

SUMMER 2021

Consumer revival awakens inflation fears



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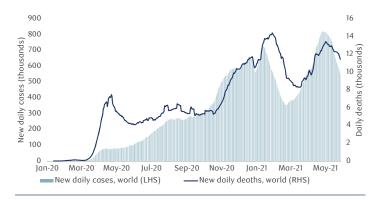
The latest wave of COVID-19 infections is now retreating, allowing governments to incrementally reopen their economies (Exhibit 1). This is a most welcome development.

However, this sunny story is shadowed by two new challenges. The first of these is that inflation has spiked higher. While much of the increase is clearly temporary, not all of it can be so tidily explained. If sustained, persistently high inflation would do damage via eroded purchasing power, more hawkish central banks and higher borrowing costs. The second danger is that a new, extremely contagious Indian variant of the virus could spur further virus waves, much

as the emergence of the highly contagious British variant contributed to the spring surge in cases.

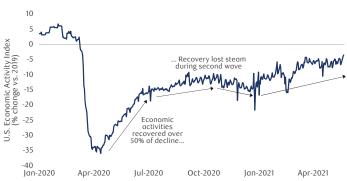
Even after considering these risks, we remain reasonably optimistic about the trajectory of the economy and markets over the coming year (Exhibit 2). High inflation should substantially, though not completely, abate over the second half of the year. Vaccines have now reached around half

Exhibit 1: Global COVID-19 cases and deaths have been declining



Note: As of 5/27/2021. 7-day moving average of daily new cases and new deaths. Source: WHO, Macrobond, RBC GAM

Exhibit 2: U.S. economic activity accelerates as states lift restrictions



Note: As of 05/22/2021. Economic Activity Index is the average of nine high-frequency economic data series measuring the percentage change versus the same period in 2019. Source: Bank of America, Goldman Sachs, OpenTable, Macrobond, RBC GAM

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Exhibit 3: U.S. business-cycle scorecard

	Start of cycle	Early cycle	Mid cycle	Late cycle	End of cycle	Recession
Bonds						
Employment						
Corporate profitability						
Sentiment						
Credit						
Cycle age						
Leverage						
Inventories						
Monetary policy						
Consumer						
Economic trend						
Housing						
Business investment						
Volatility						
Economic slack						
Equities						
Prices						
Allocation to each stage of cycle	11%	54%	22%	8%	1%	4%

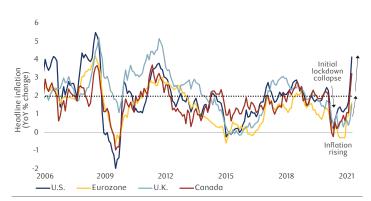
Note: As at 2021-04-29. Darkness of shading indicates the weight given to each input for each phase of the business cycle. Source: RBC GAM

of the population in many developed countries, and are increasingly reaching other countries. This should limit future virus waves. Pent-up economic demand is considerable and beginning to be unleashed as government restrictions fall away. Our business-cycle framework still points to an "early cycle" diagnosis and thus further room for economic gains, although the cycle is moving more quickly than normal (Exhibit 3).

Looking a little further out, any number of twists and turns remain in store over the next few years. Potential positives include the eventual achievement of herd immunity, the possibility of further fiscal stimulus and a scenario of structurally faster productivity growth. Potential negatives include the risk of a fiscal hangover in 2022 as some spending initiatives expire, the possibility of taper tantrums as central banks begin to publicly muse about withdrawing monetary stimulus, and the rapid rate at which the business cycle is advancing.

Our economic forecasts are mostly at or slightly above the consensus, a marginally less bullish positioning than in past quarters. This is almost entirely because the consensus forecast has itself become more optimistic. The same goes for the financial market outlook: it is still constructive, but incrementally less risk-seeking now that so much is already priced into assets.

Exhibit 4: Inflation rising in major economies



Note: As of 2/25/2021. 7-day moving average of daily new cases and new deaths. Source: WHO, Macrobond, RBC GAM

Inflation worries

Inflation is rising and now outright high in some countries (Exhibit 4). Of greatest concern, U.S. CPI has now risen to 4.2% on a year-over-year basis, more than double the targeted rate and the highest reading in well over a decade.

We continue to expect quite high inflation over the next several months, moderately higher than normal inflation over the next few years, but ultimately normal (or even slightly below normal) inflation over the long run (Exhibit 5).

