



Quarterly Market Outlook & Strategy Letter

Asset Allocation Principles

Fourth Quarter of 2017

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January 2018

Executive Summary

- Last year, financial markets enjoyed their strongest returns in over a decade, as rising corporate earnings supported stock markets worldwide. Equity valuations have gone from being fair to expensive—and, in the US, extreme. Stock prices do not merely reflect current conditions; they represent the discounted present value of a long stream of *future* earnings. Financial markets frequently overshoot fair value, since most investors focus almost entirely on the present.
- We focus our attention on achieving the optimal allocation of our clients' assets amid changing market conditions, based on the foundational principles of diversification, value-based investing, and efficient execution. Our asset allocation process begins with a determination of the appropriate strategic risk profile for each client's portfolio, considering their desired long-term return and tolerance for market risk.
- The rate at which funds are withdrawn from a retirement portfolio should not outstrip its capacity to replenish itself through market gains, especially in the early retirement years. In effect, two opposing shortfall risks must be managed: (a) the risk that the portfolio will be invested too conservatively to meet a client's retirement income needs; and (b) the risk that the portfolio will suffer permanent capital impairment by being invested too aggressively during a major market downturn.
- Most of us want to have our cake and eat it too, seeking that mythical portfolio that boasts large gains with minimal risk of loss. No such portfolio exists, of course, but one can improve the risk vs. reward tradeoff by allocating capital dynamically, in light of changing market valuations. When expected equity returns are low (i.e., valuations and drawdown risks are high) a conservative posture is warranted. Conversely, when valuations are low (expected returns are high) a portfolio can be invested more aggressively.
- Our baseline scenario for the next 12-18 months anticipates a steepening US yield curve, tighter financial conditions, rising volatility and credit spreads and, eventually, slowing growth. Accordingly, we are further reducing interest rate exposure in fixed income portfolios. Value stocks, which include the banking and natural resource sectors, should perform relatively well. Thus, we are trimming equity exposures in growth and small cap, and allocating the proceeds to value and defensive strategies.
- Finally, we are increasing our exposure to natural resources, both as a hedge against inflation and to fulfill our commitment to help clients counter the effects of climate change.

