BLACKROCK INVESTMENT INSTITUTE

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Key points

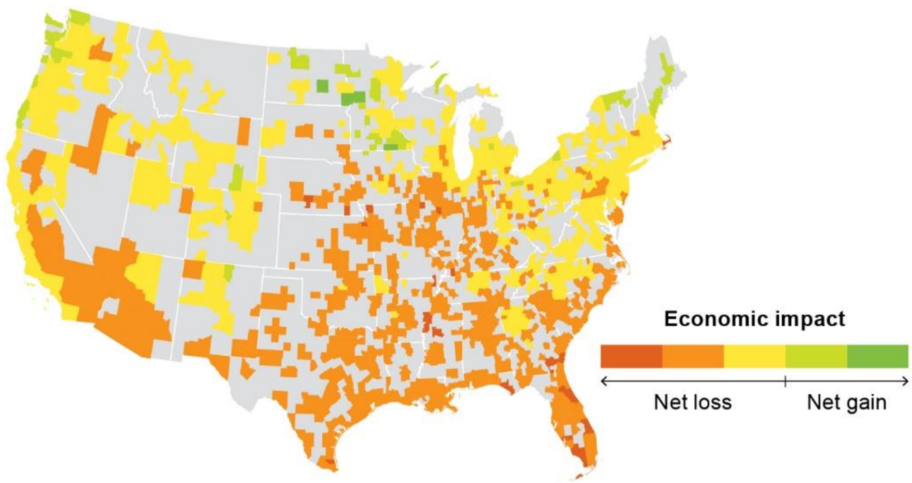
1. We share our research on the potential impact from climate-related risks on three markets, aided by advances in data and climate science.
2. The European Central Bank kept its policy unchanged and signalled the potential for more dovish moves. Crude oil prices hit five-month highs.
3. The market will scrutinize this week's Chinese economic data for any signs stimulus measures are starting to boost activity.

1 Mapping climate-related risks

A spate of recent extreme weather events — from hurricanes and wildfires in the U.S. to heat waves in Europe — has put a spotlight on climate-related risks. Yet climate-related portfolio risks have been hard to pinpoint – until recently. Advances in climate and data science now allow us to assess the financial risks – on a localized level.

Chart of the week

Estimated U.S. GDP impacts under "no climate action" scenario, 2060-2080



Sources: BlackRock Investment Institute, with data from Rhodium Group, March 2019. Notes: The map shows the projected GDP impact in 2060-2080 on U.S. metropolitan areas under a "no climate action" scenario. Climate changes are measured relative to a 1980 baseline. The analysis includes the effect of changes in crime and mortality rates, labor productivity, heating and cooling demand, agricultural productivity for bulk commodity crops, and expected annual losses from coastal storms. It accounts for correlations across these variables and through time — and excludes a number of difficult to measure variables such as migration and inland flooding. See Rhodium Group's March 2019 paper *Clear, Present and Underpriced: The Physical Risks of Climate Change for further details on its methodology.* Forward-looking estimates may not come to pass.

We can now analyze direct physical risks such as probabilities of flooding and hurricane-force winds — on a granular level across the U.S. Researchers across BlackRock have used data from Rhodium Group to estimate potential direct financial damages, as well as indirect effects such as the impact of rising average temperatures on crop yields or labor productivity. The heat map shows projected changes in regional economic activity under a "no climate action" scenario assuming ongoing use of fossil fuels. The risks are asymmetric: Some 58% of U.S. metro areas would see likely gross domestic product (GDP) losses of 1% or more by 2080, with less than 1% set to enjoy gains of similar magnitude, we estimate. The biggest likely losers: Arizona, the Gulf Coast region and coastal Florida.

Investing implications

The potential losses from a changing climate are not baked in, as suggested by our recent publication *Getting physical*. Decisive actions to curb carbon emissions could mitigate the damage. But the vulnerabilities revealed in our evolving research, led by BlackRock's Sustainable Investing and Global Fixed Income teams, can help investors get a better handle on physical climate risks. The risks are especially relevant for physical assets with long lifespans. It is why BlackRock's research first focused on three sectors with long-dated assets that can be located with precision: U.S. municipal bonds, commercial mortgage-backed securities (CMBS) and electric utilities.

