For professional investors

ROBECO
The Investment Engineers

Sustainable Investing Expertise by
ROBECOSAM

TACKLING THE TRILEMMA

INVESTMENT OUTLOOK 2021

For professional investors

November 2020

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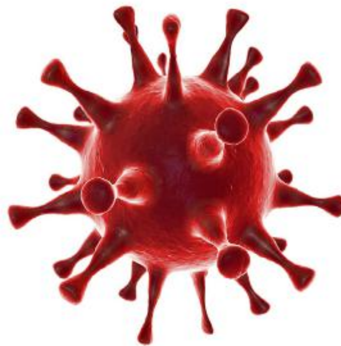
Tackling the trilemma



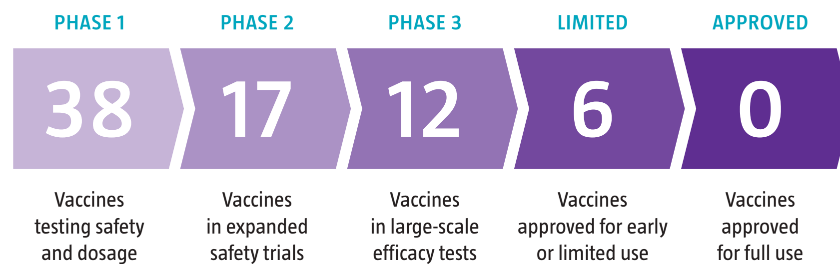
2020 will likely go down as one of the most remarkable years in history: from an economic perspective, as Covid-19 brought the deepest recession since the 1930s, and from a public health and social viewpoint as well. If someone had told us 12 months ago that we would be working from home, and wearing a face mask in most public places, they would have been met with disbelief. And yet this is actually where we are. 2020 has also taught us that the policy response to an exogenous shock such as the pandemic can be swift and monumental. Only a few times in the last century have we experienced such strong cooperation between fiscal and monetary authorities. This is the main reason why financial markets recovered so strongly after the fastest downturn in history back in March.

As Mohamed A. El-Erian put it, however, "The problem is that we haven't yet found this balance between three things – public health, normal economic functioning, and personal freedoms." The Covid-19 outbreak is confronting policymakers with a 'trilemma': finding an acceptable trade-off between public health, economy and personal freedom. It is precisely this trade-off and the easing thereof that will shape the economic, market and social circumstances in 2021. We have determined a base, bull, and bear case scenario based on the progress made concerning the trilemma. As will become clear in the remainder of our Outlook 2021, much is dependent on the timeliness and effectiveness of a Covid-19 vaccine, and the extent to which we 'return' to a kind of 'New Normal'.

Base case

In our base case we expect the arrival of a Covid-19 vaccine as well as improved testing, tracing and treatments to tackle the policy trilemma. There are joint efforts to develop these vaccines, and testing phases are being run in parallel to speed up the process. According to the New York Times vaccine tracker, there are now more than 60 candidates, with 12 in the last stage of clinical development. On average, 20% of the candidates that make it to phase III human trials receive final approval, making it plausible that at least a couple of vaccines will become available in the course of 2021. The logistical challenges of distributing the vaccine to the wider population, however, must not to be underestimated. A joint study by DHL and McKinsey finds that global coverage of Covid-19 vaccines would require up to 200,000 pallet shipments, 15 million deliveries in cooling boxes, and 15,000 flights across the world. Given the size of the operation and the sensitivity of the vaccines (most of them need to be stored at very low temperatures during transport), the global distribution phase is a challenge and only as strong as the weakest link in the supply chain.

Figure 1: Coronavirus vaccine tracker



Source: New York Times, 16 November 2020

In our base case, a vaccine becomes available sometime in the first half of 2021. The Pfizer and Moderna candidate vaccines shows efficacy can be very high, up to 90%. However, of equal importance is the vaccine being sufficiently available, widely distributed and broadly accepted, and we see some hiccups and setbacks in the process. Ultimately this leads to a somewhat unstable 'New Normal' in which social behavior doesn't fully converge with the pre-pandemic normal. Though many aspects re-emerge as vaccines allow us to find an improved balance between public heath, economy and personal freedom, some social distancing remains.

Concerning the US elections, a Biden win but a divided Congress is seen as a status quo 'lite'. Fiscal stimulus is less than it would have been had there been a Blue Sweep. At the same time, corporate taxes are not increased. In addition, geopolitical risks recede somewhat, even though many Democrats, too, view China less than favorably.

Fiscal and monetary policy remain accommodative or even very accommodative, with a high degree of mutual cooperation. The acceptance of a strong rise in the fiscal deficits of developed economies (already amounting to almost 8% of GDP in 2020) is a crucial difference compared to the aftermath of previous recessions. Looking ahead to 2021, the upside of additional fiscal stimulus – bringing the economic recovery forward in time by additional government spending – clearly outweighs the downside: higher government debt levels. Central banks facilitate ongoing fiscal spending by keeping policy rates at the effective lower bound. Advanced economies return to pre-pandemic output levels by the end of 2021.

The road towards a new normal differs among countries. Sweden (very select lockdown measures), China and New Zealand (very widespread lockdown measures) have progressed towards an improved economic and social environment while making very different trade-offs in the policy trilemma. China has seen growth levels return to pre-pandemic levels and the country (now 18.5% of global GDP in PPP terms) contributes significantly to global growth by ongoing stimulus. The Chinese leadership can't afford a double-dip slowdown and resurge in unemployment in 2021, the 100th anniversary of the Chinese communist party. Those countries managing to solve the trilemma first are also likely to be the economic winners of 2021.

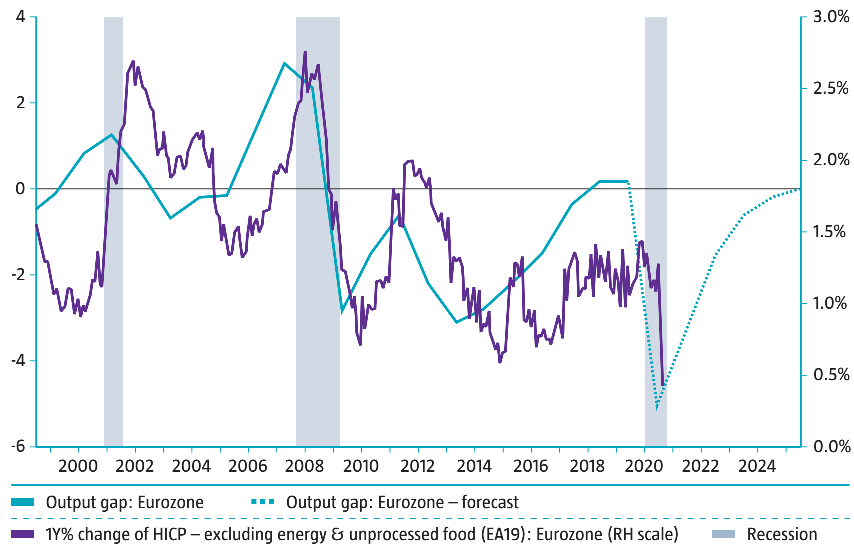
Disinflationary at first, but less so later on

Sovereign yields have room to rise, but in the base case we don't see 10Y US Treasury yields go much above 1%. We see ebbing disinflationary pressures in the course of 2021, with inflation expectations expected to move gradually higher. We transition slowly towards a reflation-like scenario, as the disinflationary shock starts to fade.

