

Climate change 2021: Drive to decarbonise the global economy

Fired by a fresh impetus to turn ambition into action, we're seeing a turning point for this challenge, which should open up investment opportunities.

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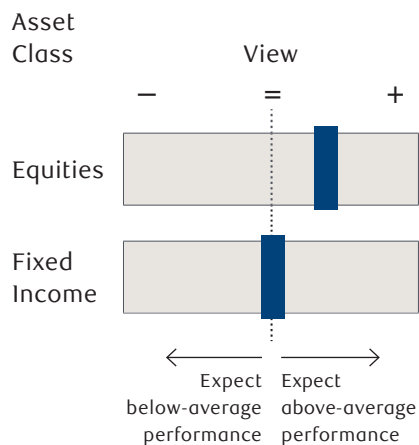
Yields are rising in the U.S. and abroad, and we view that as a positive sign for the economic outlook.

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RBC'S INVESTMENT Stance

Global asset class views



(+/-/=) represents the Global Portfolio Advisory Committee's (GPAC) view over a 12-month investment time horizon.

+ Overweight implies the potential for better-than-average performance for the asset class or for the region relative to other asset classes or regions.

= Market Weight implies the potential for average performance for the asset class or for the region relative to other asset classes or regions.

- Underweight implies the potential for below-average performance for the asset class or for the region relative to other asset classes or regions.

Source - RBC Wealth Management

EQUITIES

- The economic and corporate earnings rebound, amid the gradual transition out of the COVID-19 crisis, continues to support equity markets. Ongoing fiscal and monetary stimulus programs remain positive factors too. Even though the pace of vaccinations and business reopenings is uneven across countries, markets are looking ahead to a more normal business landscape.
- We think economic growth, especially in the U.S., has the potential to surpass consensus forecasts. As market participants weigh this possibility, it inevitably ushers in a debate about when central banks will change gears to less supportive or even restrictive policies. In the past, such circumstances have generated equity market volatility even when the actual change in policy was a long way off. While we continue to anticipate worthwhile equity returns in 2021, this could cause some bumps in the road.

FIXED INCOME

- As the global rise in yields gathers steam on an improving economic outlook, we see few things to stand in their way over the near term. Central banks still have the option to expand or extend their asset purchase programs to keep yields in check, but will likely see little reason to do so if yields are rising for the right reasons. For now, we think global yields can move modestly higher—so we stay short-term on yield curves. In credit markets, valuations are historically rich and corporate bond yields remain near record lows, but we still expect credit to outperform government debt in 2021.
- We maintain our Market Weight in global fixed income, but continue to reduce interest rate risk exposure as global yields rise on a continued repricing of a strong economic recovery. We maintain a modest Overweight to corporate credit, primarily via preferred shares.

MONTHLY Focus



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Climate change 2021: Drive to decarbonise the global economy

Fired by a fresh impetus to turn ambition into action on climate change, we're seeing a turning point for this global challenge in 2021. With government action enhanced by private sector innovation, new technologies and industries will likely emerge in a green economy, opening up investment opportunities.

We believe 2021 will see a new impetus for policy and action on climate change as two factors converge: the U.S.'s renewed commitment to the cause under Joe Biden's presidency and the Democrat-controlled Congress; and the 2021 United Nations Climate Change Conference, also known as COP26. Recent extreme weather in the U.S. stretching from the Upper Midwest down to Texas, just the latest in a growing string of once-in-several-hundred-year climate disasters, is a stark reminder of the pressing need to tackle this issue. We look at the implications of climate change for portfolio management.

A new beginning

As pledged during the campaign, the Biden administration is treating climate change as a top priority. One of Biden's first acts after his inauguration was to rejoin the Paris climate accord via executive order. Former President Donald Trump had exited this treaty, which binds nearly 200 countries to do their utmost to prevent the global temperature from rising 2 degrees Celsius above pre-industrial levels by committing to reduce their carbon emissions. (For an in-depth analysis of what the U.S. rejoining the Paris Agreement entails and the implications for investors, please see our recent report [A climate of opportunity](#).)

There are many other potential proposals to curb climate change that could come before Congress. Their prospects for adoption may depend on whether a proposal needs 51 votes (i.e., a party-line vote) or 60 votes (i.e., Republicans crossing party lines) in the Senate. For instance, tax breaks for wind energy, solar power, and electric vehicles and their recharging stations can be included in a "reconciliation bill," which would require only 51 votes and is likely to pass as part of a long-term Biden agenda. By contrast, legislation regulating energy production would require 60 Senate votes and is less likely to gather the requisite bipartisan support, in our view.

Still, that the U.S. has prioritised climate change and rejoined the Paris Agreement is important for the overall global commitment to the effort. Because such a powerful player had previously opted out, many countries were reluctant to take the tough steps to curb global warming, calculating that the global effort would fail. In essence, why make sacrifices if others don't?

Biden entered the White House with a much larger mandate on climate than any of his predecessors as the issue has gradually garnered more support

MONTHLY FOCUS

Drive to decarbonise

among Americans. According to a January 2020 survey by the Pew Research Center, nearly two-thirds of U.S. adults think protecting the environment should be a top priority for the president and Congress. This is up considerably since 2009 and the start of the Barack Obama administration, when the corresponding figure was 41 percent.

Fresh ambitions

This year will also see the UK host the COP26 summit in November, the most significant conference on climate change since COP21 in 2015, which led to the Paris accord. Accordingly, we expect to see an increase in policy commitments from national governments throughout the year.

