Strategic investing

The Long-term Strategist

Total portfolio approach versus SAA

Long-term Strategy

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- **The standard approach to managing money is to separate investment decisions into Strategic Asset Allocation, and Tactical Asset Allocation – SAA and TAA, beta and alpha.**
- **The Strategic Allocation is optimized to achieve one's investment goals and is based on the most objective long-term expected returns and risks. TAA takes zero-sum deviations from SAA to exploit shorter-term market opportunities or risks. TAA can be managed by different internal or external managers who may operate quite independently from each other.**
- **A small number of larger pensions and SWFs have for some years successfully followed a more integrated Total Portfolio Approach (TPA) that merges alpha and beta and selects assets from a wide variety of sources to meet a long-term return target without a given SAA benchmark.**
- **TPA manages risk not as tracking error versus benchmark but reviews the total portfolio against its exposure to different risk premia and the ultimate risks emanating from inflation, growth, climate, and geopolitics, inter alia.**
- **Centralization of risk-taking for the full portfolio under the CIO allows the fund to respond more rapidly and coherently on emerging risks and opportunities than SAA funds.**
- **Potential downside comes from a lack of diversification in tactical risk-taking that is much easier under SAA, and the risk that the CIO may have to chase riskier assets in a rallying market when the market IRR has fallen below the fund's target.**
- **TPA requires a clear mandate for the fund, a strong CIO with a good track record and a team with cross-asset expertise, all focused on the same return objective.**
- **TPA is thus not for everybody but is more suitable when the fund has a single owner of the capital, a clear objective, a CIO with a strong track record, a cross-asset team and a culture of teamwork.**
- **SAA and TPA are at extremes, with many managers taking elements from both. In SAA, an CIO can, e.g., use an overlay fund to respond more dynamically to change the overall fund's exposure without requiring the dedicated asset class teams to change their strategy.**

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A number of large asset managers have been moving from the **Strategic Asset Allocation (SAA)** approach to managing money, the long-time standard for the industry, towards a more integrated **Total Portfolio Approach (TPA)**.[1] In this note, we review what the differences are between these two and some of the pros and cons of both that should have a big impact on managers' decisions of which is best for them.

The classic SAA model

The classic approach to managing money consists of two elements: **The Strategic Asset Allocation, or long-term benchmark, and the Tactical Asset Allocation (TAA), consisting of zero-sum deviations from the SAA**. The ultimate owners of the money, or their representatives, first decide on a target long-term SAA that best meets their long-term objectives, circumstances and risk tolerance and is based on objective long-term return assumptions, volatilities, and correlations across asset classes. In the Theory of Finance, the SAA is selected from an efficient frontier of asset class weights that maximize returns for any given level of risk, through quadratic optimization. Under the Global Capital Asset Pricing Model (Global CAPM), the eligible assets are selected from global tradeable equities and bonds and all their country, sector and style subcomponents. These asset classes are represented by total return indices that provide consistent past return and volatility data needed for in-depth analysis and optimization.

This SAA across asset classes serves as an **anchor** from which the investor, or the asset manager they select, can deviate for some time with different positions to exploit shorter-term return opportunities or risk perceptions. The objective of the strategic anchor is to make sure you or your asset manager do not forget about your long-term objectives while chasing down shorter-term market movements. We call these shorter-term deviations **Tactical Asset Allocation (TAA**) via zero-sum over- and underweights of differ parts of the portfolio. Many asset managers operate with limits on such TAA – tracking errors – to make sure they do not deviate too far from their SAA.

A whole industry and modus operandi have grown around the SAA/TAA model of managing money. Owners of money, such as family offices, foundations, or the boards of pensions, SWFs or central banks, decide on their SAA and usually hire specialist "active" managers to do the TAA for them at the portfolio or individual asset class level. SAA is beta risk, while TAA is alpha. Funds or portfolios that stick with an unchanged SAA and do not do any TAA are called passive, while those adding TAA are called active. Active managers can operate within the organization, or externally, and are judged only on the performance of TAA, not SAA. Consultants advise on SAA, while sell-side researchers advise mostly on TAA. Index providers design and calculate the return indices for all potential asset classes that produce all the data for long-term return and risk analysis and that become the benchmarks against which active managers' performance is judged. **Everybody has their specialized role within SAA with a clearly defined division of labor**.

The SAA model has been quite successful over the years and is widely followed precisely because it makes it clear what everyone's function and performance metric is. But this **SAA-TAA division of labor also has it weaknesses**. The main one, one we have struggled with ourselves, is that your strategic allocation as your long-term anchor should only be changed every few years or so, but the main inputs into your SAA, expected long-term returns across asset classes, are highly dependent on their starting IRR, which can change from day to day.

An asset class's price today and its IRR will dictate what return it will likely earn over the next decade. Your SAA choices based on today's IRR can thus quickly become out of date. In principle, your TAA should be able to adjust for this, but the long-term signal of far-out returns tells you very little about what markets will do over coming months or quarters, and is thus not relevant for TAA.

What is the Total Portfolio Approach and how does it differ from SAA?

One of the first evolutions away from CAPM-based SAA was arguably the **Endowment Model**, popularized by the late David Swensen at the Yale Endowment that moved quite successfully beyond tradeable stocks into private equity and related alternative investments. University endowments manage funds and assets donated to the university with an objective to provide stable funding to cover part of the university's operating costs, typically 5% pa of its assets. The endowment model, in effect, merges SAA and TAA and constantly looks for long-term assets that earn at least 5%.

The **Total Portfolio Approach** builds on how endowments have merged SAA and TAA decisions by integrating investment decisions in a single team led by the CIO. The funds following it are large pension and sovereign wealth funds whose boards have given them a total-return mandate instead of a SAA benchmark. In TPA, the CIO integrates investment decisions around a single integrated team that judges all

1. For a broader discussion of Total Portfolio Approach, see Total Portfolio Approach, New Thinking Institute, Willis Towers Watson, 2019; The Rise of Total Portfolio Approach, CAIA Association, May 20, 2024; Practical Considerations for a total portfolio approach, Schroders, Aug 18, 2024.

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major investing opportunities on whether they meet the long-term return target or help reduce portfolio risk.

The valuation signal on asset classes, which dominates long-term SAA decisions, is now integrated with shorter-term signals into real-time decision-making by the CIO and team. In the language used often to describe TPA, the CIO can now react in a dynamic and agile fashion to new opportunities, price developments and risks. Funds operating under SAA typically have separate equity and fixed income divisions, each with their own benchmark to beat with tactical and relative value positions. The two groups do not have to operate from the same market assumptions.

A TPA fund is not beholden to the standard global bond and equity market indices used as benchmarks for SAA but can freely roam across a variety of alternative and illiquid asset classes, judging each on how they boost the total portfolio return and lower risk. The "Total" in Total Portfolio Approach means exactly that the CIO and team look at how any asset benefits the total portfolio, instead of just managing one part of it on its own, disregarding how that part interacts with other parts of the portfolio.

TPA allows the CIO team to look at risk beyond tracking errors versus benchmark and apply elements of **factor analysis**, such as analyzing the full portfolio by its exposure to different risk premia (term, credit, equity, ...) as well as to the ultimate source of risk from inflation, growth, climate, and geopolitics. Each of these can be levered up or hedged against.

TPA on the surface sounds superior to SAA, but it also has its own issues that make it not for everyone, with some funds taking elements of both. To work well, TPA needs a single ultimate owner of the money and a clear mandate that allows the CIO to focus squarely on this objective. Meeting the needs of many different ultimate owners of the money, as is the case for most external asset managers, requires a greater division of labor, making the SAA approach more suitable.

To us, one of the biggest challenges and risks to following a TPA model is that **so much depends on the CIO having the right view of the market**. If the CIO has a good sense of market direction, then the portfolio greatly benefits from having the CIO view applied across the total portfolio. But the reverse applies when the CIO has the wrong view.

Hedge funds, which are the ultimate tactical player in markets, are only too aware of the **dangers of a single CIO making the majority of market calls**. To reduce the risk of concentrated risk-taking, hedge funds typically work hard to diversify tactical positions by allocating risk capital to a set of different trading books, managed by individual traders that do not work from a single integrated view of the market. At the extreme, such traders in the same hedge fund simply do not talk to each other, focus on different parts of the market or different investment styles (technical, RV, fundamentals, event driven, ...). That is, **hedge funds will generally do the opposite of TPA**. Hedge funds achieve high returns to risk, not by having high success rates in market calls, but more by diversifying their sources of alpha through different investment styles and building information walls between them to keep their various positions as uncorrelated as possible.

A second major challenge to TPA is the change from being mandated a target strategic asset allocation to a **given target rate of return**. A strategic allocation is in principle chosen from an efficient frontier across eligible asset classes that shows what expected returns are feasible for any given level of risk. A particular SAA therefore does imply a particular level of expected return. If the owner of the money or the pension fund's board does not like that return, they can change the strategic allocation towards higher-return asset classes. Under TPA, the board leaves asset allocation, both short and long run, to the CIO team, but mandates them to choose one that achieves over time the given target rate of return. One would hope that when they set this target return, it is feasible with the set of asset classes the CIO is allowed to invest in.

What happens, though, **when all markets rally and the IRR of the chosen portfolio falls well below the return target?** The CIO has two options: they can decide that markets are expensive and go defensive into a lower-risk allocation and thus lower-return assets on the expectation that markets are due to fall, and their IRRs will rise in due time. Or the CIO can decide that in order to meet their return target, they need to raise the weight of higher-risk assets.

The first response runs the risk that it takes a long time for markets to reprice lower with the portfolio underperforming the market and peers over a prolonged period. Even worse if it turns out that the market has indefinitely moved to lower real bond and equity yields and the fund's long-run return target is no longer feasible, without taking excessive risk.

The second response, adding risk when future returns have fallen, risks buying high and selling low, underperforming a more stable SAA approach. In comparison, an SAA portfolio that regularly rebalances towards target weights has the advantage that it sells asset classes that have outperformed and thus have a lowered future return and buys assets that have underperformed, but now have a relatively higher future return.

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Avoiding both traps requires having a CIO who can "beat the market" and who is strong enough to convince the board it needs a target return reset if the current return target is no longer long-term feasible.

Is TPA the future, or only for a select few?

Both SAA and TPA should be seen as **extremes** on a continuum, with most funds taking from both the elements that best suit their conditions and capabilities. Conditions that allow a fund to move towards TPA in our mind include:

- A CIO with a strong track record and supported with a professional cross-asset team.
- An integrated investment team that can analyze all types of assets, standard and alternative, within a consistent valuation framework.
- Clear objectives for what the fund and its capital are supposed to achieve over time.
- Trust and frequent communication between board and CIO.
- A single owner of the funds, represented by the board.

External managers who manage the **funds of many different clients** with varying objectives, base currencies, taxation and risk preferences cannot operate on pure TPA as each of these customers will require different strategic allocations.

One midway position between SAA and TPA is where a fund has a target allocation to bonds and equities and has each of these managed separately and independently, while the CIO may use an **overlay fund** to take on broad macro positions or hedges that allow them to change the overall exposure of the fund quite rapidly when the need arises without having to ask Board permission to change the SAA.

Board asset allocations are also increasingly going well beyond the classic public equity and bond markets for which daily return indices exist towards **strategic allocations to a variety of alternative investments** such as hedge funds, private assets, infrastructure, and commodities.

Retaining some form of uncorrelated risk-taking within a single firm remains to us quite important. It is great when you have a CIO with a "hot hand" but the history of risk-taking does not give one confidence that a good track record of past performance is a guarantee for the future. The funds that are to us most focused on achieving high trading returns to risk know this well and go to extreme effort to keep different sources of risk-taking in their funds uncorrelated.

The Long-term Strategist

The attraction of illiquidity

- **Liquid assets are assumed to have more value than illiquid ones and thus frequently earn a lower IRR, known as a liquidity premium.**
- **More liquidity is thought to be better than less. We see evidence, though, that more liquidity can also have downsides and that there are circumstances where it makes sense to allocate a significant part of your portfolio to less liquid assets.**
- **The first circumstance of liquidity premia being large relative to only modest needs for liquidity is when you have well known spending needs or liabilities that are far out into the future.**
- **This is one reason we have no government debt and only spread product in the fixed income part of our Strategic Asset Allocation, as there is a hefty liquidity premium on Treasuries. Corporate debt and other spread products such as municipals are a lot less liquid, higher yielding, and have no higher long-term risk for the same duration.**
- **A second reason for allocating to less liquid holdings is that many investors do not always make good use of liquidity. There is strong evidence that the average individual investor (these analysts included) and many institutional ones tend to buy late in a rally and sell late in a bear market. "Greed and fear" tend to drive many of our actions, and we thus frequently end up buying high and selling low.**
- **The best way to self-protect against overtrading and mistiming is to not have the means to do so by allocating a significant part of savings to less liquid assets, by holding them in a less liquid form, or holding them at arm's length, through an external manager.**
- **ETFs are growing dramatically, partly because of their variety, but also because they provide intra-day liquidity, which regular mutual funds do not. If you want to reduce the temptation of liquidity, it makes sense to hold a decent number of your funds as simple mutual funds.**
- **The most popular investments in recent years have been so-called alternatives, including private equity, private credit, real estate, hedge funds and infrastructure. They have in common that they lack a functioning secondary market and are thus mostly buy-and-hold and thus relatively illiquid.**
- **We do consider alternatives part of a strategic diversified portfolio, not for any extra return reasons – on which we are not convinced – but more because they allow the end investor to make a long-term commitment to an asset class without the temptation to exit when markets turn.**

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It is typically assumed in finance and economics that **liquidity is a positive attribute** and cannot be a bad one, just as optionality cannot have negative value. **Liquid securities** are those that **can be bought or sold for cash efficiently and easily without affecting their price** – hence the presumption that, for the same price, it is always better to be in liquid than illiquid investments and that you need to be paid an extra return to give up this liquidity.

This is what economics teaches us, and we find plenty of evidence for it, as liquid securities almost always sell for a higher price than illiquid ones, just as options do not sell at a negative price. The implicit **assumption in much of economics is that economic agents are rational and that you will thus use options and liquidity only to your own benefit**. But this is where things start going awry, as there is plenty of evidence that people, and especially groups of people, frequently do not act as rationally as assumed by economic theory.

This implies to us that there are indeed **circumstances where it makes sense to allocate part of one's portfolio to illiquid holdings, even when there are no extra illiquidity premia to capture**. What are those circumstances and conditions?

The problem with liquidity

The case for liquidity in your investment portfolio, whether in the form of cash or other relatively liquid assets, is that you can make use of this liquidity in case of emergency or to seize opportunities that the market throws at you from time to time. Having some liquidity for a "rainy day" makes sense to us, and we will not disparage this point. But we do find that **it is not in everyone's ability to make profitable use of changing market conditions**. The old dictum is that the average investor cannot beat the market, as the market is held collectively by this same average investor. Some will perform better than average, and they are the most talented and experienced ones, or maybe just the luckiest ones. Their gains, however, must come from the losses incurred by those not as talented or as lucky.

The empirical evidence supports our premise, as we find that market participants most focused and specialized in trading – hedge funds – do on average beat the market after costs and fees, while individual "retail" investors generally do worse than those passively holding the market. In between these extremes are fund managers, where there is long-standing evidence that mutual fund managers on average underperform passive funds, while institutional managers probably sit in between.

Morningstar Active/Passive Barometer twice per year measures the performance of active funds against passive peers in their respective categories. The report spans ~8,326 unique funds with ~$21tr in assets, or about 72% of the US fund market. It finds that of the **US active funds** it monitors, only ~29% "survived and beat their average indexed peer over the decade through June 2024. Success rates were generally higher among foreign-stock, real estate, and bond funds and lowest among US large-cap strategies." Low-fee funds had higher success rates (survive and beat the market) than more expensive ones. One ought to assume that most of the funds that did not survive (closed or merged) did so because they were not performing well.

Morningstar also reports regularly in its Mind the Gap reports on the returns actually earned by investors in US mutual and exchange-traded fund, including how they moved in and out of these funds, relative to what they could have earned if they never changed around their holdings. These mostly **retail investors earned on average 1.1% pa *less* over the past decade** than somebody who would have simply held each of these funds over these 10 years without switching around. This amounts to cumulatively 15% over this period. The authors attribute the shortfall to the buying and selling of fund shares over these years.

The shortfall between the average dollar's return by investors who do make use of the ability to enter and exit funds at will and the buy-and-hold strategy was especially acute during the wild swings in the market at the onset of Covid in 2020. This tells us that individual investors at the margin are more likely to buy high and sell low.

At the other extreme are hedge funds that in principle focus on "alpha" while hedging out their exposure to market direction, which is known as "beta." We have discussed frequently that we see the hedge fund asset class as the best way to earn a return from market volatility and trading. And we have found that when taking out residual market directionality (about 1/3 equity and 2/3 fixed income), hedge funds over time provide positive alpha[1] .

In short, liquidity, in the form of cash or easily tradable investments, should in principle only have positive value, but in the "wrong" hands, liquidity can easily lead to overtrading and mistiming of the market. In the hands of the most professional tactical market participant, liquidity is a necessity and a condition to be able to add value to one's portfolio.

Beyond the world of finance and markets, there is plenty of evidence that it is not always good to have more options. It is well known that the secret to losing weight is to not have fattening food around, as the option to eat anything we want will

1. Most recently updated in Hedge fund "alpha" returns, Flows & Liquidity, Panigirtzoglou et al., Jan 19, 2025.

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be abused by most of us to our own detriment. Commitments and contracts, which at the core limit one's options to easily move around or change direction, can limit longer-term losses.

How much liquidity should you have?

This should depend on the volatility and uncertainty of the amount and timing of your spending needs and your ability to use liquidity profitably, relative to the cost of holding more liquid assets.

When you do not know when you will need access to your savings or how much you will need, you must hold more cash and liquid assets. If instead you have long-term predictable liabilities or spending needs, such is the case for many pension funds and insurance companies, you do not need much liquidity.

If you believe you have superior ability to time the markets, then you will need to hold a decent part of your assets in liquid form. The problem here is that the average investor seems to believe that they have better-than-average timing in the market and seizing its opportunities. With the exception of investors whose full-time job is to try and beat the market, it is wise for regular investors to hold a decent part of their savings in less liquid form in order to reduce the temptation to overtrade.

In this context, we think it makes sense for governments to impose taxes and fees to reduce excessive trading, whether in financial assets or in real estate. In the US, short-term capital gains are taxed at a higher rate than long-term gains, which helps to reduce overtrading.

What and where to focus illiquidity on?

We see two prime reasons to hold less liquid assets – to earn an **illiquidity premium** where they exist and to **reduce the temptation to overtrade** and time the market. We know liquidity premia on liquid issues are plenty in the fixed income world. Benchmark on-the-run issues will generally have a lower yield than less liquid off-the-run issues. J.P. Morgan's US Treasury Benchmark Index has earned interest income of 4.34% pa since inception at the end 1986, while its Traded Index, which has all the bonds that we cover, earned an average coupon income of 4.92% pa, 58bp more – despite the fact that our benchmark index was nearly a year longer in average duration over this period.

More broadly, we have made the point a number of times (see SAA in Appendix) that USD investment-grade **corporate bonds** are systematically cheap versus US Treasuries, as the spread on USD corporates has been much wider than the long-term default and downgrade losses on these corporates. Part of that excess return is because of the much lower liquidity of corporate bonds. Over the 12 months through June last year, daily turnover on USD high-grade corporate bonds in the secondary market averaged 0.33% of outstandings[2] , while daily turnover US Treasuries stood at 4.3% of outstandings, more than 10 times as much.

Many investors have now hold their bonds and equities through mutual funds and in particular exchange-traded funds (ETFs). ETFs allow you to buy or sell anytime during exchange hours, while with mutual funds you can only do this at end-of-day closing prices. ETFs thus provide more liquidity. Smaller ETFs are less liquid than larger ones, which comes at a cost of wider bid-ask spreads, but otherwise there is no indication that they are cheaper. Similarly, we have not seen evidence that the higher liquidity of ETFs comes at a cost of a lower return. If you can control your urge to overtrade, there does not seem to be a reason to prefer mutual funds over ETFs.

One major difference in liquidity is between the world of publicly quoted stocks and bonds that trade on an exchange or over the counter among market makers and the world of Alternative Investments, such as **private equity and credit**, infrastructure, real estate, and hedge funds, for which there are not ready secondary markets.

The illiquidity of private equity, e.g., was the original explanation for why private equity has been able to produce a higher return than publicly quoted and exchange-traded stocks. Cliff Asness at AQR challenged this view and argued that private equity investors actually like the illiquidity of the asset class. He wondered *"What if many investors actually realize that this accurate and timely [market] information will make them worse investors as they'll use this liquidity to panic and redeem at the worst time?"* He thus argued that there is an "illiquidity discount" on private equity.

We will not go into the issue of whether private assets should be expected to earn a higher or lower return than public assets, but instead support the notion that private equity and credit and the broad Alternative Investment world should be considered part of a globally diversified portfolio. Private equity is issued by different companies than public ones, frequently at an earlier stage of a company's development, and they thus complete the market. In addition, their illiquidity does have the benefit of commitment. The investor is locked in and thus will not have the ability to exit easily during difficult times. And the equity-issuing company will have stable

2. US Credit Market Liquidity: 1H24 Update, Eric Beinstein et al., Aug 1, 2024.

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funding and should thus be less focused on meeting shorter earnings targets.

That said, we think private equity makes most sense for those with long-term and stable funding. There is currently a trend and effort to make private assets available to retail investors, who are more likely to overtrade. It could thus be argued that retail will benefit from holding a long-term illiquid asset like private equity and credit. We would be rather cautious with such a recommendation, as retail investors are used to liquid ETFs and mutual funds and may have more volatile spending needs than a pension or sovereign wealth fund.

A better way for retail investors to curb the temptation to sell in a downturn and buy after a long rally is to outsource the management of their savings to an external wealth manager with clear instructions to avoid excessive trading.

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KISS investing

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- KISS investing, on the ***Keep it simple, s…*** principle, means to us holding **just one equity and one bond fund, passively** managed, spanning **all listed world assets**, with **little trading** around them.
- KISS investing has great **benefits** both from **minimizing costs** from fees, fund expenses, trading and the time required to manage savings, and from **maximizing transparency**, which reduces risk.
- KISS investing is **not an absolute** must and there are probably other approaches that could raise returns or reduce risks, but its attraction to us is that we believe it allows one **to achieve the great majority of financial objectives**, especially so for individual savers.
- KISS investing is an **implication of the Efficient Markets Hypothesis** which postulates that all public information should be in the price. Market efficiency should be one's starting hypothesis when investing, but we know there are **exceptions** to it driven by regulatory restrictions on the free flow of capital, taxation differences and behavioral biases such as short-termism.
- We can adapt to some market inefficiencies in our two-fund portfolio without abandoning KISS by restricting global fixed income to **corporate credit** FX hedged, and by including certain **tax-advantaged assets**, such as US Munis or life insurance, for those with high marginal tax rates. Long-term trends from demographics, climate, technology, or geopolitics can lead one to include a few extra funds without overcomplicating one's portfolio.
- Exploiting shorter-term market mispricing requires **active management** where specialized managers, such as hedge funds, are probably most able to add return beyond the fees they charge. But such managers add risk, reduce transparency, and require closer monitoring and time-intensive understanding by the investor, thus not making them a natural part of our KISS portfolio.
- **Alternative investments** such as private equity, credit and infrastructure extend one's reach beyond listed assets into unlisted ones and thus tick the KISS box of global diversification. This adds value to a portfolio but comes with illiquidity, lack of transparency, higher fees, manager risk and higher costs and time of tax reporting and understanding what you own. Alternatives do add diversification but are too complex to be part of a KISS portfolio, in our view.
- KISS investing is our version of both **Occam's Razor** and the **80/20 Rule**. The latter states that 80% of outcomes come from 20% of causes. In our mind, **simplicity gives you 80% of what you want from your portfolio. Added complexity gives you the extra 20%, although we would lean more towards 90/10**. The smaller one's portfolio, the more we think one should stick to KISS.

