

From Zero to Hero: The Indian Case for Global Equity Diversification

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INTRODUCTION

Until quite recently, Indian investors have had good reason to ignore global equities: from 2003 to 2018, India delivered the best returns out of any of the world's 40 largest stock markets.¹ Further deterring their interest, access to international markets has not always been easy or cheap.

However, times are changing. During the COVID-19 pandemic, global markets found new champions in industries without close Indian equivalents, while Indian investors began showing interest in new, simpler routes to international diversification such as mutual funds and exchange-traded funds (ETFs).

By offering low-cost options to diversify, index-based investing has seen significant growth in other global markets, and 2020 brought India up to date with the first fund tracking the [S&P 500®](#), which is perhaps the world's most widely recognized equity benchmark. Soon, investors in India may be offered a range of options tracking indices for more global regions, global sectors, and even indices reflecting investment targets such as income, growth, or ethical investing.

Using the long histories of benchmarks and fund performance data published by S&P Dow Jones Indices (S&P DJI), this paper examines the arguments and opportunity set for index-based international diversification from an Indian perspective, with a focus on the practical impact of an allocation to global equities.

¹ Source: S&P Dow Jones Indices LLC. Data from 2003 to 2018. Based on the S&P Global BMI Series.

HOME BIAS IN INDIAN EQUITIES

This paper examines and illustrates the case for international diversification in equities, from an Indian perspective.

We cannot know, down to the last Indian rupee or U.S. dollar, how much all Indian investors own in all international stocks. According to some academic estimates, the average allocation made to international equities by Indian investors is one of the lowest of any country, only a rounding error away from 0%.² Meanwhile, the distribution of AUM across the Indian mutual fund market supports the hypothesis that Indian investors have been almost exclusively domestically focused.

Mutual funds marketed in India are required to provide a benchmark, or mix of benchmarks, against which their performance might be judged. Based on the CRISIL database of Indian mutual funds and according to the asset mix represented by their benchmark indices, Exhibit 1 shows the top-level asset allocation made by mutual fund investors in India.

Academics have estimated the average global equity allocations made by Indian investors is close to 0%.

FUND CATEGORY	FUND COUNT	AUM (INR CR)	PERCENT OF TOTAL (%)
Indian Bonds	935	1,207,966	44.3
Indian Equities	584	1,116,983	41.0
Indian Multi Asset	213	368,054	13.5
Gold	21	18,242	0.7
U.S. Equities	10	7,430	0.3
Global Equities	34	6,126	0.2
Global Multi Asset	6	1,811	0.1
Total	1,802	2,726,412	100

Source: S&P Dow Jones Indices LLC, CRISIL. AUM in INR Crore. Data as of Sept. 30, 2020. Table is provided for illustrative purposes.

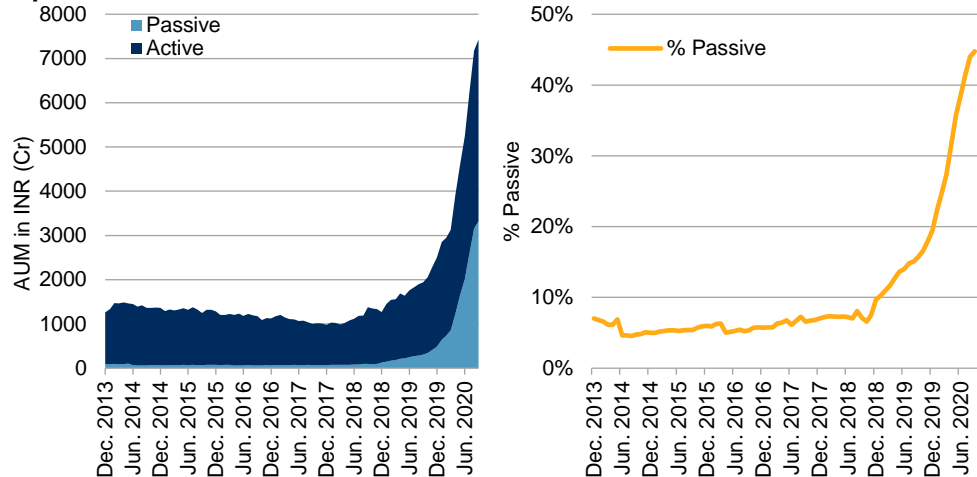
The U.S. and broader global equity allocations shown in Exhibit 1 combined accounted for about 0.5% of investor portfolios—close to zero. Even then, this represents a dramatic increase in allocations that occurred only recently, in which passive mutual funds (those simply tracking a benchmark instead of seeking to outperform it) played a significant part.

The distribution of AUM in the Indian fund market shows an almost exclusively domestic focus.

The left-hand chart in Exhibit 2 shows a time series of assets in the U.S. equities category, which have risen six-fold since 2018. The right-hand chart highlights the contribution by index funds, which rose from less than 10% to about 45% of the category's total assets in the past two years.

² Chniguir, Kefi, and Henchiri, "The Determinants of Home Bias in Stock Portfolio: An Emerging and Developed Markets Study," *International Journal of Economics and Financial Issues*, 2017, 7(6), 182-191.

Exhibit 2: Indian AUM in Active and Passive Mutual Funds Focused on U.S. Equities



Since 2018, passive funds have helped drive a six-fold increase in international allocations.

Source: S&P Dow Jones Indices LLC, CRISIL, Bloomberg. Data as of Sept. 30, 2020. Charts are provided for illustrative purposes.

The fact that the growth in international investments has been supported—even led—by passive products evidences that international diversification does not have to be hard. Thanks to the availability of funds tracking the broad market at a low cost, the U.S. market provides a simple option for diversifying country risk on a global scale, while the long-term histories of the S&P 500 and [S&P BSE SENSEX](#) offer a clear illustration of their diversification potential.³

Diversification does not have to be hard.

