

Smart-Beta Strategies in India : Analysis of Performance and Exposure of BSE Strategy Indices

SRIKRISHNA BHAGAWAN*
SATHISH KUMAR B.**

Abstract

The study examines the performance and exposure of BSE strategy indices and also compares them between the pre and post-covid periods. Though the monthly returns of some of the indices were significant, no indices outperformed the Sensex across the sample periods. On the risk-adjusted terms, quality, momentum, and low-volatility indices offered a significant alpha in the pre-covid, but post covid, all indices failed. The indices, except momentum, performed better in post covid compared to pre-covid but are insignificant due to the post covid high volatility. Momentum and value indices offered a predominant performance in the pre and post covid periods respectively, while the dividend index failed in both periods. While the market factor is the prominent driver of return for the indices, the size effect on their performance is insignificant across the sample periods. The indices, irrespective of their pre-covid exposure, gained significant exposure to loser stocks post covid. Though the exposure varied between pre and post covid, the change in the exposure was not significant except for the quality and dividend indices. They offer limited intended factor exposure and some extent of unintended exposure, as in the case of the momentum index in the pre-covid period.

JEL Code : G01, G110, G120

Keywords : Smart Beta; Factor Exposure; BSE; Strategy Indices; COVID-19; Sensex; Risk; India

I. Introduction

AMIDST THE FIGHT between active and passive strategies around the world, the smart beta strategies, a blend of both, are growing at a rapid phase. They offer transparent and less costly products compared to active investing and provide a market-outperforming capability that passive investing lacks. ETFGI reports that the smart beta funds are growing at a 5-year CAGR of 22.8% with assets of US\$ 1.27 trillion as of April 2022 (ETFGI, 2022). As per the FTSE Russel asset owner survey in 2018, 58% of the asset owner around the world have already adopted smart beta strategies and about 60% are re-evaluating to build more smart beta funds (Russell, 2018).

* Doctoral (PhD) Research Scholar, CHRIST (Deemed-to-be-University), The Department of Commerce, Hosur Road, Bhavani Nagar, SG Palya, Bangalore, Karnataka 560029, INDIA.

** Associate Professor, CHRIST (Deemed-to-be-University), The Department of Commerce, Hosur Road, Bhavani Nagar, SG Palya, Bangalore, Karnataka 560029, INDIA.

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References

- Agarwalla, S. K., J. Jacob, and J. R. Varma, (2013), "Four Factor Model in Indian Equities Market", Working Paper, Indian Institute of Management Ahmedabad, India pp.1-21.
- Agarwalla, S. K., J. Jacob, and J. R. Varma, (2017), "Size, Value, and Momentum in Indian Equities", *Vikalpa*, Vol. 42, No. 4, pp.211-219.
- Arnott, R. D., J. Hsu, V. Kalesnik and P. Tindall, (2013), "The Surprising Alpha From Malkiel's Monkey and Upside-Down Strategies", *The Journal of Portfolio Management*, Vol. 39, No. 4, pp.91-105.
- Arnott, R. D., J. Hsu and P. Moore, (2005), "Fundamental indexation", *Financial Analysts Journal*, Vol. 61, No. 2, pp.83-99.
- AIP, (2021), "S&P BSE Factor Indices Methodology", Asia Index Pvt. Ltd, pp.1-29.
- Asness, C. S., T. J. Moskowitz, and L. H. Pedersen, (2013), "Value and Momentum Everywhere", *Journal of Finance*, Vol. 68, No. 3, pp.929-985.
- Aziz, T., and V. A. Ansari, (2013), "Momentum and Illiquidity Premium in Indian Stock Market", XII Capital Markets Conference, pp.1-14.
- Balakrishnan, A., M. Maiti and P. Panda, (2018), "Test of Five-factor Asset Pricing Model in India", *Vision*, Vol. 22, No. 2, pp.153-162.
- Bender, J., T. Blackburn and X. Sun, (2019), "Clash of the Titans: Factor Portfolios versus Alternative Weighting Schemes", *Journal of Portfolio Management*, Vol. 45, No. 3, pp.38-49.
- Blitz, D., (2016), "Factor Investing with Smart Beta Indices", *The Journal of Index Investing*, Vol. 7, No. 3, pp.43-48.
- Bowes, J., M. Ausloos, C. Calin and G. W. Brown, (2021), "Financial Risk and Better Returns through Smart Beta Exchange-Traded Funds?", *Journal of Risk and Financial Management*, Vol. 14, No. 7, pp.283-312.
- Cao, J., J. Hsu, Z. Xiao and X. Zhan, (2017), "How Do Smart Beta ETFs Affect the Asset Management Industry? Evidence from Mutual Fund Flows", Working Paper, NUS National University of Singapore, Working Paper, pp.1-62.
- Choueifaty, Y., and Y. Coignard, (2008), "Toward maximum diversification.", *Journal of Portfolio Management*, Vol. 35, No. 1, pp.40-51.
- Chow, T.-M., J. Hsu, V. Kalesnik and B. Little, (2011), "A Survey of Alternative Equity Index Strategies.", *Financial Analysts Journal*, Vol. 67, No. 5, pp.37-57.
- De Franco, C., B. Monnier, J. Nicolle and K. Rulik, (2016), "How Different Are Alternative Beta Strategies?", *The Journal of Index Investing*, Vol. 7, No. 2, pp.57-77.
- Dubil, R., (2015), "How dumb is smart beta? Analyzing the growth of fundamental indexing.", *Journal of Financial Planning*, Vol. 28, No. 3, pp.49-54.
- ETFGI Report, (2022), "ETFGI reports Smart Beta ETFs listed globally gathered net inflows of US\$11.35 billion during April 2022", ETFGI Llp., 2022
- Fama, E. F., and K. R. French, (2012), "Size, value, and momentum in international stock returns.", *Journal of Financial Economics*, Vol. 105, No. 3, pp.457-472.

