Bennett Jones

Economic Outlook

Fall 2019

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Preface

This is a special edition of the twice-yearly Bennett Jones Economic Outlook. In it, as always, we review the global economic and trade context and the short-term outlook for global and Canadian growth. In addition, we examine five key policy challenges that the Government of Canada and the minister of finance will confront and deal with in a new mandate.

Government and businesses today face a complex interplay of political, geopolitical, macroeconomic, financial, and structural factors:

- The United States has discarded large parts of the "Washington consensus" in favour of "America first" unilateralism, compromising open markets and the post-war liberal economic order. Brexit and political struggles worldwide make clear that this challenge to the established order is deeper and more pervasive than the product of an erratic US administration.
- The U.S. and China tariff war—if muted by a short-term détente—is not only unsettling the global economy today; it is an early manifestation of a more profound geopolitical and economic struggle that may disrupt global supply chains and bring down a "silicon curtain" across the Pacific. The wider global scan is of little comfort to investors.
- Structurally, demography and low productivity growth are constraining growth potential in advanced economies while China is also slowing down as a normal phase of its development.
- As the fourth industrial revolution introduces new applications and services at unprecedented speed and creates new opportunities, it is disrupting business models, industries, labour markets, and the distribution of income and wealth.
- Meanwhile, nations, businesses and investors have to factor climate change and its related risks and uncertainties into their decisions and planning.
- Amid this unprecedented uncertainty, the global economy is underperforming. Despite historically low—in many cases negative—interest rates, depressed trade and business confidence are keeping investment down.
- Ten years into a recovery, any number of factors could trigger a global recession and/or a re-pricing of risk in financial markets that would expose the vulnerabilities of heavily-indebted corporations and governments.
- In this event, central banks would have limited firepower and their interventions may be less effective than in prior downturns. Where there is room to manoeuver, aggressive fiscal policy may be needed to bolster demand and re-ignite growth.
- Globally, existing trade and geopolitical tensions may make the coordination of such efforts more difficult than in 2008 when the G20 was able to come together in common cause.

There is no playbook for a period of such global political and economic risk and uncertainty. This is particularly true for an economy like Canada that has depended so critically on both strong, cohesive multilateralism and economic integration with a reasonably predictable and reliable United States.

In the short term—e.g., the next two to three years—the best baseline projection is one founded on global growth slightly below potential, with low inflation and interest rates, and only gradual convergence to potential. However, the risks to this projection—for the global economy as well as for Canada—are decidedly tilted to the downside.

For the medium to long term, Canada cannot simply ride a global wave and expect a satisfactory growth trendline. Canadians and their governments must make a concerted effort to seize opportunities in a world of change and disruption.

As it articulates an agenda, the government must be concerned with the three key goals of economic policy:

- Growth: expanding potential growth and exerting leadership to position Canada on the winning side of global change.
- Stabilization: being ready to respond to a potentially severe recession or financial disruption.
- Distribution: being attentive to the distribution of costs and benefits of adjustment with a view to facilitating, not impeding, change.

For the minister of finance and Cabinet colleagues, there is a responsibility to ensure timely and effective responses to the global environment with a range of policy levers, including:

- Macroeconomic policy: identifying the right fiscal and monetary policy anchors and ensuring the cohesion of the macroeconomic framework to underpin confidence.
- International economic diplomacy: sustaining a commitment to multilateralism while strengthening bilateral relationships and protecting against harmful unilateral actions.
- Tax policy: ensuring that the taxation framework supports investment, innovation and Canada's global competitiveness while also aiding adjustment to change.
- Financial sector policy: ensuring that the financial system is sound and that it evolves in step with innovation in the digital economy to deliver better services to consumers and small businesses and to sustain the competitiveness of our financial services industry.
- Climate and energy policy: identifying paths that make a contribution to a global climate challenge while also advancing Canada's interests as a responsible energy producer and exporter.

On all of these files, and others, the Government of Canada does not hold all the cards nor all of the answers. A "Canada first" effort must involve other levels of government. It must also draw on the participation of business leaders whose firms are on the front line of global competition and on the frontier of technology and that individually must respond to the same global forces. The backdrop of uncertainty and disruption demands a national response that mobilizes, with a sense of urgency and a long-term perspective, leadership across the public and private sectors.

In my 50 years of active engagement in economic policy and public finance, I have studied, witnessed and participated in many periods of profound economic change—perhaps none as daunting as this one. As a Canadian, I have taken immense satisfaction from the fact that our governments and our businesses have been able over time to take action and to harness, not resist, change. In some places and at some times, we have been leaders. We have the resources and the capacity to lead again: to do better in a changing world, to build on our strengths, and to address key gaps.

This is my 21st Bennett Jones Economic Outlook and the last that I will lead. I thank my colleagues for their support and collaboration and the firm's clients and friends for their engaging discussions. The conversation will no doubt continue in the months and years to come as Canadian governments, businesses, and citizens, seek and find new answers to questions old and new.

David Dodge

THEATRE

Section I:

Economic & Financial Context for a New Mandate

As it starts a new mandate, the federal government will inevitably have to make decisions on a wide array of vital issues that were not part of its election campaign. Governing is difficult enough in times of stability. But the global backdrop today is dynamic and uncertain. At any time, events can derail a policy agenda.

This report focuses on the economic context and outlook for the new government and the responsibilities of the finance minister and Cabinet colleagues in the new mandate on key issues of economic policy.

Over the past century, we have become accustomed to a relatively orderly world in which Canada thrived—one characterized by liberalized trade and investment rules and one that operated with the benefit of robust multilateral institutions. In the decade since the global financial crisis and Great Recession, however, the world has failed to stimulate strong, self-sustaining growth, while new challenges have emerged. The "normal" we knew has been shattered by "America first" unilateralism. For a small open economy like Canada, this threat to the global trade order is deeply worrying. We are ill-equipped to navigate a world of bullies and thugs.

A global scan offers no comfort. The United Kingdom is preparing for Brexit—somehow. The European Union is struggling to find a unifying vision. China and Russia, while intent on trading, are not committed to a liberal economic order. The list goes on: North Korea, the United States and Iran, the Israeli-Palestinian conflict, Turkey, Syria and the Kurds, populist governments of right (Brazil) and left (Mexico), Venezuela in meltdown. Amid economic uncertainty and geopolitical tension, it is no surprise that investors globally are largely sitting on their hands.

Ten years into a recovery, however choppy and unsatisfactory, there are non-trivial risks of either or both an imminent recession and financial disruption. If the risks crystallize, with interest rates already historically low, central banks do not have the same ammunition to stimulate demand. This will place added pressure on governments that have fiscal room for manoeuver.

At the same time, technological change has become faster and more disruptive. The world we live in now is experiencing a fourth industrial revolution shaped by digital technologies that have changed the relationship between growth and investment in physical capital in ways that we still do not fully understand. The new technologies thoroughly disrupt traditional industries, business models, and occupations. Climate change is creating even greater challenges for the medium to long term as economies must reconcile energy and environmental needs.

Against such profound and rapid global change as well as high levels of risk and uncertainty, the government in the new mandate will need to focus on the three key goals of economic policy:

- Growth, positioning Canada to be on the winning side of global change;
- Stabilization, being ready to respond to a recession or financial disruption; and
- Distribution, paying attention to the distribution of the benefits of new opportunity and growth and the costs of adjustment.

Introduction

Canada's re-elected government now faces the task of articulating and implementing an agenda for a new mandate. The Cabinet will be sworn in November 20 and work will soon begin on a Speech from the Throne. Ministers will be handed their mandate letters.

The government, of course, is expected to carry forward the party's electoral platform and the specific commitments it made to the Canadian electorate. This will form the start of the agenda. Given its minority position, the government will need to demonstrate responsiveness to some of the priorities of opposition parties. However, the government will also have to set directions and make decisions on a vast universe of other matters that, while not prominent in the campaign, will have material and long-term consequences for Canada's economy and society. The agenda will have to be set and evolve to reflect this wider leadership responsibility.

The minister of finance has a key role with Cabinet colleagues in bringing this agenda together. As guardian of the public purse, the minister must develop a budget and a fiscal plan that supports the orderly implementation of the agenda over the mandate. As chief steward of the economy, the minister is also responsible for the tools that shape how the government delivers on the three core functions of economic policy that will be at the heart of any agenda—namely growth of economic potential, economic stabilization, and the distribution of income. These tools include macroeconomic management, transfers to provinces and territories, taxation, oversight of the financial system, and the conduct, along with other ministers, of global economic diplomacy, including trade and investment policy.

The task of the government through the mandate would be complicated enough against a stable and predictable global backdrop. But the global backdrop is dynamic and uncertain. At any time, events can derail a policy agenda that appeared to be straightforward. President George W. Bush's original agenda did not include a response to the 9/11 terrorist attacks, yet that event engulfed his administration—and authorities worldwide—for years, as security overtook the economy as the central issue. The events that unfolded just after Canada's October 2008 federal election offer another vivid demonstration. None of the federal parties had campaigned on a response to a deepening financial crisis and global recession. Yet this is precisely what shaped the economic and political agenda over the next years.

Specific events or turning points in the economic and financial cycle can not only disrupt government plans. They can reveal complex and longer-term structural trends or imbalances that are not widely understood or acknowledged. Once manifested through a crisis, however, they become unavoidable and they command new thinking, policies and priorities.

In short, the government and the minister of finance must be acutely responsive to a changing global context and be prepared to step beyond the frame of the party platform.

The beginning of a mandate is a time to take stock. Today, more than a decade after the onset of the global financial crisis and Great Recession, conditions in the global economy are highly uncertain. A tense geopolitical environment and volatile politics—including from our foremost trading partner and ally—are fraying the post-war liberal economic order in which Canada has thrived. Ten years into a global economic recovery, there are risks of a global recession or disruption in financial markets. Meanwhile, authorities worldwide face complex structural trends and forces. If population ageing is a known certainty, low productivity growth is less well understood. The digital economy is ushering in a new wave of innovation and opportunity, but it is also causing disruption, new forms of economic concentration, and uncertainty. Global authorities confront the formidable challenge of responding to the threat of climate change while meeting energy needs and growing the economy.

The Perspective of History: How We Got to Where We Are

A brief review of the past century underlines just how different is the world we face today. It also shows how at different times, when confronting profound change and new circumstances, authorities worldwide assessed critically their economic policies and tool kits and developed new solutions.

The 1930s depression brought the New Deal, an effort to re-ignite the U.S. economy by increasing government spending to overcome a shortfall in private demand. This experience entrenched Keynesian economics in the policy framework of market economies. The lessons learned from the economic and political turmoil of the interwar period shaped post-war policies. Rejecting protectionist policies and competitive devaluations, the Atlantic alliance instead created the Bretton Woods institutions—the International Monetary Fund and the World Bank—as part of a new international economic and security framework led by the United States. The "liberal economic order" performed solidly for almost three decades. Rapid urbanization and industrialization, encouraged by successive rounds of trade liberalization under the General Agreement on Tariffs and Trade (GATT), pushed productivity consistently higher, generating improved standards of living for a rising population amid the baby boom. The functional distribution of income stabilized with two-thirds going to labour and one-third to capital. This, together with socio-economic forces like unionization and expanded social programs, ensured that the benefits of growth were widely shared. Wages grew steadily—and roughly equally—for both skilled and unskilled labour, expanding the middle class and improving living standards broadly.

By the early 1970s, however, economic policy had become unsettled. As it pursued both the Vietnam War and President Lyndon Johnson's Great Society, the United States accumulated large fiscal and external debts. This weakened the U.S. dollar, forcing the abandonment in 1971 of its convertibility into gold and, two years later, the dismantling of the fixed exchange rates that had anchored the original Bretton Woods system. Productivity growth slowed and oil price shocks caused economic dislocation in the industrialized world; what emerged was persistent high unemployment and inflation, labelled stagflation. A drastic monetary policy response led by the Federal Reserve (Fed), and a deep recession in the early 1980s, ultimately overcame inflation, and job creation resumed by the middle of the decade. Keynesians took a back seat to monetarist economists who held that the economy was better stabilized not through government spending but through the supply of money and the open markets espoused by the "Chicago school". The stock market crash of 1987 and the recession in 1990-91 were both met largely by monetary policy responses.

With the fall of the Berlin Wall in 1989 and the collapse of the Soviet Union in 1991, the so-called "Washington consensus"—founded on trade and investment liberalization, and monetary and fiscal discipline—took strong hold with a goal to encompass the newly independent republics of the former Soviet Union, China and other emerging economies. The creation of the World Trade Organization (WTO) in 1995 was a milestone. Global trade was the driving force of economic progress, rising faster than output and carrying with it the globalization of investment and finance. While Japan struggled after 1990 with demographic and structural challenges, the European Union (EU) was in full stride, completing its Single Market and implementing the Maastricht Treaty in 1993. The creation of the single-currency Eurozone and European Central Bank (ECB) followed in 1999. China, which joined the WTO in 2001, and other emerging economies exploited rising demand in the industrial world to grow at unprecedented rates.

Structurally, the information and communications technology (ICT) revolution began to deliver productivity growth. Financial markets became ever more developed and sophisticated, with more participants (personal, corporate and institutional) buying and selling more products (including structured and derivative products). There were cracks in the model, but the disruptions—the Mexican debt crisis of 1994, the Asian crisis of 1997, the bursting of the dot-com bubble in 2000, and even 9/11—were contained by successive injections of liquidity by central banks. Open markets and deregulation favoured corporate concentration that in a globalized economy was largely seen to promote efficiency, competitiveness, and growth. Rising external imbalances in the United States, China, and within the EU caused concern but not to the point of undermining confidence in what was called a period of "Great Moderation". The dislocation of middle-class jobs, many of which moved to lower-cost jurisdictions, was largely ignored; it was seen as collateral damage in a fundamentally sound model.

Globally, the share of labour income relative to capital began to drift down, and more of this diminished share of income accrued to skilled workers—widening the income gap between unskilled and skilled labour. Still, emerging

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economies were pulling hundreds of millions of people out of extreme poverty and creating new consumers. **The hope was that, with sensible structural reform, the rising tide would lift all boats. U.S.-led economic and financial globalization appeared irreversible and irresistible.**

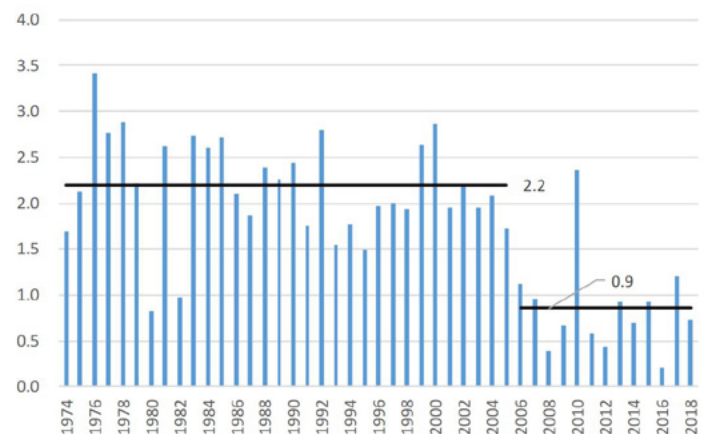
However, the global financial crisis and the Great Recession laid bare the vulnerabilities of a world economy that had become overly reliant on U.S. demand and the U.S. consumer. In 2008, the confluence of risks and pressures that had built steadily in financial markets brought the house down in the United States, with shockwaves felt around the world. The rapid injection through the traditional short-term markets of massive amounts of liquidity by the Fed and other central banks was not enough to stabilize the financial system and support renewed growth. With short-term interest rates quickly nearing zero, the Fed, then the ECB and other central banks, developed "unconventional" tools of monetary policy. They adopted quantitative easing (central banks injected more money into the system by buying longer-term bonds) and forward guidance (they assured investors that official interest rates would be kept low for an extended period of time), to bring down interest rates across the yield curve. The severity of the crisis quickly made it essential also to mobilize fiscal policy to support a recovery. Leaders of the G20 —meeting together for the first time in late 2008 and 2009—resolved to use fiscal tools boldly to stimulate demand. Their actions were reinforced by a shared agenda to reform the financial system and by a re-stated commitment to an open global economy and structural reform.

By 2010, early signs of recovery in the United States and the EU and strong contributions to global growth by China and Asia gave hope that the economy—with a shifting center of gravity to Asia—was on the mend. While central banks in advanced economies continued to deliver—to varying extents—accommodating monetary policy, governments quickly reversed the engines on fiscal policy. At the 2010 G20 Toronto Summit, advanced economies committed to cut their deficits at least in half by 2013 and stabilize or reduce government debt-to-GDP ratios by 2016.

With early withdrawal of fiscal stimulus, and monetary policy by the ECB that was still not stimulative enough, growth in industrial economies consistently fell short of forecasts and normal cyclical responses. In the United States and Canada, the result was only a moderate pick-up in growth, with constrained wages and inflationary pressures. In Europe, internal imbalances and policy misalignment created added stress that led to the first bail-out of Greece in 2010 and threatened the stability of the Eurozone. The pledge in 2012 by ECB President Mario Draghi to do "whatever it takes" and more aggressive monetary easing helped bring back order in European debt markets. However, under a tight fiscal policy, growth was still restrained. Through the period, Japan continued to be held back by demographic and structural challenges. Meanwhile, growth in China began to moderate, a normal process for a maturing economy.

The period of exceptional monetary easing worldwide proved more successful at supporting housing and financial asset prices than it did at re-invigorating a virtuous cycle of capital investment and productivity growth. The fourth industrial revolution—a term used to describe new technologies like big data, robotics and artificial intelligence, to name just a few—built up at exceptional speed, generating immense value for new entrepreneurs and new corporations. A small number of firms—Facebook, Amazon, Apple, Netflix, and Google or "FAANGs"—developed and captured new markets, with rising concentration of wealth. Alas, productivity did not follow suit, growing since 2006 on average at less than half the historical rate (Chart 1.1) and leaving wages and living standards for the middle class stagnant. The emerging "gig" economy resembled in no way the former industrial economy and its well-paid unionized jobs.

Chart 1.1



Source: OECD database. Labour productivity: annual rate of change in real GDP per hour worked.

Citizens in different parts of the world began to lose faith in traditional economic prescriptions that often brought stagnation, austerity, and even hardship. Migratory and refugee flows of people exacerbated an already deep suspicion in parts of the industrialized world that globalization was more a threat than an opportunity. Political leadership in the United States and some parts of Europe capitalized on this populist pressure or succumbed to it, unravelling decades of economic policy consensus and cooperation.

A key lesson from recent history is that disruption in economic and financial conditions, as well as in the geopolitical environment, can reset policy directions and anchors globally. We may now be at such a critical juncture: the end of the U.S.-led world economic order and the dismantling of the Washington consensus. **With the United States retreating from global leadership and technological change speeding up, we cannot expect a return to what was once normal.**

The Current Global Backdrop: A Complex Interplay of Knowns and Unknowns

The global backdrop against which the government will carry out its agenda is now a complex interplay of political, geopolitical, macroeconomic, financial, demographic, and technological factors. Together with climate change, which might just be the most significant game-changer for the medium to long term, this setting poses unprecedented challenges for domestic and international policy and a need to prepare for a range of possible outcomes. Simply put, there is no playbook for a period of such global political and economic uncertainty, especially for an economy like Canada's that has long depended so critically on both a cohesive world order and economic integration with a reasonably predictable and reliable United States.

The Politics

The United States, for tactical if not strategic reasons under the Trump administration, has already discarded large parts of the Washington consensus. Its "America first" unilateralism, abandonment of the Trans Pacific Partnership, pressure on Canada and Mexico for trade concessions under the yet-to-be-ratified Canada-United States-Mexico Agreement (CUSMA), imposition and threat of tariffs against allies, including the EU, conclusion of a trade agreement with Japan that is non-WTO compliant, and its open tariff warfare with China as principal lever for negotiation of a better trade deal defy any theory of international trade.

