The Green Bond:
Your insight into sustainable finance

22 July 2021

In this issue
Green regulation takes shape

Letter to the reader

Where Green Bonds used to lead the Sustainability Debt agenda - Sustainability is now about to go mainstream across regions, sectors and products. It has been just under 10 years since the first institutional investors started to place allocation focus on the area, and almost 13 years since they first dipped their toes into the topic with their initial investments from their core benchmark portfolios – and today, raising cash in the broader financial markets without sustainability disclosure, targets, and commitment, seems increasingly challenging, to express it mildly. With such speed, certain areas might be forgotten and the experience of the past might suffer for the sake of the vision of the future - and indeed, the speed this time is also raising questions around our systems and approaches.

The first leaders in this growth have been public institutions that have used their public mandate to change the private sectors horizon on risk and appreciation of the broader societal return. Institutions like The World Bank, EIB, The IFC, The AFDB, The NIB, KFW, The EBRD, The EDC, KEXIM, The ADB, NWB, Kommunekredit, Kommuninvest, KBN, Munifin, and many more, have driven this market. They have since long institutionalized the governance protocols to ensure compliance and assure high quality. However, now, when the private sector enters sustainability finance without sustainability routed into their financial due diligence and communication, the requirements for disclosure and systemized integration obviously change character. It might be time to address guidelines and regulations to avoid a ”one size fit all” situation – after all, we have spent a lot of energy and a lot of thought on building our institutions and giving them their mandate.

Another challenge presents itself in the way we match global compliance with regional approaches. When we all come from different places and have our ”own” challenges that need to be addressed in order gain support for domestic engagement – can and should the pathway be the same for all countries or can we move faster by allowing flexibility within a set goal and common frame? After all, it is common sense that few problems are solved without the owner of a challenge taking active part in the development of a solution. Discussions with institutional investors over the last couple of months have indicated that some of them are looking at re-allocation across their portfolios and fear that it could result in social damage, especially in lower income countries. So, a question that arises is: which frame can we provide to support (in this case) lower income countries to win on this transition and thereby support the transition – and can we once more rely on the development banks to guide us?

In this publication we have a reflection on the news from the EU and input from NASDAQ on how the Stock Exchange can support Green and Transition portfolios with increased disclosure. Lastly - but probably most importantly - a note from the G20 SFWG meeting in May which provides insight into the Global Agenda.

Enjoy your reading and your summer!

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Transition update

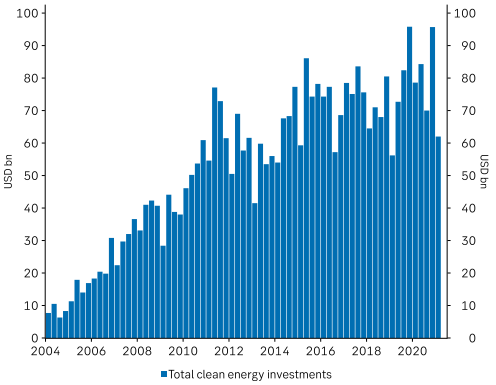
Approaching lift-off

We are now halfway through 2021 and evidence of a climate crisis keeps mounting in the shape of record high temperatures, droughts, wildfires and flooding. However, when it comes to the transition effort, the first half of the year has been a setback, most likely affected by Covid-19 related restrictions and other short-term effects of the pandemic. Nonetheless we remain optimistic about the chance to decarbonise the economy in time to avert a full-blown climate disaster over the next three decades. The political commitment will just keep getting stronger as the adverse effects become clearer and the key technologies required for transition are just about to reach the point where they start scaling for real. The coming years are thus likely to see a surge in investment alongside a continued improvement in the efficiency of zero-emission technologies.

Renewable investment remains too low

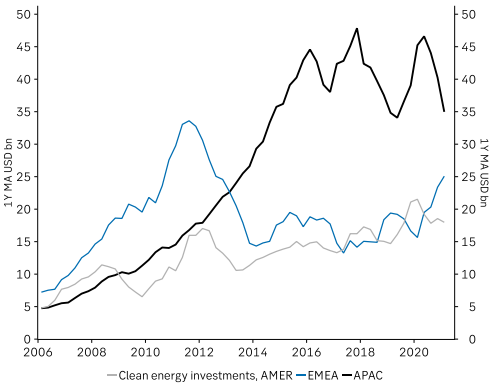
Global investments in clean energy has declined by roughly 25% in Q1 2021 compared with the quarterly average for 2020. The three major regions all saw a decline, but it was most pronounced in Asia where investment in Q1 was 50% below the peak from Q4 2019 just before the pandemic started. Looking ahead the political commitment to public investment in renewable energy remains strong in the large Western economies, and with the full reopening underway priorities are likely to shift back to long term objectives. However, in low income economies where vaccines are not affordable, the pandemic shock is likely to linger and limit the potential for diverting public funds away from short-term damage control. This is likely to be a major challenge for the transition, as developing economies generally have more energy intensive production models.

Figure 1: Global clean energy investments, USD bn



Source: BNEF

Figure 2: Regional distribution of global clean energy investments, USD bn



Source: BNEF

On a rolling Q4 basis, Europe has been picking up since the start of 2020 while Asia has been slowing and the US has moved sideways. At first glance this is a disappointment as we continue to expect investments to ramp up in accordance with stated political objectives to reduce emissions.

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As the pandemic continues to influence economic activity and Q1 saw a renewed focus on suppressing the spread of the virus, it is likely that these numbers will turn out to be an aberration in an otherwise strong trend. However, there is also a risk that the protracted slowdown in low- and middle-income economies in e.g. Asia will divert public sector spending towards other issues, also after the immediate threat from the pandemic has peaked. Over the past decade, Asia has contributed as much as Europe and America combined to global clean energy investment. If the hope of a global investment surge is to be realized, then Asia and the Americas will need to show the same kind of improvement as seen in Europe.

Europe still leads in renewable diffusion

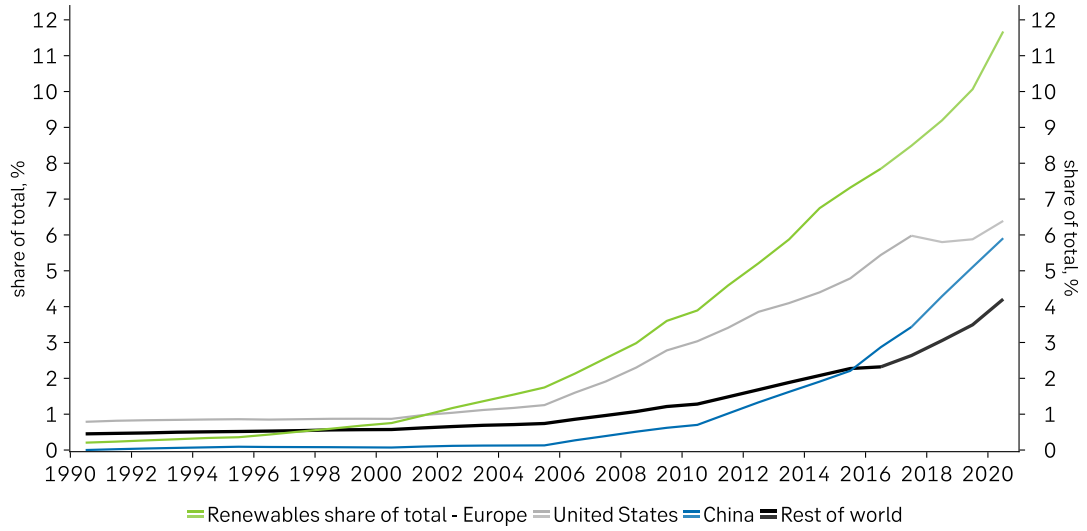
Europe's leadership is also evident in renewable energy share of total primary energy consumption i.e. not just electricity production but all types of energy. According to the latest data from BP, Europe reached a staggering 11.7% already in 2020, at a time where the similar ratio in the US was 6.3% and in China just 5.9%. With Europe also looking more aggressive on the capital expenditure side the gap is unlikely to be closed anytime soon. It is more even between US and China, where the latter has been catching up during the Trump administration.

With both China and the US committed to full decarbonization the intentions are in place and President Biden's infrastructure plan, which is likely to be passed after the summer, could be the kick starter for a new technology race between the two geopolitical rivals. However, the real challenge from a global perspective could well be outside the three main economic leaders. The global renewable share remains well below the average of the major economies, implying that the rest of the world which consumes 45% of all primary energy produced is only at 4% and rising much more slowly. Global warming is exactly what it says on the label: global and shifting emissions to other parts of the world economy is not a solution. Thus, raising capital for an accelerated transition outside the major economies should be an important objective also for the leading economies.

Autos provide transition test case

As we have pointed out in previous editions of this publication, a successful decarbonization of the global economic system depends not only on a rising supply of clean energy, it is at least as important that a transformation takes place among energy users simultaneously with the expansion of clean energy supply. Energy is deeply embedded in most capital equipment and replacing the primary source will typically require replacing the entire capital stock to get the full benefit of the new and improved technology. It also requires alignment across the supply chain to ensure that all factors required for transition are in place at the same time.

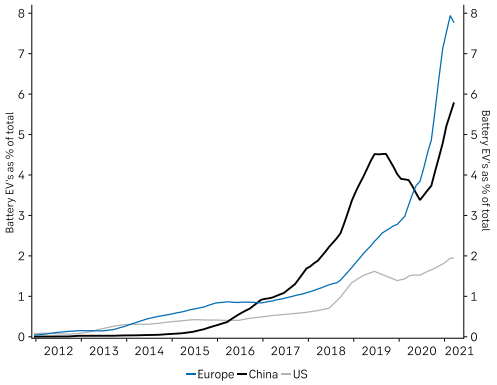
Figure 3: Renewables share of total global energy consumption



Source: BP

As of now autos are the only energy using sector where the technology is ready and competitive. R&D and electrification started earlier than in other fossil using industries with the original hybrid, the Toyota Prius, entering the market already in 1997 and the embryonic EV, the Tesla model S, currently celebrating its 10-year anniversary. All through this process learning curve effects similar to those seen for microprocessors or solar panels have been at work in battery technology, allowing EVs to overcome the major constraints of limited range and long fueling times to the extent that they now offer similar performance at a lower cost than fossil fuel vehicles. Based on historical technology diffusion experiences, this performance gap is likely to continue widening in favour of EVs for at least another 10-20 years.

Figure 4: Battery EVs across regions

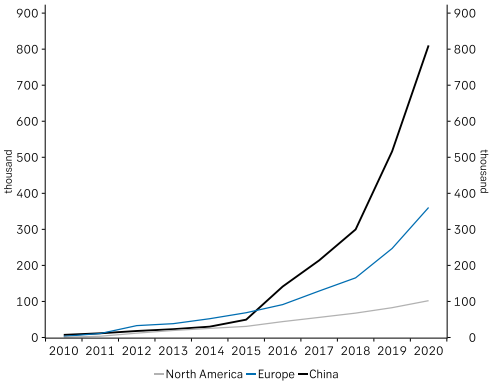


Source: BNEF

The auto sector will thus serve as the test case for how transition is likely to proceed, and demand really does appear to be taking off on an exponential scale. As a share of all vehicles sold, EVs have reached almost 8% in Europe, a quadrupling in just three years. China's EV sales share has finally broken above the level from before subsidies were phased out in 2019 and is now close to 6%, tripling in four years. Only in the US is there still no concrete evidence of similar exponential trends with the share stuck at just 2%, which is perhaps paradoxical since US based Tesla remains the world's dominant EV producer. This may be due to longer range requirements for US car buyers, which makes the range hurdle most significant but with all major US car manufacturers rolling out new EV models in 2021, we still expect the US to start catching up.