Case Study: Combining Indian and U.S. Equities

Countries establish leadership and develop dependencies (and differences) to other markets over periods that span decades, if not centuries. Offering the opportunity for long-term comparisons, the S&P BSE SENSEX, the longest running of India’s market bellwethers, was launched in 1986, with a pro forma price history extending back to April 1979. The S&P 500—in its current form—was launched in 1957. These two leading benchmarks offer about four decades of shared history and prove to be textbook examples of the potential benefits of equity investing and diversification.

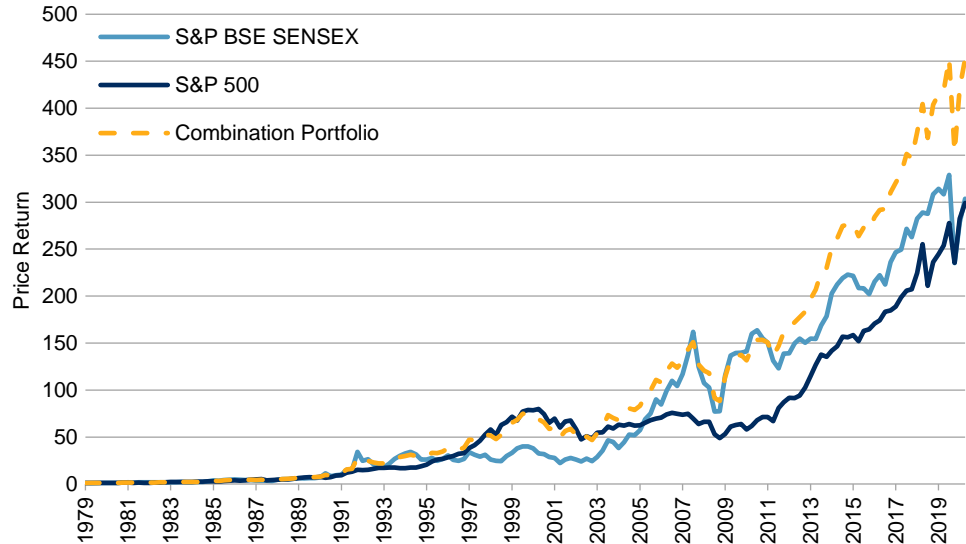
The long histories of the S&P 500 and S&P BSE SENSEX allow for a historical case study spanning four decades.

Exhibit 3 compares the performance of three hypothetical portfolios: one tracking the S&P 500, one tracking the S&P BSE SENSEX, and a combination portfolio tracking both indices in a 50:50 proportion, where the composite portfolio is rebalanced back to target weights on a quarterly basis. In order to use the longest possible historical period available for study, we used price returns, which ignore the effects of dividends.⁴

³ A short introduction to the themes explored in the following sections may be found in Preston, Hamish “[Why the S&P 500 Matters in India](#),” S&P Dow Jones Indices *Indexology*® Blog, June 2020

⁴ Total return indices will be used in subsequent sections.

Exhibit 3: Performance of the S&P BSE SENSEX, S&P 500, and Combination Portfolio



Countries establish leadership and develop dependencies over periods that span decades if not centuries.

The Combination Portfolio is a quarterly rebalanced hypothetical portfolio tracking the S&P 500 and S&P BSE SENSEX in a 50:50 proportion.
 Source: S&P Dow Jones Indices LLC. Data from June 30, 1979, to Sept. 30, 2020. Index performance based on quarterly price return in INR. Past performance is no guarantee of future results. Chart is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

The combination portfolio outperformed *both* indices, which is possible because the long-term returns of a rebalanced, diversified portfolio are not just the weighted sum of its parts. Instead, there is an additional so-called “rebalance return”—which is strongly positive in this example—arising from the trading over time to keep weights in their target proportions.⁵

Over the full period in Exhibit 3, the cumulative price gains in both U.S. and Indian benchmarks ended up being remarkably similar, but this is a coincidence. Over shorter time horizons, their performance was usually significantly different.

A 50:50 combination portfolio outperformed both the S&P 500 and S&P BSE SENSEX.

Exhibit 4 shows how different the returns of the two benchmarks have been over shorter time periods. The six-month horizon is illustrative; over all half-year periods since 2000, the correlation between the six-month returns of the S&P 500 and S&P BSE SENSEX was 0.31, the average absolute difference between the two six-month returns was 13.8%, and in about one-third (33%) of periods, their returns had a different sign (one rose while the other fell).

⁵ The rebalance return can be positive or negative. See Bernstein, “[The Rebalancing Bonus](#),” *The Efficient Frontier*, 1996 for an introduction; Edwards, Lazzara, Pestalozzi, and Preston, “[Outperformance in Equal-Weight Indices](#),” S&P Dow Jones Indices, 2018 offers a discussion of the relationship to momentum among rebalanced constituents.

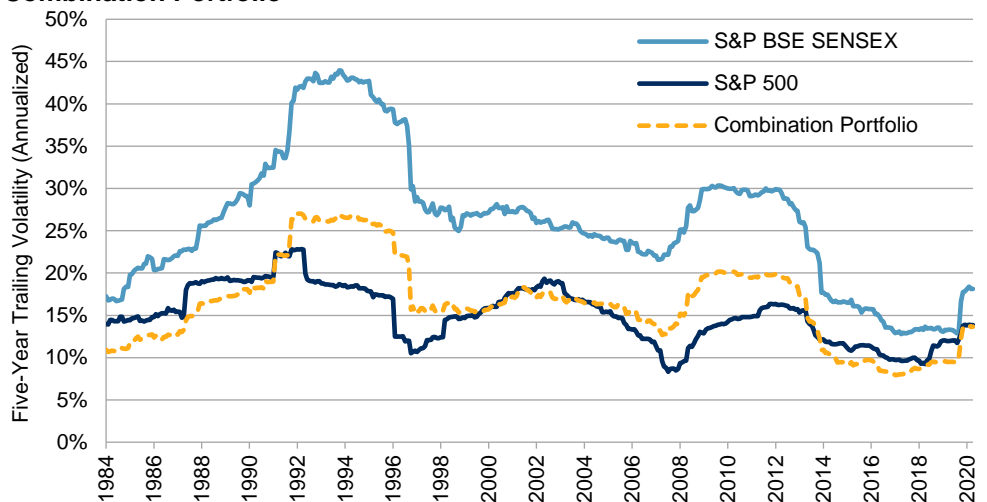
Over shorter time horizons, the performance of the S&P 500 and S&P BSE SENSEX was usually significantly different.

