BlackRock®

Portfolio perspectives
March 2020

Weathering shocks

Stress testing resilience in strategic asset allocation through the coronavirus outbreak

BlackRock
Investment
Institute

Summary

- A fierce drawdown in risky assets is underway, driven by fears of the economic cost of the coronavirus outbreaks and containment measures. The impact is likely to be sharp and deep, yet **we do not see this as a repeat of 2008 as the economy and, importantly, the financial system, is on a firmer footing.** Our view is conditional on a comprehensive, sizeable and coordinated fiscal and monetary policy response. **In this paper – a precursor to our regular, comprehensive review of our capital market assumptions (CMAs) in coming weeks - we show why we lean towards adding exposure to risk assets at the expense of government bonds in strategic portfolios.**
- **The extreme selloff in risky assets since late January is the latest episode that brings into sharp focus the importance of building portfolio resilience in strategic asset allocation** (SAA) - a core facet of our portfolio construction process. To be sure, **such an approach is no silver bullet - most asset allocations would have suffered as assets sold off in tandem. Yet we believe it offers a good starting point for long-term investors to build on**, particularly if relative outperformance through periods of markets stress facilitates more risk-taking as markets recover. To illustrate the point, we show how a hypothetical portfolio comprising public assets designed for resilience would have fared compared to a traditional mean-variance optimized portfolio and a market-cap weighted 60/40 (stock/bond) portfolio through the drawdown. We find an overweight to government bonds, diversified regional equity exposures, and a credit underweight would have all helped.
- **The key question now is – should strategic asset preferences change? Long-term investors should know that what worked before won't necessarily work now, either due to the sheer size of market moves or due to changes in medium-term macroeconomic assumptions.** We illustrate the strategic asset allocation implications of two scenarios: a pure price shock and another where alongside the near-term price shock, long-term fundamental assumptions vary from our current base case as detailed here. In revising fundamentals we assume **a changed monetary and fiscal policy outlook, a realignment of global supply chains that upend assumptions about corporate profitability, and explicit lower bounds being priced into developed government bond markets.**
- **In either scenario, we would cut government bond allocations** due to lower expected returns, diminished ballast properties at lower yield levels, and the emergence of a potentially more preferable risk-off asset – inflation-linked bonds. **We see a strategic opportunity emerging to allocate more to equities** given the repricing that has occurred, underpinned by our belief that the coronavirus impact is different to the financial crisis. **Many portfolios will have drifted from their target asset allocation. We prefer rebalancing equity exposure back up to target. The case for credit is also stronger yet more nuanced. Valuations are clearly cheaper now, creating opportunities for investors, but late-cycle risks such as higher defaults, particularly in the high yield market, cannot be ignored.**
- We have acknowledged the roles of sustainable investing, private markets and onshore Chinese assets in building resilient portfolios, yet none of these are within the scope of this note.

Authors

Philipp Hildebrand
Vice Chairman — BlackRock

Anthony Chan
Portfolio Research – BlackRock Investment Institute

Natalie Gill
Portfolio Research – BlackRock Investment Institute

Jean Boivin
Head of BlackRock Investment Institute

Paul Henderson
Portfolio Research – BlackRock Investment Institute

Christian Olinger
Portfolio Research – BlackRock Investment Institute

Vivek Paul
Senior Portfolio Strategist, BlackRock Investment Institute

Contents

Resilience through strategic allocation

A fierce drawdown in risky assets is underway as fears heighten about the harmful impact of the coronavirus outbreaks and containment measures. Global markets have swiftly moved to price in a grim outlook – a significant turnaround from a relatively benign view of the world at the start of the year. The impact of the coronavirus outbreak is likely to be sharp and deep. Yet we do not see this as a repeat of 2008 as the economy and, more importantly, the financial system, are on a firmer footing this time. Our view is conditional on a pre-emptive, comprehensive and sizeable policy response. We laid out the need for a joint and decisive effort between fiscal and monetary policy in *Time to go direct*. The key will be policies that assuage sentiment, ease financial conditions and prevent any liquidity or cashflow crunches for households and small businesses. We are starting to see increasing evidence of such stimulus – such as the $2 trillion U.S. fiscal package alongside extraordinary measures from the Federal Reserve to cushion the impact of the coronavirus shock - coming through. These measures set the stage for an eventual recovery in our view yet macroeconomic uncertainty is still elevated. Against this backdrop, we have downgraded our tactical investment stance from a moderately risk-on stance to a neutral view on financial assets.