However, in terms of sheer size China's EV market remains by far the largest with sales of close to 1.3 million vehicles over the past year compared to 0.7 million in Europe and a measly 0.3 million in the US. Over time history suggests this is likely to work in favour of EV producers in China and Europe as learning curve effects tend to be concentrated where the use of the new technology is highest.

Figure 5: Public charging stations



Source: BNEF

Moreover, the ultimate speed of the transition to a zero-emission transportation system will not only depend on how fast you can produce the vehicles. Once again, the entire value chain must transition at the same time, and one key parameter is likely to be access to charging points which could otherwise be a major bottleneck. In this area China is also the world leader in terms of pure scale with 800,000 of the world's 1,4 million public charging stations in 2020. Europe had 360,000 and the US just 100,000 public charging stations in the same year. Over time a shortage of charging stations is likely to limit the diffusion of EVs outside China if investments do not accelerate fast. The question is who will be responsible for funding this investment and how to ensure that global standards allow true scale effects by letting all vehicle makers use the same infrastructure. This is likely to require public investment alongside the huge investment that auto producers need to undertake to transform their product lines and factories.

This is in itself a daunting challenge, but autos are just one part of the broader transition. Other parts of the transportation system are not nearly as advanced in the technological development but over the next few years we expect to see the

first competitive prototypes emerge for zero-emission trucks and ships, and this is likely to trigger a compression of the time horizons similar to what happened in autos over the past two-three years. Once working prototypes are in operation, scale effects are likely to kick in and investment will pick up. Zero-emission steel production is also likely to become a reality within the next half decade. Cement production and aviation are areas where technological solutions are likely to be somewhat more distant, but also here there are indications that solutions will start to emerge before the end of the decade. Each of these sectors will have to solve the same kind of coordination problem across the value chain that auto producers are struggling with today, aligning developments in the supply of clean energy with transmission, storage and new electrified equipment to make sure all necessary parts of the new value chain become available exactly when needed.

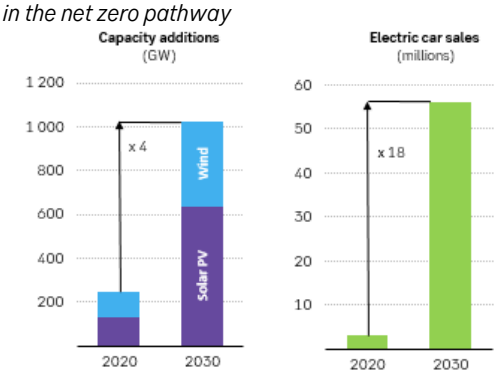
Why are we still optimistic?

Despite impressive technological progress it remains very early days for the transition and CO_2 emissions are likely to continue rising in the years to come. Even when new solutions become competitive it will take years before their share of the total production system will reach a meaningful level, because of limitations in the number of new ships, trucks or wind turbines we can produce in any given year.

So how come we still believe that a complete decarbonisation is still within reach by 2050? The main reason is that market participants and stakeholders always tend to underestimate the pace with which the transition to a new technology will take place when it is starting to emerge. The exponential pace of improvement that is core to the 30-30-30 model of technology diffusion which we have described in previous issues of The Green Bond, is too difficult to grasp for human minds accustomed to linear thinking. As a result, expected time horizons tend to collapse when the exponential volume gains reach the point where macro effects start to emerge, but even after that point is reached, the price declines and performance improvements tend to confound contemporary onlookers in every revolution. The development of renewable energy looks no different so far.

Most energy experts have thus systematically and significantly underestimated the pace of diffusion and the decline in the cost of solar and wind power – until now. In their latest report titled "Net Zero by 2050"[1], the International Energy Association (IEA) have thus made very significant changes to the expected pace of diffusion and embraced the possibility of meeting the Paris Agreement targets even while acknowledging that it will require significant effort. The report in effect presents a reverse engineered zero emission scenario and identify what needs to happen over the coming decade to keep the net zero pathway open.

Figure 6: Key clean technologies ramp up by 2030 in the net zero pathway

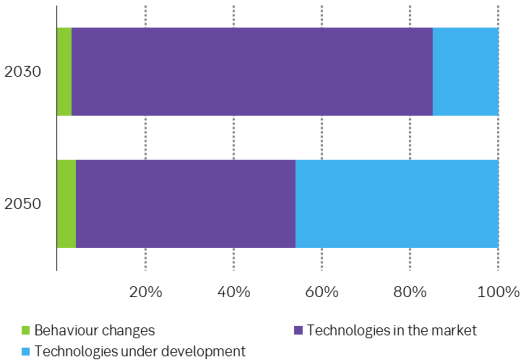


Source: International Energy Agency (2021), Net Zero by 2050, IEA, Paris

The IEA estimates suggest that it will require enormous changes. The annual increase in the supply of renewable energy will have to be quadrupled by 2030 to a level of more than 1000 GW per year, and sales of EVs will have to rise by a factor of 18 to an annual level of 55 million units, 60% of world car sales in the same year.

[1] Net Zero by 2050 – Analysis - IEA

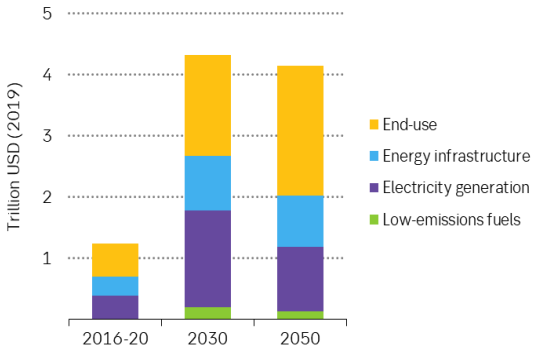
Figure 7: Annual CO_2 emissions savings in the net zero pathway, relative to 2020



Source: International Energy Agency (2021), Net Zero by 2050, IEA, Paris

The IEA also acknowledges that even these major investments will ultimately be insufficient without major technological improvements. Existing technologies and behavioural changes are responsible for almost 90% of the CO_2 reductions in the coming decade in the net zero pathway scenario. However, if you extend the time horizon to 2050, almost 50% of the total reduction in emissions will have to come from technologies that are under development and not in the market yet. According to the IEA, this means that substantial public and private R&D spending is needed in critical areas such as electrification, hydrogen, bioenergy and carbon capture, utilization and storage (CCUS).

Figure 8: Clean energy investment in the net zero pathway



Source: International Energy Agency (2021), Net Zero by 2050, IEA, Paris

In total the IEA estimates that annual investments in clean energy value chains will have to be ramped up from just above 1 trillion USD to more than 4 trillion USD by 2030 and largely maintain that level for the next two decades. More than 50% should be allocated directly to energy infrastructure and electricity generation, but ultimately investment in end-use will have to increase from less than 0.5 trillion to more than 2 trillion dollars annually. In our view, the direct investment in energy infrastructure is likely to be facilitated by governments but the end-use investment will likely to have a larger private sector involvement, which will be a massive challenge for capital markets.

These conclusions are not very different from what our own analysis had suggested by that fact that widely used and respected institutions embrace the practical possibility of a transition to a zero-emission economy, marks a sea change in the policy environment, lifting transition investment from hypothetical discussion to concrete policy initiative.

Sustainable Debt Market update

Sustainable finance eclipses 2020 record after only six months

Q2 2021 update

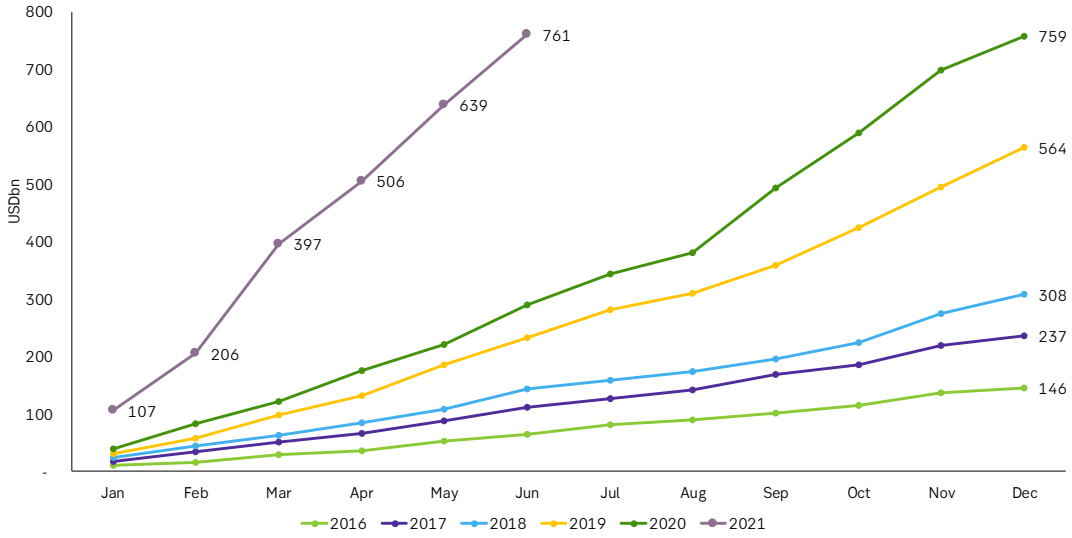
Note on data: Due to an ongoing update of the Bloomberg New Energy Finance database, information presented in the market update comes from Bloomberg New Energy Finance (until 7 June 2021) and the Bloomberg Terminal (until 30 June).

The sustainable debt market goes from strength to strength in the second quarter of 2021 as new issuances almost reach the record set in Q1. With USD 761bn issued in the first six months of this year, the sustainable debt market has already surpassed total issuances of achieved in 2020 (USD 759bn)[2]. Total sustainable bond issuance amounted to USD 569bn in the first half of 2021, exceeding the total issuance in all of 2020 and supporting our issuance forecast of close to USD 1.2trn for the full year of 2021.

Sustainability-linked bond issuance keeps growing at a rapid pace and has more than doubled compared to Q1. The total for 2021 so far is almost four times higher than that of the entire 2020. Similarly, the amount of sustainability-linked loans this year (USD 86.4bn Q1 resp. USD 84.1bn Q2) has already surpassed the total for 2020. These number show that the market for performance-based debt is quickly gathering momentum driven by borrowers and banks' confidence in sustainability-linked products.

Use of Proceeds issuance also continues its growth streak although in a less dramatic fashion. Total issuances of green, sustainability, and social bonds and loans totalled over USD 248bn in Q2 of 2021. This is under Q1 (USD 298bn) but 77% more than in Q2 of 2020. Total issuances in H1 (USD 547bn) are almost at the level of total issuance in 2020 (USD 615bn). The continued growth in use of green bonds and loans also refute the notion that there is a zero-sum game between use of proceeds and performance-based products in the sustainable debt market.