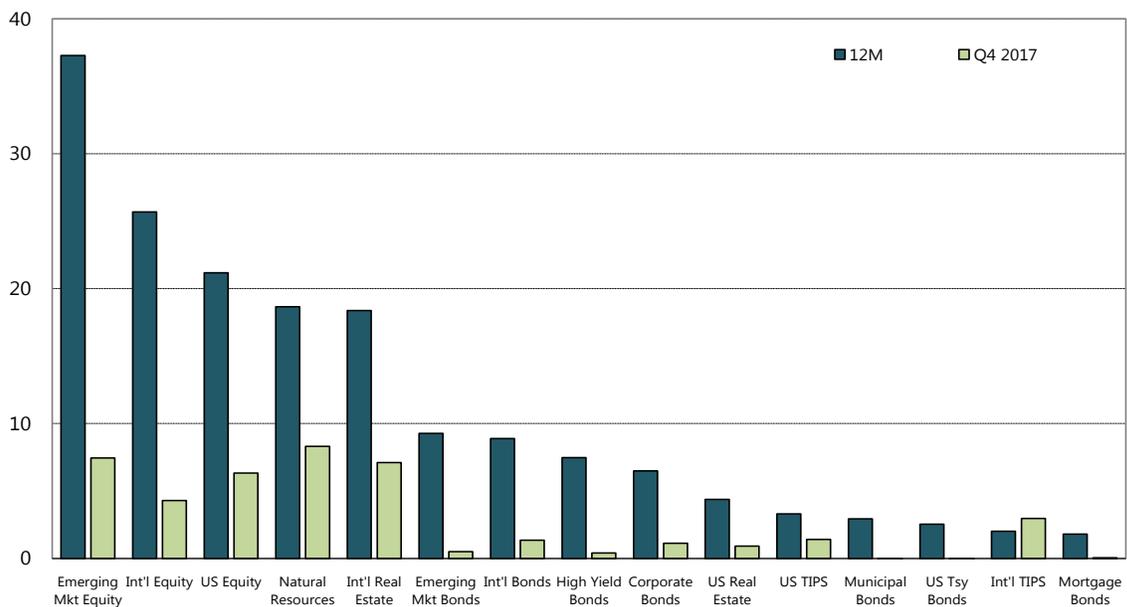
Introduction

Last year, financial markets enjoyed their strongest returns in over a decade (Figure 1). Sizable equity gains were buoyed by a synchronized global economic rebound that was activated—at last!—by a combination of lower oil prices, easy monetary policies, and competitive foreign currencies. This self-reinforcing upswing has been helped by supportive budgetary policies in China and, more recently, the United States.

Stronger growth and rising consumer confidence have contributed to better corporate earnings across all regions, leading to higher stock markets worldwide. As a result, equity valuations have gone from being fair to expensive—and, in the US, extreme. To some extent, rising stock markets are warranted by the recent strength of corporate earnings. But stock prices do not merely reflect current conditions; they represent the discounted present value of a long stream of *future* earnings. High current valuations frequently overstate long-term results, presaging low future returns—regardless of current conditions.

Financial assets can remain expensive for quite a long time, as we have seen in prior market cycles. Even so, the higher prices rise, the more investors worry whether valuations are justified by fundamentals. We got a reminder in the latter half of 2015 and early 2016 of what real market volatility looks like, when the US came dangerously close to recession. The economy quickly recovered, leaving asset prices and financial leverage much higher than they were then—setting the stage for a larger decline when the cycle eventually turns.

Figure 1. Benchmark Asset Class Returns



Source: Bloomberg

Economies, like the human body and other natural systems, exhibit a quality called *homeostasis*: self-regulation of an organism within its environment. That means the forces that produced the current economic rebound will eventually subdue it. For example: oil prices rise as activity picks up, constraining household spending. Liquidity conditions tighten as the demand for funds grows (and as central banks respond to heightened inflation risks). Foreign currencies appreciate as capital flows abroad in response to stronger growth. These countervailing forces dampen the momentum of a mature business cycle—indeed they are already doing so. The same forces operate in reverse when the economy and markets are weak, heralding the eventual return of spring.

The reason financial markets frequently overshoot fair value is that most investors focus almost entirely on the present and neglect to think about these balancing forces. To cite a recent example: bitcoin mining places unsustainable energy demands on our environment and economy, and is an unacceptable threat to governmental authority. These are binding constraints on its long-term value. Investors' belated recognition of these realities produced a sudden and drastic repricing of the asset. Globalization and central bank interference in markets have attenuated feedback loops, but have not eradicated the business cycle. Since perceptions can change rapidly, it is important to look *forward* in assessing both opportunities and risks.

Our Asset Allocation Process

Investment management offers three potential sources of return: gains from asset allocation, gains from market timing, and gains from security (or manager) selection. Of these three, asset allocation—the distribution of investment capital across broad market segments—is the most important and reliable source of long-term return. Hence, we focus our attention on achieving the optimal allocation of our clients' assets amid changing market conditions.

The foundational principles of our asset allocation process are diversification, value-based investing, and efficient execution. Diversification promotes stability and consistency of investment returns over time. Value-based investing improves the balance of reward vs. risk in client portfolios. Efficient execution minimizes the drag on investment returns from management fees, trading costs and taxes.

Our asset allocation process begins with a determination of the appropriate strategic risk profile for each client's portfolio, considering their desired (or required) long-term return and tolerance for market risk. These strategic asset allocations, which represent the long-term "center of gravity" of clients' portfolios, are based on capital market forecasts (i.e., expected asset class returns, volatilities and correlations) over a 5-10 year horizon. Over the course of the business cycle, the risk-reward parameters of various asset classes evolve in ways that alter latent

portfolio risks. To ensure we are able to honor clients' drawdown limits, while taking advantage of available opportunities, we adjust portfolio allocations proactively and prudentially, within agreed ranges. These allocation changes are infrequent, and based principally on valuation criteria—since assets that are trading far from fair value typically experience the largest and most abrupt repricings. However, we also assess where we are in the business cycle and whether conditions are ripe for a normalization of market pricing.