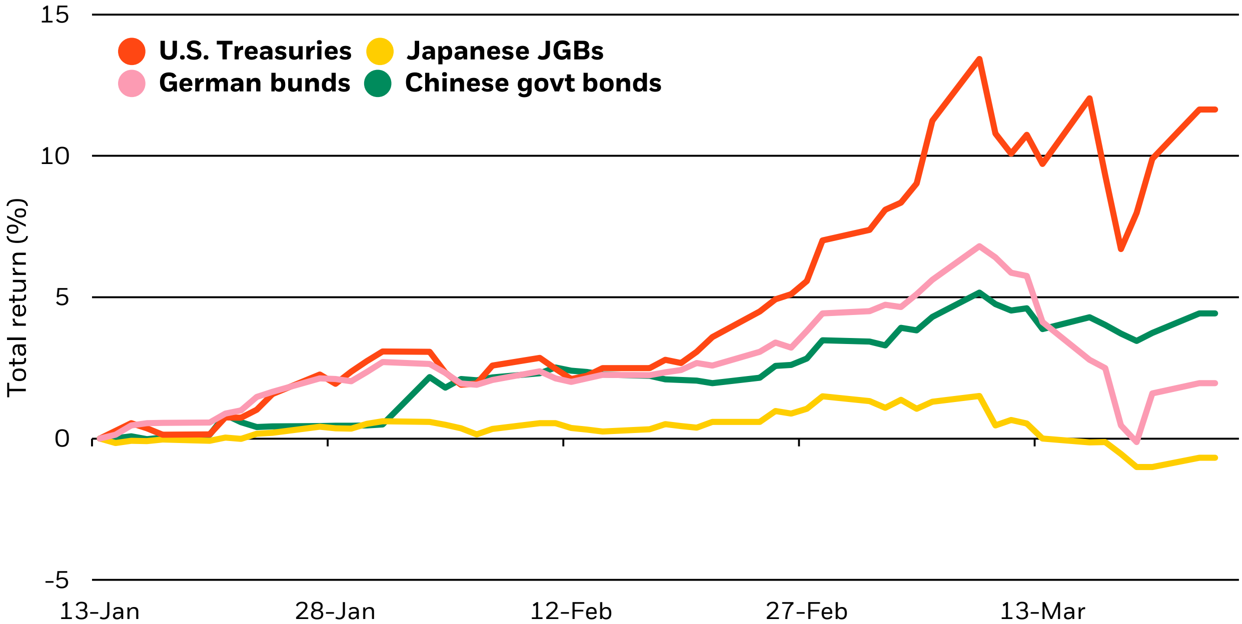
The ongoing market turbulence is the latest in a series of episodes in recent years that sharply brings into focus an investment theme that we have been emphasizing for some time now. Building portfolio resilience into a strategic asset allocation (SAA) – or the broad mix of asset classes a long-term investor will hold - is key during times of market stress and elevated macro uncertainty. What does this mean in practice? Building portfolio resilience goes beyond diversification. Ideally, a well-designed SAA would incorporate uncertainty about the future path of asset returns, including downside scenarios and scenarios beyond those observed historically. There is no silver bullet – building portfolio resilience is expected to help mitigate the impact of extreme events, not eliminate it.

Our portfolio construction framework puts portfolio resiliency at its heart by incorporating uncertainty in long-run return expectations, as explained in *Strategic asset allocation in an era of ultra-low interest rates*. Such a framework prevents us from placing too much weight on average return expectations – a common pitfall in mean variance optimisation (MVO)-based techniques - in making strategic asset allocation decisions, and allows us to consider downside scenarios.

We also questioned the traditional role of government bonds as portfolio ballast – an example of looking beyond historical observations. We tilted our government bond exposure in strategic portfolios away from lower-yielding euro area and Japanese government bonds and toward the U.S. and China. Why? We believed that government bonds in markets close to the lower bound of interest rates would have diminished ability to act as ballasts during equity sell offs as historic negative bond-equity correlations could break down. U.S. government bonds have once again shown their robust ballast properties over lower-yielding counterparts, as seen in the chart below. Yet even they started to have their diversification benefits questioned on some of the worst days of the market turmoil, as prices fell alongside equities.

