



#### **Preface**

The federal, provincial, and territorial governments are in substantial deficit positions. However, the provinces and territories face a bleaker fiscal outlook. Changing demographics will have a major impact on health care costs, which is the largest spending category for these governments. Without substantial changes, the provinces and territories will see their collective deficit balloon over the next two decades. This report provides a long-term fiscal forecast for the federal government and the collective provincial and territorial governments to assess their future fiscal capacity and identify where problems are likely to arise.

#### **Acknowledgements**

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The findings and conclusions of this report are entirely those of The Conference Board of Canada. Any errors or omissions in fact or interpretation remain the sole responsibility of The Conference Board of Canada.

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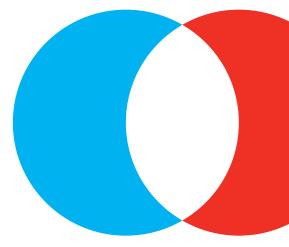
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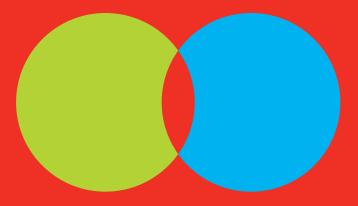
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## The Fiscal Health of Canadian Governments

## **Executive summary**



The federal and provincial governments ran huge deficits in the aftermath of the 2008–09 financial crisis. Despite decent economic growth since then, they have made little progress balancing their books. As Canada's economic growth slows in tandem with an aging population, governments across the country will face even more challenges controlling deficits.

The goal of our analysis is to provide a longterm fiscal forecast for the federal and provincial governments to assess their future fiscal capacity and pinpoint where pressure points are likely to arise.

The fiscal outlooks for the federal and provincial governments are tied to the outlook for gross domestic product (GDP), since GDP provides the broadest measure of our tax base. Despite strength over recent months, the Canadian economy is set to grow by an anemic rate of only 1.4 per cent this year. Growth will remain soft over much of the medium term given transportation constraints in the energy sector, highly leveraged households, and mounting uncertainty on the global economic front as threats of trade wars weigh on business and consumer confidence. Unfortunately, the news is not much brighter over the longer term. The combination of lagging productivity and an aging population, the latter of which will hold back labour force gains, will weigh on our economy's overall rate of potential economic growth. From 2024 to 2040 we anticipate average annual real GDP growth of just 1.8 per cent.

A future of sub-2 per cent economic growth pales in comparison to the growth Canada has experienced over the past few decades. This weaker growth has important implications for the fiscal outlook both federally and provincially. Revenue growth will slow alongside weaker GDP gains and this, in turn, has the potential to limit government's ability to fund public services.

While the federal fiscal position has deteriorated substantially over the last decade, relative to the provinces and territories the long-term outlook is still positive. We expect the federal government to return to balance by 2030–31, despite a significant increase in old age security payments as our population ages. Beyond 2030–31, the federal government will have substantially more room to announce new spending or tax cuts. Based on current plans, this improved position will allow the government to lower its net debt from its current value of \$771 billion to \$679 billion by 2040.

In contrast, the provinces and territories face a bleaker fiscal outlook. The increase in retirements will certainly slow revenues, but health care systems in these jurisdictions will also face considerable strain in meeting the needs of this aging population. Increased demand for health services is critical to the provincial and territorial fiscal outlook because health care is the largest spending item in those budgets. In 2018–19, provincial and territorial governments spent \$174.5 billion, or 40 per cent of their budgets, on health care services.

