RBC Global Asset Management

Economic Outlook

SPRING 2021

Vaccines versus variants

Eric Lascelles
Chief Economist
RBC Global Asset Management Inc.

The pandemic and its cascading repercussions remain the dominant economic theme, albeit in a landscape increasingly populated by non-virus developments such as the new U.S. government, an anticipated further round of U.S. fiscal stimulus and the finalization of Brexit.

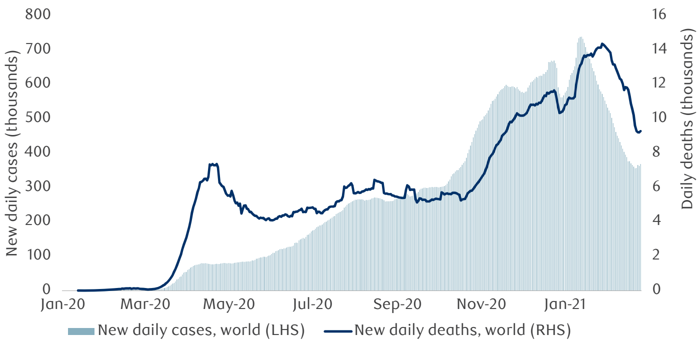
Economic growth dipped at the end of 2020 due to new social-distancing restrictions meant to dampen the latest virus wave. But the damage was ultimately quite minor (Exhibit 1), and the economy appears to be rebounding again as infection rates have fallen (Exhibit 2).

Vaccines are a key focus for the year ahead with regard to the rate at which they are deployed, their efficacy and the extent to which they may be undermined by virus variants. So far, the news has been more good than bad, with widespread

Exhibit 1: News sentiment fell much less during second wave of COVID-19

Note: As of 12/27/2020. Source: Federal Reserve Bank of San Francisco, Macrobond, RBC GAM

Exhibit 2: Global COVID-19 cases and deaths declined significantly



Note: As of 2/25/2021. 7-day moving average of daily new cases and new deaths. Source: WHO, Macrobond, RBC GAM inoculations now underway and favourable results reported (Exhibit 3).

Pitted against the good news of declining infections, rebounding economies and bold vaccination campaigns is the advance of new virus variants that appear to be much more contagious, moderately more deadly and, in some cases, possibly more resistant to the current generation of vaccines. Another wave of infections due to these variants now seems likely. Fortunately, the success thus far in administering vaccines should limit hospitalizations and deaths.

On balance, and acknowledging this last risk, we nevertheless retain above-consensus growth forecasts for 2021: the pandemic economic recovery is presumed to continue, a stance consistent with the risk-seeking tilt in our recommended asset mix.

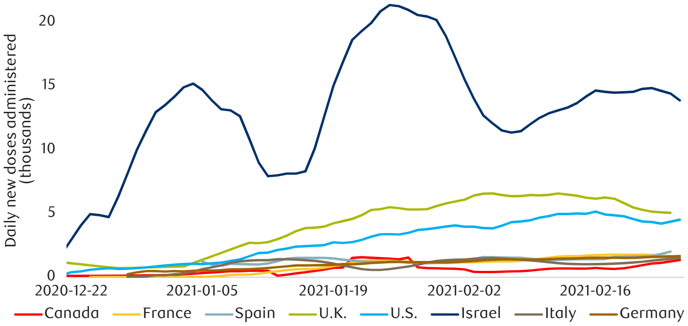
Virus in retreat

The world was swept up in a serious second virus wave over the fall. A combination of colder weather, re-opened schools, social-distancing fatigue and a string of holidays proved incompatible with controlling the pandemic.

Fortunately, the pendulum began to swing in the opposite direction in early 2021. The number of new infections in many wealthy nations has now fallen dramatically in just a few months (Exhibit 4). The global transmission rate recently reached its lowest level since the pandemic began (Exhibit 5).

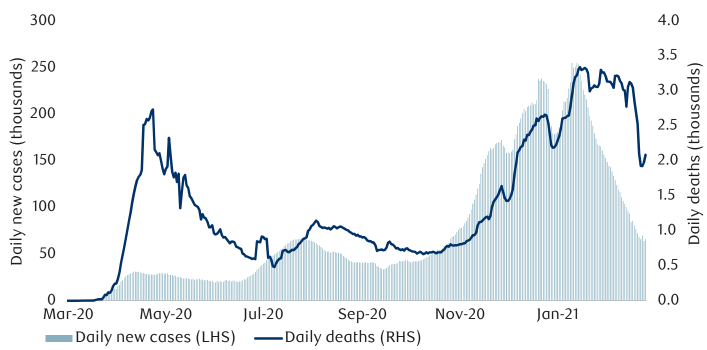
The decline in infections thus far has been particularly marked among developed nations, though emerging-market economies have also improved (Exhibit 6).

Exhibit 3: Countries are ramping up vaccination



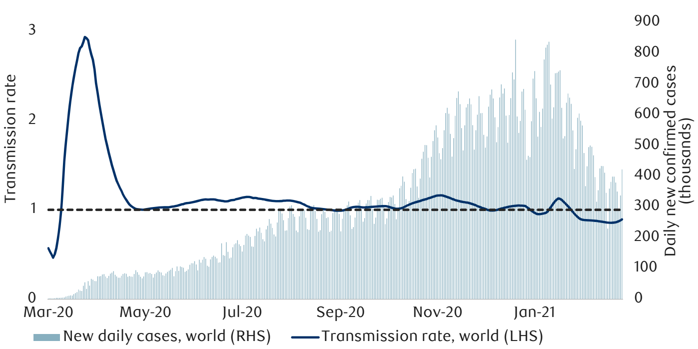
Note: As of 2021/2/25. 7-day moving average number of new daily coronavirus vaccine doses administered per million. Source: Our World in Data, Macrobond, RBC GAM

Exhibit 4: COVID-19 cases and deaths in the U.S. fell sharply, now bottoming



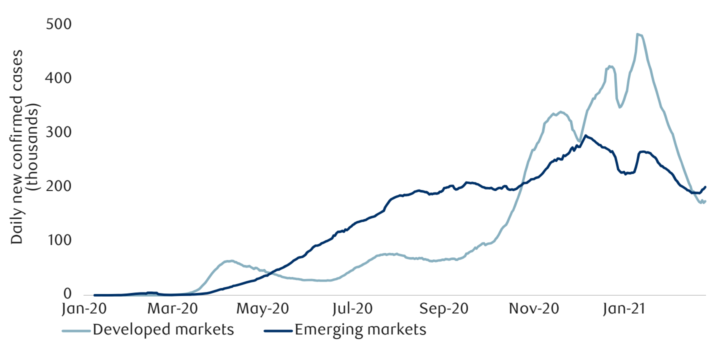
Note: As of 2/25/2021. 7-day moving average of daily new cases and new deaths. Source: WHO, Macrobond, RBC GAM

Exhibit 5: Global transmission rate fell to lowest level during pandemic



Note: As of 2/25/2021. Transmission rate calculated as a 7-day change of underlying 7-day moving average smoothened by a 14-day moving average of new daily cases. Source: WHO, Macrobond, RBC GAM

Exhibit 6: Cases fell substantially in both developed and emerging markets, now bottoming



Note: As of 2/25/2021. Calculated as the 7-day moving average of daily infections. Source: WHO, Macrobond, RBC GAM

The most obvious explanation for this reversal is that the cumulative effect of several rounds of stricter rules were finally sufficient to curb the outbreak. But other factors were likely also relevant. The peak of the wave aligned with the Christmas holidays, and so the subsequent end of that social season may also have been an important contributor. As vaccinations now mount, the swelling fraction of the population that is immune to COVID-19 provides further downward pressure. Indeed, given that vaccination campaigns are focused on the most at-risk individuals, fatalities have begun to decline with particular speed.