Strategic Asset Allocation

Our goal in devising clients' strategic allocation targets it to ensure that their retirements are "fully funded" – i.e., that there is little risk investment assets will fall short of what is needed to support them throughout their lives. We build long-term cash-flow projections in order to trace the probable trajectory of our clients' assets in the period leading toward and through retirement. Straight-line compounding of returns overstates the rate of capital accumulation, since markets are both volatile and non-linear.¹ To assess the range of potential outcomes, we run Monte Carlo simulations that apply variable rates of return to portfolio assets over time. This analysis produces 10,000 randomly-generated return sequences, each of which yields the same *average* return over the life of the plan, based on a proportional assumption for the portfolio's volatility.

The desired (or required) investment return is one that, given available savings, ensures there is at least a 70% probability that the client's retirement is fully funded. Put differently, at least 70% of the simulated return sequences should produce a positive capital balance at the end of a client's projected lifetime. *While the obvious remedy for a prospective shortfall might seem to be raising the portfolio's return target, this is not always the best way to reach a client's retirement goals.* There are diminishing returns to increased portfolio risk, given the effects of volatility on compound returns. Moreover, many individuals cannot stomach the portfolio drawdowns associated with an aggressive investment posture. To ensure the investment strategy is not abandoned prematurely (resulting in avoidable losses) we assess a client's personal risk tolerance through a rigorous interview process. We then evaluate all of a client's options—whether they be working longer, spending less, and/or assuming more portfolio risk—in order to meet retirement funding goals.

¹ A steady 5% return would compound to 10.25% after two years. However, market returns are rarely steady; a more typical scenario is a decline of 5% one year, and a rise of 15% the next. That particular sequence would also produce average return of +5%, but a compound return of only 9.25%.

Once we've determined a client's desired investment return, we identify the mix of portfolio assets that is most likely to deliver that result over the long run, with an acceptable level of risk.² These optimal portfolios are well-diversified across asset classes and market risk factors, so as to deliver the highest possible return for a given level of risk. We then scale these strategic asset allocations to meet each client's individual risk profile, and reevaluate them biennially as our capital market assumptions are updated. The asset class forecasts upon which our strategic asset allocations are based are shown in the Appendix.

Crucially, the rate at which funds are withdrawn from a retirement portfolio should not outstrip its capacity to replenish itself through market gains, especially in the early retirement years. Therein lies the Catch-22 of investment planning. An aggressive posture increases a portfolio's capacity to generate long-term returns, while simultaneously increasing the risk of short-term declines. Market setbacks, which are a mere nuisance to a young person (or a benefit for those with capital to invest) can be devastating to older clients who need to pull money from their portfolios. Untimely withdrawals can impair a retiree's long-term financial security through the forced sale of depreciated assets—turning transitory market declines into actual portfolio losses.

It is therefore important to ensure that clients retain enough stable-value assets in a retirement portfolio to meet essential distribution requirements during periods of market weakness. Holding too much cash, however, can limit a portfolio's return-generating capacity in periods of market strength. In effect, two opposing shortfall risks must be managed: (a) the risk that the portfolio will be invested too conservatively to meet a client's retirement income needs; and (b) the risk that the portfolio will suffer permanent capital impairment by being invested too aggressively during a major market downturn.³

Traditionally, this tradeoff was handled by maintaining an aggressive investment posture during clients' working years, and increasing the proportion of bonds as they approach retirement. The simple rule of thumb was that the equity share of a retirement portfolio should not exceed 100 minus the client's age. A person aged 65 would, therefore, have no more than 35% of his or her portfolio allocated to stocks. This heuristic has been replaced, in recent years, by more sophisticated "target date" or "life cycle" strategies that adjust a portfolio's risk profile dynamically as the investor approaches retirement.

² We apply the Black-Litterman optimization method, supplemented by Monte Carlo simulations on the returns projected by the optimized allocations, in order to test their robustness.