Exhibit 4: The Different Returns of the S&P 500 and S&P BSE SENSEX				
STATISTIC	1-MONTH	3-MONTH	6-MONTH	12-MONTH
JUNE 1979 TO SEPTEMBER 2020				
Correlation	0.22	0.30	0.23	0.30
Average Difference (%)	6.1	10.6	16.4	26.5
% Different Sign	43	32	38	25
JANUARY 2000 TO SEPTEMBER 2020				
Correlation	0.34	0.49	0.31	0.43
Average Difference (%)	5.0	8.2	13.8	25.8
% Different Sign	38	29	33	19

Source: S&P Dow Jones Indices LLC. Data from June 30, 1979, to Sept. 30, 2020. Index performance based on price return in INR. Past performance is no guarantee of future results. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

The short-term objective of diversification is not usually maximizing return. Instead, the diversified investor hopes for a wide range of performances, with different portfolio components outperforming at different times and with the result of a smoother ride. Lowly correlated, strongly different, and frequently opposingly signed return streams can indicate a high diversification potential, and sure enough, the addition of U.S. equities reduced the volatility of the combination portfolio in comparison to Indian equities alone. Exhibit 5 shows the trailing five-year volatility based on monthly returns for both indices and the quarterly rebalanced combination portfolio.

Exhibit 5: Trailing Five-Year Volatility of the S&P 500, S&P BSE SENSEX, and Combination Portfolio



The combination of the Indian equity benchmark with the S&P 500 displayed much lower volatility than Indian equities alone.

The Combination Portfolio is a quarterly rebalanced hypothetical portfolio tracking the S&P 500 and S&P BSE SENSEX in a 50:50 proportion. Source: S&P Dow Jones Indices LLC. Data as of Sept. 30, 2020. Past performance is no guarantee of future results. Chart is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

The diversified investor hopes for a wide range of performances, with different components outperforming at different times.

The volatility of the S&P 500 is shown in Exhibit 5 for the purpose of comparison and to illustrate another trick that diversification has up its sleeve. In several periods, the combination portfolio showed the lowest volatility of *any* series, even though it was created from combining the less-volatile S&P 500 with the more-volatile S&P BSE SENSEX. In other words, for U.S. investors with a strong home bias, Exhibit 5 shows that most of the time since 2014 and a few other times historically, an investment in India's equity markets offered a way to reduce the risks of a concentrated position in U.S. equities.⁶

In practice, there is a global opportunity set for diversification, ranging across countries, sectors, currencies, and investment styles, including large global companies without Indian equivalents. Any investor would be wise to consider their options and the extent to which they are complementary.

THE GLOBAL OPPORTUNITY SET

There were about 41,000 listed companies in the world by the end of 2017, with an aggregate capitalization of USD 84 trillion.⁷ Many of these stocks, however, are too small or illiquid to be practically investable, even as part of a broad-based portfolio.

There are about 11,000 companies, with a market capitalization of USD 83 trillion, in the S&P Global BMI.

Excluding those stocks, as well as those from frontier markets, leaves 11,000 companies with an aggregate free-float market capitalization of USD 83 trillion included in the S&P Global BMI, a broad market index that is designed to reflect the global opportunity set for equity investors.⁸

Exhibit 6 shows the breakdown of the S&P Global BMI by country. For many investors, the U.S. market represents the first step to globalizing their exposures, since that country alone accounts for more than half of the global market.

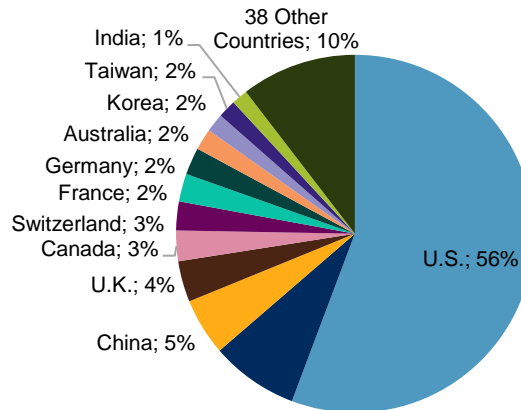
⁶ In fact, U.S. investment in Indian equities likely far outweighed investment in the other direction. Several India-focused funds marketed to U.S. investors are each individually larger than the totals for the Indian international funds as shown in Exhibit 2. Source: S&P Dow Jones Indices LLC. Data as of Sept. 30, 2020.

⁷ Source: <http://www.oecd.org/corporate/ca/Owners-of-the-Worlds-Listed-Companies.pdf>.

⁸ Source: S&P Dow Jones Indices LLC. Data as of Sept. 30, 2020. The S&P Global BMI is a broad-based index of global equities, using a weighting scheme based on free-float market capitalization. See the Appendix for further details regarding the S&P Global BMI and related indices.

Exhibit 6: Country Weights in the S&P Global BMI

The U.S. equity market alone accounts for more than half of the global market by capitalization.



