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Good morning, good afternoon, wherever you are. It's January, so that means I spend 20% of my time putting a toddler in a snowsuit, and 80% of my time giving 2021 economic outlooks. That's what January is all about for me. I've got to tell you, this year, I honestly don't know which one I like less. They're both terrible, terrible tasks. They're both terribly, terribly challenging, and I think in some ways, cruel.

Well, putting together an outlook is always a tough job, but this year, we are still faced with massive amounts of uncertainty. And it seems like it should be easy, right? Because we know that vaccines are coming, we know who won the U.S. presidential election, we must know so much more than we did last year. And yet, much of what happens this year is kind of outside the purview of what economists typically think about. Everything in the economic outlook depends on the virus and the pace of vaccinations. I don't know whether there's going to be hiccups in the vaccination's paths, but I know it's going to be hugely influential to the outlook.

A lot of what happens in the outlook depends on government policy. How much of the stimulus that the Biden administration is proposing actually gets through? What does the Canadian Budget in 2021 look like? I'm no politician, and while sometimes they call me up, they don't tell me anything, so I don't know what those things are doing to do. And then, of course, we have monetary policy, and who knows what they're going to say in their speeches. These are just people who have views; they're not things that can be quantified as easily. So, what do you do?

Well, you still have to have some form of outlook, or else we wouldn't have calls like this. So, based on what we know now, we construct a base case. Our base case rests on four pillars. The first one is that 2021 will be a year of two halves. The first half of the year is really terrible. The

Bank of Canada told us today that Q1 is going to be a contraction. Basically, Canada's going back into a recession for the first three to six months of the year. What's driving that? Essentially, lockdowns. Lockdowns slow your economy. They force it to a halt; they result in drops in employment pretty sizably that result in business failures. That's going to happen between now and probably March. And yet, most economists, and especially markets, will tell you to push that to the side, it doesn't really matter, because the second half of the year is going to have such a ferocious rebound, everybody's going to be rehired, governments are still going to spend massive amounts of money and central banks are going to keep interest rates low.

So, in some ways, the first half of the year is almost like a natural disaster: it creates distortions that are unwound. Of course, you can probably tell by the tone of my voice that even my own base case I'm somewhat skeptical of. If we have delays in vaccinations, however, it pushes that rebound out from the second half of the year into 2022. If we have problems with the variant, for example. If companies say, you know what, we just want to make sure we get through to September and we don't see a resurgence of the virus before we hire back en masse, that also pushes the outlook out a little bit more into 2022 than in 2021. But we'll start with that base case, right. A year of two halves; first half very rough, second half, pretty good. Pretty good rebound.

Now, the second pillar of the view is that we continue to see in the first half of the year the so-called K-shaped recovery. That is, anything that is touched by social distancing – we call them high-contact areas, like services, those are your hair dressers, your malls, your movie theaters – those things continue to suffer. And that's really where the depression/recession area comes from, is that bottom leg of the K. Whereas everything that is looking very good, like that is even touched by social distancing – that's manufacturing – continues to soar higher. When we look at the economic data, we see massive amounts of strength in the manufacturing and trade sectors. Those are benefitting from huge amounts of stimulus and limited restrictions. And yet, in the second half of the year, what we expect is that K-shape invert somewhat. We see an unwinding of all of those demands for manufactured goods, stockpiles. If you, for example, have bought extra toilet paper rolls this year, or you bought a Peloton, you're going to unwind that inventory in the second half of the year when things go back to normal, and you certainly won't be buying a second Peloton. Well, I don't have one, maybe people need two, one for their whole family. So, we're expecting an unwind of that durable goods component at the top end of the K, and yet, hopefully, vaccinations go well, the services economy comes back online and you see a switch in the second half of the year.

