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Remarks by Timothy Lane
Deputy Governor of the Bank of Canada
Peterson Institute for International Economics
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Taking Precautions: The Canadian Approach to Foreign Reserves Management

Introduction

Foreign exchange reserves, and their use for interventions in the foreign exchange market, have played a notable and sometimes controversial role in the world economy and financial system. This is partly because of their sheer size—estimated at some US$11 trillion worldwide. Changes in holdings of foreign exchange reserves, and in how they are invested, can matter—not just for exchange rates, but potentially for a whole range of asset prices. Reserves are usually seen as an important element of self-insurance that complements the access to financing provided to countries by the International Monetary Fund (IMF) and other multilateral organizations.

In contrast, Canada's foreign exchange reserves stand out for their relatively modest size and their stability. Our reserves are about US$85 billion, some 5 per cent of our gross domestic product (GDP). This compares with the 10-year average of about 13 per cent of GDP for other advanced economies and 20 per cent for emerging-market economies.

A key reason Canada's international reserves are nonetheless adequate is our freely floating exchange rate. Canada adopted a flexible exchange rate in 1950 and, except for an eight-year stretch in the 1960s, our dollar has floated ever since. We have not intervened to stabilize the Canadian dollar for over two decades now.

This is a period that encompassed major changes in our exchange rate. During the commodities supercycle, the Canadian dollar rose from 62 cents US in 2002 to $1.08 in 2007. During the global financial crisis, it dropped sharply to as low as 76 cents US before settling above parity for almost five years. It depreciated by about 25 per cent again with the collapse of oil prices in 2014, and has fluctuated around 75 cents US since then.

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These exchange rate movements helped the economy adjust to the shocks. Such shifts are always painful for some and beneficial for others. But the Canadian economy is diverse and dynamic and, over time, able to achieve a new balance of growth among regions and sectors.

In my talk today, I'm going to expand on these points and explain why we stopped using our reserves to stabilize our dollar. A central theme is that, because we no longer use them routinely to intervene in foreign exchange markets, we hold reserves mainly as a precaution against extreme tail events. I'll discuss what we consider to be an adequate level of reserves and how we manage them.

Why not intervene?

Canada's foreign exchange reserves belong to the Government of Canada, while in a number of other countries they are an asset of the central bank. They are managed within the terms of an established governance framework by the Department of Finance and the Bank of Canada. Together, we develop strategies and policies for the management of the reserves. The Bank, as the government's fiscal agent, carries out related market transactions.

Most of the time, exchange rate movements driven by the market have contributed to Canada's economic stability—helping our economy ride the rising and falling tides of the global economy. As a commodity exporter, Canada has been subject to swings in world commodity prices which affect our terms of trade. Let me make a few observations related to recent experience.

To a certain extent, movements in the Canadian dollar reflect the comparative strengths of the Canadian and US economies—which are linked, in turn, to expectations for each country's monetary policy path. We've seen these forces shift significantly over time.

In particular, the past year has seen an important change in the *relative* performance of the two economies—despite the fact that the Canadian economy is generally in a good place. Economic activity has been running close to potential for nearly two years and economic growth has been solid. Unemployment rates have been at historic lows, employment creation has been strong and inflation has been hovering around our 2 per cent target. In that context, we took steps to move our policy interest rate upward by a cumulative 1¼ percentage points.

But uncertainty about US trade policies has been holding back Canadian business investment below what our strong economic fundamentals would indicate. Lower oil prices in recent months have caused a deterioration of Canada's terms of trade, which in turn reduces domestic income and wealth. Housing investment and consumption spending have also softened. The result has been a temporary slowing of Canada's economic growth. Meanwhile, the US economy has been powering ahead with the effects of the fiscal stimulus and, in response, the Federal Reserve has taken several steps over the last year to move interest rates toward their neutral level. This combination of factors has been putting downward pressure on the Canadian dollar. The lower Canadian dollar, in turn, will help support the economy through this period.

It's been almost half a century since we set a target for the exchange rate. By and large, the exchange rate movements delivered by the market have served Canada well. Trying to hold the dollar constant would have given us larger fluctuations in unemployment, output and inflation.