Most critically, the United States has effectively renounced its leadership role in the global multilateral system; examples include dropping out of the Paris Accord on climate change and compromising the orderly functioning of the WTO by blocking appointments to its Appellate Body. The United States is still participating in the G7, G20 and Bretton Woods institutions, but it fails to occupy the high ground or to elicit collaboration. No country or group of countries has the economic or political capacity to fill that vacuum consistently. **This threat to the global trade order is deeply worrying. Canada is ill-equipped to navigate a world of bullies and thugs.**

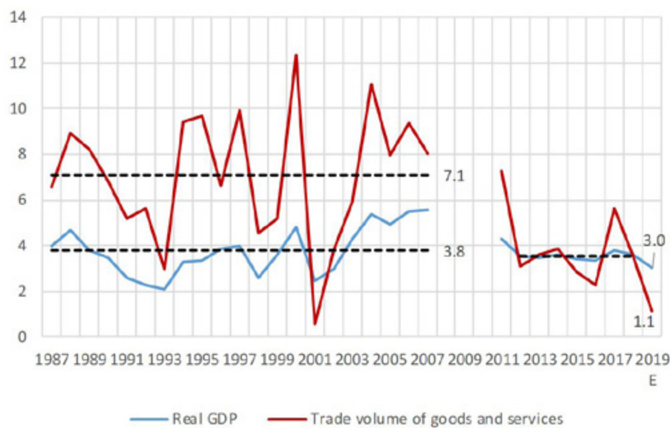
Meanwhile, the United Kingdom is marching toward Brexit on a path that remains uncertain. If elections enable a decision on a deal with the EU by a new deadline of January 31, and thus provide some clarity, the economic ramifications of Brexit for the long term are unknown—if decidedly negative. More broadly, the EU and the Eurozone continue their own policy struggles. While the leadership of EU institutions has been renewed, and work continues on the single market, the political integration of the Union and the institutional makeup of the Eurozone remain works in progress. A patchwork of governing parties across the political spectrum is embracing or confronting populist sentiment. President Macron and Chancellor Merkel, each challenged by internal political forces, have been unable to come together on a vision for the EU and the Eurozone and to exert the shared leadership that has been at the core of every stage of European integration. Despite the opportunity to do so with a United States that is AWOL, the EU is unable to exert global economic, financial, and geopolitical leadership commensurate with its original founding vision.

Finally, and critically, it has become clear that China and Russia, while intent on trading, are not committed as global partners to the full principles of the liberal economic order. The relationships in the two economies between private firms, state-owned enterprises and the state are opaque. There is no evident path of political liberalization. The pursuit of economic and security relationships in different parts of the world is intended to pull more countries and emerging economies into zones

of strategic influence. The heightened political tensions in Hong Kong illustrate the difficulty of the co-existence of two political and economic systems. The clash is visible and immediate in one country but tensions can be expected to mount internationally as the two systems compete for markets and power.

Against such political cacophony, trade has faded as an engine of growth. It is now growing no faster than the rest of a lacklustre global economy (Chart 1.2).

Chart 1.2



Source: International Monetary Fund, World Economic Outlook database. Annual rates of change.

The Geo-Politics

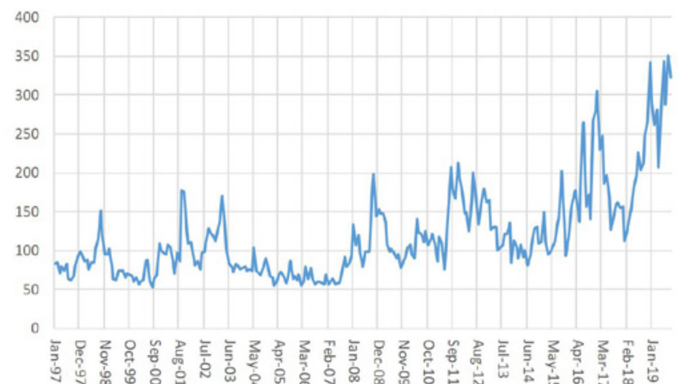
Clearly, the most critical ongoing geopolitical struggle is between the United States and China. What is at issue is not so much the macroeconomic impact of tariffs on a portion of bilateral trade. This can be absorbed by the two economies, and globally, particularly if it is temporary. The more significant issues are the future of the long-term relationship between the two global economic and military powers (looking beyond the tenures of Presidents Trump and Xi) and the governance of the global economic, financial and trade systems.

The Cold War divided the world into two blocs that did not trade with each other; there was no movement of goods, services, capital or labour across the Iron Curtain. But the United States and China start from a position of complex economic and financial interdependence. Their relationship must be managed. Indeed, the emerging technology that characterizes the fourth industrial revolution—from the internet of things, to robotics, to blockchain, to big data, to artificial intelligence, to genome editing, to new materials—creates new linkages and battlegrounds. Corporate behemoths like Amazon or Alibaba, Facebook or WeChat, develop in an environment shaped by ever more complex and inter-connected supply chains. Strategic and competitive advantage is sought or protected through the ownership, management and use of data and intellectual property rights, the development of technical standards, and security in cyber-space. **In this new digital world, the repercussions of confrontation between the United States and China are complex and uncertain. Could the global economy adjust to the imposition of a "silicon curtain" down the Pacific—i.e., two distinct marketplaces and supply chains in the physical and digital economies?**

The rest of the global scan offers no comfort. The "photo-ops" between President Trump and North Korea's Kim Jong-un have not convincingly advanced denuclearization in the Korean peninsula. Tension is high in other parts of Asia. The United States and Iran are in a logjam. The power play in Syria has affirmed the regional and international ambitions of Russia and strengthened the hand of Turkey at the expense of the Kurds, with the risk of a resurgence of ISIS and no assurance of greater regional stability. In the Americas, new challenges emerge as populist governments of right (Brazil) and left (Mexico) move in no predictable or shared direction; Venezuela is melting down; a newly-elected Peronist government in Argentina will confront daunting economic and debt pressures; in Chile, authorities face the furor of a population seeking better economic and social conditions.

The upshot of an unsettled political, geopolitical and trade environment is heightened uncertainty (Chart 1.3). Investors can manage risk, but uncertainty not so well. It is no surprise that around the globe, they are still largely sitting on their hands.

Chart 1.3



Source: Economic Policy Uncertainty (policyuncertainty.com). Weighting of country indexes, based on PPP-adjusted GDP.

The Macroeconomy and Financial System

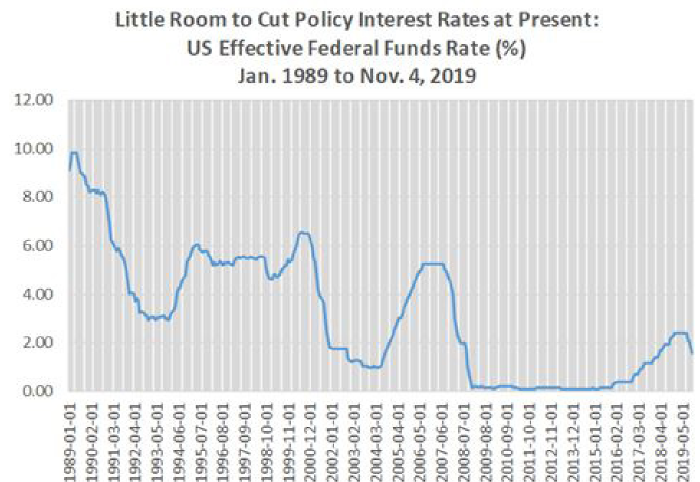
Headings in the October 2019 World Economic Outlook of the International Monetary Fund (IMF) tell the story of the current macroeconomic context further described in the next section: "subdued momentum, weak trade and industrial production", "muted inflation", "modest (projected) pick-up amid difficult headwinds", and "risks skewed to the downside". Growth slowed over the past year across advanced economies with depressed trade, business confidence, and investment; industrial output in Japan and Germany is lower than a year ago. The growth slowdown has been even more pronounced in economies like Brazil, China, India, Mexico, and Russia. The IMF's Global Financial Stability Report concludes that risks to financial stability remain elevated in the medium term. Low interest rates and the market expectation of further easing by central banks to address near-term risks to growth is incenting investors to "search for yield", stretching the valuation of financial assets. This creates vulnerability to an abrupt re-pricing of financial assets, or to adjustment of risk premiums, notably in the corporate debt market. A disruption could be triggered by a variety of factors such as deterioration of the trade environment.

Ten years into a recovery, however choppy and unsatisfactory, there are non-trivial risks of either or both a recession and financial disruption. Yet, with interest rates already historically low, central banks do not have the same ammunition to stimulate demand. This will place added pressure on governments that have fiscal room for manoeuver. In the current tense political and geopolitical environment, it will be more difficult than in 2008 for authorities to cooperate and develop coordinated responses in the G20 or other forums.

This is the lay of the land. The global economy features both low unemployment and surprisingly low inflation —the reverse of the stagflation of the 1970s. The low interest rates (both short term and long term) achieved with the prolonged stimulative policies of central banks are still not powerful enough to lift capital investment, absorb a global savings glut, and re-ignite normal wage and price pressures. John Maynard Keynes called this conundrum a liquidity trap. U.S. economist and former Treasury Secretary Lawrence Summers refers to chronic insufficiency of demand, or "secular stagnation". Symptoms would be aggravated during a recession, posing acute challenges for monetary and fiscal authorities.

In the face of recessions since the 1980s, the Fed and some other central banks could cut official interest rates by five full percentage points or more to keep credit flowing and to fire up consumer and business spending (Chart 1.4). But when the starting point is a target for the Fed Funds rate in the range of 1.5% to 1.75%, the Fed would soon be constrained by the zero lower bound—official rates cannot fall much below zero without creating other pressures. Forward guidance and quantitative easing could again be deployed—and central banks have this arsenal ready—but with even long-term rates already very low and some US$15-trillion of government debt trading at negative yield, there are severe limits to the scope and effectiveness of such measures.

Chart 1.4



Source: U.S. Federal Reserve Board, H.15 Selected Interest Rates.

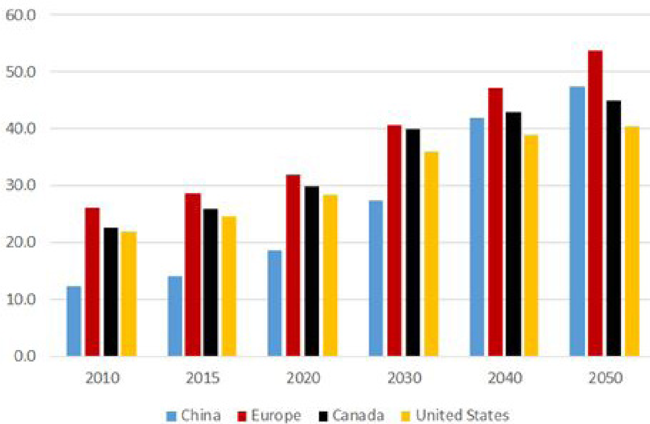
Given the limits of monetary policy in the face of any new recession, attention would necessarily shift to fiscal policy. But here again, in many industrialized economies there is limited room to manoeuver because the debt burden is already high and/or the existing anchors of policy are binding. For example, while difficult to apply, Eurozone fiscal rules set limits of 3% of GDP for the fiscal deficit and 60% of GDP for the public debt, with complex rules to mitigate policy decisions that exacerbate cyclical ups and downs. Since 2009, Germany—which has both considerable fiscal capacity and the need to invest in its infrastructure—has written into its constitution provisions that prevent the federal government from exceeding a structural deficit of 0.35% of GDP and stop regions from incurring any deficits at all. Certainly, the United States has opened the taps through its tax cuts and additional spending. The dollar being the global reserve currency, for the moment the United States has virtually unlimited licence to borrow. However, if the United States is the only jurisdiction pursuing fiscal expansion, the external payments deficit that is already prompting the administration's tariff wars could be worsened, breeding further tension and uncertainty.

Economic Structure

As the Canadian government manages these difficult issues, it must also pay attention to the economy's potential growth and structure and to the distribution of income over the longer term. There are both certainties and uncertainties here.

One certainty is fundamental: all industrial countries as well as China are seriously confronting, though in different ways, slow population growth and ageing (Chart 1.5). In Canada, the proportion of the population of 65 years or over has already grown from 22.5% in 2010 to close to 30% today and is projected to rise further to 40% by 2030 and 45% by 2050. Given low productivity growth, a rising share of national income will have to be devoted to services for the elderly, implying a squeeze on the disposable income of the working age population. In this regard, Canada may fare better than Europe, and better than China in the long term, but worse than the United States. This will exacerbate our competitiveness challenges.

Chart 1.5



Source: United Nations, World Population Prospects 2019. Ageing measured by ratio of population 65+ per 100 population 20-64.

Immigration cannot fully offset these underlying demographic trends over the long term. There is no question that Canada can be a magnet for global talent. But immigration flows are constrained by administrative capacity in the immigration system and absorption capacity in the social infrastructure of communities. Immigration is also more than a labour market issue. Policy must address refugee flows and demands for family reunification.

Structurally, economic policy must respond not only to the level of economic activity but also to the composition of growth, and income and wealth distribution. **The fourth industrial revolution is changing the relationship between growth and investment in physical capital in ways that we still do not fully understand.** The assets of today's leading global firms by market capitalization are largely intangible, not physical. Companies that own intellectual property (IP), control access to data, and capitalize on network effects gain inordinate advantage as first movers—what some call a "winner take all" or "winner take most" paradigm. Concentration of market power has led to the accumulation by leading firms of immense war chests that enable them to acquire competing or complementary technologies and to consolidate their dominant positions. Competition authorities are struggling worldwide to keep pace with new forms of market power and potential abuses. Meanwhile, income that is earned by the founders, shareholders, principal officers and highly qualified personnel of successful firms are multiples of the wages paid to front-line workers.

Moreover, while they generate new forms of services for users and enable efficiency gains across the economy, the new technologies thoroughly disrupt traditional industries, business models, and occupations. The OECD estimates that in the next 15 to 20 years, technology will automate 14% of jobs while changing significantly another 32%. The financial services industry, for example, is already changing profoundly and may be further disrupted as users expect to conduct more and more transactions in real time from their smart phones and tablets.

As a country, we want to stimulate innovation, commercialize intangible assets for national advantage, and ensure that our firms and workforce are prepared for the digital economy. This requires a close examination of a range of policies, from competition, to taxation, to intellectual property, to education, to labour markets. If economic growth in this environment is to include as wide a swath of the population as possible, an equal challenge is to ensure that worker protections and social safety nets are responsive, and that benefits are broadly shared. In short, policy must incite innovators to innovate while being sensitive to the adjustment needs of those disrupted. Government must pay attention to both winners and losers in this game.

Climate Change

There is an intense conversation internationally about the potential impacts of climate change and the necessary global response. Notwithstanding the Paris Accord, global action to date is uncoordinated and tentative at best. Yet all nations and economic agents—producers and consumers alike—must make decisions today.

Solving a global problem will entail a cost—less than the long-term cost of inaction, but more immediate. Over time, the cost of adjustment may be borne disproportionately by people, companies and jurisdictions that depend on fossil fuels and/or that are more exposed to the impact of a changing climate. For Canada, this may put pressure on our balance and terms of trade and our collective wealth over the long term.

Fortunately, Canada has the capacity and the know-how both to realize value from its resources and to make an ambitious contribution to the global fight against climate change. Since Canada produces only 1.6% of global greenhouse gases but has 100% responsibility to address the impact of a changing climate at home, it must be at least as attentive to adaptation as it is to mitigation. An integrated strategy is the only means to move forward a Canadian response to climate change and to gain a relative advantage over global competitors.

Economic Policy for a Period of Change, Disruption and Uncertainty

Canadians and their governments in the 2020s will confront profound and rapid global change and disruption as well as high levels of uncertainty. They need to be able to adapt to the unexpected. In advancing its agenda for the new mandate, the government must be agile and ready to engage in new discussions and consider new solutions that may not have been built into its electoral platform or baseline fiscal plan.

The minister of finance and Cabinet colleagues will need to focus on the three key goals of economic policy:

- **Growth:** expanding potential growth and exerting leadership to capture opportunities and to the greatest extent possible to be on the winning side of global change.
- **Stabilization:** being ready to respond to a recession or financial disruption, which may be significantly aggravated by a breakdown of global cooperation.
- **Distribution:** being attentive to the distribution of costs and benefits of adjustment with a view to facilitating, not impeding, necessary adaptation to the changing technology and global competitive environment.

In the rest of this report, we present an outlook for the global and Canadian economies to 2022 and then examine how the government and the minister of finance may address five key domains of policy: fiscal and monetary policy, trade policy, taxation, the financial system, and the response to climate change. We offer no certainty nor definitive policy prescription, but some guideposts to navigate in uncharted waters.

Section II:

Global Growth to 2022

Since last spring, rising trade barriers, further threats of tariff increases, Brexit and a slowing European Union performance, and intensified geopolitical risks in the Middle East and Asia have all given rise to slower growth in trade, increased uncertainty, lower investment and perceived higher risks of recession in advanced economies.

Three broad factors drive the profile of global growth to 2022. First, the direct effect of the tariff increases implemented to date and the indirect effect of rising uncertainty reduce global real GDP growth in 2019 and 2020. Second, macroeconomic policies have been adjusting and will continue to do so to support growth in the face of headwinds. Third, the economies of emerging economies other than China are likely to stage only a gradual growth recovery from 2020 to 2022.

Taking these factors into account, growth should rise slowly from 3.0% in 2019 and 2020 to 3.3% by 2022.

The main risks continue to be all on the downside. Trade conflicts between the United States and its principal trading partners might worsen. U.K. and EU companies face a costly adjustment to whatever Brexit arrangement emerges, which may hamper growth in Europe more than expected in the short term. Geopolitical risks are high, especially in the Middle East but also in Asia.

In Canada, real GDP grew at an estimated 1.5% in 2019 and is projected to rise to 1.7% in 2020 and 1.8% in 2021 and 2022. Thus, on average over 2019 to 2022 growth is slightly below the 1.8% mid-point of the wide estimation range for potential growth in Canada. External demand will grow only slowly and commodity prices will remain subdued. In addition, fiscal consolidation in Ontario and Alberta is likely to depress growth. Finally, like other countries, Canada will incur adjustment costs as it faces the challenges of new trading arrangements, climate change and competition in the digital economy. On the other hand, some fiscal stimulus by the new federal government in 2020, a probable ratification of CUSMA, large energy-related investment projects, a recovery in housing and continued robust population growth should support growth.

As in our global outlook, the main risks to our Canadian outlook are on the downside. A full-blown trade war between the United States and China would have significant negative repercussions in Canada. Failure to ratify the new North American trade agreement would harm Canadian exports and investment.

Several of the negative risks to global growth that we identified in our spring outlook have since materialized to some degree—more trade barriers, worsening Brexit concerns and intensified geopolitical risks in the Middle East and Asia. All contributed to rising economic uncertainty, slower growth in trade, manufacturing and investment, and perceived higher risks of recession in advanced economies, partly in light of concerns about the limited effectiveness of monetary stimulus. Beyond that, the world economy confronts profound and rapid changes of a structural character—evolving arrangements for international trade, actions regarding climate change, and the rapid development of the digital economy, to name three. All pose serious challenges to business models and government policies in both the short and medium terms. In the context of these developments, all projections of future economic growth, including the one we set out below, should be interpreted as having rather wide confidence margins.

Recent Developments

After a significant pick-up in the first quarter of 2019, real GDP growth in advanced economies decelerated considerably in the second quarter and again in the third quarter. U.S. growth slowed from 3.1% in the first quarter to 2.0% in the second quarter and 1.9% in the third. In the euro area, growth fell by half to 0.8% in the second quarter but somewhat unexpectedly remained at 0.8% in third quarter instead of declining again. German GDP figures, which will be released November 14, are expected to show a second consecutive modest contraction in the third quarter. The latest business sentiment survey for the euro area in October remained just above the 50 mark that separates expansion from contraction. In China, growth increased slightly to a 6.4% annual rate in the second quarter but then fell to 6.0% in the third quarter with much loss of momentum in manufacturing and exports.

