



An explanation of **Active/Passive**

*Active asset allocation*  
*Passive at the stock level*

The most  
cost-effective  
way to  
manage  
equity  
portfolios

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# Active/Passive

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## SUMMARY

All investors recognise the importance of *asset allocation*, or exposure to types of asset and to markets within an asset type. Think stocks versus bonds versus cash. Think UK equities versus US equities. They generally expect it to be a dynamic or active process, whether the activity is fast or slow; whether it's conducted primarily for return-seeking motives or to manage risk. But when it comes to how the market exposure is to be implemented, there is an endlessly raging debate over whether to invest in 'the market' essentially in its entirety, a passive approach, or to pick securities (or funds that pick securities) and actively manage the security selection.

That battle is often described as *active versus passive*, a phrase focused solely on the implementation approach: pick stocks or track the index. We address the debate here but as the context for explaining a sensible pragmatic solution: *active/passive*. This combines a dynamic approach to asset-class and market selection with passive implementation via index trackers within each market. It is superior to an all-active approach that combines active asset allocation and stock picking and in which either may explain exposures. And it is superior to an all-passive approach that adopts a static asset allocation, with component weights simply drifting with market movements.

The arguments are not particularly technical, being practical rather than purely evidence-based or theoretical. This is important because we need to accept that statistically the battle can never be won by a knock-out blow from one side or the other.

These pragmatic arguments are applicable to all investors, both institutional and retail. They have already swayed investment consultants, trustees and owners of capital all over the world. However, they are particularly compelling when investment portfolios are organised to deliver quantified outcomes, within specified tolerances, at particular dates, as they are at Fowler Drew. And they are most compelling when the cost/benefit of stock picking is a function of slim potential rewards, set in a zero-sum game by investors competing globally, and the fat costs set by UK private-client investment firms.

Active/Passive allows UK private clients to benefit from effective risk management whilst also offering scope for additional return that is not the product of a zero-sum game. There does not have to be a loser for every winner. Both the core returns and the potential incremental returns can be captured at very low cost via index trackers.

For the UK individual investor, playing the active game costs about 0.7% pa, made up of annual management charges of typically 0.7% compared with tracker costs of 0.15% for a globally-diversified spread of markets, plus incremental transaction costs of about 0.15% pa.

However, the behavioural effects of playing the active game as a retail investor have been estimated to impose an even greater cost, averaging 2% pa (Vanguard).

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## Optionality: a conceptual framework for the passive choice

Most contributions to the debate about stockpicking versus index tracking focus on either theoretical explanations or empirical data based on actual manager performance. We want to steer you away from both, in favour of a more agnostic reasoning.

The theoretical position rests heavily on market efficiency, which is itself a bone of contention. The data evidence is compelling but there are bound to be periods (or market environments) in which the average performance of active managers is better or worse than the index for long enough to shape the efficiency debate. This arises because there are general and persistent differences between the distribution of holdings by size (or 'weight') in a portfolio compared with an index. Period-specific empirical data comparing portfolios with indices is therefore never going to be a satisfactory proof or otherwise of the market efficiency theory. The preference of academics is to focus on statistical analysis that seeks to differentiate between randomness and skill, such as persistence of performance over multiple time frames.

Our suggested reasoning is different. From an agnostic position, we can start by asking ourselves what it is that would make active management at the security level appealing. We have already explicitly embraced the view that returns at the market level, as evidenced by a representative index, are not random walks but mean reverting, based (probably) on an underlying equilibrium model that 'explains' the workings of all different forms of the capitalist system. We embraced it explicitly but it is of course implicit in the assumptions made by almost all investors in public equity markets, as evidenced by the returns the FCA requires product providers and advisers to use in product illustrations and by the mean-return assumptions made by actuaries and pension consultants when advising pension trustees. Though this is not an unbiased starting point for assessing the role of active security selection, it is the most sensible one, given the consensus.

From this starting point, we can view security selection as being option-like. We pay a premium (the higher costs of an active approach) to be in with the chance of earning incremental return to the asset-class return. Though this necessarily introduces a risk of underperformance, it is more attractive than adding equivalent risk magnitudes at the asset-allocation level because it is not correlated with the market returns. Security selection is therefore a 'diversifier' and we value diversification.

### ***The Greeks: why security selection is a diversifier***

*The diversification effect of active security selection has a technical explanation. The correct way to identify the added value of security selection is to measure the risk-adjusted relative return, known by the Greek letter alpha. Alpha is calculated by identifying the beta return, or risk-equivalent market return, where the risk is forced to be equivalent to the risk of the securities held rather than the market as a whole. This prevents 'false alpha', where the securities selected have either higher or lower risk than the index as a whole (beta less than or greater than 1) such that the observed reward is partly one to risk rather than solely to the skill of security selection. The risk difference can be replicated by cash or leverage, and so belongs to asset allocation. By definition, therefore, risk-adjusted relative performance must be uncorrelated with the return to asset allocation. Identifying the correct beta is critical to measuring the alpha accurately and unfortunately is not as straightforward as the 'skill' versus 'chance' debate really requires.*

Viewed as an option, we can now consider its price and its potential payoffs, by both size and probability. As a 'game', there is a price to pay and a probability distribution for the possible gains and losses.