Our early findings suggest investors must rethink their assessment of vulnerabilities. Climate-related risks already threaten portfolios *today*, and are set to grow, we find. Take the potential impact on the creditworthiness of U.S. municipal bond issuers: A rising share of issuance in the $3.8 trillion market is set to come from regions facing climate-related economic losses, BlackRock's research shows. Within a decade, more than 15% of the current S&P National Municipal Bond Index by market value would come from U.S. regions suffering likely average annualized losses from climate change of up to 0.5% to 1% of GDP, we estimate. Climate risk is also a growing concern for CMBS owners. To illustrate, we overlaid Rhodium's hurricane modeling onto the roughly 60,000 commercial properties in BlackRock's proprietary CMBS database. The median risk of one of these properties being hit by a Category 4 or 5 hurricane has risen by 137% since 1980, we found. Lastly, we assessed the exposure to climate risk of 269 publicly listed U.S. utilities based on the location of their plants, property and equipment. A key conclusion: Vulnerability to weather events is underpriced in U.S. utility equities. This leaves owners of such securities exposed to temporary price and volatility shocks.

We plan to extend our analysis across global markets, asset classes and sectors as data availability improves – from the early focus on U.S. assets. The key takeaway: Climate change is increasingly a risk that investors cannot afford to ignore. Integrating insights on climate-related risks is important for investors in all asset classes and regions, and can help enhance portfolio resilience, we believe.

2 Week in review

- The European Central Bank kept its policy unchanged and signaled the potential for more support for the weak eurozone economy. Minutes from the Federal Reserve's latest policy meeting confirmed the patient stance adopted by policy makers.
- China's new bank loans in March grew more than expected, reflecting ongoing stimulus efforts. Chinese exports beat expectations but imports remained subdued. Crude oil prices rose above $70 a barrel for the first time in five months, supported by output cuts led by the Organization of the Petroleum Exporting Countries (OPEC) and sharp drops in Venezuela's production.
- The U.S. threatened tariffs on $11 billion worth of European Union (EU) products, the latest escalation in a 15-year fight over government subsidies to plane makers. The EU responded by preparing a list of retaliatory tariffs. The EU agreed to extend the UK's Brexit deadline to Oct. 31.

Global snapshot

Weekly and 12-month performance of selected assets

Equities	Week	YTD	12 Months	Div. Yield
U.S. Large Caps	0.6%	16.7%	11.3%	2.0%
U.S. Small Caps	0.2%	18.0%	3.2%	1.6%
Non-U.S. World	0.4%	13.2%	-2.7%	3.1%
Non-U.S. Developed	0.3%	12.7%	-2.7%	3.3%
Japan	-1.3%	6.7%	-6.9%	2.4%
Emerging	0.4%	13.3%	-4.8%	2.6%
Asia ex-Japan	0.3%	14.5%	-3.4%	2.4%

Bonds	Week	YTD	12 Months	Yield
U.S. Treasuries	-0.3%	1.3%	3.8%	2.6%
U.S. TIPS	0.0%	2.9%	2.3%	2.7%
U.S. Investment Grade	0.2%	5.1%	5.0%	3.7%
U.S. High Yield	0.6%	8.4%	6.1%	6.1%
U.S. Municipals	0.1%	2.7%	5.0%	2.4%
Non-U.S. Developed	0.4%	1.2%	-4.3%	0.8%
EM $ Bonds	-0.3%	6.9%	4.0%	6.0%

Commodities	Week	YTD	12 Months	Level
Brent Crude Oil	1.7%	33.0%	-0.7%	$71.55
Gold	-0.1%	0.6%	-3.4%	$1,290
Copper	1.3%	8.7%	-4.9%	$6,484

Currencies	Week	YTD	12 Months	Level
Euro/USD	0.8%	-1.5%	-8.3%	1.13
USD/Yen	0.3%	2.2%	4.4%	112.03
Pound/USD	0.4%	2.5%	-8.0%	1.31

Past performance is not a reliable indicator of current or future results. It is not possible to invest directly in an index. Source: Thomson Reuters. As of April 12, 2019. Notes: Weekly data through Friday. Equity and bond performance are measured in total index returns in U.S. dollars. U.S. large caps are represented by the S&P 500 Index; U.S. small caps are represented by the Russell 2000 Index; Non-U.S. world equity by the MSCI ACWI ex U.S.; non-U.S. developed equity by the MSCI EAFE Index; Japan, Emerging and Asia ex-Japan by their respective MSCI Indexes; U.S. Treasuries by the Bloomberg Barclays U.S. Treasury Index; U.S. TIPS by the U.S. Treasury Inflation Notes Total Return Index; U.S. investment grade by the Bloomberg Barclays U.S. Corporate Index; U.S. high yield by the Bloomberg Barclays U.S. Corporate High Yield 2% Issuer Capped Index; U.S. municipals by the Bloomberg Barclays Municipal Bond Index; non-U.S. developed bonds by the Bloomberg Barclays Global Aggregate ex USD; and emerging market $ bonds by the JP Morgan EMBI Global Diversified Index. Brent crude oil prices are in U.S. dollars per barrel, gold prices are in U.S. dollar per troy ounce and copper prices are in U.S. dollar per metric ton. The Euro/USD level is represented by U.S. dollar per euro, USD/JPY by yen per U.S. dollar and Pound/USD by U.S. dollar per pound.