The fading effect of the 2018 U.S. fiscal stimulus, rising trade barriers, a downturn in the automobile industry, and the greatly intensified uncertainty arising from trade disputes, Brexit and geopolitical risks have been weighing on global growth. All have hampered trade, depressed manufacturing activity, and discouraged business investment. By one widely used measure, global uncertainty is now more than three times more intense than it was on average from 1997 to 2015 (Chart 1.3). General easing of monetary policy, and in China's case of fiscal policy as well—partly as insurance against downside risks to growth—have provided a cushion against the headwinds. Consumption spending, supported by continuous employment gains and low borrowing costs, has proved relatively resilient this year, especially in the United States, and has supported aggregate demand growth.

In the context of rising trade uncertainty and slowing external demand, central banks have begun to reduce policy interest rates. The Federal Reserve cut its Fed Funds rate in August, September and October by 25 basis points each time, to 1.75% (upper limit). The U.S. dollar appreciated slightly over those three months as it attracted capital flows in search of a safe haven. The 5% appreciation of the trade-weighted U.S. dollar exchange rate since April 2018 relative to its average level in the two preceding years exerts a drag on the economy in the short term. But this is offset at least in part by the August enactment of the Bipartisan Budget Act of 2019 which raises government spending and the primary deficit in the United States in 2020 and continuing through 2029. U.S. consumer prices measured by the consumption expenditure price index excluding food and energy—the measure preferred by the Federal Reserve—increased on a year-on-year basis by 1.7% in both September and the third quarter as a whole, still comfortably below the inflation target of 2%. Hourly earnings in the United States grew at an average annual rate of only 3% in the four months to September, about the same as in the previous four months.

In response to weakening economic activity and growing risks of recession in the short term, the ECB announced in September several easing measures, including a cut in its policy interest rate and a renewal of asset purchases for an indefinite period. Looser monetary policy and growing concerns about the risks of recession led to a generalized marked decline in government bond yields, deeper into negative territory in some countries, notably Germany. On a year-to-year basis, core CPI inflation has remained low and well below target in the euro area and Japan so far in 2019.

West Texas Intermediate (WTI) oil prices have fluctuated within a relatively narrow range around US$55 since the end of May. They spiked briefly in mid-September in the aftermath of the attacks on Saudi Arabia's oil infrastructure, but oil supply was restored fairly quickly while the growth in oil demand was slowing in concert with global economic activity. The Western Canada Select (WCS) oil price has tracked the WTI oil price with a relatively modest discount in 2019, often less than US$10 per barrel although widening since October. Weighed down by a weaker global economy, the prices of most base metals have retreated during 2019. On the other hand, the price of pork has surged this year because of the spreading of swine fever in Asia. In turn, this has led to a sharp increase in the price of beef as substitution to other animal proteins took place.

Global Economic Outlook

We project global growth to bottom out at 3.0% in both 2019 and 2020 before rising to 3.2% in 2021 and 3.3% in 2022 (Table 2.1). This is a significantly slower pace than in our Spring 2019 outlook in part because key negative risks that we saw then have since materialized to some degree: further trade barriers were announced, concerns over Brexit worsened, and geopolitical risks in the Middle East and Asia intensified. All contributed to a notable rise in economic uncertainty, a synchronized slowing in trade, manufacturing and investment, and perceived higher risks of recession in advanced economies partly in light of concerns about the limited efficiency of monetary stimulus. Despite more accommodative monetary policy, these headwinds, along with the diminishing effects of the 2018 U.S. fiscal policy stimulus, restrain global growth in the near term but do not precipitate a recession in advanced economies. Our projection assumes that the exit of the United Kingdom from the European Union will have only a modest impact on growth in Europe and that no further U.S. trade protectionist measures beyond those already announced will be put into action. The deconstruction of global supply chains should continue restraining growth in the near term but less so in future years.

A second, important element in the currently lower projection of global growth is the considerably weaker economic performance of the emerging economies other than China, which importantly stems from adverse country-specific factors. Slower growth of demand in advanced economies and China also plays a role.

Table 2.1

SHORT-TERM PROSPECTS FOR OUTPUT GROWTH (%)*

	2018 World Output Share (%)[2]	2018	2019	2020	2021	2022
Canada	1.4	1.9(1.8)	1.5(1.3)	1.7(1.9)	1.8(1.9)	1.8
United States	15.2	2.9	2.3(2.5)	1.8(1.9)	1.9(1.8)	1.9
Euro Area	11.4	1.9(1.8)	1.1(1.3)	1.2(1.5)	1.4(1.5)	1.4
Japan	4.1	0.8	0.8(0.7)	0.5(0.5)	0.7(0.5)	0.8
Advanced economies[1]	32.1	2.2	1.6(1.8)	1.4(1.6)	1.6(1.5)	1.6
China	18.7	6.6	6.1(6.2)	5.8(6.0)	5.8(5.8)	5.6
India	7.8	6.8(7.1)	6.0(7.3)	6.7(7.5)	7.0(7.5)	7.3
Rest of World	41.4	2.8(3.0)	2.0(2.5)	2.3(2.8)	2.6(2.8)	2.8
World	100	3.6(3.7)	3.0(3.3)	3.0(3.4)	3.2(3.3)	3.3

* Figures in brackets are from the *Bennett Jones Spring 2019 Economic Outlook*.

[1] Weighted average of Canada, United States, euro area and Japan.

[2] Shares of world output are on a purchasing-power-parity basis.

Three broad factors drive the profile of global growth to 2022. First, the direct effect of the tariff increases implemented to date and the more important indirect effect of the collateral increase in uncertainty for businesses both reduce global real GDP growth in 2019 and 2020. IMF simulations and some other models predict that the overall impact on the level of global GDP will peak in 2020, assuming that trade tensions do not intensify. As a result, global growth should start recovering after 2020 especially if uncertainty diminishes somewhat. While estimates of these direct and indirect effects are subject to large margins of error, they indicate that the overall impact of the shock is likely to be substantial: the IMF, for instance, estimates that trade tensions will cumulatively reduce the level of global GDP by as much as 0.8% by 2020 and by 0.5% by 2022 in the absence of counteracting policy stimulus.[1] China would be hit much harder than the United States.

A second important factor at play is the fact that macroeconomic policies have been adjusting and will continue to do so, as required, to support growth. Thus, a general easing of monetary policy, and in the case of China and the United States of fiscal policy as well, provides a cushion against the trade, Brexit and other headwinds, especially over 2019 and 2020. China, where the negative effect of the trade tensions is the largest, benefits from the largest amount of stimulus.

Third, after a major dip in growth in 2019, importantly due to country-specific factors, emerging economies other than China are likely to stage a gradual recovery from 2020 to 2022. There is considerable uncertainty about the strength of this recovery. Even if it is projected to proceed at a measured pace, it largely accounts for the rise in global growth after 2020.

Taking these broad factors into account, we expect that growth in individual countries or regions should reach their potential rates by 2021 or 2022. **A combination of several factors—subdued labour productivity growth in advanced economies, the negative impact of population ageing on labour force growth worldwide and a slower pace of business fixed investment in reaction to the recent rise in uncertainty—will keep the growth of potential below rates that were assumed to be normal before the Great Recession.** Going forward, we assume potential annual growth of 1.9% for the United States, 1.4% for the euro area, 0.8% for Japan and 3.3% for the world as a whole.[2] Actual growth rates could exceed these potential rates in 2021 or 2022, but a cautious projection such as ours reduces downside risks, which in the past several years have led to multiple markdowns of forecasts. Indeed, global growth should be restrained over our projection period to 2022 by adjustment costs to evolving international trade arrangements, increased efforts at mitigating and adapting to climate change, and rapid developments in the digital economy. We also take a cautious view about the pace of the growth recovery in emerging economies other than China in the years ahead.

We expect that world oil supply will adjust to the projected slower growth of global oil demand, keeping **WTI oil price** mostly between US$55 and US$65 per barrel over the next three years. We adhere to the IMF view of a subdued outlook for non-oil commodity prices in general.

U.S. growth is projected to decelerate from an unsustainable 2.9% in 2018 to 2.3% in 2019 and 1.8% in 2020 before rising to its potential rate of 1.9% in the following two years. Growth in aggregate demand falls as the economy adjusts to: (i) the negative impact of the increased trade barriers and uncertainty, which is expected to peak in 2020; (ii) a diminishing effect of the 2018 fiscal stimulus until 2020; (iii) and the marked appreciation of the U.S. dollar since early 2018. What prevents the economy from experiencing sub-potential growth in the near term are the counteracting positive impacts of an easier monetary policy and the Bipartisan Budget Act of 2019, which could boost discretionary government spending by 0.5% of GDP in 2020 and small additional amounts in 2021 and 2022.[3]

In determining future adjustments to its policy rate, the Federal Reserve will monitor the implications of incoming information for the economic outlook, and in particular the degree of resilience of private consumption. Given the Fed's September economic outlook, which new data since then is unlikely to have changed materially, and given the additional rate cut in October, it is highly likely that the policy rate is now at or close to the bottom of the current rate cycle. There may be one more policy rate cut (to 1.5% at the upper limit) before mid-2020, especially if incoming data persistently disappoint or uncertainty increases. More cuts than that appear inconsistent with our current outlook for the United States and with that of the Federal Reserve.

Euro area growth is projected to drop from 1.9% in 2018 to just over 1% in both 2019 and 2020 before picking up to 1.4%, its potential rate, by 2022. This profile owes much to external demand growth, which falls in the near term before gradually recovering. Supporting growth to a limited extent are several factors: an easier monetary policy by the ECB; the fading out of the disruptions from new emission standards in the automobile industry; a

likely reduction in the level of uncertainty related to Brexit and its aftermath; and a projected continuation of the support recently provided by the services sector and wage growth. Some fiscal easing remains a possibility.

Growth in **Japan** remains firm at its potential rate of 0.8% in 2019, as robust consumption and government spending outweighs weakness in net exports. The October 2019 increase in the consumption tax from 8% to 10% is likely to depress private consumption in 2020, and there is little prospect for a major strengthening of exports or investment. As a result, growth falls to 0.5% in 2020 even after assuming that temporary fiscal measures are put in place to support growth. As external demand gains a bit of strength in 2021 and 2022, growth in Japan rises to its potential rate of 0.8% by 2022.

Much as in our spring outlook, we project growth in **China** to fall from 6.6% in 2018 to 6.1% in 2019, 5.8% in 2020 and 2021, and 5.6% in 2022. Regulatory measures to address financial vulnerabilities associated with debt accumulation have recently been cutting into growth. More generally, the slowing reflects a natural downward adjustment as the structure of the economy shifts over time towards consumption—and housing-led growth, domestic service industries and high value-added production, and away from investment—and export-led growth. It also reflects the negative effect of weakening external demand and higher trade tensions, which are projected to peak in 2020. Chinese authorities have adjusted and will continue to adjust both fiscal and monetary policies to counteract the loss of momentum in the economy. We take the view that they will implicitly, if not explicitly, shift their growth target down to a range of 5.5% to 6.0% beyond 2020 in the interests of preventing an excessive buildup of non-performing debt that could result from trying to stimulate the economy at any cost. As a result, projected growth decelerates at a measured pace in the years ahead to below the bottom of the current 6.0% to 6.5% target range.

The situation of **other emerging economies** is extremely diverse. In our projection, we incorporate the IMF's view that many of the emerging economies that experience a marked slowdown in 2019 will recover in the next three years. Examples include India, Thailand, Russia, Turkey, Mexico, Chile, Peru and Brazil.[4] Overall, however, we allow for a milder recovery for the "rest of the world" than the IMF projects and this is the major reason why our global growth projection is much less sanguine than the IMF's, which calls for growth of 3.4% in 2020 and 3.6% in both 2021 and 2022.[5]

Main Risks to the Global Outlook

The main risks continue to be on the downside. First, the trade conflicts between the United States and its principal trading partners might worsen. The apparent truce reached in October between the United States and China does not settle anything fundamental nor is it likely to meaningfully reduce trade uncertainty in the near term. In any event, it may be broken at any time if past experience with the Trump administration is any guide, in which case uncertainty would intensify. Meanwhile, the U.S. administration may decide to impose a 25% tariff on imported cars and parts from the European Union at the end of the six-month grace period initiated last May, in which case retaliatory tariff increases would surely be imposed against the United States.

Second, even with the implementation of the Brexit deal that has been agreed by the Johnson government and the European Commission or of some variant of it, the economic costs for firms of adjusting to this new, transitory arrangement may hamper growth in Europe more than expected in the short term. Uncertainty will likely remain elevated as negotiations to reach agreement on permanent arrangements will likely be arduous and extend well beyond the end of 2020.

Third, geopolitical risks are high, especially in the Middle East but also in Asia. A deterioration in one theater or another may lead to actions that could significantly increase global uncertainty, with negative effects on economic activity.

A debt crisis in a large emerging economy (Argentina, for example) could lead to capital flight from emerging markets more generally and hamper the expected growth recovery in these countries that we are projecting in our base case. On the other hand, very high and rising levels of corporate debt in the United States raise concerns about financial risks. While they are unlikely to trigger a downturn, they could exacerbate the effects of negative shocks on the economy.

The U.S. election at the end of 2020 is not without creating a risk for growth in the United States and the rest of the world, especially in 2021. It is premature at this point to have a firm view on the direction and amplitude of this risk.

In sum, global growth is likely to be weak during the next two years with a risk of falling below 3% if uncertainty intensifies or the expected growth recovery in emerging economies other than China does not materialize.

Canadian Outlook to 2022

Recent Developments

Despite weakening growth in the rest of the world, real GDP growth in Canada was very strong in the second quarter, surging to 3.7% at an annual rate after two quarters of barely positive growth on the strength of a broad-based rebound in exports. The Bank of Canada in its latest Monetary Policy Report monitors a growth rate of 1.3% in the third quarter, presumably on account of weakening exports and investment for the most part. Employment continued to grow at a solid pace in the second and third quarters, the unemployment rate reached historically low levels and wage growth accelerated. This buoyancy in the labour market has likely contributed to the renewed growth of housing expenditures in the last two quarters after more than a year of steady decline in reaction to prudential policy measures introduced earlier.

The monthly average of the core inflation measures preferred by the Bank of Canada was stable at 2-2.1% from May to September, in line with the mid-point of the inflation target range. The Bank of Canada has maintained its policy interest rate at 1.75% in the nine announcement dates from October 2018 to October 2019. The Canadian dollar exchange rate vis-à-vis the U.S. dollar has fluctuated in a narrow range around US$0.75 this year up to October.

Prospects to 2022

Real GDP growth in Canada slowed from 1.9% in 2018 to an estimated 1.5% in 2019 and is projected to rise to 1.7% in 2020 and 1.8% over the next two years. **Thus, on average over 2019 to 2022, growth is slightly below the 1.8% mid-point of the wide estimation range for potential growth in Canada. The main reasons for this modest outlook are that external demand will grow only slowly and commodity prices will move within a limited range around their current subdued levels.** The Canadian dollar exchange rate may not move much. We assume that provincial budgetary policy, especially in Ontario and Alberta, will exert some drag on Canadian growth while federal policy will continue to be mildly stimulative. Finally, like other countries, Canada will incur adjustment costs as it faces the challenges of new trading arrangements, climate change and competition in the digital economy. Such costs would tend to slow productivity growth.

While slow growth of foreign demand and subdued commodity prices dampen output growth in Canada, some domestic factors should buttress aggregate demand going forward. The probable ratification of CUSMA, along with construction work to expand the Trans Mountain pipeline and build the large LNG Canada terminal in British Columbia should raise Canadian investment, and eventually exports. The expected expansion of the Keystone XL pipeline system and replacement of Enbridge's Line 3 pipeline would also increase oil transportation capacity and exports. Commercial services and travel exports should continue to grow at a robust pace. Housing, which depressed GDP in 2018 and the first quarter of 2019, should make modest but positive contributions to GDP growth from 2020 to 2022. Finally, the rapid population growth observed in the last three years in Canada thanks to immigration should persist in the short term and stimulate growth in both domestic demand, including housing, and potential output. If the federal government follows through on promises made during the electoral campaign, federal fiscal policy would provide at least a modest stimulus to the economy in the short term, offsetting provincial fiscal restraint.

The Alberta government in its October 2019 budget projects a cumulative reduction of its net borrowing[6] from fiscal years 2020-21 to 2022-23 equivalent to 2.5% of Alberta GDP. Much of the reduction occurs in the last two years. We expect the Ontario government to pursue fiscal consolidation going forward, but involving smaller annual reductions in deficit than projected in its 2019 budget. This is because its actual deficit for 2018-19 turned out to be $4.3 billion lower than estimated at the time, although part of this improvement may have been transitory.

Given this domestic outlook for growth and presuming that the new federal government will provide some fiscal stimulus through tax cuts or transfer increases in 2020, there is no pressing reason for the Bank of Canada to reduce its policy rate significantly. Nevertheless, if the Federal Reserve were to reduce its target rate further, the Bank of Canada might need to act in order to avoid unwanted policy tightening through an appreciation of the Canadian dollar.

Risks to the Canadian Outlook

The risks to our global outlook identified earlier also represent risks to our Canadian outlook and they are on the downside. Among them, adverse trade developments represent the biggest downside risk for the Canadian outlook. **A full-blown trade war between the United States and China would have grave consequences for global growth, trade and commodity prices, with significant negative repercussions on Canada.** In addition, the failure of the new North American trade agreement to be ratified followed by a break-up of NAFTA would harm Canadian exports and investment. While we judge that there is a low risk of a serious slowdown reducing global growth over the next two years to significantly less than 3%, the new federal government must nevertheless be prepared to act should this occur. For example, under a scenario whereby global growth would only slightly exceed 2% in both 2020 and 2021, the Bank of Canada estimates that real GDP in Canada would be 4.5% lower by the end of 2021 than in a base case in which global growth is slightly higher than 3% in both years.[7]

1. The Bank of Canada estimates that “trade measures and related uncertainty would remove about 1.3% from the level of global gross domestic product (GDP) by the end of 2021 in the absence of any monetary policy actions.” See *Monetary Policy Report, October 2019*, p.2.
2. Potential growth is the maximum sustainable growth consistent with stable inflation when the economy is at capacity. For estimates of potential growth, see *Assessing Global Potential Output Growth: April 2019*, Bank of Canada Staff Analytical Note 2019-13.
3. See U.S. Congressional Budget Office, *An Update to the Budget and Economic Outlook: 2019 to 2029*, August 2019.
4. The Brazilian economy has been in difficulty from 2014 onwards.
5. Growth rates for 2021 and 2022 can be found in the IMF’s October 2019 database.
6. Net borrowing refers to the combined deficit before contingency reserve and capital investment net of amortization.
7. The 2% scenario is not purely arbitrary. In fact, it is roughly consistent with the additional future reductions in the US policy rate that financial markets expected as of October 21. See Bank of Canada, *Monetary Policy Report, October 2019*, Box 3, p.21.

SEYMOUR BUILDING

Section III:

Fiscal & Monetary Policy

In a world of heightened economic and political uncertainty, the new federal government needs to design macroeconomic policy to foster both growth and stability—positioning the economy to capture new opportunities while supporting employment and output if the global economy falters. At the same time, it must pay attention to the distribution of the costs and benefits of adjustment. An overarching goal is the achievement of a high level of employment with stable inflation.

The government's primary fiscal tool is the balance it strikes between revenue and spending; in other words, how big a deficit or surplus it plans to run. The primary monetary tool is the setting of the overnight interest rate by the Bank of Canada to achieve a target rate of inflation. There are constraints on both policies. The size of the deficit (net borrowing) is constrained by the government's long-term ability to ensure its access to financial markets. The Bank of Canada is limited by the fact that it cannot reduce the overnight rate to much below zero—known as the "zero lower bound."