Many are a function Short term of shifting preferences that should unwind Commodity Container Chip Stimulus Economic Base Housing post-pandemic shortage shortage cheques conditions Four of five upward Medium term pressures are small, 2 and money printing should be Supply chain Massive money New Fed More business Carbon Economic self-correcting inflation mandate on-shoring conditions printing pricing power Tech deflation Long term • Health care Inflation • Education Declining Demographics Faster Maturing EM Sector effects productivity growth unionization economies

Exhibit 5: Inflation to be quite high in ST, a little high in MT, normal to low in LT

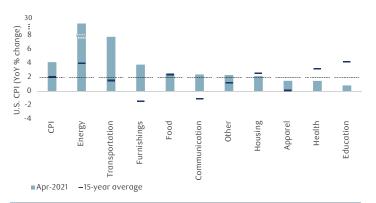
Source: RBC GAM as at 2021-04-24

The recent leap in inflation is due in large part to the confluence of several temporary factors. These include the influence of base effects (low inflation from last year rolling out of the equation), higher commodity prices and an assortment of other smaller drivers such as shortages of shipping containers and computer chips. Stimulus cheques have prompted many Americans to splurge simultaneously on big-ticket durable goods, driving prices higher. There are also various ways that the housing boom is increasing prices both directly and indirectly. The rebound in energy costs is a disproportionate part of the upward pressure (Exhibit 6).

The latest inflation jump exceeded both our own expectation and consensus estimates. Our forecasts for the coming years have accordingly been revised somewhat higher (Exhibit 7).

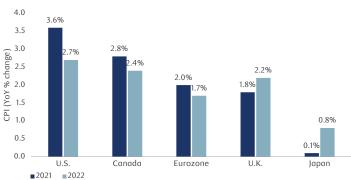
While the various short-term drivers appear haphazard in nature, in actual fact most relate to the shifting demand preferences of consumers during the pandemic. With many services temporarily unavailable, people purchased more goods, resulting in acute shortages of certain products. Similarly, in a work-from-home world (and with ultra-low interest rates), housing demand boomed. Some countries such as the U.S. have other idiosyncratic forces at work, such as the inflationary influence of a depreciating U.S. dollar.

Exhibit 6: Inflation is now above 2% for a majority of sectors



Note: 15-year average based on data from 2005 to 2019. Source: BLS, Haver Analytics, RBC GAM $\,$

Exhibit 7: RBC GAM CPI forecast for developed markets



Note: As of 5/27/2021. Source: RBC GAM

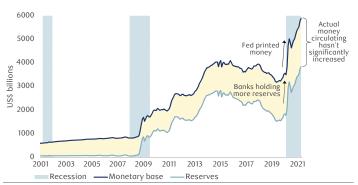
As the impact of the pandemic starts to fade, demand preferences should revert at least partially to historical norms. That should allow inflation to retreat toward more normal levels. While previously fallow sectors such as tourism are now beginning to experience demand pressures of their own as consumers rush back, any resulting inflation should be offset by diminished pressure in the sectors that consumers are pivoting away from.

Some pressure should also be taken off demand and prices in the coming months as government stimulus cheques have already been significantly spent.

Over the medium term, we continue to see some upward inflation pressures, though of a milder nature. A key factor is the large-scale money printing conducted by central banks, though in practice most of the extra money has been absorbed back into the central banks in the form of excess reserves (Exhibit 8). Other drivers include the U.S. Federal Reserve's (Fed) new inflation mandate that actively seeks a bit more than 2.0% inflation over the next few years, the prospect of additional business pricing power, the partial onshoring of certain supply chains and the inflationary effect of higher carbon taxes in countries such as Canada.

In contrast, over the long run, the most compelling drivers are deflationary in nature. Old populations with low fertility rates appear to be profoundly deflationary. The impact of new technologies remains deflationary, and such products constitute a rising share of consumption. Health care and education appear to be structurally less inflationary than in prior decades. We also believe the world may enjoy faster productivity growth in the future – another potentially deflationary force. Other longstanding secular forces such

Exhibit 8: Most of Fed's money printing didn't reach the economy



Note: As of Apr 2021. Source: Federal Reserve Board, Haver Analytics, RBC GAM $\,$

as declining unionization and maturing emerging-market economies also impose further downward pressures on inflation.

Although not a part of our base-case forecast, it is worth considering scenarios in which inflation exceeds our expectations.

One path toward structurally high inflation would be if inflation expectations become stuck at elevated levels, creating a self-fulfilling prophecy. There has indeed been a significant jump in market-based measures of inflation expectations: these now call for outright high inflation over the next several years (Exhibit 9). However, the market outlook for inflation over the longer run – while rising – remains similar to pre-pandemic expectations.