A further, more speculative, hypothesis for the virus's recent retreat involves seasonal factors. The Great Flu of 1918-1919 surged in the spring of 1918, the fall of 1918 and then again in the spring of 1919. COVID-19 similarly surged in the spring of 2020 and then the fall of 2020. These could all be coincidences, or it may be that such viruses are naturally more transmissible in cool rather than frigid conditions.

Looking ahead, there are three reasons to fear a further virus wave this spring. First, as just discussed, it could be that the virus spreads more easily in spring-like weather conditions. Second, countries are already beginning to loosen restrictions – policymakers have a history of re-opening too enthusiastically.

Third, new virus variants could prove problematic. There are now several new, more contagious variants of COVID-19. The U.K. and South African types are most widespread, with studies concluding they are in the realm of 56% more contagious than the original virus, and potentially 20% to 30% more fatal. Worryingly, some variants may also be less responsive to the current generation of vaccines.

Epidemiologists predict that these new variants will likely become the dominant form of the virus in many countries in the spring, much as they have already taken over the U.K. and a handful of other countries. Even as the original version of the virus is in steep retreat, the new variants are accelerating. This means that the current level of social distancing is insufficient to halt their progress. A further viral wave seems fairly likely, conceivably necessitating additional economic restrictions.

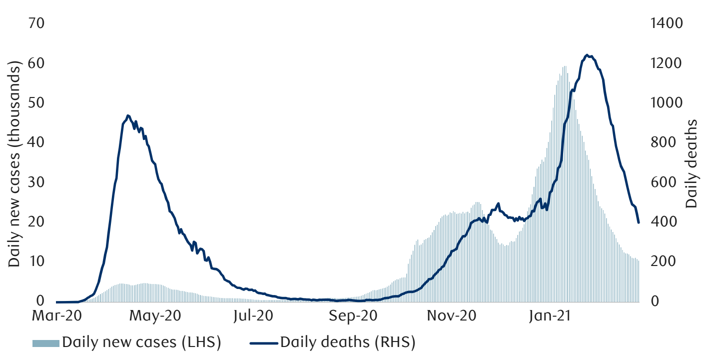
A few glass-half-full observations are nevertheless useful. We know that the new variants can be controlled with sufficient effort, as the U.K. has managed to sharply reduce its infections, albeit with additional economic damage (Exhibit 7). South Africa has also reduced its infection numbers. Further, as vaccinations continue to gain steam over the next few months, hospitalizations and fatalities should be lower in any future wave, and indeed any wave could prove rather slight relative to the rough seas of the past year.

Limited second-wave economic pain

Over the fall, as daily COVID-19 infections rose to new heights, fatalities approached their spring peaks and hospitals neared capacity, governments were compelled to impose more stringent economic restrictions (Exhibit 8).

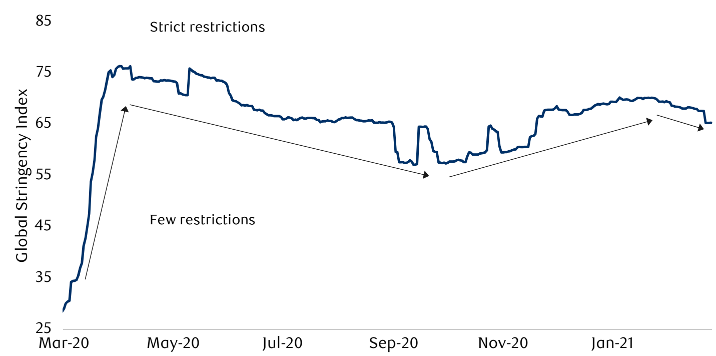
While these new rules were less stringent than those deployed in the spring of 2020, some economic damage still resulted. Fortunately, the damage was much more limited than last spring (Exhibit 9). This makes sense. While restaurants, bars, gyms and small retailers were closed, these represent a fairly small share of economic activity. Meanwhile, in contrast to last fall, sectors such as construction, manufacturing and real estate continued to

Exhibit 7: U.K. successfully quelled new COVID-19 variant



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

Exhibit 8: COVID restrictions are now easing again



Note: As of 2/25/2021. Global Stringency Index measuring the strictness of lockdown policies that restrict mobility, calculated as stringency index of 50 largest economies. Sources: University of Oxford, IMF, Macrobond, RBC GAM operate, and these areas are responsible for around 10 times as much economic activity as the aforementioned sectors. Additionally, sectors such as agriculture and financial services fared much better this time. While they were never officially shuttered last spring, the altered social-distancing landscape did take some time to adjust to. No further adjustment was necessary in recent months. While economic growth slowed at the end of 2020 and into early 2021, most countries have managed to avoid even a single quarter of outright contraction.

Now, as restrictions start to ease, real-time mobility measures show the beginning of an upturn (Exhibit 10).

Vaccines to the rescue

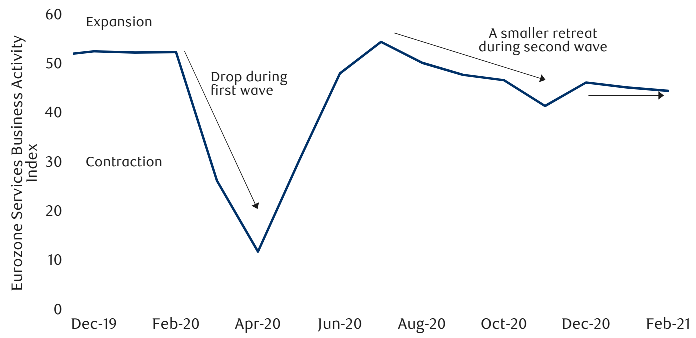
It is nothing short of astonishing that a number of vaccines to combat COVID-19 were developed, tested, proved effective, manufactured and distributed, all within the span of a single year. Historically, it has taken many years to achieve all of this. In addition to the risk-taking of the companies involved, it is extremely fortunate that COVID-19 came along at a time of rapid progress in genetic sequencing and biotechnology.

A number of vaccines have demonstrated efficacy rates of 90% or higher – well beyond initial expectations. Furthermore, several vaccines have been found to deliver protection in excess of 90% even before the second inoculation has been delivered, allowing countries to stretch supplies.

The distribution of vaccines was initially choppy and slower than expected, but the logistical issues have now largely been addressed in key countries and the pace of inoculations has quickened considerably. Demonstrating this, the large majority of forecasters now believe that most Americans will be inoculated by the middle of the year – a sharp increase relative to expectations even at the start of 2021.

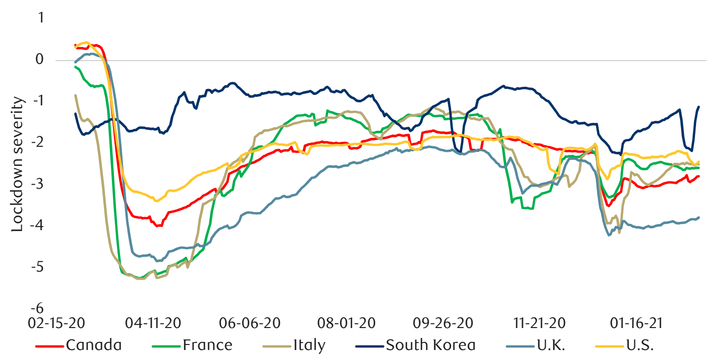
However, there have been stark differences in the rate of vaccination across countries. Israel leads by a considerable margin, having managed to secure a large supply relative to its small population, apparently in exchange for sharing detailed health outcomes with manufacturers. Among large countries, the U.K. and U.S. lead the way, seemingly based in part on their domestic pharmaceutical industries, in part due to their early orders, and in part due to their geopolitical clout. Europe lags somewhat, with Canada further behind (Exhibit 11). Japan has only just begun the vaccination process, and large countries such as China and India must inoculate enormous populations, slowing their progress.

