BlackRock

Winter 2021

Advisor insights guide

Observations and trends

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2021 may be one of the most anticipated years in our lifetime. We begin the year with hope for the end of a pandemic and the continuation of an economic recovery. New questions will come into focus. Among them, how much economic scarring has taken place in the past year? And, how much will life resume back to "normal?"

While we believe that portfolio risk will continue to be rewarded during the economic recovery in 2021, we need also bear in mind the challenged longer-term return regime characterized by high valuations in stocks and low yields in bonds. Portfolios may need to be redesigned for this new regime in order to better manage risk and enhance returns to levels that are appropriate for clients and their goals.

BlackRock stands ready to work alongside advisors as they endeavor to redesign their models. Whether it is defining changing investment goals, diagnosing unintended risks or considering the new design or security selection of an investment model, our Portfolio Solutions team remains available to assist you in making good on your pledge to clients.

This report contains unique data and insights on 20,108 models from advisors throughout the industry, collected over the past 12 months.[1] Every model has been analyzed on our Aladdin® risk management platform. We'll continue to analyze this data to make observations, derive insights and spot trends.

Some of the key takeaways from this edition are:

1. The average risk in advisor models is 25% higher than it was one year ago as a result of rising market volatility. This creates a challenging backdrop for introducing return-enhancing trades.
2. A $500,000 investment in a 60/40 portfolio 10 years ago would have grown to over $1.2 million through September 2020.[2] However, our capital market assumptions suggest a much lower value over the next 10 years. Portfolio redesigns will need to consider how to access additional returns that will likely be needed to successfully reach future client goals.
3. We offer BlackRock's guidance on how to redesign a portfolio, starting with the current average advisor model and using our outlook for both the year-ahead and beyond. We discuss how to thoughtfully pursue better returns while managing risk at the same time.

We hope you find this guide useful in your efforts. But more importantly, we hope you enjoyed a safe and joyous holiday season. We wish you and your clients much success, health and prosperity in the coming year.

1 As of 9/30/20.
2 Source: Morningstar, BlackRock. 60/40 portfolio represented by 60% S&P 500 Index and 40% Bloomberg Barclays U.S. Aggregate Bond Index 9/30/10-9/30/20. Assumes annual rebalancing. Past performance is no guarantee of future results. Index performance is shown for illustrative purposes only. It is not possible to invest directly in an index.
The analysis contained in this report was performed based on portfolios that were shared with BlackRock by advisors during a consultation with the Portfolio Solutions team or through their use of BlackRock's online Advisor Center, powered by Aladdin. BlackRock does not share individual advisor information or data/characteristics of individual portfolios. All portfolio data collected is presented in aggregate. We should note that the portfolios analyzed represent a subset of the industry, and not its entirety. As such, there may be certain biases present in the data that reflect the advisors who choose to work with BlackRock to analyze their portfolios.

Contents

The state of advisor models

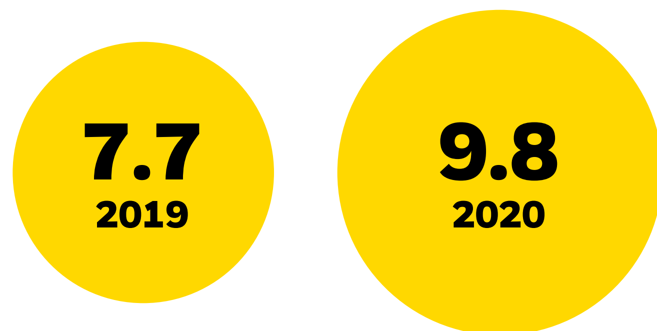
Many will be happy to ring in the new year and put 2020 in the rearview mirror, but the pandemic has impacted advisor models in measurable ways that won't simply abate with the turning of the calendar. Here we explore some important elements of typical portfolio design, the impacts of a year of market volatility and the implications for the road ahead.

Models are riskier ...

The average advisor model risk is up 25% in the past year. This is largely due to the increase in market volatility being captured by our Aladdin risk model, and not due to significant changes by advisors. The main drivers are equity and credit risk.

Implications: Seeking return-enhancing trades could exacerbate an already stretched risk picture for model portfolios. Pairing those trades with others that provide ballast may be necessary.

Average moderate model risk (%)



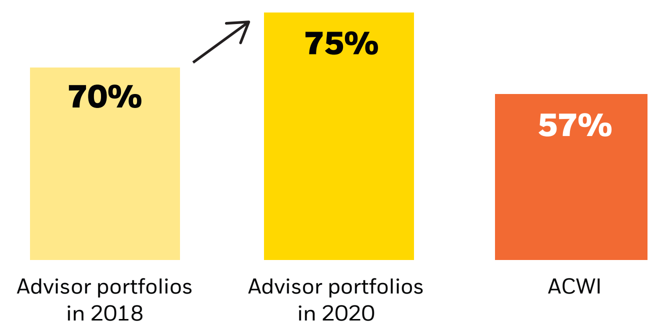
Source: BlackRock.

... and very U.S. centric

We have long talked about home-country bias that exists in advisor models, but the current weights are as high as we've seen. The typical U.S. stock allocation is currently overweight the MSCI ACWI index by 18%! We favor U.S. stocks in 2021, but not by this much.

Implications: Our capital market forecasts suggest higher returns in non-U.S. stocks for the next 5- and 10-year periods. This amount of overweight to the U.S. could be costly. More emerging market exposure could help boost portfolio returns.

Advisor U.S. weights up since 2018
U.S. stocks as % of total stock allocation



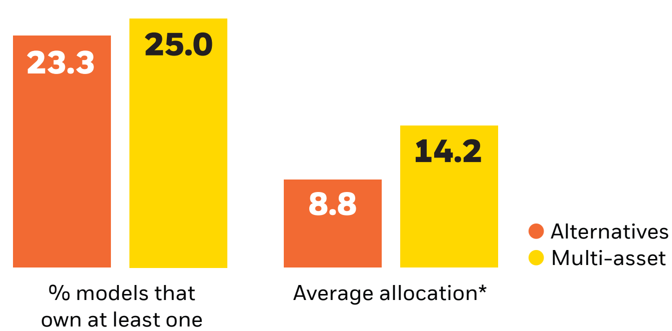
Source: Morningstar, BlackRock. 70% as of 6/30/18, 75% and ACWI as of 9/30/20.