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Last year, we argued in *Strategic investing questions, by the dozen* (Sep 26) for **the extraordinary value of keeping it simple**. "*Simple portfolios with just a few global trackers and basic valuation and investment rules make it easier to understand one's risk and lower the cost of managing money, without giving up much return.*˙ Our statement got a lot of attention, motivating us to put more meat on it in this note, adding nuances and some exceptions while addressing counterpoints.

Our main contention is not that KISS investing is absolutely optimal and doing anything else is irrational and/or a bad investment. Our point is instead that **we believe you can achieve most, if not all of your financial objectives** by following our KISS approach. Adding more products or complexity in our mind produces steadily falling extra benefits.

What is KISS investing?

The KISS Principle—short for "Keep it simple, stupid˙—has been around for ages and is just a modern version of Occam˖s Razor in Philosophy, according to which "the simplest explanation is usually the best one˙. Modern KISS itself was reportedly coined by Kelly Johnson, an aircraft engineer in the 1930s, who demanded that engineers designing jets had to make them repairable by an average mechanic under combat conditions with a limited set of tools.

KISS investing to us means holding just two passive globally diversified funds, one in equities and one in bonds, both in listed securities, tracking market-leading indices, and with large capitalization to assure liquidity. Bonds should be denominated in domestic currency, or FX hedged if denominated in foreign currency. Their relative weights are a function of return needs and ability to absorb drawdowns, but quite stable. The equity share should probably fall slowly over time when/if one approaches the time to spend one's wealth, with no trading around them aside from any rebalancing from time to time. For individual savers, a target-date fund when one accumulates savings followed by an annuity during retirement/decumulation should fit the bill. In short, **a few simple, transparent products and simple, easy to follow long-term investing rules**.

If markets are for the most part efficiently priced—an assumption for which there is a lot of evidence—then one can't expect to do better over the long run, in terms of returns and risks, than by simply buying the "world˙ market, global equities and bonds.

Does KISS investing raise returns?

KISS investing then helps you **maximize returns by minimizing the costs of investing**. These costs will consist of **entry, exit and maintenance fees** on the products one buys; **bid-ask spreads** and the market impact of any transaction; **taxes** on capital gains and transactions; and the **opportunity costs of the time required** to manage one˖s portfolio and prepare tax returns.

Passive funds have much lower expense ratios than active ones (one third as much) as they trade less, do not have to pay for expensive portfolio managers, and are generally much larger, which allows them to spread their costs more widely.[1] Active funds also have larger **turnover** that does not come for free, even as trading costs in the equity world have come down over time, while those on individual bonds have risen over time post GFC. Higher turnover also realizes more capital gains, and thus **earlier and higher tax payments**.

Finally, one needs to take account of the **time and information costs** required to monitor portfolios with a large number of different funds and/or individual securities. **Tax preparation** costs increase rapidly with any increase in the number of assets owned, the number of accounts held, and the overall complexity of the investments one makes. Private assets in particular can be quite burdensome to monitor and report on. All such tasks can obviously be farmed out to specialist managers, accountants and tax preparers that can do the work more efficiently but none of these come for free.

Does KISS investing lower risk?

Simpler passive products and strategies are more **transparent** and easier to understand, and when invested in global funds will have longer time series across which to better analyze volatility and long-term risks. **The longer the history** you have on different asset classes, the more confident you should be about its behavior, including its return and volatility. This translates directly into more accurate forecasts of future returns, and thus the ultimate potential downside, or risk. More complex products and strategies will have more components that can surprise, especially as many will be more novel and thus not have much history on which to judge what could go wrong.

Actively managed products, in turn, require you to judge not only the risk on the targeted asset class, but also the strategies pursued to try and beat this asset class benchmark. This *tracking error s*hould be very specific to the fund˖s manager and can only be properly analyzed if both the management team and their strategies for generating alpha have remained stable.

1. ICI (Trends in the expenses and fees of funds, 2023) reports 0.15% and 0.11% average pa expense ratios for equity and index ETFs, respectively, in 2023, versus 0.43% and 0.35% for their actively managed counterparts in the US market. Index equity mutual funds charge on average only 0.05% expenses in the US.

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This issue is particularly important in the case of private equity and credit where is it not possible to buy a globally diversified passive tracker and manager selection risk can be orders of magnitude as large as the risk on the underlying asset class.[2]

Can manager selection risk be reduced by diversifying across active managers? One can try, but the more one diversifies across active managers, the more one likely will get a portfolio that tracks the overall market with little alpha as active managers in effect trade against each other.

Can't we do better with high-Sharpe assets?

To many, KISS investing ignores the many opportunities that global markets offer to do better by identifying assets that lie above the risk-return trade-off line defined by our global bond and equity trackers. All of us market practitioners, whether buy-side asset managers and financial advisors, finance professors, index providers, consultants and sell-side sales and strategists (us included), are in a **never-ending search** for asset classes, securities, issuers, and trading methods with **superior returns to risk**. That is our job, so to speak.

It is our experience, though, that once an idea is "out" on what assets or techniques have indeed produced superiors returns, many investors with a lot of capital will jump on it, push up its prices and in the process **arbitrage the opportunity away**. This tends to pull any superior asset back to the market's risk-return trade-off line of our two global trackers and eliminate its superiority. The **speed of this arbitraging force has steadily increased over** time as information became ubiquitous, everyone read the same new Finance research, trading costs came down, markets and economies globalized, capital controls fell, the Washington consensus became the global benchmark for policy, and global capital and liquidity surged. The lifetime of any new "alpha" ideas has gotten shorter and shorter. This has been our experience as we searched over the past six years for asset types that could still provide superior returns to risk.

That said, there remain some **limitations to how fast and how much capital across the world can and will seek to arbitrage away higher returns to risk** priced into certain assets. These limitations come mainly from **regulatory restrictions and taxation disparities, liquidity needs and investment time horizons**. Or they can come from widespread **behavioral biases** that refuse to go away, such as overreaction, overconfidence, loss aversion, anchoring, herding, hindsight, and so on. We will look in concise form at what is known here and **accept that does create arguments to change or add to our two-fund KISS portfolio**. We will distinguish structural from tactical alpha opportunities.

1. Structural alpha from market segmentation

First, with respect to **regulations**, the elephant in the room has to be **Financial Repression** by which governments in the world force or induce insurers, pension funds and central and commercial banks to give preference to their debt, generally by providing capital relief on their debt, or simply prohibiting holding other assets. As a result, we find that government debt in most DMs is structurally expensive relative to other debt, such as that issued by investment-grade companies. As we argued in Building Strategic Asset Allocation (Oct 10, 2023), US High-Grade (HG) corporate bonds have outperformed US Treasuries over the long run because their yield has been on average ~150bp higher than same maturity USTs over the past 30 years, well in excess of the ~30bp average annual loss from net downgrades into High Yield. Even today, with the spread down to just over 100bp and near its tightest level of the past 15 years, HG should easily beat USTs over the next 10 years. Our IRR-based models indicate better than 8/10 likelihood of US HG earning higher returns than UST over the next decade.

Within our KISS approach, we simply substitute a global corporate bond fund for a global aggregate bond tracker, which includes broad government debt, leaving us still with a two-fund portfolio of a **global equity tracker and a global corporate bond fund**, hedged into one's home currency.

Second, with respect to **taxation**, differences across investors can produce diverging outright and relative after-tax returns for the same gross return that are hard to arbitrage away and imply that certain asset classes will appear superior to some investors, but inferior to others. For example, the **US municipal bond market** with over $4 trillion outstanding carries coupons most of which are exempt from US taxation.[3] Its yield will thus be below that of taxable bonds of comparable maturity, liquidity, and credit risk. The ratio between the two defines a marginal break-even tax rate. US investors who pay a higher marginal tax rate than this break-even should be heavy buyers of such bonds, while those with lower marginal tax rates as well as international investors not subject to US

2. As we argued most recently in *Ten topics in strategic investing*, Mar 19, 2024.

3. About ~20% of US Municipal debt, issued by local governments that have reached the non-taxable limit or issued under the Build America program, is taxable.

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taxation should have little or nothing at all.[4]

As discussed recently in *Will Americans continue to love equities?* (Feb 21, 2024), US high-net-worth investors own little in US Treasuries, but focus their bond allocations to corporate bonds and to US municipals that like corporates have some default risk and, on an after-tax basis, offer them a comparable yield.

Other tax advantages in many countries apply to permanent **life insurance**, making this asset produce higher net returns for the same yields than taxable corporate debt. One other reason why even a KISS investor will hold more than one fixed income fund.

Third, with respect to **investment horizons and liquidity preferences**, the main market segmentation will be between what we would call **short-term and long-term investors**. The impact on this on how you invest is largely a function of how you perceive and define risk. As we discussed in *Long-term vs short-term risk* (Feb 1, 2022), our industry tends to define and measure risk as the volatility of asset returns, making the assumption that risk over the long run is simply a statistical extrapolation of volatility (standard deviation) of monthly, quarterly, or annual returns. If so, risk on longer-term returns, say 10 years, can then simply be estimated as annual volatility divided by the square root of 10.

This follows if annual returns are identically and independently distributed over time. This is not always the case, with some evidence of mean reversion over long-term periods. In addition, as we discussed before, simply knowing the IRRs of bond and equity portfolios when you buy them gives you a more accurate idea of eventual return 10 years out, than is implied by short-term volatility. The investor with no need to withdraw funds until quite a few years from now and enough assets to tolerate portfolio "drawdowns˙ on the way to when they need their savings, thus perceives much less risk on volatile assets than those with uncertain cash needs, who need to stay more liquid and less volatile assets.

The implication is that the long-term investors can hold more volatile assets and more illiquid ones, including private assets, not traded daily on a public exchange (see below).

2. Structural alpha from factors and structured products

A second argument for certain asset classes providing superior returns to risk is the many behavioral biases that affect our behavior will make asset returns deviate from those implied by unbiased rationality and market efficiency. The asset/security selection strategies to exploit such inefficiencies are frequently targeted by factor investing such as the classic Fama-French equity factors of Value, Size (small caps) and Momentum,[5] and can be incorporated into structured products that replicate these strategies. We ourselves have written frequently over the past 25 years about these strategies.

These products or approaches can be quite basic and easy to understand. The problem is that the simpler they are, the easier they become to replicate and reproduce, and the more likely it is that their superior returns to risk will be arbitraged eventually away. One thus needs to constantly innovate and exploit the latest research, techniques, and insights to stay ahead of the crowd but this then adds cost, complexity, and a serious time allocation.

Hence, we would say that **KISS and earning market-beating returns do not mix easily**. For the latter, you need to give up the first. **Structured products thus do not really belong in a KISS portfolio**, in our opinion. But see our nuance statement at the end of our note that this does not make it irrational or wrong to own them.

3. Tactical alpha

Our starting argument of better returns on two globally diversified passive funds was based on the higher costs of active management. But **can˒t one argue**, as active managers almost all do, **that active security picking and macro positioning can earn more "alpha˙ than the expenses of generating it?**

Within the world of retail "plain vanilla˙ equity funds, significantly less than half beat passive funds on the same market after fees. [6] In fixed income, active US funds beat passive ones after fees just over half the time this past decade. To make sure one does not invest in "shadow˙ trackers that charge a fee for active management but stay close to the

4. In addition, US states, such as NY, also do not tax coupon income from bonds issued by the state itself and municipalities in the state to investors tax domiciled in the state. Other tax advantages in many countries apply to permanent life insurance, making this asset produce higher net returns for the same yields than taxable corporate debt. One other reason why even a KISS investor will hold more than one bond fund.

5. Our Quantitative Equity Research group constantly monitors and analyses a large set of equity factors such as those in our US Factors Reference Book, May 2018.
6. Morningstar˒s US Active/Passive Monitor (Year-End 2023) analyses the returns on 8,338 funds, with $18tr AUM, or 55% of the US fund market. It finds that over the past 10 years, only 6% of Global Large Cap equity funds, 13% of US large cap and 25% of US small cap outperformed their passive equivalents. Among corporate bond funds, 58% beat their passive equivalents.

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index, one should probably focus on managers that take more active risk, all the way up to index-agnostic hedge funds. But again, no free lunch here, as the more active risk the manager takes, the greater the dispersion of active results relative to passive ones. By itself, this does not automatically raise a fund's volatility as some managers will be betting against the market trend, but adding active (alpha) to passive (beta) risk does add another source of volatility and one that is harder to assess, as we have discussed above.

That said, we have argued in the past few years, that we foresee a **more volatile world**, economic and markets-wise, over the next 10 years that should improve the performance of active managers.[7] This view led us to add Hedge Funds to our Strategic Allocation recommendations, a position that has indeed worked.

Figure 1: Hedge funds excess returns

%, 1/2000-3/2024, monthly. HF minus an equity/bond portfolio with weights to give it the same return volatility on a rolling basis.

Source: J.P. Morgan, HFR, Bloomberg Finance L.P.

4. Exploiting long-term trends

Can't we do much better than our simple combo of a global equity and bond tracker by focusing on major long-term trends that should change spending and investment patterns and thus create significant winners and losers among asset classes, countries, and issuers? In principle, such gradually developing trends are well known by all and should thus be in the price, eliminating any upside from investing on them. However, we do find that most market participants are focused on the here-and-now that drive asset prices this month and quarter, as the present value of far-out events easily pales compared with that of the here-and-now. We have thus found it worthwhile to investigate the probability and potential impact of secular changes in our economies and markets and allocate more to assets set to gain from them, while avoiding those that should lose out. We made a case in our strategic advice to add an extra allocation, beyond a basis global equities and bonds, to the global Tech, Value and Financials sectors on the ultimate gains from AI, and a demographic-driven secular rise in bond yields.

That said, one popular way to position on global trends is to invest through Thematic funds. Besides climate change and the energy transition, these themes include digitalization, fintech, demographics, EM consumers, and so on. When we looked at such funds, though, we found they badly underperformed the overall market. Half of this was due to the high fees on such funds. The other half was that investors only really tend to buy such funds on evidence that they are indeed outperforming, which means that by the time they bought them, the assets the funds held were rather expensive and set to produce lower returns from that point on. The lesson here is investing on a widely held view that already has had a measurable impact on asset prices probably means one will be a bit late to the game. Better to start on a theme that is not yet consensus and can only be judged a serious risk rather than a done deal.

In short, can we do better than our starting point of investing in just one global bond and one global equity fund? **Yes**, but we can do this with just a few alterations that will keep us consistent with our KISS approach. The impact of financial repression and tax differences can be incorporated by just holding HG corporate debt, dropping government debt, and adding a tax-exempt product (such as US Munis or life insurance) in the case of investors with high marginal tax rates. Long-term structural change, where not yet fully priced, can be incorporated with a few select ETFs, or choosing say a DM equity fund, dropping EM if it is feared this region could badly underperform if Climate Change accelerates. We are not in principle against including active funds, but feel that this requires investing via quite specialized managers, by style, region, sector or just asset class. That in turn implies multiplying the number of funds one holds, increasing complexity and monitoring costs. Nothing wrong by itself, but in our mind not part of what a KISS portfolio should be.

Other challenges and nuances to KISS investing

We have heard and seen quite a few other challenges to our KISS portfolio, some of which can be countered, some of which do have a valid point.

7. First argued in Inflation, markets and the end of the Great Moderation, Sep 27, 2021, and confirmed in later notes.

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1. Can two ETFs do it for a $100bn fund?

Very large public or pension funds or sovereign wealth funds, such as those with over $100bn in AUM, will rarely if ever use just a few funds or external managers as they will want to control their exposure to individual counterparties. Putting 70% of this $100bn in a single global equity fund is not easy as there are not that many funds of this size. This risk could be simply operational and liquidity but could go as far as default risk. Hence, it makes sense for them, when they employ external managers, to use quite a few different ones, even when focused on the same asset class as they will need to diversify counterparty risk across these managers. This does not increase complexity too much, nor monitoring costs.

2. Who wants diversification, anyway, if you know what you are doing?

Two of the best long-term investors in the world, Warren Buffet and Charlie Munger, have repeatedly argued against wide diversification, in favor of much more **concentrated positions in individual companies** that they consider best value. They have called **diversification "protection against ignorance˙**, and that it makes little sense for anybody that knows what they're doing.

In our view, it made sense and worked for them to hold very concentrated positions in just a few companies that they thought would produce superior returns based on the price they paid for them and the strong competitive positions these companies had in their industries. At the same time, Warren Buffett has frequently also argued that for over 99% of investors it makes more sense to invest in a low-fee SPX tracker and not to trade in and out.

Buffett and Munger at Berkshire Hathaway have had a remarkably superior performance (10% pa over SPX since 1965) investing in companies on which they did extensive research and made sure to buy them when they were cheap. Quite plausibly, they are just superior minds that very few of us can replicate and the rest of us thus just have to rely on wide diversification to achieve normal market returns to risk.

That said, empirical analysis through 2011 has been able to "explain˙ Berkshire's superior return as the result of buying companies with value, stability and quality characteristics, enhanced with cheap leverage from being an insurance company. Since then, though, Berkshire has stopped outperforming, earning a return quite in line with the S&P 500. This supports the view we expressed before that "all alpha has a sell-by date˙. That is, Buffet and Munger have been quite open about their approach to investing and have created a global following that produced a plethora of books and analyses of their performance. With their "secret sauce˙ made public and so many investors following their approach, it should thus not be totally surprising that their alpha would eventually be arbitraged away. And having fewer opportunities in the market to apply their value approach to may explain why Berkshire Hathaway has held on average 15.5% of its assets in the form of cash since 2011.

3. Income versus wealth objectives

Much of optimal investing and allocation research makes the implicit assumption that your investment horizon is a single point in future time when you will want to use your savings. This focuses analysis on what return you can expect from now to that future point in time and what could go wrong by the point. In reality, the end-investor, whether an individual saving for retirement, a pension, insurer, endowment, or sovereign wealth fund, almost always needs to plan to be able to use savings over a **future period that can span decades**. That is, the objective is not necessarily to maximize wealth at one particular point in time, but instead a flow of income, or distributions over many years, with the end point uncertain, indefinite, or even forever shifting forward.

In principle, our two-fund KISS portfolio can handle this income objective as, say, a retiree would simply gradually sell of part of these two funds as needed to fund spending in retirement. Much of their portfolio by that time ought to be in fixed income as their investment horizon is no longer long enough to have some confidence that any sudden downfall in equities will be offset in later years, as you may not be around anymore at that time. But even a single bond fund will incur some risk that will create uncertainty about what distributions you can expect and thus what your spending ability will be.

A less risky strategy is a portfolio of bonds each of similar size and each maturing in a staggered fashion over the years when you will need the money: in effect, a **bond "ladder˙**. A KISS investor near the point of retirement then likely will find a lifetime **annuity** fitting much better in terms of safety and ease of understanding as it eliminates the risk of outliving one's savings (the annuity issuer, usually an insurance company, takes on this longevity risk and can diversify much of it away across its full client base). Such annuities allow the KISS investors to go to only one asset class.

4. Don't Alternatives add return, and extend the market?

A lot of institutional and high-net-worth investors have been piling into alternative assets, especially private equity, private debt, infrastructure, real estate, and hedge funds. Some of the attraction of alternatives is an expectation of higher returns, and a smoother return pattern as these assets do not have a ready secondary market and are instead valued by the manager on their projected ultimate cash flow.

Within our KISS strategy, there are **pros and cons** with respect to **Alternative Investments**. On the pro side, Alternatives are just a way to extend the market, by not limiting oneself to publicly quoted securities and companies. Alternatives are not just another set of more expensive managers of the same assets that one could otherwise buy with two simple ETFs. **Private equity and credit are not issued by the same companies that have issued debt or equity in the public markets.**[8] They may be similar, but that can be said also of many issuers within the public market.

Private credit, in particular, lends to *"middle-market companies deemed too risky or large for commercial banks and too small for public markets…˙* and is thus *"outside the realms of either commercial banks or public debt markets˙* concludes a recent IMF study on The rise and risks of private credit, Global Financial Stability report, Ch. 2, April 2024. Similarly, private equity does not fund companies that are publicly listed, even as LBOs will tend to acquire public companies, take them private, "clean them up˙ and then sell them off again the public markets through an IPO. Venture capital, in contrast, funds new business ideas and freshly set up small firms before eventually launching those that survive into the public markets through an IPO.

Infrastructure similarly counts as an asset that reaches out beyond the public markets.

Our argument that KISS investing should aim for **max diversification** and own the world market should welcome getting access to non-listed companies through private equity and credit.

Commodities, through futures, are considered an Alternative Investment and could also be seen as an asset class not covered by the public markets, aside from the shares and debt issued by miners, agribusiness, and commodity traders. That said, as we argued before, they are **not in our mind financial assets that belong in one's strategic allocation** as their return consists only of price changes and not income (roll income tends to be more negative than positive) and is not backed by productive investment like bonds and equities are.

The last member of our Alternative family is **hedge funds. It does not really belong in KISS Investing**, in our view, as it is the opposite of passive investing, is surely not simple, far from transparent, and not exactly low fee. Hedge funds almost all trade publicly listed assets, and thus do not qualify as an extension of the market that is to us a plus point of private assets. Returns on the overall hedge fund world are in effect beta exposure to the asset classes they trade, plus alpha from their smart trading, minus a high fee for their services. You could go as far as to consider their trading skills an asset class but would be to us stretching the concept too far. We did made a case for hedge funds to be part of our Strategic Asset Allocation (Oct 10, 2023) on our view of continued high macro volatility in the future and indeed hedge funds have outperformed, after fees, since Covid (Figure 1 above).

On the downside, Alternatives are **costly to hold** in terms of fees, understanding, monitoring, and reporting and are **not transparent**, lacking the public disclosure requirements of publicly listed securities. They are **hard to value** as they are not traded on listed exchanges. Reported values are estimated by their managers and could be quite stale relative to faster moving public markets that will price in all relevant information in real time.

Risk is hard to assess on Alternatives, in particular on private assets. In principle, one can use the historic volatility of private assets˒ returns over their full vintages to judge risk. However, it is very hard, if not impossible, for all but the largest investors in the world to get the same full access to the private asset class as one can get to public markets through a single ETF. In the alternative world, you need to invest with one or a few managers, and there can be a big gap between the return your portfolio will earn and the one of the full private asset or hedge fund market. One needs to consider this **manager selection risk** as an extra source of potential downside when investing in alternative assets.

Overall, Alternatives are not really KISS Investing as they are not simple to invest in, to value, to understand, or to monitor. Returns and risks depend on what managers you have chosen. They do, however, tick two boxes that fit with KISS: They extend your reach beyond the public markets and thus provide more overall diversification, and by their illiquidity, they prevent excessive trading and put you more into buy-and-hold we consider part of KISS investing.

5. But what happens if we all go KISS?

If everybody follows KISS investing and goes passive, who will do price discovery and assure all available information is in the price? If there are no longer enough active investors, markets likely will no longer be efficiently priced, and the whole argument for the superiority of passive investing can fall apart. Are we there already and will thus destroy our argument for KISS investing? Will self-investing self-destroy, just as the eternal search for superior assets ultimately destroys—or arbitrages away—the excess returns to risk

8. There are 8.3 million companies in the US that have more than one employee. Only 3,647 of these can be accessed via the public equity markets.

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earned by any such superior assets lying above our global risk return trade-off market line.

We do not think so. Most important, if we already have too many passive investors and not enough active ones making sure all assets incorporate all information, then there would be profitable opportunities to buy underpriced assets, allowing the remaining average active manager to outperform their benchmarks. As discussed above, this is not yet the case. And if it were in some times or markets, this would in turn attract more active managers who would over time again make markets more efficiently priced.[9]

6. Does one have to KISS?

No. Our point is not that you must absolutely follow a KISS investment strategy or are doomed if you don't. Far from it. Our point is more that you can achieve most, if not all of your financial objectives by following our KISS approach. If you don't and get involved with more products, trade more frequently, take more concentrated positions, hold more complex alternatives, it is possible you will do better than our KISS ideas, but you will be taking more risk and will have to spend dramatically more on fees, time, and effort to understand, monitor, and report on your investments. If you love this and it is your hobby, go for it, but we would suggest controlling yourself and making sure the non-KISS investing does not endanger your ultimate financial goals or that of those whose savings and wealth you are taking care of.