More than 125 countries that account for some 60 percent of total global emissions have already announced some target for “net-zero” emissions, which is seen as a key tool for meeting the commitments of the Paris Agreement. This essentially means that any new carbon emissions will need to be offset by the removal of these gases already in the atmosphere—by planting new forests, for example, or building out other emerging carbon capture technologies. In order to meet the goal of limiting global warming to 1.5 degrees Celsius, scientists from the Intergovernmental Panel on Climate Change have calculated that the world would need to reach net zero for CO₂ emissions by 2050, and for all greenhouse gas emissions sometime between 2063 and 2068. Greenhouse gas emissions include not only carbon dioxide, but also methane, nitrous oxide, and fluorinated gases. This will require significant reductions in gross emissions, through conventional mitigation techniques such as the substitution of renewable energy for fossil fuels, as well as greater use of carbon removal technologies such as carbon capture and storage.

The problem is that politicians are happy to set long-term targets, aiming to be at net-zero emissions in 2050, knowing they are unlikely to be running for re-election then, but they are very reluctant to make the necessary policy adjustments in the short term when the political cost could be high. For example, in the UK, fuel taxes have not been raised since 2011. Additionally, many countries’ current commitments have not yet been signed into law, and remain just proposals. As a result, a number of forecasting models suggest that based on current national short-term carbon emission reduction goals, the average global temperature is on track to rise by as much as 3 degrees Celsius.

Fortunately, the Paris Agreement, signed in 2015, includes a “ratchet mechanism” that requires the signatories to come forward with more ambitious short-term national climate goals every five years, taking into account the technological, economic, and social progress in the intervening years. This means some sort of convergence amongst net-zero commitments is likely at COP26, and for these to be formalised in each countries’ individual climate action plan, known as “nationally determined contributions” (NDCs).

We expect countries to announce new, enhanced NDCs at COP26 this November, and to flesh out their short-term plans in greater detail. This and the Biden presidency’s commitment to fight climate change should add momentum to the efforts to curb global warming.

Short-term commitments are insufficient

Select countries' short- and long-term commitments

| Short-term commitment/ Nationally determined contributions (NDCs) | Action plan | Long-term commitment | Climate Action Tracker NDC rating* |
|---|---|---|--|
| CANADA** | | | |
| Reduce greenhouse gas (GHG) emissions by 30% from 2005 levels by 2030 | <ul style="list-style-type: none"> Launched carbon tax in 2019 Established Canada Infrastructure Bank to help reach net-zero emissions Proposed legislation that commits government to regular reporting and setting of goals to reach net-zero target; but enforcement mechanism, details of how targets will be met and amount of additional spending yet to be defined | Net-zero carbon emissions by 2050 | Insufficient |
| CHINA | | | |
| Carbon emissions to peak in 2030 | <ul style="list-style-type: none"> 14th Five-Year Plan set the ambitions for transition to a green economy; Chinese solar and wind technologies, electric vehicles are the most prominent sectors of the transition with a \$15T investment over 40 years Environmental objectives should be a prominent feature of the next Five-Year Plan (to be unveiled in March 2021) Launched a national carbon emissions trading scheme, the largest in the world, in February 2021 | Net-zero carbon emissions by 2060 | Highly Insufficient |
| EUROPEAN UNION | | | |
| Reduce GHG emissions to 50%–55% of 1990 levels by 2030 | <ul style="list-style-type: none"> EU policy makes climate action a key driver of economic recovery At least 30% of the EU's multi-annual budget and COVID-19 recovery fund to be spent on achieving net-zero and emissions reduction goals The 2030 GHG reduction goal remains short of the 65% reduction needed to comply with the Paris Agreement | Net-zero carbon emissions by 2050 | Insufficient |
| JAPAN | | | |
| Reduce GHG emissions to 26% below 2013 levels by 2030 | <ul style="list-style-type: none"> Strategic Energy Plan (2018) aims to reduce coal use by shuttering 70% of the country's coal-fired plants while increasing renewable and nuclear energy The Japanese government is revising its 2030 energy mix target and its GHG reduction target; revision should be concluded by mid-2021; revised NDC is expected to be published before COP26 in 2021 | Reduce GHG emissions by 80% from current levels by 2050 (base year not specified) | Highly Insufficient |
| UNITED KINGDOM | | | |
| Reduce GHG emissions by at least 68% by 2030, compared to 1990 levels | <ul style="list-style-type: none"> Announced a £12B 10-point green recovery plan; focus areas of investment include carbon capture, hydrogen, nuclear, electric vehicles, and renewable energy Announced plans to set up a National Infrastructure Bank to channel funds into green capital projects | Net-zero carbon emissions by 2050 | Insufficient |
| UNITED STATES | | | |
| Reduce carbon emissions by 50% by 2035 | <ul style="list-style-type: none"> Biden campaign proposal of \$2T climate package to tackle the transition to electric vehicles and improve the efficiency of buildings and transportation systems | Net-zero carbon emissions by 2050 | Critically Insufficient |

*The Climate Action Tracker rates NDCs, 2020 pledges, and long-term targets against whether they are consistent with a country's "fair share" effort to the Paris Agreement's goal to limit global warming to 1.5°C

**Canada has committed to review its national short-term targets by 2025

Source - RBC Wealth Management, <https://climateactiontracker.org/>

MONTHLY FOCUS

Drive to decarbonise

The cost of no action

The consequences of climate change are well documented. From increased frequency of extreme weather events to rising sea levels and ocean acidification, the physical effects are potentially far-reaching. The climate-migration nexus will likely become a substantial challenge as well. The UN forecasts there could be anywhere between 25 million and 1 billion environmental migrants by 2050 as people are displaced due to intolerable heat effects on agriculture, or from rising sea levels inundating coastal areas where 40 percent of the world's population lives.