Now, this is really critical, because it muddies the signals that we're getting from traditional economic indicators. In the past, all economic recessions were led by

manufacturing. So when manufacturing started to recover, it meant total growth was going to recover. Now that signal is getting muddled, so the correlations between data points, like ISM manufacturing and the ten-year bond yield, that's breaking down in a way that's really serious and actually makes a lot of sense.

So, the third pillar of the consensus base case economic outlook is that inflation will probably surge in the middle of the year. Now, when I say surge, I mean U.S. headline CPI, the number that flashes across our BNN or our CNBCs, can reach as high as 3%. That's pretty sizeable for a post-2000 type world. Certainly, some of the higher inflation numbers that I've seen in my career, maybe not in Glen's career, I feel like he was probably around for higher inflationary periods. Sorry, Glen, if you're going to invite me, I'm just going to have to go for it, right?

Now, this is probably a head fake. It's driven by year-over-year base effects. Last year, in April, May and June, we were in deflation. So even if prices just stay the same in year-over-year terms, it looks like they're soaring. It's driven by a weaker U.S. dollar over the past nine months, and it's driven by supply chain bottlenecks. What do I mean by that?

I mean that because of COVID, we've seen trade that was stopped in ports, for example, really difficult to get goods from abroad, and prices have risen on that front. I have colleagues in Hong Kong, and over the holidays I had a colleague that I work with on Asset Allocation, and she said to me, "My children are very sad because we could not get a North American Christmas tree this year." And I said, "Why not?" And she said, "Because it's so challenging to get them, they cost about \$800 US, so I said, uh, no, we're not getting those." That's an example of something that looks like inflation that's a temporary price disruption that falls off in the second half of the year.

Now, our longer-term inflation forecast is a little bit higher than it was before COVID. Before COVID, we thought inflation generally moved around 1.5 to 2%. Post-COVID, we think it's 2 to 2.5%. Now, in the realm of the last 20 years, that's actually slightly higher inflation. But is it enough to create a massive inflationary income? Is it enough to create an environment that's very painful for equities? Absolutely not.

So, as you hear this inflation data coming into mid-year, we really do have to fade it, that's what I would say. Look through it, recognize what is the longer-term trend. Recently, we've seen a lot of markets pricing in higher inflation. If you go back to some of the research that we wrote about – you can get it at the Manulife Investment Management and Manulife Private Wealth website – back in April, May, June of last year, we did warn that market-based levels of inflation would have to rise. They were too low, they were closer to 1-1.5, they had to rise to 2-2.5. That's where they've gone now, so in my view, it's reflation

trade, it's probably peaking out now a little bit. We can kind of really focus our energies longer-term.

So, there's four pillars. Number one, a year of two halves. Number two, the K-shaped inverts. Number three, a temporary pop in inflation. Number four – this one's really basic, we all know this – we are still going to see tremendous amounts of policy support. By that I mean central banks are going to keep interest rates low. I do not believe that central banks will be tapering quantitative easing this year. Even though they mention it here and there, I don't believe that will be happening, and we are still going to see tremendous amounts of government spending. And what that's doing is really powerful. It's basically financially distorting and repressing your bond yield curve. It's means the Federal Reserve is going to try to keep that front-end very, very anchored, but government spending is probably going to create this opposing force on the long end. Central banks are going to try to contain that, but a steepening of the curve, particularly the long end, is a really key component to our long-term outlook and something we really do have to take into account before making any sort of asset allocating decisions longer than the next six months. That steepening yield curve is a key component of it.

So, maybe you've lasted this long and you're saying, "Well, I haven't actually heard anything that I don't already know." Or, "I heard this from the Scotiabank economist or the RBC economist." Well, that's probably true because that's the consensus view, and that's the only real outlook we can construct with the information we have now. As I said, if vaccine takes longer, this story gets blown up a little bit. If we actually see struggling from the Biden administration to pass a lot of their bills, if it's harder to do that, the story gets blown up a little bit. If we see central banks with clumsy communication and we see an accidental taper tantrum or a spike in rates, the story doesn't work either, but we're operating in so much uncertainty we have to start somewhere.