Figure 9: Cumulative annual sustainable debt financing



Sources: Bloomberg New Energy Finance and Bloomberg Terminal

[2] Please note that we use the term issuance to describe both bonds and loans.

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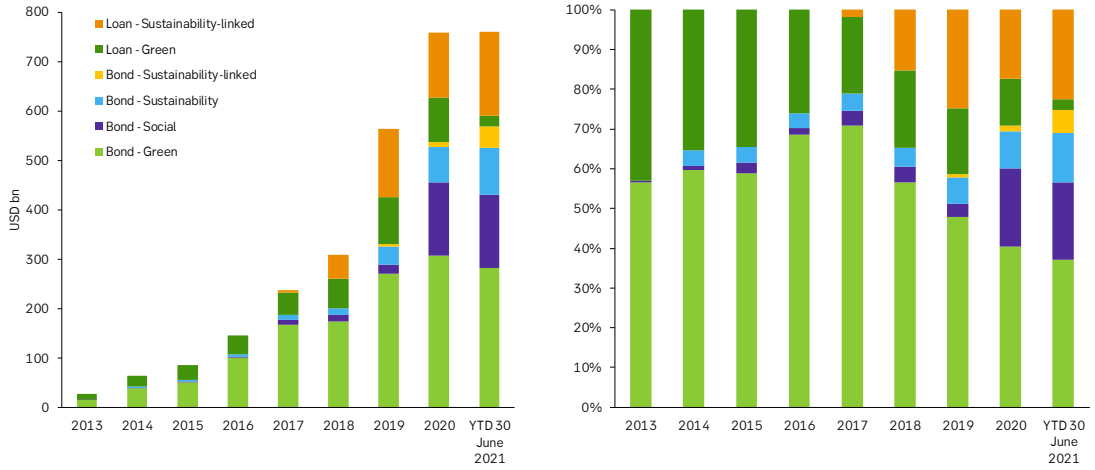
Figure 10: Sustainable debt financing growth by product type

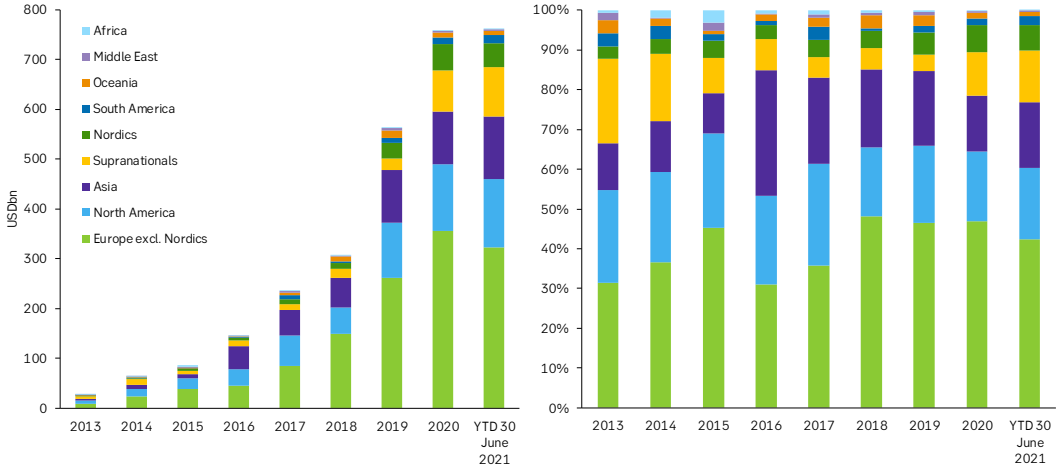


Sources: Bloomberg New Energy Finance and Bloomberg Terminal

Regional update

Europe excl. Nordics remain the largest region for sustainable debt by margin in Q2, with a total of USD 162bn of labelled bonds and loans issued (USD 323bn YTD). France continues to lead the way in Europe and accounts for USD 46.8bn in Q2. Germany accounts for USD 29.5bn, Netherlands for USD 13.8bn and Italy for USD 12.9bn. The European sustainable debt market stands out comparing to Asia (USD 69.2bn) and North America (USD 68.4bn). The Nordic region does very well despite its size at USD 23.6bn in Q2, where Sweden stands out at USD 12.2bn.

Figure 11: Sustainable debt financing growth by region[3]



Sources: Bloomberg New Energy Finance and Bloomberg Terminal

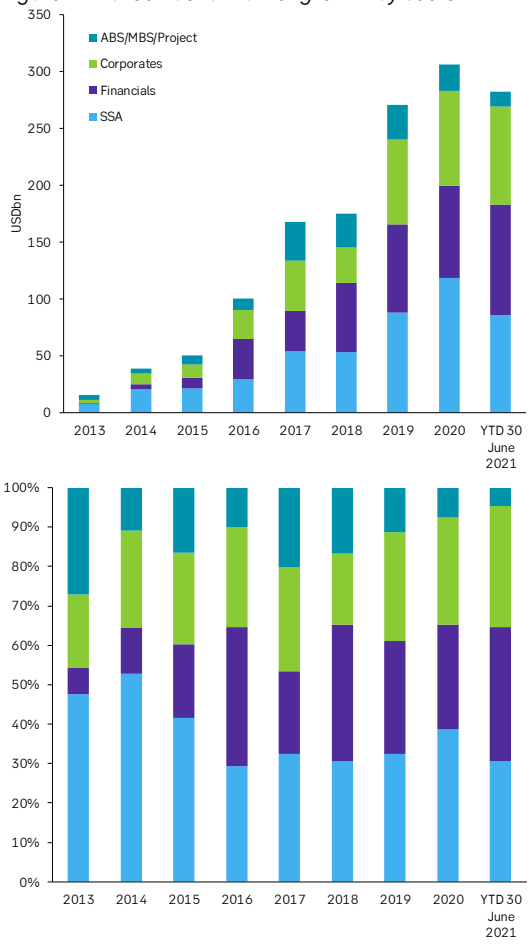
[3] Please note that in proceeding editions of the Green Bond Report, this graph erroneously included sustainability-linked loans and bonds. This error has now been rectified.

Use of proceeds

Green Bonds

A total of USD 130bn of green bonds have been issued in Q2. This is down 14% from the record setting USD 152bn issued in Q1, but still almost double the value of green bonds issued in Q2 last year. The tally of green bonds issued in the first six months of 2021 is only 8% short of the total amount issued in 2020. This should put to rest some of the concerns that a diminishing "greenium" effect is putting a dent in the green bond market[4].

Figure 12: Green bond market growth by sector



Sources: Bloomberg New Energy Finance and Bloomberg Terminal

Growth in Q2 was primarily driven by the financial sector which issued more than USD 50bn green bonds. This is above Q1 (USD 46bn) and up a staggering 190% compared to the same quarter of last year. The largest financial bond issuance was a EUR 1.25bn (USD 1.84bn) inaugural covered green bond of French bank Groupe BPCE to refinance the purchase of energy efficient housing projects. The podium place for the second largest green bond issuance in Q2 is shared between Swedbank and Westbank, each issuing bonds worth USD 1.2bn.

Corporate issuances of green bonds stagnated in Q2 compared to Q1. However, the USD 42bn in green bonds that have been issued by companies between April and June this year is still almost double the amount issued in Q2 of 2020. The largest issuance comes from a triple-tranche EUR 1.8bn (USD 2.2bn) bond by electricity transmission operator TenneT. A green bond of USD 1.5bn by utility company NextEra Energy was the second largest issuance in Q2. Virgin Media O2's issued the third largest green bond worth GBP 1.1bn (USD 1.4bn) in Q2. This transaction follows the growing trend of ICT companies entering the sustainable debt market in force.

Green bond issuances from sovereigns and supranational agencies accumulated to a total of USD 35bn which is USD 15bn below Q1 numbers but still almost USD 10bn up compared to Q2 last year. The largest issuance came from Germany, with the Federal Government issuing a EUR 6bn (USD 7.3bn) with a 30-year tenure and 2 basis points below its conventional twin, the biggest green premium Germany has so far secured at issuance[5].

Going forward, growth in green bonds will likely accelerate further as the EU readies to issue green bonds to finance member states' recently approved recovery and resilience plans under the bloc's NextGenerationEU Covid-19 recovery plan. According to an investor call published in June, the EU expects to issue up to EUR 250bn in green bonds in the coming years to fulfill its commitment to spend 30% of Covid-19 recovery funds on climate action[6].

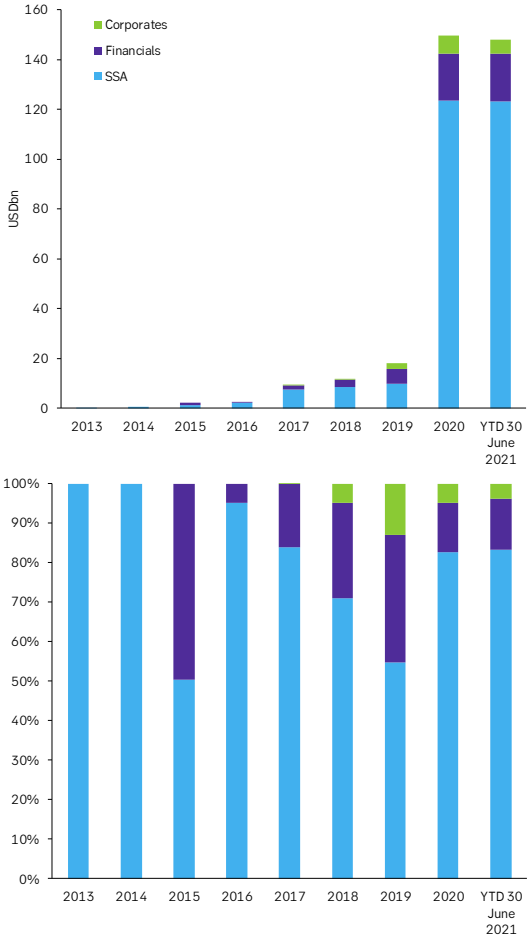
Finally, the market for asset or mortgage-backed green bonds declined noticeably to USD 2.2bn. This is down both compared to Q1 (USD 11bn) and Q2 of 2020 (USD 3.2bn). This lack of growth can be explained by smaller issuances by the largest actor in this market segment, Fannie Mae.

[4] Will the waning 'greenium' kill the green bond market? (responsible-investor.com)
[5] German 30-yr green bond bucks market selloff with record demand | Reuters
[6] gic_slides_08062021.pdf (europa.eu)

Social Bonds

Amid the outbreak of the Covid-19 pandemic, the market for social bonds grew more than eight-times between 2019 and 2020. As expected, growth has slowed downed in 2021, and total issuances of social bonds in Q2 stood at USD 53bn, down from USD 95 bn in Q1, but still up 78% compared to the same quarter last year. Looking at YTD numbers, the market of social bonds in 2021 has almost exceeded total issuances in 2020.