Fernholz, R., R. Garvy and J. Hannon, (1998), "Diversity-Weighted Indexing.", *The Journal of Portfolio Management*, Vol. 24, No. 2, pp.74-82.

Glushkov, D., (2015), "How Smart are Smart BetaETFs? Analysis of Relative Performance and Factor Exposure", SSRN Network, pp.1-53.

Harvey, C. R., Y. Liu and H. Zhu, (2016), "and the Cross-Section of Expected Returns.", *Review of Financial Studies*, Vol. 29, No. 1, pp.5-68.

Hsu, J., (2006), "Cap-Weighted Portfolios are Sub-Optimal Portfolios.", *Journal of Investment Management*, Vol. 4, No. 3, pp.1-10.

Hsu, J., V. Kalesnik and E. Kose, (2019), "What Is Quality?" *Financial Analysts Journal*, Vol. 75, No. 2, pp.44-61.

Johnson, B., (2017a,b), "Have Strategic-Beta ETFs Delivered for Investors?", *Morningstar*, 2017

Joshiyura, M., and S. Peswani, (2018), "The Volatility Effect in Value and Growth Stocks: Evidence from India", *NMIMS Management Review*, Vol. 34, No. 1, pp.1-17.

Le, T. D., (2022), "Active mutual funds: Beware of smart beta ETFs!" *Global Finance Journal*, Vol. 56, pp.1-46.

Maillard, S., T. Roncalli and J. Teiletche, (2011), "On the Properties of Equally-Weighted Risk Contributions Portfolios", *The Journal of Portfolio Management*, Vol. 36, No. 4, pp.60-70.

Malkiel, B. G., (2014), "Is Smart Beta Really Smart?", *Journal of Portfolio Management*, Vol. 40, No. 5, pp.127-134.

Markowitz, H., (1952), "Portfolio Selection.", *The Journal of Finance*, Vol. 7, No. 1, pp.77-99.

Mateus, C., I. Mateus and M. Soggiu, (2020), "Do Smart Beta ETFs Deliver Persistent Performance?", *Journal of Asset Management*, Vol. 21, pp.413-427.

Monga, R., D. Aggrawal and Jagvinder Singh, (2022), "Smart Beta Investing: An Alternative Investment Paradigm in Emerging Indian Equity Market.", *Organizations and Markets in Emerging Economies*, Vol. 13, No. 1, pp.209-237.

Peltomäki, J., and J. Äijö, (2017), "Where Is the Meat in Smart Beta Strategies?", *The Journal of Wealth Management*, Vol. 20, No. 3, pp.24-32.

Plyakha, Y., R. Uppal and G. Vilkov, (2012), "Why does an equal-weighted portfolio outperform value-and price-weighted portfolios?", *EDHEC-Risk Management*, pp.1-37.

Raju, R., and A. Chandrasekaran, (2020), "Implementing a Systematic Long-only Momentum Strategy: Evidence from India", SSRN Network, pp.1-26.

Raju, R., and A. Mittal, (2020), "Active versus Index Equity Investing - Early Evidence from India", SSRN Network, pp.1-22.

Ramya, K., and D. Bhuvaneshwari, (2018), "An empirical study on announcement effect of rights issue on stock prices of CNX 500 stocks (Abstract)", *Finance India*, Vol. 32, No. 1, pp.203-214.

Russell, F., (2018), "Smart beta: 2018 global survey findings from asset owners", Working Paper, FTSE Russell, pp.1-46.

Sehgal, S., S. Subramaniam and F. Deisting, (2014), "Tests of Equity Market Anomalies for Select Emerging Markets", *International Journal of Business and Finance Research*, Vol. 8, No. 3, pp.27-46.

Sharpe, W. F., (1964), "Capital Asset Prices: A Theory of Market Equilibrium under Conditions of Risk", *The Journal of Finance*, Vol. 19, No. 3, pp.425-442.

Tobin, J., (1958), "Liquidity preference as behavior towards risk", *Review of Economic Studies*, Vol. 25, No. 2, pp.65-86.

TM Report, (2022), "What are Smart Beta funds? Which are the top Smart Beta funds for investing in 2022?" *Tomorrow Makers*, 2022

Treynor, J., (2005), "Why Market-Valuation-Indifferent Indexing Works.", *Financial Analysts Journal*, Vol. 61, No. 5, pp.65-69.



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INDIAN INSTITUTE OF FINANCE

45 A Knowledge Park III, Greater Noida 201310, NCR Delhi, INDIA

9999321585-86, 9811971002, admission@iif.edu ; info@iif.edu

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