COP26 brought to Glasgow tens of thousands of public officials, corporate leaders, and climate activists to chart a path to limiting global warming and “keep 1.5 degrees alive.” In the words of BlackRock’s Global Head of Sustainable Investing Paul Bodnar, the commitments made in Glasgow went a long way towards closing the climate ambitions gap, but opened up a wide execution gap. A key question for asset owners: what does this all mean for investment portfolios? We brought together a selection of BlackRock experts in this field to address this question in three parts:

**Key takeaways included:**

- Financial materiality of climate-driven investing is intensifying, and asset owners are increasingly recognizing that climate risk translates to investment risk. It is, however, early days in the process of markets fully pricing this in.
- Sustainable investing is no longer a binary exercise of green vs brown investing but also increasingly about participating in the de-browning of the economy. We expect to see increased opportunities in companies and sectors that play roles in various stages of the net-zero transition process.
- Metrics that can provide an indication of how companies are performing against alignment trajectory will be increasingly central to the investment process. Transparency and consistency of data will be integral to identifying, assessing, and managing both transition and physical risks.
- Although climate change is a long-term investing theme, the transition process provides for tactical opportunities and risks.
- The gap between actions needed to contain global warming and what is being delivered means that rather than seeing a trade-off between transition and physical risks, investors need to consider both.

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Top level investment implications from COP26

Isabelle Mateos y Lago (IML): When you step back from the flurry of commitments made at COP26 and consider the climate change path we are on, what do you think are the main insights and investment implications for your respective investment platforms?

Kristen Weldon (KW): At this COP, the private sector and finance took center stage. There was the announcement that financial sector firms responsible for $130tr in assets under management had signed up to the Glasgow Financial Alliance for Net Zero, demonstrating that private capital is ready to be mobilized. But governments still have a significant role to play, as a combination of policy incentives and clear guidance on future regulation are necessary to allow the financial sector to move effectively and quickly to deploy capital.

Key industries are organizing themselves to chart a course to Net Zero in collaboration with corporates, customers, suppliers and capital providers. We also saw a significant amount of financial innovation at this COP in terms of blended finance and other novel solutions. The agreement on Article 6 on the Paris Agreement will pave the way to meeting institutional investors’ demand for more transparent carbon emissions pricing. The agreement will also lead to the proceeds of around 5% from transactions conducted under a new UN controlled trading scheme that will go towards helping developing countries implementation needs.

In private markets, there is typically a longer time horizon but much less transparency. We see this as a direct investment opportunity and enhancement to projects that did not have the same economic attractiveness previously, as we are seeing the aperture widening for funds to look at assets that are moving from brown to green. What will propel the transition over time is an emphasis on investing in the transition and providing longer-term patient capital. There is also tremendous opportunity in terms of new investments and developments in green technology, i.e. new ways to cut emissions in intensive sectors like agriculture.

Laura Segafredo (LS): Compared to pre-Paris, there is a lot to be optimistic about. Pre-Paris agreement, we were on a trajectory of warming above 3.5 degrees in 2100, after Paris we were on roughly 2.7 degree trajectory. Counting COP26 pledges, we are now between a 1.8-2.4 degree trajectory, depending on some assumptions and if pledges are met in full. But what is going to make this happen, and what is the time frame? Two things were exciting to see:

- There have been new and updated commitments by all countries that came to the table to reduce their emissions, and the deadline for the next ratchet up of commitments has been moved from 2025 to 2022. We know the long-term objective of reaching net zero by 2050, but the focus on what is necessary in terms of our actual contribution and the intermediate milestones to getting there is very positive.
- There has been a lot of progress on less-discussed issues like methane emissions; bringing down methane emissions quickly would buy time in reducing CO2 emissions.

Two other things show there is still a lot of work to be done:

- Considering the commitments countries have made with a 2050 target, we would need to half current emissions in the next decade. Looking at what the Nationally Determined Contributions (NDCs) are delivering, they are actually increasing emissions in 2030 by about 15% over current levels. Actions are not meeting the rhetoric. How to reach these goals in practice is yet to be figured out.
- Some major economies haven’t signed up to individual pledges or commitments around deforestation, phasing out fossil fuel subsidies, to name a few.