Concluding thoughts

Our industry does seem to love complexity and to abhor simplicity. The more complex the financial world becomes, the more managers, analysts, traders, consultants, regulators, and risk managers feel they add value and expect to be paid. But we conclude there is a lot of benefit to the ultimate buyers of financial services and products to keep things simple.

For one, one should not buy assets that are too complex to be easily understood as the risk is then that the asset will not be appropriate for one's financial objectives. Second, the fewer the assets one has in one's portfolio, the **easier it is to judge risk** on them, the easier it is to gauge one's exposure, the easier it is to manage one's portfolio and the **less time it takes**.

Time is indeed money. And probably the greatest benefit of simpler products is that they are cheaper, in terms of management fees and the costs of buying and selling them. Simpler products that are well understood by everybody will likely also be more liquid. The simplest investing rules, like "buy and hold˙ and do not move assets around much, are also easier to follow, save on taxes and other transaction costs and reduce the trap all of us are at risk of falling into, which is to sell when markets have been going down a lot and to buy when they have been going up (i.e., the risk of buying high and selling low). Finally, we have found that the **simplest valuation rules**, like using an asset class IRR, bond yields and equity yields, or mean reversion in real exchange rates, have had a much better record in judging future long-term returns than more complex systems.

Overall, then, we feel that **keeping things simple in finance, fewer assets, simple valuation rules, simple investment rules, is an underrated strategy** and one that too few of us actively pursue as the mainstay of their strategic allocation.

9. We discuss this issue more in depth in our *Ten topics in strategic investing*, Mar 19, 2024.

The Long-term Strategist

Ten topics in strategic investing

- **We look at 10 different questions on strategic investing and what they mean for you.**
- ***How safe is your cash?*** Cash may be default free, but to long-term investors, who need to roll over cash at unknown future yields, the eventual return on cash is more uncertain than bonds with maturities that match your spending timing needs. Hold more bonds instead of cash if you like to reduce long-term risk.
- ***Was Charlie Munger right in not finding diversification important?*** We do not think so as Berkshire's concentrated bets require their supreme selection skills that not many of us have, and either way, their value approach is now so widely known and copied that their returns no longer beat the market.
- ***Will the 7-century trend of falling real yields continue in coming decades?*** We don't think so. Real yields bottomed already with WWI, with aging and fiscal excesses now more likely to push real yields up the next 10 years.
- ***Manager selection risk is an underappreciated risk of private assets***, as it is near impossible to gain as fully diversified an exposure to the global private asset class as one can get cheaply with ETFs on listed bonds and equities.
- ***Does liquidity have value?*** In principle, yes, as it is an option, which should not have negative value if we behave rationally. But behavioral biases tend to make many of us overtrade, buying high and selling low. Liquidity can become destructive, suggesting we should allocate part of our assets to illiquid ones.
- ***How is the rapid rise of target-date funds changing markets?*** At $3.5tr now in the US alone, they bring more passive investing; help stabilize markets as they need to sell into rallies and buy on sell-offs; weaken the Momentum factor; and will move from equities to bonds as the large baby boomer cohort retires.
- ***Can markets and capitalism "fix" the climate problem just as they did with the 1972 Limits to Growth warning?*** They could, if we dramatically raise the price of carbon (which we are not doing), just as higher oil prices induced more oil exploration and less consumption from the 1970s on.
- ***Has passive investing broken markets?*** We say no, or not yet. If too much passive investing destroys price discovery, securities will become wrongly priced, providing easy money for active managers, pushing passive investing back. We don't see evidence of there being that much active alpha in markets.
- ***Are stocks still best for the long run?*** Jeremy Siegel argued so in his *Stocks for the Long Run,* showing US equities beat bonds in 92% of 20-year periods since 1802. Better data now show this was only for the post-WWII period and only for the US. Not a law anymore, and mostly US exceptionalism that is at risk. We stay with a balanced portfolio, including bonds and non-US equities.
- ***Why are non-US investors not piling into stocks just as Americans are?*** Sustained underperformance vs the US, combined with home bias and lacking the dramatic gains available to Americans in the ease and cost of holding and trading equities are the likely drivers.

Long-term Strategy

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1. How safe is your cash?

This question is not about whether your cash will disappear, or the issuer will default, but more about whether cash is really the risk-free asset we all assume it is. It is a standard assumption of finance models and valuation metrics that **cash is your safe or risk-free asset** and that all other financial assets are priced at a risk premium over cash that is a function of the riskiness of these assets vis-à-vis cash.

For an investor, cash is virtually always defined as a 1- or 3-month government-guaranteed bank deposit or debt instrument issued by the national government of the country that issues the currency you spend their money in. This assumption, which it is and not a fact, is never really challenged. But it should be.

The great majority of end investors save money for old age or future generations. That is, **almost all of us are long-term investors**, with an investment horizon way beyond the 1- to 3-month maturity of the cash instrument that is supposed to be your safe asset. Safety, and its inverse – risk – are really the risk that your portfolio will fall short of the return you expect it to yield and by how much you could fall short. If you invest in a cash instrument, even one with no risk of default, that has a maturity well short of when you want to start spending it, **you will have to regularly roll it over** at a future interest rate that is not yet known. **Over the past 70 years, the per annum return on 3-month US T-bills over 10-year holding periods has shown a standard deviation, or volatility, of 1.5%.** This may not sound like much and is indeed well below the 2.7% volatility on the compound pa return on the US Aggregate bond market over 10-year holding periods. The difference is due to the much longer duration of bonds (~6 years in the case of the US Agg.), which more than offsets the lower volatility of longer-maturity bond yields.

However, as frequently discussed with you, your long-term investment risk should not be narrowly defined as return volatility but by how confident you can be about your return expectation over your investment horizon. In the case of fixed income, knowing the yield on the bonds you are investing in gives you a very good idea of what return you will earn over a period one to two years short of twice the duration of the bond portfolio you are acquiring.[1] US Agg 10-year compound pa returns have historically ended up two-thirds of the time within 70bp of the yield at the start of each period, a range that is much narrower that what would be implied by the historic volatility of these returns, or of cash returns. In the case of cash, we do not have an obvious manner to project the future T-bill rates at which cash will need to be rolled over. However, we do know the track record of economists like us making 10-year out forecasts of T-bill rates, and it is not very good.[2] Blue Chip Economic Indicators has surveyed 50-60 economic forecasts at major US banks, insurers, asset managers, government departments, and academia twice a year since 1983 on their views of the development of the 3-month T-bill rate over the next 10 years. Since 1983, the T-bill rate had a volatility or standard deviation of 1.88%, but forecasters had an even larger root-mean-square forecast error of 2.6% for the 10-year out average T-bill rate. This indicates to us that long-term investors need to assume that the return on cash over the next 10 years will have greater uncertainty than that on the overall US bond market.

With bonds generally offering a term premium on top of cash, their long-term return over their long-term risk is thus significantly higher for bonds than for cash. It helps explain that long-term investors will generally have little in cash and much more in bonds.[3]

Implication for strategic investors: if you want to reduce risk, you are better off holding bonds that mature around the times you want your money back than in adding cash, as the bonds will generally produce a higher return and there is less downside risk on them than on serially investing in cash over that period.

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2. Was Charlie Munger right in not finding diversification important?

Charlie Munger, Warren Buffett's alter ego at Berkshire Hathaway, died a few months ago just short of reaching 100 years of age. Munger was a much-admired investment thinker, and many of us have learned a lot from his sayings and writings. But that does not mean we agree with everything he said. Or better said, some of his wisdoms apply more to himself and are not immediately good advice for the rest of us. One of these issues of contention is the issue of **diversification. Are Buffett and Munger right on diversification being just protection against ignorance**, and that it makes little sense for anybody that knows what they're doing?

In our view, it made sense and worked for them to hold very concentrated positions in just a few companies that they thought would produce superior returns based on the price they paid for them and the strong competitive positions these companies had in their industries. At the same time, Warren

1. See *Long-term forecasts: Update January 2023*, Jan 6, 2023.

2. See *How good are long-term forecasts?*, June 14, 2022.
3. *Will Americans continue to love equities?* Feb 21, 2024.

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Buffett has frequently also argued that for over 99% of investors it makes more sense to invest in a low-fee SPX tracker and not to trade in and out.

Buffett and Munger at Berkshire Hathaway have had a remarkably superior performance (10% pa over SPX since 1965) investing in companies on which they did extensive research and made sure to buy them when they were cheap. Quite plausibly, they are just superior minds that very few of us can replicate, and the rest of us thus just have to rely on wide diversification to achieve normal market returns to risk.

That said, empirical analysis[4] through 2011 has been able to "explain" Berkshire's superior return as the result of buying companies with value, stability, and quality characteristics, enhanced with cheap leverage from being an insurance company. Since then, though, Berkshire has stopped outperforming, earning a return quite in line with the S&P 500. This supports the view we expressed before that "all alpha has a sell-by date."[5] That is, Buffet and Munger have been quite open about their approach to investing and have created a global following that produced a plethora of books and analyses of their performance. With their "secret sauce" made public and so many investors following their approach it should thus not be totally surprising that their alpha would eventually be arbitraged away. And having fewer opportunities in the market to apply their value approach may explain why Berkshire Hathaway has held on average 15.5% of its assets in the form of cash since 2011.

Implication for strategic investors: In conclusion, we feel comfortable with our view and recommendation that long-term investors should start off with a globally diversified portfolio and only deviate from such a strategic allocation on the basis of strong views and objective information.

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3. Do seven centuries of falling real bond yields indicate further drops in bond yields in coming decades?

Ken Rogoff, Barbara Rossi and Paul Schmelzing wrote a paper this past summer on Paul's database on real interest rates going back seven centuries.[6] Yes, seven centuries, not decades. They find that real bond yields have been trend-declining since 1400, issuing a clear warning to people like us who have been arguing that the trend decline in real bond yields over the past 40 years is over and that we will likely see somewhat higher real bond yields over the next decade.

Rogoff and his co-authors do not attempt to explain why real yields have been declining for so long, leaving that to future research, but they do briefly mention that this may reflect a steady decline in the risk of default on sovereign bonds. We think that is the real reason. There were barely any sovereign states with stable tax revenues six or seven centuries ago with the new emerging banking houses of the Medici and Fuggers taking a lot of risk by lending to the wars of their local princes that would only be repaid if they won that war and kept their head in the process.

By the beginning of the last century, the major developed sovereign states acquired the right to collect taxes on income and founded central banks, both of which dramatically lowered their risk of default. And indeed by that time, **since WW1, real bond yields have actually been rising on average**. Rogoff and co-authors also found that major deviations of real yields from this trend decline were always quickly reversed. By their work, real bond yields in the developed world are now below where they see this new upward trend and if anything point to a bit higher levels than the 2 ¼% we think is the long-term average for US Treasury real yield in this coming decade.

Implication for strategic investors: We feel comfortable that both the seven-century long slide in real bond yields and the more "recent" four-decade slide are over, at least for the next decade, largely because of the rise of the dis-saving elderly cohorts and rising fiscal pressures. We do not want to extend this prognosis much further into the future as there is simply too much uncertainty that far out.

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4. Manager selection risk is the hidden risk of buying alternatives

A lot of institutional and high-net worth investors have been piling into alternative assets, especially private equity, private debt, infrastructure real estate, and hedge funds. Some of the attraction of alternatives is an expectation of higher returns (not our focus here), or a smoother return pattern as these assets do not have a ready secondary market and are instead valued by the manager on their projected ultimate cash flow. Or investors are simply trying to get exposure to part of the economy that they cannot reach via the public equity and

4. *Buffett's alpha*, Frazzini, Kabiller and Pedersen, NBER working paper 19681, Nov 2013.
5. *Long-run trends in long-maturity real rates: 1311-2022*, NBER working paper 30475, July 2023.
6. *What have I learned so far on strategic investing?*, Dec 5, 2023.

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bond markets.[7] The latter makes sense.

Our main point of contention here is that when assessing the risk on alternatives and comparing this with the risk on exchange-listed stocks and bonds, buyers and marketers of alternatives, by our impression, tend to obscure one important source of risk, which is what we would call **manager selection risk**.

With public equities and bonds, you can gain full and low-cost access to the asset class with a simple ETF or mutual fund, and you can analyze their returns and volatility with plenty of data. Returns will be compared with the those on alternative assets, properly adjusted for any survivorship bias. Risk is much harder to assess on unlisted asset classes as the lack of a liquid secondary market means one can only figure out any downside to one's return expectations after a fund has been unwound and any remaining principal and dividends have been paid out to the investor. This problem is well known, and there are ways to produce unsmoothed volatility estimates similar to those on listed asset classes.

One source of risk that we see little debated in discussions on the relative merits of public versus private assets is that it is **very hard, if not impossible, for all but the largest investors in the world to get the same full access to the private asset class as one can get to public markets through a single ETF**. In the alternative world, you need to invest with one or a few managers, and there can be a big gap between the return your portfolio will earn and the one of the full private asset or hedge fund market. One needs to consider this "manager selection risk" as an extra source of potential downside when investing in alternative assets. Alternatives are no panacea. Caveat emptor.

Implication for strategic investors: When making a choice between public and private asset classes, one should judge private-asset risk not simply by the long-term return volatility of the two asset classes, adjusted for smoothing, but one needs to account also for the "extra tracking error," or "manager selection" risk, on the private asset funds one invests in.

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5. Does liquidity have value?

Yes, and no. Liquid securities have generally lower yields than less liquid ones as trading-oriented investors and those with quite uncertain spending needs will prefer them. Liquidity clearly has value for tactical investors and **traders**, and is a necessity to them, as they are trying to produce returns from exploiting shorter-term movements in markets.

But is this ability to go in and out of markets at low cost of that much **value to long-term investors, many of which should be considered "buy-and-hold" investors**? Most individuals save for old age, decades from now, while sovereign wealth funds invest for the next generation or longer.

In principle, liquidity gives you the option to trade, but not the requirement. **In Finance, it is considered self-evident that all options have value** as there is no requirement to exercise them if it would lead to a loss. Their value will be close to zero if it has a short time remaining to exercise and is quite far out of the money. But they will not have negative value.

This argument, however, **assumes we all behave rationally**. There is enough evidence in Behavioral Finance that many of us do not always behave rationally and are liable to such biases as anchoring, loss aversion, regret, and overconfidence, the latter in particular with respect to our ability to time the market. As a result, in our mind, many individual investors tend to "abuse" liquidity by trying market momentum, in the process **buying high in a bull market and selling low in a bear market**.

Implication for strategic investors: Having liquidity is a bit like working at home and having a fully loaded fridge nearby. The ability to snack or to trade at will generally lead to overeating and overtrading. Controlling our overeating and overtrading by limiting our ability to do so, by not having a full fridge nearby, or by **investing in less liquid assets such as private equity or credit**, or having it **managed by somebody else who is told not to trade, is worth a lot,** in our opinion.

Watch the video on jpmm.com, or on LinkedIn.

6. What impact from the rapid rise of target-date funds?

What should we think of the rapid growth in target-date funds in the US and their impact on markets? Target-date funds try to apply the classic Rule of 100 according to which your equity allocation should be 100 minus your age. If you are Jan's age, that means 30% in stocks, 70% in fixed income. If you are Alex's age, reverse these numbers. Instead of you adjusting your portfolio yourself each year that you are a year older, target-date funds do this for you. A target-date fund 2050, for example, will have a glide path with initially a high equity allocation that comes down each year based on your

7. There are 8.3 million companies in the US that have more than one employee. Only 3,647 of these can be accessed via the public equity markets.

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target retirement year of 2050. Generally, they seem be following more a Rule of 120 than 100.

Such funds have become the **main default of most US employer-sponsored defined-contribution pension plans**, such as 401Ks, since the 2006 Pension Protection Act. They are growing tremendously fast, to $3.5 trillion today,[8] 4 times what they were under 10 years ago, and making up now 12% of all US household pension savings, which include large defined-benefit plans.[9]

We can see several ways the raging popularity of these funds is impacting markets. One is that it **accelerates the move to passive investing** even as these funds can invest in active mutual funds, as a prime motivation for companies to introduce target-date funds among eligible 401K investments has been to meet pressure (and lawsuits) to reduce expenses to their employees. A second is that it **reduces market volatility** as investing mainly in one well-balanced fund reduces the temptation to chase the market when one holds many different asset types with diverging returns. In addition, target-date funds by mandate need to stay close to their target bond/equity allocation, which means they need to sell stocks into a rallying equity market and buy when stocks fall and underperform bonds. This helps stabilize both bond and equity markets.[10]

A third implication is that this selling on rallies and buying on market weakness implies a **weakening of the Momentum Factor** that quite some active managers still rely on. Finally, the combination of the growing prevalence of target-date funds and the large baby boomer cohort crossing into their 70s rapidly should over the next five to 10 years induce Americans to lower equity allocations from their current all-time highs in favor of fixed income and should be one factor that will keep US equities in single-digit return territory.[11]

Implication for strategic investors: Do not over rely on the Momentum factor and maintain a balanced portfolio between bond and equities and US and non-US assets.

Watch the video on jpmm.com.

8. *The state of the target-date market: 2024*, Sway Research.
9. 12% is calculated as the ratio of the $3.5tr Sway Research estimate of the target-date fund market over $28.8tr US households total pension entitlements estimate by the Fed's US Financial Accounts (Z1, Table L.101) for Q3 2023.
10 *Retail financial innovation and stock market dynamics: The case of target-date funds*, Parker, Schoar and Sun, NBER working paper #28028, August 2022.
11.We discussed this more extensively in *Will Americans continue to love equities?* Feb 21, 2024.

7. Will free-market capitalism solve the Climate Change problem just as it did with the dire warnings of "*Limits to Growth*" by the 1972 Club of Rome?

We keep hearing the argument that we should be more relaxed about the dire warnings of scientists about the end of the world coming, at least for humans, when climate change hits tipping points. People of Jan's generation recite to him how the dire warnings, over 50 years ago, by scientists in so-called *Club of Rome* turned out to be completely wrong. These scientists and economists used MIT simulations to project a significant fall in economic growth and living standards as the world would soon run out of resources and especially oil, given what they knew at the time of world reserves of these resources. Soon after the report's release in 1972, two oil crises pushed oil prices up by a factor of six, and suddenly oil companies had plenty of reason to prospect for and to find more oil, and consumers found it worthwhile to conserve on energy, such as by driving smaller, more fuel-efficient cars. **The free market, via its price mechanism, took care of the problem**.

Can't then a free market again take care of the next big problem – global warming – and find technologies to replace fossil fuels, pull carbon out of the air, and get us to net zero by 2050?

In principle, this might be possible, but for that we need to see a significant price movement that incentives the world to de-carbonize rapidly. We need a dramatically higher price, meaning a tax, on carbon emissions, which imply a much higher price on oil and gasoline. That is **not happening today**. And the growth of sustainable funds and some bankers no longer funding fossil fuels are unlikely to push fossil fuel prices up sufficiently versus renewable energy, in our mind. In short, the moral of the free markets beating the dire forecasts of the Club of Rome is not that we can again rely on capitalism to prevent the worst of Climate Change, but that we need a proper negative price – a tax – to get markets and entrepreneurs to help us adapt to global warming and mitigate its worst impacts. This price is not here today.

Implication for strategic investors: Climate change, global warming, and ever more extreme weather are to us realities that will likely become worse than the modal forecasts of scientists. Many investors have been positioning on this by buying into renewable energy, rare earths, and carbon capture technologies, among others, while excluding fossil fuels, but returns have not been impressive. We think they should also consider becoming more selective about the location of the assets they are holding as extreme weather makes relatively immobile assets, such as real estate and infrastructure, located

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closer to the equator or to the shore more vulnerable to extreme weather events.[12]

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8. Is the rise of passive investing killing price discovery and capitalism?

Has passive investing indeed fundamentally broken markets, as David Einhorn, founder of value investor Greenlight Capital, has recently argued. That at least was the headline. More precisely, Einhorn said that the dominance of passive investing has forced him to change his value investing approach as he no longer can simply rely on other investors pushing up the price of the underpriced stocks he bought. But there is indeed a valid question: who exactly will make sure that stock prices incorporate all known information about the company's future earnings if everybody passively invests in stocks and thus does not check what they are really buying. **Who will do the price discovery?** Will markets become very inefficient, or even random?

Einhorn commented that about half of stocks traded in the public market are owned by passive investment vehicles that are not doing the work of trying to properly price the assets they own. Quite possible, but do you really need millions of investors to do the same pricing work? We are not that worried, because if there are not enough active investors properly pricing the assets, there should be more mispricings, which increase the return value of value investing, and thus ought to bring in more active investing capital. We have not yet seen such evidence of higher stock picking alpha. Over the past few decades, the falling number of active equity managers beating the overall US large cap-market tells us, if anything, there were too many active managers and not enough passive ones. Hence, **we think we are far from having too many passive equity investors**.

Passive investing has also been blamed for **many other market "maladies,"** such as the **enormous concentration (Magnificent Seven), market bubbles, and momentum buying**. We do not agree. Passive investors by definition do not make bets on certain sector or individual stocks. They are passive. They will hold more of the sector or stocks that outperform simply because their prices go up after other, more active investors buy these sectors or stocks.

Einhorn also argued that flows into passive funds make them buy more of the stocks with the largest capitalizations than the smaller ones, seemingly implying that the latter fit more into the value category that he covets. Still, passive funds will need to buy the same percentage of the outstanding capitalization of each stock to remain passive, and to us it is not clear why this would push up prices of the larger caps by more than those of the smaller cap stocks.

The main accusation one might throw at passive funds is that by making it cheaper to own equities, they have probably contributed to the overall rise in equity multiples over recent decades. That does not, in our view, make passive investing responsible for market momentum or the emergence of bubbles.

Einhorn finally argued that the Value industry has been completely annihilated as money is steadily flowing into passive funds instead. To us, the weak performance of the Value factor in equities is more the result of a combination high fees in Value funds, economies of scale, and network effects in Tech that have greatly boosted Growth stocks and increased market efficiency and ubiquitousness of relevant information that has reduced the advantage of Value investors.

Implication for strategic investors: We do not think that markets are broken now but are functioning even better than before. Investors should not avoid passive funds, especially not among large caps as active managers do not have much left in terms of information advantages.

Watch the video on jpmm.com.

9. Are Stocks indeed best for the Long Run?

Are stocks still best for the long run? We are obviously referring to Jeremy Siegel's runaway best seller *Stocks for the Long Run*, first published in 1994 and now in its sixth edition. Siegel has repeatedly and consistently made the point that since 1802 US equities have beaten bonds 61% of the time in any particular year, but 92% in any 20-year period. The longer-term investor, which is almost all of us saving for old age, should thus be primarily invested in stocks. Since the first publication of Siegel's book in 1994, US households and nonprofits have followed his advice and have doubled the share of their assets allocated to stocks.[13]

In the last few years, though, economists have sought out more and better data on bond and equity returns pre-WWI

12.We discussed this more extensively in *Climate and extreme weather risk is not priced into US residential real estate*, Feb 26, 2024.

13.As discussed recently in our *Will Americans continue to love equities?* Feb 21, 2024.

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that raised returns on bonds and lowered equity returns.[14] These now show a near equal frequency of equities beating bonds and vice versa pre-WWII over 20-year holding periods. And similarly, more data for the rest of the world since 1900 have shown there also now more even frequency of higher bond or equity returns over 20-year holding periods. Hence, the equities-always-beat-bonds paradigm now appears more like **US exceptional for the post-WWII period**.