Unemployment levels have generally receded from spring 2020 peak levels, but are still significantly above levels that typically bring wage pressures and demand-pull inflation. Crisis relief measures such as furlough subsidies prevent even worse scarring effects in the labor market, but, despite these government efforts, structural unemployment in the US and Eurozone is still ticking up. Permanent job losses in the US have more than doubled from 1.4 million in February 2020 to 3.7 million in October. Output gaps, the difference

between actual economic output and potential economic output, are still negative in both advanced and emerging economies. Negative output gaps typically coincide with subdued core inflation.

Figure 2: Output gap vs core inflation – Eurozone



Source: Refinitv Datastream, Robeco. November 2020.

Despite these output gaps, we see a gradual fading of disinflationary pressures in 2021, given the likely materializing of strong pent-up demand, especially for services, as a vaccine and more effective treatment for Covid-19 lower lockdown intensities. As a result of government income support, personal income levels actually increased in 2020, despite rising unemployment. High housing wealth, historically elevated savings ratios, relatively low household leverage (US household leverage is 35% lower compared to the global financial crisis), bode well for consumption growth in 2021. The prerequisite for this, however, is that risk aversion among vulnerable consumers in particular declines along the path to a New Normal. The discrepancy between services and goods consumption (the latter in the US already above pre-pandemic level) indicates consumers are shunning Covid-19 sensitive sectors for now due to social distancing, but are willing to spend. We see demand-pull inflation pressures building in the second half of 2021 but an inflation overshoot above the 2% inflation target won't be achieved in the US and Eurozone.

Conclusion: in our base case, we see an easing of the policy trilemma between public health, sustaining economic activity and personal freedom, driven by the arrival and distribution of a reasonably timely and effective vaccine. Consequently, macroeconomic and market volatility comes down considerably as a New Normal takes shape.

Bull case

Our bull case sees multiple effective vaccines arriving earlier. Logistical challenges in vaccine distribution are dealt with effectively, and the economy is freed from the pendulum swing between lockdowns and re-openings with less infringement on personal freedom. Thus, the policy trilemma is largely solved and a quicker 'return' to a 'New Normal' takes shape. Here we see room for what Keynes called "animal spirits": the "spontaneous urge to action rather than inaction".[1] Society breaths a collective sigh of relief as lockdowns recede into distant memory. Producer and consumer confidence metrics skyrocket. Services show a sharp rebound as consumption broadens to formerly social distancing-sensitive sectors. Central banks stay accommodative as there still remains quite some way to go till full employment. Likewise, the Fed refrains from addressing building inflationary pressures for a long time.

1. Keynes defined animal spirits as "the spontaneous urge to action rather than inaction and not as the outcome of a weighted average of quantitative benefits multiplied by quantitative probabilities."

Yield curves steepen but remain capped by central bank bond buying. Governments largely maintain an overall fiscal expansionary policy stance aimed at greener, more inclusive growth. Revitalizing local supply chains and infrastructure projects as well as education and health care investments are very much in focus. Core inflation starts to improve more notably as output gaps become less negative. The surge in demand outpaces supply in some segments, which suffered from underinvestment during the Covid-19 recession, for example within commodities. This causes headline inflation to pick up. Therefore, we see more room for traditional reflation with the odds of a temporary inflation overshoot increasing in our bull case.

Bear case

In our bear case, vaccine development experiences persistent setbacks, with a very limited number of vaccines on the market by only the end of 2021. This does anything but improve the trade-off policymakers have to make between public health, the economy, and personal freedom. In short, the policy trilemma continues to dominate both the economy and society. Consumer and producer confidence take another hit as an anticipated return to a New Normal is postponed. With precautionary savings skyrocketing again and consumption and investment postponed, governments and central banks provide additional support to backstop the economy.

However, the overall impact on the economy is profound as the collective belief in tackling the trilemma in the medium term becomes elusive. As a result, the multiplier effects on real GDP growth from additional fiscal stimulus dwindle. Disinflationary pressures grow stronger, preventing real interest rates from becoming low enough to kickstart the recovery. A wave of defaults arrives as rising structural unemployment stirs social unrest. The recovery phase of the business cycle remains out of reach as the recession deepens again in 2021. What's more, a prolonged period of legal battles surrounding the US election outcome clearly leads to more political uncertainty and unrest, exaggerating the already downbeat outlook for the economy in our bear case.

Table 1: Key characteristics base, bull and bear case 2021

Vaccine	Timeliness	Effectiveness	Return to new normal
Base	+	+	+
Bull	++	+	++
Bear	-	-	-

Other key developments	Fiscal	Monetary	Inflation	Earnings
Base	+	+	=	+
Bull	+	++	+	++
Bear	+	+	-	-

Source: Robeco. November 2020.

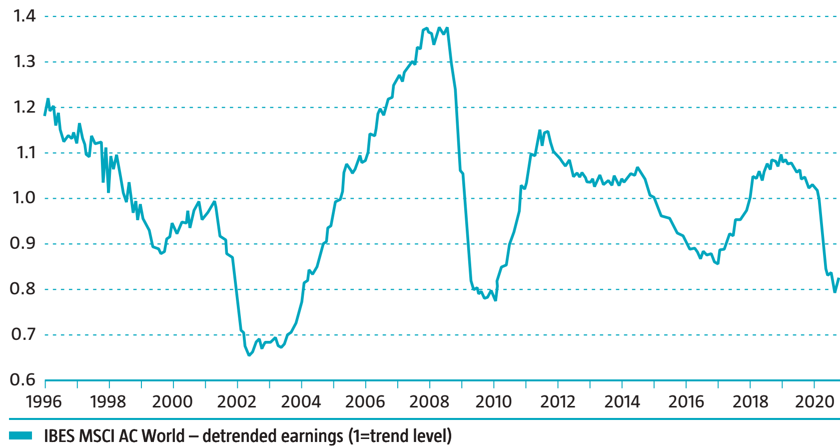
A good year for risky assets

Our expectations for the major asset classes in each of the three scenarios are given below. In general, we believe 2021 will be a good year for risky assets, with equities realizing above-average returns in our base case. However, as described in our macro chapter, in a scenario in which a working Covid-19 vaccine is not readily available to a large part of the global population in 2021, all bets are off and all risky assets will realize negative returns.