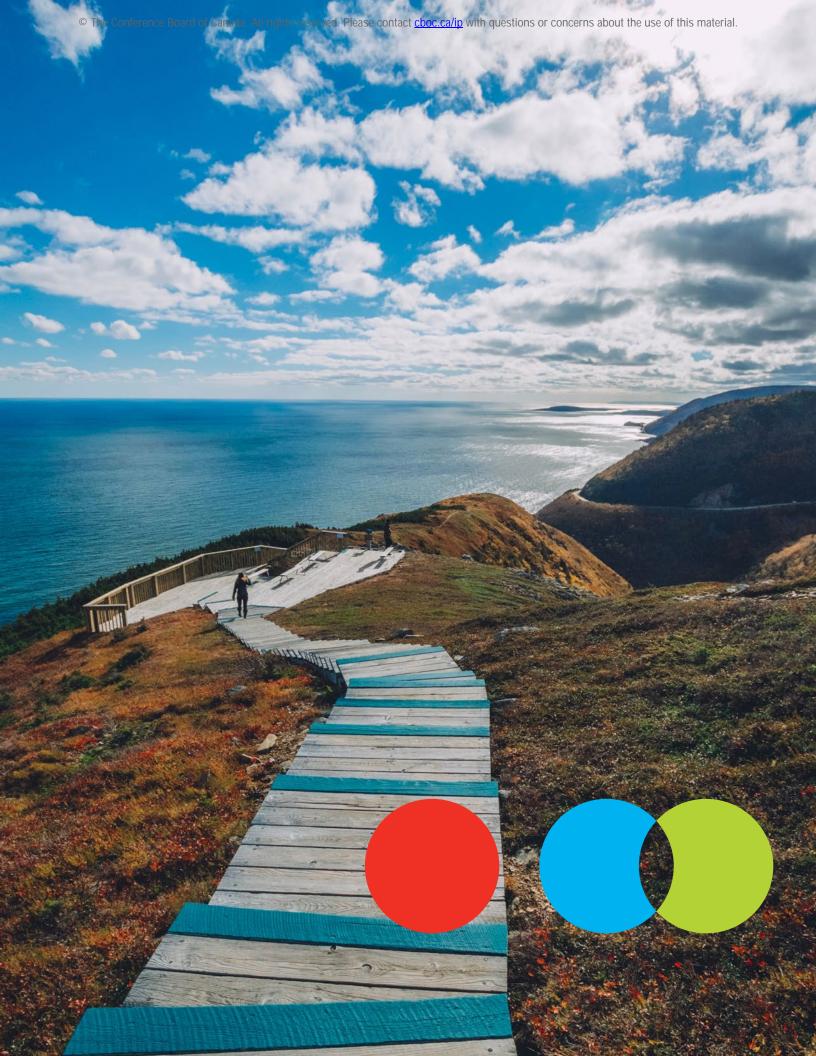
Given that the outlook for health care spending is a key driver of the provincial and territorial fiscal outlook, this report examines two potential future paths for health expenditures. In a low spending scenario, we assume that provinces and territories can freeze real age-adjusted per capita expenditures. In a high spending scenario, we assume that they allow for small increases in real per capita spending to accommodate factors such as increased utilization and advances in technology.

Under both scenarios, the provinces and territories face a rapid and large deterioration in their fiscal finances. In the low spending scenario, health care costs reach \$451 billion in fiscal 2040–41. Net debt reaches nearly

\$1.7 trillion—35 per cent of GDP compared to its current level of 30 per cent. The outlook is bleaker in the high spending scenario, with health care costs hitting \$504 billion and provincial and territorial net debt reaching an eye-popping \$2.3 trillion, equivalent to 47 per cent of GDP.

The fiscal outlooks examined in this analysis provide insight into the fiscal pressures that exist within the current system of taxation and transfers, given rising demand for public services. It is highly unlikely that the provinces and territories will allow their net debt levels to rise anywhere close to even the share of GDP observed in the low spending scenario. What this means is that they are facing some tough decisions ahead on how to manage their budgets.

Without a new approach, the provinces and territories will continue to walk a tightrope between longer health care wait times and larger deficits. They must focus on improving health care productivity. However, all levels of government must also work more closely together to ensure the system is properly funded so all Canadians have access to appropriate levels of care.



#### **Introduction and report objectives**

# Canada's federal and provincial governments continue to slowly recover from the 2008–09 financial crisis, but the next fiscal squeeze is already on the horizon.

Both levels of government face slowing growth in tax revenues due to the changing demographics that will see a large number of retirements over the next decade. At the same time, the provinces and territories will also have to contend with rising health care costs, given that per capita health expenditures increase with age. With health care being the largest line item in provincial and territorial expenditures, there will be a significant impact on their budgets as provinces and territories look to meet the needs of Canada's aging population.

While the federal government will also feel the impact of slowing revenue growth, relative to the provinces and territories, it has a brighter fiscal outlook. Indeed, the federal government is on track to balance its books by 2030–31. Our forecast suggests that the provinces and territories will not be as fortunate, and this raises the following question: How bad will the budget pressures get? Our analysis attempts to answer this question by developing a long-term outlook for federal and collective provincial finances based on our economic and demographic forecasts. We also explore how the fiscal outlook for the provinces and territories would change under different health care spending assumptions.

This report begins by summarizing our methodology, following with a section on the economic forecast. We then present the results of our analysis. The report concludes with a highlight of key take-aways and some final thoughts. Finally, an appendix provides a detailed methodology.

#### **Methodology**

The demographic and economic forecasts are critical components of the fiscal analysis presented in this report. The Conference Board has over 30 years of experience producing demographic and economic forecasts at the national and provincial levels. This section provides a brief overview of our methodology. A more detailed summary can be found in Appendix A.

Our demographic outlook takes into account recent trends in birth rates, mortality rates, immigration, and emigration. The resulting population forecast by age and gender provides the foundation for our economic outlook.

