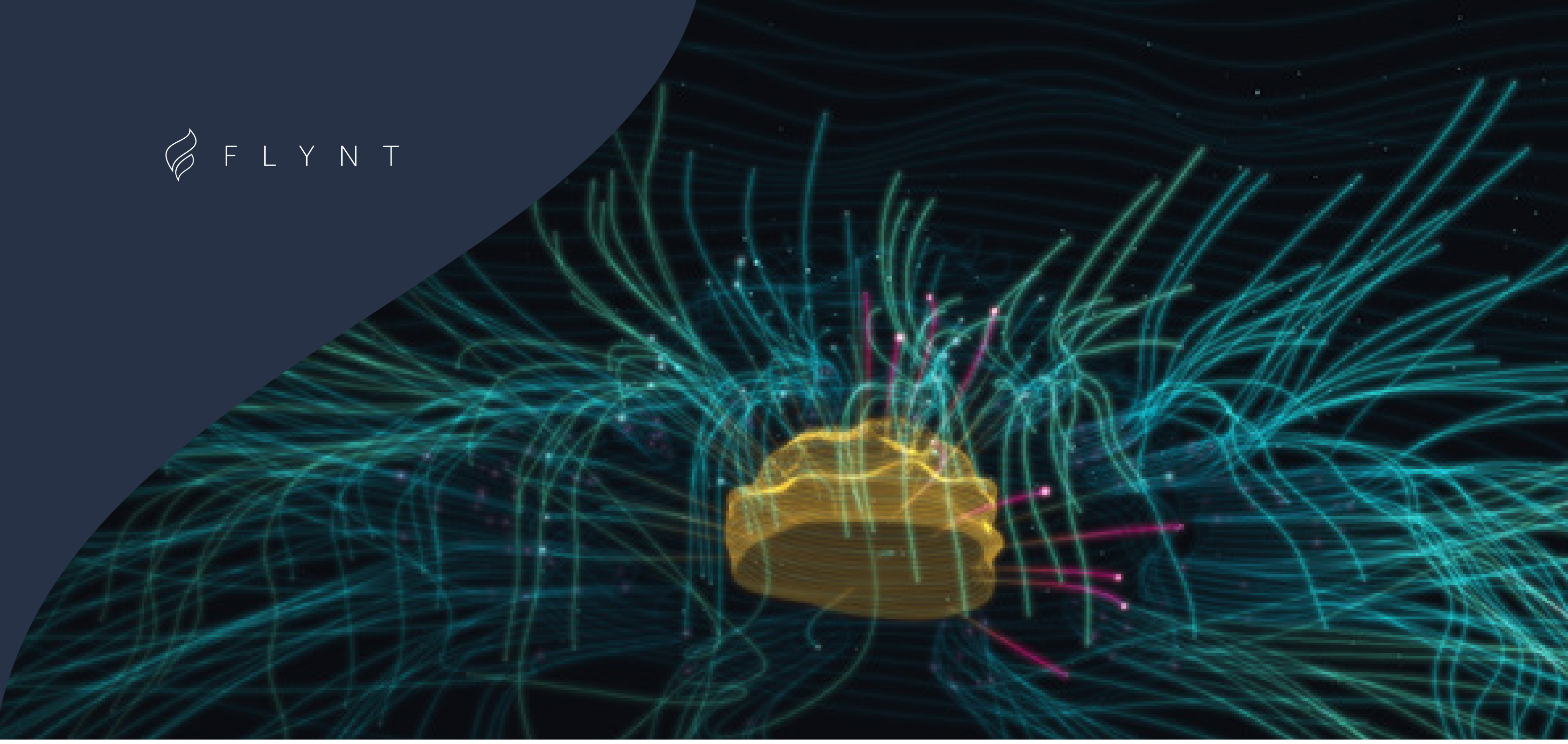

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Investing in the world of robo-advice and passive instruments

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Diversified investment solutions

In the last years, robo-advice and passive investments have become key buzzwords in the financial and technology industries. Robo-advisors are digital wealth management platforms that provide automated financial planning services and investment solutions based on passive and cost-efficient instruments. To date, robo-advisors have mainly targeted retail and affluent client segments. The first robo-advisor was launched in 2008 in the US. Since then, more and more traditional wealth managers and banks have started to introduce robo-advisor technology, mainly to improve the efficiency of their existing advisory processes. However, there are many differences in providers, investment solutions and cost structures.

