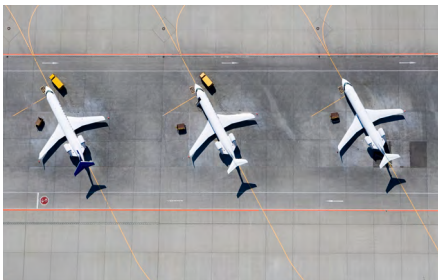


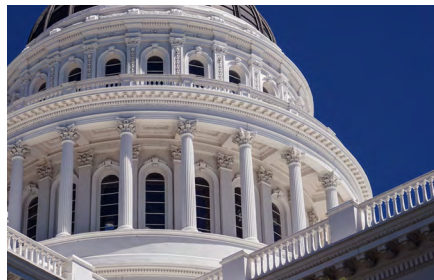
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The Energy Transition ↘



**Infrastructure As An
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The U.S. Election ↘



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Editorial Welcome: Will the next decade deliver a supercycle of infrastructure and green investments?

Karl Nietvelt, Global Head of Research, Infrastructure Ratings

S&P Global Ratings continues to assess the economic and credit effects of the coronavirus pandemic around the world. Our research, insights and ratings actions can be found on our dedicated website.

Visit our Infrastructure Hub

www.spratings.com/infrastructure

The COVID-19 pandemic is one of the most severe economic and energy shocks in modern history. On top of the massive disruptions to business, mobility, and everyday life, there clearly will be longer-lasting implications on people’s behavior, regionalization over globalization and the energy transition away from fossil fuels. To overcome this crisis, we expect governments will turn to infrastructure investment – something that has been long-anticipated given both Europe and the U.S. have experienced a 10-year investment gap that has seen infrastructure spending down to 1.5.% or less of GDP.

In this second edition of the Infrastructure Finance Outlook, we zoom in on the energy transition and ESG, and how the COVID-19 pandemic has accelerated both.

For the first time, the environmental ‘stars’ may be aligned between Europe, the U.S. and China. The U.S. presidential election is clearly a catalyst, with President-elect Joe Biden saying he will rejoin the Paris Agreement, the international climate accord, on day one. He also plans to hold a climate world summit in his first 100 days to promote global collaboration in climate protection. A similar game changer was President Xi Jinping’s statement to the United Nations in September 2020 that China aims to become carbon neutral by 2060. Europe had already taken the lead with net-zero carbon commitments by 2050.

Such calls for climate protection may also result in a speed up of carbon pricing; the degree of success depends on global acceptance. Raising a carbon tax at the EU border has been a key proposal of the EU Green Deal since 2019. Similarly, the future Biden administration could adopt “carbon-adjustment fees or quotas” on imports from trading partners that fail to meet their environmental obligations. In turn, this may incentivize China to accelerate the creation of a national carbon market by 2025 – the effectiveness of which will clearly depend on how allowances are allocated.

Europe: The EU recovery plan combined with the medium-term coal and nuclear phase out should trigger a green infrastructure supercycle. The EU has implemented a €750 billion recovery plan, 30% of which should be used to speed up the green transition, with the goal to de-carbonize the European economy

by 2050. The push for renewables is further supported by policy measures to retire 67 gigawatts (GW) of coal and nuclear power by 2025, to be offset by at least 20 GW in solar and wind capacity additions per year. Another 10-12GW in total of dedicated renewables sources may need to be added by 2024 to produce clean hydrogen as part of Europe’s target of 6 gigawatts (GW) of electrolyzer capacity by then.

U.S.: President-elect Joe Biden promises significant regulatory changes on climate policy. He could revoke the Affordable Clean Energy rule and replace it with an aggressive pre-election goal of a carbon-free power generation by 2035. However, a gridlocked U.S. Congress might complicate decisions on any national carbon tax, as the President has no executive authority on that. Democrat lawmakers in carbon states may also be reluctant to support Mr. Biden’s climate agenda, particularly as Congress nears midterm elections. One taxation area where the president has executive authority, however, is on taxing carbon-intensive imported goods (as part of trade policy).

China: overarching policy guidance in its upcoming 5-year plan will hold the key. China’s new carbon commitment neatly dovetails with another of its key objectives: to rebalance the economy. Rebalancing means a shift from manufacturing to services; from capital-intensive to innovation-led and asset-light activity; from exports to domestic demand; and from investment to consumption. The first test will be the 2021-2025 plan to be announced in March. Success factors will include the promotion of new infrastructure, such as 5G, data centers, the industrial internet, electric trains, and clean energy vehicle charging facilities. This should facilitate the growth of more efficient carbon-light manufacturing, the expansion of the digital services sector, and greater use of alternative transport. The elephant in the room, however, is how China will bring down emissions from coal-fired generation, and whether it will be through carbon capture and storage or early retirements and promotion of renewables. The recent announcements by president Xi Jinping’s are pointing in the right direction, with a target of at least 75GW p.a. of wind and solar additions, which could see China’s installed renewable capacity triple to over 1,200GW by 2030 from 455GW today.

Related research: Consumers Can Help Deliver A Carbon Neutral China, Dec. 10, 2020 and Build Back Greener Is A Green Transition Now Home And Dry?, Dec. 3, 2020



U.S. Election: What Next For America's Energy Policy?

With the election outcome all but confirmed, Mike Grande, Gabe Grosberg and Aneesh Prabhu evaluate how president-elect Biden may shape U.S. energy policy.

Ahead of the presidential election, the energy policies of both Joe Biden and Donald Trump garnered significant attention, with each side starkly contrasting the other. Upon his entrance to the White House in January 2021, president-elect Biden will likely seek to implement progressive changes with a focus on reducing dependence on fossil fuels, protecting the environment, reducing greenhouse gas (GHG) emissions, and eliminating tax subsidies for fossil fuel producers – all measures that could bear ramifications for the power sector.

Oil and gas face headwinds

Under Biden, oil and gas producers and oil field service companies could face additional headwinds. Indeed, the Biden administration will most likely restrict or halt new leases on federally owned land/waters and seek to make such policy permanent. According to the Department of the Interior, approximately 22% of U.S. oil production and 13% of natural gas production comes from federally owned land/water and an immediate ban on federal leases could reduce U.S. oil production by approximately 2 million barrels by the end of 2024, according to Platts Analytics.

However, a Biden administration is unlikely to issue an immediate moratorium on existing drilling or permits. Also, Biden's plan does not call for a ban on the controversial technique of hydraulic fracturing (hydrofracking), and any such measure, in our opinion, would meet stiff resistance, considering the economic importance and importance to the nation's power grid: natural gas accounts for 35% of the nation's electricity generation.

Uphill struggle for midstream

Biden's win could present serious headwinds for North American midstream energy companies and U.S. independent refiners. The Biden energy and climate policy goals will undoubtedly take time to be implemented but could have an impact on midstream and downstream credit quality. What's more, it's possible a Biden presidency could deny new permits to Dakota Access Pipeline (DAPL). Large projects already were facing increasing roadblocks, even with more-relaxed environmental regulations and easier permitting processes.

Utilities: time to adapt?

For the U.S. regulated utility industry, the credit impact will largely depend on the Democratic administration's GHG standards and taxes. Given Biden's plan targets a carbon-free power sector by 2035, the pace of reducing GHG

emissions will likely be accelerated – particularly in states that have been less proactive in this area to date. What's more, there could be a tightening of environmental regulations affecting electric utilities – a move that may cause some operational and financial stress.

While such an accelerated plan is environmentally-friendly, it could be problematic for utilities forced to adapt at pace. Ultimately, there's a heightened risk that expenditures could be passed on to the customer. In our base case, the utility industry will coax some exceptions from the Biden administration on the implementation of GHG policies that would prove too burdensome for the customer bill. We expect these jurisdictions would be allowed a somewhat longer and more gradual implementation phase.

What does this mean for renewables?

November's election result may also create profound effects for the renewables industry. President-elect Biden has proposed a US\$2 trillion clean spending plan over his four-year term. The plan would stimulate the electrification of power generation, transport, and real estate – a significant acceleration in clean infrastructure spending.

What's more, the Biden task force recommends a target of installing 500 million solar panels over the next five years. Assuming an average panel rating of ~300W, this would equal ~150 GW of total volume and imply 30 GW of annual installations over this period, or over twice the current pace of about 12 GW in 2020 .

The proposal also puts the U.S. on the path of cutting net carbon emissions from the country's electricity production to zero by 2035. The 2035 target allows for the use of nuclear power, the largest zero-carbon electricity source in the United States, along with wind and solar.

Further information can be found on Capital IQ in the research article titled: "How Diverging Energy Policies In The U.S. Presidential Election May Affect Credit Quality"

“President-elect Biden has proposed a US\$2 trillion clean spending plan over his four-year term.”



Europe’s Rail Operators On A Slow Train To Recovery

Pandemic-related travel restrictions, remote working and train capacity constraints due to social distancing will prevent European rail travel recovering to pre-pandemic levels before 2023 at the earliest. Tania Tsoneva explores the factors impacting the sector’s recovery prospects.

The COVID-19 pandemic is placing a huge strain on European rail travel as passengers continue to avoid usually crowded trains due to health concerns, public health advice, or ongoing travel restrictions. The lockdown months between March and May 2020 saw passenger traffic decline by more than 90% in many European countries, including Italy, France, and the U.K.

