

Performance Overview of Indian Hedge Fund Industry

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Abstract

This paper evaluates the performance of Indian hedge funds and hedge funds of North America, Latin America, Europe, Asia ex Japan, Japan and Global database for a period of 2000-2019. This paper also compares the performance of given hedge fund indexes with the major stock indexes of that region. The performance criteria have been annualized returns, annualized standard deviation and Sharpe ratio for different periods. The research shows that only Indian hedge funds have been lagging behind the equity market of the country, which raises question on the need of Indian hedge funds and the hefty fees charged by these funds. Fund level taxation is one of the biggest hindrances in the growth of Indian hedge funds industry, which is a big disadvantage to them as compared to mutual funds and equities in India.

Keywords: Hedge Funds, India, Investment, Financial Market, Performance

1. Introduction

Hedge funds are alternative investment funds that pools funds and uses that funds to employ numerous different strategies to earn market excess return, or alpha, for their investors. Hedge funds are usually actively managed, meaning the manager makes the decision about how to invest fund's money. They make use of derivatives and high leverage in both domestic and international markets with the goal of generating high returns (either in an absolute sense or over a specified market benchmark), and also hedging the downside risk, i.e, they provide good returns and at the same time give downside protection on the investments, giving a better Sharpe ratio than the equity market. Hedge funds are run by trained and experienced managers, who use sophisticated techniques to generate excess returns, or alpha, over the equity market. Hedge funds is a \$2.3 trillion globally as at January 2019, according to Eurekahedge Global Hedge Funds infographics report of 2019.

This paper evaluates the performance of Indian hedge funds and hedge funds of North America, Latin America, Europe, Asia ex Japan, Japan and Global database for a period of 2000-2019. This paper also compares the performance of given hedge fund indexes with the major stock indexes of that region. The performance criteria has been annualized returns, annualized standard deviation and Sharpe ratio for different periods. The comparison shows that the hedge fund indexes of all the major regions of the world are performing better the equity markets of that region. It also shows that only Indian hedge funds have been lagging behind the equity market of the country on a risk-adjusted returns basis, which raises question on the need of Indian hedge funds and the hefty fees charged by these funds. Since the margins on trades are small, hedge funds need large assets to generate significant returns. Fund level taxation is one of the biggest hindrances in the growth of assets under management of Indian hedge funds industry, which is a big disadvantage to them as compared to mutual funds and equities in India. This sways investors away from investing in Indian hedge funds, and thus their assets are very low as compared to Indian equity market and Indian mutual fund industry. If Indian hedge funds are given a level playing field with the other industries on tax basis, then they are expected to deliver much better performance in future.

2. Theoretical Background

2.1 History of Hedge Funds

First hedge fund was launched by former writer and sociologist, Alfred Winslow Jones in 1949. He named the company A.W. Jones & Co.(investopedia,hedgefund).A.W. Jones & Co. was starting by raising \$100,000, out of which \$40,000 was Alfred's own money. His strategy was to try to minimize the risk in having long stock positions, by short selling other stocks. After almost 3 years of its creation, Alfred altered his fund from a general partnership to one of a limited partnership. Apart from this, he also added a 20% incentive fee for managing partner for actively managing the fund.

Slowly hedge funds started gaining momentum, and went on to outperform the mutual fund industry in the 1960s. Their popularity was further increased after a article was published in Fortune magazine in 1966, stating about a obscure investment which outperformed every mutual fund, and that too by significant margins. Hedge funds outperformed the mutual funds by over double digit figures in the past year, and by high double digit figures over the last five year period. Most high-profile money managers started leaving the mutual funds during the 1990s and started joining hedge funds to generate large fortunes and gain fame. Unfortunately, during the period between late 1990s and early 2000s, hedge funds started performing very poorly, because of bad management and investment practices. But after that, the hedge funds industry revived itself, by giving consistent above market returns and for a much lesser risk.

2.2 Key Characteristics

Hedge funds have some key characteristics that separate them from the common pooled investment funds. One of the main characteristics is that hedge funds are only allowed to take money from “qualified” or accredited investors. Individuals are accredited if their annual income exceeds \$200,000 for the past two years, or their net worth exceeds \$1 million, without including their primary residence. Another main characteristic that separates them from other funds is the performance-based fee structure, where instead of charging just an management fee, hedge funds charge both management fee and a performance based incentive fee. This fee structure is popularly known as "Two and Twenty"—a 2% management fee, which is calculated on the total assets of the company, and then a 20% cut of any gains generated. Other than the limitation for taking money only from accredited investors, there aren't many regulations imposed on hedge funds. Hedge fund managers can invest in basically anything they feel will generate value, such as land, real estate, equity, derivatives, and currencies. Mutual funds, by contrast, are highly regulated, and since they pool general public's money, so they can't invest in risky strategies like hedge funds, and usually rely on long only positions in equities to generate their returns

2.3 Common strategies used by Hedge Funds

Hedge funds employ numerous strategies to generate better than market returns, while also providing protection against downside risk. Some hedge funds use only single strategy, while some use multiple strategies (investopedia, hedgefund). Some of the commonly used strategies by hedge fund managers are:

Directional Strategy: This strategy focuses on market trends as a whole rather than trends observed in individual stocks. Two examples of directional investment strategies are managed futures and global macro strategies.

Long Bias and Short Bias: A fund with long bias strategy has a net long bias on their portfolio, i.e., they take mostly long positions on the market. On the other hand a fund with Short bias strategy takes mostly short positions.

Arbitrage Relative Value: This strategy seeks to take advantage of price differentials between related financial instruments, such as stocks and bonds, by simultaneously buying and selling the different securities.

Fundamental: The fund managers that use this strategy takes into consideration fundamental factors that affects the security price, when making investments.

Bottom Up: As the name implies, here the analysis starts with specific securities, and goes up till the global economy analysis.

Top Down/Macro: This is exact opposite of Bottom Up approach. In this strategy the manager starts off with global economy analysis and then moves onto analysis of specific securities.

2.4 Alternative Investment Funds(AIFs) in India

Securities and Exchange Board of India released a set of regulations in 2012, to regulate pooled investment funds in India, such as real estate, private equity and hedge funds (wikipedia, Securities and Exchange Board of India (Alternative Investment Funds) Regulations, 2012). SEBI regulations for alternative investment funds is applicable for all pooled investment funds in India, which receive capital from Indian or foreign investors (wikipedia, aif). These regulations categorise AIFs in three categories. While category I includes social venture funds venture capital funds and SME funds, category II includes private equity funds and debt funds. Hedge funds come under Category III in India.

AIFs are only for high net-worth individuals. The minimum investment from an individual is ₹10,000,000. The minimum asset size of the fund should be ₹200,000,000. The maximum investors that any fund can have is 1000 at any given time. The fund manager's or promoter's initial contribution in the fund should be less than 2.5% or ₹50,000,000, whichever is less.

