PATHSTONE
THE MODERN FAMILY OFFICE™

The Third Wave

Passive, ETF based portfolio strategies may be supplanted by a New *Paradigm* that offers a superior combination of cost, tax-efficiency and customization.

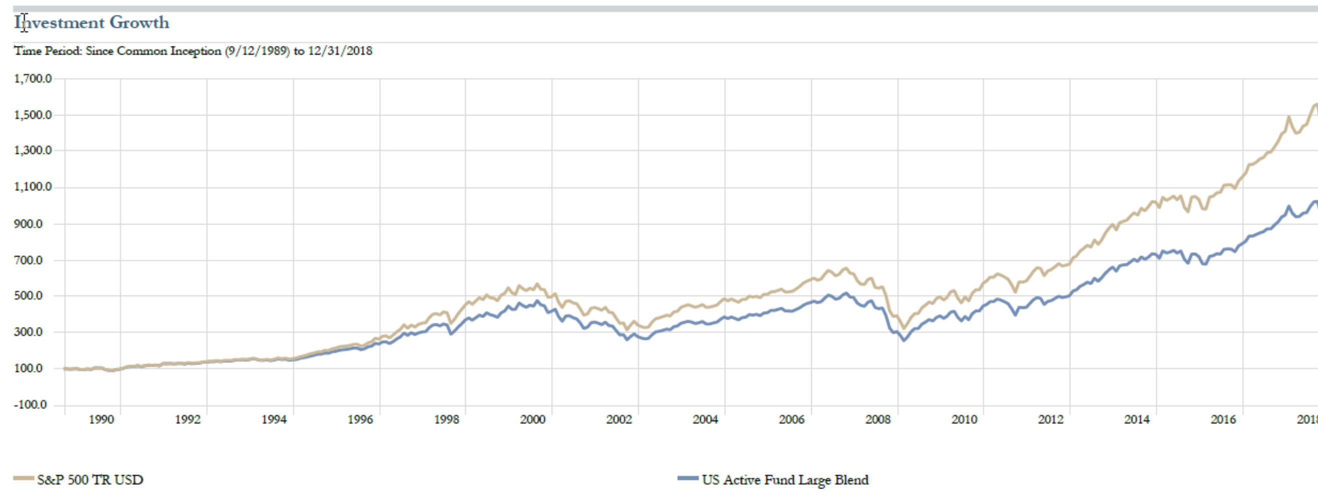
By David Kahn and Alexander Hart

In the constantly evolving landscape of personal finance, one trend has persisted – the increasing popularity of passive investing. What started as a simple concept championed by the late John Bogle of Vanguard has become a tidal wave of enthusiasm across virtually every asset class. Passive instruments (index-based mutual funds and exchange-traded funds, or ETFs) now represent the core building blocks of many "modern" portfolios.

The basic premise behind passive investing is the somewhat antithetical notion that being average is a good thing. While many investors assume a Lake Wobegon set of rose-colored glasses, a bevy of academic research confirms that being average (matching the performance of an index) actually results in performance comfortably above the median. This paper provides a statistical backdrop of the dominance of passive investing, illustrates how passive tools have become the bedrock of a new method of portfolio construction for taxable investors, and then offers an alternative approach that may provide investors with even better outcomes over time.

From Academia to the Real World

At the core of the passive investing phenomena is the efficient market theory (EMT). In academic parlance, efficient markets leave no room for outperformance by active managers since all available information is already reflected in current stock prices. Decades of outperformance by active managers such as Warren Buffett and others suggest that markets are not completely efficient. However, the data, on the whole, is conclusive: the vast majority of active managers trail their benchmark net of fees. In addition, identifying the "next Buffett" before they become household names is exceedingly difficult.