That said, it is not unreasonable to argue that today's equity markets and economies are quite different from pre-WWII ones and that the last 80 years of equity outperformance are more telling about the future than the pre-WWII period experience. Still, we think we are now **no longer talking about an economic "law" applying to all times and countries**.

Jeremy Siegel did not do that either, but many have interpreted it that way. To us, one should probably think more in terms of, say, 3 out of 4 odds of equities beating bonds over the next 20 years. By our models, from today's entry points, 10 years out, not 20, US equities have roughly two-thirds odds of beating US corporate bonds, with our expected returns of 5.7% on SPX and 5.2% on credit.

Implication for strategic investors: A good reason in our mind to hold a balanced portfolio of bonds and equities with the weights mostly a function of your age is the ability to absorb drawdowns. We do not think it is a good idea to be 100% in stocks, as some are arguing now.[15] That relies too much on equity multiples and profit margins rising a lot further, both from already quite elevated levels. And we think it is similarly a good idea not to put all of one's eggs into the US and holding non-US equities near market weights.[16]

Watch the video on jpmm.com, or on LinkedIn.

14 Edward F. McQuarrie, *Stocks for the long run? Sometimes yes, sometimes no*, Financial Analyst Journal, Nov 2023; *The US Bond Market before 1926: Investor Total Return from 1793, Comparing Federal, Municipal and Corporate Bonds Part II: 1857 to 1926*, March 2021, and *A Re-Examination of Stock Market Returns from 1871 - 1897: Did Cowles Get It Right?*, March 2021.

15 *Beyond the status quo: A critical reassessment of the life cycle investment advice*, Anakulova et al., Oct 2023.

16 Our latest strategic allocations can be found in *Top Ten Strategic Investment Themes for 2024 and beyond: It is all about the US*, Joyce Chang et al., Jan 9, 2024, and *Building Strategic Asset Allocation*, Oct 10, 2023.

10. Why is it that only Americans have fallen in love with stocks, and not those in other countries?

Why it is American investors have piled so much into stocks, while the rest of the world has not? Thirty years ago, in the early 90s, US, German, French, and Japanese investors each held some 10-20% of their financial assets in equities. Since then, US investors close to tripled their equity allocation, while the rest of the world did not change them, keeping allocations much lower than where the US households and non-profits are now. Why was that? Simply saying that Europeans and Japanese are culturally more risk averse does not do it for us as we doubt such cultural aspects would have changed that much over this time.

We can see three forces that pushed US equity allocation up versus the rest of the world: **Superior equity returns** combined with **home bias** and huge improvements in the **ease and cost of holding equities in the US that were not matched elsewhere**.

On the first two, arguing that this is all because the US equity market has produced double the return of non-US ones over the past three decades on its own does not cut it as nothing prevented European investors buying US stocks. But these higher US returns are likely part of the story, when combined with the reality that most investors have a significant **home bias**, favoring domestic companies that they know instead of being fully diversified into companies on the other side of the world that they may have never heard of. Today, US investors have some 82% of their shares in US companies.

With many investors not having precise views of what equity allocation they should have, the ~5% higher returns on US equities over US bonds then automatically raised their equity allocation, something that did not happen elsewhere given their much lower equity returns. With most people's return expectations driven by past performance, US investors would have become steadily more confident in their own markets, leading them to buy more and pushing up their equity multiples almost non-stop versus those in the rest of the world.

The second force is the **massive size, economies of scale, innovativeness, and utter competitiveness of the US financial market** that have relentlessly driven down the expense of owning shares and made it so much easier. One can now trade virtually for free and invest through ETFs with expense ratios of just a few basis points. The only other investable market of comparable size in the world is the Euro area, but its money management industry remains balkanized despite decades of efforts to create a single market in finance. As a result, the average European UCIT is 1/7th the size of the average US

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equity mutual fund and is thus much less able to spread its costs around.

Other local factors like taxation and regulations are probably part of the story, but from a top-down point of view, we think home bias plus superior US returns and a much more competitive asset management market are our prime explanation of why US investors have piled so much more into equities than those in the rest of the world.

Implication for strategic investors: US equities have outperformed the rest of the world in both the last 15 and 35 years to the point that the US now makes up two-thirds of the world market cap. Part of this outperformance is the 35-year long rise in US multiples against MSCI World ex US, which is in part explained by US investors dramatically raising the equity allocations over those years, especially to their own stock market, while households in the rest of the world did not do this. We resist strategically overweighting the US as we think an aging US baby boomer is set to reduce its equity allocation more than those elsewhere, and this should limit any further US outperformance. We are strategically market weight the US.

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The Long-term Strategist

What have I learned so far on strategic investing?

Long-term Strategy
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- **This note follows one I wrote 6 years ago at the end of my work tactical investing. It reviews where I get ideas from and what I have found to work or not to work in making profitable long-term investments.**
- **While all analysis needs to start and be informed by theory, it is empirical work – the data – I have found most informative.**
- **One satisfying result of looking at data is that I found it much easier to forecast long-term returns than shorter-term ones. It is also easier than forecasting long-run economic fundamentals, which fortunately one does not need to do as they show virtually no relation to long-term returns, which are instead defined by their entry IRRs.**
- **I have learned that longer-term portfolio risk, which is the odds and magnitude of being wrong on your return expectations, is different from and much lower than short-term price volatility. This is because knowing the price you pay for an asset class gives you a clear advantage to gauge its future long-term return and thus lowers the risk of disappointment on the eventual value of your portfolio.**
- **This in turn provides a great advantage to long-term investors, defined as owners of money who have no immediate need to spend it, are not levered, and are patient enough to absorb shorter term drawdowns. Long-term investors can make higher allocations to high-return, more volatile assets and can "harvest" illiquidity premia as liquidity should be less important to them. They should hold fewer safe assets, little cash and virtually no government debt, focusing instead on credit in their bond holdings.**
- **I find that the best strategy to invest for old age is to start with just two funds, a global equity fund and a broad credit fund hedged in one's home currency, stay fully invested with little in-and-out trading, economize on fees, and add just a few strategic overweights.**
- **Our world is not stationary and is subject to regime shifts and long-term structural trends that can inform over- or underweighting countries, sectors, or other asset types, but one should not wait until these changes have become consensus and thus in the price and instead act when they appear on the horizon as only serious risk scenarios.**
- **Despite the academic consensus favoring passive investing, most believers in passive funds – me included – are not passive in their asset allocation and too easily buy high and sell low. It makes sense to have one's SAA managed externally by somebody who uses an active but disciplined approach to allocating across asset classes and does not deviate much from it.**
- **Other ideas on the need for consistency (overrated); thematic investing (expensive and tends to happen when these assets have become overpriced); ESG (not a fan, but can tolerate impact investing); Alternatives (not that different from plain bonds and equities); and US exceptionalism (surprising given political dysfunction, but not yet fading).**

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Six years ago, as I transitioned from short-term tactical investment strategy to my current long-term strategist role, I wrote *What have I learned?* (10 Nov 2017). Six years later, I have been asked to write about what I have learned so far on strategic investing. As in the earlier note, these are my own thoughts and do not necessarily represent those of my fellow researchers nor an official view of J.P. Morgan Chase. Hence, I will frequently use of the term "I" in this note but will switch back to our habitual "we" when the lessons learned and work done are more a team effort of our *Strategic Research* group, that is headed by Joyce Chang.

Where to get ideas from?

Theory or the data? Where to start from, and what is more important, theory or empirical observations? Do we learn deductively from principles, or inductively from observations? To me, data without a theoretical framework mean nothing and easily give you nonsense correlations. But theory by itself is not enough, and if anything worse, as for every theory on how an event drives markets up, one can frequently build one with the opposite result. The supply of plausible theories in economics and finance is quite elastic and a lot more inexhaustible than the supply of empirical regularities. Hence, we need both theory, to guide us where to look for empirical relationships, and data, to test what theories find empirical support. **I tend to read pretty much only empirical research** in Economics and Finance.

Learn, and unlearn. I always thought that learning is *accumulative* in that each lesson would add to my understanding of the world. I hoped to become wiser as I studied, analyzed, and acquired more knowledge. But instead, I find now that for each new insight I gain, I learn that one or more old ones are no longer the case or may never have been fully right. In the end, I am not sure I now know more than when I began, unless I count also all the things I now know are not so. If the beginning of all wisdom is to know what you don't know, then I have surely gained a lot of wisdom.

Failures and disagreements have taught me more than any success or people agreeing with me. But this requires one to investigate why some advice did not work out and why other people do not agree with you. Despite its value, this is hard to implement, as we all prefer to forget and be quiet about what went wrong and prefer to talk with those who agree with us rather than with those who disagree. You thus need to push yourself to get out of your comfort zone, listen carefully and do not go immediately into a defensive mode. I have not always done this.

What to do when you're wrong? First, get used to it, as it won't be the last time. Even when I thought my logic and empirical support were spot on, there were many times other factors emerged that I had not foreseen. Second, don't be stubborn or double up until you better understand what went wrong. Similarly, do not double up when you've been right and have reached your target, as overextending can turn a gain into a loss. Finally, spend time understanding why your views were wrong. You learn more from errors than from being right.

When do you give up, or even switch sides? It's hard to put a time stamp on this, and more an issue of when you can explain why it went wrong and whether this factor is a long- or a short-term one. If the forces that you had expected to drive your view or trade arrived and prices did not move the way you expected, take your losses and don't make it worse. If something totally new happened that played interference with your view and you think this new factor will be short lived, stay with your view. If the idea or trade worked in many countries but not in the big one (US) that dominates global markets, you probably want to hold on. Similarly, if the loss is small and future potential quite substantial, as with our too-early view the dollar would gradually weaken over the next 10 years, hold on.

Do what you preach. Barring conditions where regulatory conflict-of-interest rules or different circumstances (tax, currency, financial objectives) keep an analyst from owning and trading the securities they analyze and advise on, it is a good idea for a strategist to apply to their own finances the advice they give to their clients. If it is good for your client, why should it not be good for you? You can learn a lot about risk, timing, and sizing, and applying the advice to yourself creates credibility. I frequently say "… and that is what I do", after having made sure this falls within the rules of permissible investments.

Everybody has an axe and wants to sell you something. Before I start writing on a particular question, I try to review what we call "the" literature, as there is no sense in trying to reinvent the wheel. And there is indeed a ton of published research by academic and financial industry researchers on any potential asset class and investment strategy, although not always on the more practical questions I get from clients. But whatever I read, I always ask myself why the author has written this piece, as we all have a purpose when writing investment notes. Financial researchers are not academic professors who are supposed to discover the absolute truth but belong to private organizations that have tasked them to help them make money. This applies to me also. And academic researchers also frequently consult with industry or try to stay true to earlier positions they have taken on. That is, we all try to sell you something. Caveat emptor.

How can one then find more objective analysis? One approach is to focus on analysts who have been studying the same field for a long time, as research is a "repeat purpose" business, and not just a single transaction. Analysts who are too much into "sell-mode" will not gather a loyal following and may thus not last very long. A second is to read analysts who do turn negative on their asset class from time to time. And a third is to read opposing views on a topic or asset class and make up your own mind on their relative merit.

What is risk? Since Harry Markowitz invented Modern Portfolio Theory, our industry has defined investment decision making in terms of just three parameters: expected return, risk, and correlation, or μ , σ and ρ. Risk should be the uncertainty we have around our expectations of future returns. σ should thus be defined by how you estimate μ. If markets are efficient, we can't really forecast μ except by looking at a long sample of past returns. Risk is then simply estimated as the standard deviation of historic returns, over months, quarters, or years. Our industry then makes the handy "iid" assumption under which returns are assumed to be identically and independently distributed over time. This allows us to gauge risk over longer periods through the square root of time rule as the volatility (σ) of the average return over n periods is then $\sqrt{n}*\sigma$. If asset returns mean revert over time, then risk over longer periods will be lower than this √time rule.

More important, going back to how we should think about risk as the probability and magnitude of being wrong in our return expectation, if markets are more predictable than the random walk hypothesis implies, then we can use current asset class IRRs to project future long-term returns and use the historic forecast errors as a better measure of risk for the buy-and-hold investor. This is a different meaning of risk than the classic volatility that our industry tends to focus on, and for plain bonds and equities, we have found this measure of how much uncertainty there should be on the eventual value of our portfolio will be less than half of what is implied by the √time rule. That is why I have argued that long-term risk is much less than implied by the extrapolation of short-term volatility. It is this finding that allows us to understand why it makes sense for the long-term (and typically younger) investor to hold more risky assets than older investors.

Isn't the long term too far out to say anything meaningful about it? Yes, and no. We do find that when economists (like me) try to forecast growth, inflation, or interest rates 5 to 10 years out, we make large and consistent errors that are larger than would be implied by the √time rule discussed earlier. That is, if our long-term forecasts were as good as our short-term forecasting, then our forecast errors for say *average* growth or inflation over the next 10 years should be like that of our 1-year out errors (measured by RMSE) divided by √10. It turns out they are significantly larger. But for the more important forecast for the long-term investor, which is future returns, we find the opposite as using the current IRR of plain bonds or equities gives us more information about future long-term returns than those over the next few quarters or year. Economic forecasting is much harder over longer periods, but long-term return forecasting is in my experience easier.

Consistency is overrated. As analysts, we feel very much we want to and need to be logical and systematic. Obvious as this seems, it does have its downsides. When in my more overconfident years, I thought I should set up or join a macro hedge fund to put in practice what I had learned, a friend who managed a very large fund advised against it. He warned me that logical analysts like me have not made great tactical investors as we get married with our models and logic and stick too long with them through thick and thin (i.e., major losses). In addition, consistency means that all our investment decisions will be highly correlated, and not produce much diversification. A good thing I followed his advice and stuck to my research knitting. As George Bernard Shaw said, those who can, do; those who can't, teach.

What to read? Aside from the news, I get a lot of insight from the FT, followed by The Economist and Foreign Affairs, focusing most on politics, geopolitics, science, tech, and companies. I do not read our competition, not on any view that it has no value (I assume it does), but if I start reading them, I will start following them, affecting, and informing my own work and I will then no longer offer distinct value to our clients. **Book-wise**, I read some economics and finance, but go mostly for history, geopolitics, physics (dumbed down to my level), paleoanthropology, language, and action-thrillers (when I need a break). I read anything by Kissinger and Harari, and books on how things have gone wrong in markets – so as not to get too overconfident – such as Kindleberger's Manias, Panics, and Crashes (1978), Minsky's Stabilizing an Unstable Economy (1986), Lowenstein's When Genius Failed (on LTCM, 2002) and Geithner's Stress Test (on the GFC, 2014).

What works and what does not?

I learned a lot here, but unfortunately the list of what I learned not to be the case is longer than new positive insights gained. The market is quick and murderous in arbitraging away high-profit ideas.

Respect the market. We should start from the assumption that the market reflects the collective weighted opinion of millions of investors across the world who have much at stake in avoiding being wrong. This is better than to assume that there is a lot of irrationality, emotions, and behavioral biases in markets. I am sure these are there, but they are not the right starting point to consider what to do in markets. I always start from the assumption the market is right as it reflects the wisdom of the crowds. Only then should one start to probe prices and see whether there are some obvious holes in them. Overconfidence that we know better than the collective wisdom of everyone else has been the downfall of many an asset manager and strategist, and I have felt its brunt many times.

Most alpha has a sell-by date. The goal of all active investors is to beat the market, which means earning a better return to risk (α) than simply passively holding a broad representation of global market outstandings (β) which one can do with two passive trackers, one on global equities and one on global bonds. Both as a tactical strategist years ago and more recently as a long-term one, I have been constantly searching through empirical research, both mine and external, academic or professional, for any relationship that gives decent odds of beating the market. Those that we found were ultimately due to either behavioral inefficiencies or structural segmentation that prevents capital from equalizing returns to risk across asset classes.

The problem is that I am not the only one reading or doing this work, and with greater capital mobility in the world and easier access to this research, the lifespan of any such alpha I (and others) discovered has become shorter and shorter. This does not mean that new ones will not keep emerging, but you must be fast with them, expect them not to last long, don't tell others about them, keep looking for new ones, and keep reinventing your systems.

I would say the life span of α ideas is getting shorter as shorter and information moves faster and more investors focus on the same strategy. Can I put a real sell-by date on it? Probably not. I do not think it is just months or quarters, but I suspect it is much less than 5 years. I would say that if a profitable strategy stops working for a year or so, it is probably time to call it quits.

KISS (keeping it simple) does work. KISS in investing means using a simple approach to choose an investing portfolio, starting with basic and clear objectives, holding just a few basic, globally diversified funds – such as an equity and a bond fund – that are easy to value and to judge risk and long-term return on, that are cheap to hold and easy to liquidate, while staying fully invested in them without a lot of trading around them. MIT's Andrew Lo, in his recent In Pursuit of the Perfect Portfolio, with Stephen Foerster, interviews 10 of the greatest thinkers in finance (6 with a Nobel Prize) and pretty much each of them points to holding a few simple, passive, long-term global investments as their perfect portfolio.

What is the best way to save and invest for a comfortable old age? Start early, stay fully invested, keep your eye on the long run and don't be distracted by shorter-term volatility, invest primarily in riskier, higher-return assets (equities), keep fees low, don't trade much, and keep it simple, with no strong reason to invest in more than two funds, a global equity funds and an own-currency, or global FX hedged, corporate bond fund. The old Rule of 100, by which your equity allocation should be 100 minus your age, is a good principle, but should probably be more 110 or 120.

Are Buffett and Munger right on diversification being just protection against ignorance, and that it makes little sense for anybody that knows what they're doing? Well, I'd say it made sense and worked for them to hold very concentrated positions in just a few companies that they thought would produce superior returns based on the price they paid for them and the strong competitive positions these companies had in their industries. At the same time, Warren Buffett has frequently also argued that for over 99% of investors, it makes more sense to invest in a low-fee SPX tracker and not to trade in and out.

Buffett and Munger at Berkshire Hathaway have had a remarkably superior performance (10% pa over SPX since 1965) investing in companies on which they did extensive research and making sure to buy them when they were cheap. Quite plausibly, they are just superior minds that very few of us can replicate, and the rest of us thus just have to rely on wide diversification to achieve normal market returns to risk. That said, empirical analysis through 2011 (Frazzini et al., Buffett's alpha) has been able to "explain" Berkshire's superior return as the result of buying companies with value, stability and quality characteristics, enhanced with cheap leverage from being an insurance company. Since then, though, Berkshire has stopped outperforming, quite possibly as their "secret sauce" was made public.

Is there really any solid argument for active investing? I would differentiate two types of active investing: one is security selection within a defined asset class, and another is asset allocation across different types of assets within a broader group. Think of the first as a manager of, say, a Euro area small cap fund while the second could be the banker who manages your wealth across asset types. There is a lot of empirical evidence that active security selection within widely covered asset classes does not add value, but I can see it working on very specific asset classes where information is costly to get and there are not a lot of analysts covering it.

Generating excess return from asset allocation across well-known asset classes should similarly be hard as there is not much privileged information. But this misses two important points. One is that the passive holder of an index tracker also must pay fees to cover the cost of a fund to track the index. More important to me is that the individual who holds a set of passive trackers on different bond and equity markets, in reality will frequently be switching around, and move in and out in an effort to time the market and move into hot asset classes, many of them thematic, on news that is not always informative on future returns. Believers in passive investing will demand that fund managers they invest in stick closely to their benchmarks but will not tend to apply this to themselves. Morningstar's latest report on Mind the Gap shows that the average investor in US mutual funds over the 10 years to end-2022 earned 1.7% pa less than the funds generated over the same period. "This shortfall, or gap, stems from poorly timed purchases and sales of fund shares,..." That is, mutual and exchange-trade fund investors tend to buy high and sell low. Given this tendency of many a retail investor (like me), it can make sense to hire a professional cross-asset manager who should be more disciplined than we tend to be, but make sure to limit their ability to deviate from your target SAA.

Does 60/40 still make sense? Yes, but it is really a personal decision. The classic 60/40 rule keeps 60% in equities and 40% in bonds. The risk reduction benefit from having bonds in your portfolio comes from both diversification due to low correlation with equities, and from the much lower volatility of bonds versus equities. I find the diversification part of the argument somewhat underwhelming, as it "pulls" the risk-return efficient frontier of bonds and equities only about 1/10th to the left (lower risk), whether we consider 1- or 10-year out risk. More important is the reduction in risk due to the lower volatility of bonds versus equities. If you have a lot of money, are not levered, and can absorb significant falls in your savings/wealth, then you should be primarily in equities and not bother too much with bonds. That is, go for 80/20, or 90/10. If, on the other hand, if you are near retirement and your investment horizon has shrunk, and (importantly) bond yields are again competitive with equities, as they are today, then 60/40 or even 50/50 does make sense.

But your equity-bond allocation is not just about risk, but also about return. When real bond yields were negative, up to some two years ago, one could be forgiven for thinking that any bond allocation did not make sense. By now, though, with the US equity market trailing multiple over 20x and its real yields then just below 5%, while the US Agg real yield is over about 2.75%, the equity risk premium is near its very long-term average, and a normal equity bond allocation does make sense now.

Do macro-economic fundamentals matter? Long-term investing should be so much more about the fundamentals than short-term tactical investing where sentiment, flows and positions surely matter a lot also. Or so I thought when I started long-term strategy. Well, that is where the value of testing everything comes in, as I gradually figured out the reality is the opposite of what I thought. When trying to forecast 10-year out returns on US bonds and equities, the only variables that allowed me to make relatively accurate forecasts were their starting yield, or IRR. I could find virtually no correlation with economic growth, inflation, or other macro variables that far out. In addition, we found that forecasts of such macro variables 10-year out came with much higher forecasts errors than one would expect from economists' ability to project these variables only 1 year out. Changes in views on macro variables 3-6 months out correlate well with asset prices over the short run. Macro is thus much more important in the short term than the long term.

Cycle versus Structure. A debate Bruce Kasman, our Chief Economist, and I have had for a very long time. Bruce is the cyclist. I am the structuralist. Are business cycles just volatility around long-term structural trends, to be ignored by the long-term investor, or do the here-and-there of current economic conditions always dominate, while secular forces are just ex-post averages of a number of shorter-term cyclical forces, that after the fact we give a name, as if we would have been able to see them in advance? The debate continues and is entering its 4th decade, which probably means reality is a bit of both.

Is our world stationary? I do not think so. Stationarity is jargon for a process whose statistical properties do not change over time. We analysts always hope that what we analyze is stationary, so that over time, we come closer and closer to fully understanding how it truly behaves. If it is not stationary, then we are constantly wondering whether any deviation from its mean level will eventually return to normal, or instead signals a break to a new normal level. I have always been looking at the world as a system that forever changes and is thus not stationary because **we all constantly learn and adapt**. Tomorrow, our behavior can be different from today, because tomorrow we have one data point more, namely what happened today. That was the idea behind the so-called Lucas Critique on which I wrote my dissertation over 40 years ago. Even long-term trends that look like exogenous events, such as demographics and climate change, are ultimately the result of the choices we all make over time, based on our own experience and what we have learned of the world.

Regime changes and long-term trends are useful ways to think about structural change. One problem with seeing a non-stationary, forever-changing world without any clear anchor is that it makes it much harder to judge what the future will bring. That is why we instead try to think in terms of longer-term trend changes in the parameters that describe economic behavior, or of more discrete *regime changes* where policy makers, and the people who vote them into office, at some point figure out that is something is not right in their world and change their behavior and objectives.

When to invest in regime changes or new trends? If you want to be certain that there has really been a regime change, you will need to wait for quite some time before you can declare it a fact as you need a lot of data to show there was a statistically significant change in behavior. The problem to the investor is that, by that time, the new regime will be in the price, and it is too late to invest on it. As a result, we must invest already when we see an increasingly serious risk of a regime change developing before it is fully in the price. This is how we have been writing about the risks of de-globalization, a return of antitrust, an end to the Great Moderation, a move to structurally higher interest rates, and de-dollarization (see library at the end of this note as well as our J.P. Morgan Perspectives series). You do run the risk this way of seeing more than will eventually become reality, but it has the advantage that you will be investing with the direction of the market as you will not be the only one seeing this risk of a new regime.