The medium-term economic forecast reflects all available current information on Canadian and global economic conditions. While it relies on a detailed model, the forecast is adjusted based on the monitoring of current economic and industry conditions. Our long-term outlook of the Canadian economy relies on our estimate of growth in potential output. Potential output growth reflects the degree to which the Canadian economy can expand in relation to its potential labour supply, capital stock, and available technology.

Our economic and demographic forecasts are then used to generate an outlook for federal and provincial government revenues. Income taxes are projected based on expected growth in personal and corporate income; sales taxes are based on projections of household spending; and royalties are based on our estimates of resource production and resource prices. Many smaller categories of revenues that are not closely tied to the economy, such as foreign exchange revenues, are assumed to grow in line with population growth and inflation.

On the federal expenditure side, many programs can be projected based on underlying demand. Expenditures on old age security are based on projections of the number of recipients and average pension costs; employment insurance benefits are based on estimates of the number of eligible unemployed combined with the average benefit; and maternity benefits are based on the number of children born. Government transfers to other levels of government are projected based on current legislated formulas. For example, health transfers are projected in line with a

three-year moving average of nominal GDP, with a minimum floor of at least 3 per cent per year. Other direct expenditures are forecast based on spending announcements from the latest budget. Beyond the budget projections, spending is projected to increase in line with inflation and population growth. For both federal and provincial expenditures, debt service costs are tied to our projection of interest rates and the stock of government debt.

On the provincial and territorial side, expenditures are projected across three main categories:

- 1. education
- 2. health care
- 3. social services and other program spending

Education expenditures are estimated based on projections of the number of students and inflation in the education sector. Social services and other program spending is projected to grow in line with inflation and population growth.

Health care is the largest provincial and territorial expenditure category. In this case, we model expenditures based on demand for provincial and territorial health care spending for eight different categories. The forecast for five of these categories is driven by the outlook for population based on age and gender. That means that our model incorporates not only population growth but also how demand changes based on age and gender shifts in our population. The other three categories in our model—capital investment, public health administration, and other health administration—are forecast based on recent trends in real per capita terms.

Although the economy may grow faster in some years and more slowly in others, in the long run this productive potential is a good predictor of an economy's growth.

This report assesses two health care projection scenarios. The first, a low spending scenario, freezes real per person health care spending by age and gender. Spending growth lower than this amount would require year-after-year improvements in productivity-something that the government has not managed to do in previous years. The second, which is a high spending scenario, increases real per person spending for each age category based on long-term trends. Overall, this results in an increase of 0.5 per cent per year in health care spending. This accounts for such factors as increased utilization in the health care system and new technologies. While real per person spending on health care fell in the late 1990s, it bounced right back, suggesting that the cuts did not reflect long-term productivity improvements but merely temporary factors such as wage freezes.

### Long-term economic outlook

Our long-term economic forecast rests heavily on our projections of Canada's level of sustainable growth. Sustainable, or potential, output depends on the size of the workforce available in an economy, the stock of productive capital, and how effectively people work. Although the economy may grow faster in some years and more slowly in others, in the long run this productive potential is a good predictor of an economy's growth.

In Canada, potential output is slowing due largely to decelerating labour force growth. The labour force participation rate hit an all-time high in the first quarter of 2008 and is not expected to return to that peak. Instead, the participation rate will continue to drift downward throughout the forecast. Canada's population is aging, and the slow withdrawal of the baby boomers from the workforce over the forecast will put continuous downward pressure on the participation rate. The average Canadian retirement age is 63.6, and with the eldest members of the baby boomer cohort having turned 72 in 2018, many boomers have already left the workforce. However, the baby boomer cohort is not evenly distributed. Tail-end boomers—those aged 53 to 62—are more numerous. As a result, the exodus of retirees has not yet peaked. As the tail-end boomers move into retirement, their departure will have a considerable impact on the labour force. Labour force growth managed an average annual increase of 1.7 per cent in the decade leading up to the recession but will average just 1.0 per cent per year over the next five years. Labour force growth will then dip to between 0.7 per cent and

0.8 per cent per year from 2023 to 2040 – and those figures would be much lower were it not for large increases in immigration.

One of the other major factors driving potential output is labour productivity. On this front, population aging is not all bad news for Canada's long-term prosperity. As available labour becomes increasingly scarce and thus relatively more expensive, businesses are expected to adopt more innovative production processes and to invest heavily in machinery, equipment, and technology. This will result in a substantial pickup in labour productivity growth (measured as output per hour worked), which is expected to average 1.4 per cent per year between 2019 and 2040. That is up from an average of 1.1 per cent over the last decade.