The government needs to retain the confidence of the public, business, and financial markets. Accordingly, it must clearly establish the fiscal and monetary policy anchors to which it will adhere in normal times and how it will act in times of severe disruption.

The election campaign has created an expectation for some kind of fiscal insurance in the form of lower taxes or higher spending. It would be far smarter to plan for a deficit of about 1% of GDP over the next couple of years, which would maintain the current debt to GDP ratio. At the same time, the government should create a distinct "emergency plan" to be implemented only if a severe downturn appears likely. Such a plan should provide temporary increased transfers to the provinces so that they could continue to deliver provincial services and invest in local capital projects during a recession.

In the longer term, the government should shift its current fiscal anchor based on the ratio of federal debt to GDP to one that is more sensitive to changes in growth and is integrated with monetary policy. An anchor based on the ratio of debt service costs to revenue would preserve long-term fiscal sustainability.

The existing monetary policy anchor—an annual inflation rate of 2%—has served Canada well since 1991. The agreement between the government and the Bank of Canada should be renewed when it comes due in 2021.

Since the debt service/revenue ratio as the fiscal policy anchor is sensitive to changes in interest rates, it works best in conjunction with the 2% inflation target as the monetary policy anchor.

The global context we set out in Section I concluded that in a world of heightened economic and political uncertainty, the federal government will need to design economic policy with three objectives in mind:

- Growth: positioning the Canadian economy to capture new opportunities that may arise during a period of profound global change and disruption;
- Stabilization: supporting Canadian employment and output if the global economy seriously falters; and
- Distribution: paying attention to the distribution of the costs and benefits of adjustment.

The question we examine in this section is: What framework for fiscal and monetary policy would give the government its best crack at meeting the stabilization objective while supporting the other two objectives?

The macroeconomic objective of every federal government since 1945 has been to achieve a high level of employment with reasonably stable prices. Today, the goal is no different, regardless of whether the government aims to expand the share of GDP which flows through government (as the Trudeau government has done) or to shrink the overall role of government (as the Harper government aimed to do).

The government's primary fiscal tool for economic stabilization is the balance it strikes between revenue and spending; in other words, how big a deficit or surplus it plans to run, both annually and cumulatively over the life of its mandate. The primary monetary tool is the setting of the overnight interest rate by the Bank of Canada to achieve a target rate of inflation that is set by agreement between the government and the Bank.

There are constraints on both policies. The size of the deficit (net borrowing) is constrained by the government's long-term ability to ensure its access to financial markets. The Bank of Canada's ability to reduce the overnight rate is limited by the fact that it cannot reduce the rate to much below zero—known as the "zero lower bound". Because Canada has a floating exchange rate, and is a net international creditor, neither monetary nor fiscal policy is normally constrained by balance of international payments considerations.

In a radically uncertain global economic environment, it is especially important that the government retain the confidence of the public, business, and financial markets. This means it will have to clearly establish the fiscal and monetary policy anchors to which it will adhere in normal times and how it will manage if a severe disruption occurs.

Fiscal Anchor

Ideally, when the economy is expanding at roughly its "potential" growth rate, the government should aim for a balanced budget over the life of the business cycle. This means the government should plan to run a surplus when excess demand threatens to put upward pressure on prices and, conversely, plan to run a deficit when a shortfall in demand threatens to reduce growth. Such a fiscal anchor would still allow the government to be a net borrower over the cycle to invest in infrastructure providing that the rate of return on such investment exceeds the rate of interest paid by the government.

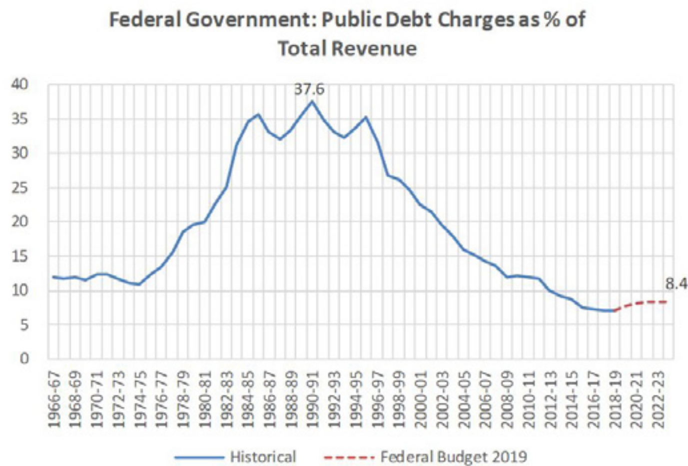
The problem is that "potential" growth cannot be measured directly, so there is always considerable uncertainty as to what potential is. Currently, the Bank of Canada reckons that the Canadian economy's potential growth is about 1.8% annually, the mid-point of a range between 1.3% and 2.1%.[8] As of the third quarter, the "output gap" (the degree to which the economy was operating below potential) is estimated by the Bank of Canada to be between 0% and 1% of GDP.

Given the projection that the economy is likely to continue to operate with a small output gap over the next two years, it would be appropriate for the new government to plan for program spending to exceed revenues by a small amount to keep the economy operating near potential at a time when provincial governments are reducing spending, thus creating some fiscal drag. At the same time, some continued borrowing for productive investment in growth-generating public-use capital should continue.

The question is how much planned borrowing is consistent with longer run financial stability given the economic outlook for the next two years? While in general terms it is clear that only "small" net borrowing is appropriate at this point in the business cycle where the economy is at close to capacity, it is difficult to give a precise definition to "small". **A sensible guideline is that net borrowing at this point in the cycle should not significantly increase the ratio of projected public debt charges to projected revenue.** This ratio is already projected to rise slightly to 8.4% in 2023 based on

spending and revenue plans set out in last spring's budget (Chart 3.1). History would suggest that it would be unwise to plan to allow this ratio to increase much further during a period when the unemployment rate is finally back to levels last seen in the early 1970s.

Chart 3.1



Source: Department of Finance, Fiscal Reference Tables 2019.

Assuming that interest rates remain low and growth remains slightly below potential, keeping the currently projected 2023 debt service/revenue ratio steady at 8.4% would allow almost no further increase in net borrowing relative to Budget 2019. The Liberals' planned personal income tax cut of $5 billion by 2023 would raise the ratio by about 0.2 percentage points and an additional $5 billion of annual spending would raise the 2023 ratio further to about 8.8%. In simple terms, it would be appropriate to plan revenues and spending to keep the debt service/revenue ratio from rising beyond 8.8%. This 8.8% debt service/revenue constraint would require that the annual federal deficit be constrained to $23-28 billion over the next three years, equivalent to about 1% of GDP. It also implies that the debt/GDP ratio not increase. Of course, if the Bank of Canada were to raise its policy interest rate more than projected due to a smaller than projected output gap, the 8.8% ratio would constrain additional spending further.[9]

But the world is very uncertain. The global economy might just perform better than projected, but it will more likely underperform—perhaps substantially. Hence, there is a risk that the Canadian economy will grow more slowly than projected and additional fiscal stimulus may be needed.

The election campaign created an expectation that the new government should immediately buy some "fiscal insurance" and plan for decreased revenues and ongoing expenditure increases that would generate increased stimulus. Such a proactive measure would be unwise, both because fiscal stimulus may not be needed, and because it is extremely difficult to cut spending (or raise taxes) once spending has been increased (or taxes cut). **Rather than introducing ongoing spending or tax reductions now, it would be far smarter for the government to plan for limited borrowing subject to the debt service/revenue constraint over the next couple of years, but to create a distinct "emergency plan" to be implemented only if and when it is clear that a future downturn is likely to be severe.**

What would such a contingency plan look like? First, any new spending or tax cuts should be able to be put in place quickly, have a maximum impact on the direct purchases of goods, services and employment, and be of a nature that can be quickly reversed when economic conditions improve. Second, and most importantly, ongoing spending on current services and people should be maintained even though the revenues that support those services are falling. Finally, capital spending should be preserved and accelerated where economically efficient. Deferred maintenance and repair work should be brought forward.

As only a small portion of federal program spending involves the purchase of goods and services, there is a limited scope to ramp up federal employment and direct purchases when growth slows. So even though the federal government may have the fiscal room to cut taxes or increase spending, the structure of its spending does not give it the effective and efficient means to directly increase demand for goods and services. On the other hand, a very large fraction of provincial and municipal spending goes to the direct purchase of goods and services. But most provinces (and municipalities) are highly constrained by debt or deficits that are already unsustainable. They have very limited capacity to borrow to maintain existing programs, let alone augment them, as their revenues decline during a severe recession.

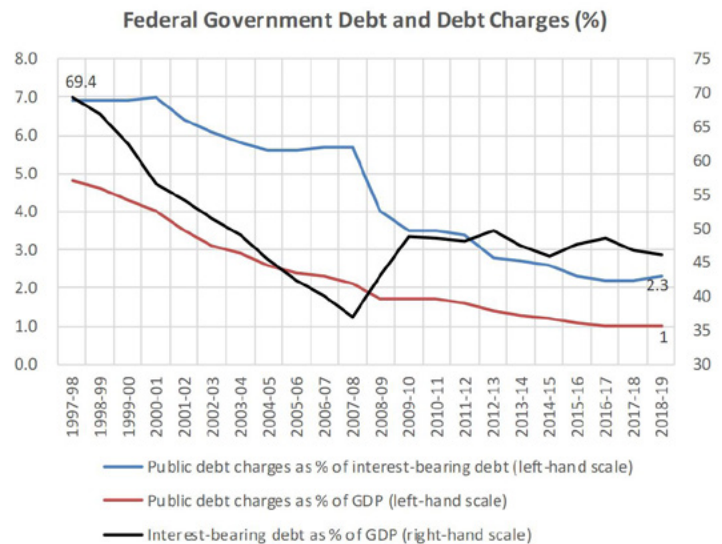
In 2009, most provinces had plenty of fiscal room to manoeuver and provided much of the heavy lifting needed—in part through additional federal transfers, but mainly by borrowing more on their own signature. As a result, they accumulated heavy debts[10] and now have more limited borrowing capacity. In a recession, the impact on their revenue bases will be severe and the demand for the social services they deliver will

increase. For the provinces to continue delivering services and maintaining their infrastructure (hospitals, roads, schools, etc.), they will need help to stabilize revenues. This means they will need transfers from the federal government which has much greater borrowing capacity. The principle of federal stabilization transfers to provinces when their revenue growth unexpectedly falls below "normal" is sound.

A key element of a contingency plan for the federal government should be to provide temporary increased transfers to the provinces so that they could continue to deliver provincial services and invest in local capital projects as their revenues fall during a recession. This could be accomplished in part through an enriched formula-based uncapped revenue stabilization program where help is directed to provinces when and where provincial own-source revenues have declined the most, and in part through ad hoc increases in federal transfers to the provinces to deal with specific adjustment issues.

If Canada faces a significant shock to demand that results in falling employment and a bigger output gap, we think the federal government should be more willing to run larger deficits to support such a contingency plan. The primary reason is that at a time when there is a global savings glut, the federal government can borrow long-term at negative real interest rates, and at nominal rates far below the expected nominal rate of growth of the economy. With nominal rates on long-term Canada bonds now several percentage points lower than even a low projected medium-term growth rate of the economy, the real burden of the debt will decline over time, as will the share of federal revenues needed to service the debt. This is very unlike the situation the federal government faced in the early 1990s.[11] Borrowing rates then exceeded anticipated growth of revenues by about three percentage points so that the real burden of the debt was growing every year. (Chart 3.2)

Chart 3.2



Source: Department of Finance, Fiscal Reference Tables 2019.

While the federal government has considerable room to manoeuver in the case of a sharp recession and reduced revenue growth by borrowing at very low interest rates, extraordinarily high and prolonged levels of borrowing would reduce the financial markets' confidence in federal fiscal management and begin to build a risk premium on federal debt.[12] To prevent such an erosion of confidence, a contingency fiscal plan—one to be deployed when the economy begins to deteriorate—requires clearly stated conditional limits on increased borrowing and planned measures to subsequently rein in borrowing at an appropriate pace as the economy recovers. It would be entirely wrong to follow the suggestion of some economists to have the Bank monetize any deficit ordered by the department of finance.

Currently, the government's anchor is the ratio of net debt to GDP, which now stands at about 35%.[13] This type of anchor is supposed to allow the debt/GDP ratio to rise during a recession, but to ratchet it back quickly as the economy recovers. In doing so, the danger is that contractionary fiscal policy seriously retards the recovery (as it did from 2011 to 2015) before the economy gets back to full potential. An anchor that is more sensitive to the speed of recovery and is integrated with monetary policy would be better than the debt/GDP ratio as a guide to, and constraint on, borrowing and deficit creation. In our view, the ratio of debt service costs to revenue would provide such a sensitive anchor. If interest rates are higher, the target ratio of debt service costs to revenue would become more restrictive. Conversely, the lower interest rates are, the greater the amount of continued borrowing would be permitted. In this way, monetary and fiscal policy would work together more or less automatically not only to support demand when the economy is weak, but also to scale back fiscal stimulus at an appropriate rate when the economy strengthens and the Bank of Canada raises interest rates in the face of rising inflationary pressures. If borrowing were constrained in this way to maintain a specific range of debt service/revenue ratio, long-term fiscal sustainability would be preserved.

The advantage of the latter "fiscal sustainability" provision is that while it provides appropriate scope for increased borrowing when the Bank of Canada lowers its policy rate in a recession, it forces an appropriate degree of fiscal constraint when market interest rates rise as the economy reaches potential. Moreover, when combined with continued inflation targets for monetary policy, this approach deals with the fears that unconstrained federal debt increases will simply lead to rapid inflation. At the same time, it provides for more room for fiscal stimulus to ensure that reduced policy interest rates can feed directly into increased effective domestic demand.

Achieving higher productivity requires increased public and private investment in physical, human and intellectual capital. Just as businesses do, it is appropriate for governments to borrow for such investments when the expected risk-adjusted return exceeds borrowing costs.

Currently, low long-term borrowing costs present an opportunity for the federal government to enhance Canadian productivity by investing in major public use infrastructure, especially projects needed to move goods, people and electrons more efficiently. Such productive investments usually require long term planning and have long gestation periods. So while they are not ideal for short term stabilization purposes, these investments are needed for long term growth. **Because they yield a real economic return, borrowing to finance these investments could, in principle as well as practice, be supported by user charges.** Both the borrowing and the subsequent revenue (explicit or implicit) should be part of a federal long term capital plan, which would be accounted for in a separate capital account as most provinces do. While we suggest that in normal times when the economy is operating close to potential borrowing for non-capital purposes be restricted to prevent the debt service/ revenue ratio from rising, net borrowing on capital account beyond this limit makes economic sense when the risk-adjusted economic return exceeds the now low federal borrowing cost.

Ultimately, federal finances will be sustainable only if the economy continues to grow as a result of the increased productivity of our labour force which, due to ageing, is rising more slowly than the Canadian population.

Monetary Policy Anchor

By 2021, the government must negotiate a new agreement with the Bank of Canada regarding the target for monetary policy. The current target—an annual inflation rate of 2%—has been in place since 1991, and continues to serve Canada well. We suggest that the agreement be renewed essentially on existing terms. Some have argued that raising the target to a higher inflation rate while others have advocated moving to a price-level target either temporarily or permanently. A third suggestion is that the agreement should direct the Bank to set monetary policy so as to achieve a target growth rate of nominal GDP.

We find all three proposals wanting. Raising the inflation target would undermine the credibility that the Bank of Canada has established. Moreover, it would not solve the problem that the Bank of Canada and other central banks have faced in getting inflation up to the 2% target. A move to targeting a rising price level rather than inflation might help to flatten the yield curve during periods of deficient demand because the Bank of Canada would lower its target for the overnight interest rate, thus quickening the transmission of lower interest rates to the real economy. But this change has been examined before by the Bank during earlier renewal agreements and not found to offer a significant improvement. The third often-suggested change, targeting the growth in nominal GDP, is not advisable. Nominal GDP targeting would make interest rates more volatile without providing the stabilization needed by an open economy like Canada's where nominal GDP is subject to terms of trade shocks. Our current inflation-targeting framework appropriately looks through these shocks.

The government should signal that it will sit down with the Bank on schedule to renew the monetary policy agreement, but that it sees no reason to change the inflation targeting framework as an anchor for monetary policy.

Conclusion

It is important that the fiscal and monetary policy anchors work well together. Adopting a debt service/revenue ratio as the fiscal policy anchor works best in conjunction with the 2% inflation target as the monetary policy anchor. A rise in excess economic capacity—that is, when demand falters—automatically gives a signal for more fiscal stimulus, which increases the impact on the real economy of monetary easing. Perhaps even more importantly, rising interest rates trigger appropriate fiscal retrenchment, which increases market confidence in fiscal management. This would reduce the chance of repeating the experience we saw from 2011 to 2015 when (tightening) fiscal and (loosening) monetary policy were working at cross purposes.

8. Potential is judged to be sum of growth of labour inputs (which can reliably forecast to grow at about 0.7% pa over the next four years) and productivity growth which is currently assumed to grow at about 1.1%. If actual growth turns out to be lower than potential, then it is expected that there would be downward pressure on prices and inflation and vice versa, if growth turned out to substantially exceed 1.8% per year.
9. If the Bank of Canada were to raise its policy rate to a neutral level (3.25% upper end) and the yield curve were to adjust commensurately, the 8.8% debt service/revenue ratio would over time approach the levels of the early 1970s. Prudence suggests debt service costs today be kept to less than those levels.
10. For example, the province of Ontario now has a debt/GDP ratio of 40% compared to 20% in 2008, and debt service costs equivalent to 8.3% of provincial revenue.
11. In the early 1990s, federal debt service costs exceeded 30% of revenue. (Chart 3.1)
12. The federal government should consider setting up a separate capital account as provinces do. This would allow a clear indication to capital markets about the use of borrowing. It would also provide for the recording of revenues accruing from user charges.
13. Net debt is larger than the accumulated deficit of 31% of GDP because it includes borrowing for capital as well as current spending.

Section IV:

Trade Policy

The international trading system is at risk. An increasingly open global order, which served Canada well, is now eroded by aggressive unilateral actions and retaliation among global trade superpowers. Canada is at a disadvantage in a world of bullies and thugs.

The United States is central to Canada's trade outlook. The escalating trade war between the United States and China is raising fears of significant damage to both economies. Although a truce is now in prospect, finding a more fundamental accommodation between the two economic systems—one state-driven and the other private enterprise-driven—remains unlikely for the near future. One bright spot for Canada is the likelihood that the U.S. Congress will find a way to ratify the successor to NAFTA. At the same time, U.S. relations with the EU and Japan, where U.S. exports compete with those from Canada, are on different tracks—worsening with the EU and improving with Japan.

Trade is increasingly centred on global supply chains, which are threatened by growing protectionism. Any substantial movement back to purely national or even regional supply chains would be costly, disruptive and inefficient. In such a situation, there would be a complex interplay with geopolitical stability.

The federal government faces five key challenges.

First, it must manage trade relations with the United States, with ratification of the new North American trade agreement being a top priority.

Second, it should pursue efforts to preserve, strengthen and modernize the multilateral trading system in the WTO. Several important initiatives are underway. These include a possible agreement on digital trade, an effort to help smaller companies take part in world trade, measures to reduce non-tariff barriers to trade in services, a prohibition on fisheries subsidies that encourage overfishing, and a new framework for facilitating foreign direct investment. Canada should continue its leadership role in these discussions.

Third, the government must find a way to defend and advance Canada's trade interests in China. Canada could incur further collateral damage from U.S.-China geopolitical and trade conflict and it must seek some cover through proactive engagement. Sectoral arrangements, particularly in dealing with regulatory barriers, might offer a useful line of approach.