Exhibit 9: Economic damage during second wave was much less intense



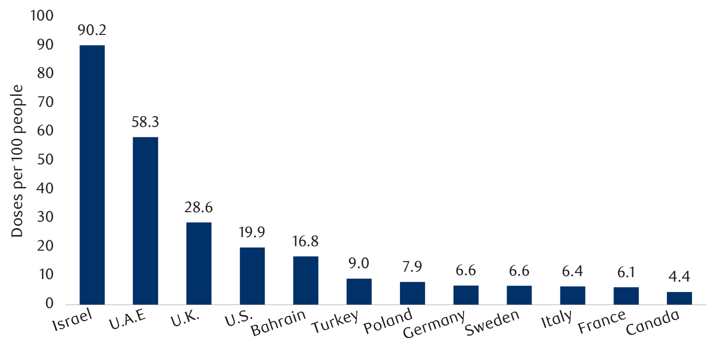
Note: As of Feb 2021. Source: IHS Markit, Haver Analytics, RBC GAM

Exhibit 10: Real-time mobility has started to rise



Note: Based on latest data available as of 2/21/2021. Deviation from baseline, normalised to U.S.and smoothed with a 7-day moving average. Source: Google, University of Oxford, Macrobond, RBC GAM

Exhibit 11: Israel leads in global coronavirus vaccination race



Note: As of 2021/2/25. Cumulative total doses administered by country per 100 people. Source: Our World in Data, Macrobond, RBC GAM

Many of the world's poorest countries will have to wait until the second half of 2021 or beyond to make significant progress.

While Canada has ordered more vaccines on a per-capita basis than any other nation, its orders were late, it lacks domestic manufacturing capacity, and it arguably also lacked sufficient geopolitical clout to secure a large number of early doses.

The pace of vaccination informs the rate at which the economies of individual countries can normalize. The U.K. and the U.S. appear to have the clear upper hand among large, wealthy nations.

The ultimate goal of vaccinations is to achieve herd immunity. However, given that children cannot be inoculated and that not all adults will be, and that some new variants may be less responsive to vaccines, the virus is likely to linger into 2022 and possibly beyond. If successful, efforts underway to permit children to be inoculated and to develop a booster for certain variants would improve this calculus.

Fortunately, there is great value to inoculation efforts whether or not herd immunity is achieved. Certain benefits are already beginning to accrue (Exhibit 12):

- The first round of people being inoculated are those at greatest risk of dying. In turn, the fatality rate for the virus should fall precipitously over the coming months.
- The second round of people to be inoculated are disproportionately those in front-line jobs – likely the group that is transmitting the virus the most. As this group is inoculated over the next several months, the infection numbers should collapse.
- Lastly, the remaining low-risk and low-contact people will be inoculated, and while this won't materially alter the fatality or infection numbers, it will represent further progress toward herd immunity.

Exhibit 12: Significant milestones even before herd immunity

Vaccination rounds	Targeted groups	Timing	Share of population	Effect on fatalities	Effect on transmission	Effect on economy	
Round One	Old, vulnerable, front-line medical	Dec – Mar	15%	Sharp decline in fatalities	Modest decline in transmission	Moderate boost to economy	Depends heavily on what criteria goverments use for reopening
Round Two	Front-line non-medical, people who work or live in close contact with others	Mar – May	35%	Moderate decline in fatalities	Sharp decline in transmission	Moderate boost to economy	
Round Three	Young, healthy, remote workers, children?	May – end of year	50%	Minimal decline in fatalities	Modest decline in transmission	Moderate boost to economy	
Herd immunity (~70% of population immune) should be achieved over summer or early fall U.K. and U.S. may be somewhat faster; CA, EZ & JP somewhat slower							

Note: As at 2021-01-26. Source: RBC GAM

- Throughout, politicians are likely to incrementally re-open economies as the risk shrinks. It is likely that such re-openings will be front-loaded, cueing off of declining hospitalizations rather than awaiting lower infections (Exhibit 13).

Optimistic about the way forward

We have found it helpful to regularly revisit five key economic questions posed at the beginning of the pandemic (Exhibit 14). The first three have already been answered.

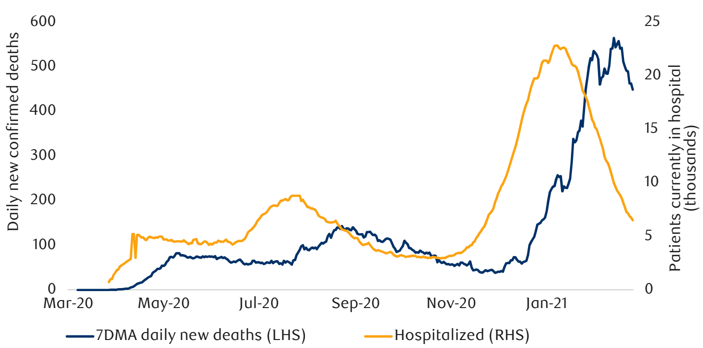
How deep was the initial economic decline? The drop varied from 10% to 25% of GDP depending on the country – unprecedented, but not as bad as feared.

How long did this decline last? The trough of output in the spring lasted barely over a month – shorter than expected.

When did economies recover half of their lost output? Amazingly, half of the economic decline was already recovered by the middle of 2020. The common theme in all three answers is that the economic reality was better than the initial expectation.

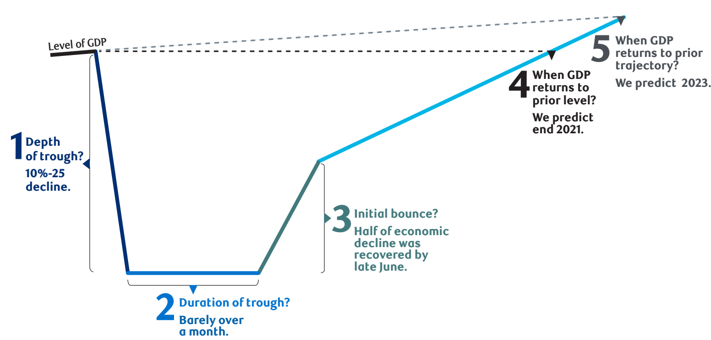
Even factoring in recent undulations, we believe the economic recovery remains not just underway but has considerable room left to grow (Exhibit 15). We estimate that around 70% of the economic decline suffered during the worst of the pandemic has since been recovered, albeit with considerable variation by sector (Exhibit 16). Retail activity is now well beyond normal, aided in significant part by government support; conversely, the food and drinks sector remains well below normal.

