INTERNATIONAL MONETARY FUND

IMF Country Report No. 16/146

CANADA

2016 ARTICLE IV CONSULTATION—PRESS RELEASE; AND STAFF REPORT

June 2016

Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. In the context of the 2016 Article IV consultation with Canada, the following documents have been released and are included in this package:

- A **Press Release** summarizing the views of the Executive Board as expressed during its June 6, 2016 consideration of the staff report that concluded the Article IV consultation with Canada.
- The **Staff Report** prepared by a staff team of the IMF for the Executive Board's consideration on June 6, 2016, following discussions that ended on May 6, 2016, with the officials of Canada on economic developments and policies. Based on information available at the time of these discussions, the staff report was completed on May 20, 2016.
- An **Informational Annex** prepared by the IMF staff.

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INTERNATIONAL MONETARY FUND
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Press Release No. 16/273
FOR IMMEDIATE RELEASE
June 13, 2016

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700 19th Street, NW
Washington, D. C. 20431 USA

IMF Executive Board Concludes 2016 Article IV Consultation with Canada

On June 6, 2016, the Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation[1] with Canada. The consultation was focused on assessing the macro-financial impact of the oil shock and policies to bolster near-term domestic demand, mitigate downside risks, and position Canada for long-term growth.

The persistent oil shock remains a major test of Canada's economic and financial resilience since the 2008 global financial crisis. After several years of solid performance, Canada's growth decelerated in 2015, as energy companies slashed investment spending in response to the decline in oil prices. With rising slack in the economy, the negative output gap widened and financial vulnerabilities have become more apparent, as reflected in rising loan delinquencies, albeit from low levels. More broadly, the weaker economy has reignited concerns about the elevated level of household debt and divergent trends in house prices, which are rapidly rising in Vancouver and Toronto and falling in Alberta. The slowdown in the economy has also weakened public finances, with performance at the provincial level diverging along the lines of their resource dependence.

Growth is expected to rebound in 2016, supported by exchange rate depreciation and accommodative monetary and fiscal policies, but uncertainty about oil prices, challenges in sustaining the global recovery, and elevated domestic vulnerabilities suggest risks to the outlook are tilted to the downside. Therefore, the near-term policy challenge is to pursue an appropriate policy mix that is supportive of growth while containing vulnerabilities in the housing market, while in the longer run, the aim should be to make the best use of the available fiscal space to accelerate structural reform and diversify Canada's future sources of growth.

Pursuing greater balance in the policy mix will also help reduce risk taking in a low interest rate environment and discourage households from taking on more debt. Macroprudential policy can be further tightened if imbalances in the housing market threaten to intensify. Enhancing

[1] Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. A staff team visits the country, collects economic and financial information, and discusses with officials the country's economic developments and policies. On return to headquarters, the staff prepares a report, which forms the basis for discussion by the Executive Board.

financial sector resilience is critical given considerable macro-financial linkages and housing market vulnerabilities.

Executive Board Assessment[2]

Executive Directors commended the authorities for responding proactively to cushion the impact of the oil shock on the economy and the financial system. Although growth has slowed significantly, and the external position weakened moderately in response to lower oil prices, the Canadian economy has coped well and is projected to recover gradually, with strong fundamentals and a flexible exchange rate facilitating the adjustment. At the same time, Directors cautioned that the macro-financial effects of the oil shock have yet to fully play out, and the balance of risks is tilted to the downside, requiring continued vigilance and a supportive policy mix.

Directors agreed that monetary and fiscal policy should work together to support the economy. They concurred on the need to maintain an accommodative monetary stance and for an active role for fiscal policy. In this context, they welcomed the authorities' pro-growth budget, and noted that additional fiscal easing should be considered if risks materialize. They also recommended that provinces with high debt or a deficit should undertake fiscal consolidation at a gradual pace so as not to offset federal government stimulus.

Directors highlighted the importance of strengthening the medium-term framework to bolster credibility. They welcomed the authorities' commitment to putting the debt-to-GDP ratio on a downward path. Directors noted that a new rule that is transparent, easy to communicate, and sufficiently flexible to avoid pro-cyclicality would help anchor fiscal sustainability and sustain market confidence. A few Directors cautioned against premature introduction of a fiscal rule until growth is forecast to remain on a sustainably high track.

Directors agreed that the long-term policy challenge is to make the best use of fiscal space to accelerate structural reform, catalyze private investment, and diversify Canada's future sources of growth. Close collaboration between the federal and provincial governments is needed to push the agenda forward and ensure efficient implementation. A nationwide infrastructure plan would help raise the quality of infrastructure investment. More broadly, a multi-pronged approach with emphasis on innovation and investment in the labor force is needed to improve productivity and external competitiveness.