Source: Morningstar Direct

Bogle built upon EMT by suggesting a simple portfolio construction model:

1) Select a stable and broadly understood index of stocks (e.g. S&P 500)
2) Use computers to manage the fund with tight tolerances and tracking error to the index
3) Items 1&2 combined to make the index fund relatively easy to run, kept trading costs low and required little human intervention, allowing for much lower total costs than active managers

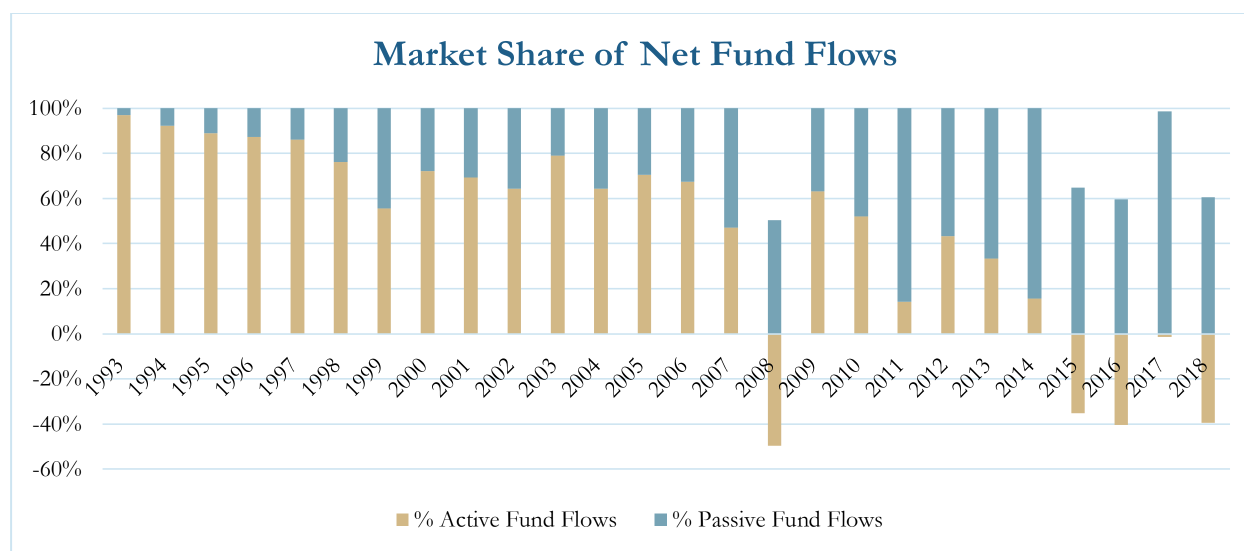
Tracking error, otherwise known as "Active Risk", is a measurement of the difference between an active manager's return and its benchmark.

Bogle opined that reduced friction via lower costs combined with reasonably efficient financial markets virtually guaranteed above-average performance for passive strategies. While he has been proven correct, passive investing was by no means an instant sensation.

Acorn to a Mighty Oak

Vanguard opened its first index mutual fund without much fanfare in 1976. Converts to passive investing were modest at first and primarily confined to the halls of academia and their substantial endowments. Vanguard's flagship S&P 500 Index Fund gathered only $6 million in new assets in its first full calendar year. Two years later, the index fund's total assets remained below $100 million, hardly a resounding success.[1] However, things started to gain momentum in the late 1990s.

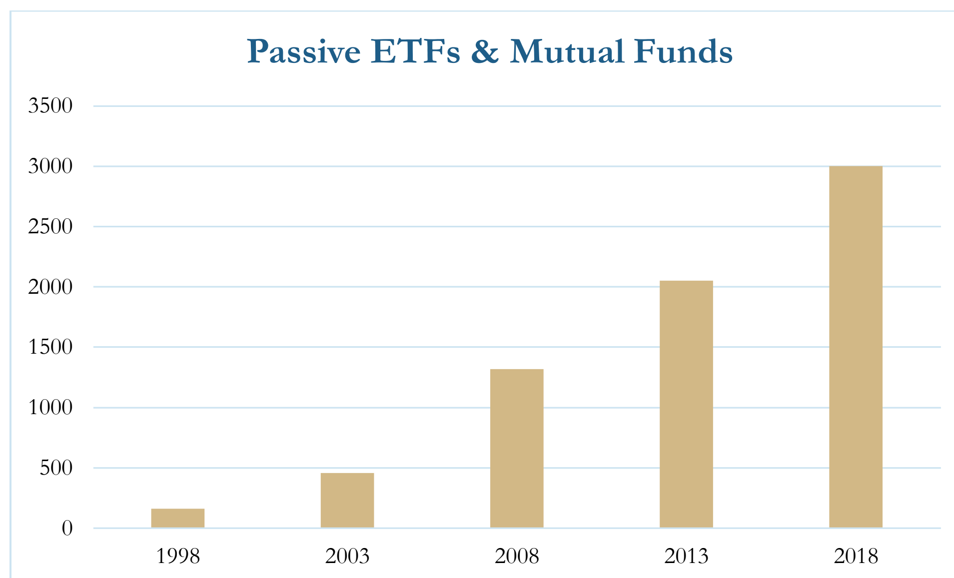
While it is difficult to pinpoint a single reason for the delayed success of passive investing, the results over the past 20 years paint a remarkable triumph for this "late bloomer". Passive investing eclipsed active investing, in terms of new asset flow, in 2007 and never turned back. Over the last 10 years, for every $1 invested in actively managed funds, $37 has been invested in passively managed funds.[2]