Alts and multi-asset underutilized

The terrific returns of U.S. stocks over the past decade caused usage in both categories to wane. However, in a new regime of lower return and higher risk, these product types can offer value in redesigned portfolios.

Implications: Relying on stocks and bonds alone may cause returns to suffer and risk to rise. In other words, portfolio Sharpe ratios are poised to drop precipitously without adding new exposures.

Usage of alternatives/multi-asset



Source: BlackRock. *Of portfolios containing at least one holding from the category.

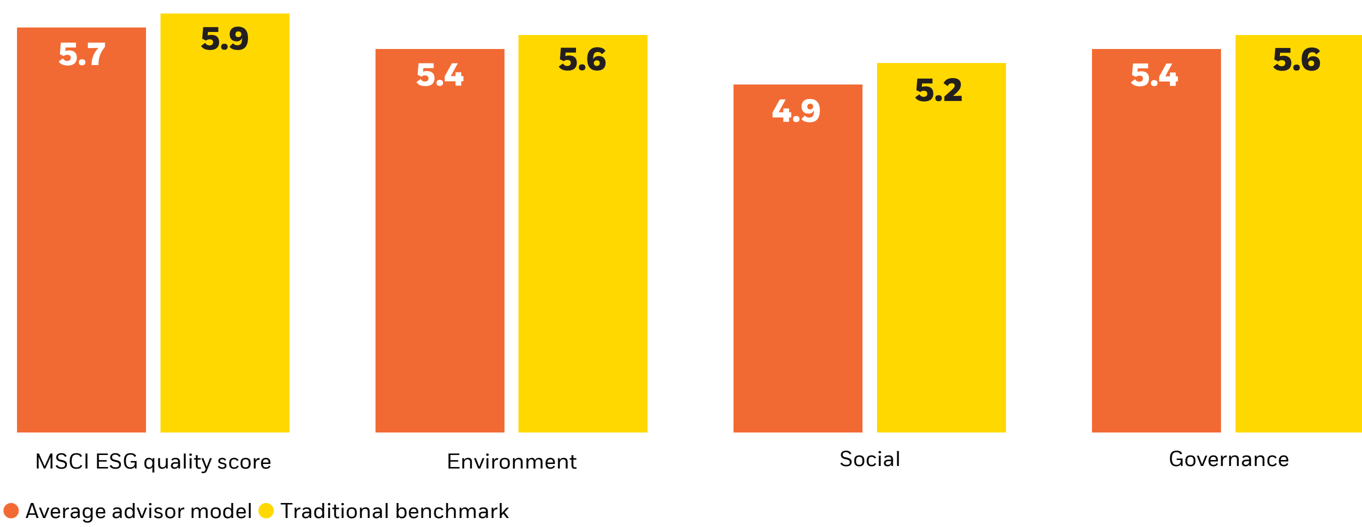
Sustainability scores lower than benchmarks

While many models are not yet built with sustainability in mind, they can still be scored for sustainability metrics. When compared to traditional benchmarks (which also aren't built with sustainability in mind), advisor models score lower in all main sustainability metrics.

Implications: As the reallocation of capital into sustainable accelerates, we believe that assets with better sustainability profiles will outperform assets with poor sustainability profiles. With the growth of sustainable products, clients can invest across asset classes, geographies and risk spectrums with sustainability in mind to meet both their financial and sustainable goals.

We believe that the new year requires a portfolio redesign to account for a new regime of lower returns and higher risk. However, before beginning any redesign, it's important to take stock of your current positioning. When you know where you are, you can make more intelligent decisions about how to get to where you want to go.

Advisor model portfolios have lower-than-benchmark ESG scores



Source: BlackRock, with data from MSCI ESG Fund Metrics for funds and MSCI ESG Research for individual companies, as of 5/31/20. The ESG Quality Score is the weighted average of the underlying funds' and companies' MSCI ESG Quality Scores. The MSCI ESG Environment, Social, and Governance Scores are the weighted average of the underlying funds' and companies' scores. In addition to an overall MSCI ESG Quality Score, each fund receives an Environmental, Social, and Governance Score on a scale of 0-10. These scores are comparable across all industries because they are not industry-weighted, like the overall MSCI ESG Quality Score. Traditional benchmark refers to the average of the scores of traditional benchmark blends listed on page 15 of this document. The ESG Benchmark refers to the average of the scores of different blends of MSCI ACWI ESG Focus Index and BBG MSCI U.S. Aggregate ESG Focus Index designed to mirror the asset allocation of the traditional benchmarks. The Average advisor model is represented by the average ESG scores of 15,749 models collected by BlackRock over the prior twelve months ending 3/31/20. Note: This material represents an assessment of the market environment at a specific time and is not intended to be a forecast of future events or a guarantee of future results. This information should not be relied upon as research or investment advice regarding the funds or any security in particular.

A plan for redesigning portfolios

The pandemic is forcing many advisors to ponder a serious question: are my long-term market projections safe? Given that long-term return and risk assumptions form the basis of most wealth planning exercises, the answer is not trivial. We believe there is a need to redesign portfolios to accommodate the new regime of lower returns and higher risk.

re•de•sign (verb)

to change a current design to ensure improvement or evolution

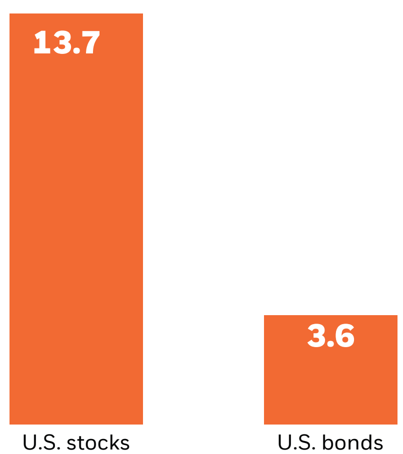
What are we aiming for?

A redesign should start with a goal: what you want your changes to accomplish. We believe a redesign for 2021 should include elements to help reduce risk and/or enhance returns.