GDP growth expanded by 3 per cent in 2017 and 1.9 per cent in 2018, but we project growth of just 1.4 per cent in 2019. The Canadian economy is being held back by slowing consumption growth, poor exports, and weak business investment. A slowing global economy also represents a risk in the medium term. Overall, we expect real GDP to post an average annual growth of 1.7 per cent from 2020 to 2023.

Although those growth rates may not seem impressive, they are still stronger than our estimate of potential output for Canada. This kind of above-potential growth can continue for only so long. We expect the economy to reach full capacity early in the 2020s; once that happens, growth will slow in line with its underlying economic potential. Unfortunately, that underlying economic potential is growing significantly slower than Canadians have come to expect. Lagging productivity growth and slowing labour force

growth (brought about by population aging) mean that annual real GDP growth rates will rarely rise above 2 per cent. From 2024 to 2040 we anticipate average annual growth of just 1.8 per cent.

There are a number of factors that could move long-term growth higher or lower than we expect. Business investment is a major determinant of the productive capacity of the economy, and investment in Canada has been largely dismal since 2014. As a share of GDP, Canada's investment is now more than 3 percentage points below the U.S. share. It is also 2.6 percentage points below its recent high, reached in 2014. Stronger investment in the economy's stock of productive capital, and therefore higher levels of productivity, could help offset slower labour force growth brought about by the continued aging of the population. This represents upside risk to the forecast.

On the other hand, there are plenty of downside risks too, suggesting that the economy could grow even more slowly than we anticipate. When business investment has been so poor for so long, it is difficult to see a scenario where it comes back strong. And there are other risks. It is almost impossible to predict the timing of recessions, so we do not include any in our forecasts, even though it is reasonable to expect that at least one will occur in the next two decades. However, this is less of an issue than at first glance. A recession is unlikely to dramatically affect our projections because the economy tends to accelerate coming out of a recession, and this burst of growth is also not included in our current outlook. Finally, Canada is hugely dependent on immigration for its labour force

growth; rising public concerns about immigration could result in lower labour force growth and thus lower economic growth.

#### **Detailed forecast results**

The financial crisis of 2008–09 plunged both the federal and collective provincial governments into massive deficits. In the decade since, improvements have been made on the deficit but both levels of government still find themselves in a sizable hole in 2018–19. Cumulative provincial and territorial deficits are estimated to total \$16.9 billion, while the federal government is set to post a \$14.5-billion deficit. According to our outlook, the fiscal fortunes of the two levels of government will diverge: the federal government is expected to balance its books by 2030–31, while an aging population will place immense pressure on provincial and territorial finances and result in rising deficits.

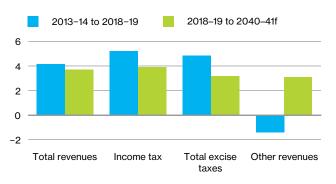
### Federal government fiscal forecast results

#### Revenues

Over the next 20 years, as Canada's demographic shift advances, the federal government will face limited revenue growth in many ways. First, Canada's highest income earners will rapidly enter peak retirement ages. Despite Canadians retiring later in life, this will still constrain federal income tax revenues. Similarly, retirees tend to spend less money on new homes, furnishings, and other major purchases and, as such, we expect the sales tax collected from such purchases will be lower going forward. Marginal increases in excise taxes, employment insurance

revenues, and other revenue streams will help federal revenue growth but not be enough to offset the dampening effects of an aging population. We expect revenues to grow at a slower pace than in the last five years, increasing by 3.7 per cent per year from 2018–19 to 2040–41 compared to an average annual rate of 4.2 per cent from 2013–14 to 2018–19. (See Chart 1.)

Chart 1
Components of federal revenue growth (average annual growth, per cent)



f = forecast Sources: The Conference Board of Canada; Statistics Canada.

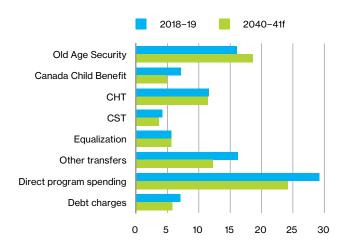
#### **Expenditures**

Fortunately, federal government expenditures, which include four major categories (major transfers to persons, direct program spending, transfers to other levels of government, and other transfer payments), will grow even more slowly than revenues. Old age security, the largest component of major transfers to persons, is expected to be the fastest-growing expenditure over the next 20 years, consistent with the vast number of Canadians who will reach the age of 65 over the medium term. That said, growth in old age security payments will peak within

the next five years and then decelerate, in line with slowing growth in the population aged 65 and over. At the same time, the number of unemployed will decline over the forecast, given our assumption that Canada will approach full employment. Accordingly, growth in employment insurance benefits will also decelerate over the next 20 years. Overall, we expect major transfers to persons to increase at an average annual rate of 3.7 per cent over the forecast period, well below the pace of growth over the prior 10 years.