Second, inflation could become a sustained problem if a wage-price spiral were to unfold. Corporations do presently possess pricing power and appear inclined to pass along most of the considerable increase in their input costs to customers (Exhibit 10). However, there is only middling wage pressure outside of a handful of low-skill sectors. The absence of surging (and inflation-sensitive) wages should short-circuit any wage-price spiral (Exhibit 11).

Third, inflation could become a chronic problem if commodity prices were to continue rising significantly. Arguments in favour of another commodity supercycle include China's enormous appetite for commodities and still impressive growth rate, the prospect of India following in China's growth footsteps over the next few decades, the possibility of a post-pandemic infrastructure boom, and a wholesale shift toward green-energy technologies.

Exhibit 9: U.S. inflation expectations at multi-year high



Note: As of 5/28/2021. Source: Bloomberg, RBC GAM

Exhibit10: The percentage of businesses that plan to raise prices is at its highest since the financial crisis



Note: As of Apr 2021. Shaded area represents recession. Source: NFIB Small Business Economic Survey, Haver Analytics, RBC GAM

But a commodity supercycle is not a certainty, as commodity prices already significantly reflect these optimistic expectations, there is some spare mining capacity that will return as the pandemic fades, the switch to green technologies will take several decades, and it is far from clear that oil prices – traditionally a key driver of any commodity cycle – can fully participate given forecasts that global oil demand will begin to fall in the 2030s. It is also important to appreciate that a key Chinese metric, the country's credit impulse, just swung sharply negative – not normally consistent with a commodity boom (Exhibit 12).

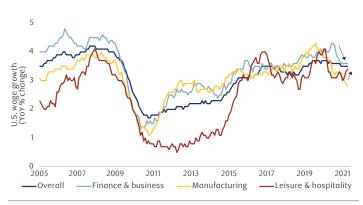
The bottom line is that inflation has been running quite hot and exceeding expectations, but is very likely to cool somewhat over the second half of 2021. But such pressures won't completely go away for a few years, and there are a trio of scenarios in which inflation could prove a more persistent problem for the economy, for central banks and for asset valuations. Whereas inflation was an afterthought for the past decade, it now requires some attention.

COVID-19 fades (but risk of another wave)

A new wave of COVID-19 infections emerged over the past quarter, driven mainly by the spread of a more contagious British virus variant, but also arguably due to the premature easing of restrictions after the prior wave, mounting social-distancing fatigue and possibly seasonal factors (Exhibit 13).

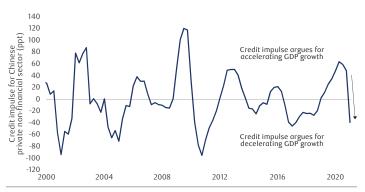
Fortunately, this wave is now abating in most countries. Developed nations have made significant progress, and emerging-market countries are finally now improving as well (Exhibit 14). There are, of course, exceptions, with South Africa now struggling and U.K. cases now creeping higher again.

Exhibit 11: Wage growth has declined during pandemic when controlled for sector



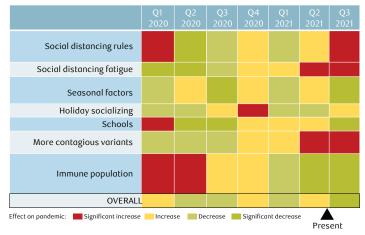
Note: As of Apr 2021. 12-month moving average of median wage growth. Source: Federal Reserve Bank of Atlanta, Haver Analytics, RBC GAM

Exhibit 12: Chinese credit impulse turned negative



Note: As of Q1 2021. Credit impulse measured as year-over-year change in year-over-year change in credit outstanding as percentage of GDP. Source: IIF, RBC GAM

Exhibit 13: The factors driving repeated virus waves – this is hopefully the last major wave for developed markets



Note: As at 2021-04-24. Vertical height of each category reflects its relative importance. Source: RBC GAM $\,$

Europe, which was disproportionately affected by the latest wave, is now healing almost everywhere, including in Germany (Exhibit 15). That said, the number of daily infections is not yet low enough for us to give the all-clear.

