

Audio Transcript

Hi, this is Beata Caranci with the economic update.

Today I plan to cover a lot of territory with three themes.

The first is to provide a forecast update relative to last quarter and to do so from a Bird's eye view.

Then I wanted to follow it up with a discussion on the inflationary drivers and how we're interpreting the extended supply chain pressures on our outlook.

And then lastly, a very brief overview of some of the new lessons or observations from global virus developments and how we're thinking through the potential forecast implications.

With that in mind, here's an overview of our global outlook. I'm going to spend a little bit of time on this slide, as there are several takeaways to absorb.

First, there have been no substantial changes this time around to the real economic indicators. The figures in parenthesis represent our views from last quarter and the magnitude of these shifts would be considered statistically insignificant there were misses, of course. Third quarter economic growth for both the US and Canada was lower than predicted in the 2% to 3% range instead of around 3% to 4%. But as I noted in the prior update because there are substantial growth cushions, data misses would need to be deep and more persistent to reroute the advantage on the annual pace. The source of most revisions largely reflected the prolonged intensity of global supply constraints, whereas headwinds created by Delta and the natural unwinding that's occurring in fiscal supports. That was largely already anticipated and embedded in the prior forecast.

The good news is that while the third quarter disappointed expectations, we can already observe a pickup in momentum within the fourth quarter, particularly for consumer spending and the rebuilding in inventories. For the US, this momentum suggests the final quarter of the year could be a barn burner, possibly north of 6%.

In Canada we were originally thinking the year would end close to 4%. But we'll have to make some downward adjustments now to take into account the BC floods. Although it's a regional shock, it will carry national repercussions because of that interruption of the supply chain, which could have come at a worse time. And as you know, measuring the economic impact never does justice to the true sense of loss.

From an economic accounting exercise, any near term drag tends to be more than offset by the reconstruction efforts in subsequent months, so it's certainly going to be a devastating blow for BC and the regional economy. But because there's a strong starting point of growth at the national level, it will dent but not derail momentum. So that sums up the first point on real GDP developments holding fairly steady to our expectations.

However, inflation has certainly challenged the outlook. The greatest immediate risk is that inflation is going to be increasingly deteriorating peoples' real disposable incomes and that kind of impact confidence and spending. This would normally lead to a significant downgrade or economic growth expectations, but the outlook is bustros, at least in the near term by three influences.

The first is a large pool of excess savings that continue to support spending patterns. And in fact, we're seeing higher pass through to spending than we had originally assumed.

The second is that there continues to be significant job growth and a high availability of job opportunities. So, what's happening is we're getting continual expansion of the pool of American and Canadians joining the ranks of the employed and that creates greater income security and this may in fact be the reason why we're seeing those precautionary savings now make its way into the economy.

And the third is that the forecast in this slide incorporates some but not all of the new fiscal spending that will make its way into the economy. So, for instance, in the case of the US we have the additional infrastructure spending in place into the forecast roughly a trillion but not the full scope of a build back better plan that passed the House but not yet the Senate.

We still a high degree of uncertainty around this so we're going to wait until we get some finalization there before incorporating. But it was certainly adding near term boost, particularly if the extension of the child and earned income tax credits goes through.

In Canada we'll have to see what comes out of the new government spending. We had a significant amount of election promises. It's possible if we just take it as it was stated during the election period, that the Liberal campaign could add between .2 and .5 percentage points to growth next year and about .1 to .2 the following year.

So that could do the Birds Eye view and I'll dive into the details around the outlook and the risks still forecast.

Let's start with the risk ride and do a gut check on how vulnerable the forecast is to our baseline assumptions. This slide quantifies a what can go wrong scenario by assuming a longer transmission in higher prices due to both supply chain and energy disruptions, combined with a sharper slowdown in China's economy given their challenges within the property markets.

This is not about exercise in the context of a stress test, but rather as a plausible downside where we've considered a one to two quarter extension of current developments. When we piece the crosscurrents of the three risks together, the Canadian and U.S. economic expansions will slow by roughly 60 to 70 basis points next year. This is significant, but not enough to derail the recovery because of those extra growth cushions that are already embedded in the forecast as we head into the new year so it's a nice tailwind.

Now I would caution that model-based exercises have their limitations. It's really difficult to estimate the confidence channel models extrapolate this based on assumptions for risk assets, and in this exercise, we assumed a 15% decline in equities. It can certainly be larger than this, likewise sentiment can retrench in other asset classes such as housing markets, which would be material in the case of Canada.