Directors noted that Canada's financial sector continues to be sound and stable. They agreed that macroprudential measures have been broadly effective in containing the growth of mortgage

[2] At the conclusion of the discussion, the Managing Director, as Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in the summing up can be found here: http://www.imf.org/external/np/sec/misc/qualifiers.htm.

credit and suggested that these could be further tightened if imbalances in the housing market threaten to intensify. Directors also acknowledged that prudential policies have strengthened banks' balance sheets and helped ensure system stability. They welcomed the progress made in implementing several recommendations of the 2014 Financial Sector Assessment Program Update, including the establishment of the new Capital Markets Authority, and encouraged the authorities to make further improvements where needed. They took note of the authorities' assessment that the framework for macroprudential oversight achieves the objective of safeguarding financial sector stability, and looked forward to the planned financial sector review. Directors welcomed the authorities' commitment to remain actively engaged in discussions with international partners related to correspondent banking relationships in the Caribbean.

Canada: Selected Economic Indicators

(Percentage change, unless otherwise indicated)

					Projections	
	2012	2013	2014	2015	2016	2017
Output and Demand						
Real GDP	1.7	2.2	2.5	1.2	1.7	2.2
Total domestic demand	2.0	1.9	1.3	0.2	0.4	2.2
Private consumption	1.9	2.4	2.5	1.9	1.8	2.0
Total investment	3.5	2.0	-0.5	-4.6	-3.9	2.7
Net exports, contribution to growth	-0.4	0.4	1.1	0.9	1.2	0.0
Unemployment and Inflation						
Unemployment rate (average)	7.3	7.1	6.9	6.9	7.4	7.5
CPI inflation (average)	1.5	0.9	1.9	1.1	1.4	2.0
Saving and Investment 1/						
Gross national saving	21.3	21.5	22.0	20.5	19.6	20.2
General government	2.1	2.3	3.4	2.5	1.3	1.5
Private	19.2	19.1	18.6	18.0	18.3	18.7
Gross domestic investment	24.9	24.6	24.3	23.8	23.1	23.1
General Government Fiscal Indicators 1/ (NA basis)						
Revenue	38.5	38.5	38.5	38.6	38.3	38.2
Expenditures	41.0	40.3	39.0	40.3	41.1	40.6
Overall balance	-2.5	-1.9	-0.5	-1.7	-2.8	-2.4
Gross Debt	84.8	86.1	86.2	91.5	92.6	91.0
Net debt	28.2	29.4	28.1	26.7	27.8	26.2
Money and Credit (Annual average)						
Household Real Credit Growth	3.9	3.2	2.3	3.8	4.1	4.7
Business Real Credit Growth	4.4	6.4	5.6	6.8	3.7	3.6
Three-month treasury bill 2/	1.0	1.0	0.9	0.5	0.4	0.4
Ten-year government bond yield 2/	1.9	2.3	2.2	1.5	1.6	1.6
Balance of Payments						
Current account balance 1/	-3.6	-3.2	-2.3	-3.3	-3.4	-3.0
Merchandise Trade balance 1/	-0.7	-0.3	0.2	-1.2	-1.5	-1.1
Export volume	2.5	3.0	5.7	3.4	3.1	3.5
Import volume	3.2	1.8	2.4	0.2	-0.4	3.4
Terms of trade	-1.5	-0.1	-1.3	-6.9	-4.1	1.1

Sources: Haver Analytics and Fund staff calculations.
1/ Percent of GDP.
2/ In percent.

INTERNATIONAL MONETARY FUND

CANADA

STAFF REPORT FOR THE 2016 ARTICLE IV CONSULTATION

May 20, 2016

KEY ISSUES

Context: After several years of solid growth, real GDP growth decelerated to 1.2 percent in 2015, as energy companies slashed investment spending in response to the decline in oil prices. Growth is expected to rebound in 2016, supported by exchange rate depreciation and accommodative monetary and fiscal policies, but uncertainty about oil prices, challenges in sustaining the global recovery, and elevated domestic vulnerabilities suggest risks to the outlook are tilted to the downside. A new government, led by Prime Minister Trudeau, took office in late 2015.

Strategy: The 2016 Canada Article IV consultation was focused on assessing the macro-financial impact of the oil shock and policies to bolster near-term domestic demand, mitigate downside risks, and position Canada for long-term growth.