The second-largest expenditure category, total direct program spending, is projected to grow at an average annual rate of 2.8 per cent. This category, which consists of spending on all departments including National Defence, is largely driven by inflation and population gains. The third-largest spending category is transfers to other levels of government and includes the Canada Health Transfer (CHT), the Canada Social Transfer (CST), and transfers related to the Equalization and Territorial Formula Financing (TFF) programs. This category follows set formulas. We expect it to increase at an average annual rate of 3.4 per cent, in line with nominal GDP growth. Finally, other transfer payments are assumed to grow at the same pace as inflation plus population growth. Put together, total program spending (excluding debt repayment charges) for the federal government is expected to grow by 3.2 per cent per year over the forecast period. (See Chart 2.)

Chart 2
Federal expenditures as a share of federal revenues
(percentage share)

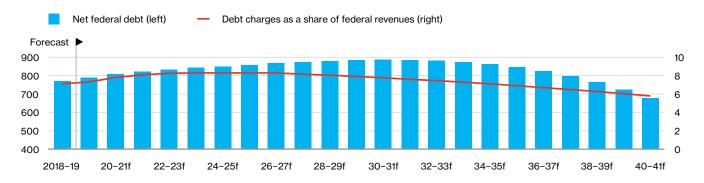


f = forecast Source: The Conference Board of Canada.

#### **Budgetary balance**

Without any further spending announcements, tax cuts, or recessions, the federal budget will balance by 2030–31, and the 2018–19 deficit of \$14.5 billion will turn into a surplus of \$49.4 billion by 2040–41. This return to the black will allow the federal government to lower net debt–from 34.5 per cent of GDP today to 13.9 per cent in 2040–41–and in turn, lower debt repayment costs. It follows, then, that debt charges as a share of revenues will decline over the forecast, falling from 7.1 per cent today to 5.8 per cent by 2040–41. (See Chart 3.)

Chart 3
Federal net debt and debt charges set to drop
(federal net debt, \$ billions; debt charges as a share of federal revenues, per cent)



f = forecast Sources: The Conference Board of Canada; Statistics Canada.

Alternatively, rather than running large surpluses and lowering the debt, the federal government will also have the flexibility to cut taxes, increase spending, or do both. This scenario is not explored in this report.

### Provincial and territorial fiscal forecast results

#### **Revenues**

As was the case with the federal government, the provincial and territorial revenue base will be dampened over the next 20 years. However, unlike the federal government, which will see expenditure growth slow even faster than revenue growth over the forecast period, the provincial and territorial governments will see rising demand for health care services push expenditure growth above revenue growth. Thus, higher deficits are in the cards.

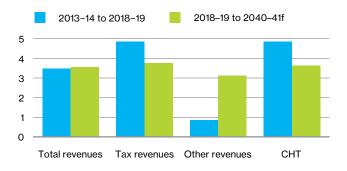
Tax revenues will be the biggest driver of provincial and territorial revenue growth.

Revenues from personal and corporate income taxes are forecast to post an average annual growth of 4.4 and 4.1 per cent, respectively, from 2018–19 to 2040–41. Meanwhile, other tax revenues, including tobacco and gasoline taxes, will see weaker growth over the forecast period (both are expected to increase by 2.4 per cent per year) as consumers continue to reduce their tobacco use and buy fewer vehicles. Other revenues, which include royalty and Crown corporation revenues, are projected to climb by 3.1 per cent per year over the forecast.

The federal government is the provinces and territories' second biggest source of revenue. They receive billions of dollars each year through a variety of transfer programs, including the Canada Health Transfer (CHT), the Canada Social Transfer, and Equalization. Transfers from most of these programs grow in line with the Canadian economy in nominal terms. In the case of the Canada Social Transfer, growth is locked in at

3 per cent annually. Put together, we expect transfers to grow by 3.4 per cent per year over the forecast period. This, along with our outlook for own-source revenues, implies that total revenues will increase at an average annual pace of 3.6 per cent between 2018–19 and 2040–41. (See Chart 4.)

Chart 4
Components of provincial revenue growth (average annual growth, per cent)



f = forecast Source: The Conference Board of Canada.

#### **Expenditures**

While provincial and territorial revenue growth is comparable to federal projections, expenditure growth in the two levels of government will diverge. This divergence will be driven by the health care file, which is primarily a provincial and territorial responsibility and represents the largest portion of those budgets. In fact, already today, health care spending accounts for 40 per cent of provincial and territorial government revenues.