But the purpose of the exercise was to offer a gut check and we try to be thorough in pulling the levers where we could. In an interesting nugget, you might be wondering why it looks like the US has a slightly larger impact in Canada from this exercise. That's because the US is more exposed to bottleneck inflation relative to Canada which is consistent with why they have higher inflation rates.

As a result, in a more prolonged gridlock scenario the US ends up with a larger erosion and reeling comes from higher inflation and then in turn this will take a larger toll on consumption. Because consumption makes up a larger share of the US economy relative to Canada, there's this intersection of multiple pathways that impact their economy.

So now I'm going to pull this thread a little bit more on supply chains within the next few slides.

One reason why Americans are more exposed to bottlenecks is because they devote more income to spending on things or durables as I've graphed here. Then what we see in other countries like Canada and Europe, these products are more linked to international supply chains via imports which compounds the impact from supply chain dislocations.

An easy way to think of this is to say Americans spend more on things however, Canadians spend more on homes, which is seen through elevated debt levels and in turn this means that there will be more interest rate sensitivity within Canada than we presume for the US.

So because of these nuances between countries, it creates a different transmission of how risks feed through the economy. Depending on how you design a scenario or your origination of those risks, it's an important learning because when people note that the pandemic is pressing on inflationary pressures and hence will be transitory, that it seems there's not a precondition or if there is it carries minimal influence. But not all dynamics can be blamed solely on the pandemic. For instance, the trucker shortage predates the pandemic. The pandemic certainly made it worse, but it wasn't the original source of the shortage, and it's not likely just going to suddenly resolve itself in the next six months, as some of the pandemic risks recede.

Likewise, although we expect Americans to continue to rotate their spending towards services and this will take off some pressure on the goods prices at the margin, this too has its limits.

Normalization for the US really does alter the fact that Americans maintain higher spending relative to other nations in a normal environment. This means that the risks stemming from supply logistic tensions may be harder to solve in the absence of some resetting of demand. It's also one of the arguments that suggest that there's a real possibility that the Federal Reserve could be running the risk of leaving rates too low for too long as we try to find this balance that the shortfalls are observing in the labor market.

This slide reinforces how the US inflation outcomes are not really representative of other regions. There's no arguing that inflation is higher globally, but energy prices has been quite material to that outcome for most regions.

Whereas the US shows a broader transmission to prices for broader products in general. And that's why I'm showing that X energy column on your right. Most of Europe is around the 2% mark and in Canada there's about a 1.4 percentage point gap to the US.

Now if you wonder why I'm showing the Euro area with constant taxes as part of their fiscal responses to the pandemic, some countries temporarily cut sales tax along certain goods and services.

For example, Germany cut the VAT rate by roughly 3 percentage points. So, what's happening in their headline inflation numbers is not only do you have the energy side pushing it up, but you have a resetting of the sales taxes as they are either already expired or set to expire. It's not really about a pass through to higher consumer prices from the retailers themselves.

When we look at the US dynamics, there have certainly been reports that larger retailers are getting more comfortable with inventory levels ahead of holiday season, and we can in fact see inventories are rising within the economy even in the auto sector which was a huge 6.5% jump in sales in October.

Basically, consumers eagerly waiting this inventory snapped it up at any sign of new supply hitting the market.

However, we're now at the nine-month mark where manufacturing supply to supplier deliveries are above the 70 thresholds. There's really no recent comparison for this, other periods might have been around mid-60s and early 70s, both in terms of level and duration. But again, these periods are not representative of what we're seeing today, and certainly there were different monetary policy and inflation regimes behind those periods.

If we look at this graph it's hard to argue that inflationary pressures will quickly dissipate. Unless demand suddenly alters its path, which wouldn't be a positive development and so now we're also seeing pressure being compounded by the erosion of supplier deliveries for services which is partly being influenced by that labor component and the shortages there.

I'll pause here to say that I don't want to sound alarming in our baseline view the dynamics point to an easing and inflationary pressure.

But the distinction I'm making here is unlikely to be a quick return to 2% we could be facing sticky prices well into the middle next year, even as the intensity of those price pressures ease as supply chains improve.

To give you an example, by the end of next year our forecast has core CPI in the US at around 3% and at 2 1/2% for Canada. Given we're currently at 4.6% in the US this may feel like it's not much relief.

Common question from clients is, why would I use it all?

The first thing is it's going to be based here effects. We're going to be benchmarking prices next year to a period in time, which was actually the peak period of bottlenecks and price pressures.