Beyond these, there is also an economic toll. Studies conducted by the U.S. National Bureau of Economic Research have identified significant economic risks should global temperatures continue to climb. For the U.S., those risks range from a 10.5 percent decrease in GDP per capita if no action is taken worldwide to a nearly two percent decline even if the commitments in the Paris Agreement are met.

There is now a growing consensus that a successful climate transition is necessary to build more resilient economies.

The need for government action ...

Part of the solution is to decrease economies' reliance on carbon fuel. This requires the dual involvement of governments via policy support and regulation and the private sector with its capacity for innovation.

As the activities that cause climate change are deeply ingrained in the foundations of our economies, governments need to ensure that mitigating measures are broad enough and sufficiently planned to be effective over the long term. Governments must also see that support is given to those industries that need to transform into greener propositions as well as to nascent green alternatives.

One of the best examples of the effectiveness of government action to curb climate change is Germany's solar energy subsidies. In the early 2000s, at a cost of some €200 billion over eight years, the German government guaranteed the price per megawatt hour sold from any installation at €457, about five times the cost of generating electricity from coal at that time. As other countries followed suit, the global market for solar panels expanded by more than 30 times, and the price of a solar panel fell to about a sixth of what it was in 2004 and has continued to decline ever since. In good weather conditions, new solar power installations can generate electricity at a lower cost than that generated from fossil fuels *without needing subsidies* to do so.

Likewise, the cost of wind power has dropped dramatically, powered by larger, more numerous installations worldwide and rapidly improving technology. Here too, government subsidies often provided the initial impetus. More will be needed.

... enhanced by private sector innovation

The private sector also needs to do its part given the 2050 targets are so ambitious. Only through innovation can they be hoped to be achieved.

MONTHLY FOCUS

Drive to decarbonise

Much like the way personal computers revolutionised the world and our daily lives, and how new vaccines were developed in record time to help tame the COVID-19 pandemic, innovation is the key to solving our climate issues.

As RBC's CEO Dave McKay remarked in his review of Davos 2021, "entire sectors will emerge—or be remade—through the 2020s as consumers look for technology to transform their lives, and governments spend trillions to lay the groundwork of a new economy."

He is not alone. Larry Fink, founder of BlackRock, the world's largest fund manager, urges CEOs in his annual letter to see climate transition as an opportunity—but not just for the climate. He calculates the world will need \$50 trillion in new investments by 2050 to meet the net-zero goals, creating new technologies and new industries.

With industry, buildings, and transport the top three producers of emissions, together accounting for close to 60 percent of the total, many innovations focus on reducing emissions in these areas. Well-known examples of technologies that could go a long way to decarbonising the world include the rapid growth of renewable energy supplies and electric vehicle manufacturing.

There are also new technologies that are not quite mainstream yet, which show promise but need scale to help achieve a cooler planet. One is carbon capture and storage—whereby carbon dioxide emissions from industrial processes are seized, transported by ship or pipeline to a storage site, and deposited underground in geological formations. This technology could help industries achieve net-zero targets by offsetting emissions produced.

For buildings, one promising approach that dramatically cuts fossil fuel consumption uses geexchange technology for heating and cooling. These systems are currently being used in Toronto to help new condos comply with the Toronto Green Standard, which calls for new buildings to have close to zero carbon emissions by 2030. Geexchange draws heat and cooling from the ground, taking advantage of the earth's constant temperature a few feet beneath the surface. In the winter, a fluid circulating through loops buried underground absorbs heat from the earth and brings it to the building. In the summer, the process is reversed. While the technology is expensive to install, it frees up valuable leasable space as bulky cooling towers, required for traditional heating/cooling systems, are no longer needed. That space can be used for penthouse suites or rooftop gardens. Some five percent of new condos in Toronto employ this new system, double the percentage of five years ago.

It is generally thought that perhaps 75 percent of the energy produced by human endeavours is lost as waste heat. Mechanical means of recapturing lost energy from industrial processes have long existed. Carbon taxes and emission reduction targets have spurred renewed interest in these sorts of installations, while newer applications and technologies are expanding the potential for utilising this vast unused resource for non-industrial purposes—e.g., data centres and commercial/residential buildings.