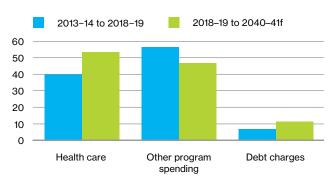
In our analysis, we developed two scenarios to identify best-case and worst-case outcomes for health care demand in Canada's provinces and territories. The first scenario, the "low spending scenario," freezes real age-adjusted health spending. We based this scenario on an assumption that the provinces and territories will cap spending increases to those required to meet changes in population, a shifting age structure, and inflation. The "high spending scenario" allows for small increases in real per capita age-adjusted health care funding to account for such factors as increased utilization rates and advances in technology. We based this scenario on observed historical patterns-real per capita age-adjusted spending has been increasing in recent years. The difference in health care spending is the only variation across the two scenarios. Of course, with higher health care spending, provincial and territorial deficits are larger, meaning more net debt and subsequently more debt charges.



If the provinces and territories can restrict health care spending to zero real per capita gains, health care will grow at an average annual pace of 4.4 per cent over the forecast period. This means that health care spending will rise from \$174.5 billion in 2018–19 to \$451 billion in 2040–41. In this scenario, health care as a share of revenues rises to 47.8 per cent by 2040. In the high spending scenario, health care grows at a faster average annual clip of 4.9 per cent, with the level of spending rising to \$504 billion by 2040–41 and eating up 54 per cent of revenues. This clearly means less money will be available for other government services. (See Chart 5.)

### Chart 5 Provincial expenditures as a share of provincial revenues

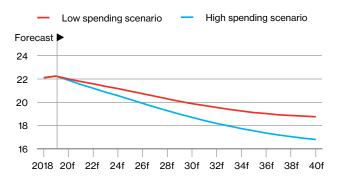
(percentage share, high spending scenario)



f = forecast Source: The Conference Board of Canada.

Under both scenarios, health care spending by the provinces and territories rapidly outpaces federal funding from the Canada Health Transfer. When the federal health transfers were first conceived, the federal government set a goal of covering 50 per cent of provincial and territorial health care spending. But this goal has not been met for several decades. In fact, the CHT currently accounts for only 22 per cent of provincial and territorial health care spending. And, according to our projections, the federal government will drift further away from this goal in both scenarios. By 2040–41, the CHT will account for just 18.8 per cent of health care spending in the low spending scenario and only 16.8 per cent in the high spending scenario. (See Chart 6.)

Chart 6
CHT as a share of health care spending (percentage share)



f = forecast Sources: The Conference Board of Canada; Statistics Canada.

#### **Budgetary balance**

Ultimately, these dynamics indicate that with no further changes in the form of tax hikes, spending cuts, higher federal government transfers, or productivity gains, provincial and territorial government debt will explode due to rising health care costs. The cumulative net debt of the provinces and territories will rise from \$646 billion in 2018–19 to \$1.7 trillion in 2040–41 in the low health care spending scenario and to \$2.3 trillion

in the high health care spending scenario. In contrast, recall that federal debt levels are forecast to decline over the same period from \$771 billion to \$679 billion. (See Chart 7.)

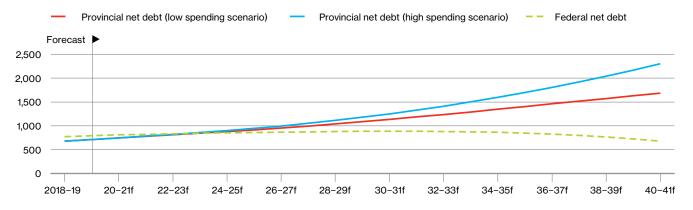
And as provincial and territorial debt continues to mount, debt charges will grow at a rapid pace, rising from \$30.2 billion today to \$81.3 billion in 2040–41 in the low spending scenario and \$107.3 billion in the high spending scenario. The rise in debt charges will eat up more revenues. Debt charges, which currently account for 6.9 per cent of provincial and territorial revenues, will eat up 8.6 per cent of revenues in 2040–41 in the low spending scenario and 11.4 per cent of revenues in the high spending scenario.

#### **Key take-aways**

Both levels of government are currently running substantial deficits. However, the fiscal outlooks for the federal government and Canada's provinces and territories are heading in different directions. On the one hand, the Government of Canada is forecast to return to balance by 2030–31, with significantly lower debt levels by 2040–41. On the other hand, provincial and territorial governments face a grim future of ballooning deficits as Canada's demographic shift advances over the next 20 years.

Canada's aging population will impact provincial and territorial finances in two ways. First, health care costs are set to rise considerably over the

Chart 7
Net debt levels set to diverge
(net debt by level of government and scenario, \$ billions)



f = forecast Sources: The Conference Board of Canada; Statistics Canada. next two decades as Canada's baby boomers—
the country's largest population segment—begin
to use health systems more often and at higher
intensity. Second, tax revenue growth will
decelerate as high-income-earning baby boomers
exit the workforce and the economy slows. This
last factor will have the same effect on federal
government tax revenue growth.