Equities

BASE CASE The combination of a timely, effective vaccine with ongoing fiscal and monetary stimulus means GDP growth and, more importantly, earnings growth continues to improve. In our base case, earnings per share (EPS) levels near those seen before the Covid-19 outbreak, implying roughly 20% growth. Based on the provisional US election outcome, potentially including a divided Congress, US policy is likely to be a small negative for EPS growth.

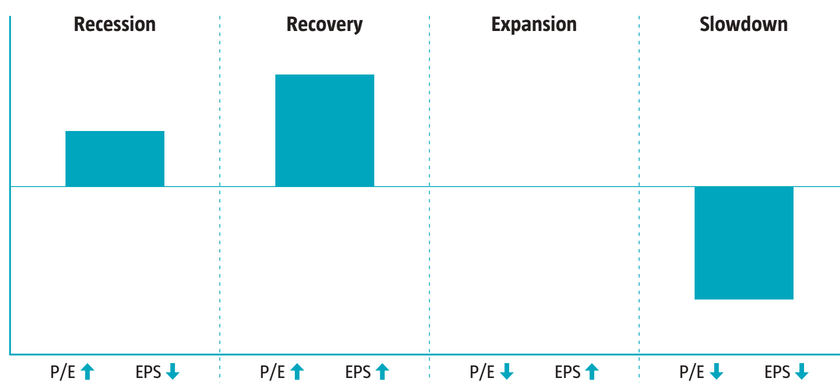
Figure 3: Earnings per share – we expect a return to the long-term trend



Source: Refinitv Datastream, Robeco. November 2020.

More importantly, the economic cycle moves from recession to recovery. Historically this phase has been characterized by the strongest EPS growth of the business cycle and a rise in valuation. We stress, however, that given where current valuations are, we believe the room for further multiple expansion is limited. Nevertheless, equity returns are very healthy in our base case.

Figure 4: P/E and EPS during different phases of the business cycle



Source: Robeco. November 2020.

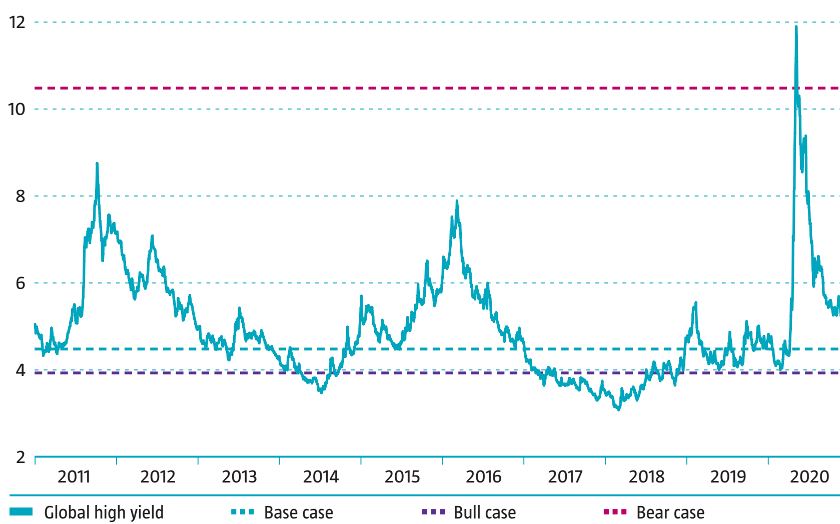
BULL CASE This comprises a quicker return to a New Normal, leading to a sharp increase in consumer and producer confidence. Also, there are few doubts about the accommodative stance of central banks. In this scenario equities likely spiral higher, driven by strong EPS growth and multiple expansion. EPS, driven by reflationary forces, rise to above pre-Covid-19 levels while animal spirits push valuations higher. A classic melt-up scenario develops with equities rising more than 20% and a clear rotation out of US and technology stocks into global cyclical and value stocks. Sustainability-focused equities are likely to outperform as well.

BEAR CASE Without a widely available or distributed vaccine, the global economy remains stuck in its pendulum swing between temporary lockdowns and re-openings. Consumer and producer confidence remain subdued and simmering inflationary pressures keep EPS from reaching pre-pandemic levels. Risk aversion increases significantly, pushing equity prices down. Despite monetary policy offering a backstop for risky assets and the addition of more fiscal stimulus, the overall decline in confidence means we see another major drawdown in equities.

High yield

BASE CASE With the vaccine and both fiscal and monetary stimulus facilitating further economic recovery, the rise in high yield bond defaults grinds to a halt. Company earnings recover, while interest costs stay low, improving the interest coverage ratio for high yield companies. With current spread levels close to the long-term average, there is room for further tightening. Having said that, with most of the potential spread tightening already behind us, as central banks offered a backstop at the height of the Covid-19 downturn, high yield bonds look somewhat less attractive than equities from a risk-return perspective.

Figure 5: Global high yield spread and estimates for the base, bull and bear case



Source: Bloomberg, Robeco. November 2020.

BULL CASE A faster return to a New Normal combined with strong forward guidance by central banks leads to an overshoot in spread tightening, with spreads moving below 400 basis points. Defaults start to come down, driven by a sharp increase in interest coverage ratios thanks to spiking earnings growth and very low interest costs. This environment provides meaningful upside for high yield bonds as investors pile in in their search for yield.

BEAR CASE The massive rise in corporate debt becomes a headache for global high yield investors, especially as EPS remain far below pre-pandemic levels. With a substantial part of the high yield universe already weakened by the first Covid-19 wave, defaults shoot up across the board. The search for yield reverses and spread levels quickly move above 1,000 basis points again, a level that has historically coincided with significant recessions. A risk-adjusted performance of high yield bonds worse than that of equities, like we witnessed in March, is not ruled out.