Not all known long-term trends are immediately in the price. When a trend is very slow and very much in the future, markets will have problems pricing in their impact as the present value of far-away events will be quite low compared with those of the here-and-now events driving asset prices and investor attention. One does not have to be short-sighted for it to be hard to invest on something that will not have a meaningful impact until say 20 years from now. Similarly, when the impact of such trends on economies and markets are not that obvious.

How to deal with the biggest and most threatening trend of all: **climate change**? There has been a rush into new technologies to produce zero-carbon energy or to capture carbon. Funds that chase these technologies have not been doing well as these companies tend to be very pricey. I find much less priced in on assets that should be doing badly on extreme weather events that will only get more frequent and more damaging in coming years. People, businesses, and real estate do not seem by running away from areas that, in my mind, are “sitting ducks” for the next firestorm, drought, heat wave, storms or flooding. If anything, movement seems to be more towards these locations.

But people will eventually move, producing massive migration flows that countries in safer places will have trouble dealing with. Borders will thus come back. The big winners here should be the countries that are best at integrating immigrants (countries across North and South America, Australia, New Zealand and to some extent the UK), relative to those reluctant to do so.

How to deal with **demographics**? My colleague Alex Wise did some great work on demographics with a panel study combing some 60 years and nearly 200 countries to gauge the impact of changes in life expectancy, age structure (how many old people) and fertility. Increases in life expectancy but not retirement ages led people to save and invest more, but savings grew more than capex. Aging societies dissave more than capex falls. Thus, expecting to live longer pushes down bond yields, while aging societies push up bond yields. The effect of living longer has dominated historically, but demographic forecasts suggest the latter force will dominate looking ahead. The effects of fertility changes were less relevant.

Thematic investing is one way that many investors position on a view of how the world is changing. Besides climate change and energy transition, these themes include digitalization, fintech, demographics, EM consumers, and so on. When we looked at such funds, though, we found they badly underperformed the overall market. Half of this was due to the high fees on such funds. The other half was that investors only really tend to buy such funds on evidence that they are indeed outperforming, which means that by the time they bought them, the assets the funds held were rather expensive and set to produce lower returns from that point on. The lesson here is investing on a widely held view that already has had a measurable impact on asset prices probably means you will be a bit late to the game. Better to start on a theme that is not yet consensus and can only be judged a serious risk rather than a done deal.

Stocks are not the same as GDP. One important aspect of your portfolio allocation is deciding what country to invest in. If you are not sure, just buy the world portfolio. But we all try to have an opinion about what is the right country or sector to buy. There is very little in the Finance literature on what are the better countries or sectors for a long-term investor, as our profession has not found much, if anything, to guide this decision. One temptation is to overweight the stock markets of countries with high economic growth. But I have not found that to work as high GDP growth does not by itself give you high EPS growth of the companies listed in that country. That may be due to volatility in profit margins and foreign earnings, and most importantly, the fact that higher growth may not come from existing companies but from new ones that one cannot buy on listed exchanges until they have gone public. Country and sector choices are very difficult long-term decisions.

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US exceptionalism in markets, with steady long-term outperformance against the rest of the world, has been puzzling many a strategist, including me. Many of us have been fore-casting an eventual end to high US returns, some based on value, others on its dysfunctional politics, but none of these arguments have left much of a mark. If US companies are so much more profitable or faster growing, then that should be in the price and not create further excess returns. I recently had to give up on advising strategically underweighting US-listed stocks as the drivers of this expected underperformance – Congressional gridlock, a return of antitrust, faster wage growth, and global coordinated corporate tax hikes – did not all come through, or turned out too feeble. I don't expect this US return exceptionalism to last forever but need to see the beginning of a turnaround and some clear forces bringing it about before cutting back on US asset exceptionalism. Given the already very high weight of the US in global outstandings, I feel no need to own even more (i.e., to overweight).

Does ESG and impact investing work? This is a tough one. All economic and financial activity imposes externalities beyond the confines of the transaction. It benefits investors *collectively* to try to reduce any negative externalities of their investing, e.g., on climate or social conditions, and to pro-mote positive ones. But this requires that we are all in this together and are clear on what we are trying to achieve. That is where the problem is. If we are not all, or almost all in this together, then other investors will free ride on our efforts and will arbitrage our efforts away. ESG investors aim to lower the cost of funding of activities with positive externalities and raise those with negative ones, but non-ESG ones can then do the opposite and gain from buying "cheap" (high IRR) negative-externality investments. The EU is hoping to reduce this problem by forcing all EU-based managers to invest in a sustainable fashion, but EU investors do not control enough of global capital.

A second problem with aiming to "do good" is how we define and decide what is good. The ESG approach is to create metrics that can guide investors towards funding companies and countries that have positive externalities and away from those with negative ones without requiring each investor to do the costly and intricate analysis of what companies and activities have positive or negative externalities. Once we agree on metrics, however, everyone who needs money will manage towards them, rather than try to achieve the objectives the metrics are trying to accomplish. Greenwashing is the typical result.

I am thus not that bullish in ESG investing and think it is really the government's job to create the right incentives, through laws, regulations, and taxation, to boost activities with positive externalities and increase the costs of negative ones. **I am more open to Impact Investing, where a motivated investor** with a clear vision of what they are trying to achieve takes substantial interest in a company where they can influence its behavior and thus have a real impact on environmental and social conditions.

Does liquidity have value? Yes, and no. Liquid securities have generally lower yields than less liquid ones as trading-oriented investors will prefer them. But is liquidity that much of value to a long-term investor? If our spending needs are uncertain, or we want to be able to jump in and out of markets at short notice, then yes, it has value. At the same time, as discussed above, we find that many individual investors "abuse" liquidity by trying to market time their investments and will tend to buy when the market is up and sell when it is down. i.e., **most of us tend to buy high and sell low**. It is a bit like working at home and having a fully loaded fridge nearby. The ability to snack or to trade at-will generally leads to overeating and overtrading. Controlling our overeating and overtrading by limiting our ability to do so, by not having a full fridge nearby, or by investing in less liquid assets such as private equity or credit, or having it managed by somebody else who is told not to trade, is worth a lot, in my own experience.

Are alternatives really an alternative to plain bonds and equities? To me, they are more an extension rather than an alternative to the public markets. A large part of what are called Alternatives are ownership of, or loans to businesses, buildings and infrastructure that are not listed on a public exchange. Hedge funds are, in principle, a more active way to trade public bonds and equities even as in aggregate their returns correlate well with their underlying assets. Commodities are different as they are not financial assets, but they are produced, traded, and sold by listed commodity companies. Alternatives are to me more an extension of the public markets, providing access to equities and credit of other issuers, rather than being a true alternative to them.

By not being traded on exchanges, they have no clear market price and are valued by managers on estimates of their earnings. Their posted returns are thus much smoother than those of the public markets. This provides some value to investors who are wary of high mark-to-market volatility. To me, being locked up in illiquid assets can also have value by preventing trading one's portfolio too much, which does not always raise performance return, as discussed above.

One extra issue is that it is much harder, if not impossible, to get full exposure to the overall alternative world, compared with how one can gain access to the full world public equity market with a single low-fee ETF. Owning alternatives thus exposes the investor to manager selection risk and to higher costs of monitoring and due diligence that need to be subtracted from expected returns. Alternatives are no panacea.

The Long-term Strategist

Ten more strategic questions

Long-term Strategy

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- ***How should you construct a long-term portfolio?*** Start with global bonds and equities, cut sectors, styles, countries that you believe will not deliver a good return to risk, and add those that will. There are arguments to cut unhedged foreign-currency bonds and government bonds. In equities, add sectors, countries, or styles you believe will outperform.
- ***Should a long-term portfolio still be overweight Health Care?*** The sector has outperformed global stocks by 1.3% pa since we advised the strategic OW early 2018, despite 1% pa underperformance in the US, where Tech outperformed massively. We maintain our long-term Health Care overweight.
- ***Can Financials perform well in a high interest rate world?*** Banks do well when interest rates are high but not when they are rising. Given real yields are near our long-term target, a strategic overweight on Financials is now justified.
- ***What is the end game with ever-rising US government debt?*** If debt growth remains uncontrolled, a debt crisis is the end point. The role of the USD as the world's reserve currency gives some leeway, but the US is not immune. The political will to shift to a sustainable trajectory will probably emerge when the government, households, and businesses cannot borrow at affordable rates.
- ***Does long-term investing make you rich(er)?*** The long-term approach to risk can deliver higher returns. Looking through higher frequency volatility allows a long-term investor to allocate heavily to high-return assets. They are also less likely to suffer from behavioral biases, buying high and selling low.
- ***Can and should a $100bn fund maintain a two-asset portfolio of global equities and local bonds?*** It's possible but owning more funds can help diversify against the risk of counterparty failures, particularly managers of funds. Exposure to more asset classes and funds allows alpha from active positioning. Large firms also need to be in primary markets and engaged with banks that underwrite new issues.
- ***How should one forecast real interest rates over the medium to longer term?*** The r* camp gauges the neutral policy rate using models driven by potential growth, then adds a term premium. The bond yield camp considers the supply and demand for capital, which leads us to think real yields have normalized.
- ***Do higher bond yields mean higher equity yields and lower multiples?*** In theory, yes; in practice, no. At moderate real bond yields, there is little correlation. Correlations were observed at higher real yields in the 70s and 80s.
- ***Do high Sharpe assets or trades have expiration dates?*** Yes. New high return ideas will keep emerging, but will have only a limited life span as risk capital will constantly exploit them, unless there is significant market segmentation.
- ***Why are there still assets with superior returns to risk within the bond world?*** In principle, higher returns to risk should be arbitraged away. But differences in capital requirements, taxes, and liquidity needs across types of investors will prevent the elimination of differences in returns to risk, such as between credit and government debt.

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1. How should you construct a long-term portfolio?

A good way to start is with the broadest definition of publicly traded global bonds and equities, and then cut assets that will likely not deliver a good return to risk in your particular circumstances, in terms of when you need the investment horizon, currency base, tax and regulatory requirements, amongst others. Then, double up on parts of the remaining portfolio that should offer superior returns to long-term risk.

Cutting out is mostly done in the fixed income part of the portfolio. For one, bonds denominated not in one's own currency add significant FX risk, without much increase, if any, in return. **Foreign-currency bonds**, thus, do not naturally belong to your strategic portfolio, unless you can hedge the FX risk at an expense[1] that is only a small fraction of the domestic bond yield. In addition, if you are truly a long-term investor – say 10 years out or more – and can absorb periodic drawdowns in your portfolio, then you probably do not need **government bonds, cash,** or even a particularly large allocation to fixed income. Broad credit funds denominated in, or hedged into, one's own currency, ought to suffice.

Adding holdings to create an overweight in certain desired sub-asset classes is largely done in the equity world, where you can buy certain sector, country, style or thematic funds that you believe will do better than the overall market. However, one ought to keep such strategic overweights relatively modest, and avoid constructing a portfolio that is very different from global outstandings, as we all tend to be overly confident in our ability to pick winners and losers in the global equity market.

Watch the video on jpmm.com, or on LinkedIn.

2. Should a long-term portfolio still overweight Health Care?

Over 5 years ago, we advised a strategic overweight on the Health Care sector in a global equity portfolio (Health Care: A Strategic Sector OW, May 11, 2018). **In those 5 and a half years, global Health Care stocks outperformed the market by 1.3% pa**, consisting of 0.6% pa underperformance in the US and 2.5% pa outperformance elsewhere.

US Health Care's underperformance is mostly due to the **massive outperformance of the US Tech sector**, which beat the rest of the US equity market by over 10% pa over this period, amplified by its near 30% weight in the large cap index. In the rest of the world, Tech also outperformed, but only by 5% pa, and with diminutive impact as, even by now, it does not even have a 5% weight in non-US equity outstandings.

In addition, last year's Inflation Reduction Act allows **US Medicare to negotiate prescription prices** in the future, which can have significant impact on profit margins as Medicare manages health care for over 63 million Americans. We had highlighted a risk of price controls 5 years ago, given the massive price hikes we had seen on certain drugs, but thought it would be offset by a new innovation wave in the industry. In the event, we did get innovation during Covid, but not high enough profitability for the overall industry. In the rest of the world, price controls on drugs have always been there.

All considered, we **maintain our long-term strategic overweight of Health Care**. Medicare price negotiations ought to be in the price by now, although with uncertainty about how much this will weigh on earnings, but it is hard to believe it will be of the same magnitude as it has been in the last few years. The diffusion of AI could be particularly promising to drive innovation in the sector. In their totality, these observations give us confidence in a strategic Health Care overweight for the next 5-10 years.

Watch the video on jpmm.com, or on LinkedIn.

3. Can Financials perform well in a high interest rate world?

As a borrow-short and lend-long investor, banks tend to perform well when interest rates are high, as they benefit from deposit rates falling below market short-maturity rates, and from their loan portfolio earning interest rates that float with market rates. In the US, we note that there has been a positive correlation between US Financials performance relative to the market with the level of real interest rates. Financials have typically outperformed the market when the 10yr UST real bond yield is above 2%, as it is today. Financials, however, do not perform as well when interest rates are rising as the long-duration position of banks will incur losses in their trading books and some losses in their held-to-maturity books which are unrecognized, but understood by the market. It is difficult to discern whether we have reached the new "equilibrium" level of interest rates in the US, but having risen nearly to our medium- to long-term target of a 2.5% 10yr UST TIPS yield, the current level of interest rates motivates a strategic overweight on Financials.

1. With expense, we mean the costs of managing the regular FX forward transactions needed to hedged FX risk back to one's base currency, beyond the natural forward costs that reflect the difference in interest rates between foreign and domestic currency.

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4. What is the end game with ever-rising US government debt?

If the growth of debt remains uncontrolled, a debt crisis is the inexorable end point. US deficits are high, despite a strong economy and low unemployment, not because we have politicians who cannot do what is "right", but because we, the voter, love to have our cake and eat it too. We love low taxes but also public goods and services, such as Medicare and Social security. In the meanwhile, US federal government debt keeps growing, seemingly uncontrollable, although it should more appropriately be called "uncontrolled."

This is putting steady upward pressure on interest rates and has pushed the 10yr real US Treasury rate much faster towards the 2.5% target we set last year for the end of this decade.[2]

To alter course, the US voter must demand that their representatives in Congress act, and either cut public services or make sure they are properly funded with higher tax revenues. We believe this will only happen when households and businesses "feel the pain" and understand there is indeed no free lunch. This is more likely to happen when they can no longer borrow at affordable rates; when home prices decline substantially as it is costly to finance a new home purchase; when companies are forced to lay off people to cut labor costs to offset the higher cost of debt; when savings lose their value when stock and bond markets fall due to a weak economy and high interest rates; when our cities and communities have to lay off teachers or police officers, as they lose access to the bond market or simply cannot meet the high interest rates; and, when our currency collapses with a loss of confidence in our ability to repay our debt.

Most emerging markets are familiar with such debt crises, which compel painful fiscal adjustments, sometimes after first defaulting on their existing debt to the rest of the world. Even some developed countries have been in such debt crises, the UK more than once, most recently just last year. The US is in the enviable situation that it issues the world's dominant reserve currency, creating some fiscal leeway. But that also means that it faces less pressure to reverse course early, before its fiscal situation becomes untenable. Japan, with more than twice the US government debt-to-GDP, has not yet endured much pressure as it finances it almost all domestically, with Japanese institutional investors not yet willing to play the bond vigilante role.

It is not easy to say what will induce Japan or the US to take concerted steps to control public debt, or when that will happen. **Arguably, the US is closer to that point as the bond markets are clearly putting heavy pressure on the government** with a ~3%-point rise in real long Treasury yields over the past 18 months. When that rise in yields does serious damage to stocks, the dollar, mortgage borrowers, and/or the overall economy, that may be the point at which US voters and their representatives will accept it is time for change.

Watch the video on jpmm.com.

5. Does long-term investing make you rich?

Yes. Or at least, it makes you richer than if you focus more on the short term. It is the long-term planning and approach to risk that allows a long-term investor to earn a higher return on their portfolio. It comes from **starting early, staying fully invested, and keeping one's eyes on the long run** and not being distracted or overly disturbed by shorter-term volatility and portfolio drawdowns that allows one to invest in riskier, higher-return assets.

The long-term investor should by definition focus on the further-out future when they will need to draw down savings, typically in old age, and should thus be motivated to **start saving and investing earlier** than those more focused on the near term. Starting just a few years earlier can make a huge difference for one's future savings giving the convex shape of a compound return curve. Somebody who put $1,000 a year for the past 35 years in the S&P500 (which earned 10% pa over that period), always staying fully invested and re-investing dividends, would have ended up now with ~$28,000 more than if they had started only 1 year later, and ~$120,000 more than if they had started 5 years later.[3]

By not needing their money over the short term, the long-term investor can afford to ignore shorter-term volatility and losses to their portfolio. This allows them to hold a portfolio with a heavy allocation to high-return assets, which will naturally have higher volatility. As we discussed in Long-term vs short-term risk (Feb 1, 2023), this shorter-term volatility does not fully translate into downside risk to one's ultimate savings over periods of 10 year of longer.

In the case of **bond portfolios** that track the overall market, over this long a period, early losses or gains in prices due to

2. See Long-term forces point to higher US bond yields, April 4, 2022, as well as our review of the debate on this forecasts in The debate on the long-term outlook for real interest rates, August 2, 2023.

3. For simplicity, these calculations assume the same 10% return each year.

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changing market yields will later be close to fully offset by changing coupon income. Your entry yield on your bond portfolio will be the return you will earn over the next 10 years, plus or minus 70bp with 2/3 odds, much less than what is implied by 1-year bond return volatility. In the case of **equity funds** that track the S&P500, knowing the current multiple – in various forms – allows one to make more accurate projections of 10-year out return than over the next year or than implied by annual volatility.

The old **Rule of 100**, according to which your equity allocation should be 100 minus your age, advising younger people to have a higher allocation to stocks than older people, does hold. And it creates a high probability that a high allocation to stocks will produce a larger savings pot when one needs it in old age than a lower equity allocation that somebody with nearer-term needs would want to hold in order to control risk.

Finally, by not having to react to, and to be overly concerned about, shorter-term market volatility, the long-term investor **should thus be able to stay fully invested** in the market, thus **avoiding one of the costliest traps of regularly adjusting one's portfolio allocations**, typically on momentum. Morningstar's latest report on Mind the Gap shows that the average investor in US mutual funds over the 10 years to end-2022 earned 1.7% pa less than the funds generated over the same period.

> "This shortfall, or gap, stems from poorly timed purchases and sales of fund shares, which cost investors roughly one fifth the return they would have earned if they had simply bought and held."

That is, mutual and exchange-trade **fund investors tend to buy high and sell low**. This report cannot say, but it is our presumption that an investor with a further-into-the-future need for their money should be more able to stay fully invested in their holdings than somebody who is concerned about making sure they have enough in the near term.

In short, a patient, disciplined long-term investor who starts savings and investing early, who keeps their eye on the distant future when they will need their money back, and who can absorb shorter-term market volatility, can afford to hold more higher-return, volatile assets and is less likely to buy high and sell low by frequently acting on perceptions of fear and euphoria that typify today's markets. In this sense, **long-term investing should make you rich(er).**

Watch the video on jpmm.com, or on LinkedIn.

6. Can and should a $100bn fund also maintain a two-asset portfolio of global equities and local bonds?

We have previously discussed the merits of "keeping it simple", even to the point of holding a simple portfolio of just two assets: a global equity fund and a local bond fund denominated or hedged into one's own currency.[4] In principle, a large institutional investor, such as a sovereign wealth fund (SWF) with $100bn under management, can construct a well-diversified global portfolio in this same way.

However, there are reasons that large institutional investors will want to own more funds. One important rationalization is to **diversify counterparty risk**, particularly with the managers of funds. Putting 70% of this $100bn in a single global equity fund is not easy as there are not that many funds of this size. This risk could be simply operational and liquidity risk, but could go as far as default risk.

Further, many large pension and SWFs aim to earn "alpha" return from active positioning in the market. To the extent that the information needed to beat markets is very special and local to the asset class, sector, or location of the assets (e.g., Latam local bonds), this fund will want to invest across a number of such specialized active managers, instead of a single active global manager.

Third, some of these alpha opportunities will come from very volatile markets where the beta return from owning the assets is not high enough to rationalize a long-term passive allocation. Commodities and FX probably fit this bill, as we argued in *Strategic investing questions, by the dozen*, Sep 26, 2023. But a fund manager who wants to earn alpha in these asset classes will have to be active in them and thus has to own some.

Fourth, many pensions and SWFs are active in **alternative markets**, such as real estate, hedge funds, and private equity and credit. In the publicly listed equity and bond markets, one can gain full exposure to the asset class with little tracking error and low costs by holding a simple passive index tracker. This cannot be done in the alternative world where any fund can easily produce a return that is some 10% points higher or lower than the overall market performance in any particular year. Judging the return to risk of alternative investing thus requires one to look not only at the risk on the overall asset class, but also to consider the extra manager selection risk. Reducing this requires one to invest in a number of different funds.

4. See *Strategic investing questions, by the dozen*, September 26, 2023.

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Finally, firms with large holdings and inflows will **need to be involved in the primary markets where new equities and bonds are issued**. To access primary markets, investors need to be involved with the major investment banks that underwrite new issues of bonds and equities.

Overall, the need to reduce counterparty risk and manager selection risk, and to access primary markets, and the desire for global alpha justify the presence of very large owners of capital in many more asset classes and funds than an individual investor, for whom a portfolio with as few as two funds should suffice.

Watch the video on jpmm.com.

7. How should one forecast real interest rates over the medium to longer term?

There is an ongoing debate in markets about how to best forecast real interest rates over the medium to longer term given the steady rise in rates over the past 18 months. Broadly speaking, there are two camps in this debate: the **"r* camp"** and the "bond camp". **The r* camp** is heavily populated by central bankers trying to estimate r*, the real policy rate at which the economy is in equilibrium, neither pushing inflation up nor down, using models driven largely by estimates of potential economic growth. To forecasts bond yields from there, one adds a term premium to this short real rate to compensate for the higher price risk of longer-duration bonds.

On the other side, the **bond camp** starts with longer-maturity bond yields, typically the 10-year maturity US Treasury note, and thinks of the short rate as that bond yield minus what they think the term premium will be. This 10-year bond yield is considered the core capital market price from which all other asset yields are derived by adding or deducting risk and liquidity premia. As the core price of capital, the bond yield is considered to be determined by the supply and demand for capital in an economy, which means ultimately savings and investment. Potential economic growth only plays a very subsidiary role here.

We subscribe to the latter view that the demand and supply for capital are paramount when considering the dynamics of real bond yields over the medium and long term. This formed the basis of our view, first stated 18 months ago, that the 10yr UST would reach a real yield of 2.5% by the end of this decade. The implied short *real* Fed funds rate, derived from this forecast for the 10-year bond yield, would be 1.1%, about twice as high as the current operating assumption at the Fed – yet another reason to think there is upside risk on inflation over coming years versus the 2% target.

The 10-year **real yield reached our long-term target of 2.5% much earlier than expected**. We see no reasons to raise our long-term target, though, and thus from here see a real 10-year bond yield moving up in a wide range over coming years. This is not a view that the bond yield will be stable, but only that one should expect a lot of ups and down around a stable, long-term mean of 2.5%.

Only two of the structural drivers that we saw putting upward pressures on yields – a **large US federal deficit and higher macro uncertainty/volatility** – have **"arrived" so far**. The other two major factors we saw changing the balance between savings and investment – dissaving by the growing number of the elderly in **aging** societies and massive capital investment needed across the world for **climate** mitigation and adaptation – are not reality yet.