For 2020 we generally expect a decline of at least 45%-60% in passenger traffic, with rail freight down by 10%. We have assumed 2021 passenger traffic still to be down by at least 20-30%, with recovery to 2019 levels only expected by 2023, considering capacity shortages due to social distancing; potential changes in commuter behaviour; a slow return of customer confidence in public transport; and the uncertain macroeconomic backdrop and rising unemployment rates.

Government support critical to limiting rating impact

Weaker passenger numbers put pressure on European rail operators' underlying (stand-alone) credit metrics and could result in negative rating actions without extraordinary government support. Even moderate revenue shortfalls can lead to a significant worsening in financial credit ratios. European rail operators have relatively high operating leverage compared to other transport infrastructure issuers and are either not able or not allowed to easily scale down services to respond to falling demand.

Also impinging on European rail operators' credit quality is their higher cash burn than other badly affected transport infrastructure groups, such as airports. This is because rail operators have limited leeway to reduce capital investments, even if a portion of contracted train deliveries will be delayed due to factory closures and disruptions in global procurement, and a portion might be cancelled altogether due to lower passenger traffic.

To date, government support has taken the form of:

- Temporary measures to alleviate high fixed costs such as furlough schemes, and reductions in track access charges (as seen in Italy);
- Investment grants and subsidies. Germany has already pledged to cover part of Deutsche Bahn's losses and invest €2.6 billion in regional rail services and infrastructure.
- Availability payments compensating train operators for providing a certain number of services regardless of how many people use them. For instance, these will cover 93% of rail operators' costs in 2020 in the Netherlands;
- Equity injections from parent companies (or state).
- Subsidized funding coming from government-owned banks in the form of subsidized loans, or state guarantees on loans from export agencies

“We see only a slow recovery to 2019 levels, in many countries taking until 2023 at the earliest.”

Factors Affecting The Recovery In Rail Travel

The extent of social-distancing measures

The mandatory use of face coverings has alleviated capacity constraints. Previously, capacity declined as some train operators only allowed the use of window seats or operated a next-seat-free policy.

The likelihood, scope, and duration of further lockdowns

A second wave of infections could prolong work-from-home practices and virtual meetings.

The economic backdrop and fiscal stimulus

Fiscal stimulus can encourage investment in rail infrastructure or have indirect benefits, such as lower ticket prices as a result of lower value-added tax. Freight volumes correlate with economic activity.

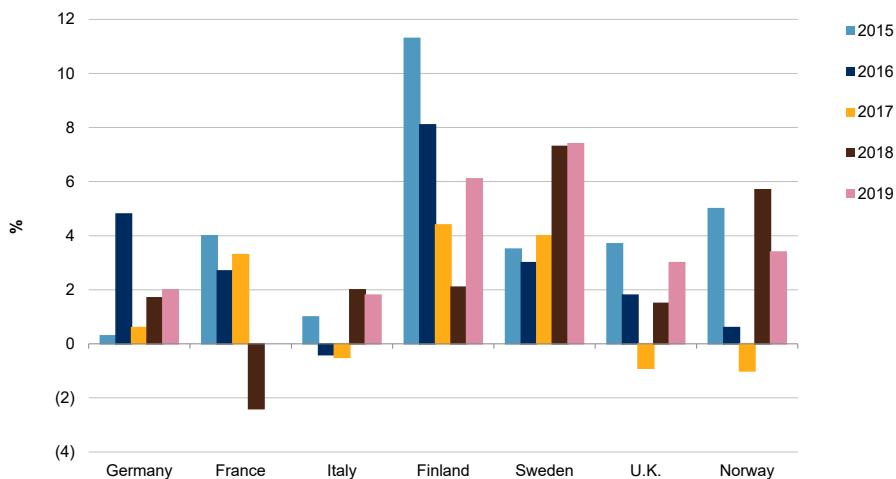
The permanency of the switch to cars and bicycles

Rail remains the preferred options for long journeys (up to four hours), and is often a cheaper option, particularly in developing countries.

Customer confidence

To reassure customers, train operators now deep-clean trains, have cancelled most food and beverage services, and have introduced new systems such as digital passenger counting.

Rail Passenger Traffic Growth In Selected European Countries



2019 data for France not available. 2018 passenger traffic in France was affected by strikes against the rail reform.

Source: Eurostat; S&P Global Ratings.

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“Also impinging on European rail operators' credit quality is their higher cash burn than other badly affected transport infrastructure groups.”

While we see a potential risk of structural change in the demand for rail travel (see box), we also factor in the importance of rail as an environmentally friendly mode of public transport. Rail travel is widely recognized as a solution to support the EU's target of net-zero emissions by 2050. It appeals to 16-29-year-olds as a means of lowering their carbon footprint when traveling, and therefore could recover faster in countries with populations who are conscious of climate change.

S&P Global Ratings believes there remains a high degree of uncertainty about the evolution of the coronavirus pandemic. While the early approval of a number of vaccines is a positive development, countries' approval of vaccines is merely the first step toward a return to social and economic normality; equally critical is the widespread availability of effective immunization, which could come by mid-2021. As the situation evolves, we will update our assumptions and estimates accordingly.

Further information is available on the Capital IQ portal in the research article titled: "European Rail Operators Are On A Slow Train To Recovery"



COVID-19 Spike Compounds Recovery Woes For Global Air Traffic

Julyana Yokota assesses the rationale for S&P Global Ratings' revised air traffic assumptions following a recent spike in COVID-19 cases.

Risks to global air traffic and, consequently, aviation revenues are increasing. Recent spikes in COVID-19 cases in many regions has necessitated a second round of lockdowns and travel restrictions, particularly in Europe and, to lesser extent, in the U.S. In response, S&P Global Ratings has updated its recovery expectations for the sector.

There's considerable uncertainty regarding the overall outlook for air travel; however, we now believe that 2020 revenues, as well as traffic – measured by revenue passenger kilometers (RPKs) – are likely to be 65%-80% lower than in 2019 (our previous August update forecast a 60%-70% decline). We still see a weak recovery in 2021, with traffic and revenues 40%-60% lower than in 2019. This estimate incorporates the assumption of widespread availability of effective immunization by the middle of 2021. We also lowered our expectations for 2022, to 20%-30% below 2019 levels, but continue to expect air traffic to match 2019 volumes by 2024.

Airports: additional downgrades still possible

As a result of our updated air traffic assumptions, more downgrades for airports cannot be excluded over the next few quarters – but on a selective basis. We've already lowered our stand-alone credit profile assessments and/or ratings on many airports by one to two notches.

Airports most at risk for lower ratings typically have tighter financial headroom, and greater constraints when it comes to significantly reducing cash burn and limiting rising debt. Furthermore, we're more likely to lower ratings on airports with heightened airline counterparty risk as well as greater operating uncertainties like stress on future aeronautical charges.

Government and regulatory support limited in the near-term

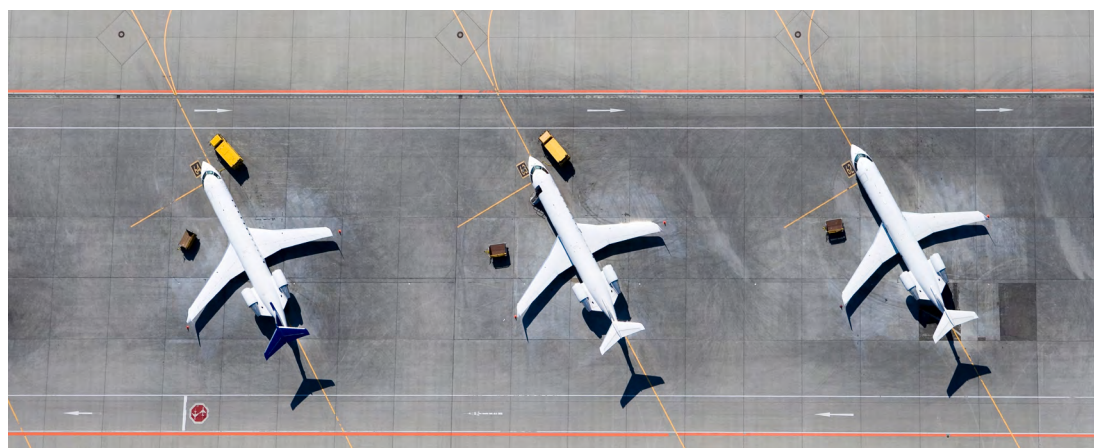
Governments rely on regulators to assure airports' long-term financial viability. As such, there's been little direct government support for airports, to date. In most cases, airports have abundant liquidity, as well as uninterrupted access to the capital markets. In addition, many countries regulate airports, either with light-touch oversight or through revenue caps. Overall, we expect regulators to wait to raise aeronautical charges until traffic recovery is more certain and stimulate demand by avoiding cost increases for passengers as well as ailing airlines. Airports with lower charges stand a better chance of attracting more traffic as airlines consolidate operations.

And, airport revenue diversification is likely to have limited benefits too, because commercial revenues (the share of which has risen to 40%-55% of most airports' revenue mix) could suffer more than aeronautical revenues. The fall in passenger numbers will have some effect on retail revenues, but airports will also likely continue to waive minimum guaranteed-income clauses and the global recession will result in less average spending per passenger.

S&P Global Ratings believes there remains a high degree of uncertainty about the evolution of the coronavirus pandemic. While the early approval of a number of vaccines is a positive development, countries' approval of vaccines is merely the first step toward a return to social and economic normality; equally critical is the widespread availability of effective immunization, which could come by mid-2021. As the situation evolves, we will update our assumptions and estimates accordingly.