Source: Information is based on Pathstone research utilizing Morningstar Direct data.

As passive management has gained in popularity, so too have the options available to investors. In its first 10 years, passive investing was concentrated on a handful of U.S. stock index based mutual funds. Sensing an opportunity to gather assets, numerous investment houses and banks jumped into the fray beginning about twenty years ago, led by global financial behemoths like State Street, Barclays, Blackrock, and JP Morgan. Index-based mutual funds broadened to encompass more diffuse assets classes, such as U.S. small cap stocks, international stocks, and even certain categories of bonds. The advent of ETFs[3] only proved to accelerate both the popularity of passive investing and the options available to its proponents. Today there are over 3,000 distinct passively managed mutual funds and ETFs available to U.S. investors.[4]

[1] Information is based on Pathstone research utilizing Morningstar Direct data.
[2] Ibid
[3] Exchange Traded Fund: a pooled vehicle managed by a sponsor (e.g. iShares) designed to closely track an index. ETFs trade all day, like a stock, rather than once per day at the close, like mutual funds.
[4] Information is based on Pathstone research utilizing Morningstar Direct data.



Source: Information is based on Pathstone research utilizing Morningstar Direct data.

The Tax-Man Cometh for Active Managers

While not the primary driver behind their creation, the impact of taxes has tilted the playing field even more in favor of passive strategies. The threat of underperformance compels most active managers to trade their portfolios far more than their passive benchmarks. For example, the average U.S. large cap blend active mutual fund strategy exhibits an annual turnover of 54%, compared to less than 3% for the S&P 500.[5] The resulting tax drag compounds the underperformance driven by high fees, resulting in a reduced net of fee, net of tax performance (see chart below) for most active fund managers.

	TAX COST RATIO			
	3 Year	**5 Year**	**10 Year**	**15 Year**
Vanguard 500 Index Fund	0.58%	0.60%	0.51%	0.45%
U.S. Large Blend Active Peer Group	1.89%	1.92%	1.34%	1.18%

Tax cost: calculated by Morningstar, the tax cost ratio estimates the amount of annualized return lost to taxes.

The evidence suggests that, particularly in the more efficient markets like U.S. Large Cap stocks[6], most mainstream passive investment tools are superior to their active counterparts. As is often the case in investing, the challenge becomes how to best use passive tools in customized portfolios.

Lots of Cooks in the Kitchen

As the ripple of assets moving to passive management has turned into a tidal wave, we've experienced a massive proliferation of options covering every corner of the financial landscape. Where passive strategies once focused on broad asset classes, today they are sliced and diced by type of investment, market

[5] Information is based on Pathstone research utilizing Morningstar Direct data.

[6] Large Cap Stocks: The U.S. equity markets are considered the most liquid and transparent in the world. This poses a challenge for active managers trying to generate informational advantages versus their competition or an index. In other markets (international, emerging equities, and credit asset classes), language barriers, cultural differences, illiquidity, and complex investment structures lend more of an advantage to a well-informed and well-resourced active manager. The data supports this logic: a greater percentage of active managers outperform their passive competitors in these markets.

capitalization, industry sector, and geography. Want to capture exposure to biotech stocks, the Malaysian market, or gold miners? A passive strategy exists for you.