As stated in the previous story, advisor models have about 25% more volatility than a year ago, so a redesign should consider ballast trades that either reduce risk or balance out return-enhancing trades that may raise portfolio risk. We believe that risk will be rewarded in 2021, so our aim shouldn't be to reduce risk at all costs. Rather, our aim should be to (1) make sure the client is comfortable with this baseline added risk and (2) be incredibly careful about adding more risk when seeking return-enhancing trades.

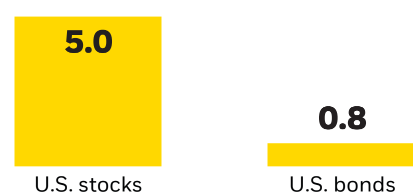
Return enhancement will likely be necessary going forward. The difference between the last decade's returns and projections for the next decade for the central assets in most clients' portfolios — U.S. stocks and U.S. bonds — is stark (see charts below). Consider, as an example, a client that needs a 6% rate of return. How does the portfolio need to evolve (especially considering that these rates of returns don't account for fees and taxes)? A redesign may need to contemplate a rotation away from these assets, which have been the workhorses of portfolio returns in the past, in favor of other things.

Last 10 years
Annualized total return (9/30/10-9/30/20)



Source: Morningstar. U.S. stocks represented by the S&P 500 Index. U.S. bonds represented by the Bloomberg Barclays U.S. Aggregate Bond Index. Past performance is no guarantee of future results. It is not possible to invest directly in an index. Index performance is shown for illustrative purposes only.

Next 10 years
BlackRock's 10-year capital market assumptions



This information is not intended as a recommendation to invest in any particular asset class or strategy or as a promise – or even estimate – of future performance. See back page for BlackRock's Capital Market Assumptions for more information.
Source: BlackRock Investment Institute, November 2020. Data as of 9/30/2020. U.S. stocks represented by MSCI USA Index. U.S. bonds represented by Barclays Bloomberg U.S. Aggregate Bond Index.

There are many ways to redesign portfolios to help produce better risk-adjusted returns. Here we outline our favorites, taking into account our shorter-term outlook for 2021 as well as our 10-year projections (see chart below).

The “trim” candidates:

1 **Core bonds —** With an expected return below 1% for the next decade, and a diminished ability to provide diversification ballast to a portfolio, core bonds may not play the same role in portfolios as they did in the last decade. That said, they do provide some measure of risk mitigation, even if less than in the past, so eliminating them altogether is not advisable.

2 **U.S. stocks —** While we believe that portfolios should currently be overweight U.S. stocks, the average advisor model already holds a pretty excessive amount compared to global stock indexes. The U.S. equity allocation in the MSCI ACWI Index is around 57% while the average U.S. portion of the typical advisor equity sleeve is around 75%. Trimming this dramatic overweight to something more reasonable (and **still** overweight) could lead to trades that enhance returns, reduce risk or both.

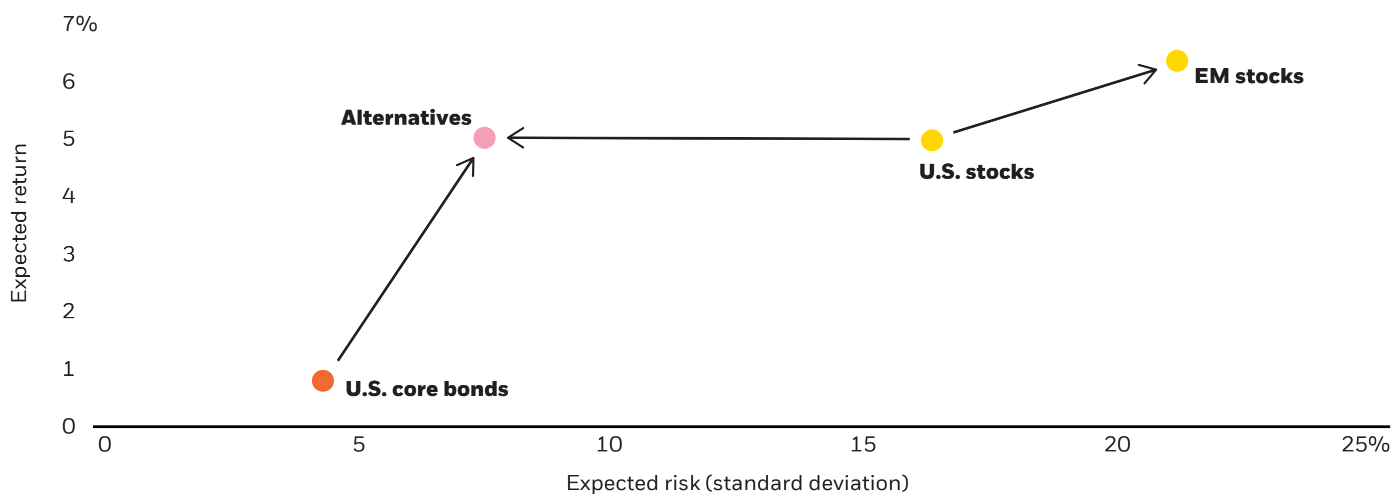
The “add” candidates:

1 **International stocks —** Our favorite is emerging markets, which have been consistently underweight MSCI ACWI in advisor models. Trading U.S. stocks for EM stocks could enhance portfolio returns. Even more, it appears from our risk measurements that the first few percentage points traded from U.S. stocks to EM stocks could reduce risk as well, given that the trade diversifies the dramatic overweight in U.S. stocks.

2 **Alternative investments —** Our favorite pool of candidates since they are flexible and can be used both for return enhancement and risk reduction. Private investments can offer amplified returns when funded from their public counterparts. True diversifier hedge funds can offer risk reduction when funded all or in part from stocks, potentially without giving up return (see chart below), or return enhancement when funded from bonds, but do this very carefully.

3 **Multi-asset products —** Our expectation for low-but-positive stock returns favors these products, as we wrote about in our Fall 2020 edition of the Advisor Insights Guide. The average fund in the multi-asset product universe has taken about two-thirds of the risk of global stocks over the past 20 years, and has produced far better risk-adjusted returns than global stocks in periods where stock returns were either negative or low-but-positive (below 7.5% annualized on a rolling three-year basis).