The shorter-term cyclical factor driving up rates derives from the **surprising resilience of US consumers and business to Fed rate hikes**, quite plausibly because they have been able to lock in lower borrowing costs in the previous years. In addition, economic agents in much of the world have used the previous decade to clean up balance sheets and are thus now in much better financial condition to maintain their spending in the face of higher interest rates. The Fed will eventually get inflation under control, even as risk is biased to higher interest rates at the moment as core inflation seems stuck around 4%. But when inflation comes down, these shorter-term cyclical factors will fade, and bond yields will come down again.

Further out, we see yields rising again as the two structural forces pushing yields up – aging and climate – should then be asserting themselves.

Watch the video on jpmm.com.

8. Do higher bond yields mean higher equity yields and lower multiples?

In principle, yes; but in practice, no. In principle, we think of the 10-year US Treasury note as the core market in the world, around which all other assets are priced. Corporate bond yields are UST yields plus a credit spread to compensate for default risk and lower liquidity, while equity yields, the inverse of equity multiples, could be considered as the same UST yields plus an equity risk premium to compensate for higher equity return volatility. A multiple of about ~20x for the S&P500 gives a real equity yield of ~5%.

While this makes sense, it does not work in practice, or empirically. Over the years, there has been only modest correlation between UST yields and equity yields, largely restricted to the period of high and volatile inflation in the

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1970s and 80s, although there was a brief 2-year period, 2021-22, when the two correlated well in the US. More broadly, during periods of moderate levels of real bond yields, there was very little correlation in the US, and none to speak of in Europe or Japan. This year, US bond yields are up almost 1% point in real terms, while equity yields are down. Hence, one should not just extrapolate views on rising bond yields into higher equity yields and thus lower multiples. When projecting 10-year ahead returns, we find that present bond and equity yields are the most effective signals, so we do not attempt to forecast how equity multiples will change over time.

Watch the video on jpmm.com.

9. Do high-Sharpe assets or trades have an expiration date?

Yes, we think so. We argued a few weeks ago in our *Strategic investing questions, by the dozen*, Sep 26 (question 2), that there are not a lot of asset classes or trades anymore that offer *long-term* superior returns to risk as knowledge of these assets and/or trades nowadays spreads very rapidly and any superior returns are arbitraged rapidly in a world of ample capital availability and mobility.

That said, we need to be more precise and nuanced. **Risk arbitrage does not prevent the emergence of new superior returns to risk.** Instead, we mean that superior return ideas can and do emerge regularly in a volatile world with constrained market making, but that each such **superior asset effectively has a "sell by"** date as information and knowledge do not yet spread instantaneously, with those "in the know" fully motivated to keep the knowledge to themselves. This, therefore, leaves the advantage to the fastest money, such as those employed by some of the major hedge funds.

Investors who quietly do the extensive analysis needed to "road test" new ideas for high-return investing and who go through internal consensus building on such strategies are probably at a disadvantage against faster money. This is one reason why our view of a more volatile world has made and continues to make us advise holding some allocation to hedge funds in one's strategic allocation.

10. ... but are there not still assets with long-term superior returns to risk within the bond world?

There are some caveats, if not exemptions, to our above statement that superior returns to risk all have a sell-by date. Consider the historic Sharpe ratios on US HG Credit and Treasuries of 0.41 and 0.27, respectively since 1986. These ratios come from 2.15% and 1.02% pa excess returns over cash, and 5.22% and 3.80% vols of these excess returns. HG's higher return is primarily because over this time, it offered on average a 150bp spread over same-maturity USTs and lost only ~30bp due to downgrades of issuers into HY.[5]

Why has this considerable gap not been arbitraged way? We see two forces that are keeping this return spread so wide. One is **liquidity preferences** as more short-term oriented investors with leverage or uncertain spending needs are willing to give up return to gain from the much higher liquidity that USTs offer relative to corporate bonds. This difference in liquidity has only widened since GFC.

One can see this factor at work in the allocation of **governments' foreign asset holdings**. One part of these holdings, **central bank FX reserves**, that a country hold to pay for imported necessities or to pay off foreign debt in times of crises, will be almost all invested in the most liquid government debt in the most liquid markets. UST debt, which is the most liquid market in the world, makes up ~60% of global FX reserves, as a result.

The part of a government's foreign assets that it holds for future generations, the quintessential long-term investment through what are called **Sovereign Wealth Funds**, will for the most part hold only minimal amounts of foreign government debt, and instead hold credit, public equities and significant amounts of private equity.

A second factor that keeps the return on government debt depressed versus credit is **financial repression**, as regulators in most countries impose much higher capital requirements on credit on banks, insurers and defined-benefit pensions. And these three types of institutions have such large holdings of government debt that other investors not subject to these onerous requirements have not been able to bring the credit spread in line with the return to risk on USTs.

The implication is thus that investors with different liquidity needs and subject to different regulations, even with the same return expectations, can easily see very different returns to risk that will not be arbitraged away by the open capital markets.

5. It is very rare for an issuer to default while still rated investment grade. Losses are instead due to issuers with falling credit quality first getting downgraded into below-investment grade (high yield), with some but not all then eventually defaulting. The HG investor's loss comes from having to sell the bond at a below-par price when it migrates from HG into HY.

The Long-term Strategist

Strategic investing questions, by the dozen

Long-term Strategy

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- **Six questions on how one should put together a strategic portfolio and six on macro questions for the long-term investor.**
- ***How many assets do you really need?*** Two will do the job. One global equity fund plus one broad bond fund in your own currency, with you deciding the balance, should give return and diversification.
- ***Are there superior asset classes left?*** Not many, as everyone knows everything nowadays, with new knowledge on what assets have high Sharpe ratios spreading rapidly and getting arbitraged in no time.
- ***What kind of bonds belong to your strategic bond holdings?*** Bonds in your own currency, and credit, with safe government debt only appropriate for those with low tolerance to shorter-term drawdowns.
- ***How to resolve the entry point problem?*** The current price/IRR of an asset class is the best predictor of long-term returns but can change daily and would thus regularly change your SAA. An investor who does not use external managers will have to integrate TAA with SAA, while having to decide which they are better at.
- ***Do Commodities belong in your SAA?*** Not really, as they lack income. But they do have hedging and trading value.
- ***The extraordinary value of keeping it simple.*** Simple portfolios with few assets and basic valuation and investment rules make it easier to understand one's risk and lower the time and cost of managing money, without giving up much return.
- ***Is Climate Change now in the price?*** It is beginning to be priced in, more in pushing up green asset prices than in pushing down the price of assets located in areas at high risk of extreme weather damage. It is not too late to invest on Climate Change.
- ***Why care about high government debt/GDP ratios?*** We should in principle focus on interest payments to GDP – flow-to-flow – which still looks OK in the US. But it is better to look at debt/GDP ratios when bond yields move quickly.
- ***Is r<g enough to give us debt sustainability?*** No, as low interest rates in turn induce governments to overspend and overborrow.
- ***Can we forecast inflation and real asset returns over the long term?*** Not really, as inflation that far out depends on the average output gap, which we can't forecast. We can forecast nominal returns reasonably, but if we can't project inflation over the next decade, we cannot be precise about future real returns.
- ***What are our top long-term risks?*** Climate Change outranks any other risk. Lower, but still meaningful, are US/China, uncontrolled US debt rises, and AI. Most risks will push interest rates and volatility higher but the dollar lower.
- ***How does higher macro vol affect where you take risk?*** To us, it means, at the margin, more tactical risk taking and less strategic.

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1. How many assets do you really need in your long-term portfolio?

In principle, you do not really need more than two: a global equity fund and a broad bond fund in your own currency, with the relative amounts a function of your return needs, ability to withstand short-term drawdowns, and need to control long-term risk on your ultimate portfolio. This gives you very good diversification, clarity and simplicity on what you are holding, and high liquidity with minimum costs if held through passive funds, mutual or exchange traded (ETFs).

One could argue that your bond fund should be global, but that would add foreign-currency risk that is generally not well compensated. If you then have strong views on what asset types, countries, or sectors to have more of than is in these broad funds – say you fancy Technology – you can simply add a Tech ETF to these two funds. It is harder when there are certain assets you want to have less of, or not have at all – say oil companies. You would need a fund that excludes oil companies, but that may not exist if there are not enough investors like you who do not want to hold oil. If such a fund does not exist, then you will have to build a portfolio bottom up by trying to buy all the other sectors, for which funds will surely not all be available. Hence, it is much easier to execute overweights than underweights in a simple portfolio. In **short, you will do quite well with holding only two funds: a global equity one and a local bond one.**

Watch the video on jpmm.com, or on LinkedIn.

2. Are there any superior assets left that you should systematically overweight in a strategic portfolio?

We used to think so, yes. The Empirical Finance literature has found troves of high-Sharpe ratio assets that have high returns to risk and thus lie above the standard risk-return trade-off line of local-currency bonds and global equities, which is the standard of a simple, well-diversified portfolio. If markets are perfectly open, global, and frictionless, such superior assets should not exist, because everyone will buy them, bidding up their price and pushing down their likely future return, until they have been brought down to the global risk-return trade-off line, and are no longer a superior asset class. The opposite happens for assets with inferior returns to risk as nobody will buy them, pushing down their price until they move back up in return. We thus need market inefficiencies, as we call them, typically brought on by market segmentation, to produce superior assets.

We always thought this was the Holy Grail of strategic investing. And for years, we joined the search and testing of these high-Sharpe assets, in Value, Small Caps, Momentum, High Buybacks, and Fallen Angels, to name just a few (see the library of past issues of *The Long-term Strategist* at the end of this note). But it has gradually been dawning on us the last few years that the majority of these show a fading pattern of outperformance, doing well decades ago, but then not doing any better than the broad markets over the past 10 years or so. A most plausible explanation is that "everyone knows everything" nowadays and has access to the same broad Finance Literature. Academic researchers after all are paid to get their results published and not to hoard them. As all this information spread out and markets became ever more global, the excess returns on these high Sharpe assets almost all dissipated.

Hence, **we are now starting from a belief that there are very few superior asset classes left** and that you might as well just stick to a simple portfolio of a global equity ETF and a bond fund in your own currency. We will make an exception within fixed income in the query below, as there remain real segmentations in world markets by base currency, investment horizon, and tax rates, that will make certain bonds produce better returns to risk, as experienced by the investors, than other bonds.

Watch the video on jpmm.com, or on LinkedIn.

3. What kind of bonds should be in your strategic fixed income allocation?

In equities, we think you should start with a global fund, to get maximum diversification within the asset class. But that is probably not the case for fixed income. Most investors will want some fixed income to limit short-term drawdowns and to get some diversification. **Foreign-currency bonds do not help** in this regard because of the extra volatility from currency changes. One could argue that a sell-off in domestic assets should also depress the currency and thus create gains on foreign currency holdings, but we are not convinced such offsets are stable and can be relied upon. We do see a strategic case to include foreign-currency bonds when one's own bond market is very small and illiquid and one's currency is pegged, or stable against one with a much larger and more liquid bond market.

Within one's own currency bond market, there is similarly the question whether one should be exposed to all bonds issued in one's currency, or only some part of it. US municipal bonds, e.g., are clearly not for everyone as most are not taxable and they thus pay a low yield that makes no sense for an investor who does not have to pay US taxes.

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For different reasons, one can question whether a truly long-term investor should hold **government bonds** as these typically pay much lower yields than corporate bonds with a yield difference that is most of the time well in excess of long-term losses due to default. Government bonds do provide one advantage over credit in that the former have a much lower correlation with equities – frequently negative – than credit and thus provide better diversification, especially during recessions when equities can perform quite poorly. The investor who is quite sensitive to temporary drawdowns or is required by regulation to hold government debt does have a strong case to include default-free government debt in their bond portfolio. The investor who does not care much about short-term volatility and only about how much their portfolio will be worth years out when they need the money has no systematic need for safe bonds.

In short, we think **your basic strategic bond portfolio should be in your own currency and include government bonds only to the extent you are sensitive to shorter-term market volatility. The rest should be corporate bonds.**

Watch the video on [jpmm.com](), or on [LinkedIn]().

4. How to resolve the entry point problem?

Our most objective and accurate forecasts for what returns you can expect for any asset class over the long term depend predominantly on its current internal rate of return (IRR), which combines today's asset price with what is known of its income (promised coupons on bonds or earnings/dividends for equities). The problem is that tomorrow's price will likely be different from today's. Hence, tomorrow, our expected long-term return on an asset class can be different from the one we calculate today. Should this then not change our strategic asset allocation (SAA) daily? This clearly **clashes with the notion of your SAA as the stable anchor allocation that one should stick to over the long run.**

How does one resolve this conundrum? One approach is simply to only adjust your SAA on an annual, or bi-annual basis and thus ignore intervening price movements, to keep a cleaner separation between TAA and SAA. A **second approach** is to use a floating entry point to calculate future returns and to use, say, the average IRR over the past year or quarter instead of today's, which means that your expected return will not move much from day to day. You can then stick to reviewing your SAA only on an irregular basis. Neither seems quite right as you are ignoring the most relevant information on future returns, which is today's price.

A **third approach**, and the one I prefer, is to integrate value-based changes in your holdings with what is called tactical investing to make it, simply, "no-labels" investing. Any changes in your asset allocation would be a **combination of changes based on long-term expected returns and expected shorter-term movements in markets**. These two signals could easily clash as tactical moves are generally more momentum driven, while SAA changes should be based on value and are thus really anti-momentum. When an asset's price is cheapening, the long-term investor will want to hold more, but the momentum-driven one may want to sell instead as what goes down tends to go down further, at least in the short run. Which will dominate should depend on the strength of each signal, and how good you consider yourself on making short- versus long-term calls. This will at times lead to a certain inertia in one's trading where an asset class going down in price versus others may lead you to want to sell on negative momentum, but your long-term calculations tell you the asset is now cheap and your SAA wants to hold more. This may seem like the proverbial "bunny frozen in the headlights," not knowing what to do, but is quite rational when you are receiving opposing signals.

This is not to say that a separation between strategic decisions makes no sense. It is most appropriate when there is **more than one decision maker** involved: the ultimate owner of the money and the asset manager hired to manage typically one part of the money around a strategic benchmark chosen by the ultimate owner. **Combining short- and long-term signals, or strategic and tactical considerations, make most sense when they are decided by the same owner of the money.**

One major **caveat** in this combo approach is that the investor must be honest and **clear about where their knowledge really lies**. The danger is that many of us tend to over-rate our ability to call the market short term. It is our perception that the most successful investors over time tend to be the ones that base their decisions on what they can be quite confident about, which is generally the yield/value of an asset or asset class and its historical long-term relative performance. Hence, a "realistic" individual investor is in our mind probably best off sticking with long-term value-based allocation and to ignore the temptation to trade the market on short-term beliefs. The general perception that "retail" tends to buy high, after a market has rallied for some time, and sell low, after that asset class has gone through severe losses, would be consistent with many of us overrating our trading skills. To leave tactical trading to the professionals is probably not bad advice.

In short, the entry-point problem is that your SAA depends on expected long-term returns that depend on the IRRs of asset classes, which can change day to day, implying more frequent changes in SAA than is consistent with its objective of serving as a stable anchor to one's investments. For the

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individual investor who makes her own decisions on how to invest, this suggests merging tactical and long-term value considerations into one combined approach. The larger investor who uses professional asset managers for different parts of their holdings will more likely want to stay with the TAA/SAA separation and only make SAA changes on an infrequent basis.

Watch the video on jpmm.com, or on LinkedIn.

5. Do commodities belong in a strategic portfolio?

In principle, No. **Commodities are "stuff"** and not financial assets like bonds and equities that generate income from coupons or dividends. Most investors hold commodity exposure through futures that can earn income from rolling from the expired to next contract. However, over the very long run, this roll income has been more negative than positive.

Commodity prices are **very volatile** and, yes, they can, in the short run, produce gains that beat financial assets. They are thus a good asset for trading, but to invest in them longer term, you need to have reason for them to produce a return competitive with equities, which have about the same volatility. With our valuation-based models projecting ~7.0% annual return on the S&P 500 for the coming decade, commodities with no income need to double in price over the next 10 years to be competitive.

Over the last 30 years, the commodity complex has earned only 1.3% pa in dollars, less than any other major asset class. But their huge volatility and sustained medium-term momentum did produce 10-year periods of double-digit gains such the 1970s when oil prices rose tenfold, or the pre-GFC decade when China entering the WTO pushed up the broad commodity price complex by a factor of 4. It is not impossible that oil, which is the main component of broad commodity indices, doubles in price in the coming decade, but it requires an active view that many could disagree with.

If not on straight return, **can commodities be a good diversifier,** or **hedge against long-term risks?** Simply by historical experience, not really. Commodities have a positive correlation with equities, ~0.4, unlike the negative correlation of US bonds with US equities, and bonds at least pay decent income nowadays.

Commodities do correlate positively with inflation, which threatens real returns on assets, but this correlation and thus hedging value are about the same for real estate, which again at least produces good income.

That said, we can see some strategic value for exposure to **food prices** and to metals important for the move to renewable energy in case of an acceleration of climate change and adverse weather events.

In short, without direct income from holding commodities, **they are not a good fit for your strategic portfolio, although they have value for tactical trading and as a hedge against extreme climate change**.

Watch the video on jpmm.com, or on LinkedIn.

6. The extraordinary value of keeping things simple

Our industry does seem to love complexity and to abhor simplicity. The more complex the financial world is seen to be, the more managers, analysts, traders, consultants, regulators, and risk managers feel they add value and expect to be paid. But there is a lot of benefit to the ultimate buyers of financial services and products to keep things simple.

For one, one should not buy assets that are too complex to be easily understood as the risk is then that the asset will not be appropriate for one's financial objectives. Second, the fewer the assets one has in one's portfolio, the **easier it is to judge risk** on them, the easier it is to gauge one's exposure, the easier it is to manage one's portfolio, and the **less time it takes**.

Time is indeed money. And probably the greatest benefit of simpler products is that they are **cheaper**, in terms of management fees and the costs of buying and selling them. Simpler products that are well understood by everybody will likely also be more liquid. The simplest investing rules, like "buy and hold" and do not move assets around much, are also easier to follow, save on taxes and other transaction costs, and reduce the trap all of us are at risk of falling into, which is to sell when markets have been going down a lot and to buy when they have been going up (i.e., the risk of buying high and selling low). Finally, we have found that the **simplest valuation rules**, like using an asset class IRR, bond yields and equity yields, or mean reversion in real exchange rates, have had a much better record in judging future long-term returns than more complex systems.

Overall, then, we feel that **keeping things simple in finance, fewer assets, simple valuation rules, simple investment rules, is an underrated strategy** and one that too few of us actively pursue as the mainstay of their strategic allocation.

Watch the video on jpmm.com, or on LinkedIn.

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7. Is climate change now in the price, as everyone knows that it is serious reality?

Should Climate Change by now not be priced, and is it then not too late to start or still be investing on this theme? After all, everyone by now should know about Global Warming, even if there is some disagreement about its causes and whether we can do something about it. And indeed, we do find that scientists' forecasts for rises in temperature and sea levels made from the 1970s on are pretty much on track 50 years later, when looking at the trend rises in each. However, scientists' forecasts are not always followed closely by investors, nor are they necessarily believed as many may think of them as Cassandras that should have more faith in the ability of the capitalist system to find solutions to problems like global warming, when given an incentive to do so.

Investors do not have to be ignorant, short-sighted, or irrational for having ignored these risks in past decades. **It is hard for markets and companies to price in events one to two generations out**, or to make very long-term investments, even if they could be of huge impact, as discounting them to the present makes them usually of much smaller value than the here and there of the present.

Still, when we look at research on whether Climate Change is priced in, we find **some evidence** here and there that the market is by now starting to look at which assets will gain, and which will lose from accelerating climate change. But we think we are very far from fully pricing in Climate Change, probably because many have been thinking for some time that this remains a far-into-the-future event that new technologies will be able to address.

As a broad generalization, there seems to be **more upside than downside priced in from Climate Change** as buying a particular "green" asset in a specialized long-only Climate fund will push its price up more than not buying others that will be hurt, mostly because there are many more of the "others." One frequently hears that green assets have become quite expensive.

On the downside, with Climate Change creating greater extremes in weather that do massive damage around the world, one would expect that assets, such as real estate, located in areas with higher risk of damage from flooding, hurricanes, tornadoes, wildfires, drought, or mud slides would be priced much lower than those with lower such risks.

Again, we see a little here, mostly driven by higher costs of insuring one's property in high-risk areas, but overall, not that much. There is some evidence that sovereign borrowers and municipalities in high weather risk areas now must pay a risk premium over those with lower such risk.[1] But we have not seen a dramatic enough repricing of real estate by weather risk as Americans have in recent years on net migrated *toward* areas with higher risk of adverse weather, rather than away from it.[2] Much of this is probably because the federal government and a number of states have been taking measures to protect property owners from the escalating cost of insuring against the damage from extreme weather events.

In short, we **do not think that Climate Change is fully in the price yet** and are most worried about assets located in higher risk areas do not seem to have priced in that much yet.

Watch the video on [jpmm.com](), or on [LinkedIn]().

8. Why do we care about a high debt-to-GDP ratio?

A high government debt-to-GDP ratio is frequently seen as a dangerous development that merits concern for long-term investors. We do not disagree, but for a different reason than is usually argued. One of the first lessons we learn in Economics is **not to compare a stock with a flow**. Only compare flow with flow or stock with stock. Debt is a stock measure of outstanding liabilities. GDP is a flow measure of economic activity during a year. Hence, they do not compare properly. Better to compare debt with the present value of future GDP flows – both are stock measures – **or the flow of interest payments on debt with GDP** – two flow measures. Each of these ratios involve interest rates, in the former as a discount rate to calculate the PV of future GDP. And over the past decade, with real interest rates on government debt almost always in negative territory, neither of these flow or stock measures by themselves gives much reason for concern for the largest advanced economies.

In principle, if a government can borrow at a negative real rate of interest, any public investment with zero real return is worth pursuing. Admittedly, much of recent deficit spending was not really on public investment. And government did use cheap funding indeed to run up spending and cut taxes, **with**

1. In Pricing of climate risk in financial markets: A summary of the literature, BIS Papers No. 130, Dec 2022, Eren et al. conclude that "While studies find that these risks are starting to be priced, concerns are growing that current prices do not fully reflect the risks."
2. See e.g., Migration towards environmentally risky areas: a consequence of the pandemic, Freddie Mac, Nov 9, 2022; Americans are flocking to wildfire: A US migration story, Dec 8, 2022; Redfin reports migration into America's most flood-prone areas has more than doubled since the start of pandemic, July 24, 2023.

the US raising its total federal debt held by the public from ~40% to ~100% of GDP the last 15 years.

Even today, the US government is paying less than inflation on its debt. What is to worry then? The reason we should indeed worry is that interest rates can be quite volatile, as we have seen the last year and a half, and do not really mean revert but can keep on going and going. And they can change a lot faster than governments can change their spending and revenues. Hence, when a government, or a private entity for that matter, uses the good times of cheap money to load up on debt, any sustained rise in interest rates can quickly raise interest payments, raising outstanding debt further, which makes investors more worried, making them demand a high interest rate, and so on, with a borrower falling into a **doom loop** of higher rates creating more debt that pushes rates up even higher, producing a debt crisis. That is indeed how Emerging Markets borrowers have gotten into trouble time and time again.

The maturity of US federal debt has averaged about 5.5 years over the past few decades and is today only slightly higher. It thus does not take that many years for higher rates to push up the total cost of federal debt. That is why we and the US CBO are quite worried about the inability of the US Congress to curtail spending or raise taxes or voters not electing people to Congress that credibly commit to cut the deficit. **We thus see this looming US debt crisis as a force to keep pushing US – and global – interest higher over the coming decade.**

Watch the video on jpmm.com, or on LinkedIn.