3. A Review of the Literature

Hedge funds are required to file disclosure by filing form 13F. 13F filing is required by the institutional investment managers with the Securities and Exchange Commission (SEC), that have over \$100 million in assets under management (AUM). It is a quarterly filing, and it provides the investors to evaluate the fund performance and also provides the portfolio of the holdings of the fund.

Aragon, Hertz, and Shi, 2012 discussed the need of transparency in hedge fund reporting, the extent to which the decision to disclosure is affected by the liquidity of the holdings and the confidential treatment's contribution in the success of the hedge fund managers. The study states that providing more disclosures help in giving transparency to investors; but at the same time discloses proprietary information of the funds. This leads to hedge funds managers using long term investments instead of using skilled managers to deployed sophisticated strategies because that information will be out anyways in a few months eliminating the alpha of the strategy. At the same time, this helps non-performing funds to duplicate other fund portfolios to generate better returns. The study also claimed that managers who want to hide bad results would want to keep results confidential and not file 13F form. SEC knows about these issues, and allows fund managers a delayed filing of 13F. Hedge funds are still required to file 13F within 1.5 months after every quarter end. This helps managers in hiding winning strategies from public for longer. The study showed that hedge fund's return have positive correlation with the extension of filing 13F these funds can receive before their investment become public (Aragon, Hertz, and Shi 2012). On the

other end, Aragon et al, 2012 didn't find any supporting evidence to show that hedge fund managers choose to not file 13F to hide poor fund performance.

Prior research analyzes earnings management based on two factors: a) as a reward for good performance, b) for avoiding punishment for poor performance. Both these factors cause a phenomenon what is termed as December spike (Agarwal, Daniel & Naik, 2007). This effect states that there is a spike in returns in December over the returns from Jan to Nov. They showed that funds observe much higher returns in December after controlling their market exposure if they have opportunity to inflate their results, and it is also higher

Agarwal, Daniel & Naik, 2009 talks about the hedge funds earnings management. Earnings management has special characteristics for any corporation. Same is the case for a hedge fund. Many hedge funds set up a hurdle fees that needs to be crossed before fund managers can claim incentive fee. These hedge fund's performance fee has similar characteristics to a employee stock option. Employees are given stock options so that perform their job to the best because they have a stake in the company. Same is true for hedge fund managers. They get their incentive fee only if the hurdle rate is crossed, and thus needs to perform at the top of their abilities. however, this has a downside also, as this increases the risks of practicing earnings management because fund managers are having an incentive to manipulate the earnings to get higher incentive fee. Agarwal, et. al, 2009 showed that hedge funds who show consistent and good returns are more likely to get investors than investors with volatile returns. On the other hand, investors are also likely to withdraw their money from the fund if the funds are posting negative returns, or even no returns at all.

Due to this, fund managers are incentivized to smoothen their returns to avoid a phenomenon known as December spike (Vikas Agarwal, Naveen D Daniel, Narayan Y Naik, ,Eurekahedge, April 2007). This phenomenon stated that December returns of hedge funds are significantly higher than their average returns from January to November. They smoothen their returns for the Jan-Nov period and add back the high December returns. Smoothing is important because it can reduce volatility in returns, and thus manipulating the commonly used risk-adjusted performance metrics. Additionally, fund managers have an added incentive to increase not just their returns, but also their risk-adjusted return, better described by Sharpe ratio, because fund's performance fee and management fee is based on the AUM that the fund has, and the funds AUM increases when its Sharpe ratio increases.

This is where proper research in Indian hedge funds is lagging. Comparing only fund's return is not a correct way to analyze the performance compared to the volatile equity market. Ashok & Bobbur, 2017 discuss about Indian hedge funds performance for a period of 2013-2017, comparing Indian funds with their global peers but have not discussed the performance of the funds as compared to the Indian equity market benchmarks. An investor would invest in some fund only if he/she is getting more returns than the benchmark of the country, i.e., if the fund is generating is alpha.

Amit, 2015 has compared the performance of hedge fund returns of five countries and two continents, with their respective indexes. He has compared HFRI Indian Index with Sensex. There are two problems with this. First Sensex is a index made up of only 30 companies of Indian equity market. Such a index covers only a small portion of the Indian equity market. Secondly,

comparison of a whole industry with just a single index can't accurately describe the performance statistics of the Indian hedge fund industry.

4. Methodology

This paper evaluates the performance of Indian hedge funds with respect to Indian equity market and also with other major hedge fund indexes across the world. The comparison is based on returns generated, risk taken to generate those returns, and returns generated after adjusting the risk factors. Certain other statistics are also discussed for evaluating the performance in more depth and to get a better idea of how these indexes are performing. Charts have been plotted for comparison of indexes, which give a visual idea about the performance and comparison. After each chart, detailed statistics have been stated and performance of each indexes based on those is discussed.

For the hedge funds data, Eureka hedge indexes have been used. For equity indexes data, yahoo finance and investing.com have been used. The data taken for comparison is from Jan 2000 to March 2019. If some index has been established late, then the date since its establishment has been considered for comparison. All these data have been used to plot charts and to calculate statistics and has been stated in the tables.

First, all the major hedge fund indexes and the Indian hedge fund index have been compared. That shows how the Indian hedge funds are performing as compared to their global peers. After that, all the major hedge fund indexes have been compared to the major equity index of the region in which they operate. That gives an idea of how these hedge funds are performing as compared to the equity market of that region, and contemplates if the high fees charged by these hedge fund managers for active and aggressive investment is worth it over the passive investment or not. After that, Indian hedge fund index has also been compared with some of the major equity indexes of the country, to show how the Indian hedge funds are performing in comparison to Indian equity market.

After the comparisons between Indian hedge funds and all the different indexes of Indian equity market, some of the possible reasons have been discussed to analyze the performance that Indian hedge funds have given over this period of time. These reasons are also quoted from some of the major hedge fund managers in India and other major news sources. These reasons have also been complemented with numerical data, to give a better picture of the Indian hedge fund industry with compared to mutual fund industry as well as equity market of India as well as other major financial markets of the world.

5. Analysis and Discussion

5.1 Hedge Funds: A Global View

Eureka hedge's global hedge funds infographic 2019 (see figure 1) sums up the hedge funds industry as at January 2019.