³ For an eloquent explanation of the challenge of balancing age considerations with valuation criteria, see GMO's April 2014 White Paper: [Investing for Retirement: The Defined Contribution Challenge](#). Perhaps the greatest loss from the demise of defined-benefit plans was retirees' ability to pool, and thus mitigate, sequence of return risk.

Unfortunately, these strategies are not working as well as they used to, since low interest rates make it all but impossible for anyone other than Warren Buffett to live off the income generated by a bond portfolio. By flooding the markets with liquidity and collapsing yields, central banks have pushed investors further and further out the risk curve, in search of a decent return on their assets. For reference, the equity allocation for Vanguard's 2020 Target Retirement fund (designed for someone aged 63-65, retiring in two years) is now 55%. This risk profile is associated with a potential drawdown of 25% or more—which could impair the capital position of a typical US retiree.



"I'm not interested in minimum risk. I want long term gains without risk."

CartoonStock.com

Low market volatility, which is common when liquidity is ample and asset prices are high, has masked the risks to portfolios invested mainly in stocks, reinforcing the trend toward more aggressive allocations. So too do: (a) an investment industry that reaps large financial rewards from keeping clients fully invested in stocks; (b) passive strategies (via market-capitalization-weighted indices) that push people into the most expensive securities; and (c) a tax code that rewards momentum investing (i.e., selling losers while adding to profitable positions). By the end of a long bull market, you can be sure that most investors have far more equity exposure than they are prepared to hold through the next downturn. That is especially true now, since bonds offer such low yields.

With equity valuations now near historical extremes, stock market sentiment and exposures are also extremely high. If history is any guide, when the market cycle turns, a lot of people are going to experience large portfolio declines, and some of them—those who cannot afford to defer withdrawals—will suffer permanent capital impairment.

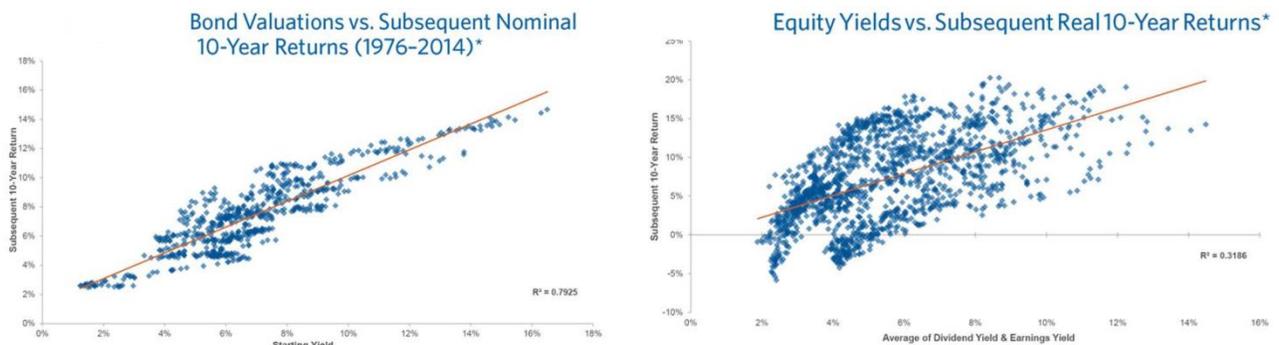
Young investors, and those with ample portfolios, may do fine riding out market volatility. Unfortunately, that’s not the reality for most American families. The median age of US households is 52 years, 13 years shy of retirement. And that median household’s net worth in 2016 was \$97,300. That’s *30% lower than in 2007*, even though housing and financial markets have long-since recovered from the financial crisis. \$100k is barely enough to cover three years of retirement spending (given the average Social Security income replacement rate of 40%) and most of that is tied up in home equity. This unfortunate situation speaks to the potential for a permanent loss of capital when one is over-invested going into a crisis.

KPF Global clients are in a more comfortable financial position, with sufficient assets to withstand most market shocks. Nonetheless, they still confront sequence of return risk—the potential for an unfavorable string of market outcomes that produces an uncomfortably tight financial situation in retirement. Therefore, we have designed a dynamic asset allocation process that balances the need for long-term return with an awareness of near-term risks.

