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BlackRock

# Blending returns updated

BlackRock Investment Institute

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# Key takeaways

The Covid-19 shock provided something of a natural experiment that enabled us to reassess our framework for blending returns and gauge the ability of alpha-seeking managers to deliver what we call pure alpha – the part of excess return relative to a benchmark not driven by a factor tilt – during a risk asset selloff and rebound of unprecedented speed and size.

Factor exposures – the part which can be captured via indexing - play a large role in manager returns and even more so following the Covid-19 shock.

Investors need to understand the drivers of returns and their costs when building portfolios, in our view. Picking and overseeing alpha-seeking managers involves governance costs that can be considerable – and the Covid-19 shock hasn't changed this.

Top-quartile alpha was higher during Covid-19 than before, yet we observed that not all managers had a steady ride. For example, high yield managers struggled before recovering due to dislocations specific to the asset class. Managers in top quartiles before Covid-19 also outperformed their peers during Covid-19, pointing to their ability to take advantage of increased volatility.

**Bottom line: These results reinforce our view that alpha, factor and index products are key components of the strategic asset allocation (SAA) over the long run.**

We also update the core of our July 2018 Building better portfolios publication, again finding higher alpha in equity but higher alpha information ratios – adjusting for volatility – in fixed income.

We double down on our original conclusions.

- The approach to blending returns is a whole-portfolio one.
- Allocating to alpha has high governance costs.
- It is important to know the returns you are buying.

# Our framework's three main points

## Know what you're buying

We believe investors need to distinguish between alpha, broad market and factor returns. This allows investors to allocate to genuine alpha opportunities within and across asset classes. And clarity on the sources of returns helps ensure investors stick to portfolio objectives by fully accounting for factor exposures. Looking at excess returns alone can be deceiving, so we see a need to uncover the factor exposures embedded in them.

## See the full picture

A blend based on investor objectives and constraints is preferable - there is no one-size-fits-all answer. Blending alpha-seeking managers with indexing and factor strategies should occur at a whole-portfolio level rather than asset class by asset class. Alpha-seeking strategies with higher expected alpha, net of fees, may entail higher risk. But we believe they should not be ruled out even if contributing meaningful market and factor exposures provided those exposures are accounted for.

## Time is money

What matters are returns net of costs. Yet product fees vary widely by client and over time. Governance costs to find and monitor alpha-seeking managers can also be considerable. Fees may lower returns – and alpha. Many investors have limited resources for these activities. Investors with a limited governance budget may opt to oversee just a few alpha-seeking managers – or even keep their entire portfolio in index products.

# Key concepts

## Factors

Macro and equity style factors are important drivers of returns, both through indexing products and alpha from timing factor returns. It is important to separate this source of return from any alpha-seeking manager's excess return relative to a benchmark to understand the return being paid for.

## Common and pure alpha

Our work seeks to find not just factor-driven returns within excess returns, but also what we call common alpha – a return that appears factor-like but cannot be explained by current macro and style factors. We group this with pure alpha – alpha that can be explained by manager skill alone – for the purposes of attributing alpha.

## Returns and fees

What matters are returns net of costs. Product fees cut into returns and can reduce or, in some cases, eliminate the alpha an investor receives. Yet these fees vary widely and change over time. Some index products can also have large fees. Investors should fully account for fees in portfolio construction.

## Governance costs

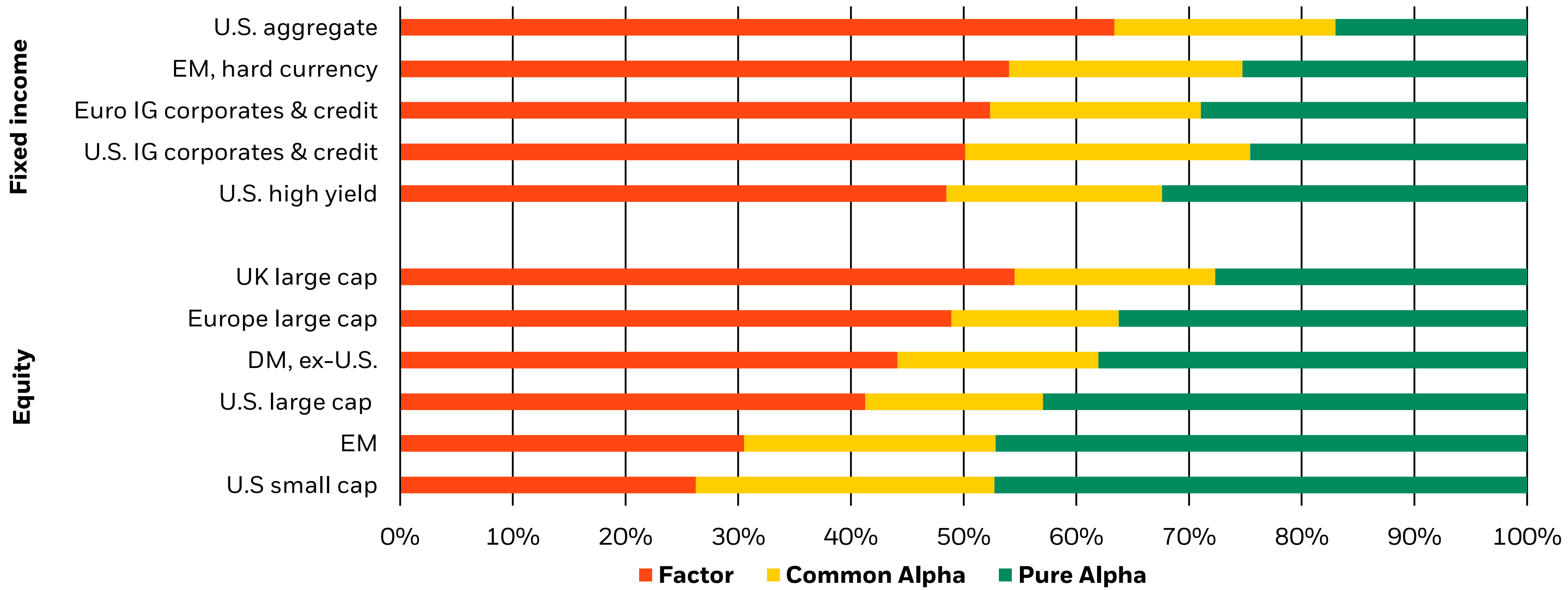
Governance costs – those required to find and manage alpha-seeking managers – are a key consideration. Because costs are negotiable and client specific, our framework for blending alpha and index looks at returns and costs separately.