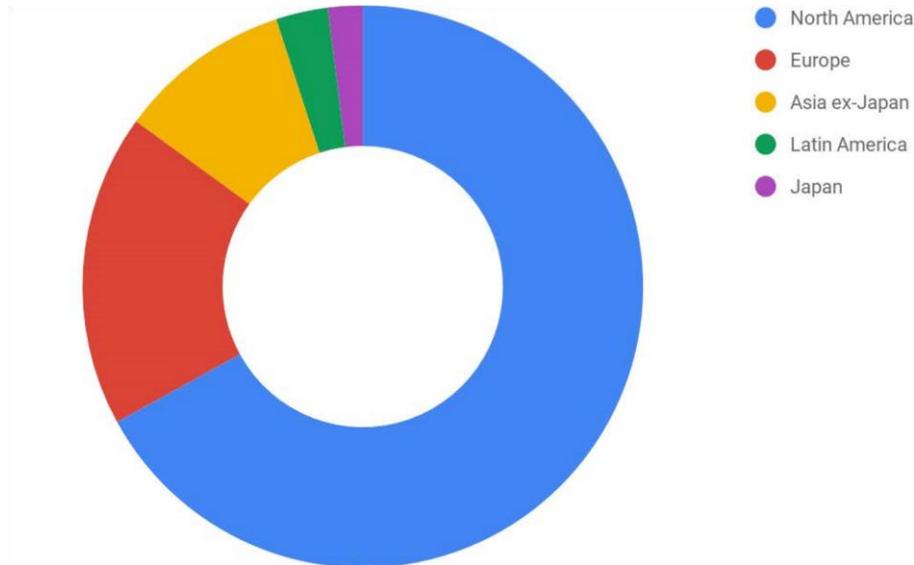


Figure 1. Major hedge funds AUM by investing geography

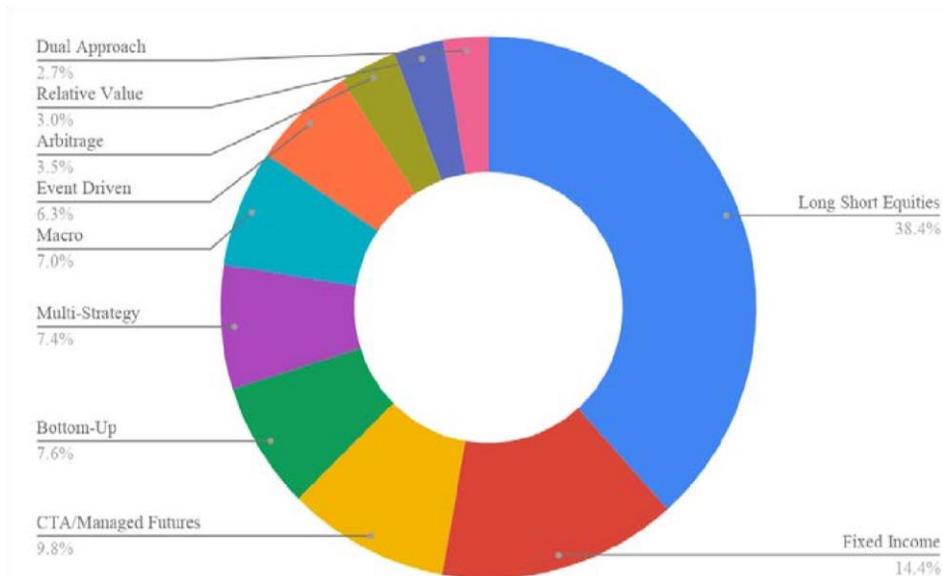


Figure 2. Strategy distribution of hedge funds globally

As we can see from Figure 1 (eureka hedge, infographics), most of the AUM of hedge funds globally are centered in North America, Europe, Asia ex-Japan, Latin America and Japan. Let's compare the performance of hedge funds indexes of these regions with themselves and also with the major stock indexes/ ETFs of these regions and also with Indian hedge fund index.



Figure 3. Indian hedge funds index vs major hedge fund indexes

Figure 3 shows the returns generated from a \$100 investment made at the end of December 1999 till March 2019 in different EurekaHedge indexes (eurekaHedge, 2019). As evident from the figure, Indian hedge fund index is the worst performing hedge fund index for the major part of the 21st century, only outperforming most of the indexes during the financial crisis of 2008, and then losing all the gains in the subsequent year to be back at the last spot.

Table 1.

Performance statistics of Different EurekaHedge hedge fund indexes by region as of March 2019

	India	Latin America	Europe	North America	Asia	Global
Number of Constituents	16	79	274	551	303	2515
Return Since Inception (%)	256.14	956.63	245.44	435.99	301.52	366.04
Annualised Return(%)	6.82	13.03	6.65	9.11	7.49	8.32

Annualised Standard Deviation (%)	19.45	6.14	5.75	5.26	7.20	4.76
Last 3 Months (%)	6.54	3.83	2.79	5.37	5.03	4.36
2019 Returns (%)	6.54	3.83	2.79	5.37	5.03	4.36
2018 Returns (%)	(7.47)	7.04	(4.95)	(3.15)	(8.71)	(4.15)
Best Monthly Return(%)	25.37	5.62	9.32	6.87	7.56	5.28
Worst Monthly Return(%)	(17.86)	(5.34)	(6.01)	(4.65)	(6.92)	(4.41)
Percentage of Positive Months (%)	59.31	75.32	67.10	72.29	65.80	70.56
Sharpe Ratio	0.25	1.80	0.81	1.35	0.76	1.33
Upside Deviation (%)	14.61	6.15	4.74	4.83	5.72	4.35
Downside Deviation(%)	12.91	2.99	3.49	2.86	4.63	2.61
Sortino Ratio	0.37	3.69	1.33	2.48	1.18	2.43
Maximum Drawdown(%)	(60.43)	(11.63)	(18.96)	(11.68)	(24.95)	(12.36)

Note. India refers to EurekaHedge India Hedge Fund Index, and similarly all of them, and Global refers to EurekaHedge Hedge Fund Index. Statistics data compiled from EurekaHedge indices indexview.

Table 1 provides the detailed risk return statistics of the six indices shown in the figure 2. Key takeaways include:

1. EurekaHedge India Hedge Fund Index is an equally weighted index of 16 constituent funds. The number of constituents in India's Index is only 0.63 % of the 2515 constituents of the global hedge fund index. This shows that Indian Hedge Fund industry is still in its nascent stages.
2. Latin America's hedge fund index posted an overall return of staggering 956.63 % , as compared to India's 256.14 % returns and Europe's 245.44 % return. European hedge funds

have not been able to perform because of the debt crisis that started at the end of 2009 in Europe, and which became severe in 2011. Europe's market has also been facing huge problems because of the lingering tensions of Brexit, that is hindering the performance of its hedge fund index. That is not the case with India, where the markets have been growing rapidly, but hedge funds have been unable to perform at par with it.