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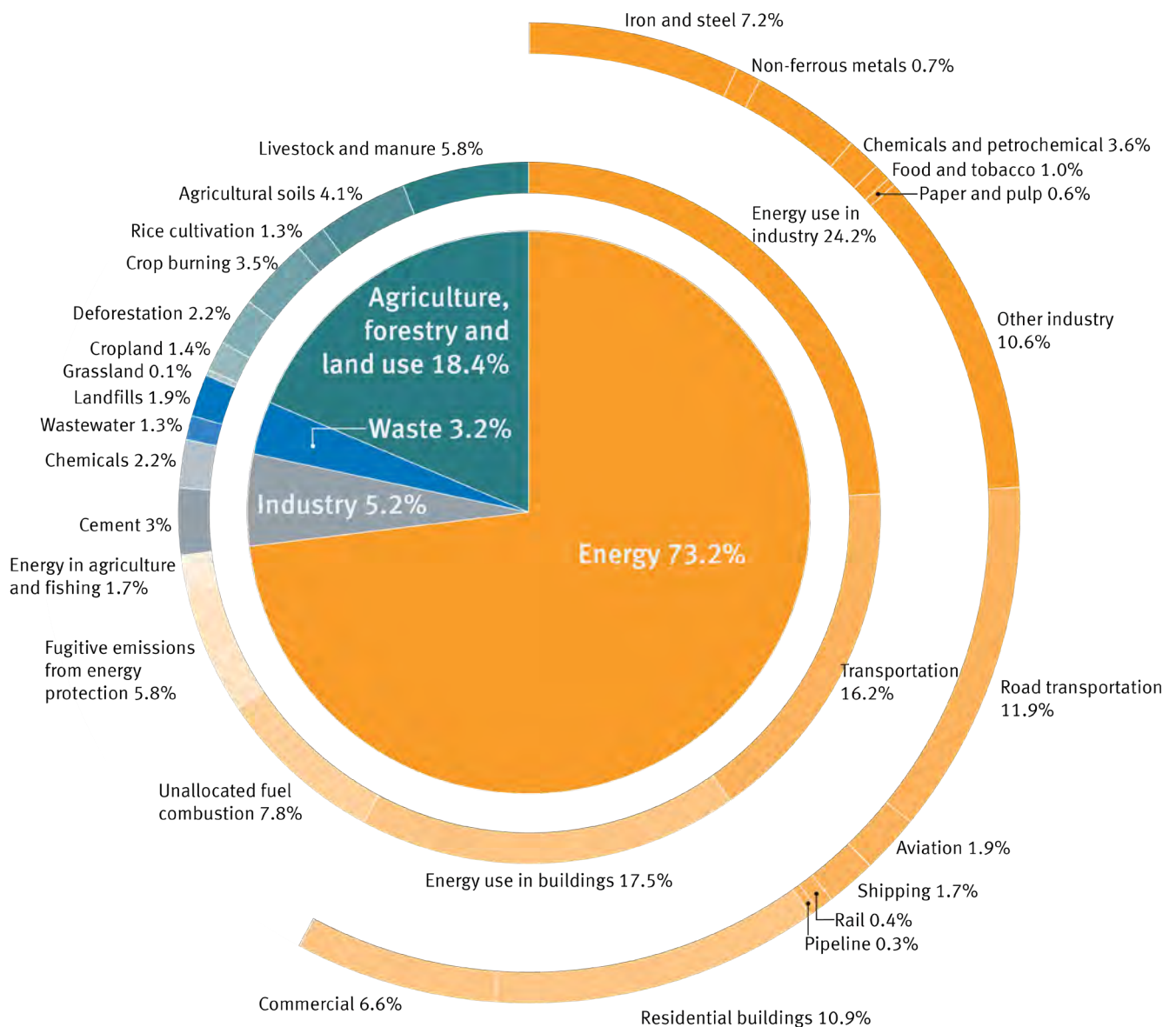
Drive to decarbonise

Heating/cooling and power costs constitute the largest operating expense for most buildings. Increasingly, waste heat recapture installations are built and managed by third parties, often utilities, who sell the power back to buildings at attractive rates.

Additionally, “Smart City” technologies are already being deployed in cities such as Singapore. They aim to ensure that every watt of energy is utilised as efficiently as possible at any given moment. Such processes optimise data management and involve the development and expansion of 5G technology, the fifth generation of broadband cellular networks, which can connect smart electric grids to billions of data points—from rooftop solar panels to Internet of Things-based home appliances. Processing all this data, in conjunction with artificial intelligence-led local weather forecasts, can enhance efficient energy use.

Global greenhouse gas emissions by sector

Shown for 2016 – global greenhouse gas emissions were 49.4 billion tonnes CO₂ eq.



MONTHLY FOCUS

Drive to decarbonise

Investment implications

Climate change is a risk investors need to prudently consider, as it can, for example, imperil supply chains, or cause unexpected financial liabilities or losses. We pointed out in the [feature article](#) in the February Global Insight that environmental, social, and governance (ESG) analysis has an important role to play in risk mitigation. As Habib Subjally, head of the global equities team at RBC Global Asset Management, suggests, “[for many companies] ESG also drives important risk mitigation with respect to regulators, reputation, the stability of supply chains, etc. For example, a company that has developed an understanding of the potential impact of climate change on its end markets, suppliers, employees, and facilities—and has a plan for dealing with it—is, in our view, a less risky investment than one that hasn’t.”

But beyond mitigating risks, there are opportunities. Investing in innovative technologies that have the potential to help decarbonise the environment and the economy can be done both at the stock level and through funds. At RBC, we refer to the combination of sustainability and technology as “SusTech,” and over the course of this year we will delve more deeply into this theme, looking in some detail at solution providers for the green economy.

Investing in solution providers, those companies that develop products and services to be used to adapt to or mitigate climate change are interesting investment opportunities in their own right and are perhaps the most direct way for a portfolio to gain exposure to these changes.

GLOBAL Equity

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Propulsion system

The economies of most developed nations appear to be in the “recovery” phase. Usually, for several successive quarters once the corner has been turned, economic activity accelerates as pent-up demand, restocking, easy credit conditions, and the unemployed beginning to go back to work act in concert to bring the economy roaring back to life. This period usually features the fastest GDP growth rates of the cycle.

Corporate profits and stock prices follow the same path, collapsing in the recession and rebounding energetically as the economy begins to recover. Typically, the stock market overdoes it both ways, falling far further than earnings decline in the recession, and then rising more steeply and sooner than earnings recover.

At some point a year or so into the new cycle, “roaring” growth gives way to a more sedate pace of economic expansion. The transition from “fast” to “sustainable” usually provokes some soul-searching about whether the growth slowdown is a portent of something worse. That discussion is often accompanied by volatility in equity markets.