Fourth, it must manage other key bilateral arrangements. The Canada-EU agreement and the Trans-Pacific Partnership offer new opportunities for Canadians. Tempting as it may be to pursue new trade agreements, the government should first ensure that our existing agreements actually deliver.

Fifth, the government should be prepared to take vigorous action in response to any unilateral action by others that adversely affects Canada.

International Trade Developments

The international trading system is in the throes of a tectonic shift—from an increasingly open global order, which existed up to the middle of this decade, to a much more unpredictable environment. Canada is at a disadvantage in a world of bullies and thugs.

Recent developments—many resulting from erratic and precipitous actions by the United States—continue to show that the multilateral trading system is at risk. Thirty years ago, Canada had strong natural allies in managing international trade relations. At the G7 (or the old "Quad",[14] at the level of trade ministers), Canada conferred with like-minded partners together representing some two thirds of global merchandise trade[15] in 1990. The Quad had great influence in the GATT.[16] Today is quite different. The Quad no longer exists as a forum; if it did, it would account for about one half of global trade. The G7 is a pale copy of its former self, divided, and its member countries together represent less than 30% of global GDP.[17] The U.S. agenda is "America first". There is no unifying agenda among Canada's traditional partners and allies.

Any analysis of trade developments affecting Canada needs to begin with an assessment of U.S. trade policy and the state of U.S. relations with China. The outlook continues to be very uncertain and the next crisis may be only a tweet away. However, both the business community and Congress are growing concerned that the President's use of the trade powers conferred on his office by Congress over the past 100 years is posing a serious risk to the U.S. economy and is undermining American global influence. Efforts to moderate the President's capricious trade actions are coming on a number of fronts. For instance, with strong private sector support Republican Senators Pat Toomey of Pennsylvania and Rob Portman of Ohio have each proposed legislation to constrain the President's ability to impose duties under Section 232 of the U.S. Trade Expansion Act for national security purposes.

In the U.S.-China trade war, cooler heads appear to be leading towards a truce. However, there is continued fear that underlying trade tension and uncertainty may cause significant damage to both countries and more broadly to the global economy. The prospect of finding a more fundamental accommodation between the two economic systems—one state-driven and the other private enterprise-driven—remains unlikely for the near future. Whatever may happen in the short term, this underlying reality will keep a dark cloud of uncertainty over the global trading system.

In the United States, the process of ratifying the successor to NAFTA (which the United States refers to as USMCA and Canadians call CUSMA) will reach a critical point in the next two months. The impeachment crisis will dominate Washington politics for the coming months but so far, it has not upended ratification efforts. Indeed, Speaker Nancy Pelosi and other senior Democrats are urging their members to stay focused on working with U.S. Trade Representative Robert Lighthizer to find a way to a "yes". Some argue that Democrats may find it easier to approve the USMCA now that they have shown their determination to unseat the President. It is worth noting that many Congressmen and knowledgeable observers believe that U.S. trade negotiators will have no credibility if the President cannot get Congress to approve the USMCA.

More indicators of the broader trading environment can be found in U.S. relations with the EU and Japan. These will have a major effect on Canada's trade prospects for two reasons. First, the United States is Canada's principal competitor for many of Canada's exports to Europe and Japan. Second, Canada has a deep interest in a healthy multilateral trading environment, which depends on solid relationships among at least most of the major trading nations.

U.S.-EU relations seem headed for a rocky patch as both sides move to exercise significant trade retaliation in the wake of findings by the World Trade Organization (WTO) that both illegally subsidize their commercial aircraft industries. The new EU Trade Commissioner, Phil Hogan, has commented that he hopes the new European Commission leadership could show President Trump the "error" of his "protectionist" policies.[18] Early prospects for a renewed effort to reach a bilateral U.S.-EU free trade agreement appear slim.

With Japan, President Trump and Prime Minister Shinzo Abe signed what has been called a first-stage trade agreement on September 25. This deal appears much more favourable to American interests than Japanese. The Japanese have given the United States access for several key agricultural products that is similar to what it has given its partners in the CPTPP—the Comprehensive and Progressive Agreement for Trans-Pacific Partnership. In exchange, the Americans have offered Japan relatively small tariff concessions. The deal says nothing about automotive trade, the area of greatest interest and concern to Japan, but does contain state of the art provisions on digital trade. President Trump has touted the accord as a great victory; the Japanese probably see it

as way of taking US agriculture hostage to guard against a Section 232 (national security) action on automobiles by the Americans. The arrangement is clearly inconsistent with the WTO provisions on free trade agreements unless the parties can make a convincing case that it is a first step to the creation of a full free trade area in the not too distant future. However, we doubt that any WTO member would regard a challenge to the WTO legality of the deal as being in its own interest.

These trade frictions could be particularly damaging because trade is no longer just about exchanging finished products or raw materials. It is increasingly about making products with components coming from foreign suppliers. These supply chains are now global and growing protectionism would force companies to rethink their current models of production. **Any substantial movement back to purely national or even regional supply chains would be costly, disruptive and inefficient.** It would also have adverse consequences on geopolitical stability.

Five Key Challenges for Canada

Canada cannot afford to give up on a rules-based trade system, starting with the WTO. Efforts must be pursued with a variable geometry of factors—allies, realistic ambitions, focus and persistence—because nothing will happen quickly. While being realistic, Canada should not underestimate how helpful its substantive contributions can be in international trade discussions.

This uncertain environment presents a major challenge for the federal government. Canada needs to be agile and ready to respond to different scenarios that could arise. Clearly, a rules-based system offers a much safer environment for Canada than one in which the power of nations is the ruling force.

We see five key challenges for the federal government.

1. Managing trade relations with the United States. The top priority is securing ratification of our new North American trade agreement, the USMCA (CUSMA)

Any Canadian government needs to focus on the relationship with the United States, which buys some 75% of Canadian exports. The most immediate task is to secure ratification of the USMCA. There is a reasonable prospect that the U.S. Congress will ratify the agreement before the end of the year. Canada needs to be ready to respond to any American proposals to adjust the agreement before it is submitted to Congress and then to ratify the agreement.

In addition, the government should continue to address various regulatory barriers that impede trade in North America. This could be done either bilaterally with the United States or on a trilateral basis involving Mexico as well. It may be possible to rejuvenate work under the Action Plan of the Regulatory Cooperation Council set in motion by President Obama and Prime Minister Harper, although the process might need to be renamed given the change in political circumstances. Whatever specific routes are chosen, a continuation of broad-based Canadian advocacy efforts in the United States will be essential to the successful management of this critical relationship.

2. Pursuing efforts to preserve, strengthen and modernize the multilateral trading system in the WTO

It is hard to overemphasize the importance of the WTO for Canadian interests. The WTO is the central anchor of the multilateral trading system, which also incorporates the web of bilateral and regional trade agreements that have been negotiated within its overarching rules.

The WTO today faces major challenges, primarily from the “America first” policies of President Trump, but also from an ascendant China whose economic model is imperfectly disciplined by the WTO rules.

Most concerning in terms of the effectiveness of the WTO is the continued impasse regarding the functioning of the WTO’s Appellate Body, a central pillar in ensuring that WTO rules are enforceable. The United States continues to block the appointment of Appellate Body judges to replace retiring members, which means the Appellate Body will no longer be able to receive appeals as of December 11, 2019. The irony is that WTO members, including the United States, continue to bring trade disputes to the WTO for resolution (17 new cases have been filed this year so far) and the Appellate Body has 12 pending appeals, including two filed by the United States. Canada and the EU developed an interim mechanism for appeals that they hope other members will use while a more permanent solution is being sought. However, the United States has criticized this tool for having the very flaws it finds objectionable in the existing appellate mechanism.

Despite such challenges, WTO members continue to pursue several important initiatives that merit close observation:

- Negotiations are underway to develop a WTO agreement on digital trade that calls for transparent, non-discriminatory rules to regulate digital trading.

This would include addressing cross-border data flows and data localization, while at the same time ensuring that the personal information of users is protected.

- Another initiative focuses on enhancing participation of micro-, small- and medium-sized enterprises (MSMEs) in international trade. Although MSMEs make an important contribution to national economies, they do very little business outside their own borders. WTO members are exploring ways to amplify MSME participation by reducing trade costs, including the cost of shipping and logistics, providing better access to trade finance, and examining technical assistance and capacity-building initiatives that could meet the trade needs and challenges of MSMEs.
- WTO members are making significant progress in the negotiation of new disciplines in services trade by developing measures to ensure that professional qualification requirements, technical standards and licensing requirements do not constitute unnecessary barriers to trade in services.
- WTO members are also working to conclude an agreement that would prohibit fisheries subsidies that contribute to overcapacity and overfishing, as well as eliminating subsidies that contribute to illegal, unreported and unregulated fishing.
- Finally, efforts to develop a multilateral framework for facilitating foreign direct investments are progressing. The focus is on improving the transparency and predictability of investment measures, streamlining administrative procedures, enhancing international cooperation and the exchange of best practices, and dispute prevention.

The 12th Ministerial Conference of the WTO, scheduled for June 2020 in Kazakhstan, is serving as a useful impetus for WTO members to deliver results on at least some of these initiatives. However, there is considerable risk that some WTO members may insist on progress in other areas, notably agricultural subsidies, before negotiations on the above matters can be concluded. Given that there is little prospect of meaningful progress on the agricultural front by next June, any outcomes at the Ministerial Conference may be limited to progress statements on emerging agreements among coalitions of countries that would be open for others to implement in the future.

The challenges are considerable and it will probably take several years to make any major progress. However, it should be recalled that it took four years of hard work to launch the Uruguay Round and another nine years before the WTO was actually launched. The WTO is too valuable to give up on. In the meantime, WTO members are engaged in reform efforts to make the organization more agile and more responsive to global challenges. For example, the United States, Japan and the European Union are working together to develop new rules on industrial subsidies to address what they describe as unfair competitive conditions caused by large market-distorting subsidies and state-owned enterprises.

Canada has taken a leadership role in steering what is called the "Ottawa Group" of 13 trade ministers from developed and developing WTO members. First convened by Canadian International Trade Diversification Minister Jim Carr in October 2018, the Ottawa Group has expressed deep concern about the rise in protectionism and the risks it poses to the multilateral trading system. Among its initiatives is an attempt to identify ways to safeguard and strengthen the WTO dispute settlement system. It is also developing proposals that would improve the deliberative and monitoring functions of WTO bodies where members seek solutions to trade irritants before they escalate into formal disputes. Canada should continue its leadership role in these discussions and be prepared to stay the course even if progress appears to be slow. There will be further multilateral trade negotiations. As a medium-sized country, Canada will find it easier to shape the agenda to address Canadian interests before it is set in stone when the major players climb on board.

3. Developing over time an approach for defending and advancing Canadian trade interests with China

China remains our second largest trading partner and has a market that offers the prospect of further growth for many Canadian producers. There are obvious challenges in developing this relationship given the different economic models in China and Canada. The trade war between the United States and China compounds these challenges. Canada has already suffered considerable collateral damage; developing trade relations with China may risk undermining our trade relationship with the Americans. The difficulty of navigating between our two principal trading partners is brought into sharp relief by the arrest of Huawei executive Meng Wanzhou and the retaliatory imprisonment by the Chinese authorities of Michael Kovrig and Michael Spavor. Canada may well

face similar difficult choices for many years to come as the United States and China struggle to become the dominant power of the 21st century. A more thorough description of the challenges can be found in our Spring 2019 Economic Outlook.

The government should not rush into developing institutional arrangements with China. The government should first assess carefully the nature and causes of the problems Canadian traders are encountering. Canada should aim to make the trade relationship more predictable while reflecting the importance of basing trade on market principles. Looking at sectoral arrangements, particularly in dealing with regulatory barriers, might offer a useful line of approach.[19]

4. Managing other major bilateral relationships

Canada has made significant progress in negotiating and implementing beneficial trade agreements with traditional partners across the Atlantic and in the Pacific region. Both the Comprehensive Economic and Trade Agreement (CETA) with the EU and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) with Japan and nine other countries in the Asia-Pacific region offer major new opportunities for Canadians. The CETA entered into force provisionally on September 21, 2017 and the CPTPP followed on December 30, 2018 among Canada, Australia, Japan, Mexico, New Zealand, and Singapore. It entered into force for Vietnam two weeks later. Chile, Peru, Malaysia and Brunei are still completing their ratification procedures.

Canada should continue to focus on extracting maximum benefit from the CETA and the CPTPP. It is hard to overestimate the potential of these markets for Canadian businesses and producers. Governments may find it attractive to pursue ever more trade negotiations, but Canada's economic interest would best be served by ensuring that our existing agreements actually deliver. This means supporting our firms, including our SMEs, in taking advantage of new opportunities. Canada should also support the accession of new members to the CPTPP provided they are prepared to accept its high level commitments.

The government must also consider how to manage our trade relationship with the U.K., our largest trading partner in the EU. While it is not yet clear how, when or even if the U.K. will leave the EU, the government should be prepared at the right time to enter negotiations to ensure the best possible deal for Canadians going forward. Boris Johnson says he is aiming to develop a truly global Britain. The Canadian government should challenge the U.K. to negotiate an ambitious "CETA plus" agreement that would in particular provide enhanced access for agri-food products. Negotiations are also underway with Mercosur and the Pacific Alliance (Chile, Colombia, Mexico and Peru) and are contemplated with the ASEAN countries of South East Asia. These negotiations could yield modest benefits for Canada but will not generate the sort of advantages that can be harvested from the big agreements already in place. These talks should continue but they are not a high priority.

A high-quality free trade agreement with India would be a big deal but it does not appear achievable at this time because of lack of willingness on the Indian side to seek an ambitious outcome. Canadian negotiators should re-engage only when it appears there is a real prospect of success.

5. In today's uncertain trade environment, the government should be prepared to take vigorous action in response to any unilateral action by others that adversely affects Canadian interests

Clearly, Canada did the right thing (along with others, including Mexico and the EU) in retaliating against the tariffs imposed on steel and aluminum by the United States under Section 232. The approach worked. These tariffs have been removed from Canadian and Mexican exports in part because of the adverse impact of the countermeasures on Americans. Retaliation makes little economic sense, but it can be necessary in today's international environment. The government cannot afford to leave the impression with other countries that it will tolerate unjustified action against Canada. However, any such reprisal should be limited to circumstances where action damaging to Canadian interests is unjustified and unilateral. Any retaliation should be proportionate. It should be limited to situations where dispute settlement would not appear to offer the prospect of relief in a reasonable time frame.

14. The Quad—the meetings of quadrilateral trade ministers—comprised the United States Trade Representative; the Trade Commissioner of what was then the EC; the Japanese Minister of International Trade and Industry; and the Canadian Trade Minister.

15. The trade comparisons in this paragraph are based on statistics from the WTO data base and include intra-EU trade.

16. GATT, the General Agreement on Tariffs and Trade, was the precursor to the WTO.

17. Based on purchasing power parity; see IMF: https://www.imf.org/external/datamapper/PPPSH@WEO/OEMDC/ADVEC/WEOWORLD/MAE

18. “Hogan approved as EU trade commissioner”Inside US Trade: https://insidetrade.com/trade/hogan-approved-eu-trade-commissioner (Paywall)

19. The Public Policy Forum makes useful suggestions in its October 2018 paper “Diversification not Dependence: A Made-in-Canada China Strategy” https://ppforum.ca/publications/diversification-not-dependence-a-made-in-canada-china-strategy/

Section V:

Tax Policy

The prime minister has set out as an early deliverable of his government to legislate the personal income tax cut for the middle class that it promised in the campaign. The government may be expected to use its first budget to introduce or set in train other tax initiatives that it proposed in its platform.

The 2020 budget will also be an opportunity to set markers and directions for tax policy over the medium term. There is a need for review. Some have proposed a royal commission on all things taxation. A better approach would be for the finance minister to identify priorities for review and use the time of the minority government to advance analysis and consultation.

Tax is an important instrument of policy for both growth and income distribution. To grow our economic potential, competitiveness is an overarching priority. Although effective tax rates on new business investment in Canada are lower than in the United States on average, there are big differences across sectors. Manufacturing has a large advantage, while services—critical in the digital economy—have a lesser advantage and retail and wholesale trade hardly any edge at all. There is no apparent justification for such variations and Canada must be responsive to global competitive pressure on business taxation.

Closely linked is the need to encourage innovation. Despite very generous tax support for research and development, Canada still lags other countries in private sector R&D and innovation. We also lag in the production of patents and we underinvest in intellectual property. Changing this is important, and we must recognize that what worked in an economy based on physical capital may not work in the digital economy.

Some elements of personal taxation, including the high marginal tax rates that apply to knowledge workers and entrepreneurs, also deserve review.

A group of experts could usefully be convened to work with the department of finance to consult and to make concrete proposals to support a more competitive and innovative economy. Changes could be considered and implemented in this mandate or the next one. What matters immediately is getting substantive work underway.

This would occur in parallel with work in the OECD and with global partners to ensure that there is appropriate taxation of multinational enterprises, including big tech, and fewer opportunities globally for base erosion and profit shifting.

Tax also affects income distribution—directly and through the support and incentives it provides taxpayers, including through work and life transitions. Both the tax and transfer system matter. In a world characterized by uncertainty and deep structural change, policy must be attentive to working-age Canadians and those most vulnerable to disruption—the self-employed, part-timers and the workers in the gig economy. The goal must be to facilitate adjustment and promote access to opportunity in the new economy.

Tax policy at the beginning of a mandate can be seen from two angles. The first view focuses on the specific commitments made during the campaign and that the government will wish to incorporate or set in train in its first budget or even before. The government's fiscal plan—the track for revenue, spending and net fiscal balance—will have to take into account any proposed tax measures that affect government revenue significantly. For example, the Liberal platform proposed to raise the basic personal exemption to $15,000 over four years for individuals in the lower tax brackets. The prime minister has committed to legislating this measure as a matter of priority business. The Parliamentary Budget Officer estimated this would cost some $5.6 billion annually by fiscal year 2023-24.[20] The Liberal platform proposed other tax measures, including targeted tax benefits and incentives, as well as an ongoing comprehensive review of tax expenditures, that it will wish to incorporate in its budget plan. As a minority government, it may also consider tax policy proposals from opposition parties. All of this will draw much attention.

Stepping back, the second view captures the structure and operation of the tax system and how effectively, in a changing global and domestic context, the system meets the government's revenue needs while serving other important objectives of policy. The personal and corporate income and sales tax systems affect economic decisions. The rates and structure of taxes send an important signal to Canadians—workers, families, students, pensioners, savers and investors, and small and large businesses—day-to-day and as they plan their future. As such, the impact of taxes shows up in employment, savings, investment in physical, human and knowledge capital, innovation, productivity growth and ultimately our standard of living. Properly designed, the tax system serves a goal of efficiency and contributes to higher growth potential. The right design also serves equity by aiding households and individuals adapt to change.

The first budget is an opportunity for the finance minister to identify where and why the government may pursue incremental or more substantive changes to promote growth and adjustment over the medium term.

This is an important responsibility. While the federal government now raises less revenue in total than the provinces and territories combined, it largely defines the structure of the tax system since provinces tend to align their personal and corporate income taxes, and in some cases their sales taxes, with the federal ones. This makes the federal finance minister the chief architect of the Canadian tax system.

The first function of the tax system is, obviously, to raise enough revenue to finance government spending. How this is done federally and provincially reflects public choices. Canada must raise more revenue—across all levels of government—than its neighbour and foremost trading partner, the United States, because it has a higher level of public spending: 40.7% of GDP vs 35.7% in 2019.[21] The current total revenue gap is in fact larger because of the higher fiscal deficit in the United States In 2019, total government revenue in Canada, including for this purpose employment insurance and Canada Pension Plan contributions, represents 40.1% of GDP, vs 31.1% in the United States. The Canadian tax burden is lower than the wider OECD average, but what most people see more readily is the gap with the United States.