More information can be found on Capital IQ in the research article titled: "As COVID-19 Cases Increase, Global Air Traffic Recovery Slows"

“More downgrades for airports cannot be excluded over the next few quarters – but on a selective basis.”



COVID-19 And ESG Factors Weigh On Airports' Credit Quality

The pandemic has prompted lower ratings for most airports globally. And while airports continue to exhibit strong credit fundamentals, Beata Sperling-Tyler discusses why they are increasingly exposed to external disruptions.

The aviation sector has been severely impacted by the COVID-19 outbreak. Since the beginning of the pandemic, we have taken negative rating actions on nearly all airports, on average by one notch, while airline ratings have come down on average by two-to-three notches. Airports are the more resilient of the two: their position as infrastructure assets with dominant market positions, and the vital economic and social role they play, add to their credit strength. Our ratings also seek to capture increasing long-term and more remote environmental, social and governance (ESG) risks where we believe there is a material and relevant likelihood of potential, unmitigated consequences.

We believe social factors, including potentially more frequent health and safety emergencies have become at least as important as environmental risks in their propensity to significantly disrupt airports' operations. And while we treat COVID-19 as an exceptional event – it has been a century since the previous comparable pandemic – the frequency of unexpected disruptions could increase amid greater globalization. The World Health Organization (WHO) believes that changes in the way humanity inhabits the planet renders new diseases inevitable, while global connectivity accelerates their spread.

COVID-19 has caused a big deviation in airports' historically very stable profitability trends, with collapses in EBITDA margins. IATA notes that in the six months following the 9/11 attacks – previously considered the most severe aviation crisis – traffic measured in revenue passenger kilometers (RPKs) declined by 12%, much less than the 65%-80% drop we forecast for 2020 and 40-60% downside for 2021 (compared to 2019).

The pandemic has also put a spotlight on airports' counterparty exposure. It has brought into question airports' ability to transfer traffic risk to airlines via increasing aeronautical charges, and to commercial tenants via executing minimum revenue guarantees as well as their ongoing viability. The regulatory model that caps revenues may not perfectly fit when forecasts are unreliable or in case of excessive deviations in traffic. Moreover, lower demand and a structural reduction in business travel will require airports' fixed costs to be spread among a smaller number of travellers. It will be difficult to raise aeronautical charges substantially, as financially weakened airlines (and indirectly travellers) may not be willing or able to accept a step increase in unit charges (respectively ticket prices).

Climate change continues to pose a long-term risk that needs to be managed

Increasing exposure to long-term chronic and acute physical climate events requires building resilience into airports' assets. In the medium term, we anticipate that ever-greater environmental transition risks (greenhouse gas emissions for example) could affect future air travel behavior via potential carbon taxation and government-led climate-friendly policies.

Physical exposures related to climate change may be less material to most rated airports' credit quality than the above social and environmental transition risks, as airports have longer to adapt to chronic climate risks. That said, some are already heavily exposed to acute weather events and, with physical climate risks likely to increase, a forward-looking approach is crucial. Key physical climate risks include storms, chronic long-term increases in temperatures, and rising sea levels.

Given airports' long-term time horizons, strong governance and management is key to anticipating and mitigating climate and social risks and building in resilience. This reflects the heavy reputational (and actual) costs of dysfunction, emergency adaptation, or unforeseen revenue losses. Timely investment ensures better predictability of cash flows.

Issuers can also demonstrate the benefits of their adaptation measures with more transparency and data and, in so doing, make long-term creditors feel more confident as to the sustainability of their investments. In the post-pandemic world, we believe management teams will aspire to create more variable cost structures for airports to become more flexible to adapt to remote and less visible, but high impact, risks.

More information can be found on Capital IQ in the research articles titled: "How COVID-19 And ESG Factors Are Weighing On Airports' Credit Quality" and "Scenario Analysis Shines A Light On Climate Exposure: Focus On Major Airports"

“Health and safety emergencies have become at least as important as environmental risks in their propensity to significantly disrupt airports' operations.”



Has COVID-19 Altered The Global Emissions Curve?

The COVID-19 pandemic is likely to have a long-term effect on energy demand, and by extension, global CO₂ emissions. But this is only a minor step in the direction needed to meet the two-degree target, argues Dan Klein of Platts Analytics.

The COVID-19 pandemic has altered the three primary drivers of energy demand: macroeconomics; consumer behaviour; and policy. Indeed, S&P Global Platts Analytics has reduced the outlook for CO₂ emissions by a cumulative 27.5 gigatons (GT) over the period 2020-2050 due to the coronavirus. This compares to current annual global combustion emissions of about 34GT. While the decline is significant, a 10x greater reduction over the thirty-year period is needed to meet the two-degree target under the Paris climate accord.

Quantifying the impact of COVID-19 on emissions naturally requires an economic analysis of the virus' effect on overall energy demand. The pandemic has certainly shocked global macroeconomic growth in 2020 and 2021, but there will likely be longer-lasting implications. Platts Analytics projects that even beyond the immediate impact, long-term global GDP will decline by approximately US\$5 trillion on a purchasing power parity basis – which equates to a loss of energy demand on the order of 7-9 million barrels of oil equivalent per day. This range represents roughly 2%-5% of total annual energy combustion emissions.

Adapting to the new normal

Of course, COVID-19 could also permanently modify consumer and organizational behaviour – especially where transport is concerned. The widespread lockdowns prompted some rethinking about the need and desire for travel, and many businesses will either mandate or allow working from home to continue as long as fears of contagion persist.

Even if or when these fears subside, demand for travel will not necessarily return to its previous state. The reduction in business travel – much of it taking place by air – has yielded considerable cost savings, and some businesses will embrace the benefits of permanently reducing travel for employees. Even a modest reduction in demand for air travel could result in 1.0-1.5 million barrels per day of lower oil demand over the long term, equivalent to 14%-21% of aviation sector oil demand in 2019.

Many companies have also identified potentially long-lasting savings of allowing employees to work from home, particularly if business activities were largely able to continue during lockdown conditions with the aid of telecommunications tools. According to a recent survey conducted by 451 Research, the emerging technology research unit of S&P Global Market Intelligence, two-thirds of surveyed organizations expect some level of expanded working-from-home policies to remain in place over the long term. Platts Analytics projects that the equivalent of 5% of the OECD's workforce could manage to work from home permanently with a moderate change in behaviour, which would reduce demand for petroleum-based road transportation fuels by an additional 1.0 million-1.5 million barrels per day over the long term, equivalent to 2%-3% of petroleum-based road fuel demand in 2019.

A changing policy landscape

Shifts have also been taking place in government policy. European policymakers have signalled their intent to skew stimulus packages toward green initiatives, such as a greater push for electric vehicles, renewables, and hydrogen energy. These policies are also seen as an additional impetus for Europe's wider ambition to achieve net zero carbon emissions by 2050, an aggressive goal given Europe emitted about 3.8 GT of CO₂ in 2019 according to our analysis.

In the U.S., President-elect Biden has released a series of plans, including an aggressive goal of carbon-free power generation by 2035. By comparison, the U.S. power sector emitted 1.6 GT of CO₂ in 2019.

In Asia, policy announcements in reaction to COVID-19 have been mixed. South Korea announced a draft plan, dubbed "South Korea's Green New Deal", which is designed to stimulate its economy and drive emissions to net zero by 2050. While China announced energy efficiency goals as part of a stimulus package, it also rolled back regulations on coal plants.

While ambitious policy targets such as net zero do not often come to complete fruition, the implementation of strong policies in these countries could curtail emissions by several GT, according to the projections in our outlook. And strong reductions will be necessary over the coming years, if the momentum provided by COVID-19 is to be translated into concrete progress towards the Paris climate goals.

More information can be found on Capital IQ in the research article titled: "The Energy Transition: Does COVID-19 Bend The Emissions Curve To 2 Degrees?"

“Of course, COVID-19 could also permanently modify consumer and organizational behaviour – especially where transport is concerned.”



COVID-19 Could Make 2020 A Crucial Year For Renewables

Beyond the pandemic, the U.S. election, accelerated policy support in Europe and China's stimulus plan could all play their part in shaping the energy transition, believes Massimo Schiavo.

In the face of growing uncertainties over power demand recovery and prices, robust commitments to invest in renewables continue across the globe. Declining costs, combined with more renewables-friendly policies, offer support in a number of markets. As such, the pipeline of renewables projects has remained generally stable over the past year, suggesting that COVID-19 will only marginally reduce the outlook for the industry.

Constructive market and policy developments have been emerging in recent months that are signalling upsides to renewables investments in the years to come. For instance, while solar PV capacity additions are expected to slightly decline year on year in 2020, wind capacity additions could be up over 10% according to Platts Analytics.

Yet, the renewables industry continues to face some roadblocks to scaling up globally. Key risks – including a cloudier outlook for long-term prices – remain in place, while stimulus plans in some regions will likely prioritize employment and direct support measures to the economy over green growth, particularly in China and the emerging markets.

Full steam ahead in Europe

Policy support for clean energy and decarbonization is leading to significant upside to renewables additions in Europe. COVID-19 has accelerated policy support, with the EU dedicating €225 billion for green investments out of the total €750 billion recovery fund, the Next Generation Plan. Combined with ambitious 2030 objectives for green hydrogen, we are seeing a significant upside to renewables additions in Europe.

