

Passive vs. Active Management in Singapore and Beyond

Why Exchange Traded Funds (ETFs) provide time-tested advantages over actively managed funds in Singapore and beyond.

EXECUTIVE SUMMARY

Passive management, also known as index investing, is an investment strategy that attempts to replicate the returns of an index or benchmark by owning the same assets, in the same proportions, as the underlying index. Active management, on the other hand, attempts to outperform the market through the art of stock picking and market timing. For example, a passively managed large-cap fund would own all 30 stocks listed in the Straits Times Index, whereas the active large-cap manager might try to pick the best 10 to 20 stocks listed in the Straits Times Index, or any stocks outside the index to their discretion, for inclusion in a portfolio.

Exchange traded funds (ETFs), considered to be some of the most attractive passively managed vehicles, are baskets of securities that track an underlying index to offer investors exposure to an entire market or market segment. ETFs offer significant advantages over actively managed funds for the following reasons:

- 1) **Liquidity:** Intraday trading provides ability to buy and sell at current prices throughout the day via limit, market, or stop-loss orders.
- 2) **Transparency:** ETF holdings and weightings are known and available on a real-time basis.
- 3) **Low-cost:** ETFs offer efficient exposure at a far lower cost than actively managed funds.
- 4) **Ability to employ multiple investment strategies:** Investors are able to employ real-time hedging strategies to protect against unwanted risks held within a larger portfolio, or quick tactical asset allocation strategies that give fast and easy long or short exposure to a targeted market or sector.
- 5) **Performance:** After taking fees into account, the SPDR® Straits Times Index ETF (STTF), formerly known as the streetTRACKS STI ETF, outperformed on average 92.5%¹ of actively managed fund counterparts that attempted to provide optimal returns on the Singapore equity market over an eight year period. Studies in multiple global markets confirm these results and show that over time, the disparity tends to widen. This paper further explores the before and after fee effects on fund performance.

While studies have shown passive management to be more effective in gaining access to the broad market, active management has the potential to be most rewarding when it comes to more niche asset classes. As articulated in arguments for both passive and active management, the two investment styles are not mutually exclusive and compelling arguments can be made for both. ETFs specifically provide an added set of investment benefits such as ease of use, low-cost, instant diversification and transparency that allows investors to gain immediate exposure to a particular market segment while also searching for overweights in favored asset classes. Additionally, as investors have varying risk/return profiles and time horizons, it is important for investors to identify their appetite and yield objectives. The purpose of this article, however, is to highlight the specific advantages of ETFs.

ETFs INTRADAY TRADING PROVIDES INSTANT LIQUIDITY AND TRADING OPPORTUNITIES

Because ETFs, unlike actively managed funds (unit trusts), are traded like shares on stock exchanges, they can be bought and sold real-time during the trading day. In volatile times when markets can move as much as 5 percent in a single day, the ability to trade intraday, like stocks, gives an ETF investor the advantage of protecting against losses beyond some limit or to take advantage of exaggerated price movements in the market.

ETFs' intraday pricing feature also allow for efficient trading, as they can be purchased on margin and included in stock lending programs. Since they trade like stocks, they can be employed for market orders, limit orders, stop-loss orders and spread trades. But unlike stocks, ETFs allow investors to use net asset value (NAV) orders, spread-to-NAV orders, and low-cost in-kind creations and redemptions.

ETFs HOLDINGS AND WEIGHTINGS ARE TRANSPARENT AND AVAILABLE DAILY

Transparency is one of the major benefits of ETFs. Unlike actively managed funds, ETFs report their holdings on a continuous basis, giving investors a comprehensive view of their positions. Short sales and hedging strategies can then be employed.

