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## **Life After Liftoff: Divergence and U.S. Monetary Policy Normalization**

### **Introduction**

Good morning, and Happy New Year to all.

Here we are at the beginning of 2016, almost eight years after the global financial crisis, which spawned the most synchronized worldwide economic downturn in history. A rerun of the Great Depression of the 1930s was averted, but the recovery has been anything but synchronized.

In fact, the dominant theme across the global economy has become “divergence.” At one end of the spectrum, the U.S. Federal Reserve has just started its interest rate normalization process after seven years of keeping its policy rate near zero. At the other end, the European Central Bank (ECB) recently cut its deposit rate to negative 0.3 per cent. Other central banks also cut rates in the past year, including the Bank of Canada.

It is very important that we understand the reasons for these policy divergences. On one level, they simply reflect actions taken by central banks tailored to their own economies. But the underlying forces acting on the global economy are powerful, slow moving and affect various economies differently. This means that the theme of divergence—both financial and economic—is likely to remain with us for some time to come.

### **Financial Divergence**

The recent move by the Federal Reserve is the first step in a long and measured process of policy normalization. This is a welcome development because it means that the U.S. recovery has largely put behind it the conditions that led to the financial crisis.

While this normalization process will be tailored to the U.S. economy, it will have implications for Canada. One effect we can expect to see over time is a decompression of global term premiums. Let me put that in plain language.

Central banks such as the Fed, the ECB, the Bank of England and the Bank of Japan have used large-scale asset purchases (or quantitative easing, if you

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prefer) and other unconventional policies, such as forward guidance, to help push longer-term interest rates lower. This has given monetary policy a broader-based stimulative impact on the economy. Investors have demanded less of a premium to hold debt for a longer term—the so-called global term premium has been compressed.

As U.S. monetary policy continues to normalize, longer-term interest rates in the United States will naturally rise as the term premium decompresses. Canada's financial markets are closely linked with U.S. markets, and, historically, higher longer-term interest rates there have meant higher longer-term rates here.

Take yields on 5-year Canadian government bonds, for example. These are a key benchmark for our mortgage market. On average over the past 30 years, when U.S. 5-year bond yields rose, about three-quarters of the increase was reflected in Canadian 5-year bonds. If a significant term premium decompression were to occur in the current context in Canada, it could introduce a downside risk into our inflation outlook.

Of course, what happens in both the U.S. bond market and our own over the next few months will depend on the circumstances prevailing at the time. The Bank of Canada doesn't have a great deal of direct influence over longer-term interest rates. But we do have firm control over our policy rate—the target for Canada's overnight rate. We will continue to conduct an independent monetary policy in response to our own economic circumstances in order to meet our 2 per cent inflation target. That's our primary mission. We have a number of tools at our disposal—both conventional and unconventional—to mitigate risks to our inflation target or to our financial system, should they arise.

## **Economic Divergence**

As I said at the start, the divergence we're seeing in monetary policy globally comes from central banks reacting to the particular needs of their own economies.

One important force affecting virtually every economy is the sharp decline in energy and other resource prices that we've seen over the past year or so. This appears to be mainly the result of increased supply capability across a wide range of commodities—an oft-repeated, textbook cycle that has resulted from a prolonged period of high prices. This decline in commodity prices affects various economies very differently, depending on whether they are a net exporter or net importer of resources.

Economists use a measure called the "terms of trade" to help gauge the impact of this type of shock on an economy. The terms of trade is the ratio of the prices a country receives for its exports to the prices it pays for its imports. A rising terms of trade therefore means that the country's income is increasing. A falling terms of trade, on the other hand, means less income for the country overall.

As a major exporter of resources, Canada saw its terms of trade move sharply higher from 2001 through 2008, and this was largely maintained until mid-2014. Since then, however, falling world prices for oil and other commodities have reversed much of that rise. Measured at annual rates, this represents a loss of more than \$50 billion in national income, or about \$1,500 for every Canadian.

This shock is leading to significant and complex economic adjustments in Canada—in effect, a reversal of the forces that drove our economy during the years when resource prices were rising. To help understand these forces, let's recall what happened to the economy during the period of rising oil prices.

Back in 2002, when oil prices were around US\$25 per barrel, investment in the oil and gas sector represented about 17 per cent of total business investment here in Canada. By 2014, that figure had jumped to 30 per cent. The share of oil and gas in Canada's merchandise exports almost tripled over that same period. This rise in the importance of our energy sector was a natural response to higher prices for oil—because the world was offering more for each barrel, we invested more in our capacity, and more Canadians moved to work in the oil patch. This is also why the impact of the sudden drop in oil prices has been so large.