Credits

BASE CASE Just like those for high yield bonds, spreads on investment grade corporate bonds tighten in our base case. In addition, there is some rotation out of government bonds into corporate bonds by investors looking for yield but unwilling to increase their overall risk profile. However, the outlook is muted somewhat by the fact that global bond yields grind higher. With the duration up sharply in recent years, especially in the US, as a result of falling yields and the issuance of longer-dated bonds, the upward potential for investment grade corporate bonds is limited.

BULL CASE Spreads on investment grade corporate bonds tighten to well below average, providing additional upside. Even more so than in the base case, however, overall bond yields go up as a classic reflation scenario starts to emerge. With duration moving substantially higher in recent years, this puts a cap on the performance of investment grade bonds.

BEAR CASE Obviously, credit spreads rise as the combination of subdued economic growth, little or no earnings recovery, and high leverage bites. The increase in bond buying by central banks, however, leads to even lower bond yields and limits spread widening. Hence, while our bear case is harsh for investment grade corporate bonds as well, the downside is capped relative to that of high yield and equities.

Local currency emerging market debt

BASE CASE The constructive environment for risky assets benefits local currency emerging debt as well. There is ample room for emerging currencies to recoup sometimes heavy losses against the US dollar. But since we see the euro rising against the US dollar as well, currency gains in euro are less outspoken. In addition, with monetary policy less accommodative compared to developed markets, the case for continuous low yields is somewhat weaker. This is because some emerging countries have experienced a significant currency depreciation resulting in higher inflation, leaving less room for additional monetary stimulus. Also, the rise in US Treasury yields raises the bar for local currency emerging debt to remain attractively valued.

BULL CASE A swifter vaccine-driven return to a New Normal means risk appetite is high and investors flock indiscriminately to higher-yielding bonds. Additionally, animal spirits make investors look past structural weakness in some countries, pushing emerging currencies higher across the board. Here, local currency emerging debt realizes a return close to or even above the return of global high yield bonds.

BEAR CASE Emerging currencies sell off, but at the same time the euro declines as well, providing a bit of a buffer. Investors discriminate between countries with better (China, South Korea) and worse (Turkey, South Africa) fundamentals. Yields in the former converge to levels in developed markets, stemming losses. For other countries with already weak currencies, high inflation and large current account deficits, this is not the case. These countries run the risk of a meltdown, potentially leading to a credit event.

Commodities

BASE CASE With the vaccine and both fiscal and monetary stimulus facilitating further economic recovery, the rebalancing of commodity supply and demand that started a couple of months ago continues. Demand for base materials driven by China in particular increases, pushing prices higher. We see OPEC+ increasing production slowly, matched by a return in demand and providing decent upside for oil prices. Precious metals continue to grind higher as inflation expectations rise. But with nominal yields rising as well, the tailwind for precious metal prices is less compared to the first half of 2020.

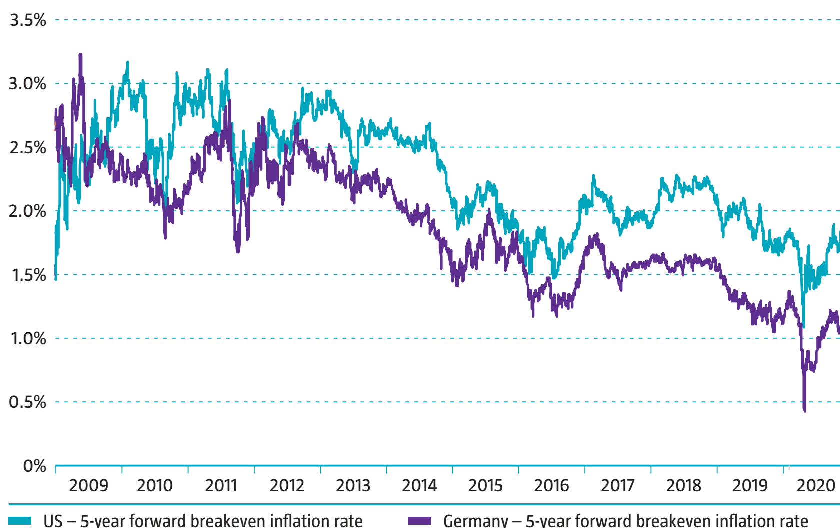
BULL CASE Commodity supply and demand rebalance more swiftly than expected. In fact, because of Covid-19 related supply issues, there might be temporary shortages and price spikes for some base materials. OPEC+ increases supply as planned but stronger demand means oil prices rise to above USD 50. Precious metals continue their stellar run as inflation expectations rise faster than nominal yields, pushing real yields down even further.

BEAR CASE The recovery remains stuck in its pendulum swing between temporary lockdowns and re-openings meaning commodity supply and demand rebalance slowly, and in the case of oil, not at all. Prices of both base metals and oil relapse. The far-below-zero settlement of WTI futures back in April is a reminder that strange things can happen when supply and demand are out of sync. The outlook for gold also looks bleak in absolute terms as real rates rise, but the yellow metal outperforms risky assets, underpinning its safe-haven status.

Government bonds

BASE CASE Government bond yields continue to grind higher, especially in the US. With the Fed aiming for an asymmetrical inflation target, leaving room to make up for below-target inflation, little action is expected when inflation expectations rise. Yet, with central bank policy still highly accommodative and discussions lingering about what asymmetric inflation targeting means in practice, the potential rise in yields is limited. With initial US fiscal stimulus on the low end, debt issuance is less than expected, further keeping a lid on rising yields. In addition, any rise is expected to occur at the longer end of the yield curve, as short-term rates are kept down. Hence, the yield curve steepens.

Figure 6: Germany and US inflation expectations



Source: Bloomberg, Robeco. November 2020.

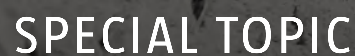
BULL CASE In a reflation-like scenario, inflation expectations move substantially higher. This in turn puts pressure on government bond yields to do the same. Monetary policy limits the extent to which this happens, but in our bull case the markets embrace the clear willingness of central banks to allow inflation to overshoot. Governments bonds are the clear underperformers in this scenario.

BEAR CASE As the recovery stumbles, both fiscal and monetary stimulus increase, but for government bond yields the latter is more important. As fears of deflation rise, yields fall to or even beyond their historical lows. Duration, having moved significantly higher in recent years, is likely your only friend in our bear case scenario.

Table 2: Expected returns outlook 2021

	Base	Bull	Bear
Equities	10%-16%	>20%	<-10%
High yield	6%-8%	>10%	<0%
Investment grade	2%-3%	4%-6%	<0%
Emerging market debt	5%-7%	>10%	<0%
Commodities	8%-12%	>20%	<-10%
Government bonds	-3%< - <-1%	-5% <- <-2%	2%-4%

Source: Robeco. November 2020.