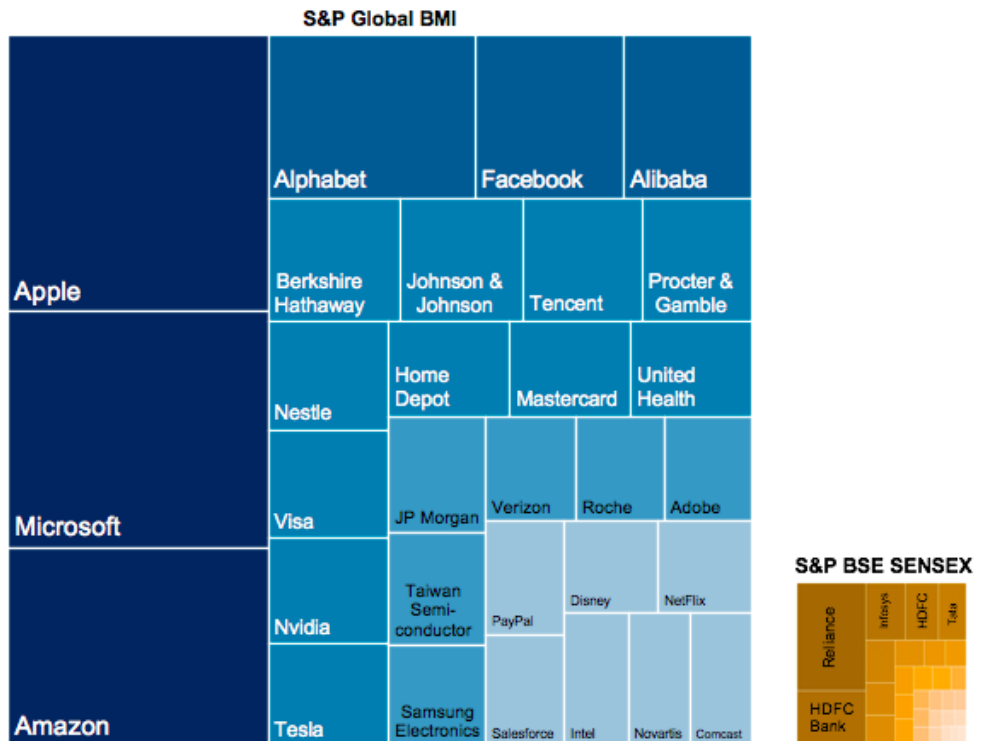
Source: S&P Dow Jones Indices LLC. Data as of Sept. 30, 2020. Chart is provided for illustrative purposes.

A single-company sense of the scale of the global opportunity set is provided by Exhibit 7, which illustrates the size (in terms of free-float market capitalization) of the world's 30 largest companies, according to their weights in the S&P Global BMI in comparison to the 30 companies currently included in the S&P BSE SENSEX.

The global equity landscape contains many names familiar to Indian investors...

Exhibit 7: Largest 30 Names in the S&P Global BMI and S&P BSE SENSEX

...each of which have a market cap greater than the totals of many single countries.



Source: S&P Dow Jones Indices LLC. Data as of Sept. 30, 2020. Area of each company based on free-float market capitalizations included in the S&P Global BMI and S&P BSE SENSEX. Chart is provided for illustrative purposes.

The giants of the IT and Health Care sectors are often found abroad.

The global equity landscape contains many names familiar to Indian investors—including relative giants such as Apple, Microsoft, Disney, and Warren Buffet’s Berkshire Hathaway—each of which have a market capitalization greater than the totals of many single countries.

Exhibit 7 also highlights another contrast in exposures between the Indian and global markets: the giants of search, smart phones, social media, and software that dominate the world’s bluest of blue chips are more likely to be found abroad, in markets like China or the U.S. Health Care is another segment where the leading names are largely international. A sector perspective can be extremely powerful when considering global diversification, as the next section will explore further.

DIVERSIFYING INDIAN EQUITY PORTFOLIOS WITH GLOBAL SECTORS

The goal of diversification is not so much to pick winners but to seek balance and participation.

We are not provided with foresight as to whether international or domestic markets will achieve higher returns, nor which kind of industries to invest in. The goal of diversification is not so much to pick winners, but instead to seek balance and participation. In doing so, both country-based and sector-based analysis can help determine the markets that might prove the most complimentary.

A sector perspective can be powerful.

S&P DJI uses the Global Industry Classification Standard (GICS®) methodology for classifying the global equity market into industries and sectors, and publishes subindices based on these classifications.⁹ At the top level, each stock is classified in one of 11 sectors, whose highly differentiated performances can offer opportunities for selection and diversification. Exhibit 8 shows the weights of each sector in the S&P India BMI, the India-based subindex of the S&P Global BMI, and in the rest of the S&P Global BMI universe, ranked by weight starting from the sector in which India is the most relatively underweight.

⁹ More information on GICS may be found in the [GICS Methodology](#).

Exhibit 8: Sector Weights in India and the Rest of the World

SECTOR	SECTOR WEIGHT (%)		DIFFERENCE (%)	CORRELATION
	REST OF WORLD	S&P INDIA BMI		
Information Technology	20.5	14.3	-6.3	0.43
Industrials	10.9	5.1	-5.8	0.44
Utilities	8.7	3.0	-5.7	0.33
Health Care	12.7	7.4	-5.2	0.25
Consumer Discretionary	12.9	8.7	-4.3	0.51
Real Estate	3.6	0.7	-2.9	0.59
Communication Services	3.0	3.1	0.1	0.35
Consumer Staples	7.5	8.7	1.2	0.26
Materials	5.1	9.2	4.2	0.47
Energy	2.6	13.3	10.7	0.44
Financials	12.5	26.5	14.0	0.52

Source: S&P Dow Jones Indices LLC. Data as of Sept. 30, 2020. "Rest of World" corresponds to the remainder of the S&P Global BMI after excluding members of the S&P India BMI. Correlations based on 10 years of monthly total return in INR of the S&P India BMI and each sector subindex of the S&P Global BMI. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Sector-based analysis can help determine the markets that might prove the most complimentary.