10-year capital market assumptions for "trim" and "add" candidates



This information is not intended as a recommendation to invest in any particular asset class or strategy or as a promise — or even estimate — of future performance. See back page for more information on BlackRock's Capital Market Assumptions.

Source: BlackRock Investment Institute, November 2020. Data as of 9/30/2020. U.S. core bonds represented by Barclays Bloomberg U.S. Aggregate Bond Index. Alternatives represented by HFRI Global Hedge Fund Index. U.S. stocks represented by MSCI USA Index. EM stocks represented by MSCI EM Index.

Enhancing returns and reducing risk

There are several return-enhancing trades we like in 2021. Trading bonds for hedge funds or U.S. stocks for EM stocks could produce better portfolio returns. However, both trades could increase portfolio risk a bit, so we insert a ballast trade of U.S. stocks for hedge funds or multi-asset funds to counteract it. Based on our capital market assumptions, these trades could potentially reduce portfolio risk without compromising expected return. If everything works according to plan, the portfolio's expected return could be higher with lower expected risk. The portfolio's risk-adjusted return could be much better in this scenario, likely improving client outcomes.

Notice below how we've changed the composition of the advisor moderate model from its original form to a redesigned state. A less productive bond allocation has been reduced, and lightly used alternatives and multi-asset products have been increased. The overall allocation to stocks (including those held by the multi-asset products) is only a few percentage points below our starting point, so the portfolio still has its growth engine. But we've made a big trade up in expected returns with every dollar in bonds we use to buy non-correlated assets. Also notice in our example below that portfolio risk is lower than our starting point.

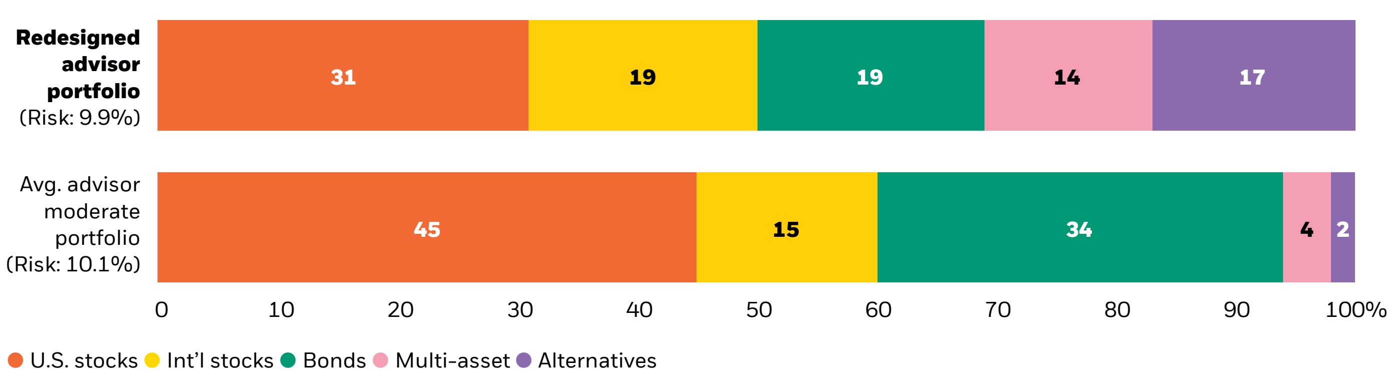
There are other trades not shown here that we would also suggest considering:

- Short duration bonds in favor of flexible bond funds
- Public equity/credit in favor of private equity/credit
- A 50/50 mix of stocks/bonds in favor of income-oriented multi-asset funds

In addition, many of the trades we've mentioned are often available through active strategies that require manager skill but often come with higher fees. To counteract the fee increase, most of the remaining core bond exposure can be obtained through ultra-low-cost core bond ETFs. ETFs can be used to seek lower cost exposure in the stock sleeve as well. This can free up your fee budget to accommodate the entire redesign without compromising the average expense incurred by the client.

A redesign does not involve dabbling around the edges. The term itself speaks to fundamentally changing something in a way that makes it look measurably different than its starting form. It often requires you to explore things you haven't before. The changes can be uncomfortable to execute, but that shouldn't deter you from making needed improvements. Even if you aren't comfortable deploying all these trades, we do believe each can offer the portfolio either return enhancement or risk reduction. But taken together, they have the ability to increase risk adjusted returns that can improve the chances of client success in a much more challenging investment regime.

Think beyond 60/40 and U.S. borders



Source: BlackRock, Aladdin as of 9/30/20.

Avg. advisor moderate portfolio is represented by a composite is a representative composite of 6,210 moderate advisor portfolios collected by BlackRock in trailing 12 months ended 6/30/20. Moderate models defined as those containing between 50% and 65% equities. Composite constructed by aggregating the underlying holdings in each individual model to create a single representative model, with holdings that appear frequently and in high weights receiving the highest weighting in the composite. Holdings of less than 0.01% weight are consolidated into the largest holding of the same Morningstar category. Hypothetical additions to the redesigned portfolio are funded by selling holdings pro-rata from within fixed income, equities, or both. Estimated risk is a holdings-based metric as calculated by BlackRock's risk model in Aladdin. For illustrative purposes only. The BlackRock redesigned model is for illustrative purposes only. There is no guarantee that a positive investment outcome will be achieved. This information should not be relied upon as research, investment advice or a recommendation regarding the Funds or any security in particular. This information is strictly for illustrative and educational purposes and is subject to change. This information does not represent the actual current, past or future holdings or portfolio of any BlackRock client.

Advisor portfolio universe

The following pages summarize advisor model data collected by BlackRock over the prior 12 months. The models are grouped into risk profile cohorts determined by equity weighting. These groupings are defined at the bottom of each page.

Figures describe the average across all portfolios in the cohort for the metric in question. BlackRock's risk model data is supplemented by asset allocation and fund characteristic data from Morningstar.

We should note that the portfolios analyzed represent a subset of the industry, and not its entirety. As such, there may be certain biases present in the data that reflect the advisors who choose to work with BlackRock to analyze their portfolios.