ETFs OFFER EFFICIENT EXPOSURE AT A LOW COST

The main benefit that ETFs offer over actively managed funds is its ability to offer access to the market at a low cost, which typically include a management fee and transaction costs for buying and selling on the secondary market. This is due to the fact that ETFs usually don't incur shareholder recordkeeping costs and have minimal fund trading costs because of ETFs' special creation and redemption process. Further, because passively managed funds track a market index, such funds usually enjoy relatively low portfolio turnover, further reducing the costs of management.

In comparison, actively managed funds come at a significantly higher cost as they not only charge management fees, but also have front-end, back-end load fees, higher costs that the fund incurs when buying and selling shares since they tend to rebalance quite frequently and other potential fees. Because successful active investing requires that managers identify market inefficiencies – managers pay premiums for necessary research and an active trading infrastructure, overhead and staffing – costs that are reflected in the higher fees they charge. In order for active managers to beat or even match the returns of a passive strategy, they must successfully create enough added value to offset their higher management fees (from recordkeeping costs, and higher turnover), higher upfront sales charges not just once in a while, but year after year. This paper examines the before and after fees performances of the SPDR Straits Times Index ETF, or the SPDR STI ETF, versus ten of the leading actively managed funds domiciled in Singapore, attempting to provide added alpha above the Singapore market. Figure 1 displays the load charges and annual management fees of the ten active funds and SPDR STI ETF.

BEFORE AND AFTER FEES: SHORT AND MEDIUM-TERM HISTORICAL PERFORMANCE

Before Fees: Short and medium term historical performance figures for passive indexing, as represented by the SPDR® Straits Times Index ETF, versus leading active funds in Singapore show varied results before taking fees into account (Figure 2). On average over the eight year period (since the SPDR STI ETF's launch), the SPDR STI ETF outperformed approximately 51% of active funds focused on delivering alpha over the broad Singapore market per year.

- On a 1-year basis, the SPDR STI ETF outperformed 70 percent of the Singapore active funds. In contrast, based on 2-year annualized numbers, the SPDR STI ETF experienced lower than median results, posting higher returns than just three of the ten active funds. Unprecedented market volatility and price dislocations over the past two years presumably provided active management the increased ability to add value (alpha). In this scenario, the high transaction costs associated with the active funds did not overshadow the fund's overall performance as the amount of outperformance relative to the index offset management fees.
- ETFs outperformed the majority of actively managed funds in the 3- and 4-year period, outperforming 60 percent and 89 percent of active funds, respectively. However, for the 5- and 6-year periods, the SPDR STI ETF again underperformed the majority, outperforming only 33 percent of funds. Finally, in the 7- and 8-year period, the SPDR STI ETF outperformed 50 and 40 percent of actively managed funds, before fees.

FIGURE 1: FEE COMPARISON CHART

ACTIVELY MANAGED FUNDS NOT ONLY CHARGE HIGHER ANNUAL MANAGEMENT FEES BUT LOAD CHARGES ON TOP

| FUND | LOAD CHARGES | ANNUAL MANAGEMENT FEES | AVERAGE BID ASK SPREAD |
|----------------|-------------------------------|------------------------|------------------------|
| SPDR® STI ETF | None | 0.30% | S\$0.03 |
| ACTIVE FUND 1 | 3-5% upfront sales charge | 1.50% | S\$0.00 |
| ACTIVE FUND 2 | 3-5% upfront sales charge | 1.20% – 2.00% | S\$0.00 |
| ACTIVE FUND 3 | 3-4% upfront sales charge | 0.85% | S\$0.00 |
| ACTIVE FUND 4 | 5% upfront sales charge | 1.50% | S\$0.00 |
| ACTIVE FUND 5 | 5.54% upfront sales charge | 1.00% | S\$0.00 |
| ACTIVE FUND 6 | 5% upfront, 0.5% redemption | 1.50% | S\$0.00 |
| ACTIVE FUND 7 | 3-5% upfront sales charge | 1.50% | S\$0.00 |
| ACTIVE FUND 8 | 3-4% upfront sales charge | 1.15% | S\$0.00 |
| ACTIVE FUND 9 | Up to 5% upfront sales charge | 1.125% | S\$0.00 |
| ACTIVE FUND 10 | 3-5% upfront sales charge | 1.00% | S\$0.00 |

Source: Fund provider websites, as of 31 December 2010.