SPECIAL TOPIC

Sustainable investing: The road ahead for the SDGs

To date, there has been some progress on the SDGs.[1] Today, 25% on average of parliamentarians are women, up from 19% in 2010. The share of the population using safely managed drinking water grew from 61% in 2017 to 71% in 2000. And as of 2019, 17% of oceans are protected, a doubling since 2011.

1. E.g. UN (2019; 2020).

The SDGs will see increased momentum as the world seeks to recover from Covid-19

Yet the world is not on track to achieve the SDGs. We are losing biodiversity at an alarming rate, inequality within and between countries is widening, and climate change is affecting more people every day.[2] Moreover, the Covid-19 pandemic is not only an unprecedented health challenge: the ensuing economic crisis is expected to push 400 million people into poverty[3] and cause food shortages affecting 265 million people.[4] And as the virus affects people living in poverty and those with underlying health conditions in particular, Covid-19 is exacerbating inequality.[5]

2. E.g. Sachs et al. (2019; 2020); UN (2019).

3. Sumner et al. (2020).

4. FAO & WFP (2020).

5. Ahmed et al. (2020).

Faced with this bleak outlook, scientists and policymakers have started to debate whether the SDGs should be revised. A recent article in *Nature*, a leading scientific journal, suggested that in a pandemic, countries would do well to focus on a few strategic goals rather than all 17 SDGs.[6] The journal's editors followed up by arguing that the SDGs should be revised to make them more achievable.[7] However, others quickly responded that "great feats are rarely a product of lowered ambition" and that Covid-19 only reinforces why the goals were established in the first place: "to chart a better course towards common economic, social and environmental ambitions that will guarantee humanity's long-term future".[8]

6. Nature (2020).

7. Naidoo et al. (2020).

8. Bhattacharya et al. (2020)

Indeed, despite that bleak outlook, there is good reason to add momentum to achieving the SDGs. They present a valuable approach to managing Covid-19 while simultaneously helping us navigate towards more sustainable societies.[9] The SDGs unite all governments, but also businesses, academics, and NGOs, in a shared agenda with common goals – which is precisely what is needed in times of crisis. Moreover, achieving the SDGs will create a more stable world in which the likelihood of future crises will be lowered, and the ability of societies to cope with hazards will be strengthened.

9. Van Zanten & Van Tulder (2020)

It is not surprising that the United Nations itself asserts that the SDGs are "vital for a (Covid-19) recovery that leads to greener, more inclusive economies, and stronger, more resilient societies". Hence, rather than revising the goals, there is an urgent need to double down on them.

Consequently, in 2021 we expect the investment community to increasingly engage with the SDGs. Two forces – scaling earlier investments and aligning with public policy – will drive this trend, while one consequence – the need for impact measurement – will become more urgent.

Scaling SDG investing solutions

The past years witnessed various asset owners, managers, and data providers develop solutions for taking action on the SDGs. This shows that the SDGs are gaining traction within the investment community.

For instance, the UN Principles for Responsible Investment, a global initiative that aims to create a "more sustainable global financial system", is calling on its more than 3,000 subscribers with USD 103.4 trillion in AuM to advance the SDGs. To help them do so, it has developed a five-part framework that enables investors to improve the outcomes of their investment decisions on the SDGs.[10] Another example involves APG, AustralianSuper, British Columbia Investment Management Corporation (BCI) and PGGM, which have

10. https://www.unpri.org/sustainable-development-goals/investing-with-sdg-outcomes-a-five-part-framework/5895.article

joined forces to develop a platform for investing in solutions that contribute to the SDGs. Their Sustainable Development Investments (SDI) Asset Owner Platform was launched in July 2020. In turn, we at Robeco have created a proprietary three-step framework for assessing how companies impact the SDGs, which serves as a backbone to our SDG Credits and SDG Equity strategies. And data providers such as MSCI and S&P have recently started to distribute SDG-related data.

Now the groundwork has been done, it is time to scale the created solutions. As the fruits of this earlier labor are being picked, we will undoubtedly see more investments in companies helping to attain the global goals.

Riding the waves of regulation and public investment

Various governments are in the midst of launching ambitious regulations governing sustainable investing. At the same time, many governments are using public investments to dampen the socio-economic blows of Covid-19 and simultaneously advance sustainable development. Both can catalyze investor action for the SDGs.

First, the European Commission (EC) is spearheading the regulation of sustainable investing by launching its "EU Taxonomy" and the "Sustainable Finance Disclosure Regulation". The taxonomy establishes detailed performance thresholds that measure whether companies (i) substantially contribute to one of six environmental objectives[11] ; (ii) do no significant harm to the other environmental objectives; and (iii) comply with minimum social safeguards. The EC brands its taxonomy as: "one of the most significant developments in sustainable finance" that "will have wide ranging implications for investors and issuers working in the EU, and beyond."[12] It is also launching its SFDR, which requires investors to report on standardized sustainability indicators. The aim is to provide more transparency on sustainability by promoting comparability and preventing greenwashing.

11. The six environmental objectives are: (1) Climate change mitigation; (2) Climate change adaptation; (3) Sustainable use and protection of water and marine resources; (4) Transition to a circular economy; (5) Pollution prevention and control; (6) Protection and restoration of biodiversity and ecosystems.
12. EC (2020).

Both types of regulations will come into force in 2021 and will set a high bar for sustainable investing. If investors rise to the challenge, significantly more capital will be allocated to truly innovative companies, leading the transition towards achieving the SDGs. This might mean channeling funds from existing 'mainstream' ESG funds to stricter 'dedicated' SDG or climate strategies. And while Europe is taking the lead, there are signs that other countries are following. Japan, Canada, and Malaysia appear to be developing their own taxonomies[13], while rumors are surfacing that China and Europe might form a taskforce on their sustainable finance taxonomies.[14]

13. https://corpgov.law.harvard.edu/2020/06/10/the-ripple-effect-of-eu-taxonomy-for-sustainable-investments-in-u-s-financial-sector/

14. https://www.responsible-investor.com/articles/china-and-eu-to-form-taskforce-on-green-taxonomies

Secondly, various countries are using their investment programs meant to dampen the socioeconomic blows of the pandemic as an opportunity for sustainability. For instance, the EC's EUR 1.85 trillion[15] recovery instrument links to the European Green Deal – the continent's growth strategy that strives to make the EU climate-neutral by 2050 – and looks to invest in sustainable, future-oriented activities that link to the SDGs. Priority sectors for such public investments include food production and biodiversity, mobility, energy, and buildings. On introducing the EU recovery instrument, EC President Ursula von der Leyen said: "The recovery plan turns the immense challenge we face into an opportunity, not only by supporting the recovery but also by investing in our future: the European Green

15. Combining the EUR 750 billion recovery fund and reinforcements from the EU's long-term 2021–2027 budget.

Deal and digitalization will boost jobs and growth, the resilience of our societies and the health of our environment. This is Europe's moment."[16] And with the election of Joe Biden as incoming president, the United States is also expected to make public investments in sustainable solutions.

