Crucial negotiations take place in Glasgow in November, with many loose ends to tie up after the pandemic-related delay. The science is clear, the impacts are here, but the outlook is cloudy as the window to limit warming to 1.5°C closes. We think policy clarity is critical for investors and businesses as climate change increasingly shapes decisions and regulations.

**Why COP26 matters:** After a year’s delay, COP26 (31-October–12 November) is widely seen as the world’s last chance to get onto the net zero emissions trajectory by 2030 and keep temperature rises below 1.5°C, in line with the Paris Agreement. The task has been made more urgent by increased scientific evidence of human-induced climate change and the large number of record-breaking extreme weather events recently. The challenges are huge, given the scale of the task, the backdrop of the pandemic, and geopolitical tensions. The UK, as host, will be anxious for delegates to attend in person, as virtual climate talks in May made little progress.

**What success looks like:** (1) Finalisation of Article 6 of the Paris Agreement, a system of trading mitigation actions between countries, will be a key marker of success. It has been a major sticking point in the past two rounds of talks. (2) Financial promises and provision – developed economies previously agreed to provide USD100bn a year to developing economies to help them tackle climate change, but since finance is often used as leverage for greater ambition and transparency, if, when and how this promise is to be met is unclear. (3) The level of ambition for climate pledges (Nationally Determined Contributions) – the task at COP26 will be to decide on the starting point and duration of individual countries’ climate pledges. (4) There are myriad other issues to address, including the fair inclusion of gender considerations, indigenous communities and human rights into discussions and decisions as well as the protection of ecosystems and natural habitats. With each word in these ‘decision texts’ so precise, success will be on a spectrum dependent on the starting position, in our view.

**Implications for investors and business:** Investors and businesses want visibility on longer-term climate mitigation and adaptation policies and clarity on the speed of the low-carbon transition. We believe a successful COP26 would result in an acceleration of climate policies – unlocking incentives for investment to reduce emissions as well as build resilience. This would drive more disclosure, more targeted regulation, and the integrity of corporate climate strategies (i.e. avoid “greenwashing”). Failure at COP26 would mean even more uncertainty over the prospects for avoiding the severest impacts of climate change, irreversible damage, and the climate response becoming ever costlier to address. If countries do not cooperate, then politics triumphs over policy, and the outlook for planet grows much bleaker.

This is a Free-to-View version of a report by the same title published on 7-Sep-21. Please contact your HSBC representative or email AskResearch@hsbc.com for more information.
Did you know?

The global climate change process

COPs and the UNFCCC
1. The climate summit taking place in Glasgow, Scotland is known as COP26, the 26th Conference of the Parties to the UN Framework Convention on Climate Change or UNFCCC. It will be presided over by the UK.

2. The Paris Agreement aims to keep the rise in global average temperatures to well-below 2°C above pre-industrial levels and preferably to 1.5°C in order to significantly reduce the risks and impacts of climate change.

Rising temperatures and science
3. The Intergovernmental Panel on Climate Change (IPCC) estimates that the overall surface temperature has increased by 1.09°C but the average land temperature has increased by 1.59°C.

4. Atmospheric concentrations of carbon dioxide (CO₂) are now the highest they have been in “at least 2 million years (high confidence)” according to the IPCC. Methane (CH₄) and nitrous oxide (N₂O) are the highest for at least 800,000 years.

Ratification and implementation of Paris Agreement
5. As of 3 September 2021, 191 Parties, covering 96% of global greenhouse gas (GHG) emissions have ratified the Agreement.

6. The ‘rulebook’ is the set of guidelines that make Paris Agreement operational. Most issues have been agreed but there are some very strong opinions over certain technical issues – such as Article 6 of the Agreement on the trading of mitigation actions – that remain outstanding and must be concluded at COP26 or risk derailing the whole global process.

Climate pledges and Net Zero
7. Some 196 Parties submitted a climate pledge (that’s all except Libya) – Nationally Determined Contributions (NDCs) – covering emissions reductions as well as preparing for the impacts of climate change by building up resilience. However, only 116 have been updated (as of 31 August) according to previous ‘COP decisions’.

8. Net zero refers to the balance between the sources and sinks of greenhouse gas (GHG) emissions. The IPCC states we must reach net zero by 2050 in order to limit warming to under 1.5°C. Around 58 countries (including the EU) and 400 companies have declared a net zero strategy. (More targets are under discussion and some are conditional.)

Carbon pricing
9. There are roughly 64 carbon pricing schemes around the world which cover over a fifth of global GHG emissions. Some 35 put a tax on carbon emitted and 29 are trading schemes.

10. Carbon credits are certificates “awarded” by an authority for an activity which is deemed to have prevented a physical tonne greenhouse gas from reaching the atmosphere. They are sometimes used to “offset” or “cancel out” real emissions. Although their true emissions reductions are debated, their use is likely to increase as more net zero targets are set.
Whilst the global climate process under the UNFCCC is a continually evolving ongoing process with more or less defined goals, host governments often have their own goals of what they would like to achieve at COPs. The UK is no different – it has laid out four goals for COP26. Note that these are the goals from the perspective of the UK (as hosts), they are not official goals under the UNFCCC process.

Figure 2: The goals for COP26 – from the perspective of the UK

<table>
<thead>
<tr>
<th>Mitigation</th>
<th>Adaptation</th>
<th>Finance</th>
<th>Collaboration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal to Clean Power</td>
<td>Financing Resilience</td>
<td>Public Finance - 11 priorities including:</td>
<td>Finalising the ‘Paris Rulebook’:</td>
</tr>
<tr>
<td>Nature for people and climate</td>
<td>Habitat protection and restoration</td>
<td>• Mobilising private climate finance</td>
<td>• Solution on carbon markets</td>
</tr>
<tr>
<td>Transition to zero emission vehicles</td>
<td>Adaptation Communication</td>
<td>• Finance for nature and nature based solutions</td>
<td>• Resolving issues on transparency</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Gender-responsiveness of climate finance</td>
<td>• Driving ambition from governments</td>
</tr>
</tbody>
</table>

Source: UK COP26 website
Key issues to watch at COP26

- Article 6 will define COP26 success or failure – but there are three distinct parts that may not move forward simultaneously
- Look out for climate pledges (NDCs) and their duration, reporting format, and overall ambition, as well as the inclusion of adaptation
- Finance may prove a sticking point (again) as USD100bn has not been demonstrably provided, but a new global finance goal looms

The Paris rulebook: The Paris Agreement is an international treaty designed to cover all aspects of global efforts to reduce emissions, prepare for the impacts and support others. However, it is worded in such a way that it implies intention – in other words, the agreement itself does not tell participants how to implement it, comply with it, or contribute to it. This is why the operational guidelines (the rulebook) is such an important document. It details how things will be done and ensures that all Parties stick to the same rules, and trust others to do the same.