Moreover, to offset the phase out of coal and nuclear plants, Platts Analytics projects more than 20GW p.a. of renewable capacities will be built in Europe over the next 5 years. The key challenge therefore will be execution, the need to overcome hurdles such as land permits and sufficient continued contractual support to provide long-term visibility as financing full merchant risk projects remains difficult. If not, larger renewables players with strong balance sheets and vertical integration into supply could move to consolidate the industry.

Almost all European utilities aim to boost their investments in renewables, while European oil and gas majors are embracing the energy transition and increasing their renewables ambitions. At the same time, the low cost of capital (a key part of overall costs) continues to support the competitive position of renewables: remuneration sank to a record low of €11/MWh at the latest Portuguese auctions.

U.S. election outcome may provide a further boost

On the other side of the Atlantic, we need to await the actual implementation of Biden's policies, which may also depend whether Democrats can avoid a gridlocked U.S. Congress which hinges on the outcome of Georgia runoff elections. Biden's task force recommended ambitious solar panel growth at an implied amount of 30GW p.a. more than double the current pace.

Irrespective of federal policies, state mandates, tax incentives, technological progress on batteries and ESG corporate initiatives will continue to be key drivers of U.S. installations.

China committed to transition goals

China's COVID-19-induced stimulus plans imply some headwinds for renewables. Restrictions on new coal plants have been relaxed to support employment and the local economy, and rising industrial energy use amid the COVID-19 stimulus for infrastructure and heavy sectors could bring China's declining energy intensity into reverse.

Despite this, we continue to see China as a key growth area for renewables investments, bolstered by its commitment to achieve carbon neutrality by 2060, further supported by the recent announcement of targeting more than 1,200GW installed renewable capacities by 2030, almost triple today's amount of 455GW. It implies at least 75GW of annual wind and solar additions or 10% p.a. growth. The country's next five-year plan (unveiled in March 2021) will reveal whether the country's energy policies will provide more insights in how successful renewable growth will be, not least because policies are moving to subsidy-free projects from 2021. For renewable energy to compete at on-grid tariffs (that is, the reference coal power prices), developers may assume that technology-induced costs decline further, while benefiting from prioritized access to grids and enhanced transmission capacities for renewables.

India faces setbacks

Among the worst economically hit by the crisis, COVID-19 is having the biggest impact on renewables new builds in India, with total renewables additions of only 4.3 GW in 2020 at the end of August – a decline of almost 40% year over year. The industry was already facing structural constraints in the process of scaling and the pandemic has meant power demand remains below historical trends.

“Policy support for clean energy and decarbonization is leading to significant upside to renewables additions in Europe.”

Does The Pandemic Threaten Gas' Bridging Role?

While natural gas has so far proven to be relatively resilient in the short-term, the pandemic threatens its future more than that of any other fossil fuel. Ira Joseph, Platts Analytics, evaluates the implications of COVID-19 for global gas demand.

Natural gas is often known as a “bridge fuel” – a comparatively cleaner fossil fuel that can serve as an alternative to more carbon-heavy options like coal and oil while easing the transition to renewables. The position of gas in the energy transition is unique: no other fuel holds the dual role of being both part of the problem and solution when it comes to meeting environmental targets.

The pandemic has only added to the complexity. Even though COVID-19 has had less effect on the demand for gas than for any other fossil fuel in 2020, it threatens to have the most impact on gas over the next 10-20 years, reflected in the more than 9% reduction in our 2030 global gas demand outlook. Indeed, gas promises to absorb the brunt of the decline in overall energy demand after relatively small reductions to renewables outlooks but also to our coal demand forecast (because of its stickiness as a domestically sourced fuel in many developing markets).

The chief challenge to gas' long-term trajectory stems from the legacy contribution of gas to global greenhouse gas (GHG) emissions and the growing commercial and policy-driven motivations that strive to skip, or at least accelerate, gas' transitioning role. In Europe, the Green Deal is unlikely to support gas in the long term, even if gas remains an important part of the energy mix owing to the phase-out of coal and nuclear power. China and India promise to remain the focal points for demand growth through the decade, while the U.S., Russia, and Qatar develop a global rivalry in terms of production growth.

“COVID-19 will perpetuate, if not slightly accelerate, a structural slowdown in growth of gas demand that has been apparent for the better part of a decade.”

Producers face structural challenges

Notwithstanding our downward revision to long-term gas demand, the expected rate of growth for natural gas remains stronger than for any other fossil fuel, and yet the outlook for gas is not rosy or without major risks. Gas supply potential and new reserve additions have piled up faster than all but the most aggressive scenarios for demand growth.

We believe that COVID-19 will perpetuate, if not slightly accelerate, a structural slowdown in growth of gas demand that has been apparent for the better part of a decade. And even if the price of gas recovers, it may not be enough to create growth, as alternative investments in renewables, hydrogen, and storage are challenging gas for the attention of capital.

The issue with gas is neither availability nor price, but demand. Gas supplies are plentiful in a region like North America, which has pushed down the long-term price outlook considerably, yet the outlook for demand growth remains relatively muted. Electrification has overridden gasification as the driving force in the energy transition, even as the price of gas has declined.

The hope that the emergence of blue hydrogen as a storage and transport fuel will rescue gas demand is already wobbling due to a focus on green hydrogen. The problem with being a transition fuel is that when events such as the COVID-19 pandemic dent demand growth, the length and breadth of the transition are shortened.

The future of gas could be industrial

A decade ago, the power generation sector was the undefeated champion of gas demand growth, but this position has been severely undermined by investments in renewables and battery storage, as well as sluggish electricity load growth. Industrial gas demand growth, on the other hand, has been revived by significant increases in elasticity of supply, lower-for-longer prices, and an overall increase in the low-cost reserve base.

Industrial gas demand now accounts for 58% of gas demand growth over the next decade; a decade ago, the power generation figure would have been over 60%. The Middle East, China, Southeast Asia, and the U.S. are the four largest growth regions for industrial gas use, while power generation use in the U.S., Europe, and Japan mark the biggest losses.

More information can be found on Capital IQ in the research article titled: “The Energy Transition: COVID-19 Undermines The Role Of Gas As A Bridge Fuel”



Oil Is Down, But Not Out

The COVID-19 has predictably taken a toll on global oil demand, but it may not alter the market's long-term trajectory. As Simon Redmond explains, expectations of an expedited peak oil date may be misplaced.

Petroleum's pre-eminence as a land, air, and marine fuel saw oil consumption drop the most of all primary energy sources due to the global economic downturn. Amid widespread lockdowns and travel restrictions, oil demand fell by over 20 million barrels a day (b/d) in March and April 2020, equivalent to 20% of total demand.

We expect global oil demand for 2020 to decline by 8.1 million b/d, wiping out the past six years of growth. And though this steep fall in demand was followed by unprecedented production cuts by OPEC+, this did not stop prices from falling to record lows in April. Still, we expect about 75% of this year's drop in demand – or 6.3 million b/d – to return in 2021.

Pandemic unlikely to be a transformative event on its own

The long-term impact of COVID-19 on world oil demand is a reduction by 2.5 million barrels per day, according to S&P Global Platts Analytics. This is however not enough to alter the trajectory of the market to meaningfully bring forward the projected peak in oil demand near 2040, or to align oil sector CO2 emissions with a two-degree warming target.

In addition to the impact of lower GDP, disruptions to both global oil demand and supply will persist far after the pandemic has ended. Many businesses and employees have expressed an intention to make remote working arrangements permanent, reducing real estate and commuting costs. Business travel will be reduced for the foreseeable future as well, and the aviation sector promises to have a long road to recovery. The recession also raised inequality, with a shift of part of the middle class into poverty, which has triggered a drop in demand on its own, perhaps as high as 400,000 b/d. Ultimately, we anticipate that overall consumption will not return to pre-COVID-19 levels until late 2022.

Yet, there are other factors partially offsetting these negative effects. For instance, we may see aversion to public transportation (and therefore higher preference for personal vehicles) if fears of virus transmission persist. Additionally, weaker oil prices make electric vehicles (EVs) less competitive than internal combustion engine vehicles and will slow their penetration

relative to the pre-COVID forecast. More broadly, a weaker oil price framework will insulate oil demand from competitive threats, including a drive for efficiency improvements. And finally, there is the elasticity of demand, as a US\$10 a barrel lower oil price could raise oil consumption by 2.5-3.5 million b/d.

But peak oil will be more sensitive to future behaviour and policy changes

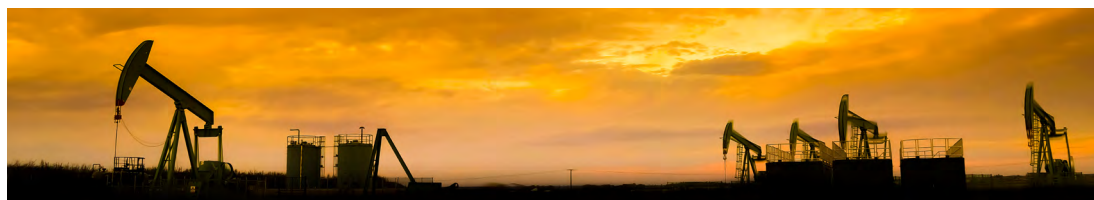
For both demand and supply, the impact of COVID-19 is a decided step down, but not a step change. It's however still unclear how much behavior and policy will change in response. To address these risks, S&P Global Platts Analytics undertook a harsh sensitivity analysis under which peak oil occurs by 2035 and as early as 2025 when just considering refined oil product demand, excluding growth in petrochemical growth.