3 Week ahead

April 16	U.S. industrial production; a two-day U.S.-Japan trade talks concludes
April 17	China industrial production, retail sales, Q1 2019 GDP; Indonesian general election
April 18	U.S. retail sales

A string of Chinese economic data will be in focus this week. The market is looking for signs of a pickup in the country's economic activity, as China's stimulus package starts to feed through into the economic data. We are increasingly confident that Chinese growth is likely to reaccelerate from this quarter onward, as the credit impulse (the year-on-year change in credit growth) turns positive and fiscal stimulus gains traction. We see a turnaround in China as likely to lift growth globally, particularly in Asia.

Asset class views

Views from a U.S. dollar perspective over a three-month horizon

Asset class		View	Comments
Equities	U.S.	▲	A slowing but still growing economy underlies our positive view. We prefer quality companies with strong balance sheets in a late-cycle environment. Health care and technology are among our favored sectors.
	Europe	▼	Weak economic momentum and political risks are challenges to earnings growth. A value bias makes Europe less attractive without a clear catalyst for value outperformance. We prefer higher-quality, globally oriented firms.
	Japan	—	Cheap valuations are supportive, along with shareholder-friendly corporate behavior, central bank stock buying and political stability. Earnings uncertainty is a key risk.
	EM	▲	Economic reforms and policy stimulus support EM stocks. Improved consumption and economic activity from Chinese stimulus could help offset any trade-related weakness. We see the greatest opportunities in EM Asia.
	Asia ex-Japan	▲	The economic backdrop is encouraging, with near-term resilience in China and solid corporate earnings. We like selected Southeast Asian markets but recognize a worse-than-expected Chinese slowdown or disruptions in global trade would pose risks to the entire region.
Fixed income	U.S. government bonds	—	We are cautious on U.S. Treasury valuations after the recent rally, but still see them as portfolio diversifiers given their negative correlation with equities. We expect a gradual steepening of the yield curve, driven by still-solid U.S. growth, a Fed willing to tolerate inflation overshoots — and a potential shift in the Fed's balance sheet toward shorter-term maturities. This supports two- to five-year maturities and inflation-protected securities.
	U.S. municipals	▲	We see coupon-like returns amid a benign interest rate backdrop and favorable supply-demand dynamics. New issuance is lagging the total amount of debt that is called, refunded or matures. The tax overhaul has made munis' tax-exempt status more attractive in many U.S. states, driving inflows.
	U.S. credit	—	A still-growing economy, reduced macro volatility and a decline in issuance support credit markets. Conservative corporate behavior – including lower mergers and acquisitions volume and a focus on balance sheet strength – also help. We favor BBBs and prefer bonds over loans in high yield.
	European sovereigns	▼	Low yields, European political risks, and the potential for a market reassessment of easy ECB policy or pessimistic euro area growth expectations all make us wary on European sovereigns, particularly peripherals. Yet any further deterioration in U.S.-European trade tensions could push yields lower.
	European credit	▼	"Low for longer" ECB policy should reduce market volatility and support credit as a source of income. European bank balance sheets have improved after years of repair, underpinning fundamentals. Yet valuations are rich after a dramatic rally. We prefer high yield credits, supported by muted issuance and strong inflows.
	EM debt	—	Prospects for a Chinese growth turnaround and a pause in U.S. dollar strength support both local- and hard-currency markets. Valuations are attractive despite the recent rally, with limited issuance adding to positives. Risks include worsening U.S.-China relations and slower global growth.
	Asia fixed income	—	A focus on quality is prudent in credit. We favor investment grade in India, China and parts of the Middle East, and high yield in Indonesia. We are cautious on Chinese government debt despite its inclusion in global indexes from April. We see rising funding needs outstripping foreign inflows.
Other	Commodities and currencies	*	A reversal of recent oversupply is likely to underpin oil prices. Any relaxation in trade tensions could boost industrial metal prices. We are neutral on the U.S. dollar. It has perceived "safe-haven" appeal but gains could be limited by a high valuation and a narrowing growth gap with the rest of the world.

▲ Overweight — Neutral ▼ Underweight *Given the breadth of this category, we do not offer a consolidated view.

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