Dynamic Asset Allocation

It is popular nowadays to argue that a static asset allocation is always best, since it’s impossible to know when or by how much a market may decline. It’s true that trying to “time” the market is a fool’s errand. However, *one doesn’t have to have a crystal ball to draw inferences about long-term returns, since the most reliable predictor of future gains in stocks and bonds is an asset’s current valuation* (Figure 2). For example, the current average yield of 2.5-3.5% on relatively safe bonds is roughly what one can expect to earn on those assets over the next ten years. Similarly, the current equity earnings yield (inverse of the price-earnings ratio) of 3-5% is consistent with S&P 500 returns averaging in the mid-single digits over the next decade. Some believe that *negative* returns may be in store, as equity markets eventually return to fair value.⁴

Figure 2.



*Barclays U.S. Aggregate for 1976-2014 and Barclays U.S. Treasury Index for 1990-2014. Source: Research Affiliates based on data from Bloomberg.

*1915-2014 for the United States, 1969-2014 for Global Developed Markets, 1994-2014 for Emerging Markets. Source: Research Affiliates based on data from Robert Shiller and Bloomberg.

⁴ See [Research Affiliates](#) and the careful analyses of [John Hussman](#).

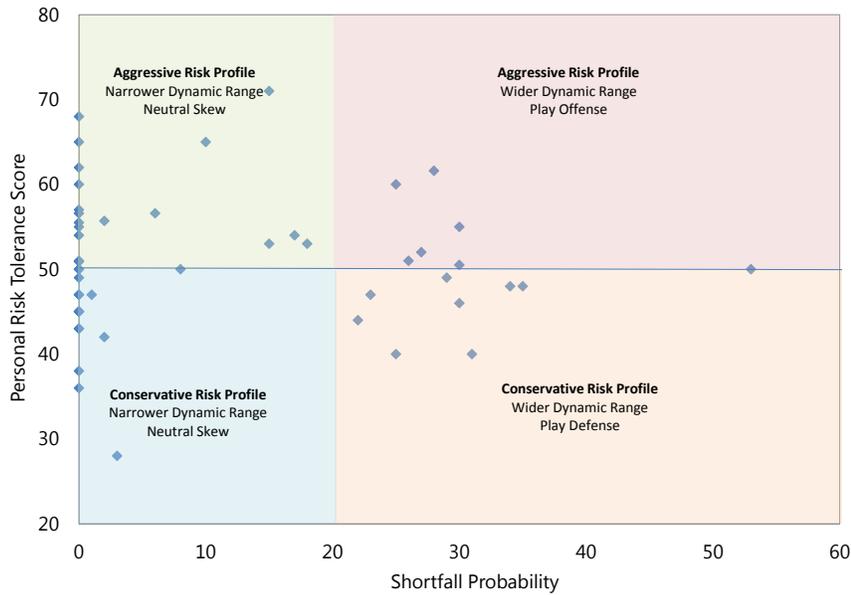
One might ask: if expected equity returns are low, doesn't it make sense to hold *more* stocks in a retirement portfolio, to compensate? The answer is no, since stocks, unlike bonds, do not offer a steady return. On the contrary, history shows that when expected equity returns are low, the risk of large market declines (i.e., drawdowns in excess of 20%) is high. There is no free lunch. After all, if stocks were as stable as bonds, they would offer bond-like returns.

Most of us want to have our cake and eat it too, seeking that mythical portfolio that boasts large gains with minimal risk of loss. No such portfolio exists, of course, but one can improve the risk vs. reward tradeoff by allocating capital dynamically, in light of changing market valuations. *When expected equity returns are low (i.e., valuations and drawdown risks are high) a conservative posture is warranted. Conversely, when expected returns are high (i.e., valuations and drawdown risks are low) a portfolio can be invested more aggressively.* This is the exact opposite of what feels natural to most people; high prices generally encourage *more* risk taking, not less. Such attitudes are reinforced by the institutional incentives described above. The reason value-oriented allocation strategies deliver superior long-term returns than either passive or momentum approaches is precisely because so few people are able to follow them.