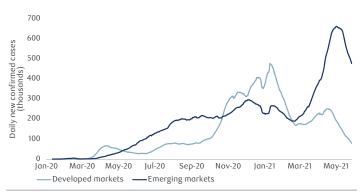
Looking ahead, the main pandemic risk revolves around a subtype of the Indian variant. It appears to be 50% more contagious than the U.K. variant, which was itself around 50% more contagious than the original form of the virus. It is distressing that a country like the U.K. is recording an accelerating number of Indian variant infections despite being among the world leaders in vaccinations, possessing an unusually high rate of naturally acquired immunity, having imposed unusually stringent restrictions until quite recently,

and having successfully tamed the highly contagious U.K. variant (Exhibit 16).

It is some consolation that India, which was until recently setting world records for new cases per day, is now beginning to improve despite the presence of the problematic Indian variant (Exhibit 17). Further, it appears that most of the Indian variant infections recorded in the U.K. were among unvaccinated people – vaccines are thought to have some efficacy against this new variant.

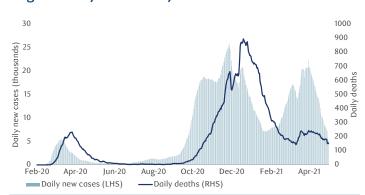
Nevertheless, there is a real risk of another virus wave in the coming months given this more contagious variant, or even other little known variants such as the one now brewing in Vietnam.

Exhibit 14: Latest COVID-19 wave receding in both developed and emerging countries



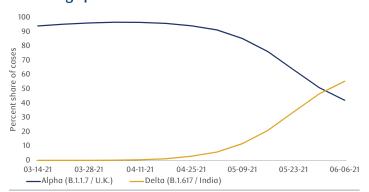
Note: As of 5/27/2021. Calculated as the 7-day moving average of daily infections. Source: WHO, Macrobond, RBC GAM

Exhibit 15: COVID-19 cases and deaths dropped significantly in Germany



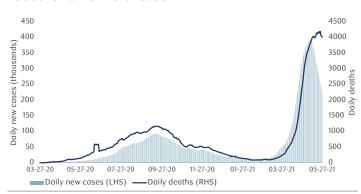
Note: As of 5/27/2021. 7-day moving average of daily new cases and new deaths. Source: WHO, Macrobond, RBC GAM

Exhibit 16: Share of Indian variant in U.K. rising at alarming speed



Note: As of 6/6/2021. Share of cases by variant. Source: GISAID, RBC GAM

Exhibit 17: New infections in India have fallen but deaths remain elevated



Note: As of 5/27/2021. 7-day moving average of daily new cases and new deaths. Source: WHO. Macrobond. RBC GAM

Vaccines to the rescue

Governments have now administered 1.9 billion doses of COVID-19 vaccine. This is a heroic accomplishment – in both a scientific and a logistical

sense – and yet woefully too little given a global population of nearly 8 billion and, in most cases, the need for two doses per person.

Unsurprisingly, inoculations have skewed heavily toward the world's richest countries (Exhibit 18). Several of these can now boast more than 80 doses administered per 100 people. In contrast, many countries have barely begun to vaccinate their populations. This disparity is partly due to differing abilities to afford vaccines and varying levels of geopolitical clout, but also because scientific development, corporate ownership and/or physical vaccine production are concentrated in developed nations.

The supply of vaccines is set to continue accelerating over the next several quarters, with the bulk of the developed world likely to be inoculated by the end of the summer and emerging nations over the remainder of the year and into 2022.

The effectiveness of COVID-19 vaccines has generally been high, with most of the countries near the top of the vaccine rankings now enjoying plummeting caseloads – illustrated by Israel (Exhibit 19).

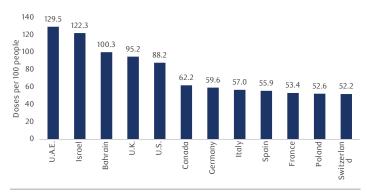
However, the vaccines appear to be somewhat less effective against certain variants, and some vaccines are potentially much less effective. These complications may help to explain why a few countries that have vaccinated the great majority of their populations, such as Bahrain and the Seychelles, are still suffering a high level of infection.

In short, vaccines are the key tool in beating back the pandemic, but not a complete panacea, especially as more problematic variants continue to pop up. Whereas herd immunity from the original form of the virus might have been achieved with just 60% to 65% of the population possessing immunity, it may take more than 80% immunity to vanquish the Indian variant. This is a potentially impossible hurdle. Accordingly, while the need for social-distancing restrictions is declining (Exhibit 20), some limited restrictions will have to remain for the foreseeable future.

Varied economic revival

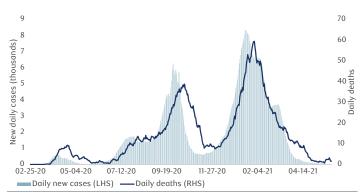
The short-term economic story varies substantially by country.