The following investment implications stand out:

- We can comfortably say coal is dead. This COP agreement acknowledges fossil fuels for the first time, and that coal needs to be phased out. The picture is a bit less clear with regards to other fossil fuels.
- The role of hydrocarbons in 2050 will need to be limited. So how will companies transform their business models and strategies if they want to exist in 2050? They will not be extracting or selling hydrocarbons on the same scale they are today – the shifts in strategy is where a lot of the interesting work will happen over the next few years for investors.
Eric Van Nostrand (EVN): As multi-asset investors, our conviction in the financial materiality of climate-driven investing is intensifying and has gained traction over the past couple of years. In observing markets and policy conversation, asset owners are increasingly coming around to the view that it is central to risk and return to understand climate risks and opportunities facing portfolios. We also see increasing recognition that the materiality of sustainability for portfolios isn’t just about the downside risk and managing physical and transition risks of companies exposed to the old energy economy. There are also tremendous upside opportunities from companies that are investing in renewables as well as other low-carbon projects in the developed and emerging world.

The transition will have a big relative impact across sectors
We believe avoiding climate-related damages will help drive growth and improve returns for risk assets broadly. We see climate-resilient sectors such as tech and healthcare as potential beneficiaries.

Return assumption differentials in green transition vs. no-climate-action

<table>
<thead>
<tr>
<th>Annualised return impact</th>
<th>Information technology</th>
<th>Healthcare</th>
<th>Utilities</th>
<th>Energy</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.0%</td>
<td></td>
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<td></td>
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<tr>
<td>2.5%</td>
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<tr>
<td>0.0%</td>
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<tr>
<td>-2.5%</td>
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<tr>
<td>-5.0%</td>
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</tbody>
</table>

For illustrative purposes only. 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 Refinitiv Datastream and Bloomberg, February 2021. Notes: The chart shows the difference in U.S. dollar expected returns over the next five years from February 2021 for four sectors of the MSCI USA Index in our base case of a “green” transition (policies and actions taken to mitigate climate change and damages, and to limit temperature rises to no more than 2 degrees Celsius by 2100) vs. a no-climate-action scenario. The estimated sectoral impact is based on expected differences in economic growth, corporates earnings and asset valuations across the two scenarios. Professional investors can access full details in our Portfolio perspectives and CMAs website.

IML: When you step back from the flurry of commitments made at COP26 and consider the climate change path we are on, what do you think are the main insights and investment implications for your respective investment platforms?

EVN: We believe the best returns are not going to come from the obvious, most green companies, but rather from companies engaged in the transition. Companies that perhaps have more negative sustainability profiles today but are taking steps to transition to a sustainable business model are exposing themselves to new sources of revenue that are expected to outperform in a low carbon economy, which hasn’t necessarily been priced in yet.

While we’re primarily focused on a longer-term time horizon, there is also a short term impetus over the next 1–2 years where we’re on the verge of being much more discerning in terms of who’s forward transition plan is credible or not.

“Asset owners are increasingly coming around to the view that it is central to risk and return to understand climate risks and opportunities facing portfolios.”

Eric Van Nostrand
Head of Research for Sustainable Investments and Multi-Asset Strategies
Top level investment implications from COP26

**LS:** We foresee metrics playing a bigger role in providing an indication of where companies are headed. While progress has been made over the past five years on disclosures, the data is still incomplete with inconsistencies across how different companies account for it. Though it is not yet a perfect science, it is encouraging to see now that 10,000 companies report to CDP annually on their emissions, and thousands of companies issuing a TCFD report. The effort around increased disclosures highlights sector contribution and where we are today in terms of warming contributions and gives an indication of exposure today to some of these risks but doesn’t yet give an indication of where we’re headed. We need better metrics for portfolio construction that align with the transition to Net Zero, including indicators that show how a company is performing on its intended alignment trajectory. Forward looking metrics, such as implied temperature rise (ITR) that are emerging can allow the incorporation of companies’ objectives and targets, any announcements they’ve made around what their contribution will be to the transition, and the time frame they’re operating on in the investment making process.

How do we take those into consideration, combine them with climate science, the concept of the remaining carbon budget, and that gives an indication of the company and portfolio trajectory? Transparency around these metrics will continue to be important; eventually we will see products and indices take formation, and implement rules in index construction.

**An Implied Temperature Rise cross-section of the MSCI All Country World Investable Market Index**

Proportion of companies by sector according to ITR

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**Sources:** BlackRock-created chart using MSCI data. Represented by the MSCI All Country World Investable Market Index (ACWI IMI), which includes large-, and mid- and small-cap traded listed companies across 23 developed-market ant 27 emerging market countries. With 9,226 constituents, the index covers approximately 99% of global equity investment opportunity set (as of August 31, 2021). Sector breakdown according to The Global Industry Classification Standard (GICS).

**IML:** It is not unrealistic to consider that we could end up well short of the 2050 net zero goals and hence end up dealing with a lot of physical risk, or with drastic action towards the end of the 2050 time horizon. How can investors manage the uncertainty of physical v transition risks?