Whilst most of the issues surrounding the operational guidelines were agreed at COP24 (2018), there are a number outstanding which were still unresolved even at COP25 (2019). These include Article 6 of the Paris Agreement, Common time frames of NDCs, and reporting formats. It is important for these to make substantial progress at COP26. The ever-present issue of finance will be used as a bargaining tool for various issues, especially transparency. There are many other loose ends to be tied up.

Article 6 of the Paris Agreement

“Parties could not reach consensus thereon” [on] Article 6 of the Paris Agreement at COP24. It was hoped that COP25 would nail down guidance for Article 6 but the complexities and contention surrounding the issues remain undecided.

Article 6 will be one of the most contentious issues to be discussed in Glasgow.

Article 6 essentially covers voluntary cooperation in implementing climate pledges (NDCs) with a view that cooperation allows for higher ambition. The three main parts of Article 6 can be seen in Figure 3.
Figure 3: The three main issues of Article 6 of the Paris Agreement

Article 6.2: Cooperative approaches
The task, in one line, is to provide “guidance on cooperative approaches referred to in Article 6.2”.

Parties are allowed to use the emissions saved/avoided in other countries (by other Parties) to count towards their own account – especially when it comes to meeting their own NDCs. However, there needs to be an accounting system whereby the mitigated emissions are deducted from one Party and added to the other country. This is to be achieved through (essentially what is) a carbon credit system, known as ITMOs (internationally transferred mitigation outcomes). The key is to ensure integrity, enable ambition and avoid double counting.

Cooperation between Parties is widely accepted and agreed as being useful, however the accounting system that would make it happen is fiercely debated.

Figure 4: Cooperation between Parties relies on a sound accounting system

There are three distinct parts to Article 6 that need to be agreed separately.

**Article 6.2 – Cooperative approaches and ITMOs**

*The task, in one line*, is to provide “guidance on cooperative approaches referred to in Article 6.2”.

Parties are allowed to use the emissions saved/avoided in other countries (by other Parties) to count towards their own account – especially when it comes to meeting their own NDCs. However, there needs to be an accounting system whereby the mitigated emissions are deducted from one Party and added to the other country. This is to be achieved through (essentially what is) a carbon credit system, known as ITMOs (internationally transferred mitigation outcomes). The key is to ensure integrity, enable ambition and avoid double counting.

Cooperation between Parties is widely accepted and agreed as being useful, however the accounting system that would make it happen is fiercely debated.

There remain many outstanding issues that need to be agreed and finalised, such as the following:

- **Definitions** – what counts as an ITMO (the distinction between “avoidance” and “removals” of emissions); the importance of *additionality*; the possibility of ‘adaptation credits’ and ‘non-GHG ITMOs’ (i.e. energy, land).

- **Governance and responsibilities** – which body will oversee the process (new or existing).

- **Transfers** – which Parties are allowed to sell ITMOs (i.e. contingent on NDC progress) and what mechanism will be employed to track the transfers.

- **Adjustments** – how will these be made, to which accounts, and how (using what accounting methodology).

- **Time frames** – What time frames would be allowed e.g. single-year or multi-year.
Avoiding double counting is of utmost importance

Could proceed from trading be channelled towards adaptation

The mechanism of Article 6.4 should enhance mitigation actions....

...but not everyone agrees on how to implement this

Are reductions physical, only in theory, or merely clever accounting

Use & limits – What ITMOs can be used for i.e. will there be a restriction on the activities. Will there be a limit on the amount of mitigation that can be “offset” using ITMOs.

Reviews – how often would the process be reviewed, by which body, how.

Double counting: If emissions were reduced (resulting in the generation of a carbon credit) then only one Party should be able to say that they reduced emissions i.e. avoid double counting. Some Parties fear double counting of emissions saved i.e. the transfer of credits which have already been applied against the originating Party’s emissions account, are then applied again to the new Party. A strict accounting methodology is required to avoid this.

Besides double counting; another issue to be addressed is whether a portion of the proceeds from the sale of credits should be used to support adaptation and related actions (share of proceeds (SOP)). This is to ensure that adaptation is not side-lined in the push for mitigation outcomes – ‘higher ambition in adaptation actions’ is written into Article 6.

Article 6.4 – The mechanism

The task, in one line, is to establish the “rules, modalities and procedures for the mechanism of Article 6.4”.

“A mechanism to contribute to the mitigation of greenhouse gas emissions and support sustainable development”.

Figure 5: The Article 6.4 Mechanism is to be designed to meet four aims

a) Promote GHG mitigation
b) Incentivise GHG mitigation by public and private entities
c) Contribute to emissions reduction (to the host partly)
d) Deliver on overall mitigation in global emissions

Source: HSBC (based on UNFCCC)

The problem is that rules that make sense for one Party (which might have a lot of mitigation activities) may not be acceptable to another Party. Discussions at COP26 must whittle down the various options on a wide range of matters.

Figure 6: The many facets of the Article 6.4 mechanism still to be agreed

1 Definitions – which activities would be included within the mechanism (including defined baselines and standards)
2 Ambition & additionality – what counts as additional and who decides this
3 Responsibilities – supervision and governance of the mechanism as well as regular review of the rules
4 Adjustments – what accounting & transfer methodologies are used how to ensure there is no double counting
5 Adaptation – provisions to include adaptation e.g. a levy on share of proceeds

Source: HSBC (based on UNFCCC)

Additionality describes whether a project actually delivers emissions reductions “in addition to” the status quo or a baseline (business as usual) scenario that either already exists or would have been implemented anyway. The concept is simple enough but it is open to wide interpretation as what is considered additional for some may not fit the additionality criteria of others. Article 6 discussions on additionality will cover whether there should be a list of projects considered additional, or whether or not additionality should be compared with NDCs.
Kyoto units: Much of the debate concerns whether old credits from the Kyoto Protocol should be allowed to be carried forward to the new system – some Parties have a large number of emissions credits from the old framework (“Kyoto units”) and want these credits to be eligible under the new framework. Understandably, they don’t want them to simply expire and go to waste (rendering the financial investment in the projects obsolete).

On the other hand, there is the very real risk that the market could be flooded with “carbon credits” (oversupply) which would weaken the effectiveness of the new mechanism and undermine the goal of reducing global emissions.