Figure 13: Social bond market growth by sector



Sources: Bloomberg New Energy Finance and Bloomberg Terminal

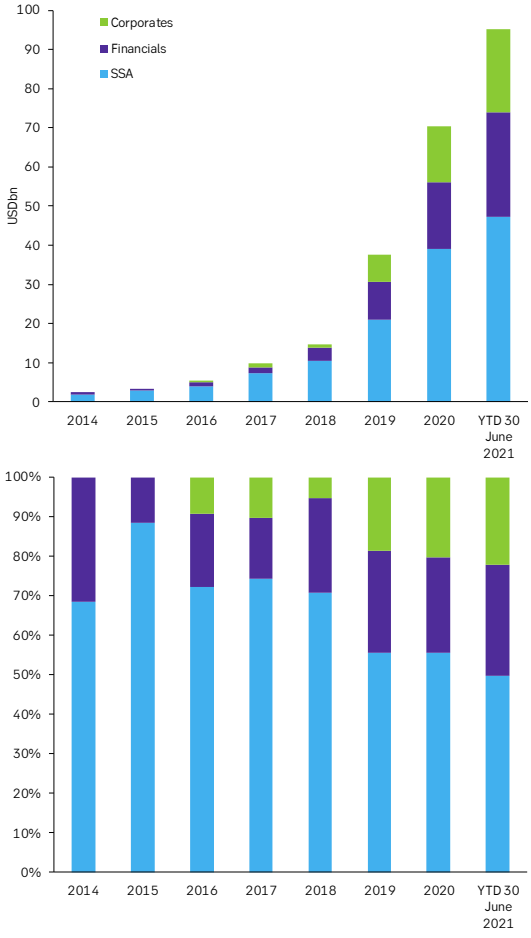
SSA continue to be largest sector at USD 41bn. While the European Union continues to lead the scoreboard when it comes to the largest issuances, the total amount of social bonds issued by the bloc fell from five issuances worth USD 43.1bn in Q1 to two issuances worth USD 17,28bn in Q2. Decline in the amount of social bonds issue by the EU is another indicator that among European policy makers attention is shifting from immediate crises management towards economic recovery.

Sustainability Bonds

In Q2, more than USD 55bn of sustainability bonds have issued which is a new quarterly record for the smallest segment of the use of proceeds market. Due to this bumper performance, total issuances of sustainability bonds have already exceeded last years total by more than 35%. The International Bank for Reconstruction and Development was the largest issuer in Q2 with ten bonds at a total of USD 11.5bn, followed by the Asian Development Bank with seven deals at USD 4.2bn.

The diversity of the market has also increased with the share of financials and corporates increasing although SSA continue to make up the plurality of market. On the corporate side, the largest issuances of USD 1bn came from Amazon which will use the proceeds to invest in renewable energy, clean transport, energy efficient buildings and affordable housing. Among financials, Wells Fargo issued the largest sustainability bond in Q2 at USD 1bn.

Figure 14: Sustainability bond market growth by sector



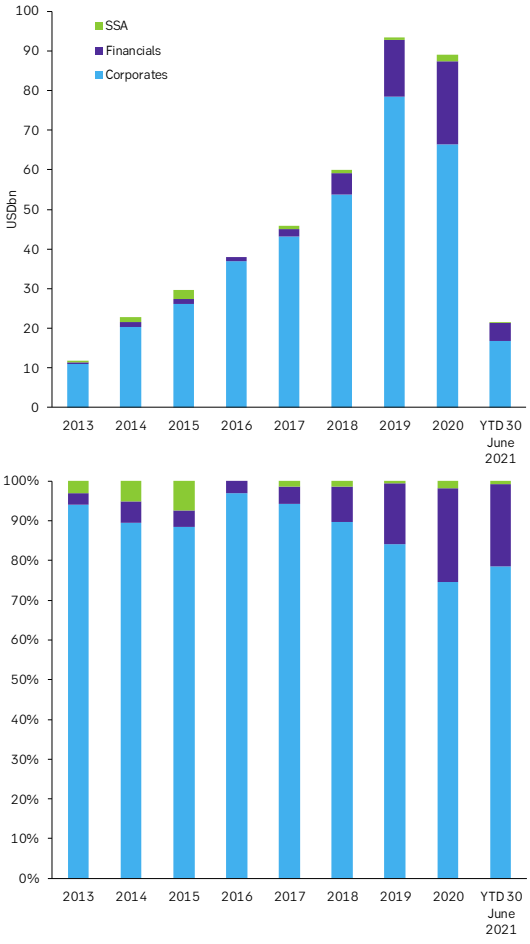
Sources: Bloomberg New Energy Finance and Bloomberg Terminal

Green Loans

Note on data: The green loan market is a private market with limited access to information. We use the loans listed in the Bloomberg Terminal and Bloomberg New Energy Finance which we think provides a good reflection of the overall market.

A total of USD 9.3bn of green loans have been recorded by Bloomberg in Q2. This is down from USD 12bn in Q1 and USD 26bn in Q2 of last year. The largest green loan was a USD 1.25bn loan from Southern California Edison. Given the strong growth in sustainability-linked loans (see below), data suggests that lenders are increasingly finding performance-based financing more attractive than use of proceed loans.

Figure 15: Green loan market growth by sector



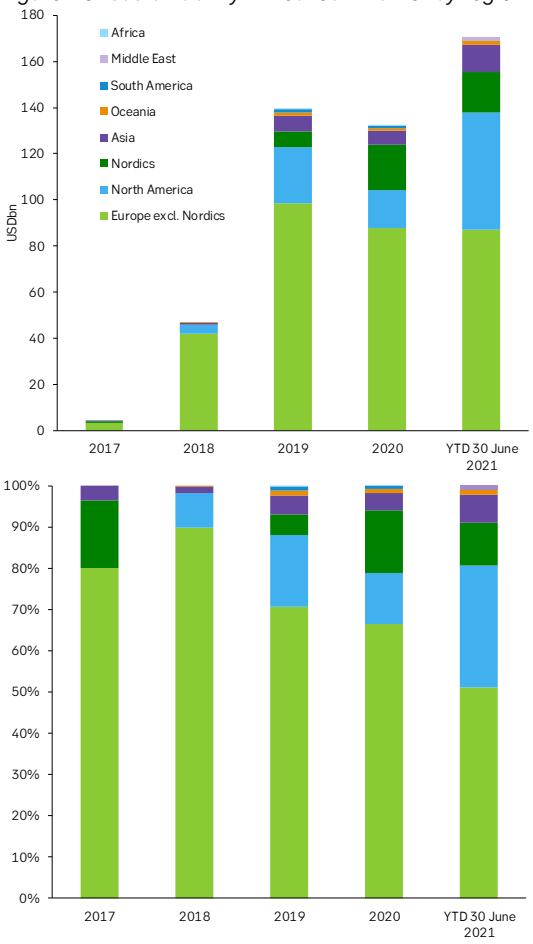
Sources: Bloomberg New Energy Finance and Bloomberg Terminal

Performance-based

Sustainability-linked loans (SLL)

Note on data: The sustainability-linked loan market, whereby the loan margin is typically linked to a set of targets or an ESG score, is a private market with limited access to information. We use the loans listed in Bloomberg New Energy Finance or from the Bloomberg sustainability-linked league table, which we think provides a good reflection of the overall market.

Figure 16: Sustainability-linked loan market by region



Sources: Bloomberg New Energy Finance and Bloomberg Terminal

Sustainability-linked loans (SLL) are primarily in the form of revolving credit facilities or term loan facilities provided to corporations in a wide range of sectors. In Q2 2021, performance-based loans totaled USD 84bn, almost equally the record setting result of Q1 (USD 86bn). Compared to Q2 of 2020, the market for sustainability-linked loans has tripled. Taking the first two quarters of 2021 together, performance-based loans stand at USD

170.6bn, having already eclipsed last year's numbers by almost 30%.

The largest SLL in Q2 came in the form of an amended USD 5.5bn revolving credit facility of ArcelorMittal. Under the amended RCF[7] - the largest ESG linked facility of its kind in the metals and mining sector - the margin payable will be increased or decreased depending on ArcelorMittal's performance against the company's CO_2 intensity and the number of its facilities which have been certified by ResponsibleSteel™.

In June, an updated version of the Sustainability Linked Loan Principles (SLLP) came into force. Compared to the first version of principles, the SLLP now require a borrower to seek external verification of its performance against its Sustainability Performance Targets (SPT). Moreover, the updated SLLP also provided additional detail on what an "ambitious" SPT looks like, determining that targets should represent a "material improvement" that goes "beyond a business-as-usual trajectory".

Since the new principles took effect, the total amount of SLLs in the market has dropped from almost USD 19bn in May to USD 11bn in June. Time will tell how the strengthening of the SLLP will affect borrowing activities and if last month's decline is foreboding a permanent market cool off.

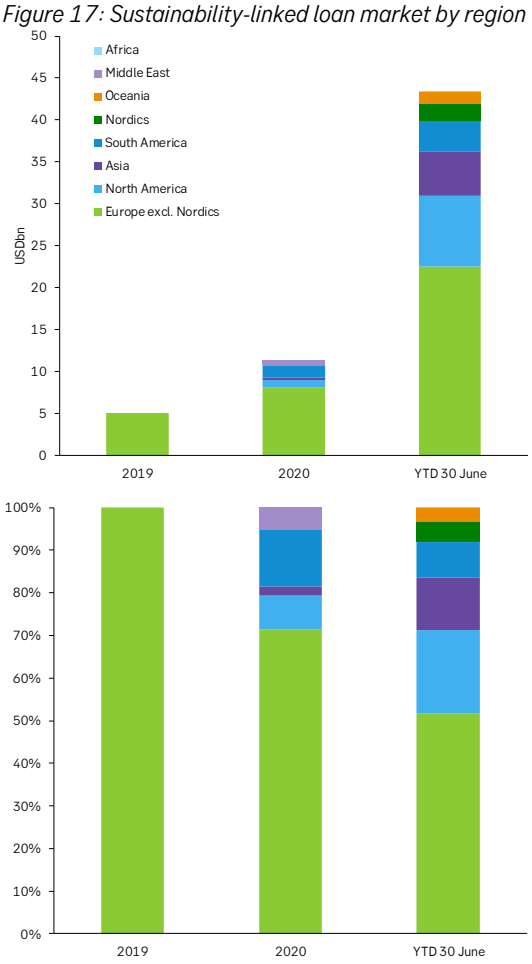
Sustainability-linked bonds (SLB)

So far 2021 a total of USD 43.4bn in sustainability-linked bonds have been issued, including USD 31.4bn in Q2 alone. With the market almost quadrupling compared to last year, sustainability-linked bonds are now firmly established in the sustainable debt market.

Data also suggests that the publication of the Sustainability Linked Bond Principles (SLBP) was pivotal for the observable growth in performance-based bonds. Since the launch of the SLBPs in June last year, USD 54bn or almost 90% of the total amount of SLB in the market have been issued.

Enel, which in September 2019 issued the first performance-based bond, was the largest issuer of SLBs in Q2 with three issuances totaling USD 3.9bn. The inaugural USD 1bn SLB by Enbridge, a company active in the Canadian oil sand industry, received considerable media attention and criticism[8] showing that the SLB market faces considerable challenges as it attracts more issuers from hard-to-abate industries.