16. EC (2020b).

Although it remains to be seen to what extent such investments truly benefit sustainability – governments also appear to still be spending vast sums bailing out 'dirty' industries such as airlines in this pandemic – it is clear that recovery instruments will help advance the SDGs. Such public investments will support the business models of companies providing solutions for the goals, presenting real opportunities for investors.

The proof is in the pudding: The shift towards impact measurement

As the SDGs continue to gain influence in the investment community, investors using the SDGs will increasingly need to prove what the impact of these strategies is.

Investors that use the SDGs in their investment process tend to promise to deliver financial results alongside supporting real world impact: contributions to the development of societies or to environmental objectives. The logic is that, because the SDGs delineate the intended development pathways of all countries around the world, companies that help achieve the SDGs are likely to be the future winners while companies that erode progress are likely to lose. Aligning investments with the ambitions of the goals then is a good way to deliver financial returns. It also ensures that money flows towards companies providing solutions to the challenges the world faces. Measuring what the societal and environmental impact is of companies helps fulfill both promises.

Impact measurement allows us to select companies that are best aligned with the SDGs – and thus expected to be future winners. It also enables us to select companies that generate the biggest impacts at the lowest costs. And, importantly, it helps investors explain to clients how their money is invested in companies that improve the lives of people and enhance the sustainability of our planet.

Outlook

Overall, 2021 will be an important year for sustainable investing. The SDGs help societies navigate through and beyond the Covid-19 pandemic. They also serve as a blueprint for sustainable investing strategies. Investors will expand on their earlier investments in the SDGs to integrate these goals into their strategies, and they will increasingly align with public policies for sustainable development. They will thereby stand to not only create wealth, but also real world impact.

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SPECIAL TOPIC

Filtering out fraud risk in Chinese A-share markets

Chinese equity markets have emerged as one of the big winners following the Covid-19 shock. And their prospects remain bright for 2021, provided investors take the necessary steps to prevent certain China-specific risks – in particular fraud risk – from spoiling the party.

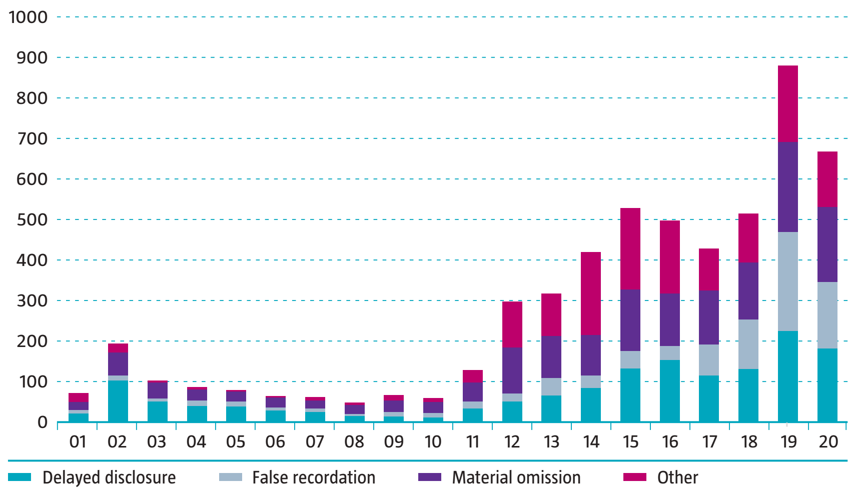
Until recently, Chinese domestic stock markets, so-called A-share markets, were largely shunned by international investors. But as China recovered faster than most countries from the sudden economic contraction induced by the Covid-19 pandemic in the first quarter of 2020, and remained one of the few economies expected to grow this year, the tide is appearing to turn for these mainland stocks.

As we enter into 2020's final stretch, A-shares are amongst the best performers year to date, with strong double-digit returns. Looking forward to 2021, this situation remains relatively favorable. Although a re-escalation of US-China tensions is possible, if increasingly less likely, the Chinese economy is expected to post significant growth, helped by strong fiscal and monetary support as well as ongoing structural reform efforts.

Yet this does not mean investors should rush headlong into buying. Although big steps have been taken over the past decade, A-share markets remain in their early development stages. Regulation is still catching up with common standards in developed markets, and important issues still exist regarding disclosure and transparency. This is particularly relevant for quantitative investors, as their models – usually designed to operate in developed markets – typically fail to capture such risks.

Fraud cases are by no means a marginal phenomenon in China, as Figure 7 illustrates. It shows a steady rise in the number and type of regulatory violations reported by the China Securities Regulatory Commission (CSRC) between 2001 and 2019. Since 2015, the number of enforcement actions has exceeded 400 per year. The most common types of violation are shown separately, being delayed disclosure, false recordation, and material omission.

Figure 7: Rising number of regulatory violations reported by the CSRC



Source: Robeco, China Stock Market and Accounting Research. November 2020.

We count the number of regulatory violations reported by the CSRC for each calendar year. Admittedly, the number of listed firms has risen sharply over this period, especially since 2012, which may partly explain why fraud cases have been growing sharply. Also, the frequency of CSRC enforcement actions has also risen, relatively speaking.

An important point to remember is that fraud cases are not only restricted to small companies. Among constituents of the CSI 300 Index, the 300 largest A-share companies, there have been at least 20 fraud cases every year since 2014, with a high of 35 cases in 2015.

Opportunity and incentive

The two main conditions necessary for fraud to prosper are opportunity and incentive, both of which tend to be high in China. The country's still rudimentary regulatory framework means that Chinese companies tend to have weaker internal controls and poorer governance than their Western counterparts. Moreover, sanctions for regulatory violations are often relatively minor, and the potential benefits from undetected fraud can be huge.

In May 2019, for instance, a Chinese pharmaceutical company was found to have falsified its financials. However, the firm's chairman was not sentenced to a jail sentence and was only fined RMB 0.9 million (EUR 120,000), after having pocketed RMB 10 billion (EUR 1.3 billion) from the fraud. Meanwhile, the stock was allowed to resume trading only after a short suspension period, although its price subsequently declined by more than 80%.