Our *dynamic allocation ranges* define the scope with which we adjust the portfolio's asset class targets relative to the strategic posture. Whereas the strategic allocation is determined primarily by a client's long-term goals and investment risk tolerance, the dynamic asset allocation is influenced mainly by market opportunities and risks. Figures 3-4 illustrate how our clients' dynamic allocation ranges are determined. The portfolios of clients with a small probability of a retirement shortfall need not be managed as actively to mitigate potential losses. Consequently, their allocation ranges are typically narrower—depending on the client's preference—with a neutral skew. By contrast, clients whose portfolios are at greater risk of falling short of retirement goals can benefit from a wider dynamic range. That allows us to manage the downside risks associated with a more aggressive investment posture.

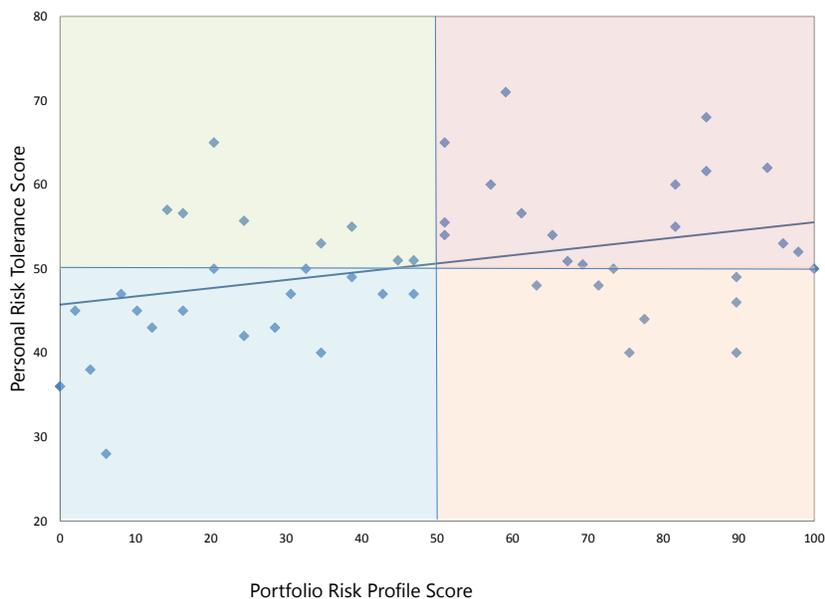
Many clients with a high risk tolerance want us to play offense—so we increase their portfolios' risk profile meaningfully when market opportunities are good. For those with a lower risk tolerance, we play defense: curbing risk sooner, and more significantly, as market conditions deteriorate. Regardless of preferences, we protect all clients from jeopardizing their future financial security by taking too much risk when history suggests it will not be rewarded—or too little when we think it will. Experience shows that, for most people, risk tolerance is highly susceptible to market conditions. Toward the end of a long bull market almost everyone loses their fear. Conversely, when markets are on sale and offer the best opportunities, few investors want to touch those "damaged goods."

