15	-2.20%	-1.59%	-13.87%	-14.70%	-11.67%	-12.91%
Apr-15	-3.78%	-3.73%	2.57%	2.76%	2.05%	2.29%
May-15	3.17%	10.89%	0.34%	0.36%	2.09%	2.92%
Jun-15	-2.33%	4.98%	-8.44%	-8.47%	-8.58%	-5.35%
Jul-15	0.81%	-7.95%	5.16%	4.70%	6.12%	0.27%
Aug-15	-3.53%	-1.38%	-6.55%	-5.69%	-6.76%	-1.93%
Sep-15	1.59%	-0.11%	-1.79%	-1.68%	-4.31%	-2.82%
Oct-15	-2.38%	-1.12%	-2.82%	-2.95%	-0.91%	-5.73%
Nov-15	0.26%	-3.43%	7.29%	6.58%	6.55%	6.36%
Dec-15	-1.46%	-0.58%	-12.89%	-12.80%	-12.25%	-10.25%
Jan-16	-1.61%	-3.09%	-21.74%	-21.51%	-22.31%	-20.76%
Feb-16	-11.23%	-5.97%	-12.76%	-13.76%	-11.89%	-12.92%
Mar-16	9.89%	2.84%	21.44%	24.21%	17.79%	19.15%
Apr-16	1.71%	2.16%	-1.89%	-4.71%	1.02%	-3.63%
May-16	1.24%	0.55%	0.91%	1.38%	0.92%	3.74%
Jun-16	2.14%	-0.24%	9.15%	10.40%	10.18%	7.76%
Jul-16	4.55%	6.53%	5.88%	5.24%	4.75%	8.84%
Aug-16	1.98%	1.19%	7.17%	7.25%	7.91%	6.58%
Sep-16	-2.09%	-1.47%	0.57%	2.51%	0.79%	-2.04%
Oct-16	0.58%	1.14%	1.94%	-0.85%	2.88%	7.64%
Nov-16	-4.93%	-5.99%	-0.18%	0.33%	-1.12%	-3.35%
Dec-16	-0.63%	0.06%	-6.04%	-5.59%	-7.29%	-4.00%
Jan-17	4.47%	4.22%	5.88%	6.02%	6.81%	3.17%

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Feb-17	3.63%	3.61%	3.37%	3.03%	3.53%	1.69%
Mar-17	3.44%	3.64%	4.95%	4.95%	6.95%	7.15%
Apr-17	1.08%	1.06%	4.54%	4.46%	3.30%	2.68%
May-17	3.43%	3.63%	-3.82%	-3.47%	-3.64%	1.26%
Jun-17	-0.43%	-0.92%	-6.94%	-7.14%	-5.79%	-5.13%
Jul-17	5.78%	5.86%	12.15%	11.87%	11.58%	8.57%
Aug-17	-1.78%	-1.68%	-11.69%	-11.87%	-12.63%	-0.97%
Sep-17	-0.46%	-0.93%	-8.55%	-8.18%	-7.29%	-18.90%
Oct-17	5.29%	5.65%	22.53%	22.77%	21.30%	22.33%
Nov-17	-1.41%	-1.19%	1.89%	1.85%	2.87%	0.87%
Dec-17	2.78%	2.68%	-5.01%	-4.98%	-4.66%	-4.98%
Jan-18	4.93%	4.68%	-0.16%	-0.62%	-0.41%	-0.42%
Feb-18	-4.77%	-4.72%	-17.59%	-17.22%	-18.34%	-17.03%
Mar-18	-3.50%	-3.52%	-7.42%	-7.05%	-6.71%	-5.72%
Apr-18	5.93%	5.93%	0.18%	-0.47%	-0.30%	-2.83%
May-18	-0.22%	0.15%	2.17%	2.39%	3.38%	2.53%
Jun-18	0.22%	0.05%	-5.42%	-6.66%	-6.16%	-7.09%
Jul-18	5.98%	5.94%	14.31%	15.10%	13.41%	17.80%
Aug-18	3.00%	2.99%	2.48%	2.76%	3.41%	0.43%
Sep-18	-6.43%	-6.28%	-20.31%	-20.60%	-20.20%	-13.67%
Oct-18	-5.25%	-5.34%	7.79%	7.87%	7.17%	2.95%
Nov-18	4.69%	4.74%	0.11%	0.50%	0.48%	3.58%
Dec-18	0.08%	0.21%	5.49%	5.98%	5.96%	2.01%
Jan-19	-0.36%	-0.51%	-2.16%	-2.94%	-2.85%	-1.59%
Feb-19	0.12%	0.07%	-9.32%	-9.03%	-9.22%	-9.28%
Mar-19	7.15%	7.12%	18.66%	18.23%	19.18%	19.01%
Apr-19	0.99%	0.73%	-8.51%	-8.07%	-9.25%	-10.14%
May-19	1.63%	1.89%	5.73%	5.61%	6.15%	5.80%
Jun-19	-0.45%	-0.45%	-1.16%	-0.03%	-0.58%	7.00%
Jul-19	-5.90%	-5.80%	-15.63%	-16.91%	-15.85%	-24.53%
Aug-19	-0.21%	-0.30%	-7.86%	-9.46%	-10.23%	-8.47%
Sep-19	3.79%	3.87%	-9.90%	-8.37%	-7.65%	-7.34%