This conceptual approach is important because the price to pay is specific to the investor type and the location of the game. A UK private client plays in the UK and has a choice of a hiring an active manager (in which case they are probably active at both the asset allocation and security selection levels) or picking an actively-managed equity fund. They will pay more for both than a much larger institutional investor would pay and even

UK institutions typically pay more than the larger and more competitive US market, for example, but less than their equivalents pay in many European countries.

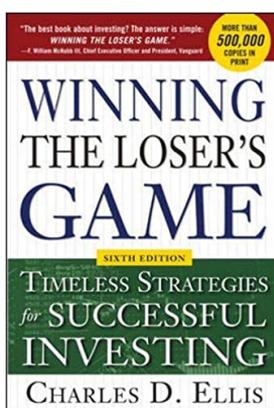
The evidence pointing to the broad scale of the probability distribution is the same as that the wider debate about active versus passive draws on, but with an important difference. Data studies tend to focus on large populations (because they are trying to identify manager skill from as representative sample as possible) whereas private clients tend to hold only a few active funds in any one market and may even hire only one active manager to pick stocks with discretion across the entire portfolio.

What the data is required for is to measure the 'plausible' alpha of a selection of active funds ranging between one and say (for practical purposes) up to 10 in any one market. Plausible alpha is not a difficult concept mathematically. Because we are interested in the distribution of the possible option payoffs, we must allow for the consistency of the observed alpha. Though alpha is already adjusted for relative market risk we need further to adjust alpha for its own risk: the standard deviation of alpha. If we observe the deviation in alpha over multiple periods we can assume that the larger the deviation the less plausible any assumption that observed alpha will persist.

In 2002, before the formation of Fowler Drew when Stuart Fowler and Chris Drew were consulting as 'investment technology' experts, they were commissioned by a 'fund supermarket' to build a model for selecting a small number of UK-based active funds in each of the major markets (both UK-domiciled and offshore but registered for distribution in the UK). The intended use of the selected funds was to complement trackers, so logically consistent with our own ideas here about the dominance of asset allocation decisions for effective risk-management purposes and about 'being in with a chance' of generating positive alpha. (We even developed an algorithm for jointly determining time-varying weights to each of active and passive based on the alpha option having more value when the expected returns to markets were low.) The statistical approach adopted was the plausible alpha described here, but after expenses specific to the UK unit-trust universe. A threshold test was set. Virtually no funds passed in any of the major markets. The client could simply weaken the test but that would be to negate the point of a threshold as a 'value for money' option exercise.

When we started Fowler Drew, we considered incorporating the model in our methodology, as a dynamic complement to a core of index trackers. Because it was highly quantitative, we thought we might be able to keep the management costs of the process (and our fee) quite low relative to the costs of a fully-indexed approach. We decided it was not worthwhile. But that was partly because we did not see an obvious solution for the rebalancing rules and frequency. That left us vulnerable to some random effects and possibly even to some non-random effects we could observe in the actual behaviour of active investors. That really scares us.

## Behavioural effects: the loser's game



Charles Ellis is one of a small number of writers on investment that are by any standards best sellers. His book 'Winning the loser's game' is in its seventh edition. It was based on an article in the Financial Analysts Journal in 1975, before either the active versus passive debate or behavioural finance had gained much traction in the mainstream of the investment profession, let alone in individual-investor circles. Rather than focus on the academic evidence about the rewards to active management Charles Ellis chose to pinpoint the characteristics of investor behaviour that make most investors bad players of the game. His game was tennis and he noted professionals won by making fewer mistakes and pouncing on the mistakes of their opponents. 'The amateur duffer seldom beats his opponent, but he beats himself all the time. The victor... gets a higher score because his opponent is losing even more points.' Investors too are good at making mistakes and very bad at learning from them.

They buy for the wrong reasons and sell for the wrong reasons. That can be equated to buying and selling funds for the wrong reasons. But it isn't just our emotions getting in the way here. It follows automatically from the mistake of assuming the game is characterised by skill more than chance whereas it is actually more, possibly even entirely, a game of chance. This is an important insight, because it means the pros are just as vulnerable as the amateur duffers.

Any investor who typically selects a manager or a fund after a period of strong performance and reacts to a subsequent period of poor performance by parting company with them or switching into another fund will not be subject to non-random performance effects. If the game itself is largely random, then most good performers in one period will revert to the mean in a later period. That mean reversion necessarily translates into a period of underperformance. So anyone following this pattern of repetitive behaviour will lock in underperformance, rather than the average performance that might otherwise have been the best assumption.