Our view: There are strong arguments from both sides which cover ambition, credibility, price signals, legal basis, fairness, time limits, transfer limits. If the text is precisely and accurately worded, then they could be a catalyst or a starting point for a consistent global carbon pricing mechanism. We think this Article 6.4 mechanism will be an extremely difficult issue to resolve because there is almost no middle ground – the conditions laid out by both sides are seemingly incompatible.

Overall Mitigation of Global Emissions (OMGE) – Article 6.4(d) requires that the ‘mechanism’ “deliver an overall mitigation in global emissions”. The term has since been applied (by some) to other parts of the Paris Agreement as a means to ensure integrity. It broadly refers to the absolute reduction of emissions reaching or in the atmosphere on a global basis. What it means in practice is that reductions in emissions in one location are truly additional and should not result in an increase in emissions at another location. Some interpretations of OMGE restrict its use to NDCs or mechanism credits – but these applications and definitions have not yet been agreed.

Options being discussed to implement OMGE include the cancellation of a certain portion of ‘emission reductions’ (carbon credits) at issuance or making corresponding adjustments to host or acquiring carbon accounts. However, these inevitably bring further questions of reporting, responsibility, aggregation, baselines, supervision etc. – with a view to being a relevant input into the global stocktake. We think OMGE will grow in visibility and relevance as it is fleshed out at COP26 and (possibly) applied to other issues.

Article 6.8 – Non-market approaches

The task, in one line, is to figure out a “framework for non-market approaches”.

Non-market approaches (NMA) refers to mitigation outcomes (i.e. emissions reduction strategies) that do not result directly in a carbon credit but are generally considered to be good for enhancing carbon or energy efficiency etc. (e.g. removal of fossil fuel subsidies, procurement practices, trade arrangements). This part is designed to ensure that Parties have a full plethora of options with which to implement their NDCs and ensure mitigation, adaptation and support, in a way that is beneficial to other aspects of sustainable development e.g. poverty eradication etc.

Figure 7: The aims of ‘Non-market approaches’

| a) Promote mitigation and adaptation ambition |
| b) Enhance public and private sector participation to implement NDCs |
| c) Coordination across instruments and institutional arrangements |

Source: HSBC (based on UNFCCC)

However, frameworks can be simple or complex depending on whether Parties emphasise the participation aspects or the supervision aspects. One of the main aims of the framework includes assisting the implementation of other Parties’ NDCs and recognising that various activities such as forest or coastal management are beneficial to overall mitigation and adaptation.
Our view: We think the discussions are likely to centre on whether or not there should be strict definitions of NMAs, the governance aspects (i.e. an implementation task force or a permanent governance body) and how NMAs would be recorded / registered.

Permanence refers to whether emission reductions last or are at risk of reversal. Any risk of a reversal in emission reductions would undermine mitigation efforts and effectively render the price paid for a reduction credit as useless since the global warming effect (i.e. radiative forcing) of GHGs lasts for years. For example, what happens to the emission reduction credits generated by a forest if it is burned down by a wildfire? Article 6 will need to include provisions which cover the risk of non-permanence or reversal.

**Common time frames (for NDCs)**

The task, in one line, is to decide on the duration and starting points of NDCs.

The issue of common time frames for NDCs is half finished. It was agreed at COP24 that NDCs implemented from 2031 onwards should apply “common time frames” – referring to the period **NDCs should cover** – however, the actual period of duration was not agreed. Common time frames are an ongoing point of contention because it has strong repercussions for ambition levels. Nonetheless they are important because:

- The pre-2020 period (see below) has demonstrated the inadequacy of implementation, action and ambition.
- The UN synthesis report from February which aggregated updated pledges received until then showed that there had been a mere 2.8% improvement in emissions reductions.
- Common time frames make for easier aggregation and assessment of global ambition levels as well as alignment to the global stocktake which starts in 2023 (and then every five years thereafter).

**Multiples of 5**: There are currently many options on the table, including: 5 years, 10 years, 5+5 years, or 10 years with “an indicative waypoint at” 5 years, and all with varying starting points. We think the final outcome will allow for some flexibility of duration and starting point.

**Split seconds**: The timing matters because longer time frames give Parties a better chance of implementing policies and hitting targets, but there are fewer opportunities to formally lift targets (if ambition and progress are shown to be lacking). On the other hand, shorter time frames are politically challenging to implement but can technically be revised (upwards) more frequently.

**Our view**: At the last set of negotiations, the re-emergence of bifurcation was apparent – that is different options for developed versus developing parties. In our opinion, although there should be some flexibility so as not to burden some (especially developing) Parties unduly, too much bifurcation such as separate time frames for all the key components (mitigation, adaptation, finance, technology transfer and capacity building etc.) would make it difficult to aggregate, as well as dilute overall ambition levels.

**What does “pre-2020” mean?** Many climate pledges cover the 2020-30 period. There was concern that the years before 2020 (known as “pre-2020”) would be a lull period where not much real action happened. More vulnerable Parties were especially worried by this because the science has consistently found that action sooner would be more effective and cost less than actions later. Various segments of the global climate debate began to focus on action and implementation “pre-2020”. The 31 December 2020 marked the official end of the “pre-2020” period. However, the pandemic delays and distractions effectively brushed aside remnants of “pre-2020”. We are now firmly in the ‘2020-30’ period where urgency is the priority.
Reporting formats

The task, in one line, is to decide exactly how ‘regular climate information’ will be reported.

Given the importance of transparency, there is a lot of debate over exactly how certain information should be tracked, disclosed and displayed. For example, should it be submitted electronically which would make it easy to collate, however once uploaded, how should it be presented online for ease of comparison and aggregation.

Presently, a lot of reported climate information is in a very general format i.e. there is little consistency on what and how information is submitted. The discussions at COP26 will try to reach further agreement on:

- **Common reporting tables** - which types of information should be tracked and subject to common reporting;
- **Common tabular formats** – exactly what information will be reported and how

The reporting issue cuts across multiple elements such as NDCs, finance, technology transfer, capacity building.

**Our view**: The task is complex because the more information is asked for, the greater the burden of collection and presentation as well as disclosure (i.e. being transparent). Taking the Common tabular formats of NDCs as an example, is there a “one size fits all” approach that can capture the most important information from NDCs? At present, NDCs are a mix of mitigation and adaptation, quantitative and qualitative information, and a vast array of country-specific information. Some Parties will want a lot more information to be included whereas other Parties will want a lot less information to be included (because they don’t collect it or don’t want to disclose it).