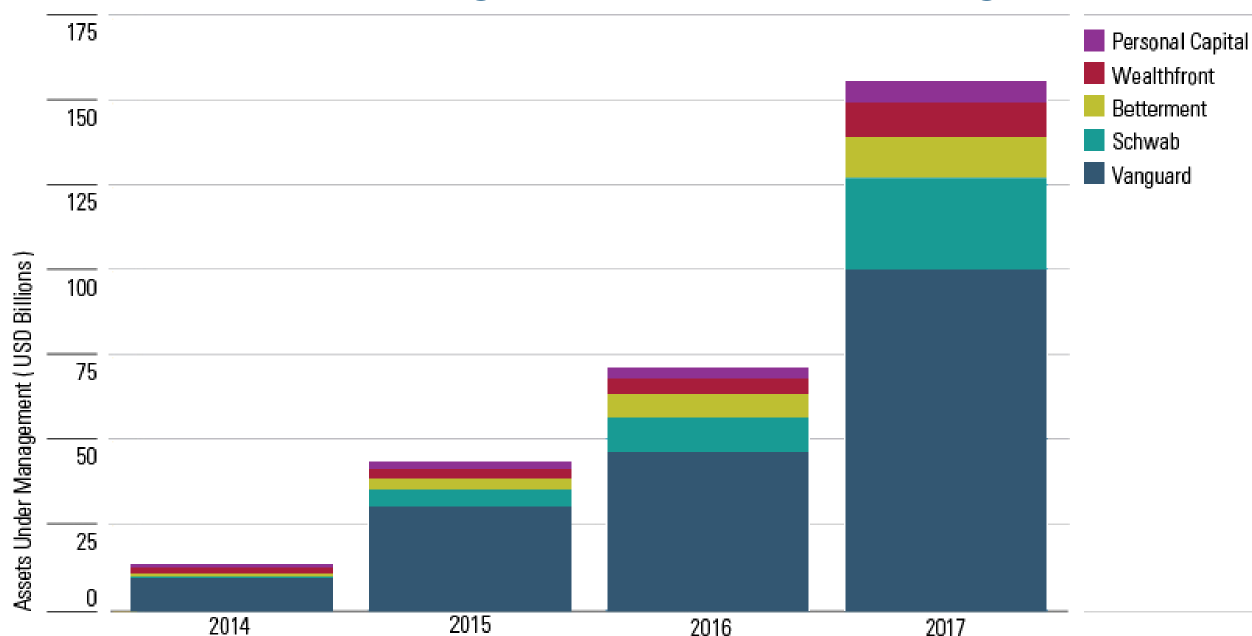
While not the focus of this paper, this trend has resulted in the corruption of some of Bogle's early objectives for passive strategies. Tracking error on certain passive strategies can be quite high, given the complexity or lack of liquidity of the underlying index components. Marketing costs and licensing fees can cause considerably higher fees compared to the very skinny costs of large cap U.S. passive instruments (e.g. the fee for the iShares MSCI Emerging Markets ETF is 0.67%). Lastly, certain indices can have a meaningfully large turnover in the underlying securities (and thus less tax-efficiency). In combination, this has led many passive instruments to resemble the venerable S&P 500 index fund in name only. The lesson for investors – not all passive strategies are created equal.

Index Funds by Morningstar Category	Number
US Fund Large Blend	242
US Fund Miscellaneous Region	167
US Fund Trading--Leveraged Equity	165
US Fund Large Value	137
US Fund Foreign Large Blend	116
US Fund Diversified Emerging Mkts	107
US Fund Trading--Inverse Equity	99
US Fund Large Growth	93
US Fund Small Blend	81
US Fund Mid-Cap Blend	76

As the variety of ETFs has expanded, new portfolio management platforms have evolved in their wake. A fully diversified portfolio can now be created using relatively low cost ETFs that trade all day for implementation ease. Since they trade like stocks, ETFs can be tax loss harvested to improve after-tax returns. Financial engines from firms such as Betterment, Wealthfront, and more recently Vanguard, have proliferated, offering an attractive proposition of diversification, relatively low cost and higher tax-efficiency than even index mutual funds. Since ETFs have become so ubiquitous, it is possible to sell one ETF in a loss position to generate a tax loss and replace it with a substantially similar, but not identical, alternative ETF to maintain portfolio integrity. These robo-advisor platforms have been very successful, raising over $150 billion as a group in only a few years.[7] This trend poses a significant business risk to both index mutual fund purveyors as well as investment advisors offering traditional platforms of active strategies.