Classic pattern

While this pandemic-driven recession and subsequent recovery has been distinctly unique, it has so far followed the classic pattern. And the upside surge for GDP and earnings may have further to run. Many governments have committed to deliver more stimulus: the U.S., for example, looks headed toward perhaps an additional \$1.5

U.S. business cycle scorecard

RBC Global Asset Management’s 17-factor scorecard rates the U.S. economy solidly in the “early cycle” phase

| | Start of cycle | Early cycle | Mid cycle | Late cycle | End of cycle | Recession |
|--|----------------|-------------|------------|------------|--------------|-----------|
| Sentiment | | | | | | |
| Bonds | | | | | | |
| Corporate profitability | | | | | | |
| Economic trend | | | | | | |
| Cycle age | | | | | | |
| Prices | | | | | | |
| Leverage | | | | | | |
| Monetary policy | | | | | | |
| Consumer | | | | | | |
| Housing | | | | | | |
| Business investment | | | | | | |
| Inventories | | | | | | |
| Economic slack | | | | | | |
| Employment | | | | | | |
| Equities | | | | | | |
| Volatility | | | | | | |
| Credit | | | | | | |
| Allocation to each stage of cycle | 11% | 62% | 12% | 4% | 2% | 8% |

Note: Darkness of shading indicates the weight given to each input for each phase of the business cycle. Source - RBC Global Asset Management, RBC Wealth Management; data as of 2/3/21

GLOBAL EQUITY

Equity views

| Region | Current |
|--------------------|---------|
| Global | + |
| United States | + |
| Canada | = |
| Continental Europe | = |
| United Kingdom | = |
| Asia (ex Japan) | + |
| Japan | = |

+ Overweight; = Market Weight; – Underweight
Source - RBC Wealth Management

trillion relief package on top of the approximately \$900 billion delivered at year-end, as well as a probable large infrastructure initiative, although the latter likely wouldn't have a big impact before 2022. Government spending initiatives in China, Europe, the UK, and Canada should keep the economic fire well fueled as vaccine rollouts progress into the summer.

But the largest stimulus will come from the reopening of the global economy. Sectors hardest hit by social distancing and travel restrictions will have a chance to reopen with positive knock-on effects for many other sectors, employment, and confidence. Much of the money transferred from governments to households is sitting in bank accounts. Some significant proportion of that will be spent in the coming year as things become more normal.

Estimates rising in anticipation of reopening

Index earnings estimates for this year in North America, Europe, and Asia are reflecting better, more normal times arriving in the back half of the year. Markets have priced in much of this improving outlook—some would say all of it in the case of the U.S. market where the S&P 500 sits at 22x consensus earnings estimates for this year, although that consensus number continues to rise. Price-to-earnings (P/E) multiples for the other developed country markets mostly sit much lower, in the mid-teens.

We expect the momentum provided by the reopening, the delayed impact of fiscal and monetary stimulus, and the initiation of infrastructure spending will provide further solid GDP and earnings gains in 2022. Share prices should advance further over the course of this year in anticipation.

Our long-term investment stance can be stated succinctly: “If there is no U.S. recession in sight, give global

equities the benefit of the doubt.” Most of our leading indicators that would warn us in advance that a recession is on the way are saying the opposite. This economic expansion looks to have room to run for some time yet. In our view, that pushes the next bear market out somewhere beyond 2022.

Virus curveballs and inflation trajectory pose correction risks

Corrections, however, are another matter. Since 1980, the S&P 500's average intra-year drop is 14.3%. That means about half the time it was something worse. We see at least two risks (among many) that could induce unsettling volatility in equity markets. One is the course the pandemic takes from here. Recent months have provided a reminder that the virus remains capable of tossing nasty curveballs. New, more challenging variants, vaccine production/delivery issues, vaccine hesitancy forestalling the arrival of herd immunity, the possibility the passage of time reveals some vaccine shortcomings—the road to convincingly vanquishing the pandemic could be, is likely to be, a bumpy one.

The other is inflation and the effect it can have on monetary policy and P/E ratios. We are about to encounter some larger-than-usual increases in consumer price indexes. In large part that will be because of comparisons with a year ago when consumer prices were falling in April and May. In addition, gasoline prices are surging. The Fed has made it clear it sees these inflation increases coming but expects them to be transitory, subsiding later in the year and further in 2022. However, the prices of many industrial commodities are also on the rise, suggesting finished goods inflation is likely to be stronger in the coming 12 months than previously anticipated. Agricultural commodity prices are also climbing, portending higher food prices down the road.

GLOBAL EQUITY

If these inflation increases look as if they are becoming persistent rather than transitory, then investors will start to worry that Fed rate hikes could begin sooner than the late 2023 timeframe currently priced into debt markets. Inflation expectations are also an important component of the equity valuation equation—a dollar of earnings earned 10 years from now is worth approximately 13% less today than it otherwise would if inflation runs over that interval at 3% per annum rather than today's prevailing rate of 1.5%.

Overweight equities

Taking all the foregoing into consideration, we are left with a constructive outlook for global equities for the coming 12 months. We expect the impact of the pandemic will continue to subside over the remainder of this year and into 2022. The forecast rising tide of GDP and earnings should permit broad market indexes to advance further from today's levels, worries about near-term overvaluation notwithstanding. We recommend a global balanced portfolio remain moderately Overweight equities.

GLOBAL
Fixed income

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A statement of confidence

That’s how Federal Reserve Chair Jerome Powell recently characterized the ongoing rise in Treasury yields—as being simply a reflection of a robust economic outlook.

But yields aren’t just on the rise in the U.S.; global yields are moving higher as expectations swell amid glimmers of light at the end of the pandemic tunnel. Importantly, as the chart shows, the move in yields is largely occurring in long-dated maturities that are typically more sensitive to growth and inflation dynamics, while 2-year yields, typically more sensitive to central bank policy rates, remain well anchored.