Specifically, this downside scenario assumes that remote work becomes the status quo following the pandemic, representing up to 25% of vehicle miles travelled in the U.S. (and a similar impact outside of the U.S.). A similar severe reduction in aviation demand was adopted in this sensitivity, with a baseline rate of over 4% a year halving to just over 2% a year, implying that the world will only approach pre-pandemic levels of air travel by 2030 (as opposed to our baseline assumption of 2024).

Downward pressures on oil demand due to changes to capital investment could persist in a post-pandemic world across several sectors, including marine bunkers, industrial demand (manufacturing), chemicals, and even commercial road transport. Anti-globalization trends are projected to accelerate, modelled as a 50% reduction in the forecasted globalization index from 2020-2025 versus our Most Likely Case. This sensitivity also assumes reshoring of supply chains away from countries where oil use is high in the industrial sector, specifically China, Saudi Arabia, and Mexico. However, it is worth repeating that this scenario hinges primarily on changes to market behaviour that are not necessarily market driven, but rather discretionary.

More information can be found on Capital IQ in the research article titled: "The Energy Transition: COVID-19 And Peak Oil Demand"

“...the disruptions to both global oil demand and supply will persist far after the pandemic has ended.”



Consumers Can Help Deliver A Carbon Neutral China

Shaun Roache explains why rebalancing China’s economy from consumption towards investment could make a decisive contribution to the country’s carbon-neutral ambitions.

“Rebalancing China’s economy is as important as two-degree policies.”

President Xi Jinping’s announcement that China aims to become carbon neutral by 2060 is a global game-changer. In recent years, China was the planet’s largest emitter of carbon dioxide (CO₂) – accounting for about 30% of total emissions. China fulfilling its carbon-neutral target would therefore provide a massive contribution to global efforts to stall climate change. What’s more, this new carbon commitment neatly dovetails with its objective to rebalance the economy towards consumption, which could help reduce carbon emissions by more than 30% over the next two decades. However, achieving carbon neutrality will not be easy. China will need to transform its economy, including what it produces and how, to reduce the amount of energy used per unit of GDP. This implies much less coal, a far larger role for renewables, and potentially the use of carbon capture, utilization, and storage technology.

Rebalancing to favour private consumption

China has a low share of private consumption in total spending making it an anomaly among major economies. In our research, S&P Global economists and S&P Global Platts analysts assume that, through economic rebalancing, the country’s share of private consumption in total spending will rise to 55% in 2040 from less than 40% now, with investment seeing a decline of a similar size: as consumers become richer and more important for the economy, so the demand for services will rise relative to goods.

Rebalancing the economy would make a major contribution to the energy transition – shifting from energy-intensive to energy-light activity. For example, if capital and labour over time move from the production of steel,

cement, and capital goods to the provision of education, healthcare, and leisure, the economy would consume less energy for each unit of GDP produced. Moreover sectors such as steel, heat-intensive industries are just difficult to decarbonize.

The impact of rebalancing could be as important as two-degree policies. When a rebalancing scenario is compared to one with no rebalancing – i.e. the share of spending and the structure of the economy remains unchanged beyond the effects of rising income per capita – we estimate that CO₂ emissions would be about one-third lower by 2040. Layering on two-degree assumptions provides an even more dramatic 61% fall in emissions that puts China firmly on the path to a carbon-neutral economy (see graph).

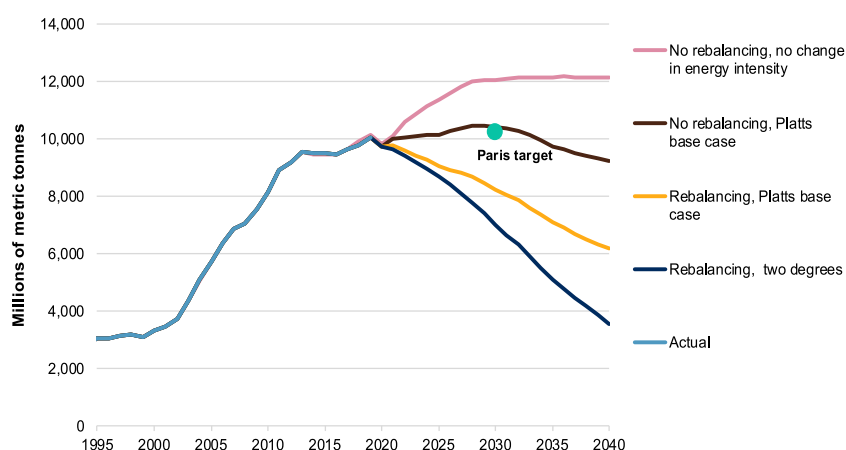
How plausible are these scenarios?

Although both scenarios are possible, challenges remain. Thus far, rebalancing toward private consumption has been slow. Over the past decade, the consumption share has risen by less than five percentage points and this pace will need to almost double to achieve a 55% share by 2040. Lifting consumer spending as a share of GDP will require boosting the share of national income that ends in the pockets of Chinese households while providing assurance that life events will not wipe out their livelihoods. Policies – such as stronger social safety nets and measures to reduce income equality – will be key.

The other major challenge China faces, is how to reduce its reliance on coal. Coal currently accounts for about 57 per cent of China’s primary energy mix. China’s president just announced new 2030 objective to increase the share of non-fossil fuels in primary energy consumption to around 25pc (up from its previous 20pc target). This may imply the share of coal coming down to roughly 45% by 2030. Under Platts’ two-degree scenario, such share needs to come down further to 22% by 2040.

The transition challenge lies in the fact that around half of all China’s coal-fired power generation capacity has been built within the past 10 years and more coal power projects were announced in the first half of 2020. The coal sector still employs over 2.6 million workers even after shedding more than half of all coal jobs since the peak in 2013. While this is small compared with total employment of about 770 million, many of these jobs are concentrated in economically vulnerable regions, where finding good, alternative employment locally may be hard.

Economic Rebalancing Contributes To A Decline In China's Carbon Emissions Of One-Third
CO₂ carbon emissions from all sectors of the economy



Note: Estimates from the S&P Global Platts Analytics' Global Integrated Energy Model and S&P Global Ratings economic projections. Source: S&P Global Platts and S&P Global Ratings. Copyright © 2020 by Standard & Poor's Financial Services LLC. All rights reserved.

More information can be found in the research article titled: "Consumers Can Help Deliver A Carbon Neutral China"

The EU Recovery Plan Could Create Its Own Green Safe Asset

The EU plan to deal with COVID-19's economic fallout has significant green undertones. Senior Economist Marion Amiot outlines how Europe could finance the recovery fund.

The EU is intending to use its post-pandemic recovery plan to reinforce its fight against climate change. EU member states have agreed to use about 30% of the "Next Generation EU Fund" – the EU's €750 billion fiscal plan to kickstart the post-COVID-19 recovery, for climate-friendly projects. This translates to a potential of €225 billion of additional green financial instruments, reinforcing the EU Green Deal's pledges.

Even if, as the European Commission estimates, this figure is still too little to bridge the required investment gap of 1.5% of GDP per year to meet 2030 carbon-reduction goals, it is a huge improvement from the €7.5 billion of "fresh money" announced in the Green Deal pre-pandemic. The agreed EU budget also contains a pledge to "do no harm", for which the recently approved EU Green Taxonomy would presumably be leveraged, helping reinforce the EU's environment-friendly strategy.

The European Commission has already expressed its desire to finance the recovery fund through debt issuance, because member states' contributions to the EU budget only cover the multi-annual framework. Given its strong commitment to finance a green recovery, and subject to concrete plans to do so, it is possible that 30% of the EU's recovery bond issuance could be labelled "use of proceeds" green bonds, that is, where issuance proceeds are earmarked for projects that aim to make a specific environmental contribution.

In this way, the EU would be able to respond to a fast-rising ESG-investor base and further develop its position as an issuer in the green bond market. By issuing around €225 billion of green bonds, the EU would also become the largest supranational provider of liquidity for a green safe asset. By comparison, the European Investment Bank (EIB) has issued US\$33.7 billion green bonds since 2007.

Promoting the uptake of sustainable finance

Only US\$53 billion of sovereign bonds have been issued with a green label, and all non-EU issuance (16% of the total) was from countries that do not issue a reserve currency, and thus are not used as safe assets. The availability of an EU green safe asset could help investors, as well as policymakers, achieve their goals to "green" their portfolios and the economy, respectively.

At present, one of the main hurdles to steering capital toward more sustainable investments is the limited size of the green bond market. It constitutes only 3.7% of total global bond issuance, making it difficult for central banks or

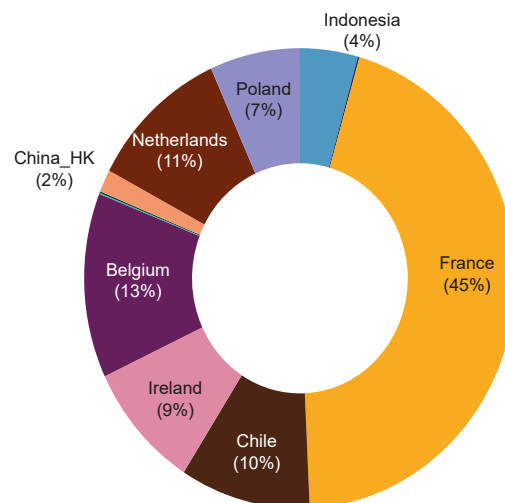
regulators to ask market participants to build green portfolios. A green bond issuance of €225 billion would represent an increase of around 89% of the global green bond market size (in terms of 2019 total issuance). It would provide the European Central Bank, as well as other central banks holding large foreign exchange reserves in euro, with investment-grade green assets. EU green issuance would also likely stimulate private sector green bond issuance, since the EU tends to leverage private money for its investments, for example by co-financing projects with the private sector.