Bonds as ballast

Performance of government bonds since first reported coronavirus case outside China, March 2020



Past performance is not a reliable indicator of current or future results. It is not possible to invest directly in an index.

Sources: BlackRock Investment Institute, with data from Refinitiv Datastream, March 2020. Notes: The chart shows the rebased performance in total return terms of government bond indices between Jan 13, 2020 – the date of the first reported coronavirus case outside China – and March 24, 2020.

Guarding against shocks

To illustrate how our approach fares through extreme market shocks, we compared the performance of three hypothetical SAAs during the recent market turbulence. We recognize this is a short horizon to assess long-horizon portfolios, yet we take this as an example of the kind of shock an SAA should offer resilience to. We constructed three hypothetical portfolios using our latest CMAs from December 2019, each with an equal expected return: one 60/40 (stock/bond) portfolio with regional allocations based purely on the market-capitalization – or market size - based weightings of global equity and bond indices, one built with mean-variance optimisation (MVO) and one built following our portfolio construction approach that explicitly allows for uncertainty in future outcomes as one of its core principles. The incorporation of uncertainty allows portfolios to be more aware of downside risks, in our view. We excluded private assets and explicit views on sustainable assets from this exercise for simplicity.

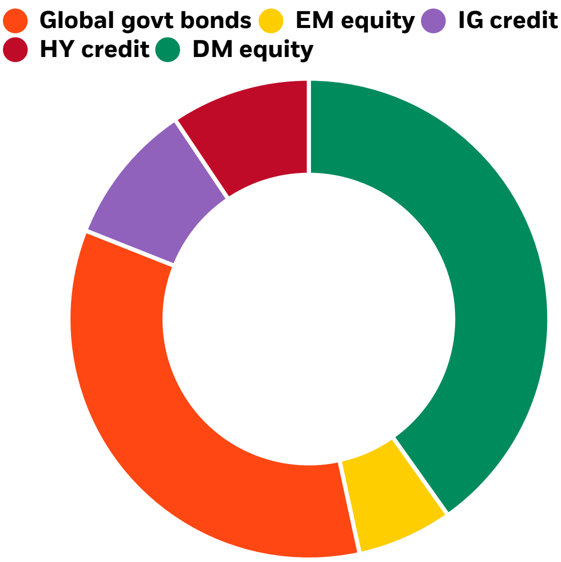
We find that the hypothetical SAA that incorporates uncertainty outperforms over the period shown. Other principles – such as overlaying regional views across a deliberately selected universe of assets rather than relying on market-cap weights as in the 60/40 – helped, in our view. It also outperformed the MVO-based allocation by avoiding the lack of portfolio diversity that typically results from placing too much reliance on point estimates. We show this purely for illustrative purposes. This exercise is not a proxy for the "final" answer - portfolio managers would likely overlay expert judgement and near-term, or tactical tilts. We believe a portfolio designed for resilience helps provide a sound starting block for investors to overlay views.

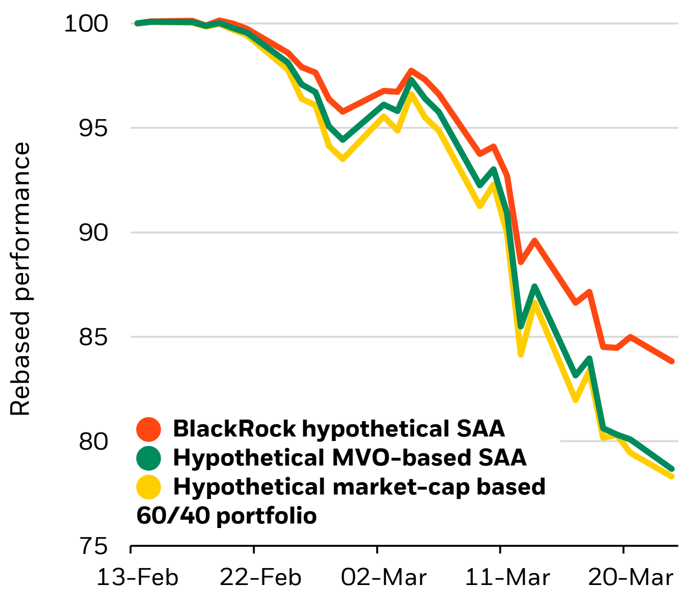
What does resilience mean in practice for our SAA? Our current strategic preferences include an overweight in government bonds - particularly those with more ballast cushion from higher yields - in the late stages of the economic cycle. We also favored an underweight allocation to credit assets because of asymmetric risks during late cycle stages. We now believe there is a strong case for reviewing what asset mix can bring resilience to a portfolio. What has worked in the past may not work now in light of today's market valuations and a potentially changed medium-term outlook.