Exhibit 18: Wealthy nations at the forefront of vaccination



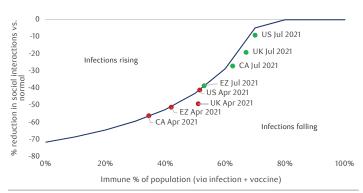
Note: As of 5/30/2021. Cumulative total doses administered by country per 100 people. Source: Our World in Data, Macrobond, RBC GAM

Exhibit 19: COVID-19 caseload and deaths in Israel have remained subdued



Note: As of 5/27/2021. 7-day moving average of daily new cases and new deaths. Source: WHO, Macrobond, RBC GAM

Exhibit 20: Reduction in social interaction necessary to control virus at different rates of population immunity



Note: RBC estimates as at 04/23/2021. Source: Macrobond, RBC GAM

Even as more contagious variants began to circulate widely this spring, the U.S. refused to lock down significantly and yet managed to pare its infection rate thanks to its fast-moving vaccination campaign (Exhibit 21). In turn, the U.S. economy barely missed a beat during the latest wave, now boasting of activity levels in the vicinity of its pre-pandemic position (Exhibit 22).

The U.K. has considerably more ground to cover before its economy fully revives, but also avoided much of the latest wave and is in rapid-recovery mode.

Other regions that were not as far along in the vaccination process, including Canada, Japan and many European Union (EU) nations, had to engage in a third lockdown. Even though many of these countries are now themselves reopening, there is an unusually large gap between countries that are almost entirely open and those that are considerably less so (Exhibit 23).

Conversely, Canada, Japan and the EU suffered setbacks that they are now beginning to recover from. Fortunately, the second wave in late 2020 showed that the economic pain is fairly mild from such mini-lockdowns.

Public policy veers in all directions

Massive monetary and fiscal stimulus were instrumental in limiting the economic damage during the worst of the pandemic and in aiding the subsequent economic rebound.

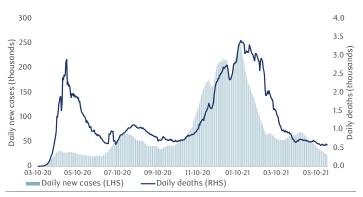
Now, the policy environment is becoming more complicated. Some policymakers are continuing to deliver major new stimulus, while others are beginning to pull back.

Most central banks remain in maximum stimulus-delivery mode, with ultra-low policy rates and quantitative easing. The majority of fiscal policymakers also maintain special support mechanisms for the unemployed and affected businesses.

Some countries are even set to add more fiscal stimulus. The U.S. delivered a major fiscal-stimulus package at the end of 2020, another in early 2021, and is now debating another one or even two multi-trillion dollar initiatives. Infrastructure plans are a major focus going forward – a classic policy choice as the rebuilding process begins after an economic crisis.

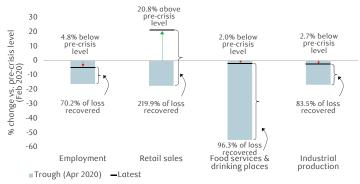
However, not all policymakers are pushing further in this direction, and some natural policy headwinds are arising.

Exhibit 21: U.S. has successfully quelled the latest wave



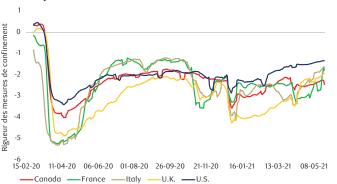
Note: As of 5/27/2021. 7-day moving average of daily new cases and new deaths. Source: WHO, Macrobond, RBC GAM

Exhibit 22: Significant U.S. recovery has already taken place



Note: As of Apr 2021. Trough since Feb 2020. Source: Macrobond, RBC GAM

Exhibit 23: Lockdown measures eased as countries saw improvement in new infections



Note: Based on latest data available as of 5/24/2021. Deviation from baseline, normalised to U.S. and smoothed with a 7-day moving average. Source: Google, University of Oxford, Macrobond, RBC GAM

China appears to be edging toward more restrictive economic policies as the country slows credit growth in response to housing-market strength.

While monetary policy in the developed world remains extremely stimulative and is unlikely to tighten significantly in the near term (Exhibit 24), some change is underway.