All data is as of September 30, 2020 unless otherwise specified.

Risk profile	Conservative	Moderate conservative	Moderate	Moderate aggressive	Aggressive
Equity weight	< 30%	30-50%	50-65%	65-80%	> 80%

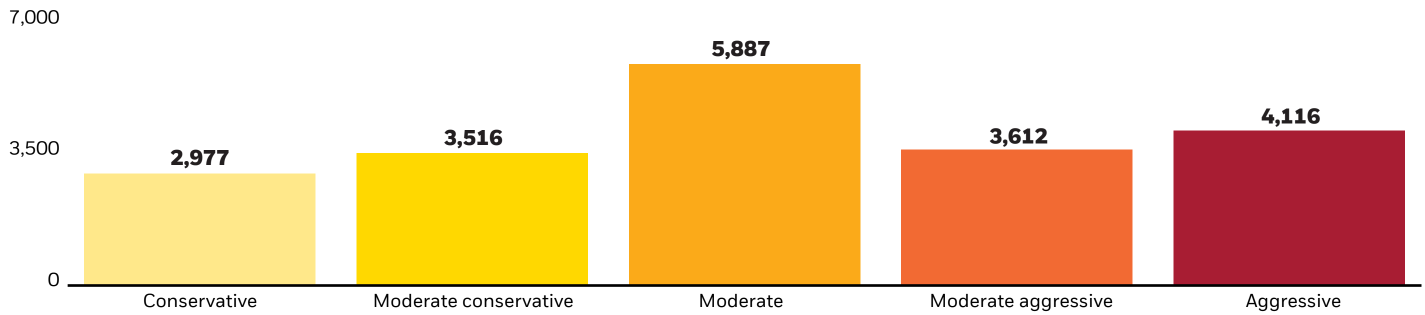
Portfolio attributes

Better balance in models collected

This edition features a more evenly distributed set of models. The total number of more aggressive models dropped slightly since the previous edition, while more conservative model counts increased. It is important to consider the impact of skew when evaluating one overall average in any area of our data. Measuring changes cohort-by-cohort may be more informative depending on the task.

Model count by risk profile

20,108 unique advisor models



Investment vehicle usage

	ETF*		OEF	CEF	Cash	Stock
Avg % allocation	**9/30/20**	**9/30/19**	**9/30/20**			
Conservative	31.7	30.9	65.3	0.9	1.4	0.2
Moderate conservative	35.2	33.1	60.6	0.5	1.8	0.9
Moderate	39.8	37.2	56.3	0.3	1.4	1.8
Moderate aggressive	41.0	38.8	54.6	0.3	1.2	2.7
Aggressive	51.7	45.7	40.5	0.1	0.8	6.8
All models	**40.5**	**38.1**	**54.9**	**0.4**	**1.3**	**2.6**

* Left column refers to data as of 9/30/20. Right column, 9/30/19 data based on 15,793 portfolios.

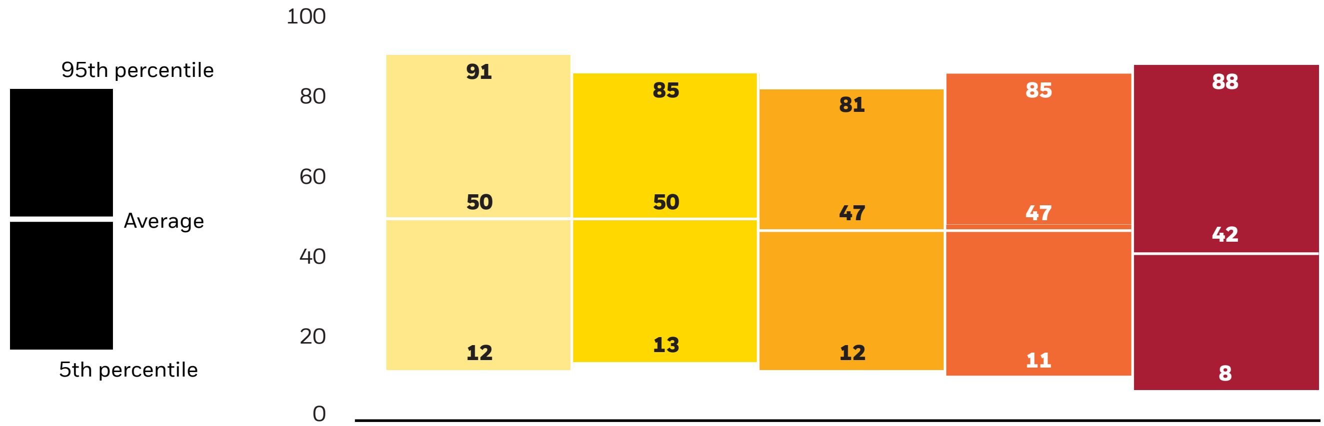
Risk profile	Conservative	Moderate conservative	Moderate	Moderate aggressive	Aggressive
Equity weight	< 30%	30-50%	50-65%	65-80%	> 80%

Yields once again hard to come by

Yields continue to fall in the aftermath of the spread-widening we saw in the first quarter of 2020. However, the drop in portfolio yields goes beyond simple retracement. The average yield in each category is now at the lowest levels we've seen since the end of 2017.

Distribution of portfolio fees (bps)

Weighted average expense ratio



Other portfolio attributes

	All		Conservative		Moderate conservative		Moderate		Moderate aggressive		Aggressive	
	9/20	9/19	9/20	9/19	9/20	9/19	9/20	9/19	9/20	9/19	9/20	9/19
Fees (bps internal expenses)	47	49	50	50	50	52	47	50	47	51	42	44
Trailing 12-month yield (%)	2.10	2.34	2.74	3.24	2.29	2.73	2.09	2.37	1.87	2.08	1.70	1.81
1-yr tax cost ratio (% return lost)	1.07	1.24	1.13	1.28	1.13	1.29	1.08	1.26	1.06	1.26	0.97	1.16
# of securities	15	17	10	11	16	17	17	18	16	18	13	17
Duration of fixed income sleeves (yrs)	4.79	3.94	4.48	3.66	4.79	3.98	4.78	3.93	5.00	4.04	4.96	4.08