[7] Company regulatory filings, Morningstar estimates. Data as of March 1, 2018
https://www.morningstar.com/blog/2018/07/11/robo-advisors.html

While Later to the Scene, Established Firms Have Leapfrogged Early Robo-Advisors in Digital Advice Assets Under Management



Source: Company regulatory filings, Morningstar estimates. Data as of March 1, 2018.
https://www.morningstar.com/blog/2018/07/11/robo-advisors.html

The New Frontier

The current landscape paints a fairly bleak picture for many traditional active strategies. Intense competition to outperform makes it very difficult to cut costs in order to lower fees. The fact that after-tax returns get little fanfare when performance is mentioned provides little penalty to actively traded, tax-inefficient strategies. High fees and tax drag seem to condemn many active strategies to a slow and painful death, particularly in comparison to modern robo-advisor ETF platforms.

This is the narrative put forth by converts, new and old, to the passive investing phenomena. But can we flip this script? Can we release active strategies from the constraints of high fees and tax inefficiency? Recent developments in the new frontier of portfolio construction suggest the answer to these questions is yes.

The first prong of the new frontier is the concept of *model delivery*. The typical investment management firm has three primary functions:

1- researching and investing in securities
2- operating the business
3- managing clients

Model delivery isolates the first function from the other two. A brokerage or investment advisor sponsoring a model delivery program “buys” the purchase and sale decisions from the portfolio manager and assumes the other two functions in-house. Purchase and sale decisions are transmitted in real time, so the model delivery sponsor is treated just like every other client of the investment manager. Since the investment manager in model delivery is relieved of much of the cost of running their business, they should (and have)

been willing to accept substantially lower fees versus typical client relationships. In fact, fee discounts for equity managers participating in model delivery programs range from 50-70%.[8]

Fee discounts dramatically narrow the gap between model delivery, active strategies, and passive instruments. In addition, model delivery portfolios are generally held in separate accounts, allowing for tax-loss harvesting in each portfolio. Finally, since securities are segregated, a degree of client-specific customization is possible that is not available in a commingled vehicle like an ETF or mutual fund.

Model delivery programs have gained some traction, but have not stemmed the floodgates to passive management. It appears that current model delivery programs offer advantages over traditional active management, but still lag most passive strategies given that fees are still higher and tax drag has not been eliminated.

Building a Better Mousetrap

Purveyors of index-based strategies have not been sitting idle in the face of the ETF onslaught. For example, firms such as Parametric and Aperio offer separate account strategies designed to closely mimic an index performance while periodically harvesting tax losses to boost after-tax returns. They offer the lure of low fees (close to index or ETF levels) with after-tax returns that often beat similar ETF or index mutual fund returns. Their shortcomings involve the fact that they operate in isolation – they focus on their index with no concern for the goings-on in the rest of the portfolio.

Model Delivery Framework + Tax Efficient Index Strategy = New Paradigm Strategies

---

These New Paradigm strategies marry the notions of *model delivery* actively managed strategies with *tax-efficient index based strategies* like these, while adding a new twist. The concept involves the following components:

- A group of asset class specific active managers at significantly reduced fees
- A passive component that serves as a warehouse for "trade" instructions delivered by model delivery managers
- A quantitatively based "portfolio manager" that sits atop this construct to manage tracking error, wash sales and tax-efficiency

All securities sit in a single account, managed by the portfolio overlay manager. This can include both domestic and international equities, as well as credit-oriented fixed income strategies. Tax losses can be continuously harvested and wash sales automatically avoided, since all securities sit in a single account. The construct also avoids the reporting and tax complexity of managing a series of separate accounts. Lastly, since the overlay manager knows which securities are "held" in each model delivery manager portfolio, performance reporting can be isolated for each manager in the total portfolio.

[8] Information based on Pathstone's experience.