A key advantage that robo-advisors might have over traditional banking players is that they are more transparent and cost-efficient because they typically adopt rigorous quantitative processes and implement their investment strategies with passive investment vehicles, such as Exchange Traded Funds (ETFs). The main purpose of most robo-advisors is to offer diversified market exposure. Therefore, they are cost-efficient alternatives for traditional discretionary wealth management mandates and strategy funds.

The basis, however, for all the different varieties of investment strategies are Strategic Asset Allocations (SAAs). Their existence has not been challenged in the last decades, but in terms of how to construct SAAs, the literature is non-exhaustive. The range of how to construct SAAs in practice is also quite large, as some providers have simpler SAAs with less granularity, while other providers offer more tailor-made and granular SAAs.

In the current interest rate environment with very low or even negative bond yields, costs of investment products have become more important for clients and investment professionals alike. That is why robo-advisors and passive investment platforms have gained popularity over the past years. However, there are multiple characteristics beyond costs to consider when investing in passive investments and robo-advisors.

The importance of strategic asset allocation

The SAA, i.e. the mix of asset classes that determines the investment strategy's exposure to systematic risk, is the most important investment decision of a long-term investor who seeks diversified market exposure. A key aspect of successful long-term investing is to define a robust and well diversified asset allocation across a global universe of asset and sub-asset classes. Furthermore, an investor should capture different risk premia, such as equity risk, interest rate risk, credit risk, small cap risk, or emerging market risk. Several studies[1] try to determine the impact of the SAA on the long-term performance and find that the SAA explains between 80% and 100% of the variation in investment returns and that the impact of market timing and security selection is negligible in this context.

There is a large variation across robo-advisors as well as traditional wealth managers in terms of constructing SAAs. A key decision in this process is how the investment universe, i.e. the so-called strategic asset classes, is defined. Does the SAA, for example, include Japanese equities, commodities, or private equity? There are some basic principles an investor should keep in mind while answering these questions:

→ The investment universe should be broadly diversified across asset classes, regions, currencies and sectors.

→ Only asset classes that generate long-term investment returns based on real cash flows should be considered as strategic asset classes. Commodities, for instance, which prices are solely driven by supply and demand and not due to real yields, do not fulfill this requirement.

→ A strategic asset class should be implementable in a passive and cost-efficient way and can be rebalanced at low cost. Private equity would not fulfill this requirement.

Providers differ in the methodology they apply to construct SAAs. They range from human-based (qualitative) to fully quantitative approaches. Another differentiator is the degree of customization and flexibility to account for clients' individual goals and preferences. While traditional banks generally offer between 4 to 6 risk profiles for retail, affluent and high net worth individuals (HNWI) client segments, they offer further customization for ultra-high net worth individuals (UHNWI). Robo-advisors can offer more customization for retail and affluent client segments due to their technology-based solutions.

Does active management pay off?

There are several ways to implement SAAs, but clients basically need to decide between passive or active implementation. A passive investment strategy replicates an SAA, whereas an active strategy tries to outperform an SAA by means of market timing (temporary over-and under-weighting of asset classes) as well as security selection (holding different securities than the benchmark index). Does active management in the context of diversified market exposure pay off?

An investor needs to keep two aspects in mind to answer this question. First, most active managers are not able to outperform their benchmark. Active management is a zero-sum game, on average.[2] Taking the costs of active management into account, active funds underperform their benchmark on average, as numerous studies have shown.[3] Also, performance persistence of active funds is low. This means that if a fund had an outperformance over the benchmark (i.e. positive alpha) in one year, there is a high probability that the alpha is negative in the succeeding year (i.e. the fund will experience an underperformance to the benchmark). Therefore, in many cases, positive alpha is the result of luck rather than skill.[4]