After Fees: With market fluctuations over the past eight years as exhibited by the Singapore's flagship index, the Straits Times Index (STI), naturally the performances of actively managed funds show a significant variance between outperformance and underperformance relative to the STI. More and less favorable time periods can always be uncovered however, over the mid- to long-term, studies across all geographies have shown that on average, active management does not offer greater returns than passive index management, after fees and expenses. Figure 3 shows the annualized returns for Singapore active funds and the SPDR STI ETF after fees have been taken into consideration. For the purpose of this paper, the only fees that were taken into account were the load and management fees outlined in Figure 1 for all funds analyzed. Total expense ratios for actively managed funds tend to fluctuate year after year and were thus not taken into account. On average over the same

eight year period, the SPDR STI ETF outperformed over 92% of active funds per year.

We can conclude from the data provided that the SPDR Straits Times Index ETF in Singapore has overwhelmingly outperformed the majority of actively managed funds, after fees. While it can be seen that some active managers have outperformed the benchmark, it is important to note that consecutive success is extremely difficult and even before fees (in this particular case study) has succeeded approximately 50 percent of the time over the eight year period studied. Moreover load charges, which range from 3 – 5.5%, management fees (see Figure 1) as well as other trading costs that were not factored into the performance of actively managed funds may significantly diminish the added alpha generated by talented active managers.

FIGURE 2: BEFORE FEES PERFORMANCE COMPARISON WITH LEADING ACTIVE FUNDS IN SINGAPORE (in SGD)

| | SPDR STI ETF | ACTIVE FUND 1 | ACTIVE FUND 2 | ACTIVE FUND 3 | ACTIVE FUND 4 | ACTIVE FUND 5 | ACTIVE FUND 6 | ACTIVE FUND 7 | ACTIVE FUND 8 | ACTIVE FUND 9 | ACTIVE FUND 10 |
|--------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| 1 YEAR | 12.7% | 15.0% | 12.1% | 10.5% | 11.6% | 6.0% | 13.0% | 11.0% | 12.3% | 9.9% | 12.7% |
| 2 YEAR | 37.8% | 38.5% | 37.3% | 39.9% | 37.6% | 39.6% | 42.10% | 47.9% | 38.2% | 35.3% | 38.3% |
| 3 YEAR | -0.6% | 4.8% | 0.2% | -4.1% | -1.1% | -8.6% | -6.0% | -5.1% | -1.3% | 0.3% | -0.3% |
| 4 YEAR | 5.4% | 7.5% | 4.9% | 1.6% | 4.8% | -1.9% | 0.7% | NA | 3.3% | 4.9% | 2.4% |
| 5 YEAR | 9.5% | 10.4% | 10.3% | 7.1% | 10.2% | 3.8% | 9.7% | NA | 10.6% | 10.4% | 8.1% |
| 6 YEAR | 10.8% | 12.6% | 12.4% | 7.4% | 12.4% | 5.7% | 13.0% | NA | 10.9% | 11.0% | 9.5% |
| 7 YEAR | 12.3% | 13.4% | 13.0% | 8.8% | 13.1% | 7.4% | 13.8% | NA | NA | 10.6% | 9.9% |
| 8 YEAR | 14.6% | 15.0% | NA | 15.9% | NA | NA | 18.9% | NA | NA | 13.9% | 13.1% |

Source: Bloomberg and SSgA, as of 31 December 2010.

Note: End of year data used for respective time periods, with startup capital of S\$10,000 assumed. Performance more than 1-year are annualized.

