CIBC Asset Management is committed to integrating ESG factors into our investment process. This increasingly includes the consideration of climate risk on asset prices. Given this importance, we wanted to share a summary of some of the key findings of the UN’s Intergovernmental Panel on Climate Change (IPCC) released in their 2021 report on August 7, 2021 and some of our high level views of possible investment implications. The IPCC report builds off prior working group research and highlights the most up to date climate science. The findings are based on new climate model simulations, analysis and multiple lines of evidence. The statement is clear;

It is unequivocal that human influence has warmed the atmosphere, ocean and land.

This is a meaningful shift in the language used in previous reports and one of many facts established by the over 200 climate scientists and approved by 195 governments by virtual meeting. The paper presses several key findings related to global warming and their impacts on key measures, extreme weather, and irreversible changes to climate.
Global warming

The important milestone established by the 2015 Paris Accord, attempts to limit planetary warming to well below the 2 degrees this century with a target of 1.5 degrees or less. The IPCC report indicates current warming in the 1.1 degree range with 1.5 degrees being reached by 2040 under all climate scenarios. Unless deep cuts are made to global emissions in the next few years we will exceed the 2 degree scenario well before the end of this century. Figure 1 provides an overview of the five climate models based on the magnitude of reaction by governments and corporations around the world.1

Figure 1 – Future emissions cause future additional warming, with total warming dominated by past and future CO2 emissions

a) Future annual emissions of CO2 (left) and of a subset of key non-CO2 drivers (right), across five illustrative scenarios

b) Contribution to global surface temperature increase from different emissions, with a dominant role of CO2 emissions

Change in global surface temperature in 2081-2100 relative to 1850-1900 (°C)

Total warming (observed warming to date in darker shade), warming from CO2, warming from non-CO2 GHGs and cooling from changes in aerosols and land use.

### Extreme weather

The report highlights the implication of higher temperatures on extreme weather events. All scenarios will lead to greater numbers of 10 and 50 year events in extreme heat, heavy precipitation, and droughts. We will continue to see increases in the heat waves and tropical cyclone intensity and frequency. Droughts are already occurring at 1.7 times the frequency and are expected to be a more common occurrence under all scenarios. This leads to longer and more intense fire seasons and overall the globe will face a multitude of climate induced challenges at the same time. Figure 2 highlights the frequency with which extreme weather events will occur based on varying warming scenarios.

Figure 2 – Projected changes in extremes are larger in frequency and intensity with every additional increment of global warming.

#### Hot temperature extremes over land

<table>
<thead>
<tr>
<th>10-year event</th>
<th>Frequency and increase in intensity of extreme temperature event that occurred once in 10 years on average in a climate without human influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1850-1900</td>
<td>Present 1° C</td>
</tr>
<tr>
<td>Future global warming levels</td>
<td>1.5° C</td>
</tr>
<tr>
<td>FREQUENCY per 10 years</td>
<td>Once</td>
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<th>50-year event</th>
<th>Frequency and increase in intensity of extreme temperature event that occurred once in 50 years on average in a climate without human influence</th>
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<td>1850-1900</td>
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Irreversible changes

The report highlights the dramatic changes to the global climate and the future consequences under all scenarios. The Arctic is the fastest warming area of the globe at twice the rate of the global average. According to the IPCC we are losing glacial cover at an astonishing rate and Arctic ice cover will vanish entirely at least once before 2050. This will create one of the many feedback loops as reflective ice cover gives way to water that will absorb solar radiation.

The science indicates now that sea levels will rise regardless of where global temperature rise is halted. Under a 1.5 degree scenario, average sea levels will increase by 2-3 meters and under the most dire scenario rises in excess of 15m cannot be ruled out. Entire coastlines are at risk that will impact hundreds of millions of people around the world. Figure 3 provides the degree of change to various climate system components based on the five climate models.¹

Figure 3 – Human activities affect all the major climate system components, with some responding over decades and others over centuries

The most important take away of the report is related to the policy response of governments, corporations, and individuals. The report provides optimism in that the most dire effects of climate change can be avoided if dramatic global action is taken today. While a 1.5 degree scenario is increasingly looking out of reach, every fraction of a degree beyond is important in mitigating the worst of the possible damage to the planet and society.

Our view on implications for investors

It is our view that the IPCC report outlines the need for dramatic intergovernmental action which may have significant implications on policy direction. The 26th UN Climate Change Conference of the Parties (COP26) will provide greater insights into how policymakers and companies will react but the message is clear, more extreme action is required. Regardless of what policy intervention arrives there will be growing pressure from stakeholders and the public to enact significant commitments to net zero initiatives. Given the reports call for pressing action, these initiatives may be more aggressive than the market has anticipated.

We believe that investors must now consider the increasing reality that climate may have reverberating effects on entire asset classes, from sovereign bonds as countries work towards financing their commitments and mitigating infrastructure, to real assets where extreme weather and mass migrations may impact valuations. It is clearer than ever that climate risk is investment risk and investors must focus on the clear implications of our changing planet and the inevitable policy response. Global carbon taxes are a logical step to incentivize consumer and corporate behavior. Investors increasingly will need to consider the carbon intensity and the emissions of their portfolios as a significant risk factor.

Some sectors will face increased exposure to the implications of the climate scenarios listed by the IPCC.

Energy

The energy sector will play a significant role in facilitating an energy transition and ultimately the required reduction in emissions. This reality will bring about new global leaders in energy as we transition from traditional fossil fuels to renewable sources. Investors must consider this transition and the implications for companies that are not adapting to change.

Real Estate and Infrastructure

Extreme weather and rising sea levels will have significant impacts on the our hard assets. Operating costs and the possibility for catastrophic loss combined with shifting regional migrations will shift supply and demand dynamics. Investors must consider the implications of regional and in particularly the coastal exposure of their portfolios.

Finance

Banks will play a significant role in financing the energy transition which may lead to opportunities. Investors must increasingly understand the regional exposure of a bank’s mortgage portfolio and their allocations to industries and sectors that will struggle in a climate policy environment.

Insurance companies need to have robust underwriting standards in place that factors in catastrophic and extreme weather events. The last decade has seen a significant increase in insured losses due to natural disaster and the first half of 2021 has already seen a ten year high at $42BUSD. Robust climate policies and appropriate risk mitigation will be essential of the industry and investors will need to understand investee companies portfolio exposure in greater detail.

Conclusion

The IPCC report outlines the need for a more intense and rapid intervention to prevent a greater than 2 degree warming scenario. This will lead to policy and stakeholder pressure across all asset classes, industries, and issuers. Climate risk will be an increasing risk factor to investor portfolios over the next several decades as the world tackles this crisis. With the increasing relevance of ESG integration, this highlights the need for robust evaluation of an issuers’ governance practices and their environmental policies.