A second key characteristic of taxation in Canada is a heavy reliance on personal and corporate income taxes (about 47% of the total tax bill in 2016) relative to the OECD average (less than one third).[22] This is a disadvantage inasmuch as taxing income is widely acknowledged to impose a higher cost on the economy than taxing consumption (particularly under a value-added tax structure) because it has a bigger effect on the incentives to work, save, and invest. This is a lesser issue when we compare Canada with the U.S., which also has a high reliance on income taxes. Good policy notwithstanding, there is no apparent political appetite to shift the burden of taxation in Canada toward consumption, for example by raising the rate of the Goods and Services Tax (GST) as a means of reducing income taxes. A carbon tax could also be part of a strategy to shift the tax mix but it, too, is strongly resisted. Politics take options off the table.

While our tax system reflects Canadian public choices, we must also compete in a global economy. Accepting that Canada has a higher overall level of taxation than the United States, and (like the United States) a heavy reliance on income taxes, there is still an onus on the finance minister to review carefully the levers—the rates and structure—that can affect the impact of the tax system on economic performance. This is particularly important today given the twin challenges of low productivity growth and population ageing.

As it stands, there is a large shortfall of business investment in Canada relative to the United States and other OECD economies, especially for machinery and equipment and intellectual property products.[23] The impacts of this gap for Canada can be material and long-lasting, notably in the digital economy that is creating powerful advantages for firms that develop and commercialize intangible assets.

Moreover, at the heart of the knowledge economy are people—the engineers, innovators, and the entrepreneurs who create the new streams of value. Canada competes globally for this talent.

Restructuring the tax system cannot alone solve the competitiveness challenge but it must be aligned with a wider strategy for Canada to win in global markets. The first budget could set in motion a focused review of the tax system—corporate and personal taxation—to determine how it could better contribute to competitiveness. Given the pace of change in the economy across sectors and regions, it is also important that the government assess how the personal tax and transfer system is providing support for those who must adapt to change.

Canada's history tells us that any meaningful change to the structure of the tax system is exceedingly hard to carry out unless there is a net fiscal investment. Zero-sum games typically make for very difficult tax policy initiatives. This is not to say that the government cannot tighten parts of the tax system to reduce the tax burden in other parts. Indeed, there must be an ongoing effort—in both tax policy and administration, domestically and with international partners—to close off avenues for aggressive tax planning and to protect the tax base. However, it matters for the success of any major structural change that the winners outnumber the losers and that taxpayers reap material net overall gains. If fiscal room is tight, changes can be introduced over a longer period that makes them affordable.

Reciprocally, however, it matters just as much that the expenditure plan of the government recognizes the reality that we start with a tax burden that is high and weighs heavily on factors that affect our competitiveness in a world that is moving fast. Unless debt-financed for the long term, every new expenditure adds pressure onto the tax system. If the function of tax is to fund public expenditure, it must not be treated as a residual but as a core part of fiscal management. It is the virtuous cycle of sound economic and fiscal management, economic growth, and revenue generation that will deliver sustainable gains in standards of living for Canadians.

Strengthening Competitiveness

In its September 2018 report, *Canada: Still Open for Business*, the Senate Standing Committee on Banking, Trade and Commerce recommended that the government establish a Royal Commission on Taxation to examine Canada's tax system with the goal of improving efficiency, simplicity and international competitiveness. It would be asked to report back within three years.

There is intellectual appeal to a comprehensive review of the tax system. Over time, the superimposition of discrete measures makes it difficult to see the forest for the trees and to judge whether the overall tax system is achieving its stated objectives. As the Senate Committee noted, the last comprehensive review of the federal tax system by an external body was the Carter Royal Commission that was created under Prime Minister John Diefenbaker in 1962 and that reported in 1966.

However, a Royal Commission could also be a safe means to ensure that nothing happens quickly. The substantive policy changes that were informed by the work of the Carter Commission were legislated only in 1972 and then left many of its recommendations on the cutting room floor.

Thus, a minister would be better advised to identify priorities for more substantive analysis, consultation, and reform, while tending to the wider tax system through the normal, incremental process. An expert group could usefully be convened to work with the finance department and use the time of the minority government to prepare the ground for meaningful change over the medium term.

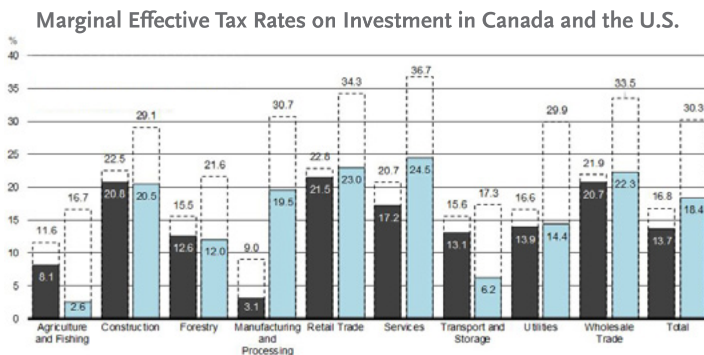
To grow our economic potential, an overarching priority in a dynamic and uncertain world is competitiveness and this encompasses both business and personal taxation.

On the corporate income tax (CIT) side, the point of departure is the Fall Economic Statement of 2018. The statement responded to the U.S. tax reform of late 2017 that, together with complex structural changes, reduced the U.S. federal statutory corporate income tax rate from 35% to 21% and introduced a temporary 100% bonus depreciation for certain capital assets. These moves effectively nullified what had been since the late-1990s a material (and rising) business tax advantage for Canada. The government's intensely awaited response was to leave the federal statutory corporate tax rate unchanged at 15% but to introduce, as in the United States, faster expensing of capital investment. This allowed for an immediate expensing of machinery and equipment investment in the manufacturing and processing sector and a tripling of the first-year deduction for depreciation for other capital investment—tangible and intangible. The changes came into effect immediately and will be phased out over three years starting in 2024.

Calculations published by the finance department in July 2019 show that this response succeeded in restoring some of the lost ground and in preserving a business tax advantage relative to the U.S. (Chart 5.1).[24] Specifically, the Marginal Effective Tax Rate (METR), which measures the taxation on new business investment for Canada, remains the lowest in the G7, below the OECD average, and, at 13.7% in 2019, 4.7 percentage points below the U.S. rate. Moreover, owing to both federal and provincial measures, the METR is down more than two thirds from 44.1% in 2000.

Chart 5.1

Marginal Effective Tax Rates on Investment in Canada and the U.S.



Source: Finance Canada, 2019. The bars in black and blue represent current METRs for Canada and the U.S., respectively. The dotted bars show the METRs for the two countries before the changes to the corporate tax systems introduced by the government of Canada in 2018 and by the U.S. in 2017.

The finance department's numbers, while telling a positive headline story, provide no room for complacency. First, the world is not standing still; there has been a 20-year global trend of declining corporate tax rates internationally.[25] One may lament a race to the bottom. Indeed, there are constructive efforts in the OECD under the Base Erosion and Profit Shifting (BEPS) initiative to counter harmful tax competition. However, competition is a reality.

Second, there are large variations in the estimated METRs for Canada across sectors of the economy. Manufacturing —which accounts for about 10% of GDP and employment—benefited the most from the Fall 2018 measures, growing what was already a material advantage even after the U.S. tax reform. The METR for manufacturing now stands at only 3.1% (a 16.4 percentage point advantage over the United States). The story is much different in the services sector, which is larger, diverse and critical in the digital economy. There, the METR is 17.2%, with a lesser advantage over the U.S. rate of 24.5%. In wholesale or retail trade, the METRs are over 20% and just shy of the comparable U.S. rates. There is no apparent justification for such large differences across sectors. Lesser variations could be achieved by going back to the basic principle of the Carter Commission, broad bases (e.g., aligning depreciation with useful life, for example) and lower rates.

Moreover, METRs do not tell the whole story. The pursuit of competitiveness today requires answering at least two added questions. First, how does the tax system affect the drivers of growth in the digital economy and in the sectors it is disrupting? Answers must consider how tax influences entrepreneurship, innovation, and the formation and commercialization of intangible assets such as intellectual property (IP) and data. Second, how does the tax system affect the life cycle of firms from start-ups to global enterprises? Tax policy should serve a policy that promotes innovation and commercialization, rewards success, and enables our firms to grow to global scale. In an economy dominated by global firms and tech giants, Canada must have its winners to deliver the greatest contribution to our prosperity—and indeed to grow our tax base.

For example, Canada historically has delivered among the most generous tax advantages for spending on research and development (R&D), notably for small firms. Despite this support, Canada still lags its global competitors for private sector R&D (as a proxy for wider innovation activity).[26] Moreover, despite world-class innovation capability in some transformative sectors like artificial intelligence, Canada also lags competitors like the United States, Korea, and Japan in producing the patents that may underpin a competitive advantage and secure the stream of income that flows from investing in innovation. Under-investment in intellectual property products by Canadian firms is another symptom of the same problem. Clearly, our businesses must step up their investment in innovation and our tax system must be structured consistent with this imperative.

In a world where the assets of leading and fast-growing firms are largely intangible, it matters not only where innovation activity is conducted, but also where the resulting assets are located and where value is ultimately realized, and taxed. For example, if foreign firms conduct R&D in Canada but locate the IP in other (e.g., low-tax) jurisdictions, Canada may not be getting the full benefit of the activity or an adequate return on any public financial support. Canada may also lose if a Canadian-owned firm shifts its IP to another jurisdiction for either commercial or tax planning reasons. There is complex

interaction in such matters among the structure of the tax system, international taxation rules and treaties, and tax administration.

Several countries, including the U.K., Korea, and Singapore, use what is called a “patent box” to encourage innovation, the generation of IP and its location in the jurisdiction. They simply apply lower rates of corporate tax to revenue that flows from intellectual property assets, including patents and copyrighted software. The 2017 U.S. tax reform also featured a complex set of rules intended to address the taxation of intangible assets whether located in the United States or abroad. Such initiatives may conflict with some principles of tax policy (e.g., tax neutrality), and in some cases may be considered to constitute harmful tax competition under the OECD’s BEPS initiative. But there may be, in the words of some experts, an “uneasy case” for a patent box in Canada.[27] The proposal in the Liberal platform to cut corporate taxes in half for businesses that develop or manufacture zero-emission products may be intended to stimulate one form of innovation. There is a need for a wider frame of analysis.

These are difficult questions and much is not well understood given the complexity of the innovation and wealth creation processes. What worked in an economy founded on physical capital (for example, stimulating investment by accelerating tax depreciation) may not work the same way in the new economy. Whether Canada’s competitiveness in the digital economy requires only a few tweaks or more ambitious reform of the corporate tax system should be a high priority for fresh policy analysis and deliberation. A more competitive tax system need not be a more complicated one; as recommended by the Business Council, a review could also pursue greater simplicity and ease of compliance.[28]

The finance department could usefully draw on the views of private sector and academic experts on tax competitiveness. A properly framed mandate and a timeline of some 18-24 months would allow meaningful work and consultation without posing the same challenges as a Royal Commission. Proposals could be considered and implemented in this mandate or the next one. What matters immediately is getting substantive work underway.

This effort domestically would complement work and negotiations taking place in the OECD on the taxation of multinational enterprises, in particular big tech. The disconnect in a digital economy between the location of actual business and the assets to which the revenue may be ascribed now require greater collaborative efforts across jurisdictions. There is scope for constructive discussion with the United States in the OECD as it too is concerned with securing revenue from big tech. The pledge in the platform of the Liberal Party that multinational tech giants pay corporate tax on the revenue they generate in Canada must be addressed within this context.

The corporate side is not the full story on competitiveness. People matter. And thus, the personal income tax (PIT) matters. Canada has exceptional assets, including world-class universities, cities, communities and innovation centres to develop, attract and retain the best talent in the world. Our economic immigration system is a factor of comparative advantage. However, we “reward” our best talent in their prime years by applying marginal rates of taxation as high as or even higher than 50% (e.g. 53.5% in Ontario). High rates kick in at relatively modest levels of income. In 2019, the top federal rate of 33% kicks in at $210,371; in the U.S., the top federal rate of 37% (in some states, it is the only applicable personal income tax) starts only at over US$500,000. If fair comparisons are sometimes complicated, they can be quite simple for a software engineer mid-stream in her career comparing take-home pay in Ontario vs, say, Texas.

It is not realistic nor necessary to match U.S. rates but clearly, and recognizing some offsetting factors in the comparison such as the high cost of health insurance in the United States, our high marginal rates of personal taxation damage an innovation and competitiveness story for Canada. It is always difficult to assess where the proverbial straw breaks the camel’s back but it is fair to say that applying added pressure at the margin will hurt, and delivering some rate relief would help.

Thus, an expert review would consider the PIT as a factor of competitiveness together with the CIT. Indeed, for some taxpayers, the decision on where to work or invest will be based on both corporate and personal taxes and how they interact. Pending a substantive review, under the “do no harm” principle of good policy, the government should avoid any measure that would push up already high marginal rates.

A policy review would focus on the federal tax system but it would have to take into account provincial taxes. This could help the minister in a subsequent dialogue with provincial ministers. Indeed, it would be important that the two levels of government advance on this issue in a cohesive manner and not undo one another’s efforts.

Facilitating Adjustment to Change

Tax also affects income distribution—directly and through the support and incentives it provides taxpayers, including through work and life transitions. For most Canadian individuals and households, the tax system —federal and provincial—operates together with the personal transfer system, including income supports for children and the elderly, the employment insurance system, and social assistance. This wider system, complemented by a universe of spending programs from housing to child care, is intended to reduce poverty, promote social inclusion, and for working-age Canadians facilitate adjustment and participation in the labour market. **In a period of heightened global risk and uncertainty and deep structural change across all parts of the economy, it matters that this wider system performs well, providing protection for those displaced by change and making it easier to adapt to change.**

First, the government should be satisfied that in the event of a major downturn, the employment insurance system will deliver needed income and adjustment assistance across regions, industries, and demographic groups. The system, including its interaction with provincial social assistance, is likely to come under pressure in a crisis. In the best of cases, the minister will be assured that the system is robust and will deliver the right assistance under a range of scenarios. But this proposition should not be taken for granted, particularly for the self-employed, part-timers, and the more precarious workers of the gig economy. The next downturn may be quite different than the last and the government must be prepared to deal with new circumstances in an evolving labour market.

Second, the minister and the government must exercise leadership, working with provinces, to ensure that the personal tax and transfer system, is up to the challenge of enabling adjustment as technology transforms the economy and reconfigures and eliminates jobs.

There is considerable uncertainty about the future of work and whether a new economy driven by robotics and artificial intelligence can in fact replace enough of the jobs it will eliminate. This has prompted proposals in Canada and elsewhere for governments to consider a basic minimum income for every citizen. Such a measure would not only provide insurance against the effects of a potential loss of jobs in the future, it could also help rationalize the personal tax and transfer system and correct disincentives to work that are inherent in social programs with high rates of tax clawback.

To date, this discussion has been more theoretical than real. Historical evidence still tells us that technological progress, while disruptive, will create, not destroy jobs in net terms. In its pure form, a national minimum guaranteed income would be enormously expensive in Canada and its application, particularly in a federal-provincial context, would be exceedingly complicated.

This said, the existing universe of federal and provincial tax measures and income supports, including, in particular, high clawback rates and their impacts on incentives to work, deserve ongoing attention. This should take place within a policy framework that must also pay attention to the wider distribution of income and to social inclusion. Incremental measures, such as federal and provincial worker tax benefits introduced over the past decade, can deliver meaningful, targeted assistance while strengthening incentives to work. Federal leadership could also help rationalize income and other program supports for low-income and other marginalized and vulnerable populations.

Again, this may require some investment of federal resources that could help foster a stronger economy and facilitate adjustment to change, while delivering better income security and greater social cohesion.

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22. See OECD, Revenue Statistics 2018: http://www.oecd.org/tax/tax-policy/revenue-statistics-highlights-brochure.pdf
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27. Robin Boadway and Jean-Francois Tremblay, "Policy Forum: The Uneasy Case for a Canadian Patent Box," *Canadian Tax Journal*, 2017, Vol. 65, No. 1, May 2017: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2962318
28. See Business Council of Canada, *A Better Future for Canadians, Report and Recommendations of the Task Force on Canada's Economic Future*, October 2019: https://thebusinesscouncil.ca/publications/a-better-future-for-canadians-report-and-recommendations/

Section VI:

The Financial System

Canada has a large, diversified, sophisticated, financial system that has served Canadians well. Though it is in good health—the industry is profitable and the institutional framework is solid—this state of affairs cannot be taken for granted. The finance minister must focus on three challenges.

First, the minister must ensure that the system can—as it did in the 2008 global financial crisis—withstand a financial disruption or recession that could be triggered at any time from any corner of the financial markets or global economy. Vulnerabilities include imbalances in the housing market, high levels of household debt, rising corporate debt, and cyber-related risks. Studies by the Bank of Canada and the IMF have concluded that our financial system would generally be able to withstand a severe storm. Moreover, the system is better prepared to deal with cyberattacks.

The apparatus for responding to a crisis is essentially in place. The minister needs to be satisfied that readiness is maintained and, in the event of a crisis, be prepared to oversee the execution of the response and to communicate with markets and with Canadians. The key challenge is to recognize a crisis as it builds and to calibrate the response and the messaging. This entails alertness and responsiveness.

Second, the minister should place priority on modernizing the financial system in step with digital innovation in a way that serves the interests of Canadian households and businesses and that enhances the competitiveness of our financial services industry. Technology is disrupting the industry worldwide, a transformation powered by big data, ever-faster networks, and artificial intelligence. This new wave of innovation—fintech—can be a source of important benefits. But the market infrastructure and the regulatory framework have to keep up with the technology so that Canada's financial system can capitalize on innovation while safeguarding market integrity, public trust, and financial stability.

There are two components here. The payments system is being modernized, and legislation to allow Canada to catch up to the market should be a priority; digital currencies are also making inroads in the marketplace and the government has to be responsive and vigilant. Open banking has the potential to generate new value for consumers and businesses, but Canada is trailing many other jurisdictions. Our financial services industry must harness, not resist, the change, and make open banking work in our market. Strong federal leadership will be needed.

Third, the minister will need to make decisions on securities regulation to improve the functioning of Canadian capital markets and to strengthen oversight for systemic stability. This has been a thorny issue for decades. There is now legal clarity. Key political decisions await the minister.

A sound, modern and competitive financial system is core to Canada's prosperity. One of the finance minister's chief responsibilities is to oversee that system. This includes the financial services industry that delivers critical services to Canadians and to the economy—and is itself an important source of activity and jobs—as well as the institutional framework that enables the industry to function properly. Canada has a large, diversified, sophisticated, financial system that overall has served Canadians well. It is largely federally regulated. It pulled through the global financial crisis and the Great Recession and is generally in good health—the industry is profitable and the institutional framework is solid. Canadian-owned firms (e.g., banks and life insurers) have a strong domestic base and inroads into the United States and global markets.

The finance minister cannot take this state of affairs for granted. Against the global backdrop of change and uncertainty, the minister must focus on three challenges:

- first, ensuring that the system can again withstand a financial disruption or recession that could be triggered at any time from any corner of the financial markets or global economy—with an unknown depth, severity, or length;
- second, ensuring that the payments system and the regulatory framework are in step with digital innovation in a manner that better serves the interests of Canadian households and businesses and that enhances the competitiveness of our financial services industry; and
- third, making decisions on securities regulation in the country to improve the functioning of Canadian capital markets and to strengthen oversight for systemic stability.

Ensuring Preparedness for a Crisis

While the financial system is broadly in good shape, there are vulnerabilities. In its Financial System Reviews, the Bank of Canada consistently has identified imbalances in the housing market and high levels of household debt as key risks for the Canadian economy and the financial sector. Rising corporate debt—in particular in the higher risk segments of the market—has emerged as a possible source of stress in a market correction. Cyber-related risks, which are harder to measure and to mitigate against, also require diligent attention across the financial system, including both individual institutions and market infrastructures.