There's a natural dynamic that will play out and then, even with our assumptions that supply pressures are more prolonged. We anticipated a few months ago so it goes back to the earlier point I made that the intensity of those bottlenecks will be easing and we are seeing that already in the accumulation of inventories and some easing up or congestions and then as the vaccines make their way more and more to emerging markets.

This should be quite material in preventing some of the supply dislocations, as they're able to get their economies back on track.

Then of course importantly, we don't anticipate, we still have fiscal policy contributing to growth, but we do anticipate those very large pandemic checks and those injection of funds that were given to households by the time we get through the second half of next year.

There should be significant drawdowns in savings and less of that income support, and so that should take some of the heat off demand that's contributing to these pressures.

As you can see, there's a lot of assumptions here, and there's a reason that Bank of Canada governor Tiff Macklem listed humility as one of the three guiding principles to their monetary policy approach in an FT he wrote a couple of weeks ago.

To offer a bit of balance to the outlook current supply, chain pressures should ultimately improve resilience with the passage of time.

Now what I'm showing you here is a graph of vehicle production. It's from 2011 and it offers us a historical lesson on supply chain resilience. In 2011, that's when northern Japan was hit with an earthquake and Toyota suppliers were the hardest hit, including one of their key chip suppliers. In the aftermath, Toyota invested heavily in gaining insight on their end-to-end dependencies to identify at risk inputs. When they did so, they came up with the name Incredible 1500 parts that were deemed critical to the production process and then they put specific controls to secure alternative suppliers to stockpile strategically and to put in a better monitoring system.

If you fast forward to today now you know the changed, they made in 2011 have paid off. It has actually minimized their production disruptions relative to their peers. The overarching point is that you know Toyota had to learn the lesson through an earthquake and others are now learning similar lessons because of the pandemic, and with sufficient time more resilient supply chain management practices should occur.

We're already hearing about strategic changes underway with many companies including Ford and GM, with their new semiconductor initiatives. The intensity of logistic issues do lessen with time and those opens could actually result in more resilience than next time we get into a situation of a domestic or global shock.

So now the all-important question, what's the Central bank to do?

A number of central banks have already begun to hike rates like the Reserve Bank of New Zealand, while others are nearing that first step like the Bank of England and the Bank of Canada.

So the first question that needs to be figured out, Is how much capacity actually exists in the economy?

It's one thing to say inflation is being temporarily pressured by supply chains, but one reason we anticipate inflation to hold above the central banks 2% threshold is because of some impacts will recede, others will take their place.

Like having both Canada and US be an excess demand in next year and that actually forms the basis of rate hikes even as a supply side risk.

This graph shows manufacturing capacity utilization.

The US is already at pre pandemic levels now.

This can edge higher because the pre pandemic period was actually not the absolute peak, but there's not a whole lot of room where there's a natural restraint on how much manufacturing can accommodate much higher demand as the supply chains improve.

The Canadian figures have ease recently, but that's reflecting the supply drag from the transportation and equipment sector, so there's room for take up there, but also not a tremendous amount.

Of course, how much slack that's out there really depends on where you're looking for it, and so when you drop in the labor market statistics you actually get a reverse story.

There's a lot of excess slack in the US labor markets but not so in Canada, and I've specifically graphed the employment rate for those aged 25 to 54, not because other age brackets matter less, but because this group is less influenced by demographic shifts caused by retirement or returning to school.

So, it gives us a true baseline measure of the potential slack.

Now these graphs say it all when comparing Canada and US labor capacity.

We heard complaints from U.S. business owners with the pandemic benefits were too lucrative and more discouraging workers from returning. But Canada had and continues to have extended benefits without the scarring on participation rates that is occurring in the US.

So clearly there's something unique happening on that front. For instance, US participation rates are down for every age, cohort and gender, but there is a particularly sharp depression among women in their late 20s relative to men, which is roughly 3 times more of a gap compared to the pre-crisis period.

It's probably no coincidence that these folks would be more likely to have young children in their care. Where the other factors affecting employees, employers is that there has been a decline in people holding multiple jobs, which makes sense as we just wage conditions improve for lower income positions.

I also graphed the 55 plus age participation rate on the right to give you an idea of the retirement wave that's being noted in the US as a new challenge.

But with the population between the ages of 55 to 64, the declines are small and limited to males, but for the population over 65 both men and women have left the labor force in droves, reversing the trend that was being observed pre-recession.