Nonetheless, for many years we did have a policy of routinely using our foreign reserves to resist, in an automatic fashion, any *significant* upward or downward pressure on the dollar. For example, between 1995 and 1998, we intervened roughly 150 times. We weren't targeting a particular level for the exchange rate but simply smoothing its movements. This reflected a belief at the time that markets did not function efficiently and could give rise to volatility that could be destabilizing.

But this view gradually gave way to the weight of evidence and experience. By 1998, we had concluded that such interventions weren't particularly effective. We saw the futility of attempting to moderate exchange rate movements caused by changes in the underlying fundamental factors. Trying to counter them was a bit like tapping on the brakes while skidding on ice. It can help, momentarily, but not by much.

So where does that leave us?

We do have a policy framework that *would* allow us to intervene in the unlikely event that it's needed. That could happen under two scenarios. The first would be a market breakdown with extreme price volatility. Buyers or sellers would be increasingly unwilling to transact, indicating a severe lack of liquidity in the Canadian-dollar market. The second would be sharp currency movements that seriously threaten the conditions that support sustainable, long-term economic growth. In a market breakdown, intervention would aim to restore market functioning and would likely be quite short-lived. In extreme currency movements, it's understood that intervention would be part of a broader set of policy changes to re-establish confidence in Canadian economy. This framework is transparent—it is posted on our website.

Thus, we are ready to intervene, if necessary. But as I said, we have not seen the need to do so at any time throughout the past two—often turbulent—decades.

There have, however, been a couple of occasions over that period when Canada participated in concerted intervention along with other countries. In 2011, Canada joined an action to stem excess volatility and disorderly movements in the exchange rate of the Japanese yen following the earthquake and resulting tsunami and nuclear crisis at the Fukushima nuclear plant. The intervention involved selling the yen against our respective domestic currencies to send a clear signal that the goal was to weaken the yen and not to strengthen other currencies. And in September 2000, we joined the European Central Bank, the Federal Reserve Bank of New York, the Bank of Japan and the Bank of England to support the euro. These episodes were in response to exceptional developments affecting other currencies of global importance, and were not specifically aimed at influencing the Canadian dollar.

How much is enough?

How, then, should we think about Canada's current level of foreign exchange reserves?

Internationally, a number of factors influence reserve holdings. In some cases, such as China, movements in international reserves are largely a by-product of the country's exchange rate regime and associated trade and capital flows. A number of countries, typically emerging-market economies, may choose to hold large reserves to offset volatility in capital flows and, in some cases, to ride out trade imbalances resulting from the fluctuations in the prices of their major exports.[1] Among advanced economies, Switzerland accumulated large reserve holdings when it set a floor for its exchange rate. In contrast, our flexible exchange rate and non-intervention policy allow us to keep a much smaller level of reserves.

Given that we intervene so rarely, why do we hold *any* reserves? And how do we gauge whether they are adequate for our needs?

First, we must be prepared to intervene in case of events that are even more severe, and improbable, than those we have experienced in recent decades. We periodically examine such extreme scenarios and estimate the scale of intervention that would be required.

A second important purpose of our foreign exchange reserves is to ensure that the Government of Canada can meet its payment obligations in situations where normal access to funding markets may be disrupted or delayed. Reserves help insure against rollover risks for public borrowing.[2] While Canada has not faced any such difficulties since the Second World War, the Government of Canada reassessed its own potential liquidity needs in the wake of the global financial crisis. It opted for a larger buffer—and accordingly, beefed up both its demand deposits and its foreign exchange reserves.

Third, Canada's foreign exchange reserves serve to reinforce confidence in the soundness of the Canadian financial system. They are among several factors that do so. Canadian banks manage their risks prudently and are well-regulated and supervised. Even during the financial crisis, banks remained in good financial health and did not have to rely on direct official support. Ten years later, Canada's financial institutions have ample buffers of capital and liquidity and the system remains resilient.

Financial institutions are expected to take responsibility for managing their own foreign currency exposures. They implement hedging and funding strategies to that end. Indeed, so do other major Canadian foreign-currency borrowers, such as provincial governments.

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[1] Some prominent international literature on reserve adequacy focuses on emerging-market economies that are subject to sudden stops in capital flows. See, for instance, O. Jeanne and R. Rancière, "The Optimal Level of Reserves for Emerging Market Countries: A New Formula and Some Applications," *The Economic Journal* 121, no. 555 (2011): 905–930.