Figure 17: Sustainability-linked loan market by region



Sources: Bloomberg New Energy Finance and Bloomberg Terminal

Currency analysis

Labeled bonds across all currencies stands for 2.7% of the entire market so far this year, up from 1.7% in 2020. For bonds issued in SEK 23% of all bonds issued so far 2021 carry a green, social, sustainability or sustainability-linked label, compared to 16.2% in 2020.

Share of labelled bonds of the total EUR dominated bond market also grew from 6.5% in 2020 to 11% in the first half of 2021. With the first issuance of green bonds on the EU's Covid-19 recovery plan looming, the share of sustainable labelled bonds in the EUR market is likely to grow even further in the second half of the year.

[7] ArcelorMittal amends US$5.5bn Revolving Credit Facility to align with its sustainability and climate action strategy | ArcelorMittal
[8] Energy Pipeline Sustainability-Linked Bond Plan Gets Mixed Reviews (wsj.com)

The strongest growth in terms of share of green, social, sustainability, and sustainability-linked bonds of the total bond market, however, can be seen in AUD and GBP. The share of labelled bonds has more than tripled in both currencies compared to last. JPY is the only market where the share of sustainable debt is trailing 2020.

Publicly Announced Green, Social, Sustainability and Sustainability-linked Bonds[9]

- The EU will share its green bond framework in late summer/early autumn and issuance to commence in the autumn.

- Turkish renewable energy company Aydem renewables has published a Green Financing Framework in preparation of selling a green bond in its debut international debt offering.

- DaFa Properties, a Chinese real estate China, has published its green financing framework ahead of raising funds through green bonds and loans.

[9] As of 19 July 2021

EU moves into regulatory top gear to achieve climate targets

Just before Brussels closed for a second summer season marred by the Covid-19 pandemic, the European Commission took decisive steps to further its climate and sustainability agenda set out in the European Green Deal[10].

On 14 July, the Commission published its *'Fit for 55 Package'* of far-reaching regulatory changes transforming the EU's economy and society to reduce net greenhouse gas emissions by at least 55% by 2030[11].

This package is an important step for implementing the European climate law adopted by Member states earlier this year[12] which sets a binding target of reducing net greenhouse gas emissions by at least 55% by the end of this decade on the way toward carbon neutrality in the EU by mid-century.

The 'Fit for 55 Package' includes a total of 14 proposals including a revision of the *Renewable Energy Directive (RED)*, a proposal for a new *Energy Efficiency Directive (EED)*, an overhaul of the *EU Emissions Trading System (EU ETS)*, and amendments to the *Energy Taxation Directive (ETD)*.

Furthermore, the 'Fit for 55 Package' also aims at keeping the promises made in the Green Deal of a just transition towards a net-zero economy and society by 2050.

In this article, we summarise some of the key regulatory changes that the Commission has proposed. We also comment on the background and potential impact of the Commission's proposals. Furthermore, we also point out some of the key challenges the Commission is likely to face in the upcoming negotiations with EU member states and the parliament to turn the 'Fit for 55 Package' into laws and regulations.

Emission trading and carbon leakage

To achieve the EU's 2030 climate target, the Commission proposes that sectors[13] included in the EU ETS will have to reduce their emissions by 61% by the end of the decade. On balance, the EU ETS has been relatively successful in reducing emissions even though the targeting of allowances has been found lacking[14]. To reach the new 2030 target, the Commission proposes a steeper annual emissions reduction of 4.2% (instead of 2.2% per year under the current system), following a one-off reduction of the overall emissions cap by 117 million allowances.

The Commission and experts agree that changes to the EU ETS will likely cause carbon prices in the EU to rise to between EUR 85-100 by 2030, up from around EUR 50 today[15].

Strengthening the EU ETS will likely increase the costs for energy-intensive industries. This could lead to 'carbon leakage' – i.e. companies based in the EU could move carbon-intensive production abroad to avoid higher costs. To address both risks and to safeguard European industry from imported goods with higher embedded emissions, the Commission has proposed the Carbon Boarder Adjustment Mechanism (CBAM).

The CBAM will mirror the EU ETS in the sense that the system is based on the purchase of certificates by importers. The price of the certificates will be calculated depending on the weekly average auction price of EU ETS allowances. Payment obligations for importers do not begin until 2026, following a transitional period and free allocations will be phased out gradually. The proposal by the Commission also sets out principles for considering a carbon price paid by importers in a third country.

Experts have hailed the CBAM as a "paradigm shift" because it signals that the Commission now believes in unilaterally imposing costs on other countries for

[10] A European Green Deal | European Commission (europa.eu)
[11] EU economy and society to meet climate ambitions (europa.eu)
[12] Council adopts European climate law - Consilium (europa.eu)
[13] Power sector, energy-intensive industry sectors including oil refineries, steel works, and production of iron, aluminium, metals, cement, lime, glass, ceramics, pulp, paper, cardboard, acids and bulk organic chemicals, as well as aviation and maritime sectors
[14] Special Report 18/2020: The EU's Emissions Trading System: free allocation of allowances needed better targeting (europa.eu)
[15] Analyst: EU carbon price on track to reach €90 by 2030 – EURACTIV.com

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not decarbonizing their industry[16]. Scientific evidence suggests that a robust carbon pricing framework with anti-carbon-leakage measures is needed to support deep decarbonization of industry facing global competition[17]. The challenge for the EU will be to ensure compliance of the CBAM with WTO rules and to avoid inciting a trade war with the US and China.

Energy taxation and renewable energy

The 'Fit for 55 Package' also proposes the removal of long-standing incentives for the use of fossil fuels as part of a comprehensive revision of the ETD. According to the Commission's proposal, the minimum tax rate of an energy type will be based on the energy content and environmental performance. This would make conventional fossil fuels (gas, oil, and petrol) increasingly expensive with a minimum tax rate of €10.75/GJ when used as motor fuel and €0.9/GJ when used for heating starting in 2023.

The Commission also plans to remove national exemptions and other incentives for the use of fossil energy and to include new sources of energy (e.g. kerosene and heavy oil for shipping) to the list of taxed fuels.

Furthermore, the revised ETD will also set fiscal incentives for renewable energy sources by applying to them a significantly lower minimum tax rate. Furthermore, the 'Fit for 55 Package' package also increases the level of ambition when it comes to the share of renewables in the EU. Proposed amendments to the RED will set an increased target to produce 40% of EU's energy from renewable sources by 2030. All Member States will contribute to this goal, and specific targets are proposed for renewable energy use in transport, heating and cooling, buildings, and industry.

The Commission does not only increase ambition levels for the use of renewable energy, it also aims to redefine what is considered as renewable energy sources. Throughout the document, one can see a promotion of renewable hydrogen as an energy source: it introduces an EU-wide certification of renewable hydrogen and links the RED directly to the EU Hydrogen Strategy.

The Commission has also taken action to address concerns about the impact of bioenergy on biodiversity and climate. Some scientists have raised questions about the carbon benefits of wood burning, arguing that emission from combusting trees for electricity or heat releases more emissions than coal or natural gas[18]. There is also the concern that if demand for renewable energy increases, woody biomass will be increasingly sourced from forests with high ecological value.

Under the amended RED, the Commission proposes stricter criteria on the production of wood biomass for energy but does not ban it entirely. The Commission plans to ban forest biomass in electricity-only installations from 2026 and require all biomass-based heat and power installations to comply with a minimum GHG savings threshold. Additionally, the Commission also wants to outlaw national subsidies for the burning of wood for energy and the sourcing of biomass in certain areas, such as primary or highly diverse forests and peatlands.

Additional restrictions on the use of biomass in energy production will come from the *EU's new Forestry Strategy* and the proposed revision of the *Regulation on the inclusion of greenhouse gas emissions and removals from Land use, Land use change and Forestry (LULUCF)*.

Given that the EU is highly reliant on biomass to achieve its 2030 emission reduction target, negotiations about what constitutes sustainable biomass will be one of the key political battlegrounds in the implementation of the 'Fit for 55 Package' package.

Road transport

Arguably the most headline-grabbing announcement coming out of the 'Fit for 55 Package' package was the proposal that all new cars registered in 2035 will have to be zero-emission. This measure is part of a proposed amendment of emission standards of new passenger cars and new light commercial vehicles.

While the essential ban on combustion-engine cars sounds ambitious, it broadly follows the industry's trend toward electric mobility. Already before the Commission announced its new targets, Bloomberg expected electrical vehicles to achieve 50% market share in 2030 and 80% in 2040[19].

[16] The EU Carbon Border Adjustment Mechanism (CBAM) (ercst.org)
[17] Designing Border Carbon Adjustments for Enhanced Climate Action | American Journal of International Law | Cambridge Core
[18] INSIDER: Why Burning Trees for Energy Harms the Climate | World Resources Institute (wri.org)
[19] Long-Term Electric Vehicle Outlook 2021 | Full Report | BloombergNEF (bnef.com)

A recent announcement of Volkswagen to end the sale of combustion engine cars in Europe by 2035[20] suggests that at least part of the European car industry is already on its way to meet the EU's new targets.

The Commission's plan to only allow the sale of zero tail-pipe emissions by 2035 also applies to light commercial vehicles. Demand for these vehicles is expected to grow as e-commerce is growing in popularity but available offerings and market share of electricity-powered alternatives are lagging in the passenger vehicle market[21]. Thus, achieving the EU's new emission targets will arguably be more challenging when it comes to vans, pick-up trucks, etc.

The Commission has also announced that it will start applying emissions trading from 2026 for road transport. This will be done in a separate system focused on upstream fuel suppliers, putting the responsibility on fuel producers to comply with the system, rather than requiring individual households or road transport users to take part directly.

This also means that the Commission's has shied away, at least for now, from amending emission standards and effectively banning the sales of combustion engine trucks like it did in the case of light commercial vehicles.

Maritime and aviation sectors

The Commission also proposes to gradually extend the current ETS to the maritime sector over the period 2023 to 2025 covering all intra-EU voyages and half of extra-EU voyages regardless of the flag ships fly. Shipping companies will be liable to surrender allowances for 20% of emissions reported for 2023, 45% for 2024, 70% for 2025 and 100% thereafter.

Under the Commission's new plans, owners calling EU ports will need to have the necessary allowances and failure to comply could result in detention at EU ports or denial of entry. As such, the EU is effectively implementing a regional carbon tax as IMO initiatives on a global carbon tax are yet to materialize.

Planned amendments to the EU ETS will also reduce allowances for intra-EU flights by 4.2% annually and fully phase out allowances by 2026. Furthermore, the Commission plans to implement the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) for extra-European flights of EU-based airlines.

However, the Commission did not address criticism levelled against CORSIA that its target of no net growth in CO2 emissions from aviation over the period 2021-2035 does not require emissions to decrease. Therefore, critics argue, CORSIA is not in line with the Paris Agreement or the EU Green Deal[22].

The Commission has also proposed measures to promote the uptake of alternative fuels to complement the amendment of emission standards for cars and light commercials and the application of the ETS on road transport, aviation, and shipping. This will be achieved by both increasing taxation of conventional fuels and by supporting alternative fuels.