In fact, if you look at the three million Americans that are missing from the labor force. About 1/3 of those are over the age of 65, so prior to the pandemic it was this group that had the strongest growth. And when you combine this with all these other impacts, it's a reminder that the labor market frictions are probably not going to be resolve overnight.

The history of the US suggests it could take years for some groups to rejoin the labor market. In particular, if we use a global financial crisis as a reference, it wasn't until 2015 that core aged woman that's at 25- to 54-year-old group that their participation rate started to rise again.

So quite a big gap from when the actual recession ended.

Higher wages and inflation could hasten the timeline relative to history, but even with this, we think there's a pretty good risk that in the coming quarters we're going to continue to see wage pressures somewhere in that 4 to 5% range.

North of the border, Canadians tend to identify with the media and narratives command the US, but wage trends have not drawn the same parallels. This is average hourly earnings for the US and Canada have dropped in a trend line to benchmark the acceleration in wage growth relative to pre pandemic period. Although many people cite average wage growth that the measure fails to capture compositional shifts in hiring. For instance, if more hiring is occurring in higher skilled roles, the average will rise and vice versa.

To correct for this in Canada, there's a fixed weighted measure and I'm just going to drop that in for you now and that shows wage growth by holding occupations constant there is not a comparable measure in the US, but for Canada we can see that wage trends are slightly more subdued, which makes sense considering well Canada has higher supply.

Minimum wages were also higher across Canada relative to the US so there is probably less pressure for immediate recalibration.

There's also an argument to be made that Canadian wages may be stickier due to higher union agreements, so we may yet see which pressures kick into a greater extent as we move into 2022.

Also, this is a double-edged sword for Canada because the high participation rates suggest it may be nearing capacity limits and this two is an argument for pick up in wage growth.

Lastly, you're looking at an aggregate measure, but labor market outcomes vary quite a bit by sector and the accommodation and food service industry has seen a really strong rebound in demand for labor, but the supply is short.

The staffing shortages that we see the US experiencing may in fact be a legacy in Canada as well, and this too is an argument that some sectors will see some pressure on wages as we go forward.

The last point I'll make on this is that store wage gains against higher inflation backdrop means that you end up with a deterioration in real wages, and in fact it may be more pronounced in Canada.

So now when I draw up in the Canadian lines you can in fact see what that's doing this is the fixed weighted where we've done the compositional adjustment. What that could mean is that as we get further out, the longer that inflation is sustained, we're going to see workers require catch up in wage demand to make up for these shortfalls they're currently experiencing.

So now the question is, to what degree can savings bridge the gap until inflation settles down?

Americans have about 2.7 trillion cushions in excess savings, which amounts to roughly 13% of nominal GDP. It's super high. I've graphed deposits by income quartile in the US to demonstrate that you know all income levels were experiencing a rise due to multiple rounds of those pandemic income relief measures.

Now this data is only to April. It has come down since, but when we rechecked the more recent data which goes through to September. Deposits remain between 40 to 60% higher than pre pandemic levels depending on the quartile. The hope is that any shortfalls in real income can be backstopped by savings

in the near term and based on stories we're hearing about Thanksgiving travel, people do not seem at this point to be refraining from spending due to high prices. It's highly uncertain how much of these savings will ultimately be spent.

Our baseline assumption was that only 5 to 10% of it would make its way through the economy over the next two years, but we are really seeing stronger spending patterns than we anticipated and suggests upside risk to that assumption.

The estimate for excess savings in Canada is about 190 billion. However, Canadian households do have competing priorities because, as you saw in the prior graph, it's that higher debt level that they are having to fund rather than just the consumption side. Even with that in mind here too, we are underestimating the intention to spend.

In a recent Bank of Canada survey, respondents said they intend to spend about 1/3 of their accumulated savings by the end of 2022. This implies a spending impulse of about 60 billion or 3% of GDP, which is also greater than we had previously assumed. And we also think it's greater than what the Bank of Canada has likely embedded in the economic outlook by roughly 20 billion.

In their forecast, they already have robust consumption growth of 5 to 6% along with an above target inflation of 3.4% in 2021 and 2022. So, if consumers spend that 460 billion and this would naturally lead to higher inflation in the near and medium term. Likewise, the Bank of Canada would need to respond in kind with an earlier or faster interest rate cycle, to return to the original point of real wages, just like in our economic growth estimates, there's this cushion for forecast misses.

It seems that the same argument can be made consumers spending that you know despite the deterioration in real wages. There is this extra cushion that's coming through on the saving size and really it probably comes down to duration in terms of how these two forces will interact. And on that note, let's turn to inflation expectations.