**This is why we believe manager selection and oversight are vital to achieve alpha.**

# Factors are an important part of excess return variance

Our breakdown of return drivers still shows factors are key in understanding the fluctuation of excess returns. But pure alpha – including the factor-like common alpha – can be found across asset classes.

## Annualized average excess return variance of all managers, 2016–2021

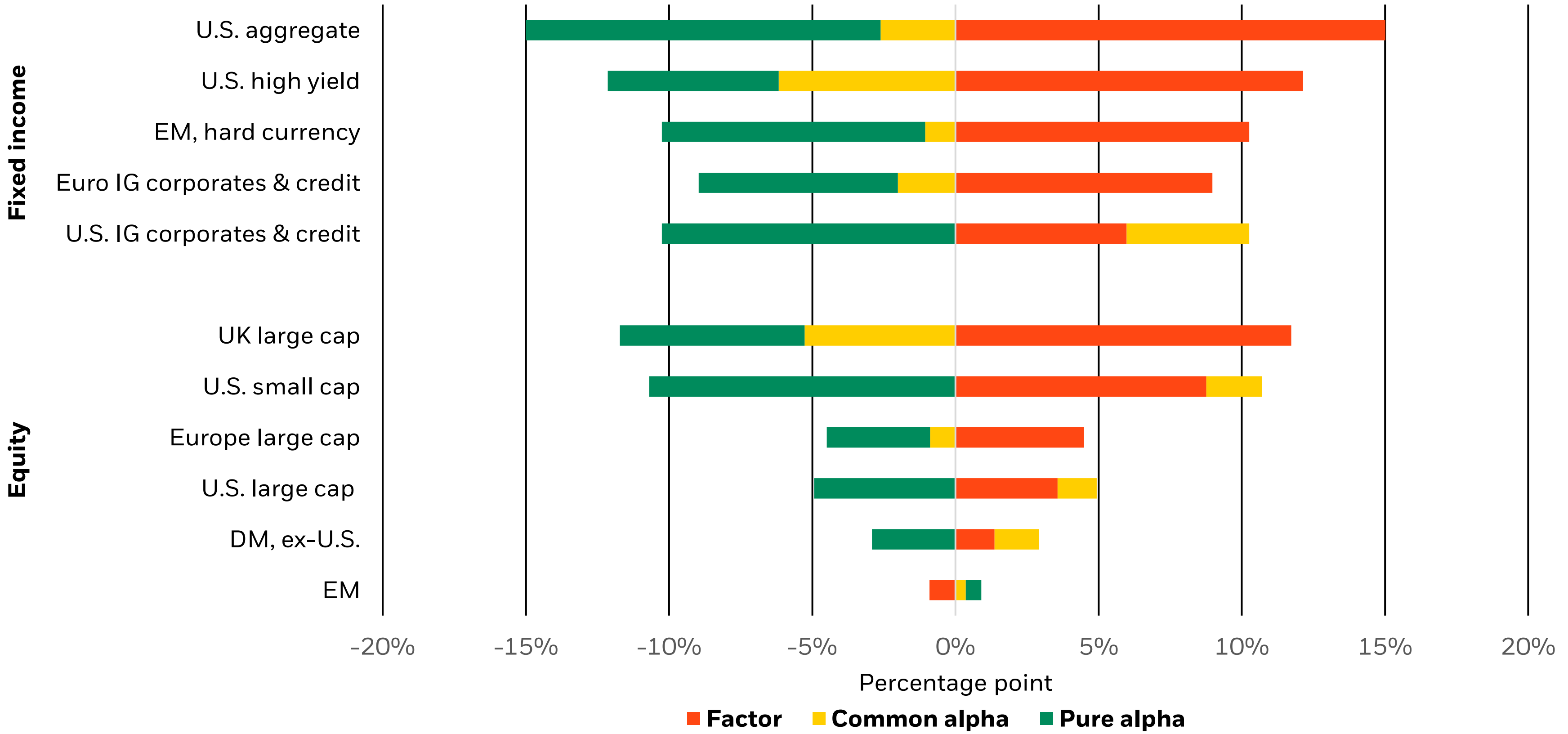



Past performance is not a reliable indicator of current or future results. This information is not intended as a recommendation to invest in any particular asset class or strategy or as a promise - or even estimate - of future performance. Sources: BlackRock Investment Institute, with data from eVestment, December 2021. We separate excess returns – gross of fees – using the eVestment database of historic returns for 2898 managers across asset classes in public markets. We use MSCI indices for equity style factors and market benchmark indexes as a proxy for macro factors across asset classes – indexes are listed in the appendix.. We first use Least Angle regression to calculate how much of the excess return of an individual manager over a given five-year period can be explained by the exposures to macro and style factors. Least Angle regression helps identify the most important factors underlying excess returns – and the results are similar to our previous publication: https://www.blackrock.com/institutions/en-zz/literature/whitepaper/bii-portfolio-construction-blending-returns-july-2018.pdf. Any excess return that cannot be explained by these factors is then defined as alpha. We next perform principal component analysis on the alpha to define the part which is systematic – common alpha – for which we take the first three principal components. From these data we can calculate the variance of the separate parts as well as levels of alpha, alpha volatility and the information ratio (volatility-adjusted alpha). We chose a five-year snapshot of the average result across all managers in our sample to get a medium-term view of this breakdown, similar to the five-year windows we used in our previous analysis from 1997-2017.