A tax on kerosene for aviation in the EU – which is fully exempted for the current ETD – will be phased in over a transitional period of 10 years to eventually reach €10.75/GJ EU-wide[23]. Similarly, fuel used for shipping and other waterborne navigations will also no longer be fully exempt from energy taxation for intra-EU voyages. The Commission will also set a maximum limit on the greenhouse gas content of the energy used by ships.

To encourage the uptake of clear energy sources, sustainable and alternative fuels will enjoy a zero rate minimum tax for a transitional period of 10 years when used for air and waterborne navigation under the new EDT.

Furthermore, the Commission has also revised the *Alternative Fuels Infrastructure Regulation* (AFIR) which will require Member States to expand charging capacity in line with zero-emission car sales, and to install charging and fuelling points at regular intervals on major highways. The *ReFuelEU Aviation Initiative* will oblige fuel suppliers to blend an increasingly high level of sustainable aviation fuels into existing jet fuel uploaded at EU airports. Similarly,9 the *FuelEU Maritime Initiative* set a

[20] VW to end sales of combustion engines in Europe by 2035 | Reuters
[21] Long-Term Electric Vehicle Outlook 2021 | Full Report | BloombergNEF (bnef.com)
[22] 2021_03_Briefing_Corsia_EU_assessement_2021.pdf (transportenvironment.org)
[23] Cargo-only flights are excepted from this rule.

maximum limit on the greenhouse gas content of energy used by ships calling at European ports.

What counts as sustainable alternative fuels will be a key sticking point in the political negotiations going forward. Biofuels and biogas are included in the proposed amendments to the AFIR and the REG. The Commission has also not brought forward the end data for support for palm oil biofuels as some member states have done. This means that the EU's strategy to reduce transport emissions will continue to rely on biofuels that carry considerable biodiversity risks.

Buildings

The proposals presented in the 'Fit for 55 Package' package support the development of renewable and less polluting energy systems for homes and public buildings. On a general level, the Commission aims to decrease emissions, save energy, tackle energy poverty, improve quality of life and generate jobs and growth for public buildings and private households. As the Commission has acknowledged, buildings account for 40% of energy consumed and 36% of energy-related greenhouse gas emissions within EU. It will therefore have several key proposals to address these issues.

The revised EED and RED will strive to make buildings more energy efficient and boost the use of renewable energy in buildings. The strengthened EED will set bolder targets for energy savings by 2030, reducing the primary energy consumption by 39% and the final energy consumption by 36%.

The EED is not setting nationally binding targets, which means that each member state will contribute to the EU-level energy efficiency target. However, the directive has set some requirements for each Member State. For example, to renovate at least 3% of the total floor area of all public buildings annually and reduce the energy use in the public sector by 1.7% every year.

Besides energy efficiency measures, buildings will also need to consume more renewable energy, both when it comes to electricity and heating. By 2030, at least 49% of the total energy consumed by buildings should be renewable. The Commission introduces the binding target of increasing the use of renewables in heating and cooling by 1.1 percentage points nationally each year in the RED.

Moreover, the Commission has also announced that it wants to create a separate emission trading system for building fuels aimed at speeding up emissions reductions and stimulating investments in renewables and energy efficiency. The Commission also states that more measures for promoting the decarbonization of buildings will follow before the end of the year, with a proposal for revising the Energy Performance of Buildings Directive.

Social Issues

The yellow vest protests that started in 2018 showed the potential for public backlash against comprehensive decarbonization policies in the EU. Many fear that poorer households and communities depended on energy-intensive industries will have to pay a disproportionate price for the Commission's plans to increase the share of renewable energy and lower emissions from heating the home or driving to work.

The Commission plans to mitigate the social impacts of its increased climate ambition with two measures: Firstly, it has introduced a new Effort Sharing Regulation, which sets emissions reduction targets for all Member states by 2030 on a fair and cost-efficient basis. The amendment includes a flexibility mechanism to allow Member States to attain their Effort Sharing targets in a cost-efficient manner.

Secondly, the Commission plans to establish a new Social Climate Fund. This fund is intended to help poorer households and communities in managing the impact of the extension of emission trading to building and transport. The Social Climate Fund would be financed by the EU budget, using an amount equivalent to 25% of the expected revenues of the new emissions trading systems.

The ability of the EU to engage rather than antagonize the public ultimately depends on how successful it is in engaging subnational carbon-intensive regions. Experts have found that the EU's "territorial" approach to a just transition has been relatively successful in generating action and bottom-up support towards decarbonization, despite the resistance of the national leadership[24].

In the case of the Social Climate Fund, however, the expected €72.2 billion provided will be provided to Members States. Disbursements of these new funds is not tied to commitment to the EU climate targets. This means that there is a risk that funds will be not used effectively to support households and

[24] https://cdn.sei.org/wp-content/uploads/2020/10/mistra-geopolitics-policy-brief-claudia-strambo.pdf

communities in investing in clean energy, efficient housing, and zero-tailpipe emission transport.

Conclusion

On balance, the 'Fit for 55 Package' is a comprehensive set of actions that has the potential to significantly reduce emissions in the EU and create certainty for the private sector. To achieve transformative change in EU's economy and society, the Commission has largely relied on known political instruments that have proven useful in the past. Strengthening and expanding the EU ETS and introducing the CBAM will arguably have the biggest impact on industry, followed by amending energy taxation.

Looking at the Commission's proposals from a technological transition perspective, the 'Fit for 55 Package' is modestly ambitious. The package includes much needed incentives to support already existing market trends but spends less attention on driving new ones.

Case in point, the proposed increase in the share of renewable energy and the new zero-emission target for cars and commercial vehicles align well with ever-falling prices for clean power and storage and announcements by car manufacturers to decarbonize their product range in the coming years. Yet, proposed emission restrictions and renewable energy targets for aviation or buildings could undoubtably drive innovation and investment into new technology, too.

The package also shows the courage of the Commission to pressure EU Member States into fully committing to their collective climate and sustainability targets. It appears as if, at least for the moment, the climate hawks within the Commission have won the upper hand. Their temporary control will be challenged and will potentially dwindle during the tug-of-war with Member States and the Parliament. Nevertheless, the Commission has shown that it is ready to set ambitious targets in the face of opposition.

For industry, areas of greatest uncertainty include the phaseout of carbon allowances in the new ETS, restrictions on the use of biomass for energy production and transport, energy taxation rates and ratches for aviation, road transport and shipping, as well as the setting of national energy efficiency and emission reduction targets. Assessment by the commission and expert indicate that changes in the EU ETS has the potential to double the price of carbon in the EU by 2030.

For the wider public, however, the setting up of a special ETS scheme for the transport and building sector is likely to become the most controversial issue in the negotiations about the 'Fit for 55 Package'. Statements by EU environment ministers on the Commission's plans suggest that there is widespread concern among policy makers not to cause social hardship to achieve climate targets[25]. Thus, managing the social costs of decarbonizing Europe's industry and society will arguably prove to be the main challenge for policy makers and private sector leaders alike.

[25] EU ministers attack plans to extend carbon pricing to heating, transport – EURACTIV.com

Nasdaq: Insight into new Green Designations

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Nasdaq's Head of European Listings explains how the new Green Designations can add transparency to companies engaging in a sustainable journey

Nasdaq just launched the Nasdaq Green Designations for its Nordic markets in June. What are the driving forces behind this initiative?

As part of Nasdaq's commitment to sustainability and based on the increased demand for sustainable investments among a broad range of investors, Nasdaq launched the Green Designations on its European Markets in June. The purpose of this initiative is to offer listed companies support in becoming more visible and transparent with their green business models and strategies towards investors and other important stakeholders such as business partners and customers.

What are the two Nasdaq Green Designations?
There are two designations that companies can apply for, *Nasdaq Green Equity Designation and Nasdaq Green Equity Transition Designation*.

To qualify for *Nasdaq Green Equity Designation*, companies must have more than 50 percent of their turnover deriving from green business activities. Additionally, at least half of their investments must be allocated to activities assessed as green, and their turnover derived from fossil fuel activities must be less than 5 percent.

Companies that are in in pre-commercialization phase and have no turnover can qualify for this designation based on the green investments' threshold. However, as soon as the company starts generating turnover, it must comply with the threshold.

For *Nasdaq Green Equity Transition Designation*, companies must have more than half of their investments placed in green business operations. While there is no minimum threshold for turnover from activities assessed as green, entities must have less than 50 percent of their turnover deriving from fossil fuels.

Who conducts the green assessment of the companies applying for the designation?
As part of the application process an independent reviewer firm that is approved by Nasdaq will make a qualitative assessment of the company's alignment with the qualification criteria. Currently the approved reviewers are CICERO Shades of Green and V.E, a part of Moody's ESG Solutions, and companies interested in a designation can initiate a dialogue or an assessment with an approved reviewer to understand how they qualify.

Who is eligible to apply?
The two voluntary designations are currently available to new and existing listed companies on Nasdaq Main Markets and First North Growth Market in Sweden, Finland and Denmark. Companies in listing process are eligible for the Nasdaq Green Designations earliest from their first day of trading.

What are the benefits for the companies?
The designation offers companies increased

opportunities for visibility and transparency for its green business and strategies to the financial market and investors. Nasdaq will support the companies with visibility via Nasdaq market data dissemination channels in the market data feed and database via Nasdaq ESG Data Portal, Nasdaq website and social media. In addition, Nasdaq will also provide the company with a Nasdaq Green Designation badge to use in its marketing and communications channels. Nasdaq will also look into how we can continue developing the offering over time, as requirements within sustainable finance develop.

What are the benefits for the investors?

There are new investors, also new type of retail investors, on the Nordic markets who are looking for ESG investments. In general, investors are looking for increased transparency and data for better informed investment decisions, and the independent assessments and data shared by companies when applying for the designation and updated annually is aimed at benefitting especially for those investors. The Green Designations offer companies opportunities serve these investors.

Which companies is this relevant for?

We believe that the designations are relevant for companies in all sectors, considering the development and increased requirements in sustainable finance, and we expect to see interest from various sectors. Cleantech companies and companies from the real estate sector have in recent years been active with seeking sustainability assessments, and we are pleased that four companies from the real estate sector, K2A, Magnolia Bostad, Platzer and Wästbygg, were early to onboard at the time of our launch in June. We envision and welcome applications from all sectors.

UNDP: G20 Sustainable Finance Roundtable

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Re-print of note from G20 Sustainable Finance Working Group Private sector roundtable 17-18 May 2021 with permission from UNDP.

Introduction

This note sets out the key messages from the G20 Sustainable Finance Roundtable held on 17-18 May 2021. It heard private sector views on the G20 Sustainable Finance Working Group agenda to accelerate the mobilization of private and public capital to achieve the Paris Agreement and the UN Sustainable Development Goals (SDGs).

The event was part of the programme of the Sustainable Finance Working Group (SFWG) re-established under the Italian G20 Presidency, co-chaired by the United States of America and China and for which UNDP provides the Secretariat. The Presidency, co-chairs and organizers, would like to thank all participants for their engagement to develop the agenda and commitment necessary for change.

This note builds on the discussions in each of the sessions and keynote speeches, and summarizes inputs for the SFWG agenda:

a. Overcoming informational challenges by improving sustainability reporting;
b. Developing consistent approaches to identify, verify and align investments to sustainability goals;
c. The role of International Financial Institutions in Supporting the Paris Agreement; and
d. Priorities for the G20 Sustainable Finance Roadmap from a Private Sector Perspective.