Domestic vulnerabilities that have built up—and that in the case of housing and households remain acute despite the moderating effects of policy and regulatory intervention—could crystallize and amplify sharply amid a global financial crisis and/or recession.

The Bank of Canada has modeled a stress scenario —worse than any shock in recent decades—in which disruptions in international trade and a global re-pricing of risk would push our dollar down, inflation up, and lead to an increase of 6 percentage points in the unemployment rate and a drop of 40% in house prices nationally.[29] Fortunately, given the policy, regulatory and business responses to the 2008 financial crisis, tests of the scenario show that Canada's banks could withstand such conditions and that levels of solvency or liquidity would not threaten the stability of the financial system. The Financial Sector Assessment Program (FSAP) review of Canada by the International Monetary Fund (IMF), published in 2019, also concluded that our financial system would generally be able to pull through a severe storm.[30]

Of course, such outcomes are not assured before the fact. To contain any damage to the financial system would require swift and decisive intervention by the Bank of Canada, the Office of the Superintendent of Financial Institutions, and the Canada Deposit Insurance Corporation, working together with the department of finance and the minister. This institutional framework was strengthened through new legislated powers and mechanisms in the last mandate in step with wider G20 efforts to ensure greater financial system resilience. This includes enhanced supervision, higher capital requirements, a "bail-in" regime and resolution plans for "systemically important" financial institutions, as well as enhanced federal deposit insurance. It also includes stronger powers for the Bank of Canada to identify and respond to risks to the critical financial market infrastructure that enables the clearing and settlement of financial transactions. Across all of these domains, federal leadership and ongoing cooperation with provincial regulators is important because threats to financial stability can also originate in or affect provincially-regulated parts of the system.

Our financial system and individual institutions have also made important strides in bolstering their preparedness for response to cyberattacks and ensuring operational resiliency. Recent breaches of privacy in the sector illustrate that this is an ongoing challenge. Continued collaborative efforts are needed to ensure that a breakdown in any one institution is contained and quickly remedied to protect the wider system.

The apparatus for responding to a crisis—while always subject to improvement, as suggested by the IMF in the FSAP—is thus essentially in place. The role of the minister is to ensure that readiness is maintained and, in the event of a crisis, to oversee the execution of the response and to communicate with markets and with Canadians. There is also an important role of national leadership for the federal minister. A crisis would entail close engagement with partners in the G7, the G20, and the IMF, in a global environment potentially less collaborative than in 2008. It would also require open lines of communication with provincial counterparts.

The key challenge is to recognize a crisis as it builds and to calibrate the response and the messaging. This entails alertness and responsiveness because every crisis is different and a new learning experience.

Harnessing Digital Transformation

While crises are largely unpredictable, what is certain is that technology is disrupting the financial services industry worldwide—in the front office and in the back office. The powers of big data, ever-faster networks, and artificial intelligence are transforming the industry and creating a new wave of innovation—fintech—that can be a source of productivity gains, new and better services, and thus important benefits for households and businesses, the financial system, and the economy.

For the financial institutions (e.g., banks, insurers, fund managers) and markets (e.g., the trading platforms), innovation and the offensive and defensive responses to fintech require massive investment in information systems and business model transformation. Lines are being re-drawn in the marketplace among incumbent firms, disruptive fintech start-ups, and global big tech. Over time, there will be pressure for banks, insurers and other financial institutions to restructure to gain greater scale to amortize investment and/or to spin off smaller entities with greater agility to compete with fintech in niche markets.

Market authorities—including governments, central banks, and regulators—have an obligation to ensure that the market infrastructure and the regulatory framework also stay in step with the changing technology so that the domestic financial system may capitalize on innovation and competition and deliver better services in a manner that safeguards market integrity, public trust, and financial stability.

This is a priority responsibility for the minister of finance with at least two components: the payments system; and open banking.

The Payments System

Canada must follow through without delay on the modernization of our payments system. The payments system—the infrastructure, processes, and rules that enable the clearing and settlement of financial transactions—is the backbone of the financial system and it must operate to new global standards or better, efficiently and soundly. In Canada, the payments system comprises both a Large Value System, for large payments, and a Retail System where the vast majority of day-to-day Canadian commerce is cleared by the financial institutions. The system is operated and modernization is led by Payments Canada, a non-profit organization funded by participating financial institutions under a governance and oversight framework that was revamped in 2015.

Modernization of the payments system is largely underway. A new High Value Payment System called Lynx is scheduled to come into service in 2021. For retail payments, the "Real-Time Rail", a 24/7/365 platform that will facilitate the delivery account-to-account of low-value payments in a matter of seconds, will have first instalments a year later, in 2022. The new retail system will provide the convenience of faster, more secure payments using an email address or mobile phone number. For example, whereas today a client by email can enable a person with a password to withdraw money from the client's account (a "pull" system), this requires an action from the recipient that can be delayed and subject to cyber risks. In the new system, the client will be able to send money from his or her account directly, instantaneously and more securely into the account of the other person using that person's email address or phone

number (a "push" system). In subsequent instalments, direct access to the payments system by more financial services providers will support competition and reduce the costs of payments for consumers and small businesses. Importantly, modernization brings with it across all platforms the application of data standards that will expand opportunity for better services, lower costs, while also enabling faster, cheaper, and more secure international transactions.

As this infrastructure is put in place, the government also must follow through on consultations launched in 2015 on the oversight of retail payment service providers that have emerged in recent years and that facilitate point-of-sale payments, mobile payments, online payments, and electronic funds transfers.[31] This includes digital wallets and money transfer services such as Google Pay, Apple Pay, or PayPal and their Chinese equivalents such as Alipay and WeChat Pay that have proliferated globally alongside the evolving mobile applications of financial institutions. Because such providers play a growing role in retail commerce—and in some cases extend credit to users, or store value and effectively take deposits from users—they should come under regulatory scrutiny. It is important that there be a level playing field and that regulation be based on the nature of the service and not the nature of the provider. With the right framework, competition will deliver choice for consumers and businesses, and faster, secure, low-cost payments. Budget 2019 announced legislation that would entrust the Bank of Canada with the responsibility to oversee the payment service providers and their compliance with operational and financial requirements. The legislation was not tabled in the last Parliament and it should be a matter of priority in the new mandate. Indeed, this is a case of catching up with the market.

While focusing on the payments system, the government will wish to keep an eye on virtual or crypto-currencies that may operate fully or partially outside this system. Such instruments, like the Bitcoin, do not have all the attributes of a currency and they are not backed by the public sector. To date, they have operated at the margins of the financial system and have not posed a stability risk. To the extent that the currencies or digital coins meet the definition of securities or derivatives, they come under the purview of securities regulators. Moreover, to mitigate the money laundering and terrorism financing vulnerabilities of virtual currency, people and entities dealing in virtual currencies will come under the purview of the Financial Transactions and Reports Analysis Centre of Canada (FINTRAC) in 2020. With technology and the marketplace continuing to evolve, responsiveness and vigilance is in order.

Clearly, a steep expansion in the market penetration of digital currencies and the underpinning technology—for example, the blockchain and the distributed ledger—could require a more comprehensive response and further adjustments to the payments system and regulation. The proposal by a private sector consortium led by Facebook for the introduction of a digital currency—the Libra—has drawn the attention of central banks and financial authorities worldwide. It is one thing for some instruments to compete with traditional payment service providers with convenient applications, or for digital coins to be traded in niche markets. It is another for a ubiquitous global platform like Facebook to create a virtual currency that while creating new payment options may step into the territory of central banks, with significant risks for consumers and for the financial system.

The Bank of Canada and the department of finance no doubt will endeavor to stay on top of such developments in close cooperation with global peers. This will include consideration of whether central banks could issue their own digital currency, a matter that raises considerable interest while also posing difficult questions for the conduct of monetary policy and the oversight of the financial system.

Open Banking

A further transformative opportunity for the financial system is "open banking". This would empower consumers to access and transfer their data residing in one or more financial institutions to benefit from financial services and applications delivered by other providers, including fintech. For example, open banking could facilitate consumer use of applications that can keep track of all of their financial transactions and aid their budgeting and financial planning. It could also enable consumers to more easily move their financial business from one provider to another offering a more competitive suite of services. Under the right marketplace frameworks and standards, and with market innovation from both existing financial institutions and new tech-enabled service providers, open banking has the potential to further stimulate competition, and generate new services and new value for households and businesses.

Canada is not ahead in this game. It is trailing other jurisdictions like the U.K., Singapore, Australia, and even the EU It is a matter of time before the United States catches up.

Canada starts with strong assets. Its banks and financial industry leaders are world-class. A vibrant ecosystem of smaller fintech firms is emerging to meet new and

evolving needs of consumers and businesses in Canada and internationally. The brand of our financial services industry is strong. Public trust is solid. In advancing open banking, we can also draw from the early experience of other jurisdictions. The timely development of a framework for Canada could position our banks, insurers and tech firms as early movers in North America, able to sell more financial services and more technology in this large market.

However, open banking will not happen without a national strategy—and certainly not in a fast, efficient and safe manner. It requires industry standards for efficiency and interoperability, safeguards for privacy and security, a liability framework, and a dispute resolution mechanism. To develop its full potential, open banking will be developed concurrent with the modernization of the retail payments system under a coherent set of rules and timetable. In short, it demands the infrastructure and the wiring of a new, dynamic, competitive marketplace that will also meet evolving global standards and practices. It also requires consumer education.

The minister and his department will have to exert leadership in fostering this framework while being attentive to matters of jurisdiction and to the balancing of public policy objectives. Open banking entails careful consideration of what information may be shared with what party for what purpose and under what set of rules. Banks are regulated tightly for good reason—to protect consumers and financial stability. Open banking must develop on a level playing field. If fintech firms get into banking activities, there should be commensurate regulation. If consumers can transfer their data held by banks to other service providers, then ostensibly they can also access and transfer data from these new providers. Risks to financial stability require attention. If consumers can empty all of their accounts in any one institution in seconds from their smart phone, there may be heightened vulnerability to a bank run even if based on misinformation.

These challenges can be overcome. Resisting the global trend and locking the data of consumers and businesses in existing financial institutions would be a sure way to erode the competitiveness of our industry and our economy. Disruptors, including small firms but also foreign-owned big tech firms that thrive on the commercialization of data-rich applications, would find ways around the status quo and create an ever-greater challenge to our institutions and financial system. Under the right framework, our financial services industry can harness, not resist, the change and become more competitive. The challenge is making open banking work for Canada. It is not in our interest to cede large parts of our financial services market to global big tech whose financial resources dwarf that of our banking sector. The right strategy will support the competitiveness of one of the few sectors of our economy that is world-class and largely Canadian-owned.

In establishing the framework for open banking, the minister will have the following starting points.

- Amendments to the *Bank Act* in 2018 opened the door to investments by the banks in fintech enterprises and to the sharing by banks of user data with their related entities. However, the regulations that will define the conditions under which such investments can be made and data shared are still being developed. Moreover, this still falls short of open banking, enabling only the sharing of data within a related set of institutions.
- A four-person Advisory Committee on Open Banking was formed by the minister of finance in November 2018 and an open consultation process was held in early 2019 by the department to inform the work of the committee.[32] The report of the committee, to be completed in 2019, has not yet been issued and ostensibly will be available to guide the government's first steps.
- The Senate Standing Committee on Banking, Trade and Commerce, held hearings on open banking and issued a report with high-level recommendations in June 2019.[33]

The minister will find that the economy-wide underpinnings necessary to enable open banking are inadequate and outdated. In particular, the federal privacy legislation, the Personal Information Protection and Electronic Documents Act (PIPEDA), is not up to the task and also lags behind the General Data Protection Regulation (GDPR) of the European Union that has set a new global benchmark. PIPEDA lacks not only key necessary provisions—such as a data portability right—but also adequate enforcement powers. A federal digital charter has set out a framework and principles to establish trust in a digital world, including amendments to PIPEDA, but the charter is still largely a shell.[34] Federal action is necessary not only to update the federal privacy framework but also to serve as the model for provinces to adapt their frameworks that apply to provincially-regulated entities.

A standardized approach to establishing identity online—a “digital identity”—for individuals and businesses would also support trust, security, innovation and efficiency in the marketplace, including in financial services. The Digital Identification and Authentication Council of Canada (DIACC), a non-profit coalition of public and private sector leaders, has a mandate to advance work on this front.

The minister will confront two risks on open banking:

- **going too fast,** not getting open banking right, and compromising its potential and/or public trust; and
- **going too slow**, not keeping up with global leaders, and damaging the competitiveness of our banks and fintech in Canada, the United States, and other markets—and then still not necessarily getting it right.

On balance, the minister will be best advised to press for early results. Strong leadership will be required to bring together government, regulators, the financial services industry and the tech industry on a concrete vision for open banking and its component parts with a road map and a timeline. The financial services industry has the opportunity and the capacity to be at the forefront of digital transformation in our economy.

Again, the minister and his officials will need to engage provincial counterparts. Open banking as a concept can embrace more than federally-regulated banks and it necessarily will have ramifications in parts of the financial sector (e.g., credit unions) and economy regulated by the provinces. Without some coordination, competition could be distorted or regulation weakened, stemming the benefits of innovation and adding to risk.

Making Decisions on Securities Regulation

The regulation of the securities industry in this country has for decades been an issue of legal and policy contention between advocates of a single or common regulator, with a federal role, and defenders of the existing system that accommodates province-specific institutions and rules with harmonization and collaboration. While the debate historically has been polarized, and still remains intense, in fact solutions advocated by the two sides have come closer together and, in each case, recognize key attributes of an effective system, notably:

- a solid jurisdictional foundation;
- market efficiency and a competitive cost of raising funds for investment across the country;
- effective protection of investors and civil and criminal enforcement;
- capacity to engage with international counterparts;
- responsiveness to regional market conditions and interests—e.g., participatory decision making; and
- sensitivity to activity and jobs in financial centres across the country.

Technological change is not just reshaping the business of banks, insurance, and payments systems globally; it is also having a profound impact in capital markets, including equity, bond, commodity, and derivative markets. Similarly, the management of exposure to climate-related risk now requires an evolution of disclosure standards for both equity and fixed-income securities. A strong, technically adept, and unified response to such developments is necessary to ensure the competitiveness of our capital markets.

The two competing models now on the table are the Cooperative Capital Markets Regulatory System (CCMRS) endorsed by Ontario, British Columbia, New Brunswick, Nova Scotia, Prince Edward Island, Saskatchewan, and Yukon, and regulatory cooperation pursued under the Canadian Securities Administrators (CSA) and promoted as the best go-forward model, by Quebec and Alberta in particular. As a distinct matter, the last financial crisis and its manifestations in Canada highlighted the need for a greater capacity to oversee systemic risk in securities markets.

The CCMRS would include a model provincial and territorial statute to deal primarily with the traditional functions of securities regulation as carried out by

existing regulators, and a proposed federal statute aimed at preventing and managing systemic risk and addressing criminal matters. A Pan-Canadian securities regulatory authority and a board of directors would operate under the supervision of a council of ministers, which would comprise the ministers responsible for capital markets regulation in each participating province and the federal minister of finance. Participation in the CCMRS would be voluntary and each province would need to enact the model statute. The CCMRS would co-exist with securities regulators in non-participating jurisdictions.

In a November 2018 judgement, the Supreme Court validated the constitutionality of the CCMRS construct.[35] **For the first time in our history, there is on the table a model for a pan-Canadian regulator that has firm legal underpinnings.** The Supreme Court observed that given its judgement, the question for jurisdictions of "when and whether to relinquish a degree of autonomy over the regulation of securities for the purpose of achieving national uniformity is entirely a matter of political choice."

Therein lies the crux of the matter. In the last mandate, the federal government allowed the discussion on the CCMRS to continue (for example, it appointed, along with participating provinces, an initial board of directors and executive for the regulatory authority), but the minister did not engage actively. His four federal budgets were silent on the file.

The political context of a minority government, and pressures on national unity that are manifest in Quebec and Alberta, unfortunately diminish the prospects of early movement on a pan-Canadian regulator. This part of the CCMRS may simply have to be set aside at least for some time. The federal minister, nonetheless, can exert a leadership role:

- encouraging provinces, with federal assistance as may be helpful, to tighten collaboration among provincial regulators and to advance substantive work, including both policy and enforcement, to stay as much as possible in step with other regulators internationally; and
- moving forward with legislation to exercise oversight over systemic risk in the securities markets under the federal jurisdiction that has been clearly confirmed by the Supreme Court.

A Pan-Canadian regulator need not be abandoned as a project but it most likely will need to wait for a better time to emerge with the right political support from more parts of the country.

29. Bank of Canada, *Financial System Review 2019*: https://www.bankofcanada.ca/wp-content/uploads/2019/05/Financial-System-Review—2019-Bank-of-Canada.pdf

30. International Monetary Fund, *Financial System Stability Assessment —Canada, 2019*: https://www.imf.org/en/Publications/CR/Issues/2019/06/24/Canada-Financial-System-Stability-Assessment-47024

31. See Finance Canada, *Balancing Oversight and Innovation in the Ways We Pay: A Consultation Paper*, April 2015: https://www.fin.gc.ca/activty/consult/onps-ssnp-eng.asp; and *A New Retail Payments Oversight Framework*, October 2017: https://www.fin.gc.ca/activty/consult/rpof-cspd-eng.asp

32. See *A Review into the Merits of Open Banking*, Finance Canada, January 2019: https://www.fin.gc.ca/activty/consult/2019/ob-bo/obbo-report-rapport-eng.asp

33. Standing Senate Committee on Banking, Trade and Commerce, *Open Banking: What it Means for You*: https://sencanada.ca/en/info-page/parl-42-1/banc-open-banking/

34. See Innovation, Science and Economic Development Canada, *Canada's Digital Charter: Trust in a Digital World*: https://www.ic.gc.ca/eic/site/062.nsf/eng/h_00108.html

35. See Bennett Jones, "SCC Renders Judgment on Cooperative National Securities Regulator, Is the End in Sight?," November 12, 2018: https://www.bennettjones.com/Blogs-Section/SCC-Renders-Judgment-on-Cooperative-National-Securities-Regulator

Section VII:
Climate Change

Climate change is a critical factor influencing our long-term prosperity. A domestic response must take into account that Canada is at once a global citizen, an intensive energy user, and a responsible energy producer. Since climate change is a global problem, Canada must be engaged internationally. It will have a voice only if it is making a meaningful contribution. It must do so in a manner aligned with our interests. The government must do three things.

First, it should mobilize Canadians both to cut domestic emissions and to get greater value from our energy resources and technology in global markets. Reality is more complex than the polarized views most often heard. The two sides—one talking about climate change, the other about energy potential—can be reconciled in an integrated strategy that will make the best contribution both to our prosperity and to the global environment. Canada can supply more energy to the world in a way that contributes to global emissions reduction while also reducing domestic emissions and achieving ambitious targets. The national conversation should be anchored in facts—the science and the economics—and center on alternative strategies along with their costs, risks and benefits.

Second, since climate change is inevitable and its impact already felt across the country, the government should lead intensified efforts to adapt to climate-related impacts and risks. Heatwaves, record-breaking fires, hurricanes, floods and drought all are having major impacts. Sea ice and glaciers are melting at the highest rates on record, causing accelerated sea rise. Such developments have been predicted for years by scientists who study climate change. Decision makers in this country are entirely responsible for how we adapt to a changing climate and reduce the risk of damage. New infrastructure should be able to withstand the effects of a changing climate or extreme events. Policy must also facilitate the adjustment of regions, and industries such as agriculture and forestry, to a changing climate.

Third, the government should encourage steps, notably in the financial sector, to assess, disclose, and manage climate-related risks objectively and transparently. The financial marketplace can be a catalyst for better environmental performance, adjustment to a changing climate, and the management of related risks.