Canada has now scaled back the pace of quantitative easing by a quarter and is musing about rate hikes for the second half of 2022. Although Canada's central bank is ahead of most of its peers in these steps, the Canadian economic context is far from unique. The Fed has a greater tolerance for temporary periods of higher inflation, but is nevertheless now internally discussing what any tapering in monetary policy might look like. Central-bank-run bond-buying programs could begin to ebb over the coming year, with 2022 or 2023 in play for higher policy rates, especially given the clip at which economies are rebounding and inflation has risen.

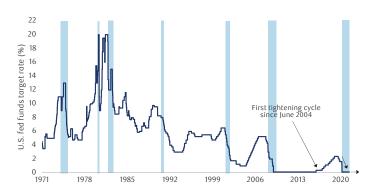
Aside from the U.S., fiscal stimulus is beginning to fade in many countries. Much of this is benign, simply reflecting a diminishing need for government help as businesses and households recover. But other programs will expire more abruptly over the coming year, imposing an active drag on economic growth. Fiscal math is frustrating: if a government spends a billion dollars one year and then \$500 million the next, economic growth will be weaker than normal in the second year because the amount of spending is declining, even though it has not vanished altogether.

Because fiscal stimulus in 2020 and early 2021 was enormous, the potential fiscal drag thereafter is quite large. But it may not be quite as enormous as imagined, as households and businesses have saved much of the stimulus delivered so far. This has two helpful implications. First, it means that the economy has less distance to fall as the support goes away, and, second, it means that households and businesses can use their excess savings to smooth their consumption through an otherwise rocky period.

There should be enough natural buoyancy for economies to continue recovering even as these policy supports fade. The gradual removal of stimulus may even be helpful in limiting any inclination for economies or inflation to overheat. This policy pivot is nevertheless one of several key risks to the growth outlook.

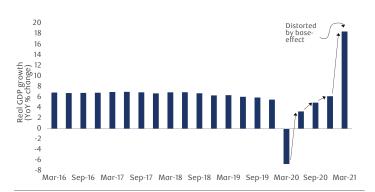
There is an additional U.S.-specific policy risk for investors, which is that the White House is proposing significant tax

Exhibit 24: U.S. fed funds rates trajectory



Note: As of 5/27/2021. Shaded area represents recession. Source: Federal Reserve Board, Macrobond, RBC GAM

Exhibit 25: Chinese economy completely recovered



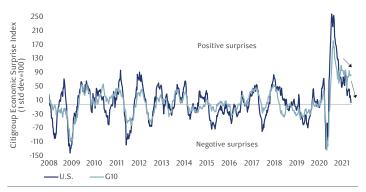
Note: As of Q1 2021. Source: China National Bureau of Statistics, Haver Analytics, RBC GAM

hikes to help pay for infrastructure and green initiatives, with many targeted at corporations and investments. Both would moderately reduce after-tax investment returns. These seem more likely than not to be implemented, but they are not certain and any implementation will probably be watered down given the razor-thin Democratic Party majority in the Senate.

Economic forecast

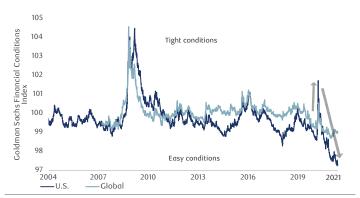
The clear winning bet over the past year has been on above-consensus economic growth, and some such bets are worth extending. Helping to inform this, China has been a bellwether in many regards across this pandemic, including in its rapid economic normalization (Exhibit 25).

Exhibit 26: Global economic surprises remain positive, though slipping lower



Note: As of 5/28/2021. Source: Citigroup, Bloomberg, RBC GAM

Exhibit 28: Financial conditions still extremely stimulative



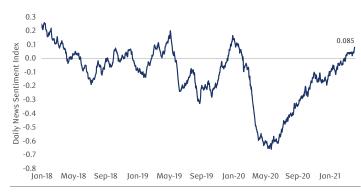
Note: As of 5/26/2021 for U.S., 5/25/2021 for global. Source: Goldman Sachs, Bloomberg, RBC GAM

However, a significant rise in market expectations tempers our enthusiasm a little, with economic surprises no longer so reliably positive (Exhibit 26). Accordingly, our own forecasts are now a mix of on-consensus and modestly aboveconsensus predictions.

In absolute terms, it is still reasonable to expect rapid growth over the coming year as vaccines extend their reach, the pandemic fades and economies recover. The flow of news is primarily positive and now back to pre-pandemic territory (Exhibit 27). We continue to anticipate little economic scarring from the pandemic.