Exhibit 13: COVID-19 hospitalization in California has fallen dramatically



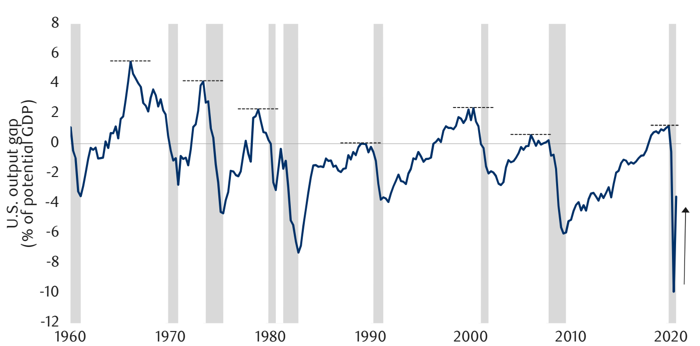
Note: As of 2/25/2021. 7-day moving average of daily new deaths used as trendline. Source: The COVID Tracking Project, Macrobond, RBC GAM

Exhibit 14: Five key economic questions – so far, answers have been better than expected



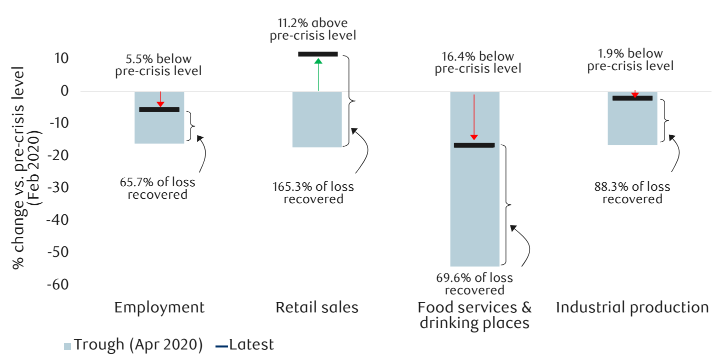
Note: As at Feb. 28, 2021. Source: Our world in data, RBC GAM

Exhibit 15: Still considerable room for catch-up growth in coming years



Note: As of Q4 2020. Shaded area represents recession. Source: CBO, Macrobond, RBC GAM

Exhibit 16: Traditional economic data confirms that significant U.S. recovery has already taken place



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

Exhibit 17: U.S. business-cycle scorecard

	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: As at 2021-02-03. Darkness of shading indicates the weight given to each input for each phase of the business cycle. Source: RBC GAM

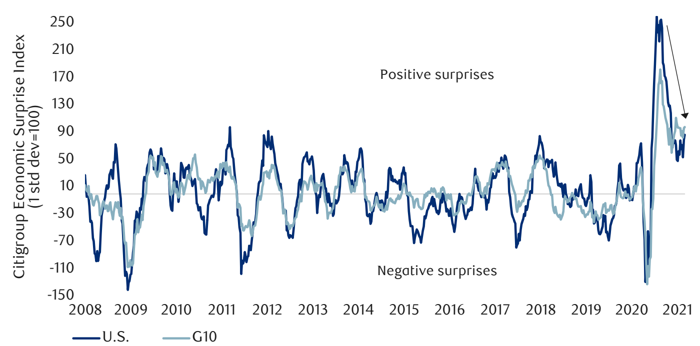
Progress in 2021 should be slower than it was over the final two-thirds of 2020, mainly because there is less low-hanging fruit to pluck. Nevertheless, as businesses continue to adapt to this altered environment and as economies incrementally re-open, robust growth is likely, with the remaining 30% of the economic decline set to be recovered in the U.S. by the end of the summer. Canada should attain a similar milestone toward the end of 2021, and most other developed countries reaching that point in early to mid-2022. From there, we continue to believe that most economies will return to their full potential around 2023.

Our business-cycle scorecard now makes the case that the U.S. economy has shifted firmly into the early phase of the business cycle (Exhibit 17). This offers no guarantees for the future, but hints that recent economic wobbles are temporary and that the economic recovery should have lasting power.

This cycle reading alongside economic surprise indexes that have remained persistently positive since the spring of last year suggest that above-consensus forecasts remain the winning strategy for 2021 (Exhibit 18).

We are alert to the possibility that several pandemic-related headwinds might arrive with a lag. These include an eventual fiscal drag as stimulus programs expire, the possibility that credit problems surface and the risk that housing markets

Exhibit 18: Global economic surprises remain positive after wild swings



Note: As of 2/26/2021. Source: Citigroup, Bloomberg, RBC GAM

end their frenzied run. But fiscal support is likely to remain in place until it is no longer urgently needed, there is little evidence of mounting credit issues and housing has shown no inclination to soften. Furthermore, a key potential tailwind exists in the form of significant pent-up demand. Households have accumulated a great deal of savings that may be unleashed by the easing of social-distancing restrictions.

Policy support persists

Policymakers have had an enormous role in cultivating the economic rebound. Low policy rates and money printing have translated into the easiest financial conditions on record (Exhibit 19). Central banks insist that they will remain locked in stimulus mode for several more years, though there are some concerns that rising inflation and a vigorous recovery could force at least mild tightening somewhat sooner.

Meanwhile, fiscal stimulus has been no less astonishing, as reflected in record fiscal deficits in 2020 (Exhibit 20). Canada led the way in this regard, with an unfathomable deficit equal to nearly 20% of GDP. Such deficits should shrink significantly in 2021 in most countries as the need for stimulus diminishes, but balanced budgets are unlikely in the foreseeable future.

An unavoidable consequence of more fiscal stimulus is more public debt, which now reaches unprecedented heights. Ultra-low interest rates are keeping this affordable for the moment, but even in the low-rate world that should prevail for some time, debt-servicing costs will divert some public funds away from more productive uses. Fortunately, the risk of a sovereign-debt crisis remains low in the vast majority of countries.

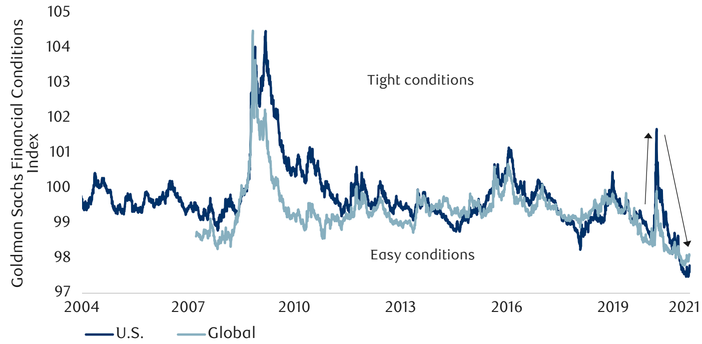
While the U.S. fiscal story initially appeared fairly similar to its peers, the trajectory began to diverge in the fall of last year. The initial thrust of U.S. fiscal stimulus expired earlier than in most countries, resulting in modest economic pain. Now the U.S. is back with a vengeance, delivering a US$900 billion stimulus program at the end of 2020, and seemingly on the cusp of a further massive stimulus package worth about US$1.9 trillion. Given simultaneous chatter of a possible multi-trillion dollar infrastructure package, it would appear that the U.S. economy will outgrow most other wealthy nations in 2021.

The new U.S. administration led by President Biden should be a net positive for economic growth. This is in part due to the aforementioned fiscal stimulus outlook, as well as on the presumption of somewhat friendlier trade and immigration policies (Exhibit 21). Despite concerns about the possibility of higher corporate taxes and the reality of greater business regulation, the stock market appears content with the new political direction. We continue to believe Biden is a mild upward force on bond yields and a mild downward force on the U.S. dollar. But much of this is now already priced in to markets.