The severity of market moves this year – particularly the drop in bond yields and selloff in equities – raises an important question for long-term investors. Is this the time to review strategic asset allocations? For instance, the rally in bonds alongside our expectation that the era of ultra-low interest rates will persist for a long time suggests a review of government bond allocations. SAA objectives could well shift for certain types of investors, such as pension plans whose sponsors' business models may come under threat. We explore how recent market events may change our expected returns, challenge assumptions about allocations to achieve portfolio resilience and how they might potentially shift our strategic asset views.

Gauging performance

Hypothetical BlackRock SAA and performance comparison since world equities peak in February 2020





Past performance is not a reliable indicator of current or future results. Reference to any asset class shall not constitute a recommendation to buy or sell. Indexes do not include fees. It is not possible to invest directly in an index.

Sources: BlackRock Investment Institute, March 2020. Notes: The left chart shows a hypothetical, unconstrained, US dollar-denominated equity-bond SAA built using our portfolio construction approach that focuses on resilience. We consider only publicly traded stocks and bonds for this exercise. We compare the performance of this asset allocation since the world equities peak (chart on the right) against two hypothetical SAAs: a 60/40 portfolio based on market-cap weights and a mean-variance optimised portfolio aimed at achieving the same return of a 60/40 portfolio. Index proxies are shown in the Appendix. This exercise is subject to certain limitations. Created with the benefit of hindsight, it cannot account for the impact that economic, market, and other factors may have on the implementation of an actual investment. In addition to the variables identified above, the return of any such portfolio will vary materially from the return shown based on numerous factors, including, but not limited to current market conditions and the specific securities in the portfolio, among others.

Assessing the fallout

The big question for long-term investors is whether the dislocations in the markets and the economic outlook warrant a change in a strategic asset allocation. There are two reasons why this might occur. First, spot prices move so much that they significantly change our expected returns. Second, the virus outbreak and measures to contain it accelerate broader structural themes that impact economic fundamentals and spur a revised medium-term outlook.

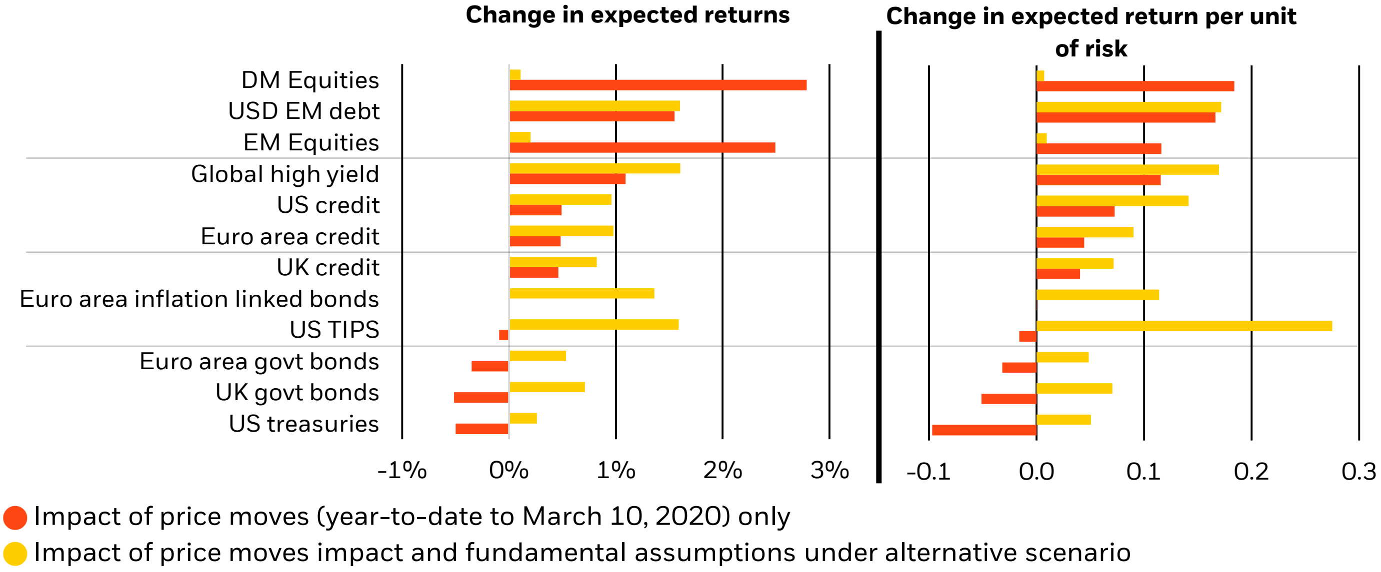
We start by estimating how much year-to date price action alone might change our current expected five-year asset class returns. See the orange bars in the chart below. These CMAs assume economic fundamentals over five years and beyond stay consistent with our current base case outlined on our website. The impact of the outbreak is severe and containment measures will bring economic activity to a standstill, yet we believe activity should eventually rebound rapidly with little permanent damage, provided both fiscal and monetary policy actions are taken to support businesses and households through the shock. Our current models find materially higher expected returns for equity and lower government bond returns. Expected equity returns get the biggest boost (see the chart on the left), yet in risk adjusted terms the relative appeal of equities falls (the chart on the right). It is important to note that these are based on a defined snapshot during a time of extremely high market volatility. Equity markets have bounced sharply off the lows as policy measures helped to calm investor nerves yet prices are still significantly off their peaks.