My strategy, instead of trying to game what a policy-maker is going to say or which vaccine is going to get approved at what given time, my strategy is to take a step back and say, what really changed in 2020 and 2021? What are the big forces that actually affect my long-term asset allocation decisions? What are the forces that don't depend on when the vaccine arrives or what a policy-maker says? What really was a major disrupter in the last year and will be, going forward?

With that in mind, we have put together seven major scenes that we call The Macro Disruptors. These are themes that I feel are vastly underappreciated by the market and are somewhat separate from all of these little nitty-gritty things that may change the course of GDP in the next year. That's missing the forest for the trees, because what we're going through is one of the greatest economic shocks of all time. And in my view, also one of the greatest economic transitions of all time.

Let's go through them; we're going to talk about seven. I have a piece coming out next week that's a written piece that will actually have a lot of this information contained within it and a couple of charts that will be available to anybody who is interested; you could just reach out to your Manulife Private Wealth contact. But let's start here.

The biggest and most profound disruptor of 2020, which does change the game, is the blurring of monetary and fiscal policy roles. Okay, that sounds less fun as I say it than how disruptive it really is. I should come up with a more exciting title. But really, the way that we think about central banks has to change very dramatically here. In 2020, we had the largest, most coordinated response between monetary and fiscal policy that we have ever seen. And thank goodness, because 2020 could have been much worse than just a short blip recession, it could have been a great depression and a financial crisis. Thanks to monetary policy and fiscal policy, we averted that.

However, the consequence is that we've now created distortions in our system that are bigger than anything we've seen before and complicate our understanding of what these two types of stimulus are supposed to do. For example, central banks have purchased massive amounts of government debt. In Canada, 75% of all of the government bond issuance, all the new debt created in the past year, three quarters of it was bought by the Bank of Canada. By the end of next year, the Bank of Canada will own half of all of Canadian debt. That's one of the highest shares in the world, and we're already seeing disruptions in the way that markets are working because the Bank of Canada is so active in that market. This wasn't just a Canadian issue, although Canada was really ahead of the pack on this one, but U.S. at times was buying 100% of new issuance, Federal Reserve buying 100% of new issuance from the U.S. Treasury. They own about 25% of the U.S. Treasury market. That's more than any major player in the world.

People always talk about, oh, China owns so much U.S. treasuries. Their ownership pales in comparison to the Federal Reserve. Now what this does, is our central banks are not natural players. They're not market players like you and me who make decisions based off of price. No, they're buying simply to suppress yield curves, so how these markets are functioning is now altered. Now, in the middle of that, we had central banks that were shifting their research focus not so much on inflation, but on broader topics, like climate change and income inequality. These are very real issues that actually hamper our economy in sizeable ways, but they aren't inflation. Central banks will say those have to be inputs into our inflation goals, but still, this line is becoming muddy. Now, problematically, if central banks want to raise interest rates, that's going to make it much harder on governments. Governments will actually have to rein in spending, it'll suddenly get more expensive for them. That means that the economy will likely slow, there will be less inflationary pressures.

The bar to hiking interest rates after COVID is probably much, much higher than it was before. And it's no surprise to me that when we open the newspapers, we see people questioning whether central bank independence has been threatened. I think it has. We have to think a little bit more differently about whether central banks have become more political players and how their role in manipulating these bond markets is going to evolve in the next several years. In my view, it's so difficult to untangle from that, it probably means it's going to be so much harder to normalize policy than it has been historically.