Finance – ever the sticking point, a big deal (or no deal) at COP26

Finance is a key part of all climate negotiations. Although it has the potential to act as an enabler that can smooth out discussions and drive compromise, it can also be so contentious that it becomes a sticking point.

Finance goals broadly have two phases:

- **An agreement to provide USD100bn by 2020 and through 2025 (from developed to developing)**
- **A potentially new collective goal** for the future i.e. from 2025/26 (for all Parties)

**Financial promises**: The issue of finance is complicated because some Parties feel that they cannot commit to future promises (i.e. greater emissions reductions after 2020) if other Parties have not kept historical promises (i.e. 2020 emissions reductions and finance). It is worth noting that the UN climate process has never even agreed on a common definition for climate finance, which means there is a lot of wriggle room for both providers and receivers.

**Biennial Communication**: Developing Parties (which were supposed to receive) asked for a status report on whether the USD100bn goal by 2020 was achieved; however, developed Parties (which were supposed to provide) were reluctant to provide this. Article 9.5 of the Paris Agreement does require developed Parties to provide an update (synthesis) every two years – one such update is due at COP26.

In the draft of such a report from June 2021, only a handful of Parties contributed by submitting a formal ‘biennial finance communication’. It is the task of negotiators at COP26 to agree on the final wording of this document. It should cover a variety of finance related matters (Figure 8).
A new goal beyond 2025: Running along in the background is an ongoing process of setting a new collective global finance goal, which should be finalised “prior to 2025”. Discussions around the process and timeline of setting this goal have been fraught because the USD100bn by 2020 has never really been met. The dates for agreeing how the process will even work made it to previous draft decisions but were left out of the final text. The amount for the new goal would be “from a floor of USD100bn per year” but the process to consider setting this goal will begin at COP26. Given the contention surrounding financial issues, we do not expect substantial progress to be made at COP26 on setting the post-2025 finance goal.

Loss and damage: The issue of finance is also closely related to ‘loss and damage’ – the concept that vulnerable Parties that have suffered (or will suffer) from the impacts of climate change should be compensated or assisted (financially or otherwise) by those deemed to be more responsible for climate change, i.e. developed Parties. The review of the system that deals with this issue (known as the Warsaw International Mechanism for Loss and Damage or WIM) has not really made much progress in recent negotiations because of entrenched positions on finance. We believe finance will continue to be a stumbling block for WIM-related ‘Loss and Damage’ negotiations at COP26 because the impacts have become much clearer (through recent events as well as the IPCC’s most recent report on climate science).

Adaptation

Parity: The issue of resilience and impacts broadly reached parity with mitigation in the 2018 discussion (COP24), however this sentiment has been less apparent since then. Adaptation remains a vital issue and especially championed by more vulnerable economies such as small islands or least developed countries.

Threads: There are a number of different threads through which adaptation weaves. For example, adaptation in climate pledges (NDCs) and other forms of Adaptation Communications, National Adaptation Plans (NAPs), a Global Goal on Adaptation, and the various vehicles through which funds are dispersed etc. Much of this is overseen by an Adaptation Committee.

An Adaptation Committee Report (which essentially reviews recent adaptation work and makes recommendations for future work) was supposed to have been adopted in 2019 in Madrid (COP25), but Parties could not agree on the wording – and so this report will remain outstanding at COP26.
What’s the overall goal for adaptation? The sticky issue of agreeing a global goal on adaptation (GGA) will also be on the agenda at COP26. Firstly, there needs to be agreement on the actual definition of a global goal on adaptation, and thereafter, all the usual guidance on how information is to be tracked, reporting, monitoring, governance etc. These are required not just to assess the progress towards a GGA (i.e. similar to progress towards 1.5°C or 2°C), but also how to mobilise greater adaptation actions. This is tricky in our view because adaptation actions tend to be very localised to regional circumstances.

Common threads of implementation

Means of implementation: Three common issues that will thread through most other issues are: capacity building, technology, finance. These are collectively known as means of implementation (MOI) and can apply to support or action. It describes how the various mitigation and adaptation actions as well as the associated reporting and communication requirements will be implemented. It is an important issue because Parties agree that these should not place too much additional burden on poorer countries.

These MOI, especially for support, will be apparent throughout the discussions as they touch almost all areas, including NDCs. One specific area of discussion at COP26 is the reporting of these MOI, and what form the related Common tabular formats should take. There are multiple views on how detailed or otherwise these could/should be.

Transparency is another key thread that covers many climate issues such as GHG inventories, NDCs, accounting and procedures, registries, etc. It is important because of its ability to build trust between Parties. Increased transparency is often used as a negotiation tool i.e. we will be more transparent if you provide more finance. Parties that are doing well on actions or support tend to agree to more transparency, whereas those not doing so well are less keen on transparency. Article 13 of the Paris Agreement specifically refers to a Transparency Framework which covers both action and support. COP26 should make some headway on the scope of the biennial transparency report.

Other issues to be discussed

The above issues are likely to be the most contentious in our view, however, there are many other issues that will be discussed in Glasgow. Some are procedural; some are operational; others are administrative; a few are aspirational.

Review of the long-term goal (under the Convention): The review began in 2020 and was due to conclude in 2022; it is to be based on the best available science and examine:

- Various scenarios in achieving goals and objectives;
- Knowledge gaps;
- Challenges and opportunities; and
- An assessment of the overall aggregate progress towards the goal.

The review will continue at COP26 but not be concluded until a later date so as to incorporate the findings of the IPCC’s subsequent science reports due for publication early next year.

Global Stocktake (GST). To assess the progress towards the Paris Agreement’s purposes and goals – specifically in mitigation, adaptation and means of implementation (MOI) – a global stocktake will take place very five years:
Information collection will start a year before the consideration of outputs – a non-exhaustive list of sources of inputs has initially been agreed, but there are concerns that this could result in too large a volume of inputs, hence trimming may be required.

The Technical Assessment will be a focused exchange of views, roundtables and workshops – but details such as the format, invitees, observers etc. not yet decided.

Consideration of outputs of the GST will consist of events to discuss the findings and implications – but any resulting actions are likely to be heavily debated in our view.

And many other issues. There will also be discussions on agriculture (its role in mitigation and adaptation), indigenous communities (their knowledge as well as rights), gender (to ensure inclusivity and balanced outcomes), GHG accounting, international bunkers (aviation and shipping), and more.