Net importers of natural resources, such as the United States and Europe, are seeing the opposite phenomenon. Their overall income is now higher because import prices are lower relative to their export prices. But other commodity-intensive economies, such as Australia, Mexico, Chile and Brazil, are working through conditions similar to those here in Canada.

Of course, most countries have a diverse domestic economic structure. Certainly, that is the case here in Canada. So, just as we see divergence in economic performance between countries in response to lower resource prices, so, too, we see divergence within Canada, among our different sectors and geographic regions.

For example, the unemployment rate in the energy-intensive provinces—Alberta, Saskatchewan, and Newfoundland and Labrador—has risen more than two percentage points since November 2014, while it has remained unchanged in the rest of the country. This divergence is also evident in consumer spending. For example, motor vehicle sales have fallen by about 10 per cent in those three provinces over this period, while they've climbed by more than 10 per cent elsewhere.

The fact is that a decline in commodity prices such as the one we have seen is one of the most complex shocks that a policy-maker can face. We know that the overall effect on Canada is unambiguously negative because of the loss of income from exporting commodities I mentioned earlier. Nevertheless, at the global level, the positive effects on importing countries will more than offset the negative effects on exporting countries, yielding a net positive impact on global growth.

However, the real complexity appears beneath the surface, where the drop in commodity prices sets in motion sectoral and regional forces that can take years to play out. These include higher consumer spending in response to lower energy costs, falling investment and employment in the economy's resource sector, and rising investment and employment in the non-resource sectors—in other words, the reverse of what we saw from 2002 to 2014.

There is no simple policy response in this situation. The forces that have been set in motion simply must work themselves out. The economy's adjustment process can be difficult and painful for individuals, and there are policies that can help buffer those effects, but the adjustments must eventually happen.

The most important facilitator of adjustment in these circumstances is a flexible exchange rate. Indeed, this is exactly why countries choose to have flexible exchange rates—to help buffer the economy from shocks that cause this kind of divergence.

We have seen ample evidence of this adjustment channel in recent months. Resource-producing countries with falling terms of trade, such as Canada, Australia and Mexico, have seen their currencies depreciate against countries that are net consumers of resources, such as the United States. It is not a coincidence that the Canadian dollar is about where it was back in 2003 and 2004; oil prices are also about where they were back then.

Let's consider for a moment how this works. As I said, lower resource prices mean lower income for Canada as a whole. Economic growth slows, as it did early last year. At first, the slowdown was concentrated in oil-producing regions as companies cut investment spending. But then it began to spill over into other sectors through supply chains and lower consumption spending as workers were laid off. In this context, and in anticipation of the spreading fallout, the Bank lowered interest rates to help buffer the economy and keep inflation aimed at our target.

The depreciation of our currency is a natural part of the process. It does several things at once.

First, it offsets a part of the drop in commodity prices, which are usually priced in U.S. dollars. In other words, Canadian-dollar revenues for commodity exporters fall by less than U.S. dollar revenues.

Second, the depreciating dollar boosts Canadian-dollar revenues for exporters of other goods, which are also often priced in U.S. dollars. This then allows those companies to compete more effectively for future export sales. Those increased sales eventually mean more growth and rising investment in the non-resource sectors of the economy, and more employment. In other words, the exchange rate decline helps to facilitate a shift in the economy's growth engine from the commodity sector to the non-commodity sectors.

We have already seen stronger growth in exports of non-commodity goods such as machinery and equipment, furniture, pharmaceuticals, aerospace and electronics, to name a few. This is helping to offset the weakness in the resource sector tied to lower commodity prices, but this natural process will take time to translate into more investment spending and new job creation.

Third—and this will sound like a less desirable part of the process—a lower Canadian dollar raises the price of imported goods for everyone. This spreads the impact of the loss of income across the entire economy, rather than leaving it just in the commodity-producing sector.

Even so, there are large regional and sectoral differences in Canada's economy—with the resource-producing regions taking a much harder hit. The exchange rate can't absorb the shock in its entirety for any one sector or region, so those underlying adjustments will continue for some time.

With this same story unfolding in other commodity-exporting countries, along with continued currency weakness in Japan and Europe, there has been a steady rise

in the global value of the U.S. dollar. Some observers have voiced concerns about the disruptive effects of excessive exchange rate variability and suggested that a stronger U.S. dollar could derail global growth. Let me address both of those points in turn.

First, it's important to remember that variability in exchange rates and interest rates is natural; financial markets generally react to movements in underlying economic fundamentals. So when you think about movements in financial markets and how they might affect an economy, it's important not to lose sight of the underlying cause of the movement and its impact.