[2] The role of international reserves in mitigating rollover risk has been an important focus of the literature. See, for instance, J. Bianchi, J. C. Hatchondo and L. Martinez, "International Reserves and Rollover Risk," *American Economic Review* 108, no. 9 (2018): 2629–2670.

In the unlikely event that a Canadian financial institution had exceptional needs for liquidity in US dollars or other foreign currencies, the swap lines the Bank of Canada has established with other G7 central banks would enable us to obtain funds in any of four other currencies. These lines were introduced in response to the global financial crisis. They were renewed in response to market stresses in Europe and later turned into standing agreements. The Bank of Canada has never drawn on these swap lines, nor has it faced a request to provide Canadian dollars. But these arrangements are available if needed.

Even though it is very unlikely that Canada's foreign exchange reserves would need to be drawn down for financial stability purposes, their existence provides further reassurance of the safety and soundness of the Canadian financial system. Such confidence, in turn, helps maintain stability in times of financial stress.

All this considered, Canada holds foreign exchange reserves as a precaution against extreme events. Even though Canada has had no history of such events, we know from international experience that they are possible.

So far, I've emphasized the role of Canada's reserves in serving Canadian purposes. I should also mention the use of our reserves in our role as a good global citizen. Part of our Official International Reserves—around US$10 billion—are held at the IMF. Canada, like a number of other advanced economies, also makes a portion of its reserves available for IMF programs.

Taking all these potential needs into consideration, Canada's level of liquid international reserves is set at a minimum of 3 per cent of nominal GDP—a floor which it generally significantly exceeds. This level is simple to communicate to the public, credit rating agencies and investors. While, as I've noted, it is low relative to many countries, it is in line with a set of similar countries such as the United Kingdom and Australia. Together with our Department of Finance, we review this level periodically in light of various metrics and international comparisons—and particularly with regard to extreme scenarios that would imply a draw on reserves. The last such review, completed in 2016, concluded that the 3 per cent minimum remains adequate to meet Canada's needs, even under such extreme conditions.

How do we manage our reserves?

Given that the primary purpose of our international reserves is precautionary, a key strategic objective in managing them is to maintain a high standard of liquidity under all circumstances. The preservation of capital value and optimization of returns are also essential.

To maintain liquidity, we hold reserves in assets that mature or can be sold on very short notice with minimal market impact.

To preserve value, we minimize the risk of loss by holding a diversified portfolio of high-quality assets, managing liquid assets and liabilities on a matched basis.

We aim to achieve the highest return while respecting the objectives of liquidity and capital preservation.

To maintain both the liquidity and capital value of reserve assets, the term to maturity of individual assets is limited, currently to a maximum of 10½ years. This reflects the fact that shorter-term securities are typically more liquid, and their value less sensitive to the interest rate, than longer-term securities by the same issuer and in the same currency.

While our liquid reserves are diversified across currencies, more than half is held in US dollars, because of the greater liquidity of US-dollar markets and since potential foreign currency needs are most likely to be in US dollars. The remainder is held in euros, pound sterling and Japanese yen.[3] We have explored the possibility of adding other currencies but decided against doing so because they were less liquid and there were fewer investment options.

Let me expand on the point about asset-liability matching. Our liquid foreign reserves are held primarily in the Exchange Fund Account (EFA). These assets are funded by Government of Canada liabilities denominated in, or converted to, foreign currencies. They largely consist of foreign currency securities, which are mostly government treasury bills and bonds, and fixed-income securities issued by sovereign-supported issuers, sub-sovereign entities and supranational institutions. Other eligible assets include deposits with commercial banks, central banks and the Bank for International Settlements.

The assets in the EFA are matched in currency and duration to the government's liabilities that fund the liquid securities in order to minimize its exposure to currency and interest rate risks. These matching requirements are part of our asset-liability-matching (ALM) framework. To my knowledge, no other central bank exclusively manages reserves in this manner.

The ALM framework, which allows us to earn a positive net return, is consistent with our floating currency. Indeed, if we intervened continuously, we would not be able to match assets to liabilities. This approach has proven to be an effective way to minimize interest rate and foreign exchange risk to the government's fiscal position. However, there is still residual market risk that is derived from the credit-spread exposures inherent in the assets and liabilities—and the lack of perfect correlation between the two. Since the EFA is predominantly funded with cross-currency swaps, there are non-zero levels of basis risk. There is also an element of credit risk, both with regard to the issuers of reserve assets and swap counterparties.