The return of science – ‘welcome’ again

There was some contention surrounding climate science at the previous two climate meetings as scientific reports were “noted” rather than “welcomed”. This was an important point because these science reports, coupled with the real impacts of climatic events, have catalysed public opinion, which has led to further adoption of more ambitious climate targets. Not “welcoming” was seen as a snub to urgency because stronger wording means they would have to ‘do more’ when it comes to climate action and response. We believe that science will be Welcome again at COP26 and that the IPCC science reports will give a sense of urgency to the discussion and the required actions.

Figure 9: Twelve key findings from the IPCC’s Physical Science Basis report

<table>
<thead>
<tr>
<th>Twelve key findings from the IPCC’s AR6 WG1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The human influence on the climate can now be better attributed</td>
</tr>
<tr>
<td>2. Atmospheric concentrations of GHGs are really high</td>
</tr>
<tr>
<td>3. Temperatures are rising 1.4-1.7x faster on land than oceans</td>
</tr>
<tr>
<td>4. Precipitation will become more frequent and more intensive</td>
</tr>
<tr>
<td>5. Sea levels are rising faster than before</td>
</tr>
<tr>
<td>6. Climate sensitivity is “near-linear”</td>
</tr>
</tbody>
</table>

Some issues will be more prominent than others

Science will be relied upon to drive urgency

COP26 will discuss various layers of climate ambition

From science to urgency and ambition

With the science crystal clear, there is a renewed sense of urgency – however, converting this urgency to ambition is another matter.

Raising climate ambition: This essentially means formally pledging to stricter climate targets i.e. greater emissions reductions over a specific time frame. There will be two aspects to this:

- **2030 targets** (NDCs); and
- **Long-term mid-century** (i.e. 2050) targets.
Nationally Determined Contributions (NDCs): The Paris Agreement requests that parties submit new or updated NDCs in 2020. In theory, these are only supposed to involve “upward revision” i.e. be more ambitious than previous communications. Although many Parties have submitted updated NDCs, not all of them show an improvement. The UN will release another synthesis report before COP26, showing the aggregate improvement of updated NDCs. However, by 31 July 2021 (the cut-off date for inclusion into the synthesis report), only around 110 Parties had submitted an update. For reference, the previous UN synthesis report from February found only a 2.8% improvement in emissions reductions (from 75 Parties).

The Figure below shows the status of NDC revisions (as of 31 August 2021). Some 116 have been revised, but 38 of these show virtually no change whatsoever. Even those that have been enhanced or improved, the emissions savings are nowhere near the reductions required by science.

Figure 10: The status of NDC updates highlight the challenges of raising ambition

Note: As of 31 August 2021. For the 196 parties that have submitted an NDC at least once. Some Parties have proposed stronger targets but have not formally submitted them hence we did not include them here.

Many long-term strategies now embrace net zero

Long-term, mid-century strategies – and the rise of net zero

Parties to the Paris Agreement were also invited to communicate mid-century, long-term low GHG emission development strategies by 2020. Following the IPCC’s Special Report on 1.5°C from 2018, many long-term strategies have moved towards becoming carbon neutral or achieving net zero emissions by 2050. There is growing pressure on all Parties for the long-term target to be net zero. The UNFCCC has set up a Race to Zero Campaign to mobilise Parties but also non-state actors (cities, regions, businesses, etc.) to commit to achieving net zero emissions by mid-century. Currently, there are around 58 countries, 34 states, 84 cities and 402 companies have made some form of commitment to net zero (according to The Energy & Climate Intelligence Unit and Oxford Net Zero, 2021).

Major emitters are announcing net zero goals. For instance, six of the top ten largest GHG-emitting countries in the world (China, US, Brazil, Japan, Germany and Canada) have publicly announced net-zero goals (although this does not equate to a formal submission to the UNFCCC).

♦ China aims to attain net-zero emissions by 2060 but without any further details. The main focus of the country should be a moving away from coal-based power generation.

♦ The United States has committed to a cut on GHG emission by 50-52% by 2030 and attaining net-zero emissions by 2050.

♦ The European Union is aiming for climate neutrality by 2050. It has released its climate work plan “Fit for 55” in July 2021.
The UK has a new 2030 target of 68% as well as actions on how net zero could be achieved.

Japan announced a pledge to attain net zero emissions by FY2050 and formulated a green growth strategy. The plan states a medium-term GHG reduction target by FY2030.

Canada announced to enhance its emission reduction target by 40-45% below 2005 levels by 2030 to reach net zero emissions by 2050, in April 2021.

Brazil pledged to reach climate neutrality by 2050 with an emission reduction target of 43% by 2030 from 2005 level.

Other major emitters will feel increasing pressure to join the race to net zero.

Figure 11: The net zero progress of the world’s largest economies and emitters

...as policy and politics often to get in the way

Source: HSBC, WRI CAIT (GHG emission in 2018)
Understanding COPs

**Usually:** There is a lot going on at COPs. There are (usually) tens of thousands of delegates representing countries, regions, companies, investors as well as civil society and other organisations striving to make their voices heard; there are multiple work streams convened under various official bodies; there are a myriad of official and unofficial documents which change on a daily basis; there are also a whole host of side and affiliated events that happen during the COP fortnight.

**Unusually:** However, 2021 will be a little different because of the COVID-19 pandemic. Although the UK insists that the meetings will happen in person, this cannot be guaranteed as the pandemic ensues. Not all delegates will have access to vaccinations which makes travel complicated. Delegations are likely to be smaller than usual. At the time of writing, we anticipate a mostly in-person event but with some parts allowing virtual participation.

Many side events will likely be scaled down this year. We note that the inter-sessional negotiations (31 May–17 June 2021) were all virtual and very little progress was made. We highlight some of the key salient features to be aware of at COP meetings.

**Parties involved**
The UN Framework Convention on Climate Change (UNFCCC) was adopted in 1992 at the Rio Earth Summit and entered into force in 1994. The main aim of the convention is the "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."

This is implemented through different sub-agreements such as the Kyoto Protocol (adopted 1997, in force 2005) and the Paris Agreement (adopted 2015, in force 2016). However, UNFCCC Parties are not automatically bound by sub-agreements. Each of these has to be ratified by individual Parties.

**Official UN bodies involved**
The discussions are organized into different work streams, assigned to different UNFCCC bodies. Many delegates, representing different groups and interests will attend (in person or virtually) COP26. Many will be a part of various (even multiple) bodies or observers to these.

**Key Bodies under the UNFCCC**

**Conference of Parties (COP)** is an annual meeting of the 197 Parties to the UNFCCC. Its purpose is to implement the aims of the convention i.e. stabilization of GHGs at safe levels. This will be the 26th Conference of Parties (COP26).

**Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA):** All Parties which have formally ratified the Paris Agreement form the CMA, Parties yet to ratify participate as observers. There are currently 191 Parties to the Paris Agreement. The CMA oversees the implementation of the Paris Agreement and takes decisions to promote its effective implementation. It is convened alongside the COP and this will be the third session of the body (CMA3).

**Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP):** All Parties that have ratified the Kyoto Protocol form the CMP. There are currently 192 Parties to the Kyoto Protocol. The CMP oversees the implementation of the Kyoto Protocol and takes decisions to promote its effective implementation. It is convened alongside the COP and this will be the sixteenth session of the body (CMP16).
**Subsidiary Body for Implementation (SBI):** The SBI supports the work of the COP, the CMP and the CMA through the assessment and review of the effective implementation of the Convention, its Kyoto Protocol and the Paris Agreement. This will be the 55th session of the body (SBI55).

**Subsidiary Body for Scientific and Technological Advice (SBSTA):** The SBSTA supports the work of the COP, the CMP and the CMA through the provision of timely information and advice on scientific and technological matters as they relate to the Convention, its Kyoto Protocol and the Paris Agreement. This will be the 55th session of the body (SBSTA55).

**Other important groups**
Countries often club together into groups for logistical reasons as well as strength in numbers. For example, smaller countries may lack the resources to send delegates to every work stream and discussion. A banding together on specific or similar issues is often more efficient because there is already a consensus to build upon and it strengthens their individual position.

**Key negotiating groups in the climate process**

1. **The Association of Small Island States (AOSIS):** Small Island and low-lying coastal countries e.g. Haiti, Kiribati, Palau, Nauru, Samoa, Suriname and Vanuatu. (44 coalition members)
   
   **View:** Adaptation is a key issue, especially financial support for adaptation by larger countries since AOSIS members are often the most vulnerable to climate impacts such as sea level rises.

2. **Group of 77 and China (G77 & China):** Originally a group of 77 developing countries, membership has expanded to 134 as other countries have joined but others have left as they became more developed. China is not an official member but joins the G77 on climate issues. The Republic of Guinea is the current chair of the G77 and China group.
   
   **View:** Seeks balance on key issues (mitigation, adaptation, transparency) but often with an element of differentiation between developed and developing economies.

3. **Like Minded Developing Countries (LMDCs):** A group of larger developing countries e.g. Bangladesh, China, India, Malaysia, Nicaragua, Saudi Arabia and Venezuela
   
   **View:** Believes developed or more industrialised nations could do more since they are responsible for majority of historic emissions, but developing nations should also play their part.

4. **The Small Island Developing States (SIDS):** Similar to AOSIS but includes some territories which are not UN member states in their own right (with some overlap) e.g. Cabo Verde, Maldives, Timor-Leste but also Aruba, Curacao, Guadeloupe and Montserrat. (58 members)
   
   **View:** Believes much more prominence needs to be given to adaptation since SIDS members are very vulnerable to climate impacts such as rising sea-levels and more severe storms.

**Other groupings:** There are others that may club together depending on the issues. Independent Association of Latin America and the Caribbean (AILAC); Bolivarian Alliance for the Peoples of Our America (ALBA); High Ambition Coalition (HAC).

**Climate pledges**
In the run up to the adoption of the Paris Agreement in 2015 (COP 21), parties were invited to present their contribution – a climate pledge – towards the global efforts to combat climate change. These were initially known as ‘Intended Nationally Determined Contributions’ (INDCs) and became simply ‘Nationally Determined Contributions’ or NDCs (i.e. without the ‘intended) after Parties ratified the Agreement.

**Signatories, Ratification (and Withdrawal)**

**Sign:** A Party to the UNFCCC signing the Paris Agreement indicates its intention to be bound by the Agreement at a later date, subject to ratification, acceptance or approval. All 197 Parties are signatories to the Agreement (195 signatories plus Syria and Nicaragua directly ratifying).
There are only six Parties which have not yet ratified the Paris Agreement

A Party is only allowed to vote on decisions aligned with Bodies they have legally ratified to become a part of.

Ratify: A Party becomes legally bound by the Agreement only once it deposits an instrument of ratification, acceptance or approval (which all carry the same legal effect). Parties that have ratified are legally bound by the Agreement and are allowed to take decisions with respect to the Agreement. Parties which have not yet ratified are only allowed to participate as observers in official meetings.

191 Parties have ratified, with South Sudan (23 February 2021) the latest ratification. There are only six Parties which have not yet ratified: Eritrea, Iran, Iraq, Libya, Turkey and Yemen.

Article 28 of the Agreement allows for a Party’s withdrawal, essentially four years after it has entered into force (for that Party). In June 2017, the US announced its intention to do so and then formally exited on 4 November 2020. However, following the change in administration, it re-joined on the day of President Biden’s inauguration and formally became a Party to the Agreement again on 19 February 2021 (an absence of 107 days). We do not expect any other Parties to withdraw from the Agreement.

We do not expect any other Parties to withdraw from the Agreement.
The state of the climate

Figure 13: Global historical annual greenhouse gas emissions (1854-2018)

Global emissions have been growing roughly 2% per year.

To achieve 1.5°C, Global GHG emissions should fall by 7.6% each year between 2020 and 2030.

Source: PRIMAP Dataset

Figure 14: Atmospheric concentrations of carbon dioxide (CO₂)

The 1960s average was around 320 ppm.

Each month in 2016 to mid-2021 has been above 400 ppm.

Source: Earth System Research Laboratory (NOAA). Note: This is the highest that atmospheric CO₂ concentrations have been for at least 800,000 years.

Figure 15: Global land-ocean temperature anomalies (1950-2020)

15 warmest years on record have occurred in the 21st Century.