**EVN:** We try not to frame these risks as a trade-off, as each of those risks impact portfolios through different channels. The way we adjudicate the extent to which we make decisions based on transition and physical risk is with data and analytics, in the sense that the measurement of both is very uncertain across the industry. There is very little consensus or correlation between different assessments of transition risk when considering metrics like the shock to a company’s earnings per share from a particular climate scenario, or physical risk given the necessity of granular geolocated data to accurately measure the extent of a company’s geographical footprint in more climate-impacted areas.

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**Physical vs. Transition Risks**

*ICBH0222E/M-2003427-4/15*
**Physical vs. Transition Risks**

**KW:** In private markets, the assessment and management of both transition and physical risk in the investment process is equally important and is a crucial part of our investment process. Within real assets, transition risk usually translates to stranded asset risk, while physical risks will be present regardless of whether an asset is aligned to Net Zero and risk severity depending on the physical location of the assets. We continue to develop and evolve our scenario modelling capabilities within alternatives and looking at signals such as COP to consider which scenarios we have conviction will materialize.

**LS:** There is a significant asymmetry in the long-term horizons of addressing both physical climate risks and the transition away from fossil fuels: transition risks are transitory, whereas physical risks will be impactful over the long term and get worse if we don’t address climate change.

In 2021 the world is 1.1 degrees warmer than it was pre-1850. This degree of warming continues to beat records of catastrophic losses from the increased frequency and severity of weather events that have a climate connection, i.e. hurricanes, droughts, fires, etc. To contain global warming to 1.5 degrees will already take significant capital and policy efforts to mitigate the consequences of displacement, land loss, and more. While some are still viewing this as a far-away risk, it is already here. Considering the infrastructure replacement cycle, infrastructure today needs to be adequately prepared for these changes, otherwise we will have to pay for it two or three additional times.

Considering climate change will impact the frequency of detrimental climate events in the future, we need to factor this into our climate models and translate into real economic impact – what are the energy costs going to be, how much labour productivity will be lost, what is the morbidity implication, etc., and take those into consideration for the relative pricing of different assets. These risks are very location specific, so it will also be important to consider the implications for sovereign or even sub-sovereign issuers of vulnerable countries.

**IML:** Do investors have enough data and metrics to factor in climate change considerations into their investment processes?

**LS:** On climate, we are very early days and indicators are finally moving from backward looking to forward looking that can give a sense of alignment and trajectory of net-zero pathways. These metrics are nascent, and we are still early on in understanding of their accuracy and effectiveness indicating that the market has not fully incorporating this pricing.

**EVN:** We try to use new, creative data sets to identify which risks are the greatest, according to the standards used by our investment researchers. Our analytics teams are focused on evaluating different input data sets for their ability to predict sustainable outcomes, with consideration for both transition and physical risk factors.
**Physical vs. Transition Risks**

**KW:** Data is a bit different for private markets; but as an industry we have a wide range of data available to us. The key is robust data collection for assets. Our teams are making strong efforts to build detailed and complete data pictures with any inputs available. In real estate, roughly 90% of our equity assets now have Scope 1 and 2 data that we can incorporate into scenario modelling. In the credit space, we’re using ESG ratchets to encourage data disclosure. In infrastructure, we’re working with third parties to conduct energy audits of equity infrastructure products. There is a lot of data and a lot that can be done with it, we’re working to evolve as the data improves over time.

**How much are climate risks already priced in?**

**IML:** Getting a bit more granular, can you be more specific on areas where you see opportunities? Are you seeing any green bubbles?

**EVN:** We think about the pricing of sustainability generally along two channels – the index side and the stock picking side. On the index side, we see the flow of capital into sustainable assets as a process that’s going to evolve over the next decade, and we’re dedicating time to figure out how much of the pricing for that shift has manifested itself or not. While there has been a burst of attention to sustainability in recent years, resulting in an improvement in the pricing of green assets relative to non-green assets, we think the gap between those groups and the difference in cost of capital is only about one-fifth of what it is projected to be given the long-term implications of the transition. To summarize, we don’t think there is a bubble in sustainable indexes generally, and we do think they’re going to continue to outperform as capital flows into sustainability.

In terms of that near-term tactical positioning, there’s a vibrant dynamic at play on the stock picking side right now, namely identifying companies that aren’t obviously green but are still playing a role in financing the transition, i.e. fossil fuel producers getting involved in blue and green hydrogen. We think there is very little pricing materialised, so investors have a lot to gain from getting ahead of transition-oriented opportunities.