As health care spending rises, it will consume increasingly larger shares of government revenues. In 2018–19, health care expenditures accounted for just under 40 per cent of revenues. But by 2040, this share will grow to between 47.8 and 54 per cent. Accordingly, provincial and territorial governments could see their cumulative deficit increase from \$17 billion this fiscal year to between \$30.3 billion and \$109.2 billion by the end of the forecast period.

Of course, rising health care spending and larger deficits mean that net provincial and territorial debts will balloon to unsustainable levels. While cumulative net provincial and territorial debt currently stands at just over \$500 billion, we forecast this value could rise to a record high of between \$1.7 trillion and \$2.3 trillion by 2040–41. In turn, debt charges will consume a rising share of spending. Debt charges as a share of revenues will rise from 6.9 per cent to between 8.6 and 11.4 per cent over the forecast period, leaving Canada's provinces and territories with fewer dollars to spend on fundamental government services.

Without a new approach, provinces and territories will continue to walk a tightrope between longer health care wait times and larger deficits. They must focus on improving health care productivity. But all levels of government must also work

Without a new approach, provinces and territories will continue to walk a tightrope between longer health care wait times and larger deficits.

more closely together to ensure the system is properly funded so all Canadians have access to appropriate levels of care.

## Final thoughts: How to adjust to Canada's changing demographics

Naturally, it is important to ask what can be done to help stabilize Canada's fiscal capacity against changing demographics and rising health care costs. One solution is higher taxes. This approach would generate additional revenue for health care spending at both the federal and provincial levels but, concurrently, would deter consumer spending and investment in the economy. Taxes in Quebec and the Atlantic provinces are already high, so raising taxes for health care spending might weaken their already modest economic outlooks. For other provinces and territories, and

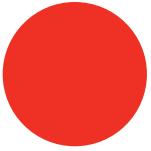
even the federal government, raising taxes might destabilize business confidence and lead to fewer large-scale investment opportunities, hurting the economy's potential output.

Another option is improving Canada's productivity. Higher productivity levels in the economy, especially in health care, mean that fewer dollars need to be spent to achieve similar outcomes. Unfortunately, productivity levels are stagnating in Canada and are forecast to hover at just over 1 per cent between now and 2040. Without fundamental changes in Canada's economic systems, there is no reason to believe that productivity levels will rise exponentially.

What about fiscal austerity? Of course, the federal and provincial governments could reduce their expenditures in other areas like public infrastructure, public administration and other social programming to offset increases in health care spending. But, while this financial

strategy might work in the short run, it cannot be sustained forever and eventually would need to be reversed. For health care, it is difficult to envision major cost reductions without impacting wait times, knowing that demand is set to rise in the long run. Critically, many provincial and territorial governments have already reduced their expenditures outside of health.

Because of the immense challenge facing provincial and territorial governments, creative solutions must be considered. A strong focus on making productivity improvements in health care must be part of the solution. However, all levels of government would benefit from sustained cooperation and partnership in ensuring Canadians receive appropriate access to health services. This could include the federal government making larger health transfers, as the highest level of government in the country will have the fiscal capacity to do so over the next two decades.





#### Appendix A

## **Detailed methodology**

The long-term economic outlook for Canada was generated using the Conference Board's proprietary model of the national economy, which was most recently updated in June 2019. This model incorporates a detailed demographic forecast, economic accounts, price block, government accounts, and the components that drive potential economic output for Canada. The national medium-term forecast is influenced by global conditions and other economic indicators. Over the longer term, once the economy reaches its estimated potential output, it is assumed to expand at a pace consistent with this potential output. We discuss our demographic assumptions as well as potential output assumptions below.

## **Demographic** assumptions

The Conference Board's demographic forecast is a crucial component affecting the country's fiscal outlook over the long term. The forecast considers the current age structure of the population, as well as assumptions about fertility and mortality rates and immigration and emigration—all of which shape and define the demographic profile. This profile helps determine labour force growth and economic potential—essential components in generating government revenues over the long term.

#### **Potential output**

The growth in Canada's potential output is an important concept in estimating Canada's future revenue-generating capacity. Potential output in this report refers to the level of sustainable real (i.e., adjusted for inflation) economic growth over the forecast period from 2018–19 to 2040–41. Real GDP growth, coupled with assumptions about inflation, determines the pace of growth of nominal GDP (or income) generated in Canada, which provides the broadest measure of the tax base.

### Public accounts forecast methodology

The Conference Board's public accounts model for Canada was used to project the fiscal outlook for the federal government and the Canadian provinces and territories (on a collective basis) from 2018–19 to 2040–41. A key assumption underpinning our analysis is that there will be no additional tax changes other than those announced in the latest provincial and territorial budgets as of August 2019.