Now, this is where I start because so many of our other disruptors rely on this first macro disruptor. But let's talk about the biggest implication for me, and that's macro disruptor two, which is a massive rise and thirst for true alternative investments. And if you've heard me speak before, you've heard me talk in the past about why I love alternatives in a low interest rate environment. Well, this is just the trade on steroids for me now. Central banks have told us they're not raising interest rates at least until 2023; my forecast is not until 2024. But importantly, even when they do, they're probably not raising them past 2%, so there's a reason that we're seeing a market search to put money into different places than it has been historically. We like things like agriculture and infrastructure, even private equity. There's all sort of things that you could be doing here, but there's going to be more and more focus on this. Now, is that necessarily the right investments for you? Not necessarily, it depends on how you're positioned. Talk to your MPWs sales and relationships there, but you are going to see more and more people talk about this.

It's also no surprise to me that we've seen a thirst for crypto. Again, don't turn off your cameras, I'm not saying that you need to be full in bitcoin. What I am saying is that a focus on cryptos makes sense in this environment. If you're looking at this and you're seeing central banks that have manipulated the bond market and you're seeing governments that want to spend so excessively that maybe you're worried about taxation in the future, of course we have people who are trying to find assets that cannot be manipulated by central banks and cannot be confiscated or taxed necessarily by governments. This is not going away.

So two, three years ago, my response to what do you think about bitcoin was: Oh, well, I don't understand it and I don't invest in things I don't understand. My response now is: It's not always a good investment, but you better understand what's happening because the trend towards things like crypto is not going anywhere. It's something that we need to monitor.

The third big macro disruptor is something that really changes my life, actually, and that is a shift away from traditional economic data. Now, during COVID, we discovered – or we had to come to the reality – that a great deal of our economic data was actually pretty bad.

It told us where the economy was two, three months ago, it was very capable of being heavily distorted, it was typically backward-looking, not forward-looking. And COVID moved so quickly, it was so challenging to get a pulse on the economy that we had to turn towards alternative types of data. By that I mean private sector data that two years ago I would have thought were silly and not robust. Open-table restaurant reservations. How many people are going through TSA passenger checkpoints? Google mobility data. You've probably heard a lot of economists talk about these data points. And when I say this, people say, "Yeah, yeah, I've heard that." But they don't realize how transformational it is that now that's become just a standard point for how we analyze where the economy is.

What we're witnessing is that by the time our standard economic data points hit the marketplace, whether it's jobs data or retail sales, that information has already been absorbed by the market throughout the course of the prior weeks because it's looking at new things like survey data or even how many people applied for weekly CERB as opposed to waiting for the jobs numbers at the end of the week. I think that on an ongoing basis, that's actually going to reduce the market reactions to a lot of economic data, or it's going to change the way economic data is responded to.

Last month, the United States lost 140,000 jobs. That's recession level. And what happened? Interest rates rose. Why? Because the market already knew that the data was going to be terrible and what it wanted to see was the conviction in that number to push through further fiscal stimulus. This is a change in the way we have to think about data, compared to where we were historically.

We are thirsting for new data sources. I am constantly trying to find new private data; I will pay for it. There's huge opportunity there for companies that can leverage some of this data moving forward. And as you yourself maybe do your economic analysis, try to expand beyond the traditional data sets which, as I mentioned earlier, are not providing the same sort of correlations with assets that they used to, and finding things that are more timely and more representative than they would have been historically.

The fourth big game changer that's changing the way I look, is actually – I never thought I would say this – an accelerated ESG focus. But when I think about ESG, I don't necessarily think about individual companies and what their screens are. Instead, what I'm watching for is two other components to it. One is that we're now seeing a shift from investors who are not focusing on individual companies, but on countries broadly. Applying country screens. You know, I remember when I opened my computer and I saw a picture of Greta Thunberg and Justin Trudeau, and Greta Thunberg making a comment about how Canada wasn't moving fast enough. And my phone's going off the hook from my cousins who are saying, "Well, I don't want to buy Canadian companies if

we're still invested in this." Now, is that necessarily the right way to ESG? No. But it is an example of the sentiment shift that is now moving from bottom-up, very company-specific, towards country level as a whole.