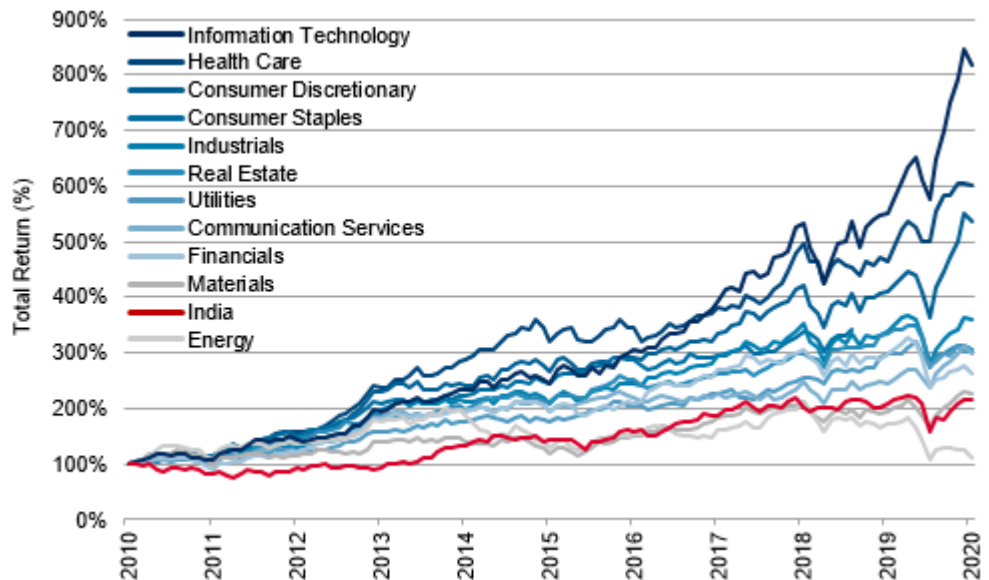
Exhibit 8 illustrates where there may be more (or less) diversification potential in two ways. First, the differences between sector weights in India and the rest of the world help indicate the market segments where the Indian market is over- (or under-) represented. Second, the correlations between the returns of the S&P India BMI and the sector subindices of the S&P Global BMI over the 10-year period (provided in the final column) indicate which sectors have displayed a more complementary pattern of returns.

Sectors can be surprisingly important in driving the total returns of any equity portfolio, including whole countries.

Despite holding constituents from a broad range of countries, the performances of different global sectors can be surprisingly different, and sector weights can be surprisingly important in driving the total returns of any equity portfolio, including whole countries.¹⁰ Exhibit 9 shows the range of long-term cumulative total returns in Indian rupees that was demonstrated by the sectors of the S&P Global BMI over the 10-year period ending Sept. 30, 2020. The S&P India BMI is also included for the purpose of comparison.

¹⁰ Including the U.S. equity market, as examined in Edwards and Lazzara, "[Sector Effects in the S&P 500](#)," S&P Dow Jones Indices, 2019.

Exhibit 9: Performances of the Sector Subindices of the S&P Global BMI



Source: S&P Dow Jones Indices LLC. Data as of Sept. 30, 2020. Index performance based on monthly total return in INR of the sector subindices of the S&P Global BMI and S&P India BMI. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

India's performance tracked closest to the sectors in which was overweight (Financials, Energy, and Materials).

History has evidenced a strong diversification effect available to Indian investors, particularly from some sectors.

Offering perspective during what was otherwise a disappointing decade for India, the country's performance tracked closest to the sectors in which it had a relative overweight (Financials, Energy, and Materials); these were also the three worst-performing sectors. Meanwhile, India was underweight the three best-performing sectors (Information Technology, Health Care, and Consumer Discretionary).

Considered as a potential diversifier, any of the S&P Global BMI sectors would have reduced volatility and improved risk-adjusted returns.

Returning to the topic of diversification, history has evidenced a strong diversification effect available to Indian investors, particularly from some sectors. Extending our time horizon back further to the longest period for which a full set of the relevant country and sector subindices of the S&P Global BMI are available,¹¹ Exhibit 10 provides summary statistics for a range of hypothetical, quarterly rebalanced portfolios created by combining the S&P India BMI one at a time with each sector subindex of the S&P Global BMI in 50:50 proportions. The table is ranked by ratio of annualized risk-adjusted return, calculated as the ratio of annualized total return to volatility, and the S&P India BMI performance is shown for purposes of comparison.

¹¹ The period selected for analysis was December 1994 to September 2020, during which the S&P India BMI would have ranked a creditable 5 out of 12 when compared with the total returns of the 11 S&P Global BMI sectors.

Exhibit 10: Combinations of the S&P Global BMI and S&P India BMI Sector Indices

INDEX	RETURN (ANNUALIZED, %)	VOLATILITY (ANNUALIZED, %)	RETURN/VOLATILITY
S&P India BMI	11.4	26.6	0.43
50:50 COMBINATION WITH S&P GLOBAL BMI SECTORS			
Health Care	14.3	16.1	0.89
Consumer Staples	13.5	15.7	0.86
Utilities	12.3	16.1	0.77
Consumer Discretionary	12.5	19.7	0.64
Real Estate	11.9	18.8	0.63
Information Technology	14.1	22.8	0.62
Industrials	11.9	19.4	0.62
Communication Services	11.8	20.3	0.58
Energy	11.4	19.7	0.58
Financials	11.2	19.8	0.57
Materials	11.6	20.8	0.56

The steadier returns of Utilities and Consumer Staples helped their 50:50 combination portfolios achieve a more significant risk reduction and higher risk-adjusted return.

The 50:50 Combination Portfolios are hypothetical portfolios.

Source: S&P Dow Jones Indices LLC. Data from December 1994, to September 2020. Sorted by the ratio of annualized return to annualized volatility. Index performance based on total return in USD converted into INR at prevailing exchange rates. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Considered as a potential diversifier, any of the S&P Global BMI sectors would have reduced volatility and improved risk-adjusted returns. The greatest advantages were generally provided by those sectors—such as Health Care and Utilities—that were the least correlated to and least represented in the Indian market.