Strategy	Cost	Tax-Alpha Potential	Account Structure	Customization	Basis Management
Traditional	High	Low	Complex	High	Difficult
ETF Based Robo–Advisors	Very Low	Modest	Simple	Low	Difficult
New Paradigm	Low	High	Simple	High	Possible

This construct blends the best characteristics of both traditional separate account portfolios and the more recent robo-advisor ETF strategies. Portfolios can reflect client-specific control over security selection (e.g. ESG criteria) as well as the benefits of selecting individual securities with large embedded gains for charitable giving. Yet manager fees approach those of passive portfolios.

The end result is an elegant solution that has the potential to be superior to passively-oriented strategies, even those that employ tax loss harvesting strategies using ETFs such as Betterment and Wealthfront. While this implementation model is relatively new, the early results are promising.

Tax Alpha Comparison

Year	PATHSTONE P-Cubed[9]								Robo-Advisor[10]	Difference
	Client 1	Client 2	Client 3	Client 4	Client 5	Client 6	Client 7	Client Average	Average	
2012	1.78%	2.12%	1.83%	ND	ND	2.22%	ND	1.99%	0.14%	1.85%
2013	1.92%	3.67%	2.04%	0.68%	0.13%	-0.97%	ND	1.25%	0.29%	0.96%
2014	0.95%	1.00%	1.30%	0.64%	1.07%	1.64%	3.81%	1.49%	0.32%	1.17%
2015	-0.28%	0.41%	-0.02%	0.91%	-0.10%	-0.07%	2.78%	0.52%	0.83%	-0.31%
2016	-0.22%	-0.04%	0.38%	0.35%	0.20%	0.09%	0.35%	0.16%	0.85%	-0.69%
2017	0.99%	1.10%	0.59%	0.40%	0.68%	1.20%	0.74%	0.81%	0.27%	0.54%
2018	1.40%	0.53%	-1.48%	1.00%	0.51%	0.80%	4.09%	0.98%	0.54%	0.44%
TOTAL AVERAGE								**1.03%**	**0.46%**	**0.56%**

The chart above demonstrates how client accounts implemented using the New Paradigm structure may generate both improved and more consistent tax benefit when compared to a robo-advisor approach.

Tax alpha is a calculation designed to measure the benefit to after-tax returns from engaging in a loss harvesting strategy.

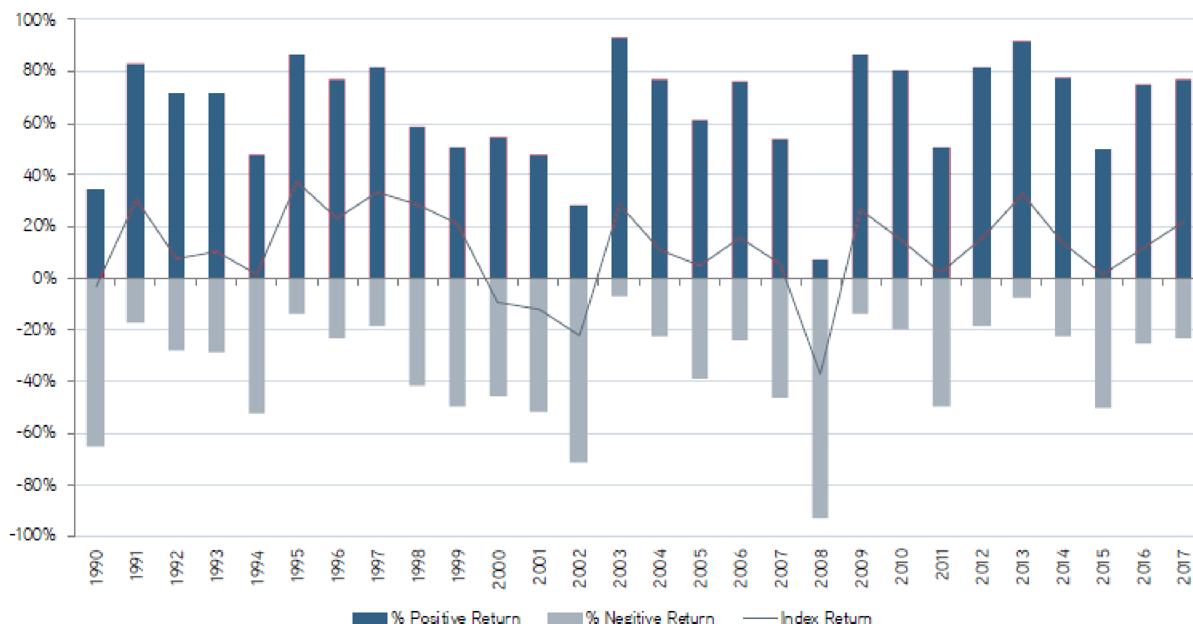
Lastly, and perhaps more subtly, this new paradigm provides an additional benefit versus ETF based portfolio strategies. The benefit of diversification