Next we consider an alternative scenario where recent events set the economy on a different course. Uncertainty around how the world evolves is very high and the scenario we outline here is just one possible economic outcome to illustrate the potential impact on expected returns. We re-estimate our CMAs assuming a different set of underlying fundamentals (discussed below and shown in the appendix) as well as accounting for price moves (yellow bars in charts below). Policymakers have a limited toolkit to address a future downturn, we argued in *Dealing with the next downturn*. The little ammunition available to policy makers is being drawn upon heavily now to pre-emptively protect the economy. An expansion of ultra-loose monetary policy globally could pull down the path of cash rates over the coming years. We believe this leaves policymakers less prepared (and more vulnerable) to future shocks. For this scenario, we consider a lower path of policy rates and higher inflation over the medium-term as the policy baton passes to fiscal policy.

The second key element of our alternative scenario is the acceleration of a realignment of global supply chains. Coming close on the heels of a rise in trade protectionism, the coronavirus outbreak has highlighted the vulnerabilities of integrated global supply chains and just-in-time manufacturing. We note the recent resilience of Chinese supply chains through the crisis, but this doesn't alter a broader trend towards deglobalisation in the alternative scenario. Corporates are re-assessing global supply chains and considering localizing, driven by a focus on sustainability and less attractive tax and labor cost savings than the past. This could spur supply shocks and hinder productivity as companies operate sub-optimally during transition. There is a risk of profit margin compression as the globalization-driven boost to profitability fades. The peak of globalization may have passed as discussed in our Global Investment Outlook. In the alternative scenario, we assume this drives higher medium-term inflation and margin compression.

Expected returns

Estimated change in our five-year CMAs for select assets in US dollar terms, March 2020



Forward looking estimates may not come to pass. Indexes do not include fees. It is not possible to invest directly in an index.

Sources: BlackRock Investment Institute, March 2020. Notes: The charts show how our CMAs for select asset classes might change relative to our current CMAs as of Dec 31, 2019 assuming year-to-date (as of March 10, 2020) asset price performance only (orange bars) and assuming performance and revised fundamentals under an alternative economic scenario (yellow bars). The right panel shows the change in each asset's expected returns relative to its risk, defined as our forward-looking view on the asset's long-term expected volatility as laid out in the Assumptions at a glance section of our capital market assumptions website. A set of alternative macro assumptions under a hypothetical scenario and index proxies are shown on the Appendix on pg. 7.

Our strategic views

What is the impact on our hypothetical SAA? We show this in the simplified graphic below for both our current base case and the alternative scenario. In the first, we use the CMAs re-estimated for recent asset price moves (left table below). On the second, we add the impact of the alternative economic scenario we laid out earlier and assume a floor on yields in the range of potential return outcomes we consider for bonds (right table below). We believe it is important to capture the asymmetry of return outcomes for government bonds when yields are significantly lower and the typical negative bond-equity correlation breaks down. These two analyses inform our strategic views.