# Variance explained by factors rose in the Covid-19 period

We find the role of factors (red bars below) played an even larger role in the fluctuation of manager excess returns in the last five years, driven by increased factor volatility during Covid.

## Change in annualized average excess return variance, 2016-2021 vs. 2011-2015

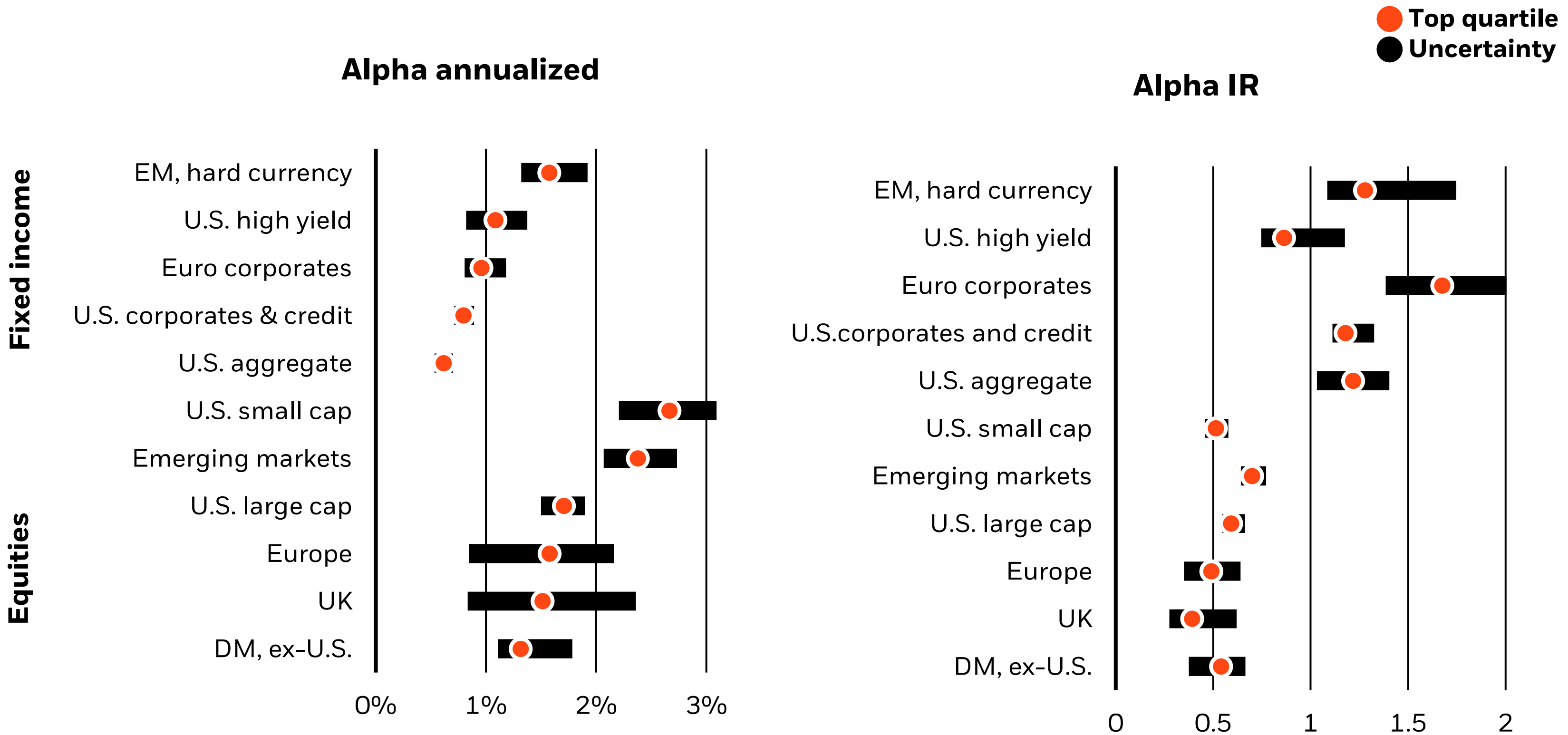



**Past performance is not a reliable indicator of current or future results. This information is not intended as a recommendation to invest in any particular asset class or strategy or as a promise - or even estimate - of future performance.** Sources: BlackRock Investment Institute, December 2021. Note: the chart shows the difference in percentage points in our decomposition of excess returns – gross of fees - for the 2016-2021 period and the 2011-2015 period. Index proxies: Bloomberg U.S. Aggregate USD, JPM EMBI Global Core Index, ICE BofA Euro Corporate Index, IBOXX $ Liquid Investment Grade Index, IBOXX $ high yield, MSCI UK, MSCI Europe, MSCI EAFE US$, MSCI USA, MSCI EM US$, MSCI USA Small Cap. Indexes are unmanaged and do not account for fees. It is not possible to invest directly in an index.

# Alpha higher in equities, but fixed income alpha IR higher

Our work over the Covid-19 period finds similar levels compared with the longer previous period we assessed (1997-2017). We find more alpha opportunity in equity, but it is less efficient for risk taken.

## Top-quartile alphas and alpha information ratio (IR) by asset class gross of fee, 2016-2021




Source: BlackRock Investment Institute and eVestment, December 2021. Notes: The alpha and alpha IR calculations are the same as we did on the previous slides. We use order statistics – a method for slicing the entire distribution of managers in the eVestment database into quartiles with an aim to focus on the alpha and alpha IRs of the top-performing managers. The orange dots show the cut-off level of top quartile annualized alpha and alpha IR within each asset class group and the bars show our confidence levels around these numbers. We obtain exact, finite sample confidence bounds by picking order statistics around the target quantile, as described in David and Nagaraja (2003). For instance, depending on the confidence level and the size of the dataset, an interval for the 75th percentile might be given by the 70th and 80th percentiles. Similar rules can be applied for percentile ranges as well. We choose the latter approach for simplicity, speed, robustness and broad applicability.