Note that the combination portfolio with Information Technology was middle ranking despite boasting one of the highest returns—a reflection of the higher volatility of the IT segment, particularly in the late 1990s and early 2000s. Conversely, the steadier returns of Utilities and Consumer Staples sectors, typically considered to be more defensive market segments, helped their 50:50 combination portfolios achieve a more significant risk reduction and a higher ranking.

When considering an allocation to any market segment, investors must choose between actively engaging in security selection and tracking a broad-based market portfolio.

ACTIVE AND PASSIVE APPROACHES TO GLOBAL MARKETS

When considering an allocation to any market segment, investors must choose between actively engaging in security selection and tracking a broad-based market portfolio. The advantage of an active approach is the potential for outperformance; the disadvantages lie in the likelihood that outperformance will be achieved and in the typically higher costs involved.

Some active funds outperformed, and some will in the future. But consistently finding outperforming active funds can be a challenging task. Even in India, index-based investing is not necessarily settling for average returns—for example, a fund that matched the performance of the domestic, broad-based [S&P BSE 200](#) would qualify in the top half of the

distribution of ELSS funds over the past 10 years.¹² Yet, not all markets are the same. In other words, while we cannot all be above average, the competition is fiercer in some markets than others.

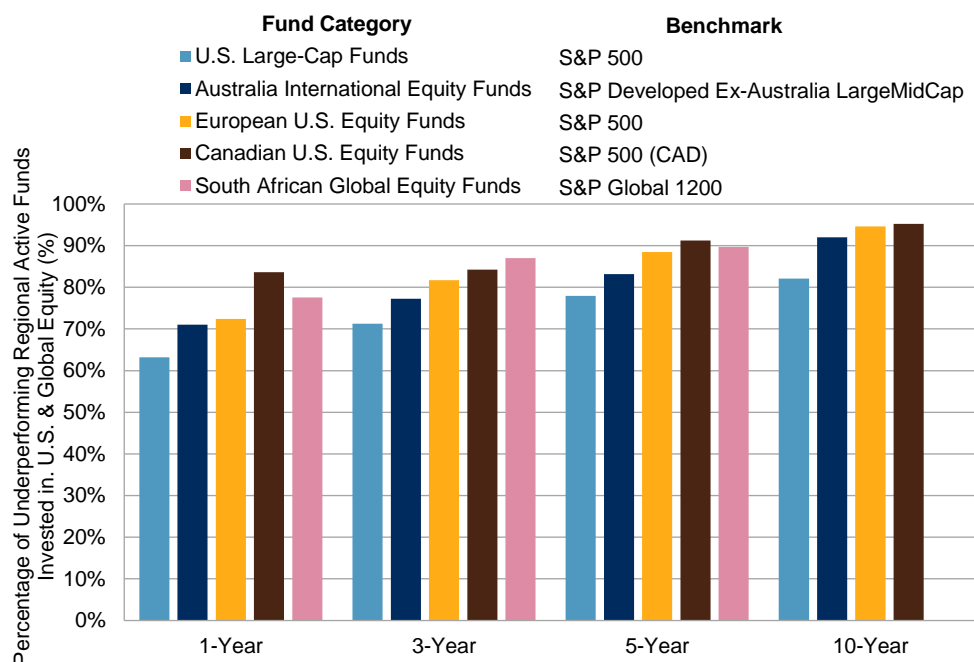
The advantage of an active approach is the potential for outperformance...

Since 2002, S&P DJI has published a regular scorecard for U.S.-domiciled active mutual funds, with equivalent reports for the Indian fund market and other major regions in subsequent years. Today, the S&P Index Versus Active (SPIVA®) Scorecard is published every six months for eight major global fund markets, ranging from Australia to Latin America and offering a comprehensive, worldwide report card for the performance of active managers in comparison to their appropriate benchmarks.

...but consistently finding outperforming active funds can be challenging.

Exhibit 11 illustrates some summary figures from some of the most recent SPIVA Scorecards published around the world, showing the percentage of active U.S. large-cap or global equity funds that failed to beat their relevant S&P DJI benchmark from each fund region over various time horizons.

Exhibit 11: Summary Statistics across Various SPIVA Scorecards



The competition is fiercer in some markets than others...

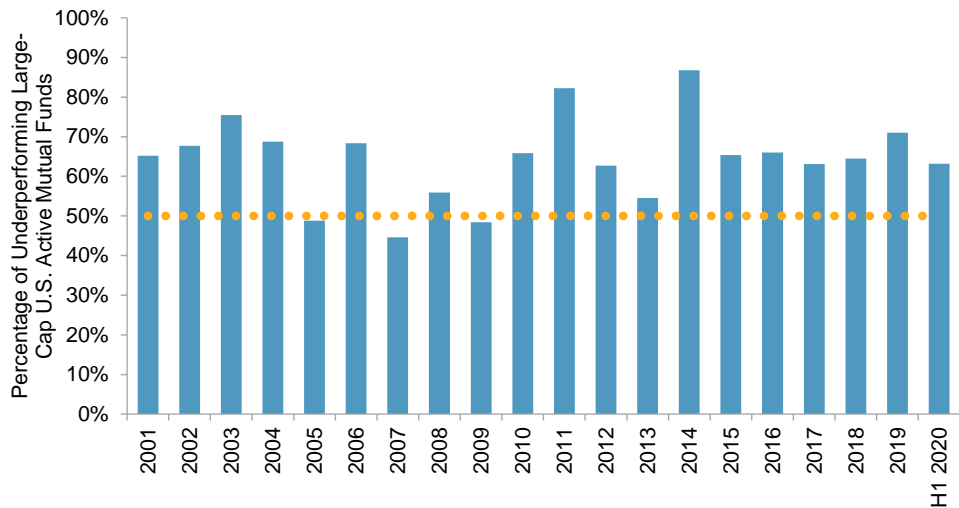
Source: S&P Dow Jones Indices LLC, SPIVA Mid-Year 2020 Scorecards. Data as of June 30, 2020. Outperformance is based on equal-weighted fund counts. Index performance based on absolute total return. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

...a majority of active U.S. equity funds from several global regions underperformed the S&P 500.