This is the current expectations amongst forecasters. There are three messages from this slide. The good news is that inflation expectations remain anchored to 2023. Now, regarding duration, forecasters don't expect a quick resolution even by the end of 2022. Inflation is north of that 2% threshold, and now for the word of caution... There has been significant forecast error in the near-term estimates, which has led to serial upward revision.

Both the Bank of Canada Governor and the Federal Reserve chair are among central bankers, noting that the pressures are lasting longer, this naturally raises the risk that higher inflation begins to be embedded in wage expectations and future prices.

So another way to think of this is that the risks around the forecasts are just not symmetrical. Turn into market inflation expectations these measures are rising and getting a bit uncomfortable in the case of the US, the Fed puts a lot of weight on inflation expectations, but of the two survey-based measures, versus market pricing.

It's the latter that they put more weight on and we get a sense of this from a speech by Fed Governor Waller when he said, "the survey respondents incur no benefit or costs from the accuracy of their forecast, but market-based measures of inflation expectations reflect investors betting with real money about future inflation".

They basically have skin in the game. So, this reinforces that market based measures are the ones to watch if choosing between the two and central bankers really can't keep noting forecasts misses on inflation without acting if they're going to try to keep anchoring those expectations. And central bank reactions don't exist in a vacuum to the asset price risks their policies may be creating.

Real estate values and the related debt risks are clearly top in line with the Bank of Canada and now we're seeing some normalization in credit demand as well that would argue that household confidence must be reasonably high and that would signal the time is nearing for rate normalization.

The central bank can't do anything about tight supply markets in the housing sector, but it can certainly try to derisk some of the behaviors occurring because of this very cheap credit.

From the market perspective, the messages being received as central banks globally shift their tone. I had mentioned last quarter that market pricing wasn't reflective of the economic fundamentals nor the risks on the direction of monetary policy.

Now we're starting to get greater consistency between these objectives, and I would say perhaps some over correction in the case of Canada.

So, let's start with why Canadian yields are outpacing their peers. Markets are pricing around 5 hikes for next year, with the first occurring in merge. By comparison, the Federal Reserve expectation is for only two hikes. And those will be starting after QE withdrawal, which is estimated to be around June.

But frankly, we've seen some really good data at the US lately and the argument would be that they accelerate their QE withdrawal and that it would end perhaps a couple months earlier than they're currently have communicated. But we'll see what they say come December.

So, with this big divergent in views between banks we just captured here in the market pricing that would be the green bar. We agree with the market views at the Bank of Canada will hike before the Fed, but think it's a bit of on the aggressive side on the five hikes we've only penciled in three hikes for next year.

For the Fed we are similar to the market, but even here we're now starting to lean to the possibility of three hikes next year. If they do in fact, signal and acceleration of their QE withdrawal schedule.

In any event, all roads lead to higher rates and a flattening yield curve.

One of the most asked client questions is whether the Bank of Canada could raise rates ahead of the Fed, and if so, by how much?

There's obviously a concern around a policy mistake. The simple answer is that the Bank of Canada absolutely can hike before the Fed and should do so based on the balance of domestic risks. There is precedence both in 2010 and 2002.

However, unlike those periods, we anticipate a go-slow approach with every hike, maybe one every three months rather than the rapid succession, and that's largely so they can monitor some of this interest rate sensitivity, although that can change as well.

We're also not looking for significant policy divergences with the Fed. Again, both of them are anticipated to be moving in the same direction, which would be different from what we were seeing in this prior two periods.

The last point I'd make is just on the terminal rate, so that's where you see the long run rate reflected in this slide.

How high can it go ultimately?

Now we can learn lessons from previous business cycles here from 2016 and 2018. The Fed skewed on a fairly aggressive rate hike cycle where the policy would eventually reach 2 1/2%.

However, at 2% it was already evident that interest rate sensitive sectors in the economy was starting to roll over in particular housing.

So, given that there's more interest rate sensitivity since the pandemic, we're putting the terminal rate for the Fed at 2% and for the Bank of Canada at 1.75%. Why? because Canada has even more interest rate sensitivity and we also project a slower rate of potential growth here in Canada.

OK, onto the final section with some takeaways from recent virus developments. The virus remains at dominant roasted outlook and the sustainability of growth and a lot has changed since the last quarter as countries have made significant headway in vaccination rates. Even so, we're now again hearing about resurgence in COVID cases and renewed restrictions taking hold in parts of Europe.