Now, the follow-on consequence to this is that countries we know, because we listen to them, are actually pushing towards more green spending than they ever have. People often ask me what the biggest game-changer from the Biden administration is. There's a lot of things that changed, but the biggest delta, the biggest differential between the Trump administration and the Biden one is actually the Green Spending Program. Green spending can boost growth over time, but it's a long-term growth spending path; it doesn't help you in the next two to three years. Often, when I hear about how huge amounts of government stimulus are going to be powerfully reflationary and they're going to help growth, I wonder if we're looking under the surface at what types of spending are going to be used for. Different types of spending give different multipliers for growth and different inflation outlets. It's not that one is good or one is bad, but we have to be more specific about that.

I suspect that we're going to see new financial instruments or financial products related to this. You know, Europe is going to unleash a massive fiscal package next month; 775 billion Euros. And a third of it is green spending that will be financed via green bonds. This is not a futuristic concept anymore. This is a new financial product, a new thirst for these types of financial products, and a new way to think about ESG not as a fringe or social or political type of screen, but a new way that governments are going to be spending and just how powerful that's going to be over time.

The fifth disruptor might seem a little niche, so I'll just drop two, three lines about this, and it's the concept we've been looking at called Central Bank Digital Currencies. And if we were all together in a room, I would be asking you if you have heard about Central Bank Digital Curr- I can see Glen's face. Have you heard about Central Bank Digital Currencies?

Glen Brown, VP, Managing Director, Head of Manulife Private Wealth

I have. I actually think there's one in the Bahamas that was just launched.

Frances Donald, Global Chief Economist, and Global Head of Macroeconomic Strategy, Manulife Investment Management

There you go. Okay, so I'm not just talking on deaf ears here. A Central Bank Digital Currency is not the same as cryptocurrencies; it is not built by blockchain. It is basically a central bank that prints money digitally and backs it; the central bank is fully backing that currency.

And a lot of the time when we talk about these, we're talking about them in the sense of a digital wallet that every Canadian, for example, would get. And in the future, central banks, when they wanted to ease, wouldn't engage in quantitative easing by buying all the Government of Canada securities, they would actually just push that digital currency into people's pockets that they felt most deserved it.

Now, if this sounds like it's totally out to lunch, there's no way this would ever happen, the Bank of Canada is currently hiring a Head of Canadian Central Bank Digital Currencies. The Bank of International Settlements has a massive section dedicated just to research on the topic. This would be a game-changer. It's not happening in 2021, it's not happening in 2022, but if you listen to what the policy objective is here, it's to move away from traditional forms of easing that have only pushed up the stock market and not helped everyday Americans and Canadians, and turn towards a more redistributive way of thinking about central bank easing.

It is, as I mentioned, a little bit more in the policy, the government policy, the targeted support area than it has been just on do we actually get to 2% inflation or not. I'll just stop there because there's so many different ways that Central Bank Digital Currencies can actually function and how they might be developed over time, but this is an area to watch. Because if we did actually see a ramp-up in Central Bank Digital Currencies – and you're right, the Bahamas has one, China has one; they just put a pilot project in shape – that actually is one of the biggest financial innovations of my time so far and something we want to pay attention to on the sidelines.

So, two more big macro disruptors and then we're going to go for questions. I already see some and I'm so grateful for that. Please put your questions in there. I know this isn't a traditional update, so if there's little elements that you want to get to, please throw them in.

Let me get to the last two elements that I think are really big game-changers here. The sixth, for me, is a concept that every economist learned about in school but has somehow forgotten in the past year, and that's the concept of labour market scarring. Every day I hear, okay, you know, there's almost 700,000 Canadians who have lost their jobs and not been rehired since February. Three quarters of a million Canadians are out of work. But don't worry about it, because they'll all be rehired by, like, Halloween. The economy will be fully healed by then.