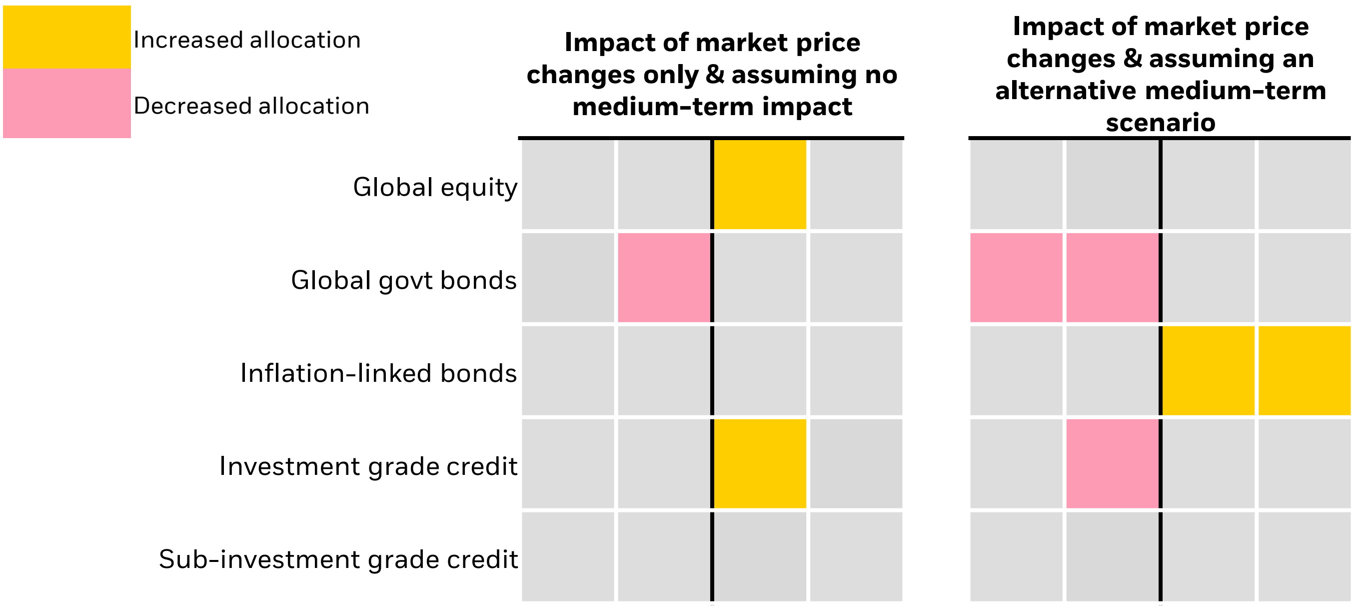
A few important conclusions emerge for a multi-asset, liability-agnostic portfolio. First, **the case for nominal developed market government bonds is materially diminished**. Why? We see three reasons: lower expected returns, reduced ballast properties and the emergence of a potentially more preferable risk-off asset – inflation-linked bonds. Prospective returns are likely to be materially lower if one assumes recent yield falls are temporary and that expected yields are unchanged in the medium term. If we assume that bond yields are nearing effective lower bounds the allocation goes down further still – the correlation offset they provide to equities is reduced because in many future states of the world, yields can fall no further even though equities could fall. In other words, they cease to provide ballast. Finally, **inflation-linked bonds may become the preferable risk-off asset**, rather than nominal bonds if de-globalization and supply chain changes pick up pace, governments are loosening the budget reins, and inflation begins to emerge. Investors should be mindful of the implementation challenges in making shifts. The market for inflation-linked bonds is less deep and liquid than that of nominal bonds, and not all nominal bonds have inflation-linked counterparts.

Secondly, **equities remain a sizeable allocation**, and we would be neutral to overweight relative to a portfolio designed at end December 2019. Many portfolios have below-benchmark exposure to equities after the sell off. We do not envisage a repeat of the global financial crisis. We favor rebalancing back up to starting levels rather than dialing down risk. This conclusion holds even in our alternative scenario of supply chain reform leading to falling margins and weaker earnings growth. Equities remain a key source of return, though their case is less strong in this alternative scenario.