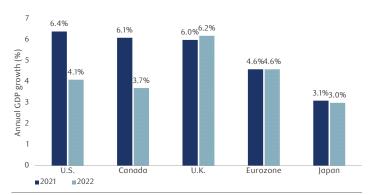
It is clear, nevertheless, that the most explosive period of growth has come and gone.

Exhibit 27: Economic sentiment is now positive



Note: As of 04/05/2021. Source: Federal Reserve Bank of San Francisco, Macrobond, RBC GAM

Exhibit 29: RBC GAM GDP forecast for developed markets



Note: As of 5/27/2021. Source: RBC GAM

Some countries – including most of the EU and Canada – had to lock down again during the recent third wave, temporarily slowing their progress. We also budget for the possibility of a further stumble over the summer should the Indian variant lift global infection rates again.

Financial conditions remain quite friendly (Exhibit 28), though we assume some tightening from central banks in 2022. Fiscal stimulus is also set to morph into fiscal headwinds at around that time, as discussed earlier. These are both reasons why economic growth should decelerate next year (Exhibit 29).

The U.S. economy is set to be among the fastest growing in 2021, at 6.4%, due to the country's vaccination success, enormous fiscal stimulus and fewer social-distancing restrictions. Remarkably, the U.S. recently surpassed its pre-pandemic level of output and is on track to eliminate any remaining economic slack by early 2022 (Exhibit 30).

As the second half of 2021 unfolds, other countries that have lagged the U.S. should begin to play catch-up, with their vaccination efforts paying belated dividends and economic restrictions abating (Exhibit 31). While our U.S. GDP forecast is roughly in line with the consensus, our eurozone and U.K. forecasts are particularly above the consensus. Still, it will take longer for these economies to return to their prepandemic levels – likely in early 2022 – and then several further quarters for the remaining slack to be eliminated.

The pandemic has hit emerging-market economies hard, both with regard to lives lost and economic output foregone. The main contours of the economic trajectory are the same as for developed nations, with 2021 a year of rapid growth, followed by some deceleration in 2022 (Exhibit 32). Our 2021 forecasts are mildly above-consensus for China and a little below the consensus for India, with the others roughly in line. Despite its recent challenges, India still appears poised for structurally strong growth over the coming decades.

Canada's stuttering recovery

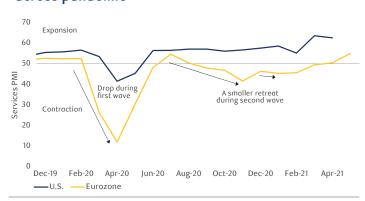
Canada experienced a more intense COVID-19 third wave than the U.S., mainly because of the country's sluggish start to the vaccination process. The economy accordingly underperformed the U.S. in April and May, much as it did at the turn of the year during the second wave (Exhibit 33).

Exhibit 30: Still considerable room for catch-up growth in coming years



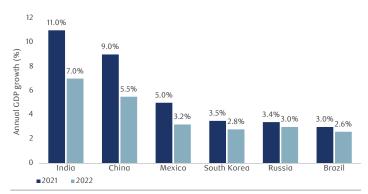
Note: As of Q1 2021. Shaded area represents recession. Source: CBO, Macrobond, RBC GAM

Exhibit 31: Eurozone has performed worse than U.S. across pandemic



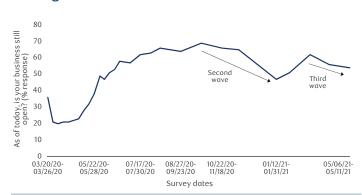
Note: Eurozone PMI as of May 2021, U.S. PMI as of Apr 2021. Source: IHS Markit, ISM, Haver Analytics, RBC GAM

Exhibit 32: RBC GAM GDP forecast for emerging markets



Note: As of 5/27/2021. Source: RBC GAM

Exhibit 33: Canadian businesses shuttered again during third wave



Note: As of 05/11/2021. Source: CFIB, RBC GAM

But the rate of infection is now in free fall thanks to stringent restrictions and accelerating (and targeted) vaccinations (Exhibit 34).

Despite the third-wave setback, the Canadian economy has staged a significant recovery from the worst of the pandemic (Exhibit 35). A further bounce should now be possible over the summer as consumers make up for time lost to the second and third waves. While the stronger Canadian dollar represents a headwind, it is more than offset by the natural buoyancy of a recovering economy, new Canadian fiscal stimulus, a significant spillover from U.S. stimulus and the rebound in commodity prices. Any increase in U.S. taxes would narrow Canada's competitiveness shortfall with the U.S.