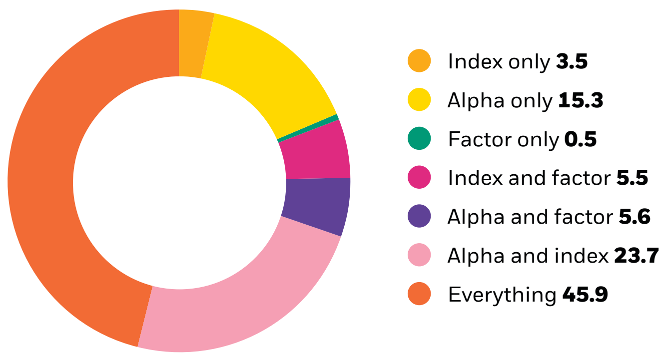
Source: Morningstar, BlackRock. For illustrative purposes only. 9/20 refers to data as of 9/30/20 and 9/19 refers to data as of 9/30/19. These attributes are calculated for each portfolio as a weighted average of the underlying holdings. The portfolio-level metrics are then averaged in each risk profile cohort to arrive at the numbers presented in the table.

Risk profile	Conservative	Moderate conservative	Moderate	Moderate aggressive	Aggressive
Equity weight	< 30%	30-50%	50-65%	65-80%	> 80%

Blending index, factor AND alpha products is becoming the norm

In an industry that began with only mutual fund investments, index products (core, cap-weighted and low cost) became a way to get market exposure at a low cost. Alpha potential was lost in the trade. Factors like momentum, value or quality can help bridge the gap, offering excess return potential typically at a low cost. More advisor models now blend all three types than any other combination.

Model approaches to blending products (%)

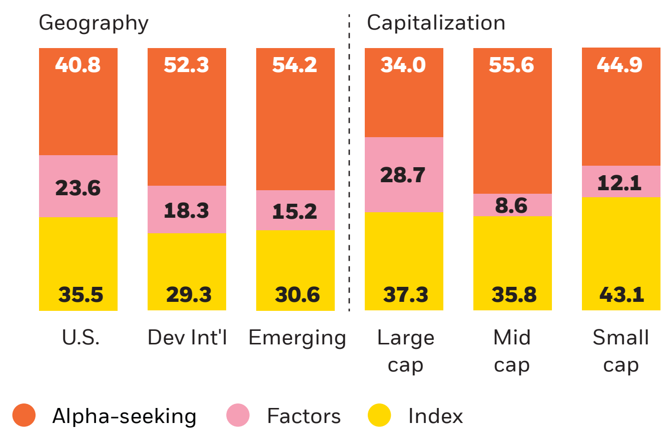


Equity investment preferences

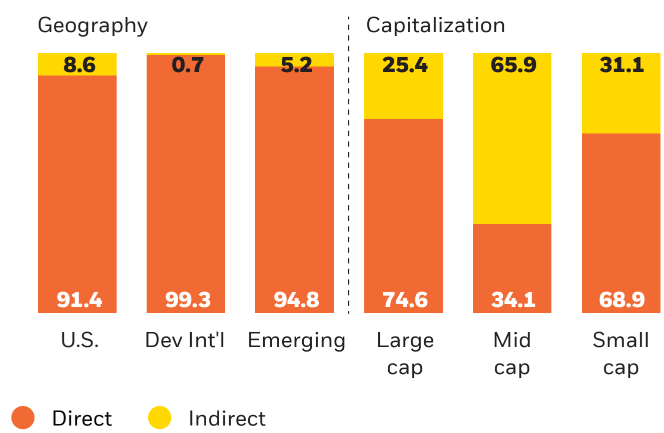
We see consistent use of core index products to derive both geographic and capitalization exposures. There is heavier use of alpha-seeking mutual funds across most segments. That said, we see a subtle shift from last quarter **away** from alpha-seeking products in U.S. large cap, but **towards** them in all other geographic and capitalization areas.

Direct exposures come from intentional category selection (e.g., selecting a fund from a small-cap category to gain small-cap exposure), while indirect exposures come from categories other than what the intended exposures are meant to provide (e.g., gaining U.S. exposure from an international fund). We see more intentional selection of geographic exposures, while capitalization exposures are accessed less directly. However, we see a subtle shift occurring **towards** indirect geographic exposures, and **away** from indirect capitalization exposures.

Average product mix (%)



Average exposure mix (%)



Source: BlackRock. Charts shown for illustrative purposes only.

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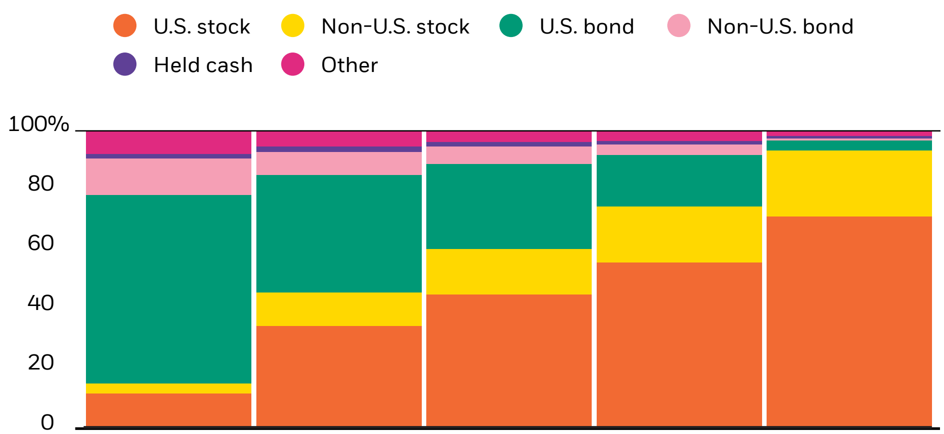
Asset allocation

Stock allocations continue to creep higher

In service of our callout on page 10, an examination of each cohort illustrates an increased stock allocation across all five risk profiles while the overall average remained steady due to a shifting distribution of models collected. In addition, we're seeing non-U.S. stock allocations rise commensurately with the overall stock increase. This is a positive sign, but we still believe the stock mix should shift more meaningfully towards non-U.S.