Above-consensus forecasts

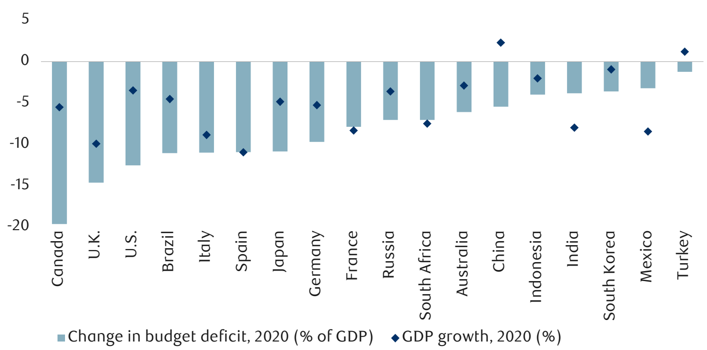
The growth outlook remains less clear than usual due to the unprecedented nature of the pandemic and large uncertainties that include the rate at which vaccines will

Exhibit 19: Financial conditions still extremely stimulative



Note: As of 2/25/2021 for U.S., 2/24/2021 for global. Source: Goldman Sachs, Bloomberg, RBC GAM

Exhibit 20: Massive fiscal stimulus deployed, but rising public debt levels



Note: IMF estimates of general government deficits and GDP growth where official GDP growth is not yet available. Source: IMF Fiscal Monitor, October 2020, Haver Analytics, RBC GAM

Exhibit 21: Biden & Blue Wave political implications are mostly positive

Biden policy stance vs Trump	Short-term economy	Long-term economy	Equities	Bond yields	U.S. dollar
Stricter COVID-19 controls	–	+			
Tax increases		–	– –		
Fiscal stimulus	+ +	+	+ +	+	+
Trade/Immigration		+	+		–
Regulations		–	–		–
Overall	+	+	+	+	–

Note: As at 2021-03-01. Source: RBC GAM

be distributed and their efficacy against new variants, the possibility of another virus wave over the next few months, uncertainty over the magnitude of fiscal stimulus from here, and new inflation risks. While significant, these risks are roughly balanced in terms of their capacity to resolve in a surprisingly good or bad direction (Exhibit 22). The downside risks arguably dominate for the vaccines and virus, but the reverse is true with regard to the possibility of future fiscal support.

While acknowledging this uncertainty, our base-case economic forecasts remain mostly above the consensus (Exhibit 23). This is motivated by the aforementioned pattern of positive surprises so far, helpful financial conditions, our conviction that vaccines will prove a game-changer, and the view that there will be limited economic scarring as the pandemic fades.

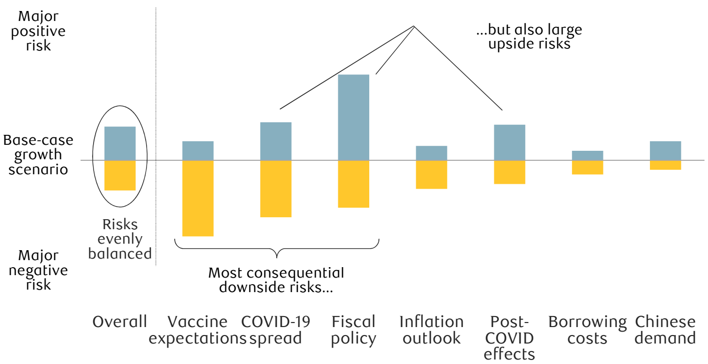
The U.S. appears capable of outgrowing most of its peers due to several advantages. The U.S. is vaccinating its population more quickly than most countries, the country is likely to reopen with the greatest enthusiasm as infections decline, and it is set to deliver far more fiscal stimulus in 2021 than any other country.

Our new forecasts are mostly a little higher than last quarter (Exhibit 24). One reason for this is that the economic damage from the second wave was milder than expected. Another is that the U.S. is set to deliver even more fiscal stimulus than previously budgeted. Finally, vaccines have been more successful than initially expected.

Further on the subject of national-level differences, it is important to recognize that the countries with the fastest growth rates in 2021 are not necessarily the ones that are truly performing best from an economic standpoint. Fast growth in 2021 is also likely in countries that have a particularly deep economic hole to dig themselves out of, as is the case for the U.K. and the Eurozone.

Instead, it is best to evaluate countries on the basis of how quickly they recover their pre-pandemic output level. We believe the U.S. economy will reach this milestone early in the second half of this year. Canada may take until later in the year, with the eurozone, U.K. and Japan trailing home over the first half of 2022. The U.K. simultaneously grapples with some Brexit damage over the next few years given that its last-minute trade accord with the EU did not extend to the service sector.

Exhibit 22: Key global macro risks over the next year



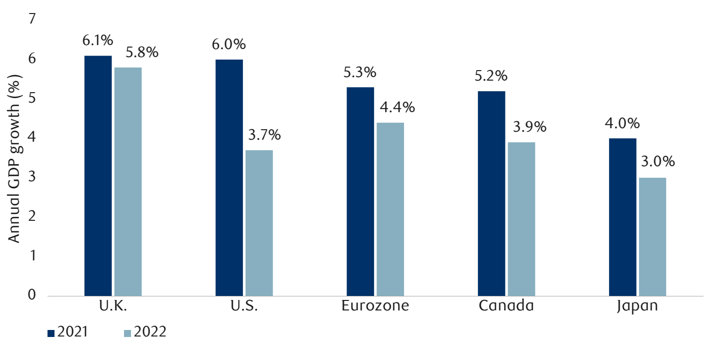
Note: As of 01/29/2021. Size of each bar reflects probability-weighted impact of bull-case/bear-case scenario. Source: RBC GAM

Exhibit 23: RBC GAM GDP forecast revisions

Forecast year	2021			
GDP forecast	RBC GAM			RBC GAM vs. CE
Forecast date	Q4 2020		Q1 2021	CE forecast, Feb. 2021
U.S.	4.0	→ +2.0 →	**6.0**	1.3
Canada	5.0	→ +0.2 →	**5.2**	0.6
Eurozone	5.6	→ -0.3 →	**5.3**	0.9
U.K.	6.6	→ -0.5 →	**6.1**	1.9
Japan	3.7	→ +0.3 →	**4.0**	1.7
Developed countries	4.7	→ +0.8 →	**5.5**	1.2
World	6.0	→ +0.6 →	**6.7**	0.8

Note: RBC GAM vs. CE calculated as RBC GAM forecast minus Consensus Economics (CE) forecast. Source: CE, RBC GAM

Exhibit 24: RBC GAM GDP forecast for developed markets



Source: RBC GAM

The year 2022 is now within our forecast horizon. Growth is likely to decelerate in 2022, but the rate of ascent should nevertheless remain well above that of a normal year, with economies nearing their full potential by year-end.

The main themes are similar for emerging-market nations – a year of global economic recovery. Our forecasts for big countries like China and India are also slightly above the consensus and steady to higher than a quarter ago (Exhibit 25).

Inflation fears

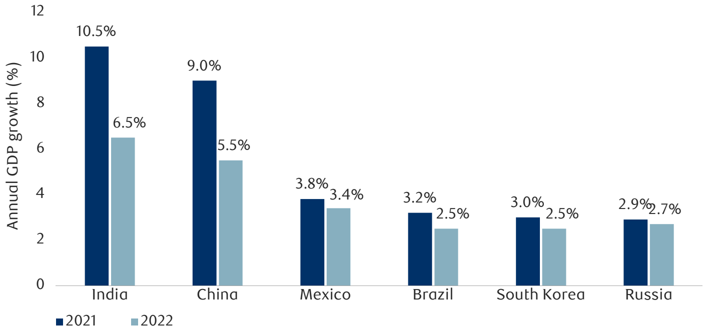
As is usually the case during and immediately after a recession, inflation is low. This makes sense: unemployment is high and pricing power is limited.

Even so, the fear of inflation has now risen significantly over the past few quarters, to an extent that is unusual for such an early phase of the business cycle. Of particular concern is that central banks have printed a great deal of money, as reflected in a surging money supply (Exhibit 26). Other arguments for additional inflation include the U.S. Federal Reserve's new goal of an inflation rate moderately above its traditional goal of 2.0%, the possibility that countries might try to erode their staggering new public debt loads via additional inflation, and the mildly inflationary effects of bringing home some production of medical and other supplies deemed critical. Actual inflation is indeed now rising somewhat, albeit off of a low base.