Figure 3. KPF Global Client Portfolio Shortfall Risk vs. Personal Risk Tolerance



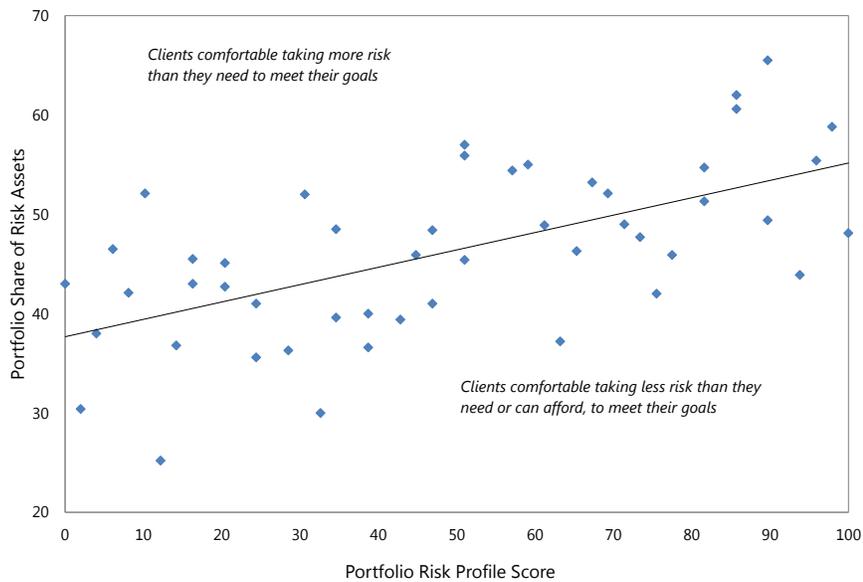
Age is an important consideration in terms of how a portfolio should be allocated. Life expectancy is already reflected both in clients' shortfall probability and in their risk tolerance (young investors, who are contributing to their portfolios, are generally more comfortable with market risk). Even so, we give independent weight to a client's age, since opportunities to build retirement capital inevitably become scarcer as one gets older. In our modeling we combine shortfall probability with remaining life expectancy into a standardized portfolio risk score, as shown below. The scatter plot & associated trend line have a positive slope, meaning that our clients' portfolio risk profiles rise in accordance with their personal risk tolerance.

KPF Global Client Portfolio Risk Profile vs. Personal Risk Tolerance



We then compared our client portfolios' *actual* risk profiles (as measured by the share of risk assets) to the results of our scoring system. Almost without exception, clients who are above the line (whose portfolios hold more risky assets than is dictated by their age and shortfall probability) have relatively high risk tolerance scores, and vice versa (Figure 5).

Figure 5. KPF Global Client Portfolio Risk Asset Share vs. Risk Profile Score



In sum, we think we have a pretty good idea of how much risk our clients should be taking to meet their retirement goals, while remaining within their personal comfort zone as markets evolve. Even so, it doesn't make sense to dynamically manage portfolio allocations unless one can do so in a way that clearly improves risk-adjusted returns.

A proactive risk management framework is liable to anticipate two or three downturns for every actual recession. Although business cycle dynamics are key determinants of the relative performance of different asset classes, these are considerably more difficult to forecast than valuation trends. Moreover, as noted in prior letters, markets usually turn well before the cycle, leaving those who wait for the perfect signal scrambling to manage portfolio risk. Hence, we rely on asset valuations as our primary guide, supplemented by *leading* cyclical and technical indicators with demonstrated predictive power.

Most KPF Global clients would rather that we err on the side of caution, since portfolio drawdowns can entail permanent destruction of capital, and are best avoided. Happily, our dynamic allocation strategy has been effective, since our clients' returns have tracked market benchmarks over the past decade, while exhibiting considerably less risk.

With any active investment strategy, one must be mindful of the tax consequences associated with portfolio turnover. For this reason, we adjust allocations only when there is a preponderance of evidence that the benefit is commensurate with the costs—and, whenever possible, do so in our clients' tax deferred accounts.

KPF Global Strategy

We expect that strong global growth, expansionary fiscal policies, tightening resource constraints, and rising commodity prices—along with the pass-through effects of a weak US\$—will lead to a pickup in inflation in 2018. The Federal Reserve plans three rate hikes this year but, like other central banks, is behind the curve. Global bond yields remain extremely low (expensive) by historical standards. For the first time, US monetary authorities will allow some of the bonds they purchased over the past decade (in an ill-advised attempt to support the economy) to mature. Absent budgetary adjustments, this will require more official buying from overseas, or increased interest from the private sector. Given competing demands for capital, higher interest rates will be needed to attract those buyers. Our portfolio strategy reflects this perspective.

Our baseline scenario for the next 12-18 months anticipates a steepening US yield curve, tighter financial conditions, rising volatility and credit spreads and, eventually, slowing growth. Global interest rates will likely be pulled higher in sympathy with US yields. Accordingly, we are further reducing interest rate exposure in fixed income portfolios by rotating intermediate-duration municipal holdings into shorter-term municipal bonds and Treasury notes.