For now it would appear that rising global yields up to what are still historically low levels pose little threat to the ongoing economic recovery, but at what point might yields become a headwind for the economy, perhaps forcing central banks to act?

In the U.S., as long as the benchmark 10-year Treasury yield holds a 1.5%–2% range over a 12-month horizon, and inflation expectations

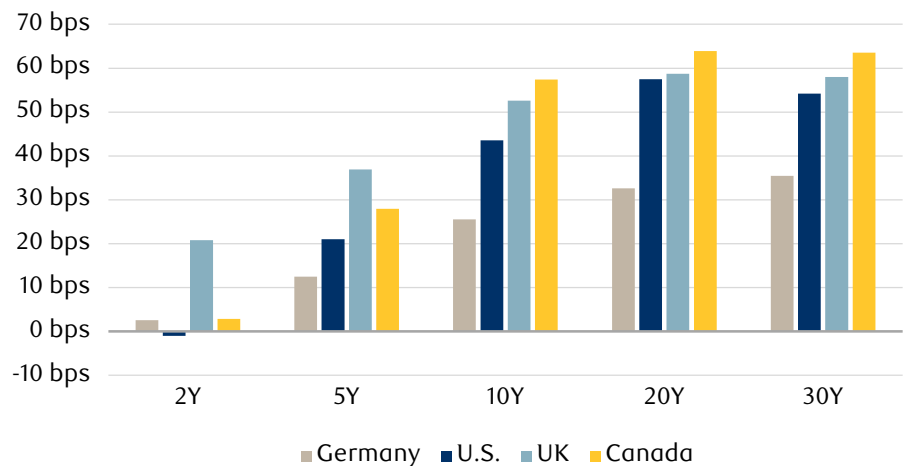
are above 2%, meaning real yields remain negative, the Fed is unlikely to intervene. The Fed will keep an eye on lending rates, particularly mortgage rates, in assessing the need for action, but surveys still show those being well below 3%.

European Central Bank (ECB) President Christine Lagarde has already said officials are “closely monitoring” the movement in yields. Though the 10-year German Bund yield is indeed still in negative territory, it too has been on the move. The level to watch would be -0.20%, in our view, as a rise above that would mark a multiyear high, and the highest since the ECB’s last policy rate cut in mid-2019.

Investors should continue to view rising yields as a confirming factor with respect to the economic outlook. And while there may be room to move moderately higher still, markets will ultimately understand that central banks also have room to move in order to keep yields in check until the recovery is firmly underway.

2-year yields remain relatively unchanged as global central banks are still seen holding policy rates low, while long-end yields have risen on improved growth and inflation expectations.

Year-to-date change in global yield curves



Source - RBC Wealth Management, Bloomberg; bps = basis points; data through 2/23/21

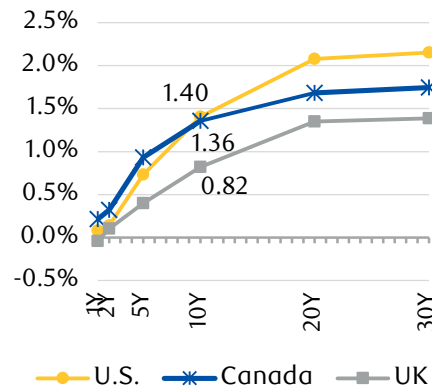
GLOBAL FIXED INCOME

Fixed income views

| Region | Gov't bonds | Corp. credit | Duration |
|--------------------|-------------|--------------|----------|
| Global | = | + | 5-7 yr |
| United States | = | + | 5-7 yr |
| Canada | = | = | 5-7 yr |
| Continental Europe | = | = | 5-7 yr |
| United Kingdom | - | = | 3-5 yr |

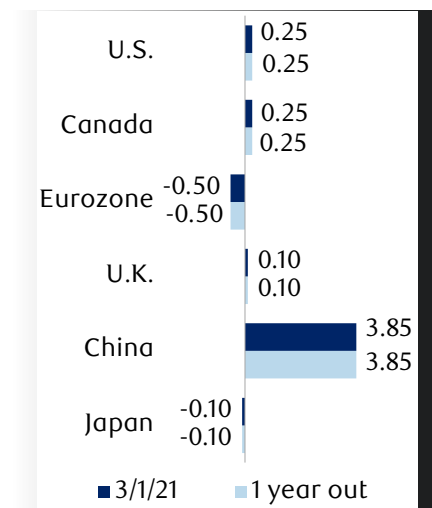
+ Overweight; = Market Weight; - Underweight
Source - RBC Wealth Management

Sovereign yield curves



Source - Bloomberg; data through 2/28/21

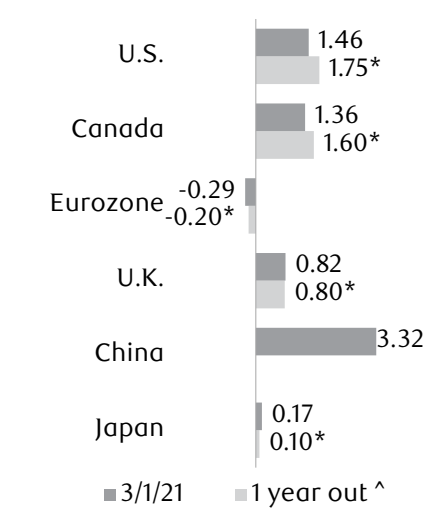
Central bank rate (%)



*1-yr base lending rate for working capital, PBoC

Source - RBC Investment Strategy Committee, RBC Capital Markets forecasts, Global Portfolio Advisory Committee, RBC Global Asset Management

10-year rate (%)



Note: Eurozone utilizes German Bunds.