These are all, to one degree or another, valid concerns. However, this list fails to paint a complete picture. It is worth beginning with inflation expectations, which have risen but remain in line with the norm of the past decade (Exhibit 27). As such, inflation fears are not exactly extreme. Furthermore, really the only way that inflation could end up aggressively higher than normal is on the basis of central-bank money printing. If realized, the other factors might add a few tenths of a percentage point to inflation, but not multiple percentage points.

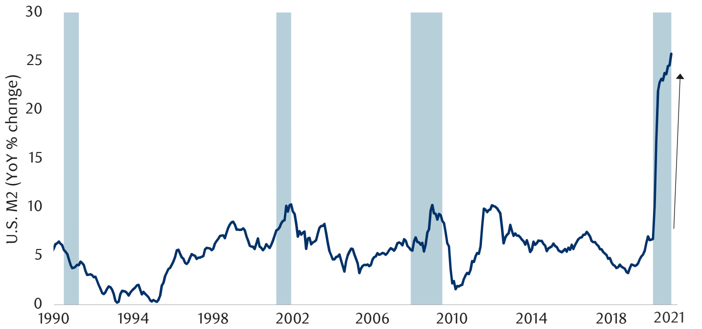
So what of the idea that central-bank money printing might be profoundly inflationary? It is a risk, but an unlikely one. So far, very little of the money has actually made its way into the economy. The great bulk has either been gummed up in extra savings at banks, or returned to the central banks themselves in the form of excess reserves. In practice, there is very little connection between the monetary base and the rate of inflation – a reason that central banks abandoned targeting the money supply as a means of controlling inflation

Exhibit 25: RBC GAM GDP forecast for emerging markets



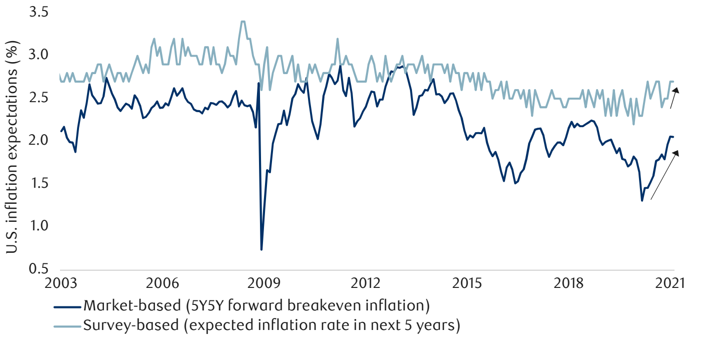
Source: RBC GAM

Exhibit 26: U.S. money supply growth surged during pandemic



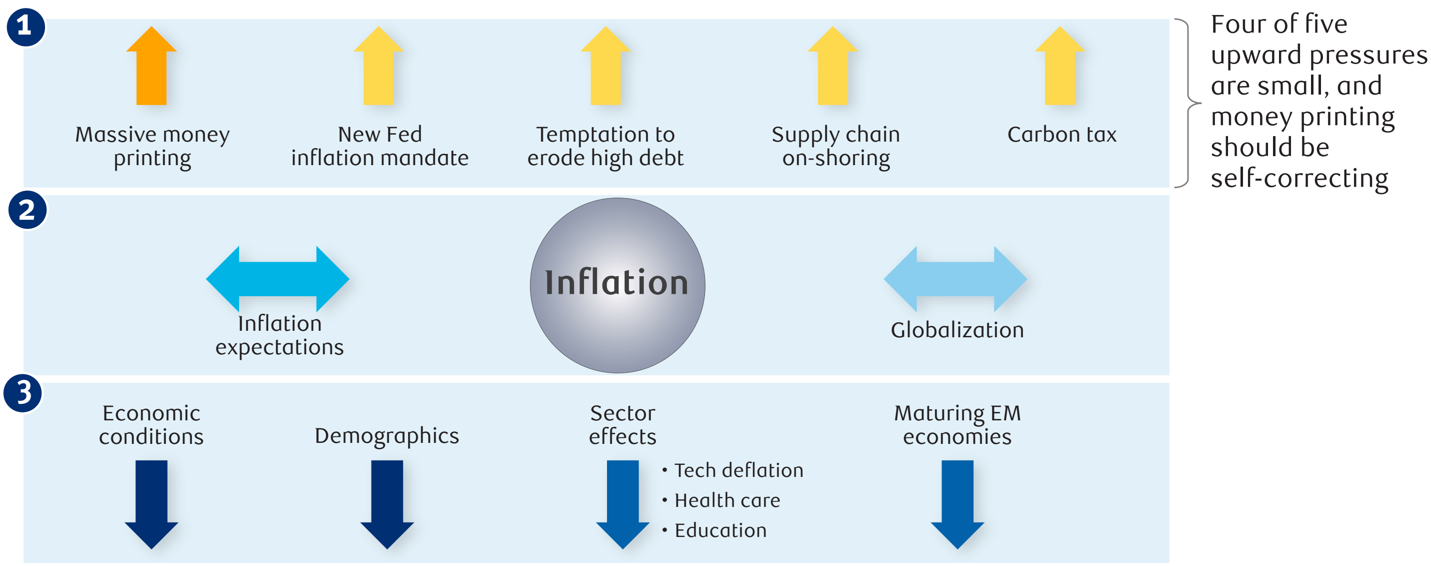
Note: As of Jan 2021. Shaded areas represent U.S. recessions. Source: Haver Analytics, RBC GAM

Exhibit 27: U.S. inflation expectations rose, but only to normal levels



Note: Market-based inflation expectations as of 2/25/2021, survey-based inflation expectations as of Feb 2021. Source: Federal Reserve, University of Michigan Surveys of Consumers, Haver Analytics, RBC GAM

Exhibit 28: New upside inflation pressures, but also significant downward ones



Note: As at 2021-01-16. Source: RBC GAM

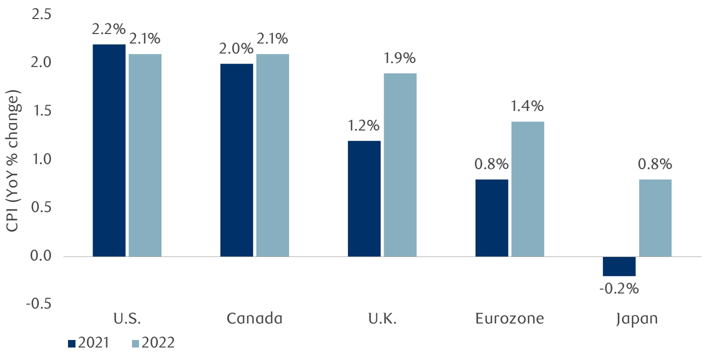
in the 1970s. Also recall that central banks are aiming for a reasonable level of inflation. If money printing suddenly led to too much inflation, central banks would have every motivation and ability to reverse themselves. Of course, that would send interest rates higher – perhaps the real risk in the inflation discussion.

It is also important to recognize that there is a different set of factors that argue for low inflation (Exhibit 28). These aren't as flashy or novel as the upward pressures, but they still matter.

Fundamentally, economic activity should remain below its normal level over the next two years – a fundamentally deflationary pressure. For that matter, even when the economy was objectively tight before the pandemic, inflation was still low. A proper wage-price spiral has not been seen in decades, and in a world of diminished unionization and an increasingly global labour market, it makes sense that wage growth is not the potent inflationary force it once was.

Demographics are also a powerful downward force on inflation. Older, slower-growing populations appear to depress inflation. Japan is the classic example, with Europe now following a similar trajectory. The rest of the world is not immune. Before the pandemic, inflation risks tilted substantially downward for this reason.