Source: NASA; NOAA. Note: Base year: 1951-80; El Niño data starts from the year 1950.
Disclosure appendix

Analyst Certification
The following analyst(s), economist(s), or strategist(s) who is(are) primarily responsible for this report, including any analyst(s) whose name(s) appear(s) as author of an individual section or sections of the report and any analyst(s) named as the covering analyst(s) of a subsidiary company in a sum-of-the-parts valuation certifies(y) that the opinion(s) on the subject security(ies) or issuer(s), any views or forecasts expressed in the section(s) of which such individual(s) is(are) named as author(s), and any other views or forecasts expressed herein, including any views expressed on the back page of the research report, accurately reflect their personal view(s) and that no part of their compensation was, is or will be directly or indirectly related to the specific recommendation(s) or views contained in this research report: Wai-Shin Chan, CFA, Polo Heung, Tarek Soliman, CFA, and Lucy Acton, CFA

Important disclosures
Equities: Stock ratings and basis for financial analysis
HSBC and its affiliates, including the issuer of this report (“HSBC”) believes an investor's decision to buy or sell a stock should depend on individual circumstances such as the investor's existing holdings, risk tolerance and other considerations and that investors utilise various disciplines and investment horizons when making investment decisions. Ratings should not be used or relied on in isolation as investment advice. Different securities firms use a variety of ratings terms as well as different rating systems to describe their recommendations and therefore investors should carefully read the definitions of the ratings used in each research report. Further, investors should carefully read the entire research report and not infer its contents from the rating because research reports contain more complete information concerning the analysts’ views and the basis for the rating.

From 23rd March 2015 HSBC has assigned ratings on the following basis:
The target price is based on the analyst’s assessment of the stock’s actual current value, although we expect it to take six to 12 months for the market price to reflect this. When the target price is more than 20% above the current share price, the stock will be classified as a Buy; when it is between 5% and 20% above the current share price, the stock may be classified as a Buy or a Hold; when it is between 5% below and 5% above the current share price, the stock will be classified as a Hold; when it is between 5% and 20% below the current share price, the stock may be classified as a Hold or a Reduce; and when it is more than 20% below the current share price, the stock will be classified as a Reduce.

Our ratings are re-calibrated against these bands at the time of any 'material change' (initiation or resumption of coverage, change in target price or estimates).

Upside/Downside is the percentage difference between the target price and the share price.

Prior to this date, HSBC’s rating structure was applied on the following basis:
For each stock we set a required rate of return calculated from the cost of equity for that stock’s domestic or, as appropriate, regional market established by our strategy team. The target price for a stock represented the value the analyst expected the stock to reach over our performance horizon. The performance horizon was 12 months. For a stock to be classified as Overweight, the potential return, which equals the percentage difference between the current share price and the target price, including the forecast dividend yield when indicated, had to exceed the required return by at least 5 percentage points over the succeeding 12 months (or 10 percentage points for a stock classified as Volatile*). For a stock to be classified as Underweight, the stock was expected to underperform its required return by at least 5 percentage points over the succeeding 12 months (or 10 percentage points for a stock classified as Volatile*). Stocks between these bands were classified as Neutral.

*A stock was classified as volatile if its historical volatility had exceeded 40%, if the stock had been listed for less than 12 months (unless it was in an industry or sector where volatility is low) or if the analyst expected significant volatility. However, stocks which we did not consider volatile may in fact also have behaved in such a way. Historical volatility was defined as the past month's average of the daily 365-day moving average volatilities. In order to avoid misleadingly frequent changes in rating, however, volatility had to move 2.5 percentage points past the 40% benchmark in either direction for a stock’s status to change.
Rating distribution for long-term investment opportunities

As of 02 September 2021, the distribution of all independent ratings published by HSBC is as follows:

- **Buy**: 59%  (31% of these provided with Investment Banking Services)
- **Hold**: 33%  (29% of these provided with Investment Banking Services)
- **Sell**: 7%  (28% of these provided with Investment Banking Services)

For the purposes of the distribution above the following mapping structure is used during the transition from the previous to current rating models: under our previous model, Overweight = Buy, Neutral = Hold and Underweight = Sell; under our current model Buy = Buy, Hold = Hold and Reduce = Sell. For rating definitions under both models, please see “Stock ratings and basis for financial analysis” above.


To view a list of all the independent fundamental ratings disseminated by HSBC during the preceding 12-month period, please use the following links to access the disclosure page:

- Clients of Global Research and Global Banking and Markets: www.research.hsbc.com/A/Disclosures
- Clients of HSBC Private Banking: www.research.privatebank.hsbc.com/Disclosures

HSBC and its affiliates will from time to time sell to and buy from customers the securities/instruments, both equity and debt (including derivatives) of companies covered in HSBC Research on a principal or agency basis or act as a market maker or liquidity provider in the securities/instruments mentioned in this report.

Analysts, economists, and strategists are paid in part by reference to the profitability of HSBC which includes investment banking, sales & trading, and principal trading revenues.

Whether, or in what time frame, an update of this analysis will be published is not determined in advance.

Non-U.S. analysts may not be associated persons of HSBC Securities (USA) Inc, and therefore may not be subject to FINRA Rule 2241 or FINRA Rule 2242 restrictions on communications with the subject company, public appearances and trading securities held by the analysts.

Economic sanctions imposed by the EU, the UK, the USA and certain other jurisdictions generally prohibit transacting or dealing in any debt or equity issued by Russian SSI entities on or after 16 July 2014 (Restricted SSI Securities). Economic sanctions imposed by the USA also generally prohibit US persons from purchasing or selling publicly traded securities issued by companies designated by the US Government as “Chinese Military-Industrial Complex Companies” (CMICs) or any publicly traded securities that are derivative of, or designed to provide investment exposure to, the targeted CMIC securities (collectively, Restricted CMIC Securities). This report does not constitute advice in relation to any Restricted SSI Securities or Restricted CMIC Securities, and as such, this report should not be construed as an inducement to transact in any Restricted SSI Securities or Restricted CMIC Securities.

For disclosures in respect of any company mentioned in this report, please see the most recently published report on that company available at www.hsbcnet.com/research. HSBC Private Banking clients should contact their Relationship Manager for queries regarding other research reports. In order to find out more about the proprietary models used to produce this report, please contact the authoring analyst.
Additional disclosures

1. This report is dated as at 07 September 2021.

2. All market data included in this report are dated as at close 01 September 2021, unless a different date and/or a specific time of day is indicated in the report.

3. HSBC has procedures in place to identify and manage any potential conflicts of interest that arise in connection with its Research business. HSBC's analysts and its other staff who are involved in the preparation and dissemination of Research operate and have a management reporting line independent of HSBC's Investment Banking business. Information Barrier procedures are in place between the Investment Banking, Principal Trading, and Research businesses to ensure that any confidential and/or price sensitive information is handled in an appropriate manner.