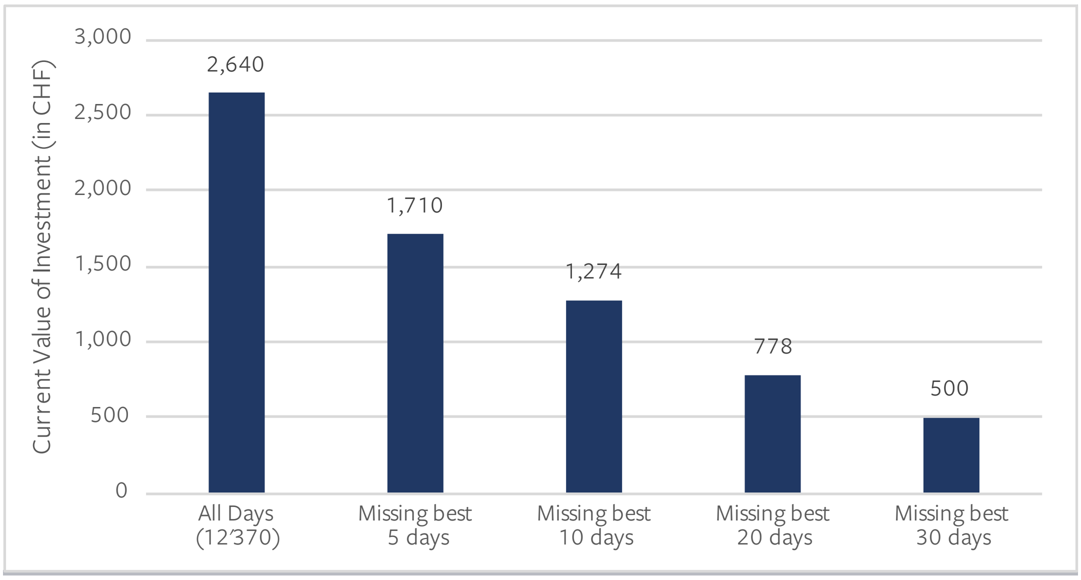
Second, it is difficult to select the few successful active managers from a universe of thousands of active investment funds. In the U.S. alone, there are over 16'000 registered investment advisors. Picking the best performing stock from around 40'000 listed companies world-wide is difficult – identifying the best fund manager is even more challenging. Most investors select active funds based on their past performance. However, it is well documented that past performance is not a reliable predictor of future performance[5] and should not be used as a selection criteria. Even investment consultants specialized in manager selection are prone to this fallacy and thus often not successful.[6]

The fact that most active funds do not add value after costs and the few that do so are very difficult to identify in advance leads to the conclusion that active management on average does not pay off in the context of diversified investing.

Stay the course – trying to time the market can be costly

A widespread investment fallacy is that investors believe they can time financial markets correctly. While it is relatively easy to limit losses, and exit the market after a predefined drawdown has occurred, it is difficult to find the right point in time to re-enter the market and increase the exposure to risky assets again. Most investors who reduce risk during a crisis miss the first days of the rebound, which can be quite costly, as Exhibit 1 shows. With an investment in the S&P 500 Index since 1970, missing the best 5 days would have reduced the final value of the investment by more than 30%, whereas missing the best 30 days would have reduced the final value of the investment by more than 80%. An analysis of mutual fund flows reveals that investors do not have market timing skills. The difference between asset-weighted return (i.e. the return the average investor has realized by moving in and out of the fund) and the time-weighted return (i.e. the return an investor would have achieved with a buy-and-hold strategy in a fund)[7] is substantially negative for most asset classes and fund categories.

A long-term investor should apply a strict rebalancing regime. Rebalancing re-adjusts the current allocation of the portfolio back to its strategic weights. If stocks outperform bonds over a certain time, the allocation of stocks increases and the allocation of bonds decreases, which affects the risk profile of the portfolio: it becomes riskier. To ensure that a client's risk-return profile can be maintained in the long-term, it is necessary to reduce the equity exposure and buy bonds instead. In doing so, the investor engages in a counter-cyclical investment behavior by selling the winning asset classes and buying the asset classes with the lowest returns. Most robo-advisors rebalance their SAAs automatically.



Hypothetical gain of CHF 100 investment in the S&P 500 Index from 01/1970 to 05/2017

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1 See, e.g., Brinson et al. (1986), "Determinants of Portfolio Performance", Financial Analysts Journal, Vol. 42, No. 4, or Ibbotson and Kaplan (2000), "Does Asset Allocation Policy Explain 40, 60, or 100 Percent of Performance?", Financial Analysts Journal, Vol. 56, No. 1.

2 Based on traditional finance theory, active management is a zero-sum game before costs, and a negative-sum game after costs see, e.g. Sharpe (1991), "The Arithmetic of Active Management", Financial Analysts Journal, Vol. 47, No. 1. However, non-traditional finance theory would disagree with this view.