As a comparison, back in 2009, Bernie Madoff was sentenced to no less than 150 years in prison in the US (the maximum allowed), having been found guilty of stealing an estimated USD 65 billion from approximately 4,800 clients, through the largest Ponzi scheme in world history, making it the country's largest financial fraud case to date. Such harsh sentence reflects the much stricter approach to fraud sanctions applied in the US and more generally in Western countries.

As long as opportunities remain plenty and incentives high, the number of fraud cases is likely to remain substantial in Chinese A-share stock markets. It is therefore crucial for quant investors to have the detection tools necessary in order to avoid such risks. Unfortunately, existing available databases relating to fraud-risk screening lack the broad coverage and level of detail typically needed for this purpose.

A proprietary fraud-risk screen

To address this issue, Robeco has built a proprietary fraud-risk screen to cover the entire investment universe of approximately 1,500 China A-shares that we rank for our quantitative equity strategies. The aim is to first identify which companies have questionable business and accounting practices, before any potential fraud is exposed by regulators or the media. These practices might result in low integrity of the data we use as input in quantitative models.

Companies that score high on our fraud-risk screen are then scrutinized in more detail, using fundamental analysis to determine the likelihood of low-integrity data reporting or potential regulatory violations. In our analysis, we consider approximately 100 company-specific variables, including accounting metrics. Table 3 explains some of the main variables we look at as part of our screening process.

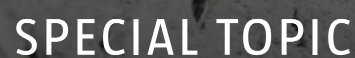
Table 3: Five key variables explained	
Sub-scenario	**Explanation**
Pledged shares	This variable measures the incentive for insiders to manipulate the share price. Pledged shares serve as collateral for loans. Insiders with large equity stakes in a company who have pledged their shares for loans to fund their stakes typically do not have much additional cash. If the share price drops, additional cash collateral is usually required by the lender. Hence, there is a strong incentive for insiders to manipulate stock prices when these are under pressure.
Cash genuineness	Verification whether the reported strong cashflows are genuine or overstated on the balance sheet. An important difference between genuine and fictitious cash is that the latter cannot be paid out as dividends to shareholders. Thus, companies with lots of reported cash but no dividend payments can appear suspicious. Also, artificially generated cash generally appears in the balance sheet in one form or another as a 'non-production' asset. These 'non-production' assets are assets which are not involved in the production of goods and services, and typically include short-term investments and accounts receivable. Companies with an abnormal level of 'non-production' assets, or an unusually fast build-up of 'non-production' assets over a short period of time, should also be considered with caution.
Financing behavior	This highlights companies with poor capital management practices. Companies that report to be in a net positive cash position and generate strong free cashflows would normally not need to issue significant amounts of debt, nor raise new equity frequently. Also, dividend payments or share buybacks can sometimes be funded by debt. While this is not uncommon, it sometimes reflects poor corporate governance or financial statements falsification.
M&A accounting	This aims to identify companies which manipulate their reported profits through a frenzy of acquisitions. Companies that make material acquisitions have more opportunities to manipulate their earnings. These companies can artificially boost earnings in the periods following acquisitions through asset write-downs during the M&A process. Asset write-downs lead to losses during the M&A process itself, but can artificially inflate accounting profitability metrics going forward through lower depreciations. This earnings manipulation may be used to fulfil post-merger earnings targets that may be part of the management's incentive scheme.
Window dressing	The goal is to identify whether a company presents favorable financial statements by understating the actual level of debt. Although window dressing does not always involve fraudulent practices, it is usually done to mislead investors. Managers may engage in window dressing by reducing short-term borrowings to disguise the true risk level of the company. In this example they will often sell short-term speculative assets and use this money to repay short-term debt or fund other operations just before the reporting period. After the reporting date, they may again purchase speculative investments financed by short-term debt. The goal is to hide certain risky activities from investors.

Source: Robeco. November 2020.

Thanks to this fraud-risk screening tool, we can identify the dozen companies showing dubious management and accounting practices, out of the hundreds of large and liquid investible Chinese A-shares. Robeco's fundamental analysts in Rotterdam, Shanghai and Hong Kong can then study these companies in more detail to further narrow down the list of firms that are most likely to suffer from fraud.

Short-listed individual cases are ultimately discussed within the Quantitative Equity department. Depending on the outcome, overweight positions may be cancelled, or stocks may be entirely excluded in our quantitative equity portfolios. A potential reason to decide not to entirely exclude a riskier company from all our strategies is that excluding large index names may result in a large tracking error, which can be a problem for some investors.

In a stock market characterized by very attractive investment prospects but also relatively high chances of being affected by fraud, our proprietary screening tool helps us remove important tail risks that are typically not captured by standard quantitative investments models. This fits well with our key investment principle of avoiding unrewarded risks at each stage of the investment process, to ensure the highest risk-adjusted returns for our clients over the longer term.



SPECIAL TOPIC

Unlocking 5G's potential

We believe 2021 will be an inflection point for 5G – and a select group of companies will reap the fruits of this powerful shift. In 2020 Apple joined the likes of Samsung and Huawei as it presented its first smartphone capable of connecting to 5G mobile networks. Consumers can now choose from a broad range of 5G smartphones.

At the same time, telecommunication companies in the US, China, Japan, South Korea, and several countries in Europe are activating their 5G mobile networks. Even though 5G network quality is not yet equal to 4G, the availability of 5G smartphones and activation of 5G networks mean that most of the technological prerequisites for 5G adoption among consumers are being met.

Followers of 5G developments often remark that consumer adoption will remain low because there are no blockbuster use cases that appeal to consumers. We partly agree with that statement, in the sense that 5G won't be a big hit overnight. But is this a chicken-or-egg question? When a technology isn't widely adopted, companies have a lower incentive to develop use cases for that technology, and when use cases are limited, adoption is likely to be slow.

A similar situation occurred with 4G. To illustrate, mobile applications for video and music streaming, social media, and online shopping were in their infancy before 4G arrived. Data speeds were so low on 3G that user experience for those applications was too unsatisfactory to support broad adoption. Now, of course, they have become mainstream.