**Climate repricing has a long way to go**

Relative repricing impact of changes in discount rates, 2020 vs dot-com bubble

<table>
<thead>
<tr>
<th>Annualized Returns (absolute value)</th>
<th>Positive climate repricing in 2020 (IT)</th>
<th>Negative climate repricing in 2020 (Utilities)</th>
<th>Dot-com bubble (IT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20%</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>15%</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>10%</td>
<td></td>
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<td></td>
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<tr>
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</table>

Past performance is no guarantee of current or future results. Sources: BlackRock Investment Institute, with data from the Center for Research on Security Prices, December 2021. Notes: To estimate climate-driven repricing, we attribute historic returns to two drivers; cashflow news and discount rate (DR) news. We then identify the DR news associated with climate change using carbon emission intensity (CEI) as a proxy. We isolate the DR component of returns by 1) estimating revisions in future expected returns, based on forecast surprises from a vector-autoregression embedding standard factors such as value, momentum and quality 2) applying the approximate return decomposition of Campbell (1991). Sector returns are MSCI US Sector index- weighted averages of stock-level returns. Attribution to climate scores is given by cross-sectional predictive regressions of DR news on CEI, given by the log of level 1 carbon emissions scaled by firm value. The first two bars represent fitted values for the lowest and highest CEI sectors, respectively. The “Dot-Com Bubble” is the period Jan 1998–June 2001.
LS: We think about how sustainability affects performance with the ‘three F’s:’ flows, fundamentals, and factors. ESG investing and data providers have been around for a long time, but until recently have been viewed as niche. It is becoming much more widespread and more of a default type of investment strategy, which we are starting to see being priced in. While we’re not sure of the pace, we are facing some significant changes.

“We anticipate that in the medium to long term, non-sustainable assets will be discounted as they’re affected by increased obsolescence, which will make these assets challenging to invest in over time.”

KW: Across the alternatives space, renewable energy and later stage green companies are the most advanced opportunities. There is tremendous appetite and a huge wave of capital that’s looking to come into this space, but the market is getting quite mature. We are seeing significant scale, but to reach Net Zero goals we need to see around 10-15x more renewables. Further on the real assets side, in real estate specific to certain geographies and asset classes we are starting to see green premiums for net zero carbon buildings in the short term, which is also interesting to look at. We anticipate that in the medium to long term, non-sustainable assets will be discounted as they’re affected by increased obsolescence, which will make these assets challenging to invest in over time. The least advanced areas are the sectors that are harder to decarbonize, but we see opportunities on the technology front to invest in innovation and the next generation of decarbonization solutions. Finally, we see an increasingly important theme in transition finance. As investors, we need to play an active role in transitioning carbon intensive sectors and companies and is an area where we can have great impact.

The massive capital investment needed to achieve a net-zero economy
Annual average capital investment needed to achieve net zero (in US$tn)

<table>
<thead>
<tr>
<th>Year</th>
<th>Fuel Production</th>
<th>Electricity</th>
<th>Infrastructure</th>
<th>Industry</th>
<th>Transport</th>
<th>Buildings</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016-20</td>
<td>$1bn</td>
<td>$2bn</td>
<td>$3bn</td>
<td>$4bn</td>
<td>$5bn</td>
<td>$6bn</td>
</tr>
<tr>
<td>2030</td>
<td>$10bn</td>
<td>$20bn</td>
<td>$30bn</td>
<td>$40bn</td>
<td>$50bn</td>
<td>$60bn</td>
</tr>
<tr>
<td>2040</td>
<td>$100bn</td>
<td>$200bn</td>
<td>$300bn</td>
<td>$400bn</td>
<td>$500bn</td>
<td>$600bn</td>
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<tr>
<td>2050</td>
<td>$1Tn</td>
<td>$2Tn</td>
<td>$3Tn</td>
<td>$4Tn</td>
<td>$5Tn</td>
<td>$6Tn</td>
</tr>
</tbody>
</table>

Source: International Energy Agency, October 2021. For illustrative purposes only. There is no guarantee that any forecasts made will come to pass.

IML: Is there one marker to signal whether there is going to be the acceleration that we need to get to the right place to reach net zero? What are you each looking at in terms of an indicator to demonstrate progress, or lack thereof, toward these goals?

EVN: I think companies that are cutting their Scope 3 emissions, reducing their environmental impact up and down the value chain while maintaining profit margins are demonstrating resilience that we think is a good marker of transition capability.

LS: One thing I’ll be monitoring is whether emissions are going up or down. Unfortunately, the arithmetic of the physics of climate is merciless, and emissions must go down in order for us to not overshoot our temperature goals.

KW: I am keeping track of capital deployment as it relates to private markets. We see figures around $1.5-2 trillion dollars a year needed, so the pace of deployment will be critical to see the development of these solutions.
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