Nonetheless, EU green bond issuance is unlikely to come all at once. As the proposal currently stands, only one-quarter of Next Generation EU payments will come before 2023. Meanwhile, in terms of duration, we think the EU might be likely to issue longer-dated bonds. This is in part because member states are likely to want to postpone the reimbursement of those bonds to a time when their economies have recovered, strengthening their ability to repay their borrowings. What's more, in an environment of low to negative yields, investors are likely to prefer longer-dated assets, which provide higher interest rates.

More information is available on Capital IQ in the research article titled: "The EU Recovery Plan Could Create Its Own Green Safe Asset"

"The EU would be able to respond to a fast-rising ESG-investor base and further develop its position as an issuer in the green bond market."

84% Of Sovereign Green Bond Issuance Has Been By EU Countries Cumulative issuance by sovereigns worldwide (2007-2020)



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The Pandemic-Driven Surge In Social Bond Issuance Shows Sustainable Debt Market Is Evolving

Lori Shapiro explains why S&P Global Ratings expects social bonds to emerge as the fastest-growing segment of the sustainable debt market in 2020, and why disclosure practices may become more important as a result.

The COVID-19 pandemic has dragged countries around the world through a period of economic disruption, the depths of which have not been seen since the Great Depression.

Increased unemployment, rising fatality rates, and strained health care systems have placed a spotlight on a future fraught with social risks. In parallel, corporations and financial institutions have been looked to for leadership in addressing these unforeseen challenges. This call for a greater focus on mitigating social risks has spilled over into the capital markets, particularly through the rapid rise of social bond issuance – even as credit conditions have weakened sharply.

Social bonds have emerged as an unlikely tool in the economic fight against the virus to address the demands of consumers and communities that are increasingly aware of current social issues. The International Capital Market Association (ICMA) defines social bonds as those whose proceeds fund new and existing projects with positive social outcomes such as improving food security and access to education, health care and financing.

Although historically only constituting a relatively small part of the overall sustainable debt market, social bond issuance has more than quadrupled this year – with growth outpacing the more mature green bond market. The trend could foretell a pivot away from a historically climate-centric sustainable debt space and reflect a diversification of sustainability objectives financed by investors. And, while the COVID-19 pandemic may have precipitated this

recent surge, the appeal of social bonds as a sustainable finance instrument may endure long after the pandemic's effects have subsided.

Social bond issuance reaches record levels

According to the Climate Bonds Initiative (CBI), of the US\$400 billion in sustainable debt issuance in 2019, CBI, social bonds constituted approximately US\$20 billion – just 5% of market share (see chart). But, from this low-base, their share is growing rapidly: according to Morgan Stanley, US\$32 billion of "social" and "sustainability" bonds were issued in April 2020 alone. This also marked the first month during which social and sustainability bond issuance surpassed green bonds.

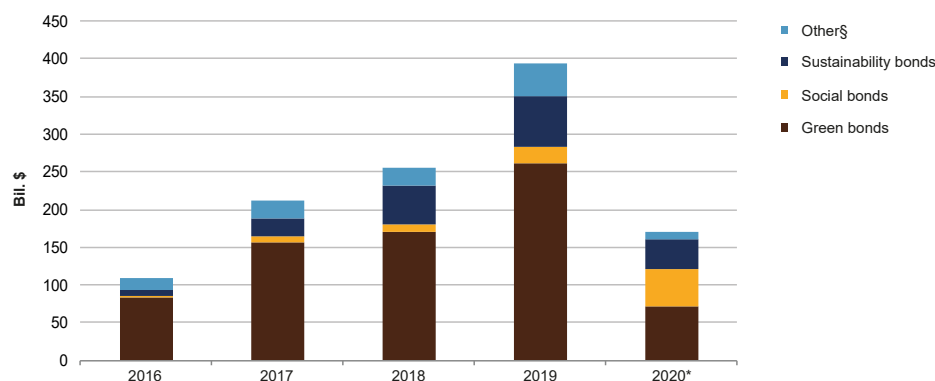
Undoubtedly, much of this rapid growth can be attributed to the effect of the COVID-19 pandemic, which has accelerated the issuance of social bonds to finance both public and private responses and create positive social outcomes, especially for target populations.

In March 2020, ICMA underlined the relevance of social bonds in addressing the coronavirus pandemic and provided additional guidance for eligible social projects, which could include coronavirus-related health care and medical research, vaccine development, and medical equipment investments. The increased scope of projects eligible to be considered under the social bond designation likely led issuers, particularly supnationals, to become more active in the space. In March 2020, the International Finance Corporate (IFC) completed

“Social bonds have emerged as an unlikely tool in the economic fight against the virus...”

Social Bond 2020 Issuance Surpassed Total Issuance In 2019

Annual issuance in sustainable debt by instrument type



Note: Data apply to green, social, and sustainability bonds issued under the International Capital Markets Assn.'s Green Bond Principles, Social Bond Principles and Sustainability Bond Guidelines. *Year to date through June 15, 2020. §Other includes sustainability-linked loans, green loans, and other excluded financing. Source: Climate Bonds Initiative. Copyright © 2020 by Standard & Poor's Financial Services LLC. All rights reserved.



its largest social bond issuance since its social bond program was launched in 2017, to finance its response to the coronavirus. Soon after, the African Development Bank launched a US\$3 billion "Fight COVID-19" social bond which, according to the Institute of International Finance (IIF), was the world's largest dollar-denominated social bond transaction to date. Furthermore, In April 2020, Guatemala became the first country to issue a sovereign social bond aimed at financing COVID-19 response efforts.

These recent issuances indicate that the pandemic has not turned issuers' or investors' attention away from sustainable finance; in fact, interest in this space seems to be expanding. We do not believe that market engagement in green bonds or loans will tail off entirely. However, as the sustainable debt market grows, we anticipate social bonds will make up a significantly larger share.

Calls for transparency become louder

As the market grows, social bond reporting and robust disclosure practices will only gain importance. Historically, green bonds have been more popular than their social bond counterparts, partly because their impact can be tracked using more easily quantifiable and science-based metrics (i.e. a reduction in greenhouse gas emissions or energy use) that are well understood by investors. This mitigates the risk of "greenwashing" – where a company misuses the "green" label to overstate the true environmental benefit of a transaction and, in doing so, misleads market participants. The standards surrounding social bonds, however, are more complicated because assessing social impacts tends to be more qualitative and less standardised than for green projects. As interest in social risks grows, particularly amid the COVID-19 pandemic, investors now face a new issue – social-washing – which, in our opinion, could arise if the proceeds are labelled as "social" but the implied social benefits are questionable. In order to standardise the definition of social projects and mitigate this risk much like it did

for the green bond market, ICMA developed a set of Social Bond Principles (SBPs) in 2018. These were later updated this year. The principles encourage companies to define what they consider "eligible projects", structure their transactions to avoid misallocation, and regularly report on use of proceeds. Adherence to the SBPs is generally valued as a sign of credibility and market integrity given enhanced transparency and standardized disclosure practices. However, the guidelines are voluntary and unlike for green bonds (where around 80%-90% of issuances are aligned with the Green Bond Principles) a number of institutions have issued COVID-19 and other self-labelled social bonds that are not aligned with ICMA's SBPs.

In addition, with so many issuers currently accessing the social debt market, speed to market has become the most important factor, with many issuers foregoing external verification/review. Therefore, while we are seeing growth in social debt for crisis response, improvements in tracking and disclosure are experiencing a significant lag. As social bond issuance picks up, we anticipate expectations for transparency will grow while social bond impact reporting will be imperative to developing a more standardized social bond market.

Although still small, we believe the social bond landscape is growing and evolving rapidly and that the correct steps are being taken to ensure sustained capital flows toward socially beneficial objectives. The recent surge in social bond issuance to address the COVID-19 pandemic has given investors the rare opportunity to evaluate an entity's commitment to its stakeholders – including employees, customers, and communities – in the short-term. Improved transparency and reporting practices will ultimately help reduce some of the social bond risks, including social-washing, and solidify investors' confidence in the asset class as it grows, ultimately propelling further issuance.

Further information can be found on Capital IQ in the research article titled: "A Pandemic-Driven Surge In Social Bond Issuance Shows The Sustainable Debt Market Is Evolving"

“The pandemic has not turned issuers' or investors' attention away from sustainable finance; in fact, interest in this space seems to be expanding.”

Diversity And Inclusion: A Social Imperative

Increasing demand for corporations to address discrimination in the workplace is driving diversity and inclusion initiatives to the fore. Neesha-Ann Longdon explains.

The Black Lives Matter movement has pushed the long-standing issue of systemic racism to the fore. Stakeholders' increased awareness and activism are pushing corporate transparency and accountability to unprecedented levels, while customers, employees, and shareholders are opening their eyes to the reality of what the Black community faces – calling on corporates to address discrimination within their organizations.