The relatively high underperformance rate of actively managed funds in U.S. equities displayed in Exhibit 11 is not unusual, as Exhibit 12 shows. In most years, actively managed U.S.-based large-cap domestic equity funds underperformed the S&P 500, with a majority outperforming in only three years since 2001.

¹² Source: Jain and Gupta, [SPIVA India Mid-Year 2020 Scorecard](#), S&P Dow Jones Indices. Data as of June 30, 2020. See the Appendix for more on the S&P BSE Indices and S&P Global BMI Indices.

Exhibit 12: Annual Underperformance Rate of U.S. Domestic Equity Mutual Funds



The median U.S.-based actively managed fund outperformed in only three calendar years since 2001.

Source: S&P Dow Jones Indices LLC, SPIVA U.S. Scorecards. Data as of June 30, 2020. Outperformance is based on equal-weighted fund counts. Performance based on year-end values, except H1 2020, which is based on the 12 months ending June 30, 2020. Index performance is based on absolute total return. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Asset allocation choices are quite often the most important decisions facing investors in determining their future returns.

These results should not be surprising. Simple arithmetic indicates that the average market participant will achieve the market return *before* fees and costs.¹³ Professional fund managers might be expected to outperform in a market dominated by small retail investors, over whom they might have an “edge,” and to find it harder in markets dominated by large institutional and professional participants.¹⁴ Large-cap U.S. equities and the broader market for global blue-chips is an example of the latter; the data confirm how difficult outperformance can be.

PRACTICAL APPLICATIONS: THE POWER OF AN OPEN APPROACH

To a portfolio manager, large differences in performance are indicative of a more powerful decision; asset allocation choices are quite often the most important decisions facing investors in determining their future returns.¹⁵

Over the past 10 years, 2.3% of annualized return separated the performance of a top-quartile fund from a bottom quartile fund.

In order to provide a practical context, consider that according to the most recent SPIVA India Scorecard, an actively managed Indian large-cap equity fund hoping to boast top-quartile performance required a 10-year annualized return of 8.9%.¹⁶ An annualized return of 2.3% lower would

¹³ Sharpe, “[The Arithmetic of Active Management](#),” *Financial Analysts Journal*, Vol. 47, 1991.

¹⁴ Ganti and Lazzara, “[Shooting the Messenger](#),” S&P Dow Jones Indices, December 2017. Similar analysis for the Indian market may be found Ganti and Jain, “[A Glimpse of the Future: India’s Potential in Passive Investing](#),” S&P Dow Jones Indices, November 2018.

¹⁵ This observation has a long history, beginning with Brinson, Hood, and Beebower, “[Determinants of Portfolio Performance](#),” *Financial Analysts Journal*, Vol. 42, 1986.

¹⁶ Source: Jain and Gupta, SPIVA India Mid-Year 2020 Scorecard, S&P Dow Jones Indices. Data as of June. 30, 2020.

place the fund within the bottom quartile. These 10-year statistics give a starting point for a range of comparisons.

Imagine an investor 10 years ago without any international equity holdings but who otherwise allocated along the lines of the distribution of assets shown earlier in Exhibit 1. This investor's portfolio is split equally between domestic equities and bonds plus a 1% allocation to gold, so that the portfolio performance can be proxied by a similar allocation between the S&P BSE 200, [S&P BSE India Bond Index](#), and [S&P GSCI Gold](#), respectively. Over the 10 years ending in September 2020, the hypothetical portfolio returns in such proportions (which we know in hindsight) would be a cumulative 9.0% per year with 9.0% annualized volatility.

This statistic gives the starting point for a range of comparisons between the impact of various possible portfolio decisions.

Then, by simulating the performance of hypothetical portfolios obtained by substituting 10% of the overall portfolio, taken from domestic equities and allocated either to the S&P 500 or a sector subindex of the S&P Global BMI, Exhibit 13 shows the impact of various portfolio decisions over the past 10 years. For the purposes of comparison, statistics were included for the base portfolio, swapping a "bad" fund for a "good" one and the more traditional option of changing the asset allocations between equities and bonds.

Exhibit 13: The Power of an Open Approach to Global Diversification

PORTFOLIO ACTION	IMPACT ON RETURNS*	IMPACT ON VOLATILITY*
BASE PORTFOLIO		
49.5% Indian equities, 49.5% Indian bonds, 1% gold	Base portfolio: 9.0%	Base portfolio: 9.0%
FUND SELECTION		
Reallocate 10% of portfolio from a bottom-quartile active Indian equity fund to a top-quartile fund	Increased by 0.2% (based on interquartile fund performance range as of SPIVA India Mid-Year 2020 Scorecard)	No change (presuming both active fund choices share in overall Indian equity market volatility) ¹⁷
U.S. ALLOCATION		
Reallocate 10% of portfolio from Indian equities to S&P 500	Increased by 1.0%	Decreased by 1.6%
GLOBAL SECTOR ALLOCATION		
Reallocate 10% of portfolio from Indian equities to one of the 11 S&P Global BMI sectors	Average increase of 0.6% <ul style="list-style-type: none"> best case increased by 1.5% worst case decreased by 0.5% 	Average decrease of 1.4% <ul style="list-style-type: none"> best case decreased by 1.7% worst case decreased by 1.2%
DOMESTIC BOND ALLOCATION		
Reallocate 10% of portfolio from Indian equities to Indian bonds	Increased by 0.1%	Decreased by 1.6%

* Impact on returns and volatility based on historical impact on 10-year annualized portfolio returns and volatility. All portfolios are hypothetical.