# Gauging alpha over shorter time horizons

## Problem?

Trying to gauge alpha performance over shorter periods of time using our previous method – time series regression – would lead to very noisy results.

## Solution

We can see manager excess returns and our previous time series regression allows us to estimate factor tilts that managers held going into the Covid-19 shock. From these two sources, we can then estimate implied alpha.

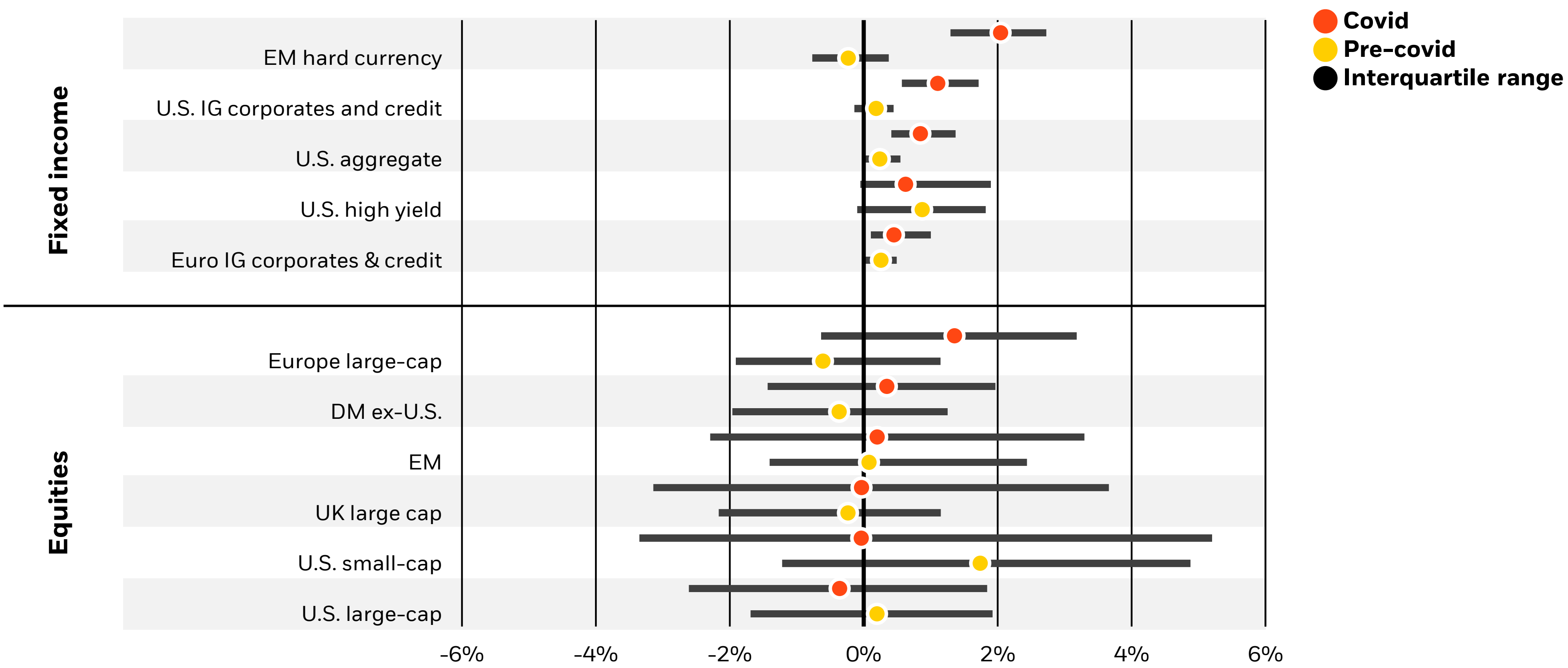
## What is Implied alpha?

- We calculate a manager's factor exposures in the period just before the Covid-19 shock (to end December 2019) and calculate the return that would have come from these exposures through the Covid-19 shock
- The difference between this return and the manager's observed excess return is the implied alpha
- Implied alpha is therefore the additional return that managers generated over and above their starting exposures – by either changing their factor exposures through the covid shock (factor rotation), stock picking or other market timing
- Implied alpha can help track manager alpha performance over time relative to a defined starting point

# Implied alpha through Covid shock

The distribution of alpha was higher and wider through Covid – the full range among alpha-seeking managers underscores the importance of picking top-quartile managers.