The conclusions from the private sector roundtable will inform the work of the Sustainable Finance Working Group. The full agenda of the event is included in the Annex[26].

Key Messages

The event was held against the backdrop of an unparalleled number of companies that have publicly declared their net zero greenhouse gas (GHG) commitments. However, they represent only one sixth of publicly listed companies, falling far short of the trajectory required to achieve global net zero by 2050. The International Energy Agency (IEA) reports that the Covid-19 driven economic slowdown resulted in a 5% drop in GHG emissions. Urgent action is needed to avoid a rebound of emissions and to maintain this downward trajectory.

These trends yield both risks and opportunities. Transition risks are becoming more prominent as the time horizon to meet 2030 targets gets shorter, with fears over job losses in affected industries. But the opportunities to support new

[26] The Annex is not included in this re-print

and more sustainable jobs as part of the required transition are far greater. The finance industry has a pivotal role to play in channeling global capital flows to support this transition, and to support the 2030 UN SDG Agenda and Paris Agreement.

The need to tackle climate change is leading many discussions but it will be important to broaden the debate to include nature, biodiversity and the wider Environment, Social and Governance (ESG) agenda. Many of the issues of data, alignment, the need to embrace technology and for urgent action will be similar, but a broader framework integrated into business as usual for companies and governments will be a vital part of taking the steps needed. Given that the SDGs already exist the debate can be very focused on how to achieve them rather than on what to achieve.

Convergence on existing disclosure formats and taxonomies is necessary to overcome the fragmented landscape and to enhance interoperability. The speed at which standards are defined and rolled out will be a key success factor because of the urgency to solve climate change and other challenges. Speed is important to avoid existing voluntary and regulatory frameworks becoming too entrenched which will make change more costly. Flexibility for certain industries, small and medium sized enterprises (SMEs) and developing countries, must also be considered to avoid overburdening such groups with unnecessarily resource-intensive requirements.

Collaboration across the private and public sector is vital and will be instrumental in defining standards and driving solutions forward. Cross-industry collaborations (e.g., the IFRS Foundation-led Group of Five) will be required to bring necessary expertise at rapid pace. This is required to avoid further fragmentation and to create and implement standards in the most impactful way.

Flexibility of approach is essential for achieving an inclusive and just sustainable financial system. Industries, company sizes and markets will determine the organisational abilities and resources available to meet global sustainability disclosure standards and operate in line with a global taxonomy. Frameworks need to be aligned but flexible and tailored for maximum impact.

To achieve the UN SDGs and align with the Paris Agreement, disclosure and transparency need to be supported by a global risk management framework, best-practice policy incentives and the involvement of International Financial Institutions (IFIs) including the multinational development banks (MDBs). Investment risks, environment risks and transitional risks to companies and economic stability will all need to be managed as a more sustainable financial system is built. An analysis of existing policy incentives should enable leveraging those with the most impact. IFIs need to play an even larger role and respond to more of the sustainable finance market's demand, helping to de-risk the private sector.

The roundtable produced 10 main suggestions for the G20 Roadmap to be decided by October. These are set out in detail in Session D below – and draw out practical suggestions that highlight issues in the key themes identified. Participants are encouraged to review and comment on the suggestions that came out of the event to help develop and refine the actions where the G20 can best add value.

A: Overcoming informational challenges by improving sustainability reporting

<u>The Benefits and Challenges of Sustainability Reporting</u>

The last year has seen unprecedented sustainable finance activity against the background of the Covid-19 pandemic. Demand has exploded for green, social and sustainable investments. However, barriers to a wider adoption of sustainable finance are reported by practitioners due to the current fragmentation of sustainable finance standards and inconsistency of good quality data; among others.

To date, a tremendous amount of progress has been made on voluntary sustainability disclosures in the private sector. Disclosure plays an important role in sustainable finance in three distinctive ways:

1. *As a mirror.* It presents the opportunity for a reporting institution to reflect on itself and its performance.

2. *As a window.* It provides the opportunity for external parties to view and scrutinize the institution's internal activities and appraise its financial and sustainability performance.

3. *As a lens.* It enables external and internal stakeholders to focus on and closely examine a specific practice undertaken by the reporting institution.

The influence that sustainability disclosures have on financial decision making is highlighted by the 97% of polled roundtable participants agreeing to the question, *"Do you agree that issuers ´ external sustainability impacts increasingly influence investors ´ decisions and drive enterprise value creation, in particular considering the longer-term horizons of risks and opportunities?".*

The voluntary standards in place today have been developed from different perspectives, and for different users and use cases. As a result, various fragmentation challenges exist:

– Complementing financial accounting disclosures. Investors require consistency that marries up reporting topics, complementing backward-looking financial disclosures with future-looking sustainability disclosures.

– Delivering to a multi-stakeholder audience. Sustainability disclosures are prepared for a broad audience including: communities, employees (current and future), customers, suppliers, policy analysts as well as shareholders and investors. Different users may need different disclosures.

– Balancing disclosure requirements across industries, company size and between developing / developed countries. One must acknowledge the need for both consistent standards and flexibility of approach to avoid burdening certain industries, SMEs and countries with unachievable and counterproductive disclosure requirements.

A Global Sustainability Reporting Standard

Traditional global accounting standards demonstrate that convergence of sustainable disclosure standards is also possible. The IFRS Foundation has convened a working group to bring together the leading global reporting standard setters (known as the 'Group of Five'). The working group comprises five framework and standard-setting institutions: Carbon Disclosure Project (CDP), Climate Disclosure Standards Board (CDSB), Global Reporting Initiative (GRI), International Integrated Reporting Council (IIRC), Sustainability Accounting Standards Board (SASB).

The group intends to draw best practice from these standards, embed the TCFD framework, and has published its progress to date. The working group intends to deliver the new standards in November 2021 (in line with COP26) and receive endorsement from IOSCO in early 2022.

To address the fragmentation challenges listed above, the Group of Five has proposed a building block approach to reporting standards. The concept of "nested materiality" was developed, to deliver common visuals and language by layering three types of information:

1. *Traditional financial information*. Reporting that is already reflected in the financial accounts.

2. *Enterprise value creation.* Reporting on the sub-set of sustainability topics that are material for enterprise value creation.

3. *Impact on society.* Corporate impact reporting which can be tailored to a broad array of stakeholders.

The development of a global reporting standard was clearly supported by roundtable participants, with 95% of poll respondents agreeing to the question, *"Do you agree that in light of the various jurisdictional policy approaches on sustainability, a common international sustainability reporting standard should provide a global baseline and take an enterprise value-oriented approach, while ensuring a coordination mechanism to support interoperability with complementary, perhaps jurisdiction-specific, requirements?".*

Standards to Accommodate Issuer Variability

There is a tension between the need for convergence on the one hand, and the need to reflect the varying contexts of disclosure-issuers on the other. Quality sustainability reporting

requires specialist knowledge, expertise, resources and assurance.

If the ultimate goal of disclosure is to provide relevant and material information to a variety of users and use cases, it needs to take account of the issuer's context. For example, some industries (e.g., the energy industry) may have a different range of material sustainability information to disclose than others (e.g., the legal industry). Taking a holistic view of sustainability disclosure, it is also important to acknowledge organizations will be at different levels of maturity and have different access to sustainability knowledge, advice and resources. The efforts of SMEs or developing world companies should not be undermined by overly burdensome disclosure requirements, as they may not have the capacity to produce such detailed reporting.

Additionally, specific industry disclosure requirements are important. 89% of roundtable participants agreed, when asked *"Do you agree that global sustainability-related reporting standards should include, in addition to core cross-cutting sector agnostic metrics, industry specific metrics?".*

B: Developing consistent approaches to identify, verify and align investments to sustainability goals

It is important to ensure that the sustainable finance debate is not about climate goals or the SDGs but instead about achieving both. Similarly, the focus on climate is natural in the year of COP26, but as part of the G20 agenda it needs to be widened to include critical issues in relation to nature and biodiversity as well as the wider Social and Governance imperatives that make up the full spectrum of ESG issues. As well as ensuring a broad focus it will also be essential to integrate new approaches into business as usual for governments, companies and the not-for-profit sectors. Successful businesses are ensuring that ESG issues are built into the heart of their strategy – in the same way as successful investors – rather than appearing as an add-on.

However, the emergence of a number of approaches to identify, verify and align sustainable investments has led to fragmentation and challenges for interoperability between them. To channel capital towards the achievement of the UN SDGs, asset owners and investors need to be able to appraise sustainable investment from the perspectives of both risk mitigation and the creation of positive impact. To achieve this, consistent, standardized and quality data on the sustainability performance of companies is required. Sustainability performance needs to be against science-based targets to verify whether a company is on a path to meet meaningful global sustainability goals.

The definition of sustainability concepts, activities and levels of performance is fundamental. Without a common understanding of terminology and what best practice really looks like, sustainability disclosures could be measuring, reporting and indicating different things. Likewise, it is important to fully understand and try to align the disparate ways in which sustainability disclosure data is integrated into investment decisions. What methodologies and technology are used to leverage the power of the data? Are these methodologies robust and transparent? Do these approaches operate against a consistent set of standards?

<u>Designing Global Approaches</u>

Designing a global approach for investment appraisals that facilitate channelling capital towards the SDGs will require a set of interoperable and global approaches that provide consistent standards for definitions, principles, terminologies, product labels, benchmarks and thresholds. The design of these approaches needs to build on existing frameworks and use the lessons learned in implementing them.

Global standards need to focus on delivering sustainability metrics that have material impact on enterprise value and provide sufficient flexibility to ensure industries, regions and companies are not overly burdened with definition and categorization requirements. Negative externalities need to be identified, monitored and priced-in to ensure the full costs and benefits of production are recognized within supply chains.

Flexibility will be needed to accommodate regional and national specificities. This is because there may be indirect impacts on companies in

developing and emerging markets and / or on small to medium sized enterprises (SMEs), who may not have the resources available to define and categorize data to the same standard as large companies in developed markets. What may seem easy to implement in a developed market may be more complex or create unintended consequences in developing markets.

To overcome this challenge, threshold setting should be at regional or national level, and multilateral and regional support should be in place to assist the capacity of resource constrained companies to adopt these standards. The broader markets should be involved in design. The UN FC4S network is an example of collaboration where market regulators and market actors collaborate through sharing challenges and examples of best practice with one another.

Over time, as sustainability standards are implemented more widely, poor sustainability performers will emerge at a company, country and perhaps a regional level. As disclosures and global standards become more advanced and transparent, capital markets will be able to justify the diversion of capital away from poor performers. Likewise, they can consider the intentional allocation of capital to support those seeking to improve current low performance with sustainability improvements. Considerations around the impact of increased transparency (e.g., whether it could lead to bulk divestment from a major publicly listed entity or country), should be considered at a policy level.

Global approaches should be developed in stages, allowing for iterative testing and feedback before reaching a final state. At the roundtable, five considerations were cited for designing global approaches:

1. Agree common definitions. Existing standards define things differently across and within industries, impeding comparison and interoperability. Agree on commonalities and seek to align differences.