9. Is economic growth exceeding the level of real interest rates enough to produce debt sustainability?

In the classical models, r<g is all you need to reduce debt-to-GDP, but it comes with two major caveats that have recently been reality. One is that it requires a government to have a primary budget balance, that is, a balanced budget excluding interest payments. That has surely not been the case in the US, because of caveat number 2, which is that governments should not be using the ability to borrow at low interest rates to load up on debt, which is exactly the understandable temptation. Hence, do not try to judge debt sustainability of government by comparing its real cost of borrowing with the growth rate of its economy, as a lower rate than the growth of its economy is exactly the time when a government will want to load up on more debt.

Watch the video on jpmm.com, or on LinkedIn.

10. Can we forecast long-term inflation and real returns?

Well, **not really**. We have tried and have not come up with anything quantitative that works for inflation. And that is probably because theory tells us that inflation rises when the economy is operating above full capacity and falls when it is operating below. But over the next 10 years, one ought to assume that at least on average, the economy will be operating at capacity.

We have models to forecast economic growth, but how do we know that is faster or slower that its potential? Our profession is not very good at forecasting changes in the supply side of the economy. Since 1979, the US *Blue Chip* Consensus of some 50-60 US economists have overpredicted US inflation 10-years out, each time by an average of ¾%.[3]

Our Chief Economist, Bruce Kasman, always reminds me that over the long run, inflation is a policy choice, but how do we then forecast what choices will be made by policy makers and the voters and broad society that appoint them? Are we still in a world where central banks are almost exclusively focused on inflation, or will jobs growth, financial stability, and government borrowing costs get a larger weight than they have the past few decades? We think so but can't give you a model on this and thus can't say "You have to believe me." We think about an average rate of 3% in the US for the next decade, with US inflation breakevens giving us only about 2 ¼%.[4]

What does this mean for forecasting the long-term real return on asset portfolios? Real is nominal minus inflation. We can reasonably project nominal returns 10 years out, but if we can't do inflation, that leaves us up the creek, as they say. Many pension funds have a real return target, frequently ~4% + inflation, as in Canada and Australia. We think it is tough on them. We can see why they hold a lot of real estate and infrastructure where revenues are indexed to inflation, but for the main part of their bond and equity holdings, they will simply have to make an "assumption" on inflation.

In short, **No, we do not think we can reliably forecast long-term inflation and real asset returns.**

Watch the video on LinkedIn.

3. See our paper on this in Long-term economic growth forecasts, Oct 10, 2022.
4. For more details on this view, see the Macro risk cluster discussed in our long-term risk paper: Top long-term risks and what to do about them, July 18, 2023.

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11. Top long-term risks

You all must receive at the start of each year strategists' lists of that year's Top Risks. We had a good look at what we see as top long-term risks that can affect markets over the coming decade. There is some overlap with the usual short-term risks, but most are quite different.

None of these risks will be unknown to you, and markets already price in the average investor's views of their odds, timing, and impact. But in many cases, we think they have higher odds and more adverse impacts than is priced in. Ordered from most impactful to markets to least, for us they come from **Climate Change and the destruction of Nature, worsening US/China tensions, a Tech/AI boom, aging populations, weakened inflation control, DM government debt crises, domestic polarization, and post-GFC market structure**.

The majority of these risks, Tech excluded, by our reckoning, bring **higher interest rates, upward pressures on prices/ inflation, a weaker dollar, lower growth, EM underperformance, and higher macro and market volatility and risk premia**. This world benefits the active investor. If realized and more extreme than expected, these forces will likely give us somewhat lower nominal returns on the global bond and equity market than their current prices suggest. But most of the impact would be on the different performance of countries, regions, sectors, and asset classes.

Investors concerned about these longer-term risks should overweight bonds up to five-year maturities, cost-efficient macro-active managers, domestic banks, Value, Tech, inexpensive green/sustainable assets, agriculture prices, and inflation linkers against global benchmarks and should underweight longer-duration bonds, JPY, SEK and CHF bonds, the US dollar, P&C insurers, and assets located in areas with higher flood, heat, fire, storm, or droughts risks, which includes a lot of EM.

Watch the video on jpmm.com, or on LinkedIn. Read the paper.

12. Does higher macro volatility tell you anything about where you should take risk?

How does Macro volatility affect where and when you should be taking risk? We have been arguing to you that we are likely in a period of sustained higher macro volatility than we have seen in previous decades, likely caused by instability of the central bank's control functions – NAIRU, r*, the Phillips curve – some de-globalization, a probable return of the dual mandate of the Federal Reserve, making it less exclusively focused on purely stabilizing inflation, and raising the focus on jobs.[5]

To us, that gives higher, short-dated macro volatility, also market volatility, and that ought to translate into higher long-term uncertainty too – although not one for one. Hence, the long-term investor, seeing somewhat higher long-term risks, should be less purely focused in equities. More tactical investors seeing higher short-dated volatility now at least have the necessary condition in place, not by itself a sufficient one, to make better returns from tactical risk-taking. As we see already, hedge funds have done very well here.

So, we conclude by putting it a very simply: **higher macro volatility gives you more tactical risk-taking, less strategic. We would call it less SAA, more TAA.**

Watch the video on jpmm.com, or on LinkedIn.

5. See Where are we in Regime Change? Macro volatility, deglobalization, and secular rise in yields, Nov 8, 2022.

J.P.Morgan

The Long-term Strategist

Is thematic investing worth it?

- **A broad set of 1,000 thematic ETF/mutual funds that operated during all/part of the past 16 years underperformed global equities by 1.4% pa.**
- **Thematic funds charge on average ~55bp more in expenses than a passive global equity portfolio that covers both DM and EM.**
- **They are overall high beta, with a focus on future growth, but are also negative alpha, maybe as they pay high prices for "hot" stocks and themes.**
- **High expenses and negative long-term alpha suggest the universe of thematic funds does not belong in one's strategic asset allocation. However, selecting funds that incur less than 1% cost gives the investor even odds of outperforming.**
- **Thematic funds can be used to tactically position on an emerging theme.**
- Video.

Long-term Strategy
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Thematic investing has become very hot, with the asset class close to tripling in size in just 2 years.[1] Much of this is likely due to a growing sense that economies and markets are going through a number of "gut-wrenching" paradigm shifts that investors should prepare for.[2] Thematic investing aims to do this by only holding stocks that are expected to directly benefit and outperform from a specific secular force, or "theme", that is seen to be structurally changing our world.

Thematic investing is intrinsically long term and thus quite different from standard tactical asset allocation (TAA) where a manager picks sectors, countries, and individual securities that they expect will outperform the overall market in coming months or quarters. It is also different from systematic risk premium investing where managers choose asset styles -- such as the classic trio of Value, Momentum and Size -- that have proven over time to deliver a higher return to risk than the broad market.

There is clearly some overlap between TAA and thematic investing as active managers will also use ideas and stories about how the world is changing to try and beat the market over the shorter term. A thematic fund is different in that it typically focuses on a single, unchanging theme, generally ignoring others stories or ways to beat the market. Similarly, there is overlap between thematic and risk premia investing[3] as in the case of a high-buyback strategy where a fund only buys the shares of companies that have been buying back a certain amount of their shares in recent years.

[1] Morningstar Global Thematic Funds Landscape, May 2021, and Fig. 1 on p. 2.
[2] It is with this in mind that we started focusing regular issues of our sister publication, J.P. Morgan Perspectives, on paradigm shifts. See Joyce Chang et al. Paradigm shifts: what lies ahead?, March 2019 and subsequent issues.
[3] We analyzed such high Sharpe ratio asset types in previous issues, such as those on Value, small caps, buybacks, and fallen angels.

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In this paper, we investigate **whether thematic investing indeed helps investors beat the market.** We accept, but do not analyze the potential of thematic funds to hedge the impact that these secular forces could have on one's broad economic or financial conditions

Where to find a theme?

There is no shortage of potential themes that one could focus on. But they all are **forward-looking** and foresee a **change in economic or industrial structures from what was there before**. Thematic investing explicitly does not look at past returns, but envisions a structural change that will make future relative returns different from what was seen before, allowing the investor in this theme to outperform the broad world market. Hence, new themes emerge when there is change in spending and investment patterns, such as those engendered by demographics, regulation, climate change, the pandemic, geopolitics, and technological innovation.

What are typical themes?

There is no single agreed upon classification of the different types of thematic funds that have been launched in recent years. The most popular themes involve technological innovation/disruption and the energy transition in response to climate change. Morningstar, e.g., in its May 2021 Global Thematic Funds Landscape provides a 3-level taxonomy of thematic funds, starting at the top with Technology, Physical world (such as energy), Social (demographics and politics), and Broad, which is essentially "Other".

How to build a thematic portfolio?

Building a thematic fund portfolio requires selecting the assets that are set to benefit/outperform from the realization of a selected theme. If the theme is, e.g., the move to electric vehicles (EVs), then the fund will include companies involved in the manufacturing of electric cars, electric batteries for cars, and the electric grid to charge these EVs. There is clearly a lot of judgment required in deciding what companies are in or out as almost all car companies produce both gas-fueled and electric cars. Thematic funds range from those that use pure discretion to decide what assets fit a particular theme to those that are largely systematic. Systematic funds generally determine their allocations by tracking a thematic index, managed by an index provider. But the manager can also use their own rules on how to match assets with a particular theme. All major equity index providers offer a wide range of such thematic indices.

On the systematic side, we can highlight the work of our Equity Derivative Research colleagues who have been using their **QUEST** (QUantitativEly Selected Theme) framework to select the right stocks with any chosen theme. They do this by using their 'Smart Buzz' thematic engine to identify the key words and phrases belonging to a target theme, and then use machine learning methods on alternative data, in particular news-based indicators, to search for companies associated with that topic[4].

Is ESG Thematic?

ESG investing is to us **not per se** thematic and we are thus excluding it from our analysis, even as there is clearly some overlap with it. At its core, ESG investing aims to broaden the objectives of a portfolio beyond narrow financial risk and return, by incorporating Environmental, Social and Governance metrics. Most simply, ESG aims to have *impact* on the world by investing in a manner that improves environmental, social and governance conditions in the world, ultimately to the benefit of the people whose money it manages[5]. Thematic investing to us aims to earn superior returns without raising risk by exploiting structural change in societies and economies.

Performance

Our premise is that thematic investors want to beat the market. **But do thematic funds help them do that?** An alterative to buying a thematic fund would be simply to create tilts to one's strategic portfolio that reflect a view on such themes. As put succinctly by Morningstar's report on thematic funds, in order to beat the market, the thematic investors must (1) select a theme that indeed represents a future structural change in markets and economies; (2) choose the right assets that will benefit from the realization of this theme; and (3) make sure the theme is not already fully priced into these assets. To this, we would add the thematic investors must select a portfolio that will beat the market by enough to offset the extra expenses that most thematic managers charge.

One approach to analyzing the return on thematic funds is to follow the thematic indices that many such funds track, an approach we have used frequently to test the performance of

[4] AI and Big Data Approach to Thematic Investing: Identifying themes and selecting stocks via NLP, Kolanovic et al., June 18, 2020, and: Thematic Investing Handbook Global Outlook and Key Themes, Kolanovic et al., June 10, 2021.

[5] J.P. Morgan Research has extensive ESG content that can be found on our ESG website. See also most recently our J.P. Morgan Perspectives, ESG 2022: Energy Crunch challenges Net Zero transition, Joyce Chang et al., Dec 16, 2021.

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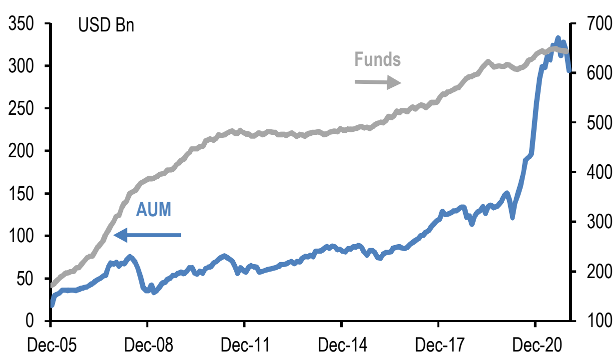
risk premia investing. We are reluctant to go this route here as the construction of such funds will differ from one index provider to the other, given the many diverging ways that one can build a stock portfolio on a particular theme. In addition, some thematic indices are back-cast to before the index launch date, creating the risk that the index constructions was optimized over its past performance. Also, investors need to account for fund expenses that are not included in index returns. We, therefore, prefer to look at actual thematic mutual funds and ETFs.

The data

We start by collecting the ~2,000 funds that Bloomberg indicates are thematic. From these, we exclude those that are clearly ESG, as discussed above, as well as those that appear mostly regional or sectoral in focus. This leaves us with 1000 funds that have return data at some point since 2005[6]. Funds come and go, with managers trying out new thematic ideas and then closing the ones that do not attract enough funding. The majority of the theme categories we are looking at had funds that were already live at the end of 2005, where we thus start our return data. At the end of 2005, we had 173 live funds, with $18.5bn under management. Figure 1 shows how AUM grew by a factor of 16 from that point to $295bn at the end of 2021 with still 643 funds operating, when global equity capitalization grew only by a factor of 3. Only 93 funds were operational over the full sample since 2005.[7]

Figure 1: 1000 Thematic funds, AUM and number

USD billions, number of active funds at each point, 2005-2021



Source: J.P. Morgan, Bloomberg Finance L.P.

Tables 1 provides a summary overview of our thematic fund sample with the number of funds in each theme, category returns, return vol, expense ratios. Table 2 offers a brief descriptions of each theme. The theme designations are our own creations, but are very similar to those we have seen in other papers on this topic.

Table 1: Thematic funds

number, ratio, %, 2005-2021

Category	No. of funds	Expense ratio	Return (%)	Vol (%)
Infrastructure	166	1.21	7.3	16.6
Sustainability	149	0.93	7.1	16.4
Disruptive Technology	144	0.75	12.1	19.9
Natural Resources	132	1.12	3.5	21.6
Islamic	101	1.39	10.0	13.4
Ethical	83	0.80	7.5	17.4
Other	76	1.03	7.1	18.0
Clean & Renewable Energy	62	0.76	4.2	24.7
Health Care Innovation	30	0.95	4.6	17.5
Mega trends	25	0.92	5.8	18.1
New Consumer	22	1.40	6.8	20.9
Cannabis	17	0.77	-1.3	56.1
Thematic 1000	1005	0.95	6.6	18.0
MSCI AC World Index	N/A	0.4	8.0	15.9

Source: J.P. Morgan, Bloomberg Finance L.P. Cannabis funds only since Apr 2017.

Returns, risks and expense ratios for each thematic category and the overall asset class are calculated on an AUM-weighted basis, similar to how the major market indices calculate returns on a capitalization-weighted basis. Investors may not want exposure to each fund, or may not want to hold more of a fund simply because others pile into it, boosting its AUM. But AUM weighting is the right thing to do when one wants to assess the returns and risk of the full asset class held by the population of all investors[8].

How do we deal with **newly launched funds** and those **that are closed** and paid out to shareholders? We deal with these in the same way as the broad equity and bond

[6] We find that the term 'Thematic" is used quite expansively, if not loosely, with many funds labelled as thematic where we could not really find any link to clear secular/structural forces separate from sectoral or regional designations. We thus felt we needed to "hand check" each fund until we had just over 1,000 funds that we felt comfortable can be considered thematic.

[7] In comparison, the much broader population that Morningstar categorizes as thematic had 1,276 surviving funds as of March 2021, with $595bn in AUM.

[8] Two other ways to calculate returns are equal weighting and total return weighting. The first takes the simple average of each fund return over each period (month or quarter) as investors may indeed put equal initial capital in each fund, but then unrealistically assumes investors constantly rebalance from high to low return funds, which is costly given high transaction costs. The problem can be reduced by letting the weight of each fund grow by its cumulative return, but does not eliminate it as new funds are launched regularly.

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market indices are calculated. Newly launched funds enter each thematic index at the start of each month, with existing funds making "room" through dilution, and we delete the funds that have been closed.

Table 2: Thematic categories descriptions

Theme	Description
Infrastructure	Infrastructure, human or physical capital development, smart cities
Sustainability	Low carbon target, environmentally friendly, fossil fuel free, climate change, companies that lead to a sustainable future
Natural Resources	Natural resource companies, energy, oil & gas, wind, nuclear, generation, transmission and distribution of power, mining
Disruptive Technology	Automation, AI, Big Data, Robotics, Blockchain, Fintech, E-commerce, Digital/Cloud Infrastructure, Internet, Cybersecurity
Islamic	Shariah law compliant or Islamic principled companies
Ethical	Refrain from tobacco, alcohol, gambling, weapons use socially responsible investing in any way, promoting gender equality, women leadership, excludes ESG
Other	Trends like Pop Culture, Travel and Leisure, Defense, Military, Gig Economy, Media, Buybacks, Fallen Knives, New China A shares, SOE/PSUs, Online retail
Clean & Renewable Energy	Clean Tech, Energy Efficient, New energy economy, Electric and Autonomous Vehicle and Battery, Mobility
Health Care Innovation	Biotech, Genomic Advancement, Medical or Heath care breakthrough, Biopharma, Immunology
Mega Trends	A mix of two of more of these thematics, multi-themes/trends
New Consumer	New Consumption trends in EM; millenials
Cannabis	Marijuana use related, follow a Marijuana Index

Source: J.P. Morgan, Bloomberg Finance L.P.

Is **survivorship bias** present in our data? Survivorship bias emerges and artificially boosts returns when return data are reported voluntarily by managers who have an incentive to "forget" about funds that did not perform well. In our data base, though, the funds are either ETFs that are traded on exchanges which report all prices, or are retail mutual funds, Sicavs, or Ucits where return reporting is public and a regulatory requirement. There are many more institutional and over-the-counter thematic funds where survivorship bias can be present, but these are not covered by our analysis.

Relative Performance

Table 1 showed that the thematic asset class significantly **underperforms** the world equity market, represented by MSCI AC, which covers both EM and DM markets. Weighted monthly by AUM, our Thematic 1000 portfolio earned 6.6% since end 2005. Over this period, the MSCI AC index itself earned 8.4%. This comparison is somewhat "unfair" as our Thematic 1000 returns are after management fees and other expenses, and market index returns do not include such expenses. The largest ETF -- ACWI -- that passively follows MSCI AC currently reports 0.3% as the expense ratio. Since the inception of this ETF on March 26, 2008, it has underperformed the index by 40bp, so it is in our mind a fair assumption that over our sample period from 2005, global investors would have paid ~40bp in expenses to have passively invested in MSCI AC. We thus use in our analysis throughout an **8.0% MSCI AC net of expense return** since 2005 as our metric of the return on the global equity market.

Including expenses, our portfolio of Thematic 1000 funds thus **underperformed a passive global equity portfolio by 1.4% pa over 16 years**.

What explains this negative "alpha"? One reason is the **higher expenses** of holding thematic funds. At an AUM-weighted average of 95bp, against 40bp to hold a global equity portfolio over the past 16 years, thematic funds thus charged **55bp higher in costs**, which accounts for 40% of their underperformance.

Looking at relative **performance over time** similarly shows how thematic funds steadily lag the broad public equity markets. Figs 2-3 show the cumulative total return of our Thematic 1000 and MSCI AC (after 40bp expenses) since 2005 as well as the ratio between the two. The ratio shows that thematic funds outperformed modestly over a 6-year period until 2011, then lost some 25% versus global stocks until the eve of the pandemic, rebounded in 2020, but gave it again back in 2021. The two surges in thematic funds versus global stocks came during the equity market selloffs in 2007-08 and 2020, quite possibly as investors first sell their more liquid non-thematic holdings. The later thematic rally in 2020 was quite plausibly related to the massive capital gains in one EV stock.

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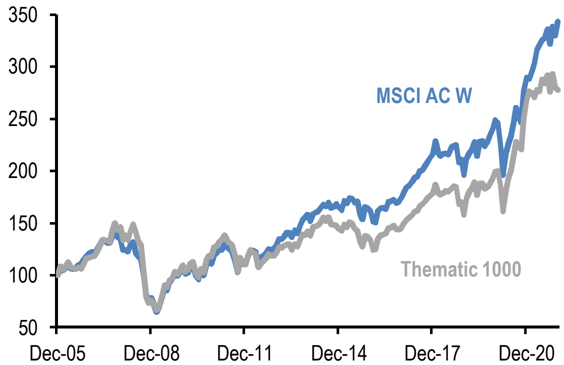
Figure 2: Thematic 1000 funds and MSCI ACWI cumulative total return
2005 = 100



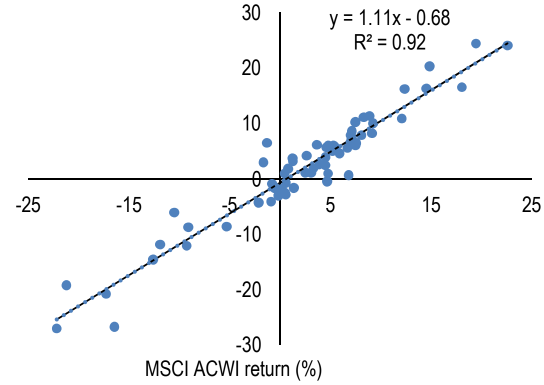
Source: J.P. Morgan, Bloomberg Finance L.P.

Figure 3: Thematic 1000 funds and MSCI ACWI cumulative total return ratio
2005 = 100

Source: J.P. Morgan, Bloomberg Finance L.P.

Thematic outperformance during broad equity market sell offs could indicate that they consist of a lot of low-beta stocks. However, we find no support for this. Figure 4 below regresses quarterly returns on our Thematic 1000 against global equities (MSCI ACWI), to produce a classic market line. We find that thematic funds actually were **high beta, at 1.11, with a quarterly alpha (intercept) of -68bp, which compounds to -2.7% pa.**

Figure 4: Thematic 1000 *quarterly* returns against MSCI AC
%, 12/2005 to 12/2021.



Source: J.P. Morgan, Bloomberg Finance L.P.

The higher than 1.0 beta is likely because some 39% of the current Thematic 1000 AUM are in the Technology Disruption category, with many other companies also having a bias to tech companies. A different sector composition is thus probably not the reason for thematic fund underperformance. MSCI AC currently only has a 24% weight in tech. If we recalculate the return on MSCI AC with the same tech weights as our Thematic 1000, then the underperformance rises from -1.4% to -2.0%.

Without a clear factor to explain thematic fund underperformance beyond their higher expenses, we must guess at the probable cause. Remember that for a thematic fund to outperform, it must target a secular force that is indeed getting momentum; select stocks that properly represent this force; and buy assets where the theme is not yet priced in. **Our guess is that the last requirement, the asset price, is where the problem is**. If fund managers really purely randomly choose “phantom” themes and randomly choose stocks to represent them, then their portfolios would consist of randomly selected stocks and over the long run should perform on par with the broad equity market, after expenses. While difficult to prove analytically, our guess is that thematic funds get launched and attract a lot of inflows when certain themes become "hot." This suggests that thematic funds pay high prices for the stocks they select as they buy companies in sectors that fit the hot theme and where the theme is fully priced in.

Should you hold thematic funds, and, if so, which should you hold?

In principle, there is nothing wrong with buying a thematic fund as a way to express a view, or hedge a scenario of a secular change in economies and markets. The question is whether such funds indeed represent

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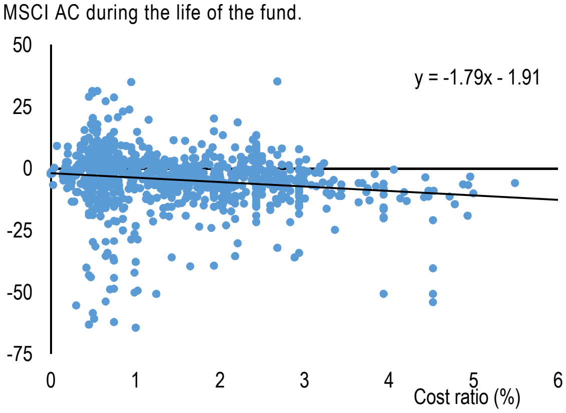
such themes well, select the right securities and do all this at an acceptable price. As discussed, the fees on these funds do not help performance. But one has to be careful not to judge each and every fund by the performance of the overall asset class.