3. India Hedge Fund Index posted a loss of 7.47 % in 2018, outperforming only Asia's index which posted a loss of 8.71 %. Looking at the first quarter of 2019, Indian hedge fund managers posted an average profit of 6.54%, outperforming all the hedge fund indexes of Figure 1.
4. Annualized Standard Deviation, or risk is highest for the India focused hedge funds, giving an annualized deviation of 19.45%. This is almost 3 times the risk posted by next in the list, which is Asia's hedge fund index, posting a deviation of 7.20 % and the least in the category is the global index posting a deviation of 4.76 %. This shows that the returns being generated by hedge funds in India come at a great risk.
5. India focused hedge funds are very volatile, as apparent from the fact the best monthly performance of Indian index is 25.37 %, and the worst monthly performance is -17.86 %. Comparing it with the next in line, Europe's index is the one with the best monthly performance, having return of 9.32 % which is almost one-third of India's returns. The second worst monthly performance is of Asian index, posting a loss of 6.92 %. This shows that while all the other indices are generating consistent returns, while protecting much downside risk, Indian hedge funds are all over the place, showing huge upside and downside deviations.
6. Sharpe ratio, which shows the excess returns from the risk free rate generated per unit of risk taken, is significantly low for Indian hedge funds, as expected from the above argument. Sharpe Ratio = $(R_p - R_f) / \text{StdDev}$ where R_p is annualized return of the index here, R_f is risk free rate, which is taken for all the further calculations, and StdDev is the annualized standard deviation of the index here.
Indian index posted a sharpe ratio of 0.25, which is less than one-third of the Asian index which has a Sharpe ratio of 0.76, while the highest is of Latin America, having a Sharpe ratio of 1.80.
7. Another statistic showing the volatility of the Indian index is maximum drawdown, which shows the maximum loss from a peak to a trough of a portfolio, before a new peak is attained. India's index have a max drawdown of -60.43 % which is highly alarming, considering the next is Asian index, which only has max drawdown of -24.95%.

All of these arguments point out that India focused hedge funds are significantly behind the rest of the world, and have to make major changes in their strategy to come close to global funds.

One argument here can be made that all of the other regions are developed regions where India is still an emerging market. To shed light on this argument, let's compare the performance of India's index with EurekaHedge Emerging Markets Hedge Fund Index. Figure 4 shows the returns

generated from a \$100 investment in India's hedge fund vs Eureka hedge emerging market hedge fund index at the end of Dec 1999 to March 2019.

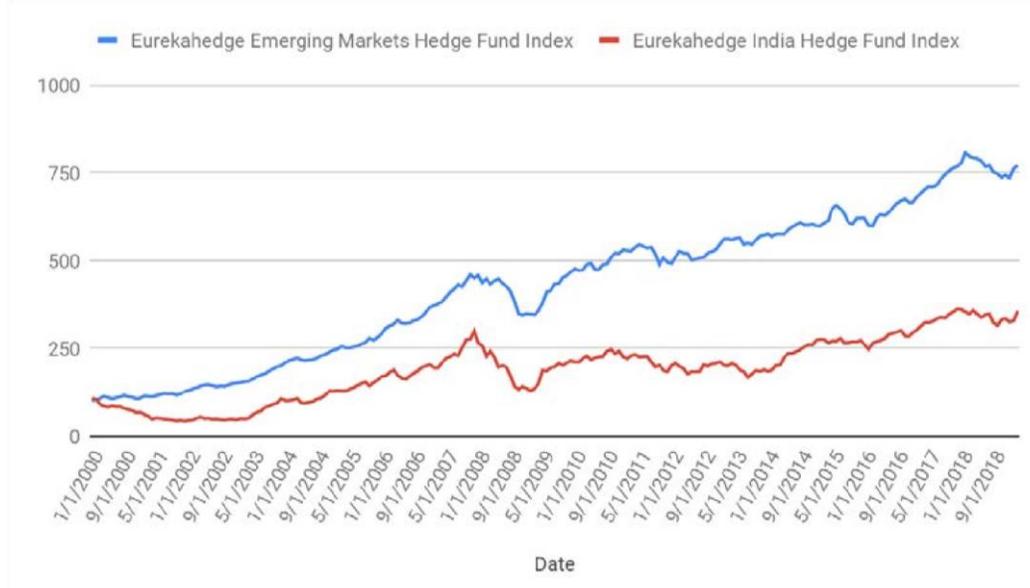


Figure 4. Indian hedge fund index vs Emerging markets hedge fund index

Figure 4 shows that Indian index is way behind the emerging markets index, showing that the hedge funds have been unable to tap the growth in the Indian equity market as opposed to the rest of the world. Table 2 shows some of the major statistics of these two indexes, which helps in comparing the performance of these two indexes.

Table 2.

Performance statistics as of March 2019 (Indian index vs Emerging Market index)

	Eureka hedge India Hedge Fund Index	Eureka hedge Emerging Markets Hedge Fund Index
Number of Constituents	16	295
Return Since Inception (%)	256.14	671.46
Annualised Return (%)	6.82	11.20
Annualised Standard Deviation (%)	19.45	8.31

Sharpe Ratio	0.25	1.11
Maximum Drawdown (%)	(60.43)	(25.19)

Note. Statistics data compiled from Eureka hedge indices index view.

Table 2 provides the detailed risk return statistics of the two indices shown in the figure 4. Key takeaways include:

1. Indian hedge funds have given only 6.82 % annualized returns, as compared to the returns given by the emerging market index, which is 11.20%. This shows that the Indian hedge funds have been unable to harness the growth in Indian markets in giving returns, as opposed to other emerging market focused funds.
2. Annualized standard deviation, or the risk is more than double for Indian index than the emerging market index, which are 19.45% and 8.31% respectively. This shows that constituents of the emerging market index have been able to reduce the risk of investing in the volatile emerging markets to a great extent as compared to Indian index constituents.
3. Giving almost half the returns while taking more than double the risk, has caused the Sharpe ratio of Indian index to be well below emerging market index, which are 0.25 and 1.11 respectively.

5.2 Major hedge fund indices vs Stock Indices/ETFs of respective regions

Hedge funds use many diverse and complex strategies to generate returns over the stock markets of their regions, which attracts investors to invest in their funds, despite the hefty fees that they charge for their services. They have to generate constant and significant returns over the benchmark indexes of their regions, while significantly reducing the downside risk, to retain their investors. Let's see the performance of the major hedge fund indexes with the major stock market index/ETF of that region.

5.2.1 American stock market vs Eureka hedge Latin America Hedge Fund Index

Figure 5 shows the comparison between Eureka hedge Latin America hedge fund index vs S&P 500 returns for a \$100 investment made at the end of 1999 till march 2019.