Any private client reading this should ask themselves whether they have in fact shown this tendency themselves, if either picking advisers or picking funds, or have observed this behaviour in their own advisers or discretionary managers. Are most of the 'buys' funds with top quartile performance in some past period, like 5 years? Are most of the funds they have then sold only sold after a period of underperformance? If so, they are destroying wealth by systematically turning randomness into negative returns.

There are several industry estimates of the cost of this systematic destruction, based on weighting fund relative performance (typically not risk-adjusted) by the flows into and out of them, on the basis more damage is done when a fund has grown large by 'good' performance and then does badly than if performance had previously been very ordinary and performance-chasing flows in were not particularly large. Think Woodford. Much more money was exposed to the drop than to the good performance on which his reputation relied.

The surveys are US-orientated but the general scale is comparable, as both fund returns and investor behaviour are similar in each. One annual survey, Dalbar, is often quoted in the press with an estimate of a negative performance effect of about 5-6% pa. This doesn't allow properly for fund flows due to regular savings rather than performance chasing. Estimates by the US investment company Vanguard of a 2% pa loss are probably nearer the mark. These estimates are net of the cost of playing the game, being based on fund returns, except to the extent there is a layer of adviser fees on top. Often it is the adviser making these decisions and acting like the amateur duffer.

Bearing in mind that the historical mean real return before expenses from equities is about 5-6% pa from most markets, misreading the nature of the active management game could be costing investors nearly half their return. If you consider that the excess return over the risk free rate is normally about 3-4% pa, over half the reward for risk is being gifted to the industry, which bears none of the risk.

## Six degrees of implausibility

Up to this point, our argument for a passive approach is evidenced-based and starts from a non-theoretical and agnostic position. There is one further basis for making your own mind up about whether to play the game, and that is to focus on what you would have to do right to play to win if it were in fact a game of skill rather than chance. Then you can consider whether you plausibly have this in you.

There are in fact six degrees of implausibility you will need to get over to harness your own skill and that of others you will depend on.

- 1 For a portfolio manager or self-directed investor in stocks to beat the market, he or she needs to be able to make good forecasts of the economic influences on equity markets.
- 2 That then needs to be translated into good forecasts of the impact on individual companies' trading performance.

- 3 To turn that into better forecasts of share-price performance requires a correct estimate between the difference between his or her own view and the aggregate opinion of all other investors that is already reflected in the current share price.
- 4 The requirement for outperformance against an index is to turn that set of broadly correct opinions about a large number of share prices into the right particular construction of relative weights: differences in exposure to each relative to the proportion each represents in the index.
- 5 These are the activities a fund manager needs on balance to succeed in, if they are skilled. But somebody else has to be skilled enough to identify the skilled fund managers and separate skill from luck. That could be a wealth manager, fund of funds manager or financial adviser. But what about the client himself or herself? Don't they need the same or similar skill in order to identify whether their appointed agent has the right skill?
- 6 Finally, each activity will be tested by the way information comes at us about earlier selections, including stuff that looks like it is information but is really just statistical noise. How each agent and client reacts to that noisy information flow, which is subject to significant emotive pressures, will determine whether success in 1-5 can be captured not wasted.
  - Has a poorly-performing manager lost his touch or did I simply make a mistake?
  - Will I avoid compounding an error by doing nothing?
  - As an adviser, will I look stupid to the client if this shows up in the 'dog' funds list?
  - As a client, am I encouraging an adviser to act on noise, not information, by my own reaction to noise?

Nearly 50% of institutions in the USA and UK have opted out of the six degrees of implausibility.<sup>1</sup> Can we single out any one level of implausibility that was decisive in explaining the shift to passive? Probably it was 6: the realisation by the end investors that the decisions they themselves made (hiring and firing managers or putting their managers under perverse performance pressure) were not only 'unskilled' but were actually making matters worse. Opting out of active management therefore reduced their own capacity to harm performance.

They did not need to wait for the knock-out blow or even to decide on whether the game was one of skill or chance. They know what it cost to pay and what they could save by opting out. And they knew how implausible it was that the extra cost, and the extra risk, would in practice be rewarded.

**Our advice to individual investors in the UK is to opt out, whatever you think about the underlying nature of the game. Bank the cost saving and avoid the hassle, the emotional turmoil and the risk of mistakes that come with the noisy flow of active performance data. That will in turn free you up to focus in your time with your adviser on the things that really matter.**

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<sup>1</sup> Stuart Fowler played a part in this, his former business being, in 1990, the first to commercialise an Active/Passive approach, as a way of managing international equity portfolios for US pension and endowment funds, using State Street index funds. Though he is sometimes credited with inventing it, it was actually conceived by the trustees of the public-employee pension fund of the Canadian province of Saskatchewan. The Active/Passive label was coined a little later by pension consultants needing to differentiate what quickly became a popular style for global and international equities.