Black workers face barriers

U.S. workplaces have yet to achieve equal opportunity for people of different races, and policies have so far not fully addressed the widespread issue of racism. The Black community has long been subject to civil and human injustices that have contributed to a vicious cycle of low educational attainment, high unemployment, and concentrated poverty. This has made it difficult for Black people to enter the workforce, advance in higher wage work, and accumulate generational wealth.

Poverty serves as a systemic hurdle to Black employees because it creates barriers to higher educational attainment, thereby limiting their ability to procure employment and financial opportunities that would enable wealth accumulation. What's more, Black employees are often held to higher standards than their white counterparts. A 2015 study by the National Bureau of Economic Research found that Black workers receive extra scrutiny in the workplace, leading to lower wages, slower promotions, and sometimes even job loss. This legacy may also create an additional barrier to career advancement – of the Fortune 500 companies, Black employees only account for 3.2% of executive and senior management and only 0.8% of CEOs (four in total) are Black.

The emphasis is on inclusion

Diversity and inclusion (D&I) programs are an important mechanism for improving racial equity in the workplace. Done well, they offer several business benefits, from improved productivity to innovation, which help boost a company's ESG performance by helping it anticipate changing consumer preferences and consumption patterns. Diverse workforces have also been linked to financial performance and innovation potential, with studies indicating increased sales revenue as well as enhanced creativity, more informed decision making and increased capacity for innovation.

However, analysing diversity remains a challenge due to a lack of available data from businesses. According to the U.K.'s Business in the Community (BITC) Race at Work 2018 Scorecard report, only 11% of employers report ethnicity

and pay data, while in France, a race-neutral policy approach to education and employment renders it illegal for employers or institutions to ask about someone's race or ethnicity. Even when companies do report on minorities, they more frequently refer strictly to percentages without commenting on the positions they occupy, making disparities in terms of job level, promotions, or lack of diversity in certain roles challenging to identify.

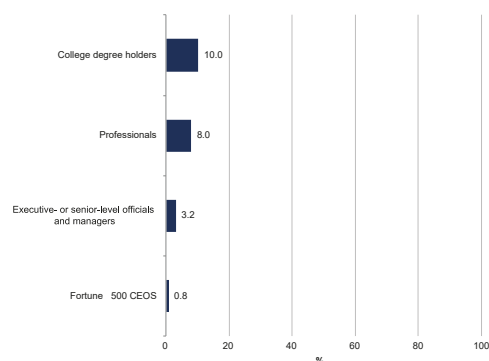
Indeed, recruiting ethnic minorities does not necessarily translate into an environment that's free of discrimination. Therefore, we believe the success of D&I initiatives appears to hinge on the inclusion side of the equation, which should ensure employees feel their contributions are appreciated and full participation is encouraged. Analysing inclusion practices could provide better insight into how companies manage more covert forms of discrimination associated with micro-aggression, such as interactions through comments that proliferate Black stereotypes.

Companies have started promoting conversations with Black employees to better understand their experiences, which we believe is a starting point. Ultimately, achieving a sustainable diverse workforce and addressing system racism will require continued leadership and accountability.

The Black Lives Matter movement has ignited a broader awareness of racism in society that has put the corporate sector in the spotlight. We believe companies' diversity track records will be increasingly scrutinized, making a diverse and inclusive workforce a reputational imperative. Ultimately, an effective, inclusive framework that supports long-lasting diversity and ESG goals depends on sound communication and ongoing commitment to employees at all levels of the organization. As such, we foresee a widening competitive gap between companies that adopt effective strategies for workforce and diversity, and those that do not.

Further information can be found on Capital IQ in the research article titled: "Diversity And Inclusion As A Social Imperative"

Black Employees Are Underrepresented In Management Positions In The U.S.



Source: Center for Talent Innovation Paper "Being Black in Corporate America". Copyright © 2020 by Standard & Poor's Financial Services LLC. All rights reserved

“The success of D&I initiatives appears to hinge on the inclusion side of the equation, which should ensure employees feel their contributions are appreciated.”

In June 2020, S&P Global Ratings expanded its Green Evaluation analytical approach to provide an opinion about green financing frameworks and how they align with the Green Bond Principles 2018 (GBP) and the Green Loan Principles (GLP).

Here, we answer frequently-asked questions about how the Green Evaluation analytical approach is applied to the GBP and GLP.

What are the different analytic approaches included in the Green Evaluation?

A Green Evaluation can offer an opinion on the transaction's alignment with the GBP or GLP – referred to as a Transaction Alignment Opinion. We can also provide Green Financing Framework Alignment Opinions – a stand-alone view on a seeker of finance's green financing framework's alignment with the GBP or GLP. Finally, the analysis can provide a combination of a Green Evaluation (which may include a Transaction Alignment Opinion) and a Framework Alignment Opinion.

What are the Green Bond Principles (GBP) and the Green Loan Principles (GLP)?

The ICMA describes the GBP as “voluntary process guidelines that recommend transparency and disclosure and promote integrity in the development of the green bond market by clarifying the approach for issuance of a green bond.”

The GLP, meanwhile, build on and refer to the GBP. Their aim is to promote consistency across financial markets and are administered by the Loan Market Association. The GLP are voluntary, recommended guidelines that “set out a clear framework, enabling all market participants to clearly understand the characteristics of a green loan, based around [the same] four core components [as the GBP].”

Does a Green Evaluation of an issuer's self-labelled green bond constitute an external

CIFI Holdings (Group) Co.

On August 5, 2020, CIFI Holdings (Group) Co. Ltd. (CIFI), a China-based company engaging in property development and property investment, issued US\$200 million in senior unsecured notes with a coupon of 5.95%, maturing on October 20, 2025. This issuance was a reopening of its initial US\$300 million senior unsecured notes issued in July 2020, with the same coupon rate and maturity date.

The transaction has received a Green Evaluation score of E1/87, and was the first to receive Green Financing Framework and Transaction Alignment Opinions. In our view, both the transaction and CIFI's green finance framework, which has been developed to ensure it funds projects that deliver a positive environment impact, are aligned with the GBP.

review under the GBP or GLP?

While we note that our Green Evaluation is not a verification, certification, audit, or credit rating, we believe an opinion on alignment from an independent party provides a second opinion, which is referred to as a form of external review under the GBP and the GLP.

What kind of transaction would be aligned with the GBP and GLP as part of a Green Evaluation?

A transaction must meet several conditions within the Green Evaluation analytic approach for S&P Global Ratings to consider a green bond aligned with the GBP or GLP. First, all net proceeds must be allocated to eligible green projects as described above.

Second, the bond or loan must meet the basics of the four components of the GBP or GLP, which are to: use the net bond proceeds for eligible green projects; use clear criteria in selecting projects for funding; manage and track proceeds; and commit to regular reporting of environmental impact and use of proceeds.

Third, we believe that a bond or loan must receive a governance score of 58 or more and a minimum transparency score of 42 or more. If all three conditions are satisfied, S&P Global Ratings may view an issuer self-labelled green bond or loan as being aligned with the GBP or GLP.

What does a Green Financing Framework Alignment Opinion with the GBP or GLP involve?

To be considered aligned with the GBP or GLP by S&P Global Ratings, a green financing framework must first state that all net proceeds of any instrument issued under the framework will be allocated to eligible green projects. We base our Green Financing Framework Alignment Opinion on our assessment of whether the framework satisfies all the requirements of the GBP or GLP.

More information is available on Capital IQ in the research article titled: “Q&A: Green Evaluations—Transaction And Framework Alignment Opinions With The GBP And GLP”

We scored the project E1/87, the highest rank on our scale of E1 to E4 for Green Evaluations. The score is a weighted average of the project's Transparency (79), Governance (81), and Mitigation (93) scores. The excellent Mitigation score reflects the meaningful environmental benefits from CIFI's green building projects, which help offset the relatively higher carbon intensity of the building sector in China. Both its Transparency and Governance scores are solid, owing to the company's commitment to report annually the management of issuance proceeds and the environmental benefits of its projects.

More information is available on Capital IQ in the Green Evaluation titled: “CIFI Holdings' Green Finance Framework And US\$500 Million Green Bond”

Southwire Co. LLC

On August 6, 2020, Southwire Co. LLC scored 70 (on our scale where 100 indicates the lowest risk and 0 the highest) in its ESG Evaluation.

Southwire Co. LLC manufactures copper and aluminium wires, cables, and related products for residential and non-residential construction, energy, infrastructure, and original equipment manufacturing markets in North America, with annual production of about 2.1 billion pounds.

Our ESG Evaluation score of 70 with adequate preparedness reflects the company's focus and commitment to enhance its environmental and social sustainability. Company owners the Richards family have a long-term goal to promote and enhance Southwire's sustainability, the belief being it will help the company remain viable for the next 100 years. Southwire has a largely independent board of directors that is well aligned with the senior management team and company shareholders on its sustainability and operating strategy. Southwire has already made progress achieving its sustainability mission over the past three years, with reduced greenhouse gas emissions and water intensity, improved safety metrics, and a growing focus on giving back to its workers and communities.

More information is available on Capital IQ in the ESG Evaluation titled: “Southwire Co. LLC”



Ratings Updates

Channel Link Enterprises Finance

On October 20, 2020, S&P Global Ratings lowered the debt issued by Channel Link Enterprises Finance PLC (CLEF), the financing vehicle for companies within the Eurotunnel Holding SAS group, by one notch to 'BBB' from 'BBB+'.