When we compare the vaccination rates, it's surprising that relatively small differences between regions can lead to fairly large differences in cases which you can see in this top right corner graph. The Netherlands is of particular interest, given there's only a 3-percentage point separation on their vaccination rate relative to Canada.

As I mentioned last quarter, we're not using the US as a benchmark as it is carved out its own independent path and shows a much higher tolerance for cases and hospitalizations relative to most other advanced economies.

So, what can we take away from this? When we have the re-imposition of restrictions in Europe, it's important to know what those starting points are, and this stringency index gives you a little bit of perspective here. It's not a perfect measure, it does capture nine response indicators, including school closures, workplace closures, travel bans, but when policies vary at the sub national level. For example, Canada provinces have different policies. The index will take the strictest sub region and apply it.

Like I said, it's not a perfect measure, but it's actually fairly good at doing regional comparisons across countries. You can see that countries with less restrictions are the ones facing a higher virus wave, which makes total sense. What we've learned in the past, however, is that each successive wave seems to bear less drag on the economy, and this too makes sense because the duration of scope of the lockdown is less heavy handed. More so now that there's greater population resilience via vaccinations.

Austria and Netherlands have received a lot of media attention for re-imposing restrictions, but the policies are not particularly onerous. One of the key restrictions that are being reinforced are face masks for indoor settings, and this doesn't necessarily impinge on economic activity.

Now Netherlands has entered a three-week modified lockdown, but again, it's not overly onerous. It means that restaurants, bars and essential stores will be closed by 8:00 PM while nonessential retail were closed by 6:00 PM.

In trial that feels like a Sunday, so it's not a lockdown in the way we've come to think of them in the past waves one and two and even three. Even in this environment, they have faced violent protests over the new measures in Austria, which is actually in a truer form of a lockdown is also facing significant protests, even though that's a very short duration of only 10 days. It's questionable whether they can extend it beyond that if they would like to.

Now in Germany, on top of the national policies like Canada, there's a patchwork of regional level measures. Here too we are reading that there's consideration of increased restrictions, but for Germany what is that mean? It means that where hospitalization and ICU levels get to a certain point. They go from requiring proof of vaccination, a negative test or recovery from an infection to enter public spaces to only requiring proof of vaccination or recovery of infection. They remove the negative test requirement.

This is clearly not stringent and is less stringent than what we already have in place in Canada. Now German authorities have not ruled out another lockdown, but again, like everywhere else, political, and public sensitivities run high. It's clear COVID store rules a day as a dominant downside risk to the economy, but how?

Much to incorporate into our forecast is less clear, particularly in Canada, where vaccination rates are higher in public, health measures are also higher. If anything, you can envision a two-to-three-week circuit breaker approach that limits activity, but certainly not of the scale of past waves.

As for the US, it actually makes a good representation of what's happening globally. First, you can get a sense of the seasonal patterns in new cases, warm states have a resurgence during summer months. Colder states during colder months, consistent with when people are gathering indoors.

Now we've used New Hampshire, Maine, and Vermont in these graphs because they actually have really high vaccination rates compared to states like Georgia and South Carolina, as much as a 20-percentage point difference on 2nd dose vaccinations.

Given that many European countries that lack last name needs are also the ones experiencing in escalation cases. I also tried just graphing in the US. What that might look like within a representative group of States and that's the graph you see there. Sure enough, non-mask mandate states run higher cases, but it's not that simple because typically that's representative with other ideological factors like having lower vaccination rates or more lax rules.

In general, I think what struck me most with this is that there's not as much of a gap as I would presume between the two groups. And putting pieces together, it's probably just a reminder that there's only so much within our control at the virus, and it does seem to be that more and more advanced countries are moving into stages of thinking about acceptable risk rather than absolute virus control.

To put it bluntly, in the words of Germany's acting public health minister, his words. "Probably by the end of winter, more or less, everyone in Germany will be vaccinated, cured or dead".

But now you're either laughing or completely shocked by that statement, which I knew not with the intention to dismiss the risk but to raise the possibility that we may be approaching thresholds on the degree to which restrictions can be sustained within public acceptance in this post vaccinated economy. So, from a forecast perspective, we'll keep adjusting the outlook to development, but we haven't taken a predictive stance on what the next step will be by the various Canadian and US governments. Although we do know that of the two countries, Canada does show the history of employing more caution when case counts arise. But again, in a post vaccine environment, we don't want to prejudge those actions this time around, so I'll end it there on a presentation.

Thank you so much for sharing your time.