FIGURE 3: AFTER FEES PERFORMANCE COMPARISON WITH LEADING ACTIVE FUNDS IN SINGAPORE (in SGD)

| | SPDR STI ETF | ACTIVE FUND 1 | ACTIVE FUND 2 | ACTIVE FUND 3 | ACTIVE FUND 4 | ACTIVE FUND 5 | ACTIVE FUND 6 | ACTIVE FUND 7 | ACTIVE FUND 8 | ACTIVE FUND 9 | ACTIVE FUND 10 |
|--------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| 1 YEAR | 12.3% | 7.7% | 5.2% | 5.3% | 4.4% | -0.6% | 5.7% | 3.8% | 6.5% | 3.1% | 6.0% |
| 2 YEAR | 37.4% | 33.0% | 32.2% | 36.0% | 32.1% | 34.6% | 36.42% | 42.0% | 33.9% | 30.3% | 33.4% |
| 3 YEAR | -0.9% | 1.5% | -2.7% | -6.1% | -4.2% | -11.2% | -9.0% | -8.1% | -3.7% | -2.6% | -3.0% |
| 4 YEAR | 5.1% | 4.5% | 2.4% | -0.2% | 1.9% | -4.2% | -2.1% | NA | 1.1% | 2.3% | 0.1% |
| 5 YEAR | 9.2% | 7.6% | 7.9% | 5.4% | 7.4% | 1.6% | 7.0% | NA | 8.4% | 7.9% | 5.9% |
| 6 YEAR | 10.5% | 9.9% | 10.1% | 5.9% | 9.7% | 3.7% | 10.4% | NA | 8.9% | 8.6% | 7.5% |
| 7 YEAR | 12.0% | 10.9% | 10.8% | 7.4% | 10.6% | 5.5% | 11.3% | NA | NA | 8.4% | 8.0% |
| 8 YEAR | 14.2% | 12.6% | NA | 14.5% | NA | NA | 16.3% | NA | NA | 11.8% | 11.3% |

Source: Bloomberg and SSgA, as of 31 December 2010.

Note: End of year data used for respective time periods, with startup capital of S\$10,000 assumed. Each fund's performance reflect a one time charge of their respective upfront sales charge and annual management fee as detailed out in Figure 1. Expense ratios vary from year to year so they were not included in these calculations. Commissions for regular investors were used (i.e. lower sales charges indicated are provided to Central Provident Fund Investment Schemes (CPFIS) and not ordinary portfolios). Performance more than 1-year are annualized.

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LONG-TERM OUTLOOK

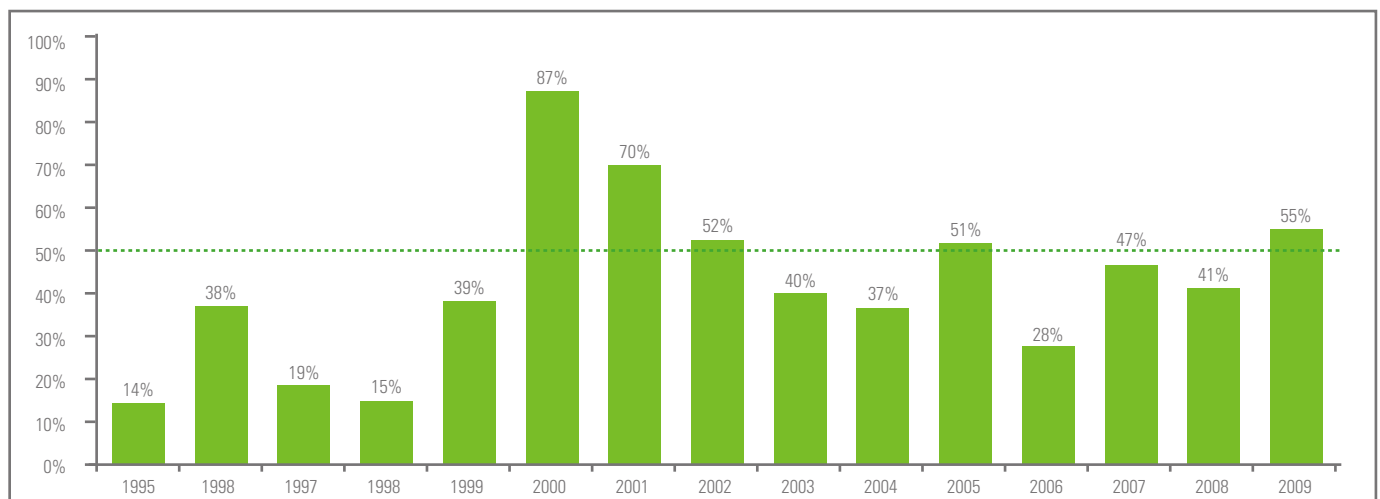
It is our belief that in the long term, clients should consider investing in ETFs because of the lower fees, which should on average generate better returns than active managers. Moreover, investors choosing active funds usually have a 50/50 chance in selecting a manager who could outperform the benchmark and the common mistake that most retail investors make is that they keep switching from one active fund for another, usually affecting overall returns.