As the cost of capital rises, we believe investors will reconsider their allocations to high-priced growth stocks (tech and biotech) and yield-sensitive sectors such as utilities. Value stocks, which include the banking and natural resource sectors, should perform relatively well. Thus, we are trimming equity exposures in growth and small cap, and allocating the proceeds to value and defensive strategies. We have invested our clients with a manager who writes short-duration calls against high-quality US stocks. We continue to hold overweight exposure to the emerging equity markets, but are mindful of any deterioration in the global economic cycle

Finally, we are increasing our exposure to natural resources, both as a hedge against inflation and to help clients counter the effects of climate change. We are initiating a long-term holding of the PAX Global Environmental Markets Fund, which invests in companies that are focused on improving energy efficiency and addressing water scarcity issues.

Appendix: KPF Global Capital Market Assumptions

Capital Market Assumptions

Compound Annual Returns

Expected Annual Asset Class Returns, 2018-2025

	Historical Returns (1997-2017)	Expected Annual Asset Class Returns, 2018-2025									
		KPF Global		BNY Mellon <i>value neutral</i>	J.P. Morgan <i>value neutral</i>	BlackRock <i>value neutral</i>	GMO* <i>full reversion</i>	AQR <i>value neutral</i>	Research Affiliates*** <i>full reversion</i>		Sellwood Consulting* <i>partial reversion</i>
		2015	2017								
Equity Investments	7.1	6.9	6.4	6.3	6.8	5.2	0.8	6.4	4.8	5.9	5.9
US Equity	8.8	6.0	6.0	6.3	6.6	5.0	-0.3	6.2	2.6	5.4	5.0
International Equity	5.3	7.5	6.4	6.0	6.8	5.2	1.4	6.6	6.9	6.5	6.8
Emerging Market Equity	5.7	10.5	9.5	8.5	9.3	6.4	4.9	7.4	8.7	6.3	6.6
Fixed Income Investments	4.8	3.3	2.0	2.4	2.8	2.2	1.2	2.3	2.8	3.1	2.4
US Treasury Notes	2.6	2.0	0.5	1.8	2.2	...	...	...	2.2	2.2	2.0
US Treasury Bonds	5.7	2.5	2.0	2.1	2.2	2.2	1.2	2.7	2.6	2.9	2.1
Mortgage Bonds	5.1	3.3	2.8	...	...	...	...	...	2.9	...	...
Municipal Bonds	4.2	3.8	2.3	2.7	2.5	...	...	...	...	...	...
International Bonds	4.3	3.0	1.1	0.2	1.8	2.2	-0.5	1.9	2.2	2.1	...
EM Sovereign Bonds	6.7	5.5	3.3	5.1	5.5	...	2.8	...	4.1	5.0	3.2
Real Assets/Inflation Hedges	6.2	4.6	3.3	4.2	4.8	3.4	2.3	5.6	3.9	2.3	3.4
US Inflation-linked Bonds	5.4	2.5	2.5	2.1	3.5	2.7	2.3	...	3.1	3.3	2.1
International Inflation-linked Bonds	6.4	3.0	1.5	...	...	...	...	...	...	...	...
Natural Resources	4.9	4.0	4.8	2.0	3.8	3.3	...	5.0	4.0	-2.0	3.4
Domestic Real Estate	8.0	6.0	3.5	6.3	6.0	4.3	...	6.2	4.5	5.5	4.6
International Real Estate	6.4	7.5	4.0	6.4	5.8	...	...	...	...	...	...
Opportunistic Investments	6.5	4.1	4.0	4.1	4.5	4.5	2.0	3.8	3.0	3.7	3.4
Corporate Bonds	6.1	3.8	2.5	3.3	3.3	4.3	2.0	3.4	2.7	3.4	2.5
High Yield Bonds	6.9	4.5	3.0	4.9	5.8	4.7	...	4.2	3.4	3.9	4.3
Opportunistic Investments	..	...	6.5	...	...	...	...	...	...	...	...
Cash & Liquid Instruments	2.1	1.5	1.0	1.8	2.0	1.9	2.2	2.0	1.6	1.6	0.8

* GMO assumes full reversion of prices to fair value

** Sellwood assumes a 25% reversion of prices to fair value

*** Research Affiliates assumes either zero or full reversion of prices to fair value