The case for corporate credit is more nuanced. For the last few years, we have been underweight credit assets in strategic portfolios, as a barbell of equities and treasuries was preferable in a late-cycle environment and given prevailing spread levels. The sizeable spread widening is clouding this view. Absolute returns look more attractive now, and the potential benefit this offers could offset some of the increased risk of a spike in defaults and downgrades. Yet we could see spreads remain particularly volatile in the near term, particularly in high yield. The sharp dislocation in oil prices also muddies the outlook for high yield given the energy sectors' heavy weight in benchmark indices.

Quantifying the impact of market events on strategic asset preferences

Potential change in asset allocations relative to hypothetical portfolio under different assumptions, March 2020



Forward looking estimates may not come to pass. Indexes do not include fees. It is not possible to invest directly in an index.
Sources: BlackRock Investment Institute, March 2020. Notes: The tables show potential changes in preference relative to the hypothetical asset allocation shown on page 4. We use the CMAs shown on page 5 to derive these preferences. The left table shows the change in preferences as a result of market price moves between Dec. 31, 2019 and March 10, 2020. The right table shows the change in preferences as a result of market price moves and assuming persisting effects of the economic and market shock year-to-date, resulting in an alternative medium-term scenario. The details of the alternative scenario are laid out on the following page and in the Appendix on pg. 7. Index proxies are mentioned in the Appendix. "Sub-investment grade credit" refers to global high yield and emerging market debt. Global equity combines developed and emerging market equities.

Appendix

Macro assumptions

Comparison of fundamental assumptions for hypothetical scenario vs. our base case outlined here.

Variable	Change relative to core scenario	Rationale
Inflation	5-year expected CPI and breakeven inflation increases by 20-50bps p.a. across regions	Increased expected inflation driven by a reorganization of global supply chains as well as a larger reliance on fiscal policy
Interest rates	In 5 years' time, expected cash rates are 30-70bps lower and 10-year government bond yields are 60-70bps lower across regions	Following rate cuts in response to the corona virus outbreak, central policy rates remain lower over the next five years. Higher inflation results in lower real yields rather than higher nominal yields.
Credit spreads	Expected credit spreads in 5 years' time are 10-30bps wider for investment grade and 70-100bps wider for high yield bonds	Higher macroeconomic uncertainty and market volatility result in wider spreads
Earnings	5-year average earnings per share growth is 2-3% lower and net profit margins narrow	Major disruptions result in 0% EPS growth in 2020, lowering the five-year average. Higher inflation and more supply chain realignment squeeze profit margins
Distribution of returns for bonds	For government bonds and investment grade credit, the distribution of simulated return pathways around the central path is restricted to exclude pathways consistent with government yields falling below an effective lower bound, ranging from 0% to -1%	Given the fall in spot yields and policy rates, interest rates are now in closer proximity to effective lower bounds, beyond which policy rates no longer stimulate the economy. The level of a lower bound is difficult to identify, however, at current spot yields we believe the distribution of outcomes for some government bond markets is asymmetric. To account for this, we exclude outcomes consistent with yields beyond approximate lower bounds

Indexes

Global govt bonds = Bloomberg Barclays Global Treasury index

Japan govt bonds = Bloomberg Barclays Global Treasury Japan Index

Euro area credit = ICE BofA Merrill Lynch 10+ Year Euro Corporate Index

Global high yield = ICE BofA Merrill Lynch Global High Yield Index

Euro area govt bonds = Bloomberg Barclays Euro Aggregate Treasury Index

U.S. credit = Bloomberg Barclays U.S. Credit Index

Global IG credit = Bloomberg Barclays Global Aggregate – Corporate

Inflation-linked bonds = ICE BofA Merrill Lynch Global Inflation-Linked Government Index

Euro area inflation-linked bonds = ICE BofA ML EMU Direct Government Inflation Linked Index

US TIPS = Bloomberg Barclays US Government Inflation-Linked Bond Index

EM debt, local = JP Morgan GBI-EM Index

EM debt, hard = JP Morgan EMBI Global Diversified Index

Japan equities = MSCI Japan index

European equities = MSCI Europe index

EM ex-China equities = MSCI Emerging Markets ex-China index

DM equities = MSCI World index

EM equity = MSCI Emerging Markets Index

Onshore Chinese equities = MSCI China A Inclusion NET Index

BlackRock Investment Institute

The BlackRock Investment Institute (BII) leverages the firm's expertise to provide insights on the global economy, markets, geopolitics and long-term asset allocation – all to help our clients and portfolio managers navigate financial markets. BII offers strategic and tactical market views, publications and digital tools that are underpinned by proprietary research.

BlackRock