¹⁷ This seems like quite a reasonable assumption at least based on studies of global funds, such as Edwards, Lazzara, and Ramotti, "[The Volatility of Active Management](#)," S&P Dow Jones Indices, August 2016.

Source: S&P Dow Jones Indices LLC. Data as of Sept. 30, 2020. Index performance based on total return in INR of quarterly rebalanced hypothetical portfolios constructed from combinations of the S&P BSE 200, S&P BSE India Bond Index, S&P GSCI Gold, S&P 500, and the 11 different S&P Global BMI sector indices. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

The decision to allocate even 10% of a domestic-focused portfolio to international equities could have a major effect on both returns and volatility.

The decision to allocate even 10% of a portfolio to international equities could have had a major effect—comparable in risk terms to changing the overall bond/equity mix within the portfolio and potentially much more significant than changing active managers within domestic equities.

It is worth emphasizing that while the absolute values of the figures in Exhibit 13 may appear small, they arise from simulating only 10% changes in the overall portfolio allocation.

CONCLUSIONS

The optimal allocation to international equities is impossible to predict in advance, but the evidence has told us that it is unlikely to be zero. Extending from purely domestic equities to a mix of international exposures can achieve a reduction of risk, while maintaining or even improving long-term growth prospects.

Sectors illustrate the potential of a more discriminating approach to global diversification.

For Indian investors, the historical evidence for a diversification benefit from international equities is strong, while the events of 2020 have added further impetus; the COVID-19 pandemic and subsequent slowdown drove large differences in performances between stocks in the U.S. and elsewhere, starkly illustrating the role of different sectors in creating diversification effects.

U.S. equities offer an easy route to global diversification, and for the world's largest, most traded, and most watched equity market, the case for a passive approach is a strong one. However, an active approach to global equities can also be valuable. Sectors illustrate the potential of more discriminating approaches, but the decision to invest in international markets *at all* will likely prove more important than whether to do so passively or actively.

The introduction of passive funds presents Indian investors with a new toolkit to access global equities.

Options for Indian investors to diversify internationally are somewhat limited at present, but the recent introduction of passive vehicles has accompanied fast growth, and against the backdrop of an INR 25 lakh crore mutual fund industry, there is plenty of room to grow. Whether seeking diversification, exposure to fast-growing industries, or simply to participate in more of the available opportunity set, Indian investors are being presented with a new toolkit.

APPENDIX THE S&P BSE AND S&P GLOBAL BMI INDEX SERIES

S&P Dow Jones Indices publishes a range of indices covering the Indian and global equity markets, including the S&P BSE Indices and S&P Global BMI Series.

The S&P BSE Indices measure the performance of BSE-listed companies across various sizes, industries, themes, and strategies. The S&P BSE SENSEX is comprised of 30 large, well-established, and financially sound companies across key sectors and is the oldest index in the country. The broader S&P BSE 200 measures the performance of 200 of the largest and most liquid companies within the Indian market; it also provides the benchmark against which all domestic Equity Linked Saving Schemes (ELSS) are compared in the SPIVA India Scorecards.

The S&P Global BMI (Broad Market Index) is designed to capture the global, investable opportunity set. Spanning 50 developed and emerging market countries and more than 11,000 companies, it tracks over 99% of each constituent country's available market capitalization. The S&P Global BMI series of subindices break the global market down by country, region, size, GICS sector, and style. The consistency of methodology across markets allows for apples-to-apples comparisons, for example comparing the opportunity set in a whole country like India to the global range of stocks in a sector like Health Care.

Over the past 10 years, the correlation between quarterly returns of the S&P BSE 200 and S&P India BMI was 0.997, while the correlation between the narrower S&P BSE SENSEX and S&P India BMI was 0.981. Exhibit A1 compares the price and total return performances of the S&P India BMI to the perhaps more familiar S&P BSE SENSEX, as well as the broader S&P BSE 200.

Exhibit A1: Long-Term Returns of Indian Equity Benchmarks					
INDEX	3-YEAR	5-YEAR	10-YEAR	15-YEAR	20-YEAR
PRICE RETURNS (%)					
S&P India BMI	4.0	7.6	6.6	10.4	11.3
S&P BSE SENSEX	6.8	7.8	6.6	10.4	11.8
S&P BSE 200	3.8	7.4	6.6	10.3	12.6
TOTAL RETURNS (%)					
S&P India BMI	5.3	8.9	8.0	11.8	13.1
S&P BSE SENSEX	8.0	9.2	8.1	11.9	13.6
S&P BSE 200	5.1	8.7	8.1	N/A	N/A

Source: S&P Dow Jones Indices LLC. Data as of Sept. 30, 2020. Past performance is no guarantee of future results. Index performance based on annualized return in INR. Table is provided for illustrative purposes.

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S&P Dow Jones Indices defines various dates to assist our clients in providing transparency. The First Value Date is the first day for which there is a calculated value (either live or back-tested) for a given index. The Base Date is the date at which the Index is set at a fixed value for calculation purposes. The Launch Date designates the date upon which the values of an index are first considered live: index values provided for any date or time period prior to the index's Launch Date are considered back-tested. S&P Dow Jones Indices defines the Launch Date as the date by which the values of an index are known to have been released to the public, for example via the company's public website or its datafeed to external parties. For Dow Jones-branded indices introduced prior to May 31, 2013, the Launch Date (which prior to May 31, 2013, was termed "Date of introduction") is set at a date upon which no further changes were permitted to be made to the index methodology, but that may have been prior to the Index's public release date.

The back-test period does not necessarily correspond to the entire available history of the Index. Please refer to the methodology paper for the Index, available at www.spdji.com for more details about the index, including the manner in which it is rebalanced, the timing of such rebalancing, criteria for additions and deletions, as well as all index calculations.

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