### Annualized cumulative implied alpha and interquartile ranges gross of fee, 2018-2021

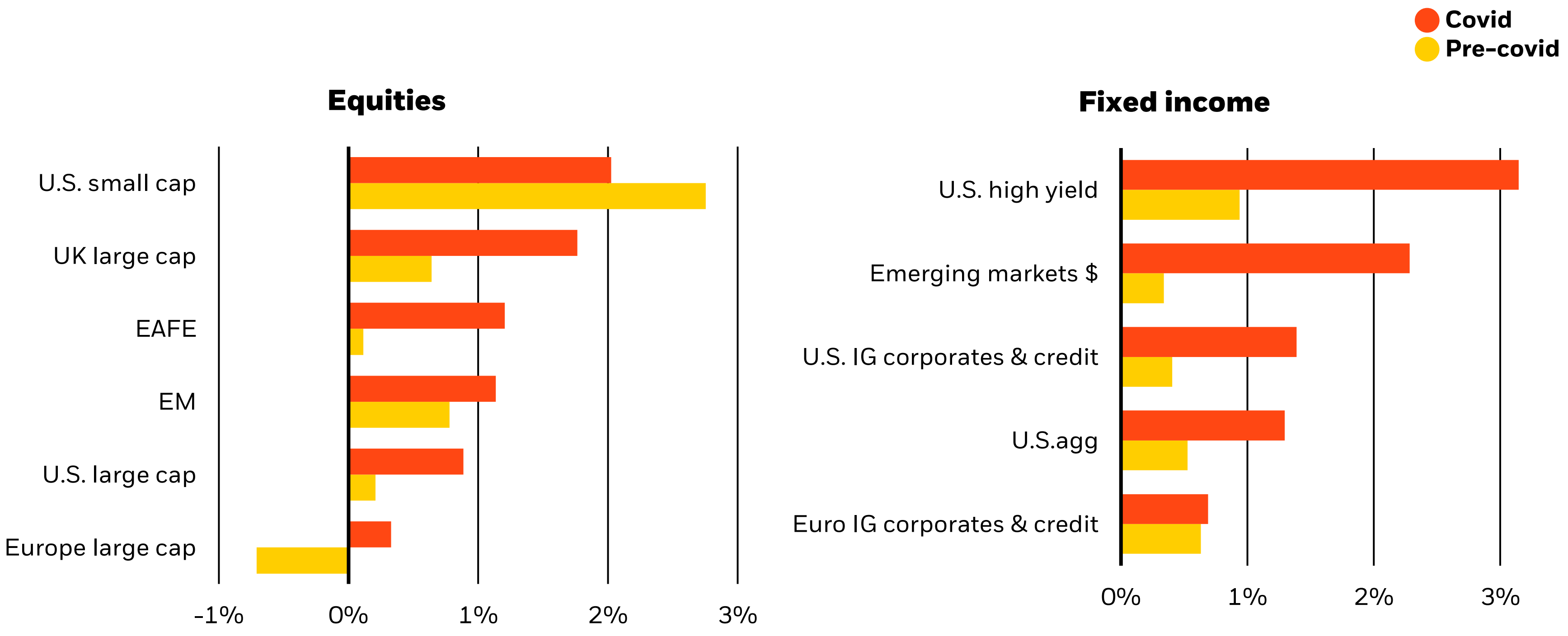



Source: BlackRock Investment Institute and eVestment, December 2021. Note: The chart shows the ranges of cumulative annualized implied alpha (median, top and bottom quartiles) before and through Covid for managers in the eVestment database (see Appendix). It also shows that the dispersion – or width – of the distribution is wider in the Covid period The pre-Covid period spans July 2018 to December 2019 and the Covid period spans January 2020 to June 2021. We calculate implied alpha using the method described on the previous page. We look at an eVestment database of 2898 managers across asset classes - see Appendix for details - and show a sample here. We find that dispersion of alpha was higher post Covid - both median and top quartile alpha was higher but also that returns in the bottom end of the distribution were lower. Alphas are calculated gross of fees. If fees were included, alpha and returns for the investor would be lower.

# Top-quartile performance higher in Covid than pre-Covid

Based on our implied alpha estimates, top-quartile managers delivered more alpha after the Covid-19 shock than in the period before, suggesting an ability to take advantage of the heightened volatility.