[9] We calculated the average tax alpha for Pathstone's P-Cubed using data for seven randomly selected clients. The data used to make this calculation was provided by the overlay manager and is based on actual client experiences.

[10] Robo-advisor tax alpha results are simulated. The simulation and calculation was done by Parametric Portfolio Associates based on assumptions developed by Pathstone. The simulation utilizes the same ETF investments as a leading Robo-Advisor. Asset Allocation and tax loss harvesting thresholds were designed to be consistent with Pathstone's asset allocation and loss harvesting thresholds utilized in P-Cubed. More information on the results of this study is available upon request.

offered by ETFs also limits their tax loss harvest potential, as winners and losers within the fund offset one another. New paradigm portfolios hold hundreds of securities, offering a myriad of opportunities to take advantage of short term market volatility to harvest losses.

Winners and Losers in the S&P 500®, 1990-2017



Sources: Parametric, Factset 2018

> We are far from the days of tax loss harvesting occurring only at year end. Sophisticated investors are looking for tax-loss harvesting opportunities on a daily basis. In order to maximize the opportunity set for daily tax loss harvesting, breadth of options is critical. This chart shows that over 25 years of data investing in the stocks comprising the S&P 500 rather than an ETF that tracks it would have resulted in tax loss harvesting opportunities every year. Even in years where the S&P 500 Index returns more than 20% in a given year, there will be opportunities for investors to tax loss harvest individual components.

This contrast highlights the less transparent issue of imbedded basis. As markets appreciate over time, it becomes more and more difficult to harvest losses. Concentrated portfolios, or robo-advisor ETF strategies which typically hold a dozen or so ETFs, can become effectively "frozen" as reticence to realized large capital gains restricts trading. Portfolios can deviate from desired targets, and this build-up of imbedded gain ultimately represents a hidden tax that must be paid. By utilizing individual securities, the New Paradigm construct lowers the tax cost of rebalancing the portfolio and the switching costs of investments. While it is perhaps still too early to draw firm conclusions, the larger tax-loss opportunities offered by new paradigm portfolios portends the opportunity to realize some capital gains (and reset basis) while at the same time mitigating net capital gains taxes through aggressive tax-loss harvesting.

Conclusion

Portfolio implementation has evolved substantially over the past 25 years. Passive investing introduced a new way to invest in mainstream asset classes and poses an existential threat to many active managers. Passive ETFs have put broadly diversified, cost and tax-efficient portfolios within reach of virtually all investors. However, more recently, what we call New Paradigm strategies combine benefits of the strategies that have come before them, offering a combination of cost, tax-efficiency, simplicity and control previously not available.

Disclosure:

This presentation and its content are for informational and educational purposes only and should not be used as the basis for any investment decision. The information contained herein is based on publicly available sources believed to be reliable but not a representation, expressed or implied, as to its accuracy, completeness or correctness. No information available through this communication is intended or should be construed as any advice, recommendation or endorsement from us as to any legal, tax, investment or other matters, nor shall be considered a solicitation or offer to buy or sell any security, future, option or other financial instrument or to offer or provide any investment advice or service to any person in any jurisdiction. Nothing contained in this communication constitutes investment advice or offers any opinion with respect to the suitability of any security, and this communication has no regard to the specific investment objectives, financial situation and particular needs of any specific recipient. Past performance is no guarantee of future results. Additional information and disclosure on Pathstone is available via our Form ADV Part 2A, which is available upon request or at www.adviserinfo.sec.gov.

Any tax advice contained herein, including attachments, is not intended or written to be used, and cannot be used, by a taxpayer for the purpose of (i) avoiding tax penalties that may be imposed on the taxpayer or (ii) promoting, marketing or recommending to another party any transaction or matter addressed herein.