We conduct our own risk assessments, including credit risk, which we have significantly enhanced in response to the Financial Stability Board's call to reduce reliance on credit rating agencies.

In large measure, the difference between our approach to reserve management and those of other reserve managers is related to the relatively small size of our reserves, our ALM framework and our focus on liquidity. In their pursuit of higher

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[3] As of January 2019, the currency composition of our reserves was 67 per cent USD, 19 per cent EUR, 10 per cent GBP and 3 per cent YEN. See Official International Reserves, Department of Finance Canada.

returns, many countries are pushed to explore alternative asset classes, such as higher-yielding bonds and equities. Moreover, most countries have a net asset position, which means they have outright exposure to currency movements. This increases the need for diversification into other currencies. Because our portfolio is asset-liability matched, volatility in currency markets is a lesser concern to us.

I should say a brief word here about gold. Some countries continue to hold portions of their reserves in gold, sometimes for symbolic reasons. Canada doesn't. In 1980 the government implemented a policy of selling its gold at a gradual and controlled pace to enhance the return for the EFA. Gold bullion is not considered as liquid as, for example, US Treasury securities and, to the extent that physical delivery may be involved, could entail significant costs for secure transport and storage. As such, gold doesn't fit well within the asset-matching framework. Proceeds from gold sales were invested in high-quality, interest-bearing, foreign-currency assets. While these assets may not have the reassuring physical heft of a gold bar, we believe they are better suited to the purposes for which we hold reserves. The last of the government's gold bullion was disposed of in 2003. The gold reserves that remained were coins, which have also since been sold.

Our dollar as a reserve currency

One of the relatively recent developments for our dollar that we are monitoring closely is its use as a foreign reserve currency by other countries. Following the global financial crisis, central banks and monetary authorities around the world began adding Canadian-dollar assets to their reserve portfolios. Reserves in Canadian dollars now amount to around $200 billion—close to 2 per cent of the global total.

The move to hold a portion of reserves in Canadian dollars is part of a broader strategy of reserve diversification. It is also, in some sense, a vote of confidence in Canada: reserve managers tell us they are attracted by Canada's sound financial system and fiscal position, as reflected in its high credit ratings.

Even though the Canadian dollar is only a small share of global reserves, the total allocations to our dollar may be large relative to the size of our market. Combined with the fact that some reserve portfolios are buy-and-hold, inflows from reserve managers may have a material impact on Canada's financial markets, particularly the government bond markets in which these flows are concentrated. Although the flows tend to be relatively stable, they may put downward pressure on yields, lowering the government's funding costs. At the same time, the increasing presence of these large buy-and-hold investors might negatively affect the markets' liquidity because of the effects on secondary market trading and the availability of collateral. We continue to assess the impact of such activity on the bond market and its potential implications for financial stability, particularly since the government debt market and the associated market for repurchase agreements are core funding markets. We also regularly review our market operations, recognizing the influences of various holders, and have implemented policies that aid in providing or enhancing liquidity via repo, securities lending and our own balance sheet management.

Finally, the impact of our own reserves on the exchange rate is negligible because of our non-intervention policy and asset-liability matching. However, Canadian-dollar-denominated reserves at foreign central banks as well as allocations to Canadian-dollar assets by foreign private investors may cause appreciation of our dollar during times of heavy portfolio inflows.

Conclusion

To conclude, I would like to touch on the new Canada-United States-Mexico Agreement (CUSMA), or USMCA as it is known here, which has been signed but not yet ratified. In one chapter, the parties are enjoined from manipulating their exchange rates to gain an unfair trade advantage. This is not a controversial issue for us. We have long relied on our market-determined flexible exchange rate to absorb external shocks and cushion the economy from their impact. This policy has served Canada well. Without a freely floating currency, prices, wages and unemployment would fluctuate markedly, creating havoc for people and businesses. A flexible exchange rate is essential for us to be able to pursue an independent monetary policy.

We maintain a high standard of transparency, both with regard to our framework for managing foreign exchange reserves and the publication of relevant data. This speech is another step in making sure that our framework is well understood.