#### Revenues

Government revenues at the federal and provincial levels are estimated as a function of key indicators from the Conference Board's long-term provincial and national economic forecasts. Personal and corporate income tax revenues at both the federal and provincial levels are a function of personal income growth and corporate profits, respectively. Other income tax revenues at the federal level consist of income taxes paid by non-residents of Canada and are driven by investment and dividend income. Employment insurance revenues consist of employment, maximum insurable earnings, and wages. Goods and services tax revenues are based on consumer spending. Goods and services tax revenue is shown net of the goods and services tax credit, which is projected based on demographics. Provincial and territorial sales taxes are similarly projected based on consumption.

Federal custom and import duties are a function of imports. Federal energy revenues and provincial and territorial gasoline tax revenues include gasoline tax rates and real consumption of gasoline. Revenues from other excise taxes and duties are assumed to grow in line with inflation over the forecast period. Other federal revenues include revenues from Crown corporations, which are projected to grow roughly in line with economic activity; foreign exchange revenues, which are assumed to follow inflation; and other non-fiscal revenues, which are forecast to grow in line with inflation and population growth in the long term but will be affected by the sale of assets in the short term.

Provincial and territorial tax revenues, particularly personal income, corporate income, and retail sales, follow a similar methodology to the federal government tax revenues. Provincial and territorial tobacco tax revenues include consumption of tobacco products and tobacco tax rates. Property tax revenues are assumed to grow in line with inflation and population. Royalty revenues are a function of energy prices and our forecast for oil and natural gas production. Other provincial and territorial revenues are projected to expand with population and inflation growth. Another important source of funding is federal transfer revenues, which are covered in the federal expenditures section below.

#### **Expenditures**

To complete the outlook for the federal government, we forecast its main expenditure categories. Old Age Security (OAS) is currently the largest category of federal government spending, representing an estimated 16.5 per cent of program spending in 2018–19. Our forecast is based on projections of the number of recipients and the average pension, which is indexed to inflation. The number of total beneficiaries will rise from 6.3 million in 2018 to 10.6 million in 2040.

Employment insurance benefits are based on projections of the number of recipients of regular benefits, maternity benefits, and other benefits; average earnings; and maximum insurable earnings. The number of regular beneficiaries is determined by our forecast for unemployment. The ratio of regular beneficiaries to total unemployment is expected to increase over the forecast period as the share of long-term unemployment returns to its historical average.

The number of maternity beneficiaries is based on projections of the number of births.

Health transfers are set to grow in line with a three-year moving average of nominal GDP, with a minimum floor of at least a 3 per cent increase per year. This is much slower growth relative to recent history as, prior to 2017–18, health transfers from the federal government to the provinces and territories grew at 6 per cent per year. Social transfers are legislated to grow by 3 per cent per year. Fiscal arrangements include funding for the Equalization program and the Territorial Formula Financing (TFF) program and are also set to grow in line with the economy. Fiscal arrangements also include the offsetting category of the Youth Allowances Recovery.

## Forecasting health care spending

Health care spending is the largest component of provincial and territorial budget expenditures and, as such, is the most important component of our fiscal model. To properly project future health care spending, we have built a health care model. Our model projects demand for provincial and territorial health spending for eight different categories. The forecast for five of these categories is driven by the outlook for population based on age and gender. That means that our model not only incorporates population growth, but also how demand changes based on age and gender shifts in our population. Spending on hospitals, physicians, other institutions, other professionals, and drugs is broken down into 40 separate age and gender cohorts to provide

a detailed analysis of how demographic changes will impact health spending. The other three categories in our model—capital investment, public health administration, and other health administration—are forecast on a real per capita basis and are not broken down by age or gender.

In our analysis, we were interested in exploring different scenarios for changes in real per capita spending. To do this, we first had to take the nominal spending estimates from our health care model and convert those figures into real (inflation-adjusted) estimates. We created health spending deflators based on a weighted average of four price deflators for health wages, drugs, health investing, and other goods.

These four deflators were used to create individual deflators for each of our eight components of health care spending. The individual deflator for each spending category is based on a weighted average of the four price deflators. We determined the weights using Statistic Canada's input-output database, which provides a detailed snapshot of the industrial structure of the Canadian economy.

Once we created real per person spending estimates we were able to estimate historical real increases in spending, which excludes the effects of inflation, population growth, and aging. In our low spending scenario, we kept real per person spending constant. In our high spending scenario, real per person spending is expected to increase at a still conservative average of 0.5 per cent per year. Over the last decade, real per person spending on health care spending increased at an average rate of 2.4 per cent.



#### Where insights meet impact

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