Section VII: Climate Change

The government and the minister of finance have no choice but to treat climate change, and the international and domestic responses to the challenge, as one of the factors with the greatest potential to affect Canada's prosperity. **Whatever the actions and specific commitments to date, the government has an ongoing responsibility to shape, adapt, and lead a long-term plan.** For Canada, this means integrating the perspectives and interests of a global citizen, an intensive energy user, and a responsible energy producer.

Globally, attention is high to what is increasingly called a climate emergency or crisis. Almost everyone is talking about what should be done—national and sub-national governments, non-government organizations, the scientific community, global corporations, institutional investors, young people and communities that find themselves especially vulnerable to a changing climate. At the UN Climate Action Summit in September 2019, 65 countries (including Canada) and the European Union committed to net zero emissions of carbon dioxide (CO_2) by 2050.

The heightened public concerns and the political statements from governments confront hard realities: the world—especially the emerging economies—has a growing need for energy, and energy systems still largely depend on fossil fuels. Technology, market forces and policy are bending the curve on emissions growth but there is no sign of an early peak.

No nation can solve the problem alone, and there is a cost to adjusting to a low-carbon future that is more immediate than the cost of inaction. Despite the 2015 Paris Accord, there is no mechanism to enforce collective action and to share fairly the costs. Progress is slow and uncertain. Indeed, it has become clear that even if the Paris Accord is fully implemented, the signatories' existing commitments—the "nationally determined contributions"—would fail to achieve the necessary reductions in greenhouse gas (GHG) emissions. The United States' decision to withdraw from the Paris Accord makes collective action towards a satisfactory outcome even more uncertain if not remote.

In Canada, the political landscape is considerably more diverse and complicated than it was in 2016 when the Pan-Canadian Framework on Climate Change was adopted by all jurisdictions except Saskatchewan and Manitoba. The federal government's carbon price is still being litigated before the courts and in the political sphere. The path to meeting domestic targets remains uncertain at best. For some, the targets are out of reach. For others, they are not ambitious enough. Meanwhile, provinces, firms and workers that value the contribution of oil and gas supply and exports to our economy remain deeply frustrated by the delays in building the infrastructure to get our resources to market.

Climate change is a global problem. Canada must be engaged on this issue internationally. It will have a voice only if it is making a meaningful contribution. It must do so in a manner aligned with our interests. Domestically, this requires a consensus that also embraces our capacity to supply energy to the world with the best technology and environmental performance.

A Canadian response must also fit within a wider global dynamic and thus adapt over time. In a competitive marketplace, our firms will lose if they bear costs that are disproportionate to those of their global rivals and if they are not provided the timelines or the means to adjust to rising standards. By the same token, our firms—including our energy producers—cannot afford to fall behind the curve. Investors and financial markets increasingly are paying attention to climate-related risks and they will sanction firms and economies that are laggards. Likewise, our customers will expect that we pull our weight; if we do not, there could be a loss of market access. There will be shifts in technology and markets. The costs and benefits of climate action will evolve and Canada needs to be responsive.

It is the stuff of leadership to bring Canadians together on such a defining issue as climate change. While much is uncertain and while views today differ sharply, the government must do three things:

- Mobilize Canadians both to meet ambitious targets for domestic emission reduction and to get greater value from our energy resources and technology in global markets.
- Since climate change is inevitable and its impact already felt or predictable across the country, lead intensified efforts to adapt to climate-related impacts and risks.
- Because economic signals and incentives matter, encourage steps, notably in the financial sector, to assess, disclose, and manage climate-related risks objectively and transparently.

Charting a Path to Cut Emissions and Grow our Energy Exports

The debate over climate change and energy in Canada—unfortunately and unproductively—has polarized between those who wish primarily to reduce our domestic emissions of GHGs and those who first wish to drive the development of our energy resources through growing energy exports. In part, this split arises because advocates for either view find it more compelling to keep things simple than to acknowledge that reality—both global and domestic—is quite complex. An integrated vision is harder to articulate and to promote as an agenda.

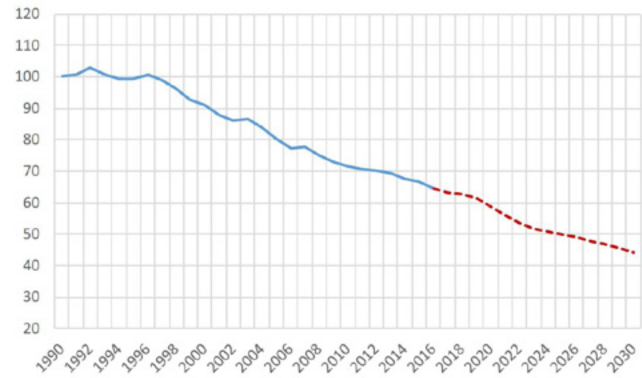
In fact, historically, and on the current path, the two sides in this joust are not irreconcilable. Indeed, they can form the foundation of an integrated strategy that will make the best contribution both to our prosperity and to the global environment. Given uncertain markets and policy globally, a unified approach also represents the best means for Canada to respond over time to evolving scenarios on climate and energy.

More importantly still, an integrated strategy is the only path that can mobilize all of the country and preserve and strengthen national unity.

Let us begin with facts.

Between 2005 and 2016, Canada's total GHG emissions fell modestly in absolute terms. Indeed, they have been dropping consistently relative to GDP (Chart 7.1).[36] Our economy is becoming less GHG-intensive, so emissions and growth have been partly decoupled. This has occurred despite robust growth of our oil supply and exports.[37] While emissions in the oil and gas sector are rising in absolute terms and represent a growing share of Canada's total emissions, the emissions intensity is diminishing. For example, GHG emissions per barrel of production in the oil sands fell by some 15% between 2008 and 2016.[38]

Chart 7.1



Source: Environment and Climate Change Canada, 2018 Canada's Greenhouse Gas and Air Pollutant Emissions Projections. Intensity measured by quantity of emissions relative to real GDP.

Thus, Canada has shown that it is possible to reduce domestic GHG emissions and to grow our energy supply and exports at the same time. Our challenge is sustaining the pursuit of the two efforts together over the medium to long term to meet ambitious climate targets and grow our prosperity—mindful that a prosperous Canada will be better able to invest in climate efforts.

Global trends are equally pertinent. The global demand for energy is growing robustly. The International Energy Agency (IEA), under its "New Policies" scenario, projected in 2018 that energy demand in 2040 will be 25% higher than today.[39] All of the demand growth originates in the developing world. Second, despite strong growth in renewable sources of energy, hydrocarbons will still account for about 75% of primary energy supply by 2040. The demand for oil keeps rising, although at a declining pace, while the demand for natural gas grows briskly, notably as an alternative to coal and a transition fuel for a low carbon future.

Not surprisingly, under these projections, energy-related GHG emissions are rising. This contrasts sharply with what scientists estimate is necessary to keep the rise in global temperatures to below 2°C, let alone 1.5°C.[40] Of course, the IEA projections are likely to be wrong by some factor. Many variables—from global growth, to energy prices, to technological breakthroughs, to policy shifts, all interacting—can bend the demand curves significantly. But today, this is the point of departure.

A Canadian response to climate change must be situated within this global context, understanding that it will evolve. Canada cannot on its own affect decisively the forces and trends that will determine global outcomes. Its share of global GHG emissions is about 1.6%. While it is the fourth largest producer of both oil and natural gas, its share of the global market in both cases is about 5%. Canada cannot move the global price or demand for energy. By selling into the global market, it merely displaces supply from Venezuela, Mexico, Iraq, Qatar, or others.

The backdrop is clear: there is now and will be in the foreseeable future a demand for Canada's energy resources. If the economics for our producers are right, and if the infrastructure exists to get the product to market, a modest increment of our share of global supply —e.g., one or two percentage points off a global demand of some 100 million barrels per day—could make a material difference to Canada's prosperity.

Two questions may now be asked. First, can Canada supply more energy to the world in a way that also contributes to global emissions reduction? The answer is yes. Historically, Canada's oil sands crude, which represents close to two-thirds of Canada's current output, has been in the upper tier of emissions intensity (and cost of extraction) among crudes in the global market. However, improvements in technology and processes have brought emissions intensity and costs in the oil sands down and there is room for further significant progress over the next decade.[41] In fact, the more recent oil sands projects are already within the range of emission intensity of the average barrel refined in the United States. The same is true for our existing supplies of conventional oil (including "tight" oil) and condensates. For liquefied natural gas (LNG), the British Columbia government and the industry together are committed to delivering the cleanest supply in the world. Canada has a far more rigorous and transparent regulatory regime, as well as higher industry standards and practices, than virtually any other producing jurisdiction.

Canada can set a goal to grow its global market share by supplying oil and gas that has lower emissions intensity than the competition. To do so, it can draw on a rich resource base and world-leading know-how and innovation capacity.

As noted by the IEA, this period is one both of challenge and opportunity for the industry:

> "It should not be taken for granted that the comparative advantage in energy of major producers disappears during energy transitions. These countries can produce some of the least costly and least emissions-intensive oil and gas, and could choose to play a leading role in energy technology development, including areas such as carbon capture, utilization and storage and hydrogen supply."[42]

Indeed, in the best of worlds, Canada would set the global standard and export not only its resources but also its technology for the efficient extraction and transmission of oil and gas. There is no reason for Canada to take a back seat to Norway or other global producers in this endeavor.

The benefits of responsible energy supply can be realized across the country, upstream through the supply chain (including clean technology), mid-stream by the displacement of imports, and downstream through secondary and tertiary industries that in turn can grow market share.

The second question is whether Canada can grow its energy exports while also lowering its domestic emissions and meeting ambitious targets. The answer again is yes, as demonstrated by the record to date. On the current track projected by Environment and Climate Change Canada (ECCC), Canada's emissions would drop by some 20% relative to 2005, by 2030.[43] Of course, this is short of the current target of 30% reduction, but importantly it accommodates substantial growth in our oil supply and exports as well as some LNG development.[44] For 2030, the projection for emissions is aligned with the absolute cap of 100 Mt of GHG emissions in the oil sands agreed by the major producers in 2017. Taking this scenario and the current target as a baseline, the key issue is how to close the outstanding emissions gap. Constraining oil or gas production is unlikely to be a cost-effective means for Canada of meeting any reasonable emissions reduction target in the foreseeable future.

Again, projections can be challenged on many grounds. No outcome is pre-determined. Both markets and policy —and how they will evolve globally and at home—will matter. However, Canada has a strong incentive to make

this equation work: growing its energy exports and lowering its emissions.

For example, the IEA estimates that if Canada were to carry out economically and technically feasible energy efficiency investments and measures for buildings, transportation, industry and the energy sector, we could reduce energy demand by about one third by 2050 without cutting into economic output or energy production for export.[45] The IEA estimates that there would be broad-based benefits for Canada, including an improved balance of trade and reduced household energy expenses.

We can develop and export technology across energy sources, including nuclear energy that has a role to play globally in a low carbon future. Canada is well positioned to be a testbed and launchpad for small modular reactor technology that can deliver emission-free energy on and off grid.

There will continue to be extensive debate on the right policy instruments to meet or exceed domestic emission reduction targets. Economists will continue to argue that under the right set of conditions, a carbon price is the least-cost means of lowering emissions. Regulation, also with the right design, can be an alternative or a complement. Technology can no doubt make a significant contribution. No single instrument will be sufficient. All industries, businesses large and small, and consumers must make a contribution.

On the other side of the equation, the pace of energy development will be affected by the progress of key investments projects such as TMX and Canada LNG, as well as by legal and regulatory decisions in the U.S. on Keystone XL and the Line 3 replacement projects. The regulatory framework to review future energy and infrastructure projects under federal (e.g., Bill C-69) and/or provincial legislation will also matter. Indigenous participation in energy development can be an important lever.

It is important that the national conversation be anchored in facts—the science *and* the economics—and then scenarios that draw out alternative strategies for Canada, their costs, risks and benefits. The right strategy and the right challenge for Canada is to integrate two pursuits into one plan: reduce our domestic emissions and grow our energy exports.

There can be a vigorous discussion about how the different regions of the country can realize opportunity and also share the cost of adjustment to a lower carbon future. What matters first is a vision with the widest possible participation. Pushing off access to export markets or meaningful action for emission reduction through sterile debate is both making Canada poorer and raising the cost we will incur to help solve a global problem.

Adapting to a Changing Climate

While doing what we can to reduce emissions, we must also be ready to adapt to a changing climate. This includes pursuing resilient infrastructure, as well as policies that facilitate adjustment of regions, and industries such as agriculture and forestry, to a changing climate. Innovation again can be an important lever of change.

The World Meteorological Organization (WMO) reports that the average global temperature is on track to be the warmest of any five-year period on record; it is estimated today to be 1.1°C above pre-industrial times.[46] Heatwaves, record-breaking fires, tropical hurricanes, floods and drought all are having major impacts on populations and the environment. Arctic and Antarctic sea ice and glaciers are melting, also at the highest rates on record, causing accelerated sea rise. Such developments have been predicted for years by scientists who study climate change.

In Canada, the impacts of climate change are also visible. Environment and Climate Change Canada estimates that our climate is warming twice as fast as the rest of the globe; Northern Canada is estimated to have warmed—and will continue to warm—at even more than double the global rate.[47] Together with extreme weather events, a changing climate affects our coasts, water, forests, agriculture, infrastructure, homes, properties, and ultimately Canadians and their health and well-being.

While Canada cannot alone solve the problem of mitigating climate change, decision makers in this country hold *all* the cards for how we adapt to a changing climate and how we reduce the risk of damage inflicted by climate change. This is not the business of any one government or decision maker; it is a responsibility that is distributed across all regions and sectors of the country.

The Commissioner of the Environment and Sustainable Development has observed that Canada needs a sturdier

adaptation framework that identifies key risks, sets priorities for action, and ensures oversight.[48] The federal government must exert leadership: it can draw attention to the challenge, work with provinces and territories, convene other parties and experts, disseminate information, and drive the development of a cohesive framework. All of these efforts can be stepped up.

Realistically, federal fiscal resources devoted explicitly to this end will be limited, but a climate resilience and adaptation lens should be applied, in particular, to all spending on physical assets, including infrastructure programs implemented jointly with the provinces and territories. The test for each new infrastructure project is simple: Can it withstand the effects of a changing climate or extreme events? Infrastructure supported by the Canada Infrastructure Bank should undergo the same analysis, as indeed should any privately-funded infrastructure project.

Disclosing and Managing the Risks

If we are to mobilize action for climate change mitigation and adaptation, we must deploy effective tools to assess, disclose and manage risk. Globally, investors—at least in principle—place their money where they earn the highest risk-adjusted returns. Disclosure of environmental performance and exposure to climate-related risks can make it easier for capital to identify the assets and activities that are better insured against the risk of climate change. This can be an important tool to accelerate environmental action across all sectors, including the energy sector.

A Task Force on Climate-related Financial Disclosures (TCFD) created under the auspices of the Financial Stability Board (FSB) is promoting voluntary, consistent climate-related financial risk disclosures that companies can use to provide information to investors, lenders, insurers, and other stakeholders.[49] An initiative now comprising more than 370 institutional investors worldwide with more than US$35 trillion in assets under management—Climate Action 100+—is committed to engage the world's largest corporate GHG emitters to strengthen their climate-related disclosures and to take necessary action on climate change.[50]

Earlier this year, a Canadian expert panel on sustainable finance recommended an approach to implementing the recommendations of the TCFD. Importantly, it also suggested how to use financial expertise and influence to embed climate change opportunity and risk management into everyday business decisions, products and services. The panel's recommendations covered the financial sector's role in planning and financing an energy and economic transition; this would include its involvement in clean technology, oil and gas, buildings, infrastructure and the electricity grid. The panel's report is an important reference for policy makers and for an integrated Canadian response to climate change.[51]

Canada has an interest in promoting transparency and disclosure of facts and evidence as a better way to instil discipline and incite action than international campaigns that unfairly target individual countries, resources bases or companies. The securities regulators have a role to ensure that there are appropriate disclosures. In turn, prudential regulators, including the Office of the Superintendent of Financial Institutions (OSFI), can ensure that the risks of climate change in our financial system are managed rigorously and effectively.

In short, the financial marketplace can be a catalyst for better environmental performance, adjustment to a changing climate, and the management of related risks. Objective and transparent financial information can also inform policies and enable the economy to achieve better outcomes.

36. Environment and Climate Change Canada, *2018 Canada's Greenhouse Gas and Air Pollutants Emissions*: http://publications.gc.ca/collections/collection_2018/eccc/En1-78-2018-eng.pdf

37. Between 2005 and 2018, Canada's production of crude oil and equivalent grew by 85%, to 4.6 million barrels per day (mb/d); this includes a tripling of production from the oil sands to 2.9 mb/d. The trend for natural gas has been different because of the rise of shale production in the U.S. Canada's natural gas output dropped about 5% over the period from 2005 to 2018, with growing domestic demand insufficient to offset a sharp fall of net exports to the U.S. See Canadian Energy Regulator (former National Energy Board): https://www.cer-rec.gc.ca/nrg/sttstc/crdlndptrlmprdct/stt/stmtdprdctn-eng.html

38. Environment and Climate Change Canada.

39. International Energy Agency, *World Energy Outlook 2018*, https://www.iea.org/weo2018/. This text was finalized before the publication of the 2019 edition of the World Energy Outlook on November 13.

40. To keep the rise in global temperatures to no greater than 2°C, the Intergovernmental Panel on Climate Change (IPCC) estimates that global emissions must be reduced by 25% by 2030, on track to get to net zero emissions by 2070. Emission must be net zero by 2050 if the goal is to limit the rise of temperatures to 1.5°C. See Intergovernmental Panel on Climate Change, *Special Report: Global Warming of 1.5°C, Summary for Policymakers* https://www.ipcc.ch/sr15/chapter/spm/

41. For analysis of potential improvements in the oil sands, see for example: IHS Markit, *Greenhouse Gas Intensity of Oil Sands Production, Today and in the Future*, September 2018.

42. International Energy Agency, *World Energy Outlook 2018 – Special Report, Outlook for Producer Economies*, https://webstore.iea.org/weo-2018-special-report-outlook-for-producer-economies

43. From ECCC, comparing emissions in 2005 with projected emissions in 2030 under "additional measures case" that incorporates federal, provincial and territorial policies and measures announced but not yet fully implemented. The projection for 2030 also includes credits under the Western Climate Initiative and contributions from Land Use, Land Use Change, and Forestry (LULUCF).

44. For its modeling, ECCC uses the baseline oil and gas supply projections from the Canadian Energy Regulator. Accordingly, the latest projections for Canada's GHG emissions assume growth in oil supply to some 5.9 million barrels per day by 2030. The projections also embed a modest rise in the supply of natural gas by 2030.

45. International Energy Agency, *Energy Efficiency Potential in Canada to 2050*, 2018: https://www.iea.org/publications/freepublications/publication/Insights_Series_2018_Energy_Efficiency_Potential_in_Canada.pdf

46. See highlights from The Global Climate in 2015-2019, World Meteorological Organization (WMO), *Science Advisory Group Report to the UN Secretary-General's Climate Action Summit 2019*: https://www.un.org/sustainabledevelopment/blog/2019/09/unite-in-science-report/

47. Environment and Climate Change Canada, *Canada's Changing Climate Report 2019 – Executive Summary*: https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/energy/Climate-change/pdf/CCCR_ExecSumm-EN-040419-FINAL.pdf

48. Commissioner of the Environment and Sustainable Development, *2017 Fall Reports to the Parliament of Canada, Report 2—Adapting to the Impacts of Climate Change*, http://www.oag-bvg.gc.ca/internet/English/parl_cesd_201710_02_e_42490.html

49. See: https://www.fsb-tcfd.org/

50. See: http://www.climateaction100.org/

51. *Final Report of the Expert Panel on Sustainable Finance—Mobilizing Finance for Sustainable Growth*, 2019, https://www.canada.ca/en/environment-climate-change/services/climate-change/expert-panel-sustainable-finance.html

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***Bennett Jones Fall 2019 Economic Outlook*, November 2019**

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