Exhibit 29: RBC GAM CPI forecast for developed markets



Source: RBC GAM

Taking all of this information and applying it to the year-ahead inflation outlook, the underlying price trend should be one of low inflation becoming a bit less low.

Several special factors not yet discussed must then be layered on top:

- The partial rebound in oil prices should artificially and temporarily increase inflation somewhat in 2021, though this merely represents the reversal of declining oil prices in 2020.

- In the U.S., a falling dollar adds moderately to the inflation outlook.
- In Canada, rising carbon taxes should tack a few tenths of a percentage point onto Canadian inflation (Exhibit 29).

These forecasts are relatively neutral versus the consensus – a hair higher for the U.S. and Canada, and a little below for the U.K., Eurozone and Japan. It is a similarly mixed proposition for emerging-market inflation. For emerging-market nations, arguably the most important inflation theme is the ongoing gradual decline in their structural inflation rate as their economies mature.

Mixed Canadian story

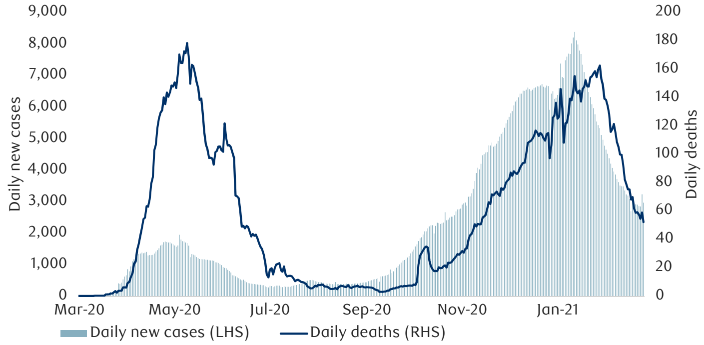
The Canadian economic story is a nuanced one. The country has fared better than most wealthy nations across the pandemic when measured by the number of infections, hospitalizations and fatalities per capita. Canada has also recently enjoyed a significant decline in infections (Exhibit 30).

However, a country's economic performance has much more to do with the extent to which it imposes economic restrictions as opposed to the human toll of the pandemic. Canada has generally been somewhat stricter in its restrictions than the U.S., and so suffered a sharper economic decline (Exhibit 31). Much of this was initially offset by more generous fiscal stimulus, leaving the Canadian economy in a roughly similar position to the U.S at the end of 2020 in terms of the economic recovery (Exhibit 32).

But, in 2021, Canada appears set to lag the U.S. recovery somewhat, for four reasons. First, the U.S. is vaccinating at a much faster pace than Canada, allowing for a more rapid normalization of economic activity. Second, the U.S. has repeatedly demonstrated that it will re-open more quickly than most countries even if its pandemic conditions are similar. Third, the U.S. is now delivering big new fiscal stimulus that is not being fully matched by Canada. Fourth, the Canadian dollar is strengthening against the greenback, diminishing the country's competitiveness.

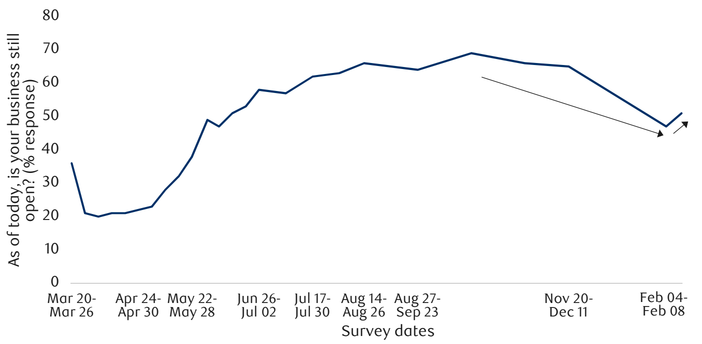
Providing partial but incomplete offsets against these forces, commodity prices have rebounded and may yet rise further, Canada will enjoy some indirect benefit from U.S. fiscal stimulus and political normalization, and the country's woeful vaccination pace appears on the cusp of accelerating significantly in the second quarter of the year. In the end, we look for Canadian growth of 5.2% in 2021 – an impressive clip on an absolute basis, but a bit short of the 6.0% pace in the U.S.

Exhibit 30: Canadian infections have fallen sharply, now flattening



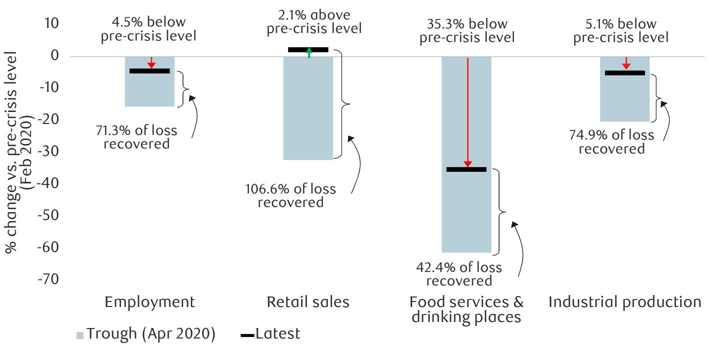
Note: As of 2/25/2021. 7-day moving average of daily new cases and new deaths. Source: WHO, Macrobond, RBC GAM

Exhibit 31: Canadian businesses start to reopen after second lockdown



Note: As of 02/08/2021. Source: CFIB, RBC GAM

Exhibit 32: Significant progress made in Canada



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

Lasting implications

When afforded the luxury of looking beyond the pandemic, our primary thesis remains that there should be surprisingly little economic scarring and perhaps fewer permanent changes to how society functions than many imagine.

There are several reasons to imagine limited economic scarring after the pandemic:

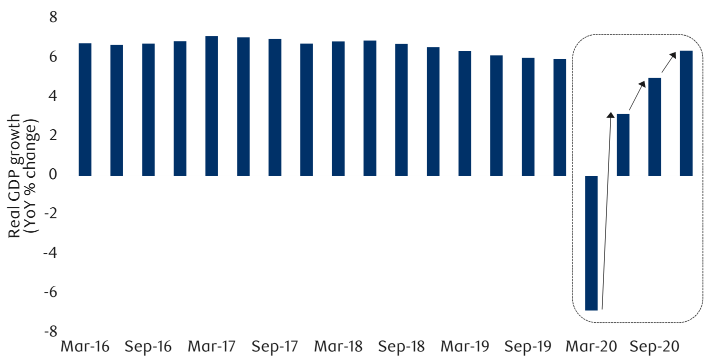
- The economic recovery so far has been more enthusiastic than expected at every turn.
- The economic damage that remains is mainly the artificial result of government restrictions, and should rebound as soon as the restrictions ease.
- Massive monetary and fiscal stimulus has been so forceful that the usual recessionary scourge of bankruptcies and defaults has been minimized to the extent that little hangover is likely later.
- China, which is well ahead of most countries in its handling of the pandemic, reveals very little economic damage, and even managed to grow unusually quickly in 2020 (Exhibit 33).
- Looking back a decade, the global financial crisis was expected to do a great deal of lasting damage but most of this evaporated fairly quickly.

It is a similar story when thinking about how the world might be permanently altered by the pandemic. Historically, pundits usually exaggerate the extent to which major shocks will leave a lasting mark on the economy and society (Exhibit 34).

We certainly acknowledge that quite a number of things will be different in the immediate aftermath of the pandemic, but many of these should be quite short-lived, others will only last for a few years, and many of the changes that are permanent should de-intensify somewhat (Exhibit 35).