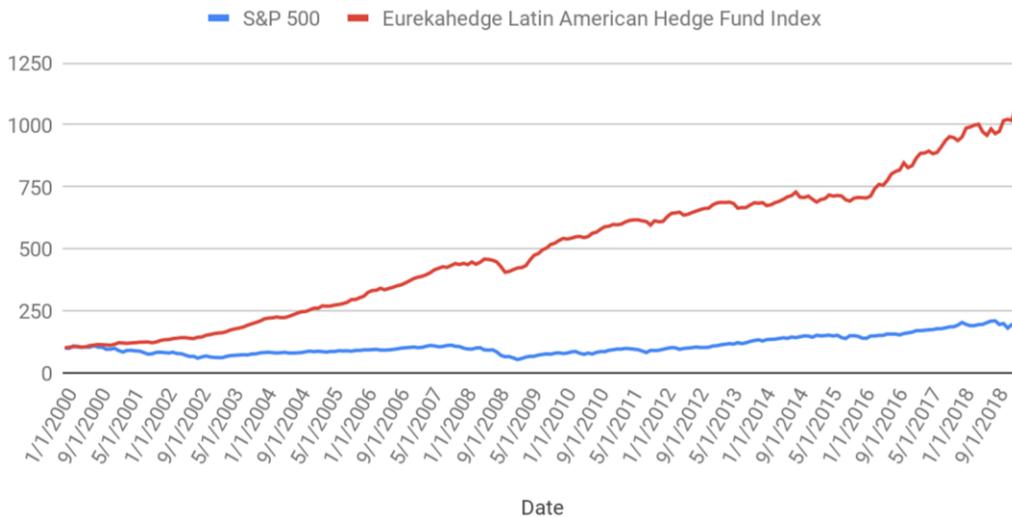


Figure 5. S&P 500 index vs Eurekahedge Latin America Hedge Fund Index

As we can see from figure 5, Latin America hedge fund index have significantly outperformed the S&P 500 index (finance.yahoo,GSPC),which is an American stock market index based on the market capitalizations of 500 large companies having common stock listed on the NYSE, NASDAQ, or the Cboe BZX Exchange. It does not take into account the risk taken by both these indices to provide this return. In order to measure the risk-adjusted return, the Sharpe Ratio of the two are to be considered. Sharpe ratio is important because risk and rewards must always be considered together when comparing any investment (Investopedia, Sharpe ratio). Annualized Sharpe ratio of S&P 500 for the given period is 0.133 and the Sharpe ratio of Latin America index has been 1.80,which shows that Latin America’s hedge funds have far outperformed the American stock market.

5.2.2 American stock market vs Eurekahedge North America hedge fund index

Figure 6 shows the comparison between Eurekahedge North America hedge fund index vs S&P 500 returns for a \$100 investment made at the end of 1999 till march 2019.

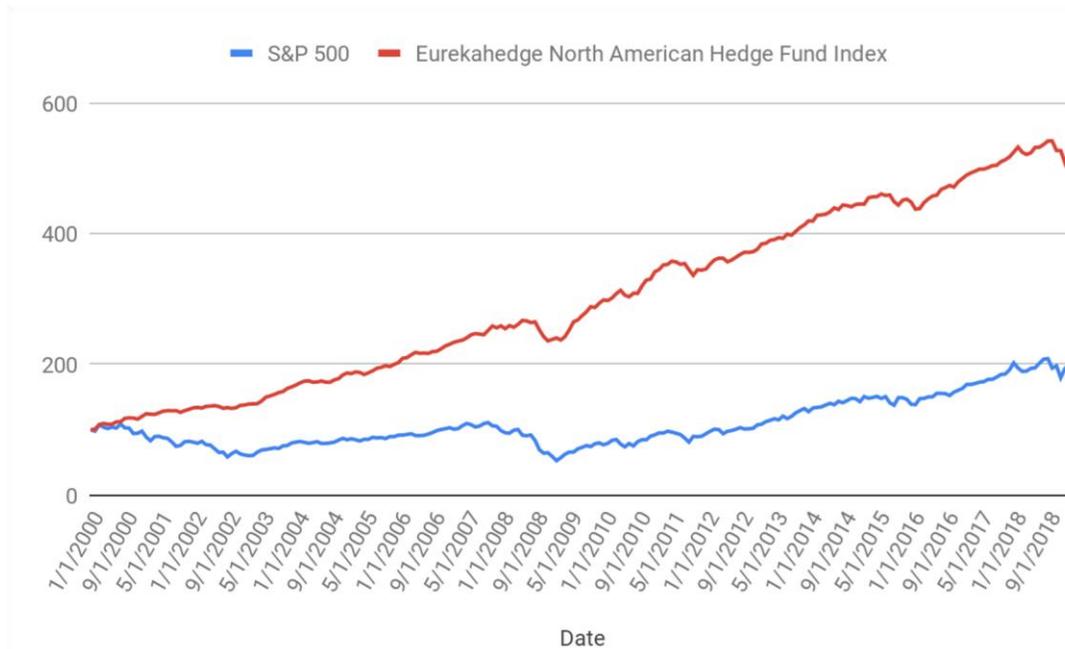


Figure 6. S&P 500 vs Eurekahedge North American Hedge Fund Index

As we can see from figure 6, north America hedge fund index have significantly outperformed the S&P 500 index, which is an American stock market index based on the market capitalizations of 500 large companies having common stock listed on the NYSE, NASDAQ, or the Cboe BZX Exchange. It does not take into account the risk taken by both these indices to provide this return. In order to measure the risk-adjusted return, the Sharpe Ratio of the two are to be considered. Annualized sharpe ratio of S&P 500 for the given period is 0.133 and the Sharpe ratio of north America index has been 1.35, which shows that north America's hedge funds have far outperformed the American stock market.

5.2.3 European stock market vs Eurekahedge Europe hedge fund index

The STOXX Europe 600 Index, a stock index of European stocks designed by STOXX Ltd, is derived from the STOXX Europe Total Market Index (TMI) and is a subset of the STOXX Global 1800 Index. It is made up of 600 constituents, and represents large, mid and small cap companies across 17 countries of the European region: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland and the United Kingdom. It covers approximately 90% of the free-float market capitalization of the European stock market (not limited to the Eurozone). Figure 7 shows the comparison between Eurekahedge Europe hedge fund index vs Stoxx Europe 600 returns for a \$100 investment made at the end of 1999 till march 2019.



Figure 7. Eurekahedge European Hedge Fund Index vs Stoxx Europe 600

As we can see from figure 7, Europe hedge fund index have significantly outperformed the Stoxx Europe 600 index(uk.finance.yahoo). It does not take into account the risk taken by both these indices to provide this return. In order to measure the risk-adjusted return, the Sharpe Ratio of the two are to be considered. Sharpe ratio of Stoxx Europe 600 is -0.10 during the given period and the Sharpe ratio of Europe index has been 0.81, which shows that Europe’s hedge funds have far outperformed the European stock market.

5.2.4 Asia ex-Japan equity market vs Eurekahedge Asia ex-Japan Hedge Fund Index

Since there is no such stock index available that tracks the performance of stock in the region of Asia excluding Japan, so iShares MSCI All Country Asia ex Japan ETF (AAXJ) is used as the benchmark to compare the performance. AAXJ is a ETF of the iShares family, which is a group of ETFs managed by BlackRock, the world's largest asset manager today. AAXJ tracks a market-cap weighted index of Asian stocks, excluding Japan. The fund holds securities from both developed and emerging markets in Asia. Asia ex Japan is seen separately to see the Asian exposure without Japan’s dominating influence. Since AAXJ started on August 2008, so performance of both the indexes is compared from that time. Figure 8 tracks the performance of AAXJ vs Eurekahedge Asia ex Japan Hedge Fund Index for a \$100 investment made at the start of August 2008 till the end of March 2019.