The aggregate performances of Singapore actively managed funds versus Singapore ETFs only cover a relatively short time period, however we are able to examine a longer-term outlook by using the U.S. market as a proxy. Consider the 15-year results of active managers outperforming the broad Dow Jones Large Cap U.S. Total Stock Market Index commencing in 1995 – 30% of active blend managers outperformed over that time period. On a year-by-year basis, the results vary considerably, ranging from as few as 14% to as many as 87% outperforming the broad U.S. market benchmark. From 1995-1999, active funds consistently underperformed – fewer than 20% outperformed in 1995, 1997, and 1998. In 2000 and 2001, the trend reversed and 87% and 70% of active funds outperformed, respectively. In the following seven years, the percentage of funds outperforming ranged from a high of 55% (2009) to a low of 28% (2006).

Another disheartening finding by many professional money managers is that returns in any given year are often not determined by hard-work and organizational processes, but rather through sheer luck from indeterminable market fluctuations and effects.

Passive management rests on the assumption of market efficiency and the concept called the Efficient Market Hypothesis (EMH), which contends that it is impossible to beat the market in the long run. EMH suggests that stocks will always trade at a fair value that reflects all available information at the time, thus no one stock can be deemed over or undervalued at a given point. Efficient market hypothesis further states when stocks are bid up, it is for a good reason. The same is true for weaker stocks that are in decline. Active managers that feel they are avoiding a “hype” stock can often miss some of the market’s biggest opportunities. Conversely when they invest in stocks that, on the surface, look “cheap”, they can be caught in what is known as a “value trap” where their money is chasing a stagnant investment that may not realize its potential for many years. ETFs do not play this guessing game, instead always buying stocks based on their market capitalization weights. As a stock strengthens in price, the weight of that stock increases in the ETF. The result is that the ETF tends to have increasing exposure in strong stocks that have growing market capitalizations (this is true since the replicated index is based on the market capitalization of its constituent stocks) and decreasing exposure to those stocks within the index that the market deems as weak and are in decline.

FIGURE 4: LARGE CAP BLEND FUNDS - PERCENT OF ACTIVE MANAGERS OUTPERFORMING (1995 - 2009)



Source: Morningstar Direct, SSgA Strategy & Research as of 12/31/2009.

Based on Morningstar data for the past 15 years on a year-by-year basis, ending December 31, 2009. Chart shows the percent of active strategies that outperform the Dow Jones Large Cap U.S. Total Stock Market Index. Mutual fund performance is net of fees; index performance is gross of fees. The following index was used as a benchmark: Dow Jones U.S. Total Stock Market Large Cap Index. For illustrative purposes only. Past performance is not indicative of future results.

WHAT ABOUT AN ETF'S BID/ASK SPREAD?