For instance, the level of socializing, physical contact and personal travel should rebound quite quickly once restrictions are lifted. We similarly expect most economic variables to normalize over time: population growth has been only minimally affected, immigration should resume, economic slack and the unemployment rate should normalize over a few years, and there is little reason to expect a sustained diminishment of innovation (in fact, crises are sometimes catalysts for a spurt of subsequent innovation).

Exhibit 33: Chinese economy recovered rapidly



Note: As of Q4 2020. Source: China National Bureau of Statistics, Macrobond, RBC GAM

Exhibit 34: Prior shocks induced fewer lasting changes than expected

Event	Initial expectation	Did this happen?
World War I	• War to end all wars	No – much bigger war within a generation
Spanish Flu	• Very similar to COVID-19 expectations • Lasting economic damage • Lasting aversion to social activities, restaurants, entertainment, travel • Distaste for dense cities	No – life returned to normal very quickly and subsequent decade enjoyed an economic boom
World War II	• Long-lasting economic depression in Europe	No – economy boomed during rebuilding and productivity surged globally due to new technologies
1990s dot com blowup	• End of online tech boom • No more funding for revenue-less companies	No – was actually just the beginning of the online tech boom
9/11	• Less air travel • Aversion to tall buildings, cities	No – record air travel, urbanization continued, many tall buildings built subsequently

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

Exhibit 35: Lasting implications of COVID-19 – few implications are truly permanent and most of those should partially reverse

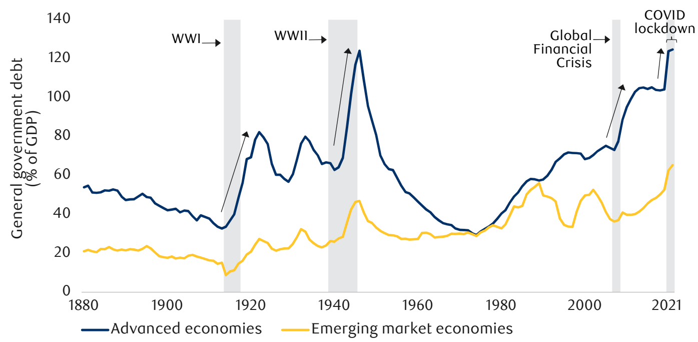
	Permanent	Multi-year	Short-lived
No reversal	More public debt	Rural/Suburbs > Downtowns	Less socializing, physical contact, personal travel
	More automation	Lower LT return on investments?	Higher unemployment
Partial reversal	Online > Brick and mortar	Larger government	Lower population growth (deaths,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

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

While suburbs and rural areas may outperform downtowns for some time, the powerful forces underpinning urbanization should eventually revive, reflecting the fundamental attraction of living where jobs are high-paying and plentiful, and given the generally high quality of education, health care and culture available in cities. Although governments are set to be larger than normal for a number of years, there is no reason that the additional spending must be permanent. The same goes for the risk of higher inflation – it exists for several years, but should then fade.

Finally, among permanent changes, only a few are set to remain in full force. We expect public-debt levels to remain permanently higher than otherwise (Exhibit 36). But many of the other permanent changes should at least diminish somewhat in their intensity. Yes, online spending will remain higher than before the pandemic, but likely not to the current extent. Yes, business travel should be permanently lower than

Exhibit 36: Global public debt to reach record high due to pandemic



Source: IMF Fiscal Monitor, October 2020, RBC GAM before, but not nearly so low as it is now. Yes, more people will likely work from home than before, but executive surveys make quite clear that most people working remotely will be back to the office for more than half of their hours.

Bottom line

The pandemic is not yet resolved. It may well be tidily resolved in the coming months for wealthy nations if vaccines prove particularly effective, but there is also the distinct possibility of additional infection waves if some new virus variants manage to take over and prove resistant to the existing generation of vaccines. The inflation outlook is a further source of risk. Uncertainty remains considerable.

However, there is arguably reason for more optimism than pessimism:

- Governments, businesses and workers have adapted to the pandemic to the point that the latest wave of infections only minimally damaged the economy.
- Whether the infection numbers remain low over the next few months or not, it is very likely that the virus will be in serious retreat no later than this summer.
- Vaccines appear to be a genuine game-changer.
- Monetary and fiscal stimulus is likely to remain powerful, and significant pent-up demand waits to be unleashed.
- A key takeaway from the pandemic experience so far is that the economic rebound has been more forceful than expected at nearly every turn.
- Lastly, we continue to anticipate little economic scarring after the pandemic is over.

As such, it is most likely that 2021 will be a year of strong, above-consensus economic growth, with the recovery then extending into 2022 and beyond. Critically, life should be somewhat more normal in the middle of 2021 than it was at the beginning, and then almost completely normal by the end of the year.

Disclosure

This document is provided by RBC Global Asset Management (RBC GAM) for informational purposes only and may not be reproduced, distributed or published without the written consent of RBC GAM or its affiliated entities listed herein. This document does not constitute an offer or a solicitation to buy or to sell any security, product or service in any jurisdiction; nor is it intended to provide investment, financial, legal, accounting, tax, or other advice and such information should not be relied or acted upon for providing such advice. This document is not available for distribution to investors in jurisdictions where such distribution would be prohibited.

RBC GAM is the asset management division of Royal Bank of Canada (RBC) which includes RBC Global Asset Management Inc., RBC Global Asset Management (U.S.) Inc., RBC Global Asset Management (UK) Limited, RBC Global Asset Management (Asia) Limited, and BlueBay Asset Management LLP, which are separate, but affiliated subsidiaries of RBC.

In Canada, this document is provided by RBC Global Asset Management Inc. (including PH&N Institutional) which is regulated by each provincial and territorial securities commission with which it is registered. In the United States, this document is provided by RBC Global Asset Management (U.S.) Inc., a federally registered investment adviser. In Europe this document is provided by RBC Global Asset Management (UK) Limited, which is authorised and regulated by the UK Financial Conduct Authority. In Asia, this document is provided by RBC Global Asset Management (Asia) Limited, which is registered with the Securities and Futures Commission (SFC) in Hong Kong.

Additional information about RBC GAM may be found at www.rbcgam.com.

This document has not been reviewed by, and is not registered with any securities or other regulatory authority, and may, where appropriate and permissible, be distributed by the above-listed entities in their respective jurisdictions.

Any investment and economic outlook information contained in this document has been compiled by RBC GAM from various sources. Information obtained from third parties is believed to be reliable, but no representation or warranty, express or implied, is made by RBC GAM, its affiliates or any other person as to its accuracy, completeness or correctness. RBC GAM and its affiliates assume no responsibility for any errors or omissions.

Opinions contained herein reflect the judgment and thought leadership of RBC GAM and are subject to change at any time. Such opinions are for informational purposes only and are not intended to be investment or financial advice and should not be relied or acted upon for providing such advice. RBC GAM does not undertake any obligation or responsibility to update such opinions.

RBC GAM reserves the right at any time and without notice to change, amend or cease publication of this information.

Past performance is not indicative of future results. With all investments there is a risk of loss of all or a portion of the amount invested. Where return estimates are shown, these are provided for illustrative purposes only and should not be construed as a prediction of returns; actual returns may be higher or lower than those shown and may vary substantially, especially over shorter time periods. It is not possible to invest directly in an index.

Some of the statements contained in this document may be considered forward-looking statements which provide current expectations or forecasts of future results or events. Forward-looking statements are not guarantees of future performance or events and involve risks and uncertainties. Do not place undue reliance on these statements because actual results or events may differ materially from those described in such forward-looking statements as a result of various factors. Before making any investment decisions, we encourage you to consider all relevant factors carefully.

Publication date: March 15, 2021

103073 (03/2021)
ECONOMIC OUTLOOK _SPRING 2021_E 03/19/2021