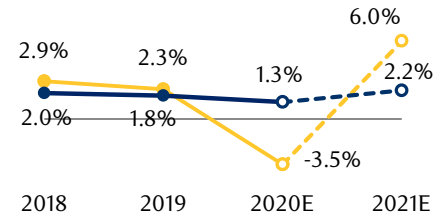
^Under review; * RBC Wealth Management estimates

Source - RBC Investment Strategy Committee, Global Portfolio Advisory Committee, RBC Global Asset Management

KEY Forecasts

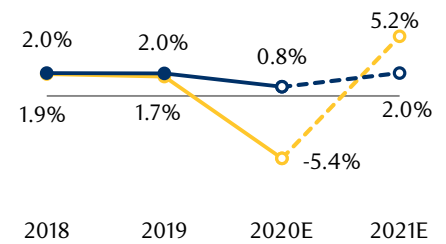
United States: Fiscal bridge

The labor market softened further reflecting 2nd wave shutdowns. Upbeat ISM data and elevated job openings suggest this may be transitory. An expected \$1.5T fiscal package on top of \$900B delivered at year-end should keep growth positive as the vaccine rollout gathers speed. Housing starts, auto sales, container traffic, and corporate profits all at new highs. Index earnings estimates rising.



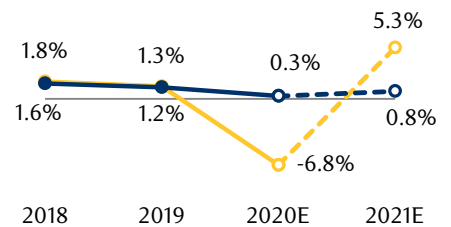
Canada: Record home construction

Employment has stalled as vaccine rollout delays and 2nd wave shutdowns take a toll. Retail sales softer but new home construction surged to a decade high amid robust demand. Consumer confidence improved as optimism surrounding economic and personal finances increased. The BoC reiterated commitment to an ultra-accommodative stance, stating complete recovery is a long way off.



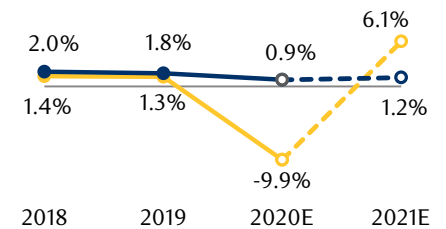
Eurozone: Manufacturing resilience

Inflation rose sharply to start off the year, posting a record jump from -0.3% to 0.9%. Tight restrictions remain in place pointing to another GDP contraction in Q1 2021, following a weak Q4 2020. PMI data showed a strong rebound in the manufacturing sector, while the services sector index continued to lag, falling to the lowest level in three months. As global yields have risen, the ECB has stated it will keep financial conditions accommodative.



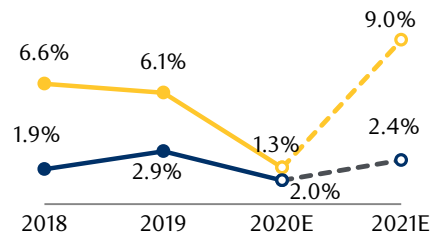
UK: Easing restrictions in stages

After the biggest drop in three centuries UK GDP looks set to fall further in Q1 under the weight of COVID-19 lockdowns and Brexit disruptions. February PMI improved sharply but remains in contraction territory. Construction unexpectedly weak as year begins. PM Johnson indicates restrictions will ease over the next four months. BoE has told banks to prepare for negative rates down the road.



China: COVID-19 undercutting recovery

Growth, strong through the last half of 2020, has softened marginally early in the year as some regional lockdowns have taken a toll. PMIs have weakened but remain expansionary. Exports remain a source of growth. Consumers are confident as reflected in housing and auto sales. Vaccine rollouts constitute a mammoth undertaking. China surpassed its previous GDP peak back in Q3 of 2020.



Japan: Q1 contraction likely

A survey of 51 economists in February suggests Japan's economy is expected to contract 5.9% during Q1 2021. While COVID-19 infections and deaths seem to be declining, further virus containment measures may be necessary. Japan's economic recovery remains tenuous with a recent major earthquake and prospects for job security still a concern among the country's citizens. PMIs strengthening spurred by Chinese demand.

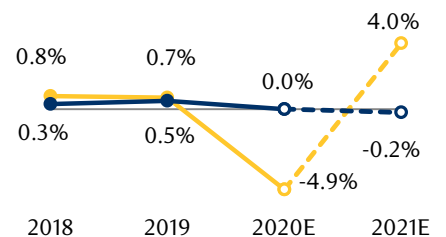


Chart source - RBC Investment Strategy Committee, RBC Capital Markets, Global Portfolio Advisory Committee, RBC Global Asset Management, Bloomberg consensus estimates

MARKET Scorecard

Data as of February 28, 2021

Equities

Small-cap stocks have outperformed large-caps year to date, buoyed by optimism on vaccine distribution and further fiscal stimulus.

Bond yields

The U.S. 10-year Treasury has soared in 2021 and is now more than 50 basis points higher than at the start of the year.

Commodities

Copper and silver continue to rally as investors rush to purchase metals, with expectations that supplies will tighten as economies rebound.

Currencies

Several currencies gained strength against the U.S. dollar amid a shift in risk appetite that saw investors moving their funds into higher-yielding currencies.