Average allocation to broad asset classes and geographies



% allocation vs. prior*	All		Conservative		Moderate conservative		Moderate		Moderate aggressive		Aggressive	
	9/20	9/19	9/20	9/19	9/20	9/19	9/20	9/19	9/20	9/19	9/20	9/19
TOTAL STOCK (%)	60.2	61.2	14.7	12.5	45.4	41.4	60.1	58.5	74.5	72.6	93.3	92.5
U.S. stock	45.2	45.6	11.3	9.4	34.2	30.7	44.7	42.8	55.6	53.8	71.0	70.6
Non-U.S. dev stock	10.5	10.8	2.6	2.2	8.2	7.8	10.7	10.9	13.2	13.1	15.3	15.0
EM stocks	4.5	4.7	0.8	0.9	3.1	2.9	4.7	4.7	5.7	5.7	7.0	6.9
TOTAL BOND (%)	34.3	33.1	75.9	78.9	47.5	50.9	34.7	35.4	21.0	22.4	4.1	4.5
U.S. bond	28.6	27.7	63.6	66.1	39.7	42.7	28.8	29.6	17.5	18.7	3.4	3.8
Non-U.S. bond	5.7	5.4	12.4	12.8	7.8	8.2	5.9	5.8	3.5	3.6	0.7	0.7
Held cash	1.3	1.4	1.4	1.6	1.8	2.0	1.4	1.6	1.2	1.2	0.8	0.8
Real assets, Leverage, other	4.1	4.3	7.9	7.0	5.2	5.7	3.8	4.6	3.3	3.9	1.7	2.2

Source: Morningstar, Aladdin. For illustrative purposes only. * Left column refers to data as of 9/30/20. Right column, 9/30/19.

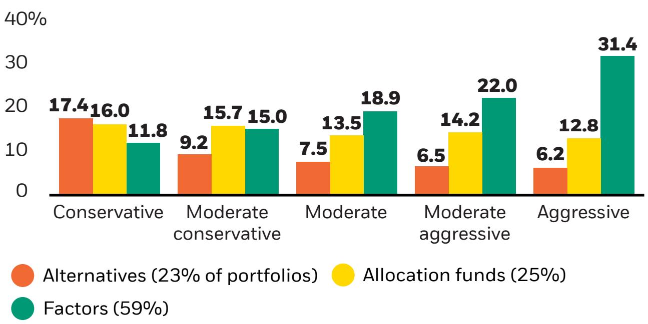
Risk profile	Conservative	Moderate conservative	Moderate	Moderate aggressive	Aggressive
Equity weight	< 30%	30-50%	50-65%	65-80%	> 80%

Light usage of alternatives and multi-asset products

Only 23% of models contain at least one alternative investment product and only 25% contain at least one multi-asset product. These two product types should be integral to portfolio redesigns and we believe client outcomes could benefit if these numbers rise in the future.

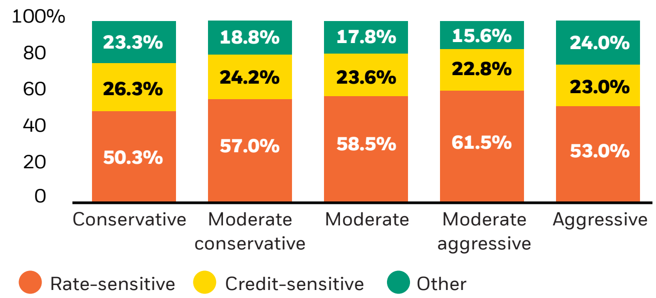
Allocation to product categories of interest (%)

% of portfolios including 1+ product in category



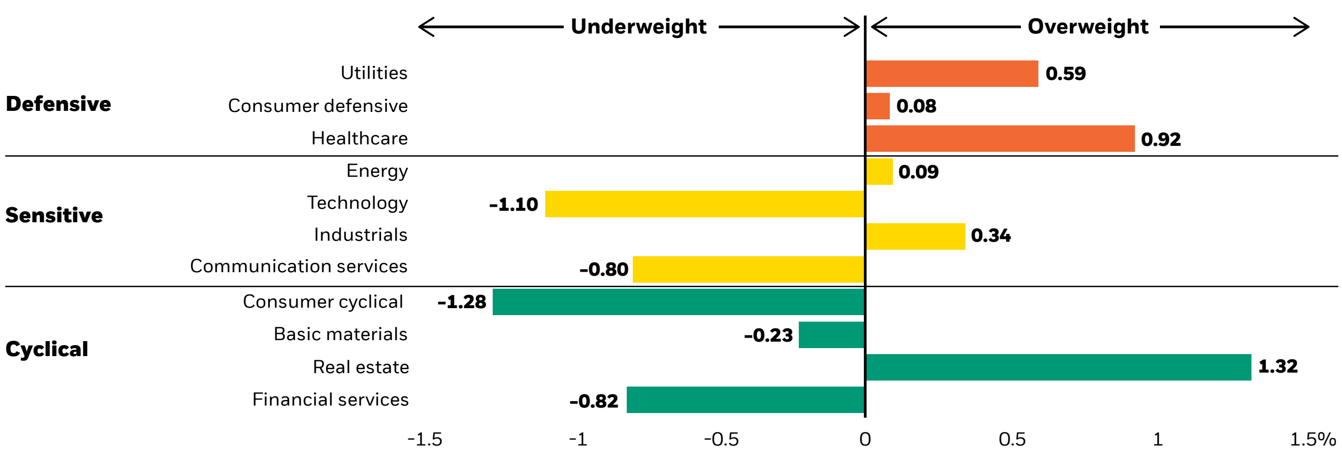
Source: Morningstar, BlackRock. For illustrative purposes only. See back page for descriptions of each category.

Allocation within fixed income



Source: Morningstar, BlackRock. See back page for descriptions of each category.

Sector allocation within equities



Source: Morningstar, BlackRock. For illustrative purposes only. Based on sector weightings relative to a benchmark consisting of 75% S&P 1500 Index and 25% MSCI ACWI ex-U.S.