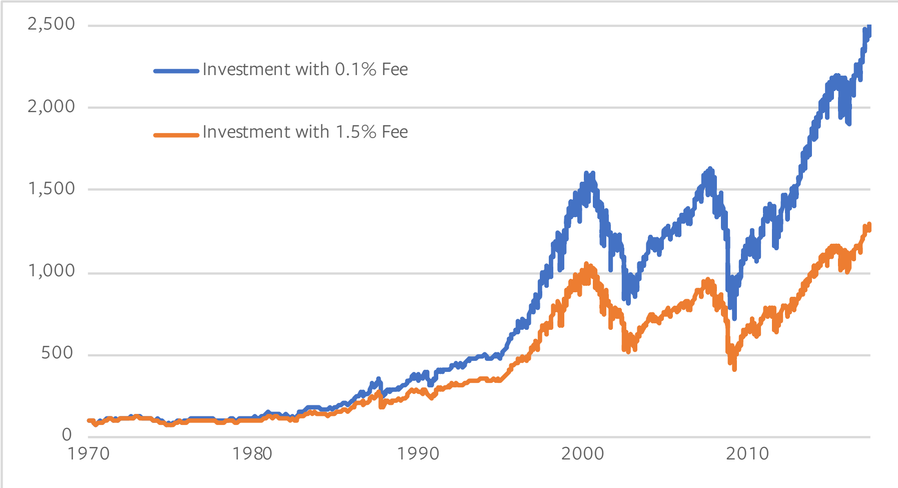
3 See, e.g., Wermers (2000), "Mutual Fund Performance: An Empirical Decomposition into Stock-Picking Talent, Style, Transaction Costs, and Expenses", Journal of Finance, Vol. 55, No. 4, or the Standard & Poor's Indices versus Active Funds Scorecard (SPIVA®) which documents relative performance of active funds in different segments.

4 Mauboussin uses the concept of "reversion to the mean" to separate skill from luck. If persistence is high, winners stay winners and the reversion to the mean is low. He finds that performance persistence is much higher, e.g., in sports like tennis, compared to active investment management where reversion to the mean is very pronounced (M. J. Mauboussin (2010), "Untangling Skill and Luck", Legg Mason Capital Management White Paper).

5 See, e.g., Goyal, Amit, and Sunil Wahal (2008), "The Selection and Termination of Investment Management Firms by Plan Sponsors", Journal of Finance, Vol. 63, No. 4

6 See Jenkinson et al. (2015), "Picking Winners? Investment Consultants› Recommendations of Fund Managers», Journal of Finance, forthcoming.

7 Morningstar, "Mind the Gap 2016".



Hypothetical growth rates of investments in the S&P 500 Index from 01/1970 to 05/2017 with different management fees.

Watch your costs

Costs are a key driver of long-term performance. Through the effect of compound interest, the impact of fees increases exponentially with the length of the investment horizon. An investment of CHF 100 in the S&P 500 Index in 1970 with a hypothetical management fee of 1.5% p.a. would have resulted in a final value of CHF 1’293 after 46 years versus a final value of CHF 2’517 for an investment with 0.1% management fee - almost twice as much!

The total expense ratio (TER) expresses the total costs associated with managing and operating an investment fund. The TER usually includes management, trading, legal and audit fees as well as other operational expenses. For ETFs, TERs can range between a few basis points up to more than 1 %. So-called smart-beta ETFs can be relatively expensive, as they do not replicate simple market cap weighted indices and involve more frequent trading and rebalancing.

Besides explicit costs captured in the TER, there are various implicit costs that should not be overlooked. The liquidity of an ETF is an important cost driver. Illiquid ETFs – ETFs with a low daily trading volume – can exhibit relatively large bid-ask spreads, which leads to unfavorable execution prices and can have a substantial impact on a client’s overall return. Given all these aspects, ETFs and index funds are the most efficient building blocks to implement a cost- efficient investment strategy.

What is the future of passive investing?

Active investment strategies are often expensive and do not, on average, deliver real added value for investors in the context of diversified market exposure. Clients will become more reluctant to pay for investment advice without alpha, and the demand for passive investment solutions will therefore continue to exist and potentially increase. Today, about one third of the share of outstanding equities is held by passive investors and they are projected to control half of the U.S. stock market by 2021.[8] However, today’s SAA methodologies applied by robo-advisors are quite simplistic. In most cases, the number of risk profiles is not sufficient to cover all client risk profiles and their investment goals in a systematic way. Typically, their investment universe and focus are narrow and geared towards a specific client segment, a regional focus, or reference currency. The robo-advisor of the future will have to offer more customized and broader investment strategies.

To obtain diversified market exposure, a passive implementation of an investment strategy is generally cheaper, more efficient and transparent, and thus a preferred way to invest for cost-sensitive clients. Robo-advisors will not only become the preferred investment solution for retail clients, but will also gain importance in the affluent and high net worth individuals segments. Through co-operations with fintech companies or acquisition of innovative technology, robo-advice could become an increasingly important element for traditional banks and wealth managers.

[8] Financial Times, “Passive investing set to claim half of equity and bond markets”, published 06.06.2017.

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