Equity returns do not include dividends, except for the Brazilian Ibovespa. Equity performance and bond yields in local currencies. U.S. Dollar Index measures USD vs. six major currencies. Currency rates reflect market convention (CAD/USD is the exception). Currency returns quoted in terms of the first currency in each pairing.

Examples of how to interpret currency data: CAD/USD 0.78 means 1 Canadian dollar will buy 0.78 U.S. dollar. CAD/USD 0.0% return means the Canadian dollar has remained stable vs. the U.S. dollar during the past 12 months. USD/JPY 106.57 means 1 U.S. dollar will buy 106.57 yen. USD/JPY 3.2% return means the U.S. dollar has fallen 3.2% vs. the yen during the past 12 months.

Source - RBC Wealth Management, RBC Capital Markets, Bloomberg; data through 2/28/21

| Index (local currency) | Level | 1 month | YTD | 12 month |
|-------------------------|------------|---------|---------|------------|
| S&P 500 | 3,811.15 | 2.6% | 1.5% | 29.0% |
| Dow Industrials (DJIA) | 30,932.37 | 3.2% | 1.1% | 21.7% |
| Nasdaq | 13,192.35 | 0.9% | 2.4% | 54.0% |
| Russell 2000 | 2,201.05 | 6.1% | 11.5% | 49.1% |
| S&P/TSX Comp | 18,060.26 | 4.2% | 3.6% | 11.1% |
| FTSE All-Share | 3,702.40 | 1.7% | 0.8% | 0.8% |
| STOXX Europe 600 | 404.99 | 2.3% | 1.5% | 7.8% |
| EURO STOXX 50 | 3,636.44 | 4.5% | 2.4% | 9.2% |
| Hang Seng | 28,980.21 | 2.5% | 6.4% | 10.9% |
| Shanghai Comp | 3,509.08 | 0.7% | 1.0% | 21.8% |
| Nikkei 225 | 28,966.01 | 4.7% | 5.5% | 37.0% |
| India Sensex | 49,099.99 | 6.1% | 2.8% | 28.2% |
| Singapore Straits Times | 2,949.04 | 1.6% | 3.7% | -2.1% |
| Brazil Ibovespa | 110,035.20 | -4.4% | -7.5% | 5.6% |
| Mexican Bolsa IPC | 44,592.91 | 3.7% | 1.2% | 7.9% |
| Bond yields | 2/28/21 | 1/31/21 | 2/28/20 | 12 mo. chg |
| U.S. 2-Yr Tsy | 0.127% | 0.109% | 0.913% | -0.79% |
| U.S. 10-Yr Tsy | 1.405% | 1.066% | 1.149% | 0.26% |
| Canada 2-Yr | 0.298% | 0.155% | 1.155% | -0.86% |
| Canada 10-Yr | 1.355% | 0.889% | 1.132% | 0.22% |
| UK 2-Yr | 0.128% | -0.106% | 0.310% | -0.18% |
| UK 10-Yr | 0.820% | 0.327% | 0.442% | 0.38% |
| Germany 2-Yr | -0.663% | -0.601% | -0.769% | 0.11% |
| Germany 10-Yr | -0.260% | -0.185% | -0.607% | 0.35% |
| Commodities (USD) | Price | 1 month | YTD | 12 month |
| Gold (spot \$/oz) | 1,734.04 | -6.1% | -8.7% | 9.4% |
| Silver (spot \$/oz) | 26.67 | -1.2% | 1.0% | 60.0% |
| Copper (\$/metric ton) | 6,486.50 | 16.2% | 17.9% | 62.7% |
| Uranium (\$/lb) | 20.90 | -0.5% | -12.6% | -7.7% |
| Oil (WTI spot/bbl) | 61.50 | 17.8% | 26.8% | 37.4% |
| Oil (Brent spot/bbl) | 66.13 | 18.3% | 27.7% | 30.9% |
| Natural Gas (\$/mmBtu) | 2.77 | 8.1% | 9.1% | 64.5% |
| Agriculture Index | 273.20 | 1.9% | 8.2% | 39.2% |
| Currencies | Rate | 1 month | YTD | 12 month |
| U.S. Dollar Index | 90.8790 | 0.3% | 1.0% | -7.4% |
| CAD/USD | 0.7850 | 0.3% | 0.0% | 5.1% |
| USD/CAD | 1.2738 | -0.3% | 0.1% | -5.0% |
| EUR/USD | 1.2075 | -0.5% | -1.2% | 9.5% |
| GBP/USD | 1.3933 | 1.6% | 1.9% | 8.7% |
| AUD/USD | 0.7706 | 0.8% | 0.2% | 18.3% |
| USD/JPY | 106.5700 | 1.8% | 3.2% | -1.2% |
| EUR/JPY | 128.6700 | 1.2% | 2.0% | 8.1% |
| EUR/GBP | 0.8670 | -2.1% | -3.0% | 0.8% |
| EUR/CHF | 1.0971 | 1.5% | 1.5% | 3.1% |
| USD/SGD | 1.3326 | 0.3% | 0.8% | -4.3% |
| USD/CNY | 6.4789 | 0.8% | -0.7% | -7.3% |
| USD/MXN | 20.8554 | 1.4% | 4.7% | 6.2% |
| USD/BRL | 5.6033 | 2.4% | 7.8% | 25.3% |

Research resources

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|-----------------------|-------|---------|--|---------|
| | | | Count | Percent |
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| Hold [Sector Perform] | 615 | 40.73 | 166 | 26.99 |
| Sell [Underperform] | 67 | 4.44 | 12 | 17.91 |

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