4. You are not permitted to use, for reference, any data in this document for the purpose of (i) determining the interest payable, or other sums due, under loan agreements or under other financial contracts or instruments, (ii) determining the price at which a financial instrument may be bought or sold or traded or redeemed, or the value of a financial instrument, and/or (iii) measuring the performance of a financial instrument or of an investment fund.
Disclaimer

Legal entities as at 1 December 2020


The Hongkong and Shanghai Banking Corporation Limited (“HSBC”) has issued this research material. The Hongkong and Shanghai Banking Corporation Limited is regulated by the Hong Kong Monetary Authority and is a member of the Securities and Futures Council of Hong Kong, Hong Kong Securities and Futures Commission. This publication is distributed by HSBC Bank plc on the terms of the publication. HSBC makes no guarantee, representation or warranty and accepts no responsibility in respect of any matters arising from, or in connection with this report. Please refer to The Hongkong and Shanghai Banking Corporation Limited Singapore Branch’s website at www.research.hsbc.com.sg for contact details. HSBC México, S.A., Institución de Banca Múltiple, Grupo Financiero HSBC is authorized and regulated by Secretaría de Hacienda y Crédito Público and Comisión Nacional Bancaria y de Valores (CNBV).

In this document, has been distributed by HSBC Securities (Japan) Limited. HSBC Securities (USA) Inc. accepts responsibility for the contents of this research report prepared by its non-US foreign affiliate. The information contained herein is used in no circumstances to be construed as investment advice and is not tailored to the needs of the recipient. All US persons receiving and/or accessing this report and intending to effect transactions in any security discussed herein should do so with HSBC Securities (USA) Inc. in the United States and not with its non-US foreign affiliate, the issuer of this report. In Korea, this publication is distributed by either The Hongkong and Shanghai Banking Corporation Limited, Seoul Branch (“HBAP SEL”) or The Hongkong and Shanghai Banking Corporation Limited, Seoul Branch (“HBAP SEL”) for the general information of professional investors specified in Article 9 of the Financial Investment Services and Capital Markets Act (“FSCMA”). This publication is not a prospectus as defined in the FSCMA. It may not be further distributed in whole or in part for any purpose. Both HBAP SEL and HBAP SLS are regulated by the Financial Supervisory Commission of Korea. In Singapore, this publication is distributed by The Hongkong and Shanghai Banking Corporation Limited, Singapore Branch for the general information of institutional investors or other persons specified in Sections 274 and 304 of the Securities and Futures Act (Chapter 289) (“SFA”) and accredited investors and other persons in accordance with the conditions specified in Sections 275 and 305 of the SFA. Only Economists or Currencies reports are intended for distribution to a person who is not an Accredited Investor. Expert Investor or Institutional Investor as defined in SFA. The Hong Kong and Shanghai Banking Corporation Limited, Singapore Branch accepts legal responsibility for the contents of reports pursuant to Regulation 32C(1)(d) of the Financial Advisers Regulations. This publication is not a prospectus as defined in the SFA. This publication is not a prospectus as defined in the SFA. If it may not be further distributed in whole or in part for any purpose. The Hongkong and Shanghai Banking Corporation Limited Singapore Branch is regulated by the Monetary Authority of Singapore. Recipients in Singapore should contact a “Hongkong and Shanghai Banking Corporation Limited, Singapore Branch” representative in respect of any matters arising from, or in connection with this report. Please refer to The Hongkong and Shanghai Banking Corporation Limited Singapore Branch’s website at www.business.hsbc.com.sg for contact details. HSBC Mexico, S.A., Institución de Banca Múltiple, Grupo Financiero HSBC is authorized and regulated by Secretaría de Hacienda y Crédito Público and Comisión Nacional Bancaria y de Valores (CNBV).

In this document, has been distributed by HSBC Securities (Canada) Inc. (member IIROC), and/or its affiliates. The information contained herein is used in no circumstances to be construed as investment advice in any province or territory of Canada and is not tailored to the needs of the recipient. No securities commission or similar regulatory authority in Canada has reviewed or in any way passed judgment upon these materials, the information contained herein or the merits of the securities described herein, and any representation to the contrary is an offense. In Brazil, this document has been distributed by Banco HSBC S.A. (“HSBC Brazil”), and/or its affiliates. As required by Instruction No. 598/18 of the Securities and Exchange Commission of Brazil (Comissão de Valores Mobiliários), potential conflicts of interest concerning (i) HSBC Brazil and/or its affiliates; and (ii) the analyst(s) responsible for authoring this report are stated on the chart above labeled “HSBC A Analyst Disclosures”. Any recommendations contained in it are intended for the professional investors to whom it is distributed. This material is not and should not be construed as an offer to purchase or subscribe for any investment. HSBC has based this document on information obtained from sources it believes to be reliable but which has not independently verified; HSBC makes no guarantee, representation or warranty and accepts no responsibility or liability as to its accuracy or completeness. Expressions of opinion are those of HSBC only and are subject to change without notice. From time to time research analysts conduct site visits of covered issuers. HSBC policies prohibit research analysts from accepting payment or reimbursement for travel expenses from the issuer for such visits. The decision and responsibility on whether or not to invest must be taken by the reader. HSBC and its affiliates and/or their officers, directors and employees may have positions in any securities mentioned in this document (or in any related investment) and may from time to time add to or dispose of any such securities (or investment). HSBC and its affiliates may act as market maker or have assumed an underlying commitment in the securities of any companies discussed in this document (or in related investments). may sell them to or buy them from customers on a principal basis and may also perform or seek to perform banking or underwriting services for or relating to those companies. This material may not be further distributed in whole or in part for any purpose. No consideration has been given to the particular investment objectives, financial situation or particular needs of any recipient. (07/0905)

If you are an HSBC Private Banking (“PB”) customer with approval for receipt of relevant research publications by an applicable HSBC legal entity, you are eligible to receive this publication. To be eligible to receive such publications, you must have agreed to the applicable HSBC entity’s terms and conditions for accessing research and the terms and conditions of any other internet banking service offered by that HSBC entity through which you will access research publications ("the Terms"). Distribution of this publication is the sole responsibility of the HSBC entity with whom you have agreed the Terms. If you do not meet the aforementioned eligibility requirements please disregard this publication and, if you are a customer of PB, please notify your Relationship Manager. Receipt of research publications is strictly subject to the Terms and any other conditions or disclaimers applicable to the provision of the publications that may be advised by PB. © Copyright 2021, The Hongkong and Shanghai Banking Corporation Limited, ALL RIGHTS RESERVED. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, on any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of The Hongkong and Shanghai Banking Corporation Limited. MCI (P) 028/02/2021, MCI (P) 007/10/2020

Issuer of report

The Hongkong and Shanghai Banking Corporation Limited

Level 19, 1 Queen’s Road Central
Hong Kong SAR

Telephone: +852 2843 9111
Fax: +852 2801 4198
Website: www.research.hsbc.com

[1177753]