2. Agree equivalence on existing taxonomies between markets. In the short term, agreeing equivalence between certain standards will effectively consolidate them, reduce transaction costs and create the framework on which a global standard could be built.

3. Create regional variations for developing and small markets. There is an opportunity to design regional variations for developing and small markets for some countries e.g., in Africa and Asia, with a pathway for them to mature to global standards over time.

4. Leverage existing taxonomies. For regions where no taxonomy is currently practiced, implement existing taxonomy versions rather than design new ones. This will avoid further fragmentation.

5. Be flexible and inclusive. Create an agile, collaborative, "building blocks" approach to accommodate priorities as they are set by policy.

Aligning Financial Portfolios to Sustainability Objectives

Financial investment appraisal and performance will increasingly embed sustainability into all its processes. This will need systemic solutions to help individuals and companies within the financial ecosystems analyze and align their portfolios to global sustainability objectives. Whilst climate has been a priority issue and frameworks such as TCFD presented to embed climate risk into financial operations, wider sustainability issues will also need to be included. The following tools to wider sustainability alignment have been highlighted:

- Ratings agencies have a role to play. Factoring sustainability into the credit rating of a company sends a clear performance signal to the market.

- Biodiversity, social and other sustainability issues need metrics require definition. These will need to be carefully designed to capture accurate performance of complex and interrelated issues.

The Role of Technology

Big data and artificial intelligence (AI) is starting to play a significant role in the production and interpretation of quality sustainability data. "ESG intelligence" is necessary for investors and other sustainable finance practitioners to make optimal decisions. However, there are still significant divergences in ESG indices measuring supposedly relatively similar issues.

AI could also play a role in analyzing and converging existing sustainability disclosure frameworks and taxonomies, thus reducing the

effort and amount of original creation required in defining a global standard. However, as with all AI innovation, it is essential to ensure that it is not incorporating the biases and blind spots of those creating the algorithms or reflecting a skewed view of the issues due to the partial nature of the data on which the system was developed.

To reduce the burden on companies (particularly SMEs and those in developing countries) to source and disclose data, creativity should be employed on identifying more diverse data sources. Big data analysis using data from government agencies, social media or telephone networks will be able to present insightful trends that would be challenging for even the most sophisticated disclosing companies to identify.

As the internet of things becomes more entrenched, passive data collection will reduce the burden on institutions to manually source data. This technology will also open opportunities to measure real time data to provide sustainability performance metrics (for example the yield of crops) that are only available retrospectively or not at all. As with AI, privacy and security concerns need to be addressed carefully.

As technical solutions for sustainable finance are designed, they need to consider which actors they are connecting. How can systems be connected from regulators to institutional investors and ultimately to individual customers purchasing financial products? Providing the opportunity for individuals to understand where their money is invested will provide a level of transparency and empowerment for customers that is only partially available today.

Initiatives such as the G20 Techsprint 2021 hosted by Banca d'Italia are vital. The Techsprint is bringing entrepreneurs and technologists together at a hackathon event to identify technical solutions to three sustainable finance problems:

1. Data collection, verification and sharing,

2. Analysis and Assessment of Transition and Physical Climate-related Risks

3. Better connecting projects and investors

Such initiatives, and related efforts to help focus technological solutions on supporting the creation and use of global taxonomies, should be encouraged and expanded.

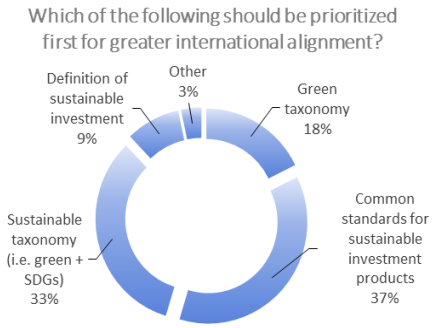
Design Approaches for the End User

Sustainable investment identification, verification, and alignment of approaches design should have end users and use cases in mind. The nature of sustainability disclosure is that the stakeholder audience is more diverse than only finance professionals. It is important to understand who those stakeholders are and the information they require.

Language and terminology will need to be defined in a clear and meaningful way for non-scientific or financially-expert users. Information needs to be decision useful. Materiality should be used as a test to determine what is important to end users and therefore what should be included in sustainable investment identification tools and why.

Figure 1 illustrates how polled roundtable participants prioritize common standards for investment products and a sustainable taxonomy for greater international alignment on sustainable finance.

Figure 18: Priorities for greater international alignment: 161 roundtable participants



Source: UNDP

The roundtable participants were optimistic that global standard alignment was achievable, with 80% of those polled agreeing to the statement, "Do you expect better international alignment of sustainable finance definitions and tools in the short term?". 88% believed that regulation or

legislative action was required to achieve this outcome.

C: Role of International Financial Institutions in supporting the Paris Agreement

The International Financial Institutions (IFIs), including Multilateral Development Banks (MDBs)) have a coordinating group on climate change. They all committed in 2017 to ensure their financial flows would support the Paris Agreement. Some of the members have already announced when they will achieve alignment, including the World Bank and the European Investment Bank. All are due to announce their timelines by the COP26 meeting in November. The MDB group on climate finance has a 6-point strategy that starts with the commitment to align portfolios to Paris and continues with a focus on: adaptation; climate finance to support transition; strategy engagement with countries and policy support for national plans; technical assistance at the country and project level, and reporting and transparency. This multi-step approach is required to ensure the translation of commitments into action to accelerate transition, but in a way that protects the most vulnerable from the costs of transition.

There is a great deal of diversity in regions and countries served by the different IFIs. In some countries there is a high reliance on fossil fuels for power generation, so the transition challenge is more difficult. But in all cases, a clear strategy from the IFIs helps identify which kinds of projects will receive support – and offers examples for how climate adaptation and continued economic development can go hand in hand. It is very important to address transition risks proactively. Whilst the IEA forecasts significant opportunities, such as the creation of 9 million new jobs per year between 2021 and 2023 (predominantly in the clean energy sector) the chance to see additional jobs created may be politically unachievable if the estimated 6 million who lose jobs in the transition are not assisted to yield the benefits.

The Covid-19 pandemic has unfortunately created massive hardship across the world, and a need for urgent action to support those badly affected by the health and economic crisis created. This has made it more difficult to raise capital for investment in some developing countries. However, even during the pandemic, there were examples of some liquidity assistance programs including commitments to future action on greening the economy. The size and speed of the IFI response has given a demonstration of what could be achieved if a similar level of intensity and focus is placed on adaptation to the risks on climate, social and governance issues. This is combined with a huge stock of capital that is earning little or no return from government bonds, and which can fund the investments required to meet the SDGs – if the right partnerships, projects and incentives can be created.

The IFIs need clearly agreed global taxonomies and reporting like any investors for their own purposes. But if IFIs adopt common frameworks, they can help drive a move to more global consistency in taxonomies and reporting, given their role in using their own investments to 'crowd in' private finance to increase total investment. The use of blended finance will have multiple benefits and perhaps more now than ever before. Despite progress, there is a need to significantly scale up the total volume of lending to support transition projects and the consequential impact on leveraging private finance – both directly on a given project and indirectly, via the demonstration effect of the initial IFI supported project.

The IFIs can also help continue the innovation in capital market products to support the climate transition. Having already taken a leading role in the development of green bonds, there is a need to expand the supply and use of other instruments. In countries where they are moving from low levels in relation to ESG, there may be more call for transition bonds than traditional green bonds. Loans and bonds need to be supplemented by equity instruments and venture capital to support climate friendly investments and leverage both listed and private markets. In some regions, such as Latin America, there is a need to create projects with the larger scale that some private sector investors are seeking in order to increase inflows. For all IFIs, there will be a need to use global taxonomies proactively and flexibly to ensure they support the development of projects and deliver required change in different economic sectors and different sized companies. This again supports the message

from other sessions in the conference on the need to create a consistent overall framework that can then flow logically into requirements that are material and useful in a given industry, country or company.

The IFIs have a key role in publicizing the many examples where investment in climate and ESG-friendly activities did not need incentives because it was profitable on its own terms. This is additional to the detailed interventions through projects that crowd in private finance. It is important to showcase the positive stories such as the examples heard during the private sector roundtable from companies in developed and developing markets and in many different sectors of the economy.

D: Priorities for the G20 Sustainable Finance Roadmap from a private sector perspective.

The conference heard many perspectives for potential G20 actions that could support the transition – supplemented by the remarks throughout the event from the Presidency and co-chairs and other speakers. This helped to create a broad range of suggested actions to build on the progress so far and contribute to the massive step-change that is still required. A recent Global Financial Markets Association (GFMA) report highlighted the different challenges in different sectors, as well as aggregate financing need of $100-$150 trillion over the next 30 years to meet the Paris Agreement and enable a transition to a low carbon economy. This would require an 8-fold increase in current annual financing flows.

A summary of the key suggestions for the SFWG's roadmap highlighted:

1. Support for a multi-year plan over multiple G20 Presidencies with the focus on climate change in 2021 expanded in 2022 to include biodiversity, social and governance issues, with urgent implementation for G20/developed countries, and technical and financial assistance aiding rapid transition in developing countries.

2. The need to ensure global consistency in sustainable finance approaches that focus on issues that are material for end users and reflect diversity between them – modelled on the way in which the G20 called for the FSB to take action that led to the initial creation of the TCFD. Different jurisdictions should recognize the need for consistency in global standards. The taxonomy should define data disclosure to be sourced and disclosed by companies – using their own data or data from others such as government agencies or proxies (such as social media sentiment or opinion polls).

3. Creation of a global risk management framework supported by the right data, metrics and methodologies to understand and help mitigate risks in: investment, climate & wider sustainability, risks for displaced workers in affected industries, for companies as a result of implementing a global taxonomy and the risks to wider economic stability from large shocks.

4. Evaluation of market and pricing incentives. The G20 could commission the SFWG to investigate the use of fiscal incentives, carbon pricing and emission trading mechanisms and other sustainable finance levers so that across different regions, countries and sectors they collectively help achieve a net zero goal. Investigate any unintended consequences, particularly on developing countries and disadvantaged groups, within those countries.

5. Commit to financial and technical capacity support for developing countries to help them meet the G20 goals on sustainable finance – with support to be provided through bilateral initiatives and through regional and global International Financial Institutions.

6. Call for the IFIs to adopt a common global framework for sustainability reporting and announce the planned date for the alignment of their own investment portfolios to the Paris Agreement and the SDGs – using the process of developing national level programs with partner countries to reflect local priorities and characteristics.

7. Call for the IFIs to include specific protection and support for adaptation for women and SMEs in local country agreements that implement a shift towards meeting the Paris Agreement and the SDGs.

8. G20 to task the regional IFIs to develop any required tailoring of the global framework to encourage proactive adaptation in their

respective regions – with a commitment only to introduce regional or country-level departures from the global framework where these are clearly needed to avoid the costs of transition exceeding the benefits – and only where giving more time to transition cannot solve the problem.

9. Support and extend initiatives started under the Italian Presidency to encourage the development and use of new technology to make the creation, use and dissemination of simpler, cheaper and more accurate data to support smarter and lower cost adaptation.

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