There is to us no necessity that selecting the stocks that present a particular theme has to cost 55bp pa more than a passive global fund. We would thus advise selecting the funds that are either passively tracking an established thematic index, at low cost, comparable to other passive tracking funds, or that are using their own algorithm to select such fund and charge less than 1% pa for this.

Indeed, at the fund level, we do find a **negative correlation between individual fund expenses and their excess return to index**. Figure 5 shows a scatter of our 1000 thematic funds' expense ratios against their excess return over index over the life of each fund, which differs from fund to fund. The figure shows a beta of excess return on expenses of -1.8, implying that each basis point increase in expenses lowers a thematic fund's excess return by 1.8 times as much. There is similarly a positive relation between expenses and the share of funds that outperform the market. Of the funds that charged over 2% for expenses, only 17% outperformed the market while a much higher share of 42% outperformed when the funds charged less than 1% in expenses.

Figure 5: Thematic fund excess returns over global equities against fund expense ratios

1005 funds, %, 12/2005 to 12/2021, excess return of each fund over MSCI AC during the life of the fund.

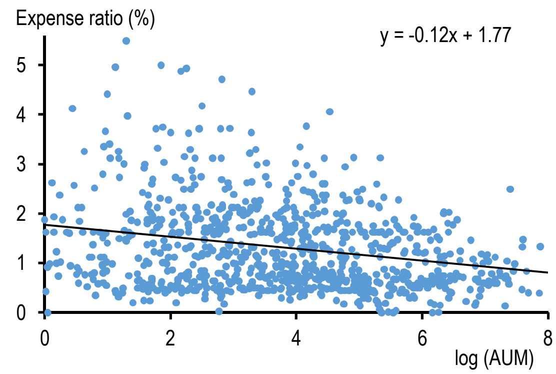


Source: J.P. Morgan, Bloomberg Finance L.P.

A fund's expenses should be driven by how efficient they are and how well they can spread their fixed costs over the fund, which is simply a question of the fund's size. Figure 6 confirms that larger funds have on average lower expenses.

Figure 6: Thematic fund expense ratios against their average AUM during the fund's life time

%, log of fund's average AUM in $bn over its life time



Source: J.P. Morgan, Bloomberg Finance L.P.

Should one therefore buy into larger funds to benefit from lower costs? **More broadly, should one buy the bigger funds or those with momentum in price and/or inflows?** Given that smaller bespoke funds will have low turnover and are thus subject to liquidity risk, it makes sense to hold the funds with larger AUM or at least higher turnover. Also, one could ask whether funds that are growing fast due to superior returns or high inflows have momentum that can be exploited in one's choice of fund. We tested this extensively to see whether various forms of relative momentum in prices, inflows, or total AUM (which combines the previous two) over say the past 1-2 years provide a reliable signal of the future superior returns. Unfortunately, we could not find anything that was reliable, or statistically significant, neither positive nor negative. Strong returns or inflows suggest neither superior nor inferior returns relative to market.

What thematic categories? Aside from expenses, can we say anything about which themes one should buy and what to void? By definition, as the themes that people invest in are all based on a view of a future that will be different from the past, one cannot just look at past data to show which secular themes one should invest in. We have written before in these issues that we like the Health Care sector long term, but otherwise have no strong opinions which theme will produce superior returns.

And even with Health Care, the question arises whether one should invest in an active thematic heath care innovation fund, or simply buy a passive broad health care sector ETF, not related to any particular theme. To help with this decision, one can try to match each of the theme categories we have in Table 3 with its closest

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broad equity sector index, recognizing that many thematic funds select stocks across different sectors.

Table 3: Thematic fund categories returns and matching MSCI ACWI sector returns

Index returns have been reduced by 0.4% pa to account for expenses.

Category vs Sector	CAGR	Since
Thematic: HC Innovation	4.6%	Dec-05
MSCI AC Health Care	10.6%	
Thematic: HC Innovation	4.6%	Apr-06
MSCI AC Health Care Tech	9.1%	
Thematic: Islamic	8.6%	May-07
MSCI AC Islamic	6.1%	
Thematic: Tech disruption	12.1%	Dec-05
MSCI AC Technology	14.1%	
Thematic: Sustainability	14.1%	Mar-16
MSCI AC Sustainable impact	14.2%	
Thematic: Clean Energy	4.2%	Dec-05
MSCI AC Energy	2.6%	
Thematic: Infrastructure	7.3%	Dec-05
MSCI AC Infrastructure	6.6%	
Thematic: Natural Resources	3.5%	Dec-05
S&P Global Natural Resources	4.9%	

Source: J.P. Morgan, Bloomberg Finance L.P., S&P.

Table 3 compares our theme category returns with broad equity indices that in our mind come closest to them. Here, we do find significant differentiation between sector and thematic funds. In the case of **Health Care**, **Technology**, and **Natural Resources,** a simple passive sector ETF has significantly outperformed their matching thematic funds. **Islamic Thematic** outperformed its matching MSCI Islamic index, but our set of 100+ Islamic funds has ~80% of its AUM in just two funds, managed by the same company where the return profile suggests it is overweight Tech. 88% of the funds in this category have underperformed MSCI AC Islamic.

For **Sustainable** Thematic funds, we can only compare with the MSCI Sustainable Impact Index which was return data since March 2016. Over these almost 6 years, the index earned 14.2% pa before expenses, compared with 14.1% on our thematic funds. This may sound like one should prefer Sustainable over other thematic funds, but note from Figure 1 that over this period the overall thematic fund asset class performed on par with global equities.

Only two thematic categories -- **Clean & Renewable Energy** and **Infrastructure** -- have outperformed their matching broad market sector indices.

Our Health Care Innovation and Disruptive Technology thematic fund categories amount currently to 50% of thematic AUM, and their underperformance is thus primarily responsible for the weak underperformance of the broad thematic asset class. The smaller themes, in terms of AUM amounting to 22% of out thematic asset class, have in contrast been outperforming. These also happen to have been the **weaker total returns sectors and themes**, compared with Health Care and technology.

Conclusion

A broad portfolio of 1,000 thematic equity funds, mutual and ETF, has underperformed the global equity market by 1.4% pa since 2005. Much of this took place during the last decade, 2010-19, with more par performance since. The ~55bp higher expenses of holding these funds versus a passive equity tracker explains only part of the lower return. Thematic funds are high beta, as they focus on growth. Weak returns are thus due to a negative alpha, which we suspect is because many funds buy into popular themes that are probably already more than fully priced in when the funds sees it greatest inflows.

In principle, there is nothing wrong with investing in views of a changing future, as we advised in many of our strategic notes, listed below. But one needs to be "economical" with how one does this, selecting funds that charge no more than 1% pa.

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The Long-Term Strategist

Why long term?

Long-term Strategy
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- **The longer-term perspective has become more important to investors.**
- **At first blush, it would be suboptimal to constrain oneself to a longer-term plan, as it throws away new information. But constantly adapting one's portfolio to all this new information does not work well either, as it incurs transaction costs and is more subject to return-destroying behavioral biases than is long-term investing.**
- **Fallen market liquidity is also making it much harder for large investors to trade actively around their longer-term asset allocation.**
- **The poor relative performance of hedge funds suggests that short-term opportunities have become harder to come by.**
- **Time diversification is making it easier to judge return over a longer horizon, producing a higher return to risk to long-term investing.**
- **By itself, longer-horizon investing does not raise return. It only lowers risk. But lower risk can be transformed into higher returns, as it allows longer-term investors to hold more risk and less liquid asset classes.**
- **Long-term investors generally look at different signals than shorter-term ones. They focus on value, the supply side of the economy, long-term inefficiencies, and structural change, like demographics and productivity. Shorter-term investors look more at the demand side of the economy, flows, and positions – factors that have little lasting impact over the long run.**
- Video.

How far out should an investor think, plan and act? What is your right investment horizon? We live and act in real time, and it thus makes sense to use all we know to act now and here. Reality is the present. The strong focus of many investors and much of sell-side research is thus on the immediate news flow and what it means for markets.

Traditionally, investing has been divided into longer-term Strategic Asset Allocation (SAA) and shorter-term Tactical Asset Allocation (TAA), which takes tactical over- and underweights against long-term SAA positions. In this note, we look at what the function and value are of longer-term investing[1] and why, in our minds, the long-term focus has become more important.

To start with the prosecution case *against* long-term investing: Why constrain oneself and not react to all new information when it arrives? Why throw information away? Why make long-term investment plans and stick with them when new information might tell you otherwise?

1 We are not looking at capital investing by corporates as the long out payoffs to most capital spending makes it obvious why companies need to plan and act over long-term horizons.

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We argue that **long-term investing is lower risk** and makes sense for savers whose dominant need is income in old age, at a time when short-term tactical investing has become harder as liquidity has worsened and short-term "alpha" opportunities are harder to find.

An investor puts money aside, saving out of income, to have funds available for a future when income will not cover desired spending. This might be just a few months away, as spending does not align perfectly with inflows. The lion's share of savings, though, is for old age and thus for most people several decades away.

To manage for these longer-term needs, an investor can either think and act shorter term, one step at a time, optimizing their portfolios for each quarter and year, or they can think and act over the full time horizon until they need the money back, applying what they can tell over this longer term.

In principle, there is nothing wrong with a short-term, one-step-at-a-time approach to investing. Most important, it allows you to react to all new information, getting in front of "slower" long-term investors. In addition, it creates flexibility to respond to your changing needs and cash flows.

Long term is "easier"

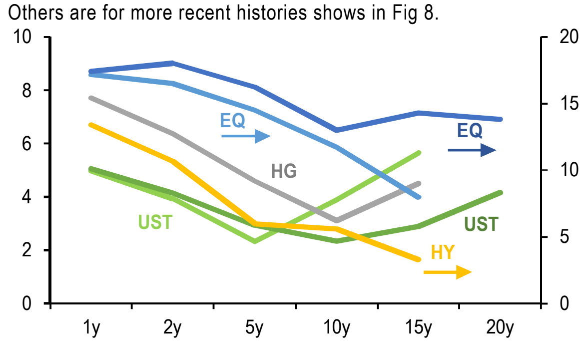
On balance, though, we think there are greater benefits from a longer-term approach to investing. Foremost, **judging future returns and risks is "easier" over longer periods**. This was the core of our previous paper on Time Diversification. We argued there that the most important variable to judge the future return on different financial assets is their current internal rate of return (IRR), or yield. This yield allows you to gauge future returns better than simply taking an average of long-term historic returns.

Most important for our argument is that the power of using current IRRs to gauge future **returns improves the further we look into the future,** though only up to a point. Figure 1 from our Time Diversification paper shows the annualized standard errors from regressing different US asset class returns across different holding periods against their starting yields. 5-10 years out, all asset class returns become easier to judge, with high-yield bonds continuing to show lower risks beyond 10 years.

Our result that longer-out return forecasting is easier than short term is **not intuitive**. It would seem quite logical to argue that, if it is already hard enough to figure out where the dollar and stock market will be in a month or at year-end, then it must be nearly impossible to say where it will be in ten years' time. We would not argue here that it is outright easier to call the level of the dollar or of stock market in 10 years' time than in 1 year. It is not. Total wealth risk does rise with time. Instead, we find it is easier to judge the *average* or compound annual return over ten years than over one.

Figure 1: Annualized standard errors of compound returns of regressing different asset classes against starting yield by holding period

%, EQ and UST lines with 20yr periods refer to history since 1876. Others are for more recent histories shows in Fig 8.



Source: J.P. Morgan, S&P, Bloomberg Barclays, http://www.econ.yale.edu/~shiller/data.htm.

The lower annualized risk on long-term investing comes from **mean reversion in periodic returns**. For equities, this comes from mean-reverting multiples and earnings growth. For bonds, it comes from the cyclical behavior of credit spreads and defaults and the fact that any price losses on bonds in one year eventually bring higher coupons on new bonds in later years. Fig 1 shows that this mean reversion is strongest for high-yield bonds.

Fig 2 shows our expected returns to risk on the four main US asset classes. These **Sharpe** Ratios rise from a low 0.1-0.2 for investors with only a 1-year investment horizon, to 0.2-0.45 for 5-year holding periods, and equities and high-yield bonds moving all the way up to 0.45-0.8 on 15-year holding periods. We take risk as the annualized standard errors displayed in Fig 1. Expected returns for bonds are current yields minus long-term credit losses. For the US equity market, we combine long-term views on the main components of return – dividends, multiples, economic growth and profit margins – to arrive at a 4.7% 10-year out return, from which we deduct a 1% expected return on cash. Our

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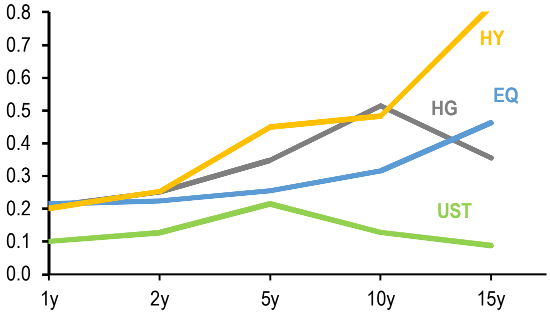
numbers are very much in line with consensus for estimating 10-year out returns.

Figure 2: Sharpe ratios (excess return to risk) by asset class and holding period

%, Returns are long-term expected derived from yield, minus 1% cash. Risk is annualized standard error from regression 10-year annual returns against starting yield.



Source: J.P. Morgan, S&P, Bloomberg Barclays, http://www.econ.yale.edu/~shiller/data.htm.

Short term is getting harder

Judging annual returns 10-15 years out is to us easier – i.e., subject to less uncertainty – than calling the market over the next 3-12 months due to mean reversion in periodic returns. It is also easier because shorter-term investing has its own challenges, which, if anything, are getting worse.

Buying and selling short term incurs **transaction costs** from bid-ask spreads, fees, stamp duties and capital gains taxes, depending on the country and asset class. Over the last 3-4 decades, pure transaction costs have come down due to competition and computerization, initially boosting turnover.

Over the past decade, though, post GFC, market **liquidity has worsened significantly**. It is particularly acute in **dealer-driven OTC markets**, but even exchange-traded derivatives and stocks have seen declines in turnover and depth. Many factors underlie this fall in market liquidity, ranging from higher capital costs and regulations on bank dealers, to the shift from active fundamental to quantitative and passive investment, the prevalence of volatility targeting and trend-following investors, and automation of market making, all of which reduced the ability of the market to prevent large drawdowns[2].

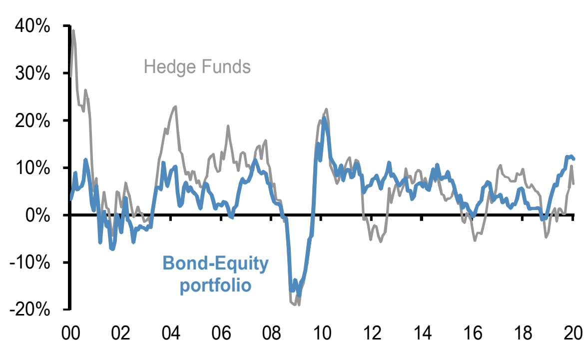
Adding insult to injury to the problem of reduced liquidity is the high likelihood, at least in our minds, that the **ability of investors to find short-term opportunities to beat the long-term asset allocation has weakened significantly.** Short-term trading adds no value if you cannot make use of higher-frequency information to do better than your long-term strategic allocation.

For individual investors ("retail"), a case can be made that the greater freedom to move money around short term frequently leads to reduced returns relative to a longer-term buy and hold strategy, even without appealing to transaction and tax costs. There is much literature on **behavioral biases** in Finance[3], ranging from overreaction, loss aversion, herd mentality, confirmation bias, recency bias, home bias, among many others. Many of these (though not home bias) apply largely to the short-term investor, and may indeed be why retail investors are generally not seen to be beating the market.

For larger, more institutional investors, a good measure of the ability of tactical investors to beat the long-term passive investor is to analyze the performance of **hedge funds,** which should be the ultimate in smart trading. Fig 3 shows in grey the rolling the 12-month total return net of fees on HFRI, one of the widest indices of hedge fund returns. It compares this with a portfolio of US bonds and global equities, weighted to produce the same rolling return volatility as HFRI.

Figure 3: Returns on hedge funds and global bond/equity portfolios

%, 12 month rolling returns, rolling vol weights for equities and bonds



Source: J.P. Morgan, Bloomberg. Last observation is Jan 2020.

Fig 4 depicts the excess returns of HFRI over this equal-volatility portfolio of bonds and equities. It shows that, after a strong decade in the 00s, hedge funds have underperformed over the past decade and have thus not

2 We wrote last year about the decline in market liquidity in Paradigm Shifts: What Lies Ahead, JPMorgan Perspectives, Joyce Change et al., April 2019, pp. 11-36. See also, Global Financial Markets Liquidity Study, PWC, Aug 2015, 156 pp.

3 See, e.g., Misbehaving: The Making of Behavioral Economics, by Nobel Prize winner Richard Thaler, 2015.

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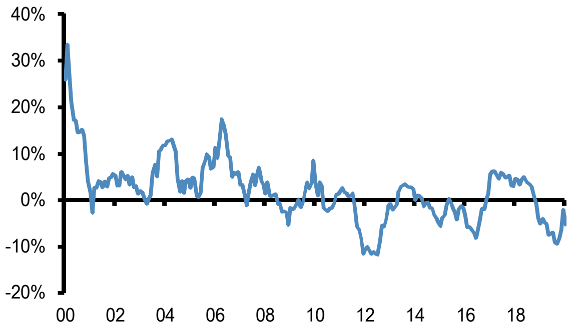
beaten the market, net of fees. To us, this means that it has become a lot harder for active investors to find short-term investment opportunities.

Figure 4: Hedge fund excess returns

%, monthly, 12 month rolling returns, rolling vol weights for equities and bonds



Source: J.P. Morgan, Bloomberg. Last observation is Jan 2020.

One can guess at the reasons of why finding profitable shorter-term trading has become more difficult. Global monetary easing and massive asset purchases are often blamed, but this makes little sense, in our view, as policy is simply one of the many macro factors that hedge funds have in the past used to beat the market. More likely, information is nowadays ubiquitous, leaving nobody with an information advantage, while the hedge fund model of trading is now adopted by all major asset managers across the world, both leveraged and real money, and is slowly arbitraging itself away out of existence.

What does the long-term investor look at?

Long- and short-term investors should look at information that is most relevant for their time horizons. For the long-term investor, that means first the **internal rate of return** on the assets that they have access to, closely followed by the longer-term risks they run on those assets. On assets with uncertain cash flows, such as stocks and corporate bonds, one then needs to judge potential economic growth, inflation, profit margins, leverage, and multiples. For this, we start with historic means and then assess the risk of **structural change** from past patterns. In our papers, we call these paradigm shifts, and among these we have written on de-globalization, US-China, the global savings glut, and climate change, among others (for a list, see the Library at the end of this note).

In addition to judging the returns on asset classes, the long-term investor also needs to assess the return on different **investment Styles**, such as **Momentum, Value, Size, and Quality**, among others. These could be considered active investing, as they involve switching between assets depending on a particular signal. However, it is nowadays possible to buy a rule-based product or fund that passively follows this signal to switch tactically among assets, or individual securities. We similarly have tried in our work to analyze what returns to expect from certain investment styles, or factors. See the library at the end for notes on Value and Size investing[4].

The shorter-term investor generally does not focus on longer-term forces, partly because they are not as dominant in driving near-term asset prices, but also as these forces are too low-frequency and do not move enough to provide enough trading signals.

The shorter-term investor, instead, looks at higher-frequency factors such as positions, flows, policy actions, statements, and economic data releases, among others. The tactical investor looks largely at the demand side of the economy, while the strategic one looks at the supply side. Most of these short-term signals do not add up to enough to change the long-term picture and are to the latter thus largely noise to the long-term investor.

How long is long term?

What is the relevant long term? Several factors impinge on this issue. Foremost, it is a function of when you need your money back, as you should plan and judge markets for the full horizon over which you need to stay invested. Second is the size of your holdings. This is mainly an issue for institutional investors. The larger your AUM, the harder it is to move capital around. The largest pensions and sovereign wealth funds in the world have to think in terms of at least a generation when planning their holdings.

Finally, given that returns become easier to judge over a number of years, as discussed above, it makes sense to plan over a period for which the error and thus risk on projecting returns is the lowest. For safer bonds, both government and high-grade corporate, that is close to 10 years. For high-yield and equities, that is 15 years plus.

Is there a return premium for longer-term investors?

With the same assets, simply holding assets longer-term does not directly add to returns, except that you reduce transaction and tax costs and the behavioral biases of

4 For a more exhaustive review of systematic risk premia strategies, see the reference publications on our website, among which Systematic Strategies across Asset Classes, Risk factor approach to asset allocation, Marko Kolanovic, Dec 2013.

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trading around your strategic position. The longer-term investor largely reduces risk.

However, by reducing the uncertainty on one's holding, and giving up the need for short-term liquidity, **the long-term investor can now hold a different portfolio with riskier, higher-return assets** than a short-term oriented investor. In our Time Diversification paper, we showed that 15-years out, the reduction in return uncertainty applies only to riskier assets, such as equities and high-yield. Hence, **long-term investing does increase your returns, because it allows you to hold riskier asset classes**.

Should a longer-term investor hold more illiquid assets?

One riskier asset class that many long-term investors increasingly hold is **private assets** – private equity, private debt, and direct real estate. These assets are illiquid and thought to offer a higher return than public assets, those traded OTC or on exchanges. There is, however, a growing argument among academia and some practitioners that this illiquidity premium is no longer there, after massive inflows into the asset class, and still a large pool of un-invested commitments, and may never have been there to start with[5].

Private assets do make sense, though, for funds that have longer-term, relatively known liabilities, such as pension, life insurers and endowments. Private assets have the advantage that due to their lack of being traded, their value is driven by cash flows and present value calculations that are much less volatile than public market prices. This could be seen as putting your head in the sand, but could alternatively also be seen as shielding returns from the excessive, technical volatility of public markets. Banks similarly do not mark to market their loan portfolios and neither their liabilities. Long-term funds that do not mark to market their liabilities thus have an incentive to hold a large share of their assets in illiquid assets, that themselves have not quoted public price.

What balance between tactical and strategic risk?

Many institutional investors hire external managers for the asset classes on which they determine the strategic allocation. Frequently, they allow and expect these managers to try and beat, through tactical over- and underweights, the passive benchmark given by the owner of the money. This creates a clear division of labor between those deciding TAA and those that work on SAA.

Whether tactical risk is outsourced or taken in house, the owner of the money must decide the balance between tactical and strategic risk. Let's call these alpha and beta risk. Alpha risk is additive to beta risk and needs to pay its own return for it to be worth it. If alpha returns are uncorrelated to the beta returns on the benchmark, then total portfolio risk is just the sum of the two. Alpha risks needs to offer the same return to risk as the benchmark for there to be a case to have any alpha risk at all: if the return to risk of active trading around the benchmark is the same as that on the benchmark, then the overall return to ratio does not rise.

For it to be worth it to add any tactical risk at all, its return to risk must either be the same as the benchmark, or its excess return negatively correlated to the benchmark return, or a combination of the two. Chart 3 suggests that for the sum of all active returns after fees earned by hedge funds the return to risk was both lower than the overall equity and bond market and was positively correlated to them: +0.85 during 2000-09 and +0.54 during 2010-20. We would except that there are pockets of sufficiently positive alpha in markets where information is not ubiquitous, such small caps, EM, and private markets, but these are also, not by coincidence, the markets where liquidity is not great. The alpha opportunities are probably there, but are not easily exploited in size.

Overall, we argue that, over the past decade, the **optimal balance is shifting strongly in favor of taking more beta and less alpha risk.**

5 See, e.g., Demystifying Illiquid Asset: Expected Returns on Private Equity, Ilmanen et al., Q1 2019, and The Illiquidity Discount, Cliff Asness, Dec 19, 2019.

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