Now, apart from the fact that I think it's logistically very challenging to hire back that many people, not to mention the 10 million people in the United States who are out of work, there's an additional problem, which is that we know from every past recession in modern history, that when people lose their jobs, it is actually very challenging to get them back into the labour force. This year, we saw very sizeable drops in labour force participation. Men and women, but particularly women, and particularly women

with children under the age of six, just gave up. They've dropped out of the labour force and they said, "I'm not working anymore." We actually see a very tight correlation between those moments when we've seen big drops in that and when we've gone to virtual schooling.

Often, when I think about schools closing, I think about how we have these very huge labour force participation rate drops when that happens. What we know is that when people lose their job, they tend to not come back in as quickly as you might think. They've lost skills, they've lost contacts. Typically, they have holes in their CV and employers don't like to hire them back if they've had this hole in their CV, even if it's explainable over that period. What we know is that after every sort of employment crisis that's of this size, it can take five to eight years to bring back your labour force participation rate to levels that it was before. This is not a quick fix. This actually has long-term damage on an economy. It puts people into a position where they feel like they shouldn't be working, they don't want to be working or they can't work.

Now, that's not just very sad, it also has huge implications for interest rates. The way that we calculate where interest rates should be over the long term is by in part calculating what your long-term growth should be, your potential GDP. Your potential GDP is a function of two things: your labour force participation rate and productivity. Well, we've seen a very sizeable drop in labour force participation rate, and it's going to take years for it to come back. So unless we have a huge productivity surge, which doesn't seem likely to me, then you're stuck in a situation where your long-term growth is lower and therefore your interest rates have to be lower.

When people talk to me about when the Federal Reserve or the Bank of Canada will start increasing interest rates again, I can play the game. I can tell you, well, I have 2024 and someone else will say I have 2022. What really matters is not when they start that process, what really matters if you're a long-term investor is how high they will go. And based on labour market scarring that we've seen this year, we don't think that any major central bank can really get above 2%. That's as high as the next cycle will go to, if we even get that high. That long-term trend of lower interest rates over time probably stays in that longer-term trend. And if you're thinking beyond the next six months or you're not trying to trade Fed futures or any type of thing like this, then that's the real messaging. And it comes from labour market scarring, which somehow mainstream economists are totally ignoring, even though it's a pillar of the way we think of the world.

Last but not least, seventh pillar, and then we will go to questions. Glen, get ready, I'm expecting expert moderating skills from you. Here's the thing. Ah, okay, in 2016, I started reading about populism. In 2019, I thought I could stop reading about populism; it looked like we were moving away from those types of trends. We're now, as of today, no longer in a Trump administration, Brexit is solved, and yet underlying the

surface, what we notice is something that's a little uncomfortable for economists to talk about but is increasingly relevant, the COVID-19 crisis just propelled inequality to really extreme levels, and correlated with rising levels of inequalities are the surge and demand for more populous parties.

Take a look at France. France has an election coming up, they're a populous party led by Marine Le Pen, who is actually leading now. We're hearing higher and higher demands for redistributive policies, which in my opinion are necessary. We're likely to see government spending that is more and more redistributive in Canada and in the United States over the next several years. We have not had that type of policy response. We have not had a policy focussed on inequality for the past several decades. Now we're going to have policy-makers that try to reverse that trend. So when I said, you know, watch not just what money is being spent on, but how it's being spent, my sense is a lot of these policies we're going to see in the United States, perhaps slightly higher taxes, even if we have more checks, that's less inflationary and provides less growth than things like infrastructure or transportation, or even green spending. I don't think the populism, the political discord, geopolitical uncertainty, is going away. What surprises me most is that people aren't talking about it.

I'm going to stop here. I know that's a lot of information. Again, I have a paper on this coming out next week. I know it's a little untraditional, but I hope that gives you some insight into the way I'm thinking about the world and maybe just taking a step back from the traditional outlook and thinking about what really is a game-changer and how should that be changing my view of the world.

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