Figure 8. AAXJ vs Eurekahedge Asian Hedge Fund Index

As we can see from figure 8, Eurekahedge Asia ex Japan Hedge Fund Index has performed better than the AAXJ ETF (finance.yahoo) for majority of the more than 10 year period. It does not take into account the risk taken by both these indices to provide this return. In order to measure the risk-adjusted return, the Sharpe Ratio of the two are to be considered. Sharpe ratio of AAXJ is 0.073 during the given period and the Sharpe ratio of Asia ex Japan index has been 0.81, which shows that Eurekahedge Asia ex Japan Hedge Fund Index constituent hedge funds have far outperformed the stock market region of Asia ex Japan.

5.2.5 Japanese equity market vs Eurekahedge Japan Hedge Fund Index

The Nikkei 225, more commonly called the Nikkei, the Nikkei index, or the Nikkei Stock Average, is a stock market index for the Tokyo Stock Exchange. It has been calculated daily by the Nihon Keizai Shimbun newspaper since 1950. Figure 9 shows the comparison between Eurekahedge Japan hedge fund index vs Nikkei 225 returns for a \$100 investment made at the end of 1999 till march 2019.

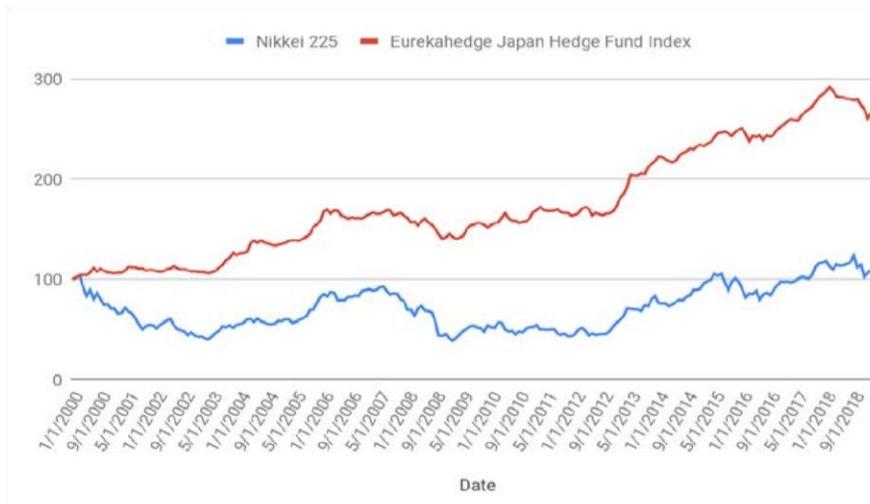


Figure 9. Nikkei 225 vs Eureka Hedge Japan Hedge Fund Index

As we can see from figure 9, Japan’s hedge fund index have significantly outperformed the Nikkei 225 index. It does not take into account the risk taken by both these indices to provide this return. In order to measure the risk-adjusted return, the Sharpe Ratio of the two are to be considered. Sharpe ratio of Nikkei 225 is -0.07 during the given period and the Sharpe ratio of Eureka Hedge Japan Hedge Fund Index has been 0.52, which shows that Japan’s hedge funds have far outperformed the Japan stock market.

By looking at all the performance figures shown above, we can see that all of the major indexes have performed better than the stock market indexes/ETFs of that region, and that too by significant margins. This has to be true, because of the hefty fees that the hedge funds charge, so they have to perform better than the indexes to justify their fees for the active investment that they offer rather than just passively investing in the stock market.

5.3 Indian Hedge Funds vs Indian equity market

Let us now compare the Eureka Hedge India Hedge Fund Index with the Indian stock market, and try to see if Indian hedge fund managers are performing at par with their global peers or not, and are they justifying charging the 2 and 20 fees structure or not. Before comparing their performances, let’s first see that why Indian markets are suitable for hedge funds (Nalin Moniz, 2017). Indian equity markets have three distinguishing characteristics that make them ideally suited for hedge funds:

1. The equity market in India has performed remarkably well during the last 15 years, as can be seen from the performance of the stock indexes. NIFTY has given a compounded return of 15.40% during this period, and CNX Midcap, which is composed of mid cap companies, has performed even better at 20.68%.
2. Even though these are good returns, but they have been crippled by some high volatility periods which the Indian investors have found hard to handle. As per the statistics, NIFTY

fell -51.79% in 2008, and has fallen more than 20% from its peak for 62 times during the past 24 years. This accounts to 2.5 times every year on average.

3. In India, there is a wide gap in the performance of individual stocks, when both the company fundamentals and the returns that they are providing is taken into account. The average gap between the top 50% and bottom 50% of BSE 200 is 21.35% annually.

Due to the high volatility in returns provided by the indian equity markets, they are ideally suited for a more risk-adjusted approach. This suggests the need for high active management rather than just passively investing in stock markets.

Let us now compare NIFTY 500 index vs EurekaHedge India Hedge Fund Index. NIFTY 500 represents the top 500 companies based on full market capitalization from the eligible universe. The NIFTY 500 Index represents about 95.2% of the free float market capitalization of the stocks listed on NSE as on March 31, 2017 (nseindia,nifty500).

Figure 10 shows the performance between EurekaHedge hedge fund index vs NIFTY 500 index for a \$100 investment made in both indexes at the end of January 2000 till the end of Feb 2019.