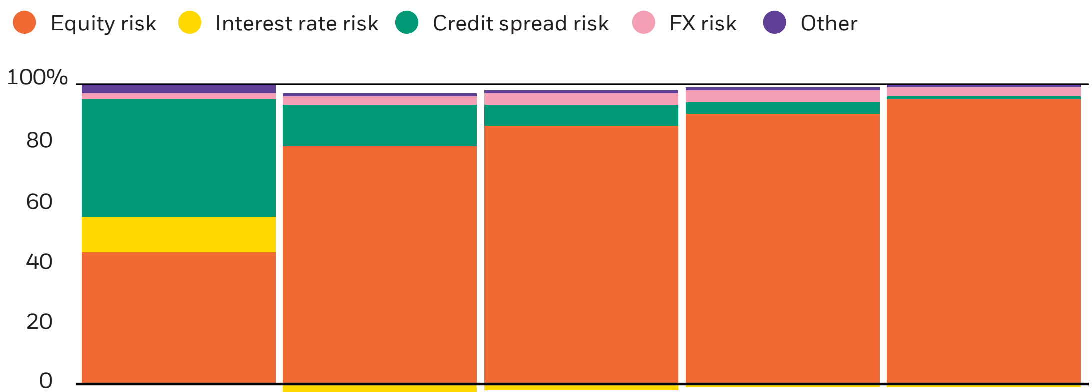
Risk profile	Conservative	Moderate conservative	Moderate	Moderate aggressive	Aggressive
Equity weight	< 30%	30-50%	50-65%	65-80%	> 80%

Risk allocation

Credit risk helps drive risk reduction

Last quarter, credit risk rose to roughly 60% of total bond sleeve risk in the average model. As market volatility has continued to abate in the back half of the year, the credit risk contribution has fallen. This has contributed to lower overall portfolio volatility, which is down roughly 30-50 bps across all risk types from our Fall 2020 edition, but still 25% higher than a year ago.

Portfolio volatility decomposition — exposures to broad risk factors



	Conservative 9/20	Conservative 9/19	Moderate conservative 9/20	Moderate conservative 9/19	Moderate 9/20	Moderate 9/19	Moderate aggressive 9/20	Moderate aggressive 9/19	Aggressive 9/20	Aggressive 9/19
Total portfolio volatility (%)	4.27	2.91	7.59	5.62	9.81	7.74	11.96	9.44	15.06	12.27
Total benchmark volatility (%)	4.06	3.47	7.07	5.72	9.90	8.07	12.09	9.93	14.32	11.83
% fixed income risk from credit	52.1%	24.1%	48.9%	19.6%	47.2%	17.1%	44.9%	16.6%	40.2%	18.1%
Benchmark blend (S&P 1500 | ACWI ex-U.S. | BBG Universal)	11% | 4% | 85%		30% | 10% | 60%		45% | 15% | 40%		56% | 19% | 25%		67% | 23% | 10%	

Source: Aladdin. For illustrative purposes only.

Risk profile	Conservative	Moderate conservative	Moderate	Moderate aggressive	Aggressive
Equity weight	< 30%	30-50%	50-65%	65-80%	> 80%

BlackRock's long-term capital markets assumption disclosures – 9.30.20 CMAs

Return assumptions are total nominal returns. U.S. dollar return expectations for all asset classes are shown in unhedged terms, with the exception of global ex-U.S. Treasuries and hedge funds. Our CMAs generate market, or beta, geometric return expectations. Asset return expectations are gross of fees. We use long-term volatility assumptions. We break down each asset class into factor exposures and analyze those factors' historical volatilities and correlations over the past 19 years. We combine the historical volatilities with the current factor makeup of each asset class to arrive at our forward-looking assumptions. This approach takes into account how asset classes evolve over time. Example: Some fixed income indices are of shorter or longer duration than they were in the past. Our forward-looking assumptions reflect these changes, whereas a volatility calculation based only on historical monthly index returns would fail to capture the shifts. We have created BlackRock proxies to represent asset classes where historical data is either lacking or of poor quality. Expected return estimates are subject to uncertainty and error. Expected returns for each asset class can be conditional on economic scenarios; in the event a particular scenario comes to pass, actual returns could be significantly higher or lower than forecasted.

This information is not intended as a recommendation to invest in any particular asset class or strategy or as a promise of future performance. Note that these asset class assumptions are passive, and do not consider the impact of active management. All estimates in this document are in U.S. dollar terms unless noted otherwise. Given the complex risk-reward trade-offs involved, we advise clients to rely on judgment as well as quantitative optimization approaches in setting strategic allocations to all the asset classes and strategies.

References to future returns are not promises or even estimates of actual returns a client portfolio may achieve. Assumptions, opinions and estimates are provided for illustrative purposes only. They should not be relied upon as recommendations to buy or sell securities. Forecasts of financial market trends that are based on current market conditions constitute our judgment and are subject to change without notice. We believe the information provided here is reliable, but do not warrant its accuracy or completeness. This material has been prepared for information purposes only and is not intended to provide, and should not be relied on for, accounting, legal, or tax advice.

Important notes

Alternatives refer to products in the following Morningstar categories: Long-Short Equity, Options-Based, Multialternative, Managed Futures, Long-Short Credit, Market Neutral, Multicurrency and Bear Market. **Allocation funds** refer to products in the Target Date and Allocation series of Morningstar categories, as well as World Allocation, Convertibles, and Tactical Allocation categories. **Factor** products refer to non-market cap weighted ETFs and OEFs in categories determined by BlackRock, including: dividend-weighted strategies, multi-factor, single factor exposures, equal weight strategies, low volatility, active factor, and certain fixed income strategies. The chart calculates the average weight to each product category among portfolios that include at least one from the category.

Rate-sensitive fixed income Morningstar categories include: Corporate Bond, Inflation-Protected Bond, Intermediate Government, Intermediate-Term Bond, Long Government, Long-Term Bond, Static Intermediate Bond, Static U.S. Government, and all Municipal categories. **Credit-sensitive:** Convertibles, Bank Loan, Emerging Markets Bond, Emerging-Markets Local-Currency Bond, High Yield Bond, Multisector Bond, Nontraditional Bond, Preferred Stock, and High Yield Muni. **Other** refers to all other fixed income categories, mostly short term in nature.

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