## Cumulative annualized implied alpha, June 2018–Dec. 2019 vs. Jan. 2020–June 2021

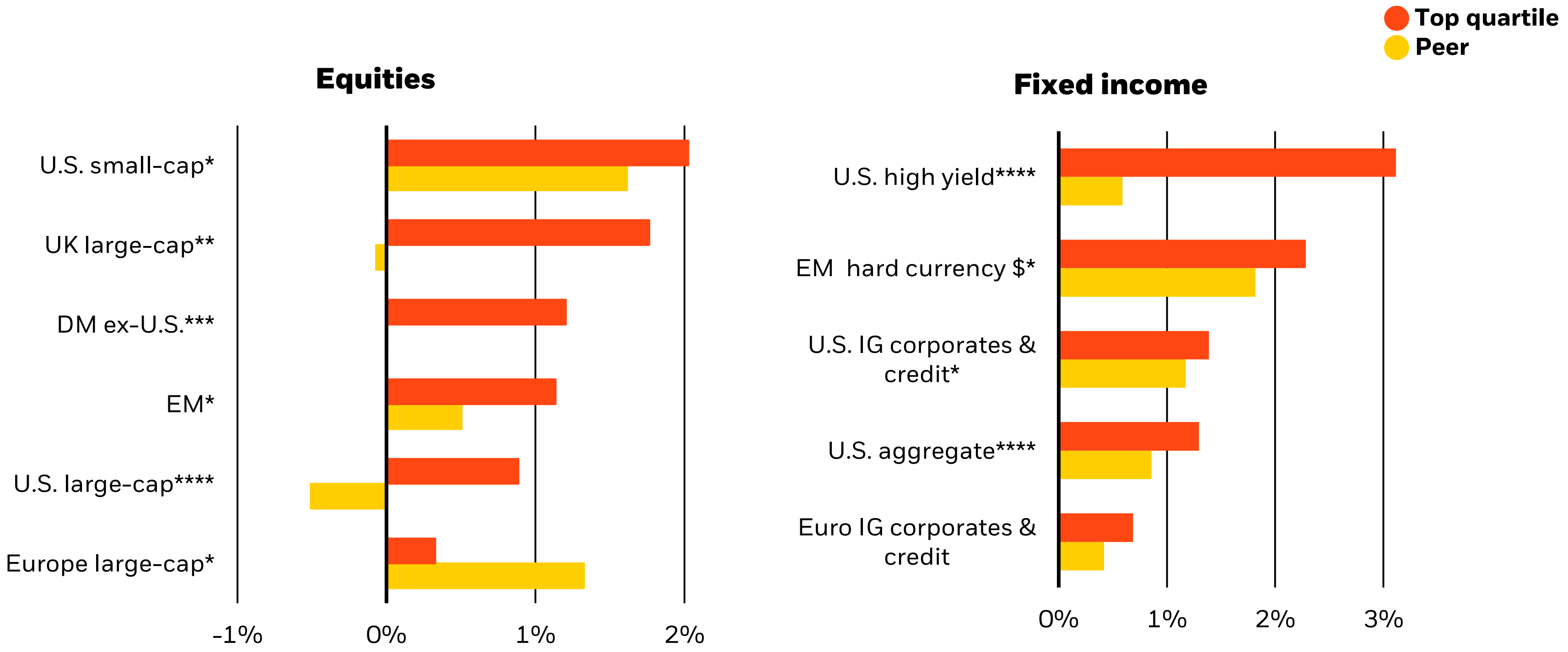



**Past performance is not a reliable indicator of current or future results. This information is not intended as a recommendation to invest in any particular asset class or strategy or as a promise - or even estimate - of future performance.** Source: BlackRock Investment Institute and eVestment, December 2021. Notes: The charts show the cumulative alpha – gross of fees - as of end of June 2021 (Covid) for the top quartile of managers sorted by IR alpha along with the cumulative implied alpha as of Dec 2019 (pre-Covid) in the eVestment database (see Appendix). We sort the managers within each asset class by their IR alpha as of December 2019 and we track the top quartile managers throughout the period Jan 2020 to June 2021 and show their cumulative implied alpha. Implied alpha is computed on a monthly basis, from Jan 2020 to June 2021, assuming the managers have the same betas (factor exposures) as of end of December 2019. Implied alpha is given by the difference between active (excess returns) and sum product of betas and factor returns. We do the same thing for the pre-Covid period – select top quartile as of June 2018 and follow them until end of December 2019.

# Top-quartile managers outperformed peers through Covid

Top-quartile managers – sorted by alpha IR – generally outperformed managers in the other quartiles by asset class.

**Cumulative annualized implied alpha, December 2019–June 2021**



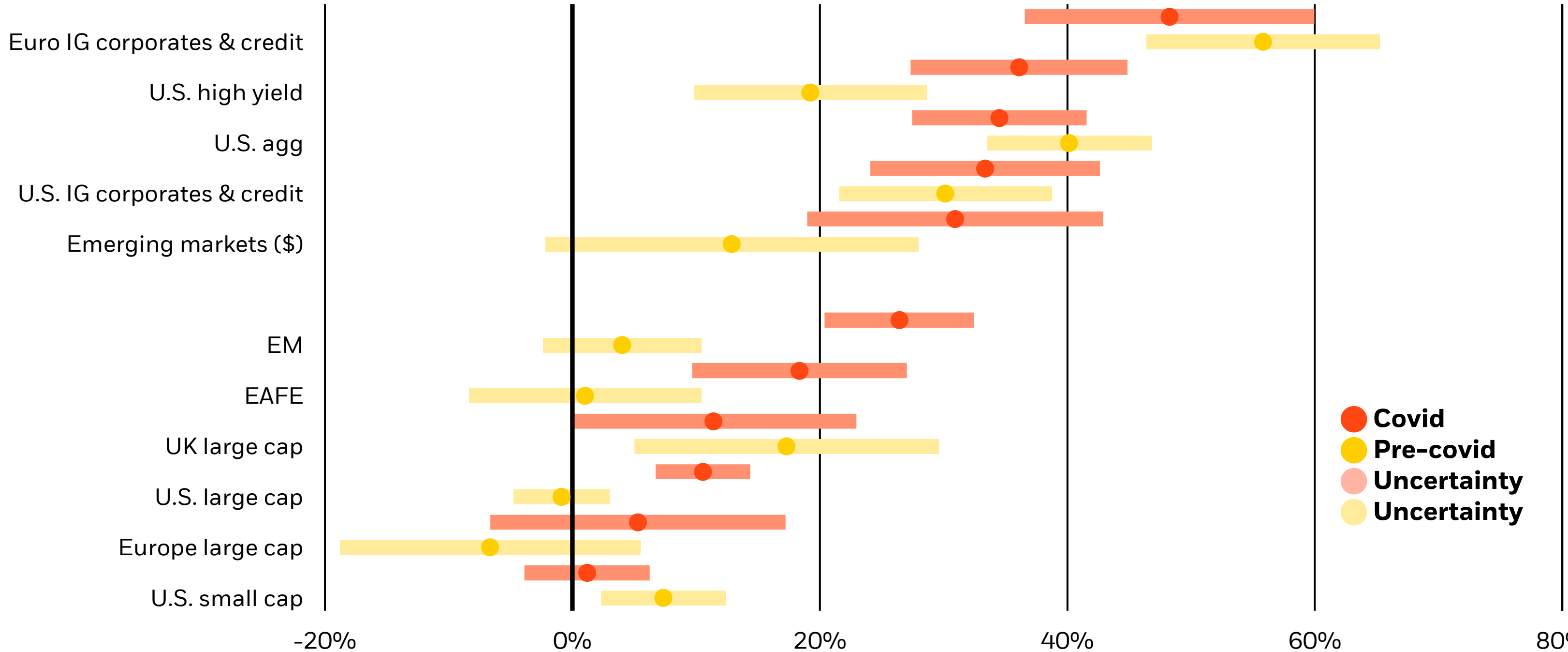

**** 99% confidence *** 95% confidence ** 90% confidence * 75% confidence

**Past performance is not a reliable indicator of current or future results. 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.** Source: BlackRock Investment Institute and eVestment, December 2021. Notes: the charts show the cumulative alpha as of end of June 2021 for the top quartile of managers sorted by IR alpha along with their peers (all the fund managers but the top quartile) in the eVestment database (see Appendix). We sort the managers within each asset class by their IR alpha as of December 2019 and we track the top quartile managers throughout the period Jan 2020 to June 2021 and show their cumulative implied alpha. Five-year regression in December 2019 is used to assess performance over the next 18 months. We find similar results when looking at excess returns instead of alpha IRs, suggesting the results are robust.

# Persistence of alpha performance higher during Covid

Even accounting for error in our alpha estimates, we find higher persistence over the Covid period, and higher persistence in fixed income than equity.