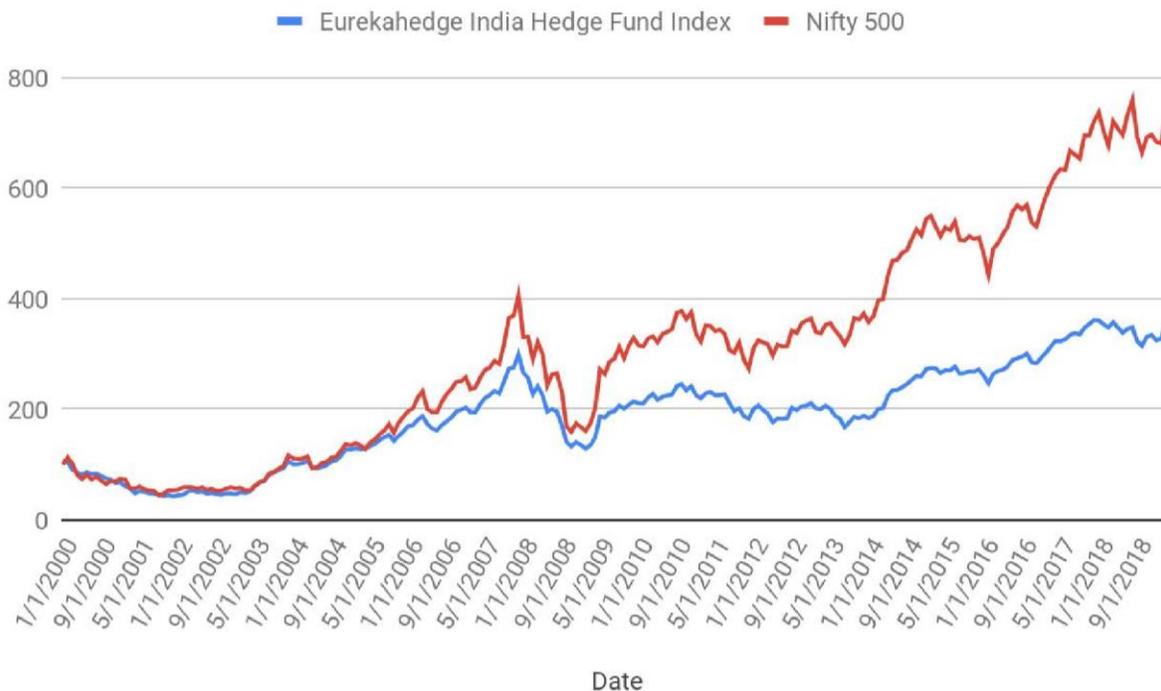


Figure 10. EurekaHedge India Hedge Fund Index vs Nifty 500

For the years up to 2005, Indian hedge fund index moved almost in complete sync with the Nifty 500 index(finance.yahoo). But after 2005, Nifty 500 grew to a large extent, and Indian hedge funds have been unable to catch it since then. It does not take into account the risk taken by both these indices to provide this return. In order to measure the risk-adjusted return, the Sharpe Ratio of the

two are to be considered. To calculate Sharpe ratio, annualized return and the annualized standard deviation of the two indexes are calculated.

Sharpe ratio of eureka hedge India hedge fund index came out to be 0.25, and Sharpe ratio of Nifty 500 came to be 0.33, which is marginally better than the Sharpe ratio of the eureka hedge fund index. As we can see, only India's hedge fund index is the one whose Sharpe ratio is less than the Sharpe ratio of the stock market of the region, which raises the question that why would anyone invest in Indian hedge funds by giving them such a high fee and still getting less than benchmark returns.

Let us analyze India's index further by comparing it with some more stock indexes in India. That will show us a more clearer picture of how Indian hedge fund industry is performing.

5.3.1 Comparison with indexes based on market capitalization

Nifty 100, Nifty Midcap 100 index, Nifty Smallcap 100 index are used here to compare the performance of Eureka hedge India Hedge Fund Index with these indexes. First let us see what each of these indices represents:

Nifty 100: NIFTY 100 is a stock index made up of 100 different companies that represents all the major sectors of the economy in which the companies operate. NIFTY 100 is made up of the top 100 companies based on full market capitalization of the NIFTY 500. This index is intended to measure the performance of large cap companies. This index tracks the performance of combined portfolio of NIFTY 50 & NIFTY Next 50. This index represents about 75% of free float market cap of the NSE stocks as on March 31, 2017 (nseindia, nifty 100).

NIFTY Midcap 100: The objective of the NIFTY Midcap 100 Index is to capture the movement and be a benchmark of the midcap segment of the market (nseindia, nifty midcap 100). The NIFTY Midcap 100 Index represents about 11.8% of the market capitalization of the stocks listed on NSE as on March 31, 2017.

NIFTY Smallcap 100: The NIFTY Smallcap 100 Index is made to show the performance of the 100 small cap companies in the Indian economy that are listed on the NSE. This index represents about 2.9% of the free float market cap of the stocks listed on NSE as on March 31, 2017 (nseindia, nifty smallcap 100).

Figure 11 gives a comparison of returns generated by all the indexes for a \$100 investment made at the end of November 2005.



Figure 11. Indian hedge funds vs Indian equity market

Figure 11 shows that for the most part of the given period, Indian hedge funds have performed either at par or worse than the given indices in terms of returns generated. Annualized returns for Nifty 100 is 10.89%, for Nifty Midcap 100 is 11.39%, for Nifty Smallcap 100 is 8.41% and of Eureka Hedge India Hedge Fund Index is 6.29%. Data for indexes has been gathered from yahoo finance and investing.com. Indian hedge funds have been unable to tap into the growth potential offered by the Indian equity market and thus are lagging behind in terms of returns generated.

This comparison does not take into account the risk taken by all the indexes, which shows how much risky the investment is to generate the given returns. For this, annualized standard deviation of all the indexes is compared. Annualized standard deviation of Nifty 100 is 22.51%, of Nifty smallcap 100 is 31.24%, of Nifty Midcap 100 is 26.53% and of Eureka Hedge India Hedge Fund Index is 17.84%. This shows that Indian hedge funds have done a good job at reducing the market risk of investing in India's equity market.

To analyze the returns generated per risk taken, Sharpe ratio for all the indexes for a 2% risk free rate is compared here. Sharpe ratio for Nifty 100 is 0.39, for Nifty Midcap 100 is 0.35, for Nifty Smallcap 100 is 0.20 and of Eureka Hedge India Hedge Fund Index is 0.24. This shows that Indian hedge funds have performed better than only the small cap market of India on a risk adjusted basis. This is disheartening considering the amount of fees that these hedge funds charge, which does not justifies such performance. Table 3 summarizes the findings discussed above, with some other statistics.

Table 3.

Performance Statistic as of March 2019 (Indian equity market vs Eureka hedge India Hedge Fund Index)

	Nifty 100	Nifty	Nifty	Eureka hedge India
No of Constituents	100	100	100	16
Return since December 2006 (%)	324.94	352.64	205.64	134.98
Returns in 2015(%)	(12.91)	(4.99)	(7.94)	4.68
Returns in 2016 (%)	15.21	23.62	25.28	4.15
Returns in 2017 (%)	29.11	34.85	39.90	27.60
Returns in 2018 (%)	(3.48)	(18.67)	(30.44)	(7.47)
March 2019 year-to-date(%)	7.4	7.93	9.02	6.54
2 year annualised returns(%)	10.66	0.44	(5.22)	6.53
2 year annualised standard	13.66	18.82	24.22	9.51
2 year Sharpe Ratio (RFR=2%)	0.63	(0.08)	(0.30)	0.47
3 year annualised returns (%)	14.07	11.41	8.73	10.49
3 year annualised standard	12.56	17.91	23.21	9.37
3 year Sharpe Ratio (RFR=2%)	0.96	0.52	0.30	0.90
5 year annualised returns(%)	12.37	15.74	11.19	12.17
5 year annualised standard	13.70	17.86	24.22	10.62
5 year Sharpe Ratio (RFR=2%)	0.75	0.77	0.38	0.95
Annualized Return(%)	10.89	11.39	8.41	6.29

Annualized Standard	22.51	26.53	31.24	17.84
Sharpe Ratio	0.39	0.35	0.20	0.24

Table 3 provides the detailed risk return statistics of the four indices shown in the figure 10. Some of the key points to notice are:

1. In 2019 first quarter, Eurekahedge India Hedge Fund Index posted a return of 6.54%, lagging behind all the indices. In 2018, Indian hedge funds posted a loss of 7.47%, whereas nifty midcap 100 and nifty smallcap 100 posted a loss of 18.67% and 30.44%, indicating that these fund managers indeed provide some protection against downside risk. As a comparison, nifty 100 posted a loss of only 3.48%.
2. In previous years, Indian hedge funds have given mixed results, beating the indices significantly in 2015, and then lagging behind in 2016 and 2017. This shows that in some years, they are using strategies that are beating the markets and in other years these strategies are not working as well as expected.
3. Indian equity markets are highly volatile, as can be seen from the 2 year, 3 year and 5 year annualized standard deviation for all the indices. Indian hedge funds have performed a remarkable job in reducing the downside risk and posting less risky statistics than all the three indices.
4. Overall Sharpe ratio shows that Indian hedge funds have been able to beat only the smallcap index, with a sharpe ratio of 0.24 and nifty smallcap 100 index having a Sharpe ratio of 0.20. Sharpe ratios of nifty 100 and nifty midcap 100 are 0.39 and 0.35 respectively which shows that Indian hedge fund managers haven't been able to utilize the exceptional growth in the Indian equity market in over 15 years.
5. When comparing the 2-year and 3-year Sharpe ratio, we can see that Indian hedge fund index has given more returns per risk than the smallcap and midcap indices, but is lagging behind the nifty 100 index. 5-year Sharpe ratio shows that Indian hedge funds have beat all the indexes, giving more risk adjusted returns than all indexes, even though by a small margin.

Table 4 provides the correlation values between the performance of Indian hedge fund managers and the underlying equity market indices over the period starting in December 2005:

Table 4.

Correlations between Eurekahedge India Hedge Fund Index and Indian equity market indices

	Nifty 100	Nifty Midcap 100	Nifty Smallcap 100	Eurekahedge India Hedge Fund Index
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Nifty 100	1			
Nifty Midcap 100	0.98	1		
Nifty Smallcap 100	0.94	0.97	1	
Eurekahedge India Hedge Fund Index	0.91	0.94	0.96	1

From table 4 we can see that the Eurekahedge India Hedge Fund Index return is strongly correlated to the performance of the equity market of the region, possibly signifying that a significant portion of the returns generated over the last few years were driven purely by the performance of the equity market itself. The Eurekahedge India Hedge Fund Index posted correlation coefficients of 0.96 to the Nifty small cap 100 index, 0.94 to the Nifty Midcap 100 index and 0.91 with the nifty 100 index.

This is a point of concern that if Indian hedge funds are so highly correlated to the equity market itself, then why have they not been able to perform even at par or ideally better than the stock market indexes. This does not justify the fees that the hedge funds managers charge from their investors in India, and give such mediocre results.

5.4 Why Indian hedge funds are not performing?

Indian hedge funds are run by highly talented and qualified managers (livemint, smart Indian hands), having significant and relevant experience in money management field, then why Indian hedge funds have been unable to beat the equity market, and generate the alpha which they charge their fees for.

Table 5 gives a comparison of the Indian hedge fund industry by size with Indian equity market, and the same for the major hedge fund regions of the world. For comparison, table 5 also shows the mutual fund industry size in these regions, to better understand the size difference in the industries.

Table 5.
Industry Comparison by size and region

	India	USA	Brazil	Japan	UK
Equity Market(in billion \$)	2400	29600	1000	6300	3800

Hedge Fund Industry(in billion \$)	3	2630	27.73	63.2	328
Hedge Fund industry as a % of regional equity market	0.125	8.88	2.77	1	8.63

Note. The data is collected from different sources and so collection methodology may vary.

Table 5 represents the AUM for different industries. As we can see, Indian equity market data is among the top of the world. In fact, Indian equity market is 7th biggest in the world at the end of 2018(Samie Modak,2018). AS we can, Indian hedge fund industry is a very miniscule in comparison to total equity market of India (Boby & Partha,2018). USA and UK are dominant players in hedge funds industry, and are growing steadily in size because of giving good performance and returns to investors(prequin,2017). The reason why indian hedge funds are not able to beat the markets is because of the size of the industry. Out of the \$3 billion dollar industry, \$1.3 billion is held by a single fund, Avendus Capital, which is India's largest hedge fund. In comparison, the world's largest hedge fund holds more than 100 times assets of India's largest fund. According to Ranu Vohra, Avendus co-founder and chief executive, even though Indian hedge fund industry is a small percentage currently, it is expected to swell to as much as \$10 billion till 2024.

Hedge funds take big positions to generate returns, and often rely on taking leverage for taking such positions. Since Indian hedge funds are small in size (comparatively), so they have to take risky bets, which can be seen from the huge volatility in Indian hedge fund index. This makes investors further skeptical of investing in these funds because of their comparatively poor performance.

One of the biggest reasons why hedge funds in India are not able to find investors is the unfavorable tax regime for the alternative investment funds category III, under which hedge funds come. For category I and II, it was announced that the tax liability will be shifted from the funds level to investor, which is also the case for mutual funds in India. For category III though, the taxation is at the fund level, which is much higher than the capital gain tax which the investors have to pay.

This becomes a disadvantage to the mutual funds, as they are not on the level-playing field. Profits from hedge funds are taxed at about 30 percent every year (Sachin,2017), while unit-level taxation is applicable for Indian mutual funds, where long-term capital tax is applicable on sale of securities exceeding Rs. 1 lakh if held for more than 1 year, and short term gain tax is applicable at a rate of 15%, which is still much lower than the tax rate for hedge funds. Indian hedge funds managers have repeatedly demanded for the change in tax regime, that hedge funds should also be provided unit-level taxation, so that they can compete with the equities and with the mutual funds, but they haven't been given this pass-through status for taxation to investor level yet (Redmond & Karve,2017).

6. Conclusion

Indian hedge fund industry is still in its nascent stages, and is doing a respectable job in providing downside protection on investments to some extent. Their returns are below equity market levels, even though they are taking significant risk to generate those returns. Due to this, Indian hedge funds are not doing a good job of providing returns on a risk-adjusted basis, and are lagging behind Indian equity markets as well as global hedge funds. Globally, all the major hedge fund indexes have performed better than the equity market of their regions, when compared on a risk-adjusted basis, but that is not the case for Indian hedge funds. Indian hedge fund industry is a very small percentage of its equity market currently, but is growing at a good pace. Since Indian hedge funds have much less assets as compared to global funds, so they have to rely on investing in risky strategies, which gives the volatility in returns. Unfavorable tax regimes is a big reason for the lower assets in Indian hedge fund industry, where Indian hedge funds have to pay taxes at a rate which is 2-3 times higher than mutual funds and equities. This leads to investors not investing in Indian hedge funds, and rather invest in equity market themselves or in the mutual funds, keeping the AUM for Indian hedge funds lower. A change in this regime is expected to bring a radical shift in the performance of Indian hedge funds.

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