Cross border rail traffic has been more severely hit than we previously anticipated, on the back of mobility restrictions, quarantine measures, and fewer business passengers. The severe drop in Eurostar passengers using the Eurotunnel connecting France and the U.K. combined with uncertainties over the pace of traffic recovery led us to revise our traffic and yield assumptions for CLEF. We have therefore revised our assumption on Eurostar's passengers, and we now consider that they could drop by 75% in 2020, compared with 40% previously. We now also expect passenger traffic will remain 35%-40% below pre-pandemic levels next year. As a result, though the fall is partially offset by higher yields from cars and trucks, we estimate that the project's annual debt service coverage ratio (ADSCR) could fall to 1.10x in December 2020 from the 1.20x we previously expected.

The negative outlook on the issue ratings reflects the uncertain pace, timing, and shape of the traffic recovery through the Eurotunnel due to COVID-19 restrictions and potential effects from any operational disruption related to Brexit.

More information can be found on Capital IQ in the ratings updates titled: "Channel Link Enterprises Finance PLC Debt Downgraded To 'BBB' On Harsher Eurostar Passenger Decline; Outlook Negative"

FirstEnergy Corp.

On Nov. 24, we downgraded First Energy's ratings To 'BB', after having been lowered to 'BB+' from 'BBB' on Oct. 31st, reflecting ineffective internal controls.

The one notch further downgrade follows the company's decision to significantly increase its borrowings under its revolving credit facility: although it demonstrates prudent risk management given the unique challenges the company is facing, in our view, it is also an acknowledgement that the company may not have consistent access to the capital markets.

This action follows the October 2020 double-notch downgrade of our ratings on FE following the termination of company CEO Chuck Jones and two other executives for violating company policies and its code of conduct. We believe these violations at the highest level of the company are demonstrative of insufficient internal controls and a cultural weakness. We view the severity of these

violations as significantly outside of industry norms and, in our view, they represent a material deficiency in the company's governance.

We continue to monitor the U.S. government criminal complaint against the Speaker of the Ohio House of Representatives and four associates for participating in an approximately \$60 million racketeering scheme. Although FirstEnergy has not been named as a defendant in the criminal complaint, we believe the allegation that bribery payments began as early as March 2017, prior to Energy Harbor's emergence from bankruptcy under its new ownership, could possibly implicate FirstEnergy.

More information can be found on Capital IQ in the ratings updates titled: "FirstEnergy Corp. Downgraded To 'BB' On About \$2 Billion Revolver Borrowing; Company Remains On CreditWatch Negative"

California-based utilities

On September 16, 2020, we revised the outlooks to negative from stable on three California-based utilities: San Diego Gas & Electric Co.; Edison International and subsidiary Southern California Edison Co. (SCE); and PG&E Corp. and subsidiary Pacific Gas & Electric Co. (Pac Gas).

The revision came due to unprecedented wildfire activity throughout California at the beginning of the wildfire season which, in our view, could be indicative of a worsening environment that is more susceptible to frequent wildfires. This could increase the probability that a California-based, investor-owned electric utility causes a catastrophic wildfire at a more regular occurrence than our prior base case assumptions. These deteriorating conditions may also adversely affect these utilities in effectively managing regulatory risk.

The negative outlook reflects the evidence of accelerated catastrophic wildfires. Although AB 1054 establishes a wildfire fund that reduces much of the credit risk exposure associated with California's interpretation of the legal doctrine of inverse condemnation – whereby a California utility can be financially responsible for a wildfire if its facilities were a contributing cause of a wildfire, regardless of its negligence – the fund does not automatically replenish. Every catastrophic wildfire caused by an investor-

owned electric utility reduces the size of the fund. The evidence of wildfire acceleration in just the very beginning of this wildfire season could, in our view, increase the probability of a California investor-owned utility causing a catastrophic wildfire, depleting the wildfire fund sooner than expected.

Managing regulatory risk could become more challenging for California's utilities, in our view. Many of California's electric customers have already faced rolling blackouts in 2020 due to the extraordinary hot weather and we expect the pace of public safety power shut-offs to accelerate, reflecting California's utilities proactively reducing the risk of causing a catastrophic wildfire. Should the frequency of these blackouts and shut-offs increase, frustrated customers and politicians could negatively affect California's investor-owned electric utilities ability to consistently manage regulatory risk.

More information can be found on Capital IQ in the ratings updates titled: "Edison International And Subsidiary Outlooks Revised To Negative On Adverse Wildfire Conditions; 'BBB' Ratings Affirmed"; "PG&E Corp. And Subsidiary Outlooks Revised To Negative On Adverse Wildfire Conditions; 'BB-' Ratings Affirmed"; and "San Diego Gas & Electric Co. Outlook Revised To Negative On Adverse Wildfire Conditions; 'BBB+' Rating Affirmed"

Commercial

George Slavin
Sales - New York
+1-212-438-2629
george.slavin@spglobal.com

Jonathan Usdin
Sales - New York
+1-212-438-0154
jonathan.usdin@spglobal.com

Alberto Santos
Sales - LATAM
+1-212-438-2329
aj.santos@spglobal.com

Sandra Pereira
Sales - EMEA
+(44) 207-176-3746
sandra.pereira@spglobal.com

Mireille Barthez
Sales - EMEA
+(33) 1-4075-2528
mireille.barthez@spglobal.com

Denis O'Sullivan
Sales - APAC
+(852)-2533-3522
denis.osullivan@spglobal.com

Analytical

Andreas Kindahl
Global Head of Corporate & Infrastructure Ratings
+(46) 8-440-5907
andreas.kindahl@spglobal.com

Global Research
Karl Nietvelt
Head of Global Infrastructure & Utilities Research
+(33) 1-44 20-67-51
karl.nietvelt@spglobal.com

Ben MacDonald
Head of Global Project Finance Research
+1-303-721-4723
ben.macdonald@spglobal.com

Sustainable Finance

Michael Wilkins
Global Head of Sustainable Finance Research - London
+(44) 20-7176-3528
mike.wilkins@spglobal.com

Corinne Bendersky
Americas Sustainable Finance Analytical Coordinator
+1-415-371-5091
corinne.bendersky@spglobal.com

Beth Burks
EMEA Sustainable Finance Analytical Coordinator
+(44) 207-176-9829
beth.burks@spglobal.com

Jesus Palacios
Latin America Sustainable Finance Analytical Coordinator
+(52)-55-5081-2872
jesus.palacios@spglobal.com

Bertrand Jabouley
APAC Sustainable Finance Analytical Coordinator
+(65) 6239 6303
bertrand.jabouley@spglobal.com

North America

Anne Selting
Head of North America Transportation & P3s
+1-415-371-5009
anne.selting@spglobal.com

Trevor d'Olier-Lees
P3s & Renewable Energy
+1-212-438-7985
trevor.dolier-lees@spglobal.com

Dhaval Shah
Canadian Infrastructure - Toronto
+1-416-507-3272
dhaval.shah@spglobal.com

Mike Grande
North America Midstream
+1-212-438-2242
mike.grande@spglobal.com

Simon White
Head of North America Energy
+1-212-438-7551
simon.white@spglobal.com

Aneesh Prabhu
North America Energy & Power
+1-212-438-1285
aneesh.prabhu@spglobal.com

Kyle Loughlin
Head of North America Utilities
+1-212-438-7804
kyle.loughlin@spglobal.com

Gabe Grosberg
North America Utilities
+1-212-438-6043
gabe.grosberg@spglobal.com

EMEA

Pablo Lutereau
Head of EMEA Infrastructure & Project Finance
+(34) 91-423-3204
pablo.lutereau@spglobal.com

Tania Tsoneva
EMEA Transportation Infrastructure
+(353) 1-568-0611
tania.tsoneva@spglobal.com

Michele Sindico
EMEA Project Finance
+ (46) 8440- 59- 37
michele.sindico@spglobal.com

Beatrice de Taisne
EMEA Utilities
+(44) 207-176-3938
beatrice.de.taisne@spglobal.com

Pierre Georges
EMEA Utilities
+ (33) 1-44 20 67 35
pierre.georges@spglobal.com

Latin America

Candela Macchi
Head of LATAM Infrastructure & Utilities - Buenos Aires
+ (54) 11-4891-2110
candela.macchi@spglobal.com

Julyana Yokota
LATAM Infrastructure & Utilities - Sao Paulo
+(55) 11-3039-9731
julyana.yokota@spglobal.com

Daniel Castineyra
LATAM Infrastructure & Utilities - Mexico
+(52) 55-5081-4497
daniel.castineyra@spglobal.com

Asia-Pacific

Richard Langberg
APAC Infrastructure & Utilities - Hong Kong
+(852) 2533-3516
richard.langberg@spglobal.com

Gloria Lu
Greater China Infrastructure - Hong Kong
+(852) 2533-3596
gloria.lu@spglobal.com

Abhishek Dangra
South East Asia Infrastructure & Utilities - Singapore
+(65) 6216-1121
abhishek.dangra@spglobal.com

Parvathy Iyer
Australia Infrastructure - Melbourne
+(61) 3-9631-2034
parvathy.iyer@spglobal.com

Richard Timbs
Australia Infrastructure & Utilities - Sydney
+(61) 2-9255-9824
richard.timbs@spglobal.com

S&P Global Ratings
20 Canada Square
London, E14 5LH
United Kingdom

www.spglobal.com

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