## Manager rank correlation pre-Covid and after with uncertainty bands, 2018-2021

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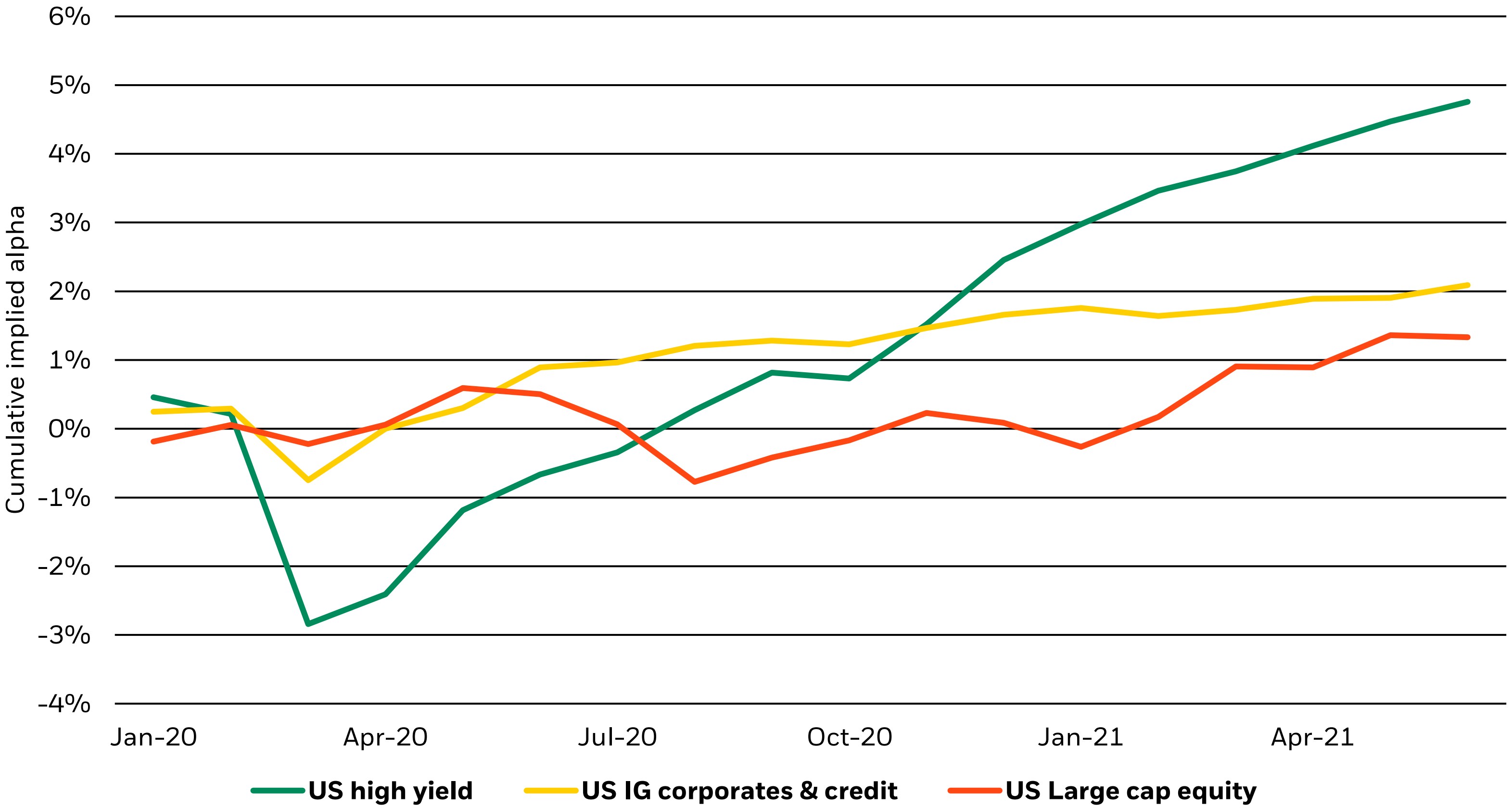
Source: BlackRock Investment Institute and eVestment, December 2021. Notes: the chart shows rank correlation for managers in the eVestment database in the 18 months prior to December 2019 (pre Covid) period and the 18 months post December 2019 (Covid) to determine persistence in patterns. We rank by IR end June 2018 and December 2019 and calculate implied alpha for these managers over the following 18 months and rank them. Next, we calculate rank correlation plus confidence intervals between beginning and end of the period rankings. Higher rank correlation than zero suggests that good managers tend to stay good and bad managers tend to stay bad.

# High yield alpha was volatile during the Covid shock

Top-quartile managers in high yield saw alpha suffer more in the shock and took longer to recover, suggesting asset-class specific issues – such as liquidity – played a role.

### Average top-quartile cumulative implied alpha in selected asset classes, 2020-2021




**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.**

Source: BlackRock Investment Institute, December 2021. Note: the chart shows the average cumulative implied alpha within the top quartile of IR alpha managers. We select the top quartile of mangers by alpha information ratio as of Dec 2019 and plot their average cumulative implied alpha from Jan 2020 to June 2021.

# Our framework applies to the net-zero transition

Sustainable investing will impact returns through all three drivers: pure alpha, common alpha and factors. Our recent paper highlights the use of innovative research to identify alpha, the innovation in the construction of rules-based index methodologies and the link between sustainability and factors.

## Blending returns is consistent with the rise of sustainability

- Prior to the availability of specific sustainable index products, innovative alpha-seeking managers could follow sustainable strategies in their portfolio.
- Any excess return from these first-mover managers would have initially been pure alpha, but with greater awareness and adoption across the industry it becomes more akin to common alpha.
- A plethora of new indexes* is increasingly allowing for a variety of bespoke exposures giving end investors access to this source of return via cost effective index products.
- The commoditization is not yet complete, in our view, as the definition of “sustainability” is not universally accepted, measured or indeed understood, as shown by the focus on E but not S or G in our CMAs. We also see a range of different implementations of sustainability in portfolios.
- Sustainable data also provides promising ground to enhance traditional factor investing, such as with aspects of sustainable behaviour linked to the quality style factor.
- Just like broader alpha, tomorrow’s sustainable alpha is yet to be invented.