Our growth forecasts for Canada of 6.1% in 2021 and 3.7% in 2022 should bring the country's economy back to its prepandemic peak in the fall of this year, with the remaining economic slack vanishing before the end of 2022. The inflation trajectory is akin to the U.S., but less extreme in the near term.

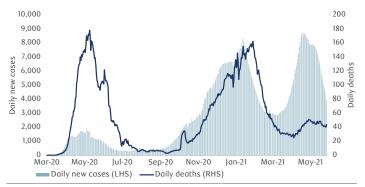
Canada's housing market has been a particular source of economic strength. Home prices have increased by an incredible 23% since the start of the pandemic as households prioritized more living space. Whereas the pairing of lower mortgage rates and higher home prices resulted in improved affordability in the U.S. housing market, the opposite has proven true in Canada (Exhibit 36). Housing affordability is now at its worst level in more than a decade. This would seem to suggest less upside for Canadian housing going forward, though falling unemployment rates and a planned immigration boost may buffer any softness even as the pandemic-driven appetite for housing fades.

Bottom line

In conclusion, we anticipate rapid, on- or modestly above-consensus growth in 2021, followed by slower but still good growth in 2022. Key supports for this view include the fact that economies have proven persistently more buoyant than expected throughout the recovery, permanent scarring from the pandemic appears to be limited, recent virus waves have done limited economic damage, vaccination efforts are proving highly effective and there is considerable pent-up demand set to be unleashed.

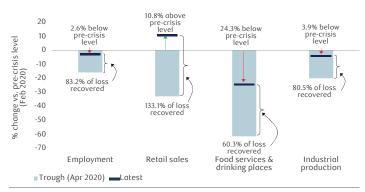
Risks to this view include the possibility of additional virus waves emanating from new variants, the possibility of

Exhibit 34: Canada now over the peak of the third wave



Note: As of 5/27/2021. 7-day moving average of daily new cases and new deaths. Source: WHO. Macrobond. RBC GAM

Exhibit 35: Significant progress made in Canada



Note: Employment as of Apr 2021; retail sales and food services & drinking places as of Mar 2021; industrial production as of Feb 2021. Trough since Feb 2020. Source: Macrobond, RBC GAM

Exhibit 36: Canadian home prices surge on demand and ultra-low interest rates during pandemic



-10 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

Note: As of Apr 2021. Source: CREA, Haver Analytics, RBC GAM

persistently high inflation, a scenario in which the 2022 fiscal drag is worse than anticipated, and the risk that markets might rebel against the removal of monetary supports.

Over the longer run, we continue to believe that many of the distortions to daily life imposed by the pandemic will fade (Exhibit 37). Economic variables should fully normalize, and the appetite for services, walk-in retail and public transportation should mostly rebound quickly. Other factors may take a few years to normalize, but downtowns should eventually revive, inflation should eventually settle down, and so on. Only a few changes are likely to prove permanent, including higher levels of public debt, a lower level of business travel and a moderately greater inclination to work from home.

We also posit that productivity growth may prove faster over the coming decades than it was over the past 10 years. This is not quite as remarkable as it first seems given that productivity gains were unusually paltry over the 2010s. Nevertheless, any revival would be a welcome development given the centrality of productivity growth in increasing standards of living and driving corporate profits.

Arguments in favour of faster productivity growth include a pandemic-induced productivity leap due to advances in remote working, online commerce and automation; the scope for a surge in capital expenditures as the recovery proceeds; the impressive rate of scientific progress underway in key fields; and China's newfound position at the technological frontier, from which it can begin to meaningfully contribute to future innovation.

Exhibit 37: Lasting implications of COVID-19 – few implications are truly permanent and most of those should partially reverse

	Permanent	Multi-year	Short-lived	
No reversal	More public debt	Rural/Suburbs > Downtowns	Less socializing, physical contact, personal travel	
	More automation	Lower LT return on investments?	Higher unemployment	
Partial reversal	Online > Brick and mortar	Larger government	Lower population growth	
	Commercial real estate	Higher inequality	(deaths, less immig., baby bust = slower GDP growth / housing)	
	weakness	More private debt / default risk	Less innovation (= slower GDP growth) Goods > services	
	Less business travel	More inflation		
	More skittish/prepared for future viral outbreaks	Supply chain on-shoring		
	Lower interest rates	Human capital loss	Big business > Small business	
	Lower interestrates	(school closures & unemployment)	Private transportation > Public transportation	
	More working from home	Less monetary policy independence		
	More resources for low prob./ high impact risks	Complete reversal		

Note: As at 2021-02-17. Source: RBC GAM

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