If financial markets did not respond to these underlying events, or if this financial variability was somehow suppressed, then all of the adjustment to the fundamental shock would be borne by the most important economic variables, such as employment and inflation. As a central banker, I want to see stability in those variables while much of the variability is absorbed by financial markets. Such variability acts as a shock absorber for the broader economy.

To make this point concrete, consider what would happen if commodity prices fell significantly and the Canadian dollar started to decline, but the Bank of Canada acted to prevent that depreciation. That would mean raising interest rates and slowing the entire Canadian economy, and the process of adjustment to the commodity price shock would be made slower and more painful.

Second, some commentators have expressed concern about the potential of a stronger U.S. dollar to stifle growth. Indeed, U.S. net exports have deteriorated over the past year as the U.S. dollar has appreciated.

But this focus on the possible economic consequences of an exchange rate movement misses the fundamental point. The U.S. dollar has not risen out of the blue, but in the context of a solid U.S. economic expansion and a softening of growth elsewhere. Accordingly, the rise in the U.S. dollar may be causing a moderation of U.S. GDP growth through higher imports and lower exports, but it is not causing a softening in U.S. demand. Rather, the stronger U.S. dollar diverts some of the growth in U.S. demand outward, boosting growth in other countries. In other words, the rising U.S. dollar doesn't stifle global growth, it redistributes it.

What we've observed since mid-2014 is that countries with declining terms of trade have generally seen their net exports improve in real terms, while those with rising terms of trade have seen their net export positions worsen. This is how floating exchange rates redistribute demand—to countries struggling with falling terms of trade from countries that are enjoying rising incomes—and this helps the upturn become more synchronized.

Nonetheless, the multi-dimensional nature of this global shock vastly complicates the adjustment process. To illustrate, consider that while Canada goes through its adjustment, some of its competitors are doing the same, and their currencies are depreciating along with Canada's. This will make the adjustment process more challenging compared with a case where Canada was the only country that had to adjust.

This should serve as a reminder that a flexible exchange rate is not a policy panacea. Other complementary policies can be deployed to offer a broader array of buffers while still encouraging the necessary longer-term adjustments, including fiscal policies and policies that make labour markets more flexible.

## **Exchange Rates and Inflation**

Before I conclude, let me say a few words about how this all relates to our primary mission: controlling inflation. The impact of a terms-of-trade shock is incredibly complex. While the reduced income means less demand and downward pressure on inflation, the depreciating currency means higher prices for imported goods and services. We're seeing this in Canada right now. We'll update our estimates and give a new, full outlook for the Canadian economy in our next *Monetary Policy Report* in a couple of weeks.

It's possible to imagine a situation where a sharply weaker currency could drive a country's inflation significantly above target, even with the continued presence of excess capacity in the economy. The greater the divergence of inflation from target, the more skeptical people might become that the divergence would be temporary. In other words, there could be a risk that inflation expectations would become de-anchored. Managing that risk might even require a tightening of monetary policy that, in the end, would produce below-target inflation.

That is not our situation in Canada. The Bank of Canada has almost 25 years of inflation-targeting history, and inflation expectations in Canada are very well anchored as a result. Certainly, our experience in the post-crisis years has tested those expectations repeatedly, and they have remained solid.

This credibility is a crucial benefit of our inflation-targeting system. It allows us to look through inflationary forces that we expect to be temporary, such as those coming from movements in the Canadian dollar. We do not take our credibility for granted—in fact, we treasure it, and would never put it at risk.

As we've said repeatedly over the past year, we at the Bank are studying a number of issues as we prepare to renew our inflation-targeting agreement with the federal government. One of these issues is what measure or measures we should use to gauge underlying inflationary pressures. The best-known measure, core inflation, is facing upward pressure because of the impact of the lower Canadian dollar on the prices of imported goods. As such, core inflation is overstating the underlying trend of inflation in the economy. Later this year, we will answer the question of whether we should continue to focus on one measure of underlying inflation and, if so, whether core inflation will keep that role.

## **Conclusion**

Allow me to conclude. As the global economy enters a new year, divergence has become the dominant theme. Economies are reacting in different ways to a seismic shift in global resource prices. These different reactions have divergent implications for monetary policy from country to country. Divergence of monetary policy should be expected.

Financial markets have been focused on policy divergence for some time, and we should be prepared for this preoccupation to last. This will probably mean

more variability in global financial markets than we have seen in the recent past. Such variability is a natural reaction to shocks and a buffer for the real economy—and the variables that count, like employment, growth and prices. Movements in exchange rates are helping economies, including ours, make the adjustments that must take place.

We've been in this situation before. The Bank of Canada will continue to run an independent monetary policy, anchored by our inflation target, and we will use our tools to manage risks along the way.