According to Bloomberg's bids and asks recorded in the 2010 calendar year, the average bid-ask spread for the SPDR Straits Times Index ETF was approximately 1.5 pennies or 0.5% of the underlying ETFs value. This half percent of slippage is negligible when juxtaposed against the front load fees most unit trusts will charge investors. When new investors place money with a unit trust they are often slapped with an upfront charge that can range from 3-5% of assets.

As the SPDR Straits Times Index ETF is a relatively new product with sponsorship that is still growing it is relevant to note that in other markets where SPDR ETFs have matured, spreads are even tighter on a percentage basis and the depth of liquidity even greater.

VALUE OF ACTIVE MANAGEMENT DIMINISHES OVER TIME

Active management requires that investors have complete confidence in their ability to hire the right manager who has the skill and ability to consistently outperform the market over time. Studies suggest that most managers do not outperform the market and that any short-term outperformance has typically been unsustainable. Further studies have shown that, on average, active funds underperform their benchmarks on a risk-adjusted basis and the magnitude of underperformance directly relates to the level of experience.

SURVIVORSHIP BIAS SKEWS VIEW OF ACTIVELY MANAGED FUNDS

This has not been addressed but it seems relevant to note that data provided by active managers can be skewed by a "survivorship bias" as well as "backfill bias".

- Survivorship bias, in this case, is the tendency for failed active funds to be excluded from performance studies because they no longer exist on the FundsSupermart (FSM) platform. Therefore, it causes the performance results of active funds as a group to skew higher because only the funds successful enough to survive are included in the performance comparison.
- Backfill bias can become an issue when analyzing performances of active managers when new funds that were not previously available to FSM's investors are added. This would presumably occur after poor-performing managers are dropped and replaced with better performing funds (after all, who would want to offer their clients a fund that has been performing poorly?).

An index fund by its very nature will never suffer biases such as these because it is merely reflective of the index's performance.

CONCLUSION

The benefits of passive investing include liquidity, transparency, and flexibility for the employment of a multi-strategy portfolio, reduced costs – and, historically, passive funds have outperformed a majority of active funds. However, proponents of active investing stress that there are always market anomalies that can potentially be exploited by active managers. The tricky part is trying to predict which of the minority of active managers will outperform the market going forward and how long will it last. In today's transitioning market, ETFs should play an important role in any investor's active or passively managed portfolios:

- Retail investors can use ETFs for core and broad exposure to the market for beta, such as to the SPDR Straits Times Index ETF, while actively selecting stocks that they view favorably to gain any potential alpha.
- Institutional investors can tactically equitize cash to seize market opportunities and momentum. In addition, institutional investors can use ETFs to hedge unwanted market exposure in their actively managed portfolios.

ABOUT SPDR ETFS

Offered by State Street Global Advisors, SPDR ETFs are a family of exchange traded funds that provide investors with the flexibility to select investments that are precisely aligned to their investment strategy. Recognized as an industry pioneer, State Street Global Advisors created the first ever ETF in 1993 – the SPDR S&P 500[®], which is currently the world's largest ETF². SSgA introduced Singapore's first local ETF when it launched the SPDR Straits Times Index ETF in 2002. Currently, State Street Global Advisors manages approximately US\$255 billion of ETF assets worldwide.*

For more information about our ETFs or how to invest, please call +65 6826 7500 or email ssgaasia@ssga.com.

*Source: SSgA Global ETF Strategy & Research. This AUM includes the assets of the SPDR Gold Trust (approx. \$58 billion as of December 31, 2010), for which State Street Global Markets, LLC, an affiliate of State Street Global Advisors serves as the marketing agent.



For further information, please visit our website at www.globalspdrs.com or contact State Street Global Advisors Singapore Limited (Co. Reg. no, 200002719D) at +65 6826 7500.

¹ Bloomberg and SSgA, as of 31 December 2010.

² Bloomberg as of 31 December 2010.

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