**Bottom line: Sustainability will remain part of pure alpha, common alpha and factors going forward, in our view.**

*We do not use sustainable indices in our work yet as their commoditization is too recent for us to include in our historical analysis. Today’s sustainable strategies will contribute to pure or common alpha, depending on how widely they are utilised

# Conclusion

**The Covid-19 shock provided something of a natural experiment to see alpha-seeking managers' ability to deliver what we call pure alpha.**

**Factor exposures still play a large role in manager returns – and even more so during Covid-19.** Investors who allocate to managers with factor exposures could see increased volatility in times of market stress.

**We need to understand the drivers of returns and their costs when building portfolios:**

- The approach to blending returns is a whole-portfolio one
- Allocating to alpha has high governance costs
- It is important to know the returns you are buying

**Bottom line: These results reinforce our view that alpha is a key component of the strategic asset allocation (SAA) over the long run if you have confidence in being able to consistently pick top-quartile managers.**

# Appendix

## Methodology

We use time series regression to remove factors and other market indices from manager excess returns to estimate the underlying idiosyncratic alpha. We go beyond the usual Ordinary Least Squares technique in an attempt to reduce overfitting and use procedures such as Lasso regression with various cross validation approaches and Least Angle Regression (a form of 'stepwise' Lasso). While none of these approaches can eliminate overfitting, and all will be noisy procedures producing estimates of alpha that will only be approximate, we observe that the results are broadly consistent across the econometric approach used. These approaches are all backward looking and can be difficult to understand. Expert judgement from a manager research team on an individual manager can help bring clarity to what they did. For manager specific forward-looking views, econometrics can again be improved with a manager research view or priors on some of the underlying variables. Ang et al. (2021) for one possible approach.

# Appendix – Index proxies

| | Asset class/Factor | Index |
|---|---|---|
| Equities | U.S. large-cap value | MSCI USA ENHANCED VALUE |
| | U.S. large-cap quality | MSCI USA SECTOR NEUTRAL QLTY |
| | U.S. large-cap min-vol | MSCI USA MINIMUM VOLATILITY |
| | U.S. large-cap momentum | MSCI USA MOMENTUM |
| | U.S. small cap | MSCI USA Small Cap |
| | Emerging markets | MSCI EM |
| | DM, ex-U.S. | MSCI EAFE |
| | U.S. large-cap | MSCI USA |
| | DM, ex-U.S. value | MSCI EAFE Value |
| | DM, ex-U.S. quality | MSCI EAFE QUALITY |
| | DM, ex-U.S. min vol | MSCI EAFE MINIMUM VOLATILITY |
| | DM, ex-U.S. momentum | MSCI EAFE MOMENTUM |
| | DM, ex-U.S. small-cap | MSCI EAFE Small |
| | Europe large-cap value | MSCI EUROPE ENHANCED VALUE |
| | Europe large-cap quality | MSCI EUROPE SECTOR NEUTRAL QLTY |
| | Europe large-cap min-vol | MSCI EUROPE EUR MINIMUM VOLATILITY |
| | Europe large-cap momentum | MSCI EUROPE MOMENTUM |
| | Europe small-cap | MSCI EUROPE SMALL |
| | Europe large-cap | MSCI EUROPE |
| | UK large-cap value | MSCI UNITED KINGDOM VALUE |
| | UK large-cap quality | MSCI UNITED KINGDOM QUALITY |
| | UK large-cap min vol | MSCI UK MINIMUM VOL |
| | UK large-cap momentum | MSCI UNITED KINGDOM MOMENTUM |
| | UK small-cap | MSCI UNITED KINGDOM SMALL |
| | UK large-ca | MSCI UK |
| | EM value | MSCI EM ENHANCED VALUE |
| | EM quality | MSCI EM QUALITY |
| | EM min-vol | MSCI EM MINIMUM VOLATILITY |
| | EM momentum | MSCI EM MOMENTUM |
| | EM small-cap | MSCI EM SMALL |
| Fixed income & credit | U.S. high yield | IBOXX $ LIQUID HIGH YIELD INDEX |
| | U.S. corporates and credit | IBOXX $ LIQUID INVESTMENT GRADE INDEX |
| | EM, hard currency debt | JPM EMBI Global Core Index |
| | U.S. long-dated government bonds | ICE BofA 7-10 Year US Treasury Index |
| | EM debt | JPM GBI-EM GLOBAL DIVERS Composite |
| | U.S. inflation-linked bonds | Bloomberg U.S. Treasury: U.S. TIPS USD |
| | U.S. government bonds | Bloomberg U.S. Aggregate USD |
| | Europe corporates | ICE BofA Euro Corporate Index |
| | Europe high yield | IBOXX EUR LIQUID HIGH YIELD INDEX |
| | Europe long-dated government bonds | ICE BofA 7-10 Year Euro Government Index |
| | Euro inflation-linked bonds | ICE BofA Euro Inflation-Linked Government Index |

# Appendix – eVestment fund database

| Asset | Number of funds |
|---|---|
| U.S. equities - large-cap value | 315 |
| U.S. equities – large-cap growth | 237 |
| U.S. equities – large-cap blend | 295 |
| U.S. equities – mid-caps | 209 |
| U.S. equities – small-cap | 505 |
| EM equities | 352 |
| DM ex-U.S. equities | 152 |
| UK equities | 83 |
| Europe equities | 90 |
| U.S. corporates and credit | 151 |
| U.S. high yield | 152 |
| U.S. fixed income – core | 217 |
| EM hard currency debt | 66 |
| Europe corporates | 74 |
| **Total** | **2898** |

Source: BlackRock Investment Institute with data from eVestment, November 2021. Note: the table shows the list of funds by asset class we considered for our analysis. eVestmentis a third-party data provider. More detail s are available at https://www.evestment.com/research/trends/

# BlackRock Investment Institute

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**Index Disclosures**: Index returns are for illustrative purposes only and do not represent any actual fund performance. Index performance returns do not reflect any management fees, transaction costs or expenses. Indices are unmanaged and one cannot invest directly in an index.

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