A giant leap forward

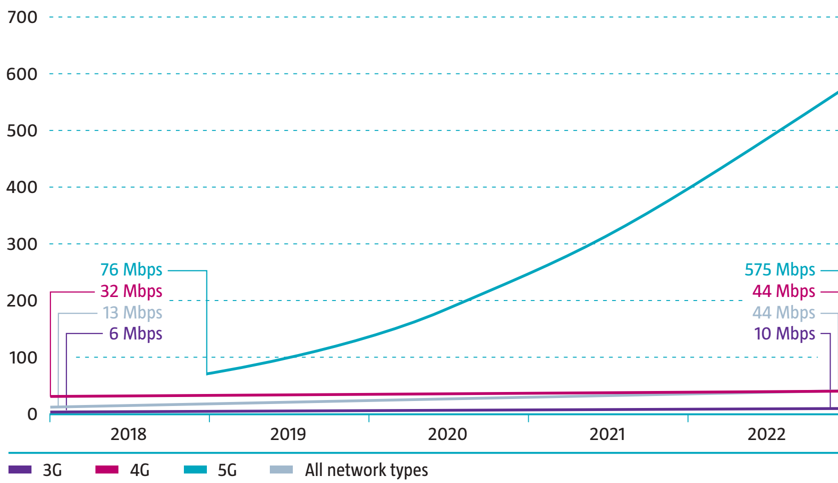
In a famous commercial from the largest Dutch telecom provider KPN around the introduction of mobile telephony, people on the street were asked in 1998 whether they had a mobile phone. The majority answered they didn't want one because they could receive phone calls at home, liked to receive mail, or thought it would be annoying to always be reachable.

In 2013, 4G was introduced in the Netherlands, and KPN interviewed the same people. By now they all had mobile phones, and couldn't do without them, they said. When asked about 4G, they shruggingly replied it wasn't for them, a waste of time or they were happy with just reading e-mail. One wonders what they will say when asked about 5G. It is much easier to understand in retrospect than to imagine for the future what impact exactly such a change will have on us.

Do not underestimate the leap forward 5G will bring. 5G's mobile network technology vastly exceeds its predecessor's capabilities. Its speed is ten times that of 4G; the network delay (latency) is ten times lower; and it can handle ten times more connections in the same area. Quite impressive. Is 5G making the most of that promise in the real world? Global connectivity measurements show that 5G's speed is already five to six times higher than 4G's[1]. While higher speeds are exciting, we expect improvements in latency and connection density to be the real game changers in terms of enabling entirely new use cases.

1. Opensignal. Date: 2020.

Figure 8: Global mobile average speeds by network type



Source: Cisco annual internet report, 2018-2023. November 2020.

It's about more than just speed

Network upgrades preceding 5G were mainly about speed. In the upgrade to 5G, additional emphasis is put on latency and connection density, to ensure an extremely fast, virtually instantaneous experience for up to a million connections per square kilometer. Cutting latency from 20 to 30 milliseconds to one or two milliseconds has a particularly strong impact on 'live' experiences such as streamed video gaming. New latency-critical applications such as augmented or virtual reality might become viable on mobile devices as well.

With 5G accelerating the adoption of augmented and virtual reality, the vision of a Metaverse might become reality. This is a real-time, 3D social medium where instead of sending messages and pictures to one another asynchronously, you're with each other in a virtual world, interacting and having fun experiences which might span anything from purely gaming to purely social experiences.

This vision does not come out of thin air; in fact, it's backed by Tim Sweeney, founder of Epic Games (creator of the immensely popular game Fortnite). And he's not alone. Facebook acquired virtual reality (VR) company Oculus in 2014 and has quietly been working on Facebook Horizon, an ever-expanding VR world where you can explore, play, and create.

5G meets the Internet of Things

5G is not just a technology relevant for data-hungry consumers – it has promising industrial applications as well, where wireless connectivity is clearly in demand. As the number of connections increases, wireless connectivity becomes a more attractive option in terms of cost and time consumption than a wired option. According to industrial network company HMS, wireless connectivity accounts for about 6% of the industrial network market in 2019 and is growing 30% annually.

5G's ability to maintain a very large number of connections in a relatively small area, i.e. connection density, could make it a suitable technology platform for the Internet of Things (IoT). IoT simplifies tracking and controlling moving parts of an industrial operation such as automated guided vehicles, handheld devices, and collaborative robots on mobile platforms, but also components that move through the supply chain and production lines.

In this way, 5G could be a key enabler of further factory automation and a driver of increased efficiency. Its connectivity can increase productivity in industrial operations: using real-time data to communicate with each other, machines can adjust their actions. A current IoT example comes from Ericsson, which has wirelessly connected 1,000 devices in its manufacturing plant in China, enabling real-time monitoring and analysis of production data to guide adjustments to the production plan. Key beneficiaries are IoT companies such as PTC Inc. and connected robotic companies such as ABB and Teradyne.

Robots, cars and machines

5G's capabilities, high speed, low latency, and high connection density could accelerate IoT adoption outside factories too. Most new cars now come with an internet connection but are not yet connected to the 'things' they encounter such as traffic lights, parking spaces and other cars. A large installed base of things such as sensors, robots, cars and machines interacting through a network such as 5G could generate massive quantities of data.

Companies processing, analyzing, and extracting information from that data create economic value because they improve business decision making for other companies. Large cloud providers such as Google, Microsoft and Amazon already offer solutions for the data created by IoT. Other beneficiaries are data-center owners such as Equinix, CyrusOne and CoreSite.

We believe 2021 could be an inflection point for 5G. Consumers have shown a willingness to subscribe to 5G services. Asia is leading in 5G adoption. In China, over 110m users have subscribed to 5G plans as of June 2020, representing 6.9% of the country's total user base. South Korea is also seeing increasing adoption, with 5G subscribers now making up 10.6% of the total subscriber base from virtually nothing two years ago. It seems the egg has hatched, and the chick is growing.

Exciting investment opportunities

We can therefore see exciting investment opportunities among owners of digital infrastructure to take action on. For example, densification of our digital infrastructure is needed to ensure 5G reaches its full potential. Networks are being built-out as we write, with 2021 being a key year to increase 5G coverage and quality.

This will give consumers and enterprise customers the user-experience they want. Companies owning digital infrastructure at critical points in the network will benefit, because their assets are increasingly in demand and cannot be avoided when building the 5G network. Selected cellular tower, small cell, fiber cable and data center owners are key beneficiaries at this stage.

As more opportunities slowly become visible, it's important to bear in mind that as humans, we often underestimate the non-linear change profound technological innovations can bring about. 5G will increase the mobile network's capabilities with an order of magnitude we cannot imagine.

While use cases are in their infancy, we are confident that innovative growth companies will look at 5G, see its capabilities, and develop use-cases and applications for it. Comfortably invested in digital infrastructure now, we are excited to see which companies are able to unlock 5G's potential for all our benefits.

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