Key policy recommendations:

- Monetary policy should stay accommodative, and further easing should be considered if the economy slows. It should not, however, solely bear the burden of supporting the economy given potential financial stability risks associated with a low interest rate environment.
- Fiscal policy should be pro-growth. The federal government has fiscal space and its plans to increase infrastructure spending in the 2016 Budget are appropriate. There is merit in and room for providing further fiscal support if downside risks materialize and the economy falters. Medium-term sustainability anchors should be strengthened to underscore fiscal credibility.
- Macroprudential policy has been broadly effective in alleviating financial stability risks and reducing tax payer exposure to mortgage finance. Additional macroprudential measures may be needed if housing market vulnerabilities intensify.
- Despite important progress, concerted efforts are needed to address several major recommendations that remain outstanding from the 2014 Financial Sector Assessment Program.
- Greater emphasis should be placed on structural reforms to boost productivity and external competitiveness to facilitate the transition to a more diversified economy.

Approved By
Krishna Srinivasan (WHD) and Vivek Arora (SPR)

Discussions took place in Toronto, Montreal, Calgary, and Ottawa during April 19–May 6, 2016. The team comprised Cheng Hoon Lim (head), Kotaro Ishi, Yulia Ustyugova, Bengt Petersson (all WHD), Itai Agur (SPR), Sanjay Hazarika (MCM), and Takuji Komatsuzaki (FAD). Messrs. Werner and Srinivasan (both WHD) joined the mission for concluding meetings in Ottawa. Ms. Young and Mr. Lessard (OED) accompanied the mission, and Mr. Dupont (former ED) attended the concluding meetings. The mission met with Finance Minister Morneau, Governor Poloz, Superintendent Rudin, Deputy Minister Rochon, Senior Deputy Governor Wilkins, other senior officials, regulators, provincial governments, representatives from the financial and business sector, academics, and think tanks. The press conference was held on May 9, 2016 in Washington D.C.

A high level conference on "Re-Inventing the Role of Central Banks in Financial Stability" was held during the last two days of the mission. The conference was co-hosted with the Bank of Canada, the Peterson Institute for International Economics, and the Centre for International Governance Innovation.

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A SOBERING YEAR

A. The Macroeconomic and Political Context

1. After almost two years, the effects of the oil price shock continue to reverberate through the Canadian economy (Figures 1–2). Oil prices have fallen by 60 percent since 2014, with the spot WTI touching a low of US$27 in January 2016. At these prices, the oil sands industry is struggling to break even. With oil and gas accounting for a large share of economic and financial activity, the effects of the oil price decline have spread through the economy, transmitted through macro-financial linkages (Box 1). The economy slipped into recession in the first half of 2015, as oil companies slashed investment spending, and the stock market fell by 17 percent. In a pro-active move to insure against falling prices and slowing growth, the Bank of Canada (BOC) cut the policy rate twice in 2015. The economy recovered in the second half of 2015 and is likely to gain strength in 2016, but the complex adjustment to lower oil prices continue to weigh on the near-term outlook.

Canada: Oil and Gas Sector Snapshot

Percent share in:	2014	2015
Total Output 1/	6.9	6.7
Capital Expenditures	28.8	20.6
Exports of Goods	24.0	16.0
Royalty Revenues:		
in GG Revenue	1.2	0.4
in Alberta Province Revenue	19.8	7.0
Employment, 15 years and over /2	2.1	2.0
Stock market capitalization	23.6	19.3

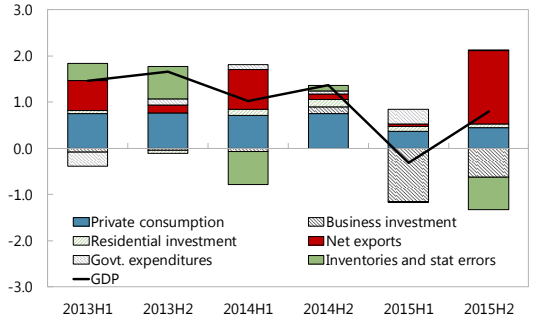
Sources: Statistics Canada, Bloomberg and IMF staff estimates.
1/ Includes support activities for mining and oil.
2/ Includes forestry, fishing, mining, oil and gas sectors.

2. A new government, led by Prime Minister Trudeau, took office in late 2015. It announced its first Budget in March 2016, emphasizing infrastructure investment and strengthening the middle class as central to growing the economy.

B. Adjusting to Lower Oil Prices

3. Growth has decelerated but inflation expectations remain well anchored. Real GDP growth decelerated to 1.2 percent in 2015, down from 2.5 percent in 2014 (Table 1). Headline and core inflation were within the BOC's target range (1–3 percent). Two opposing factors were at play with respect to consumer prices: pass-through from a weaker Canadian dollar was adding to inflationary pressures, while lower energy prices and slack in the economy were placing downward pressures. Notwithstanding the magnitude of the oil shock, a terms-of-trade decline of 8 percent in one year, the labor market has held up relatively well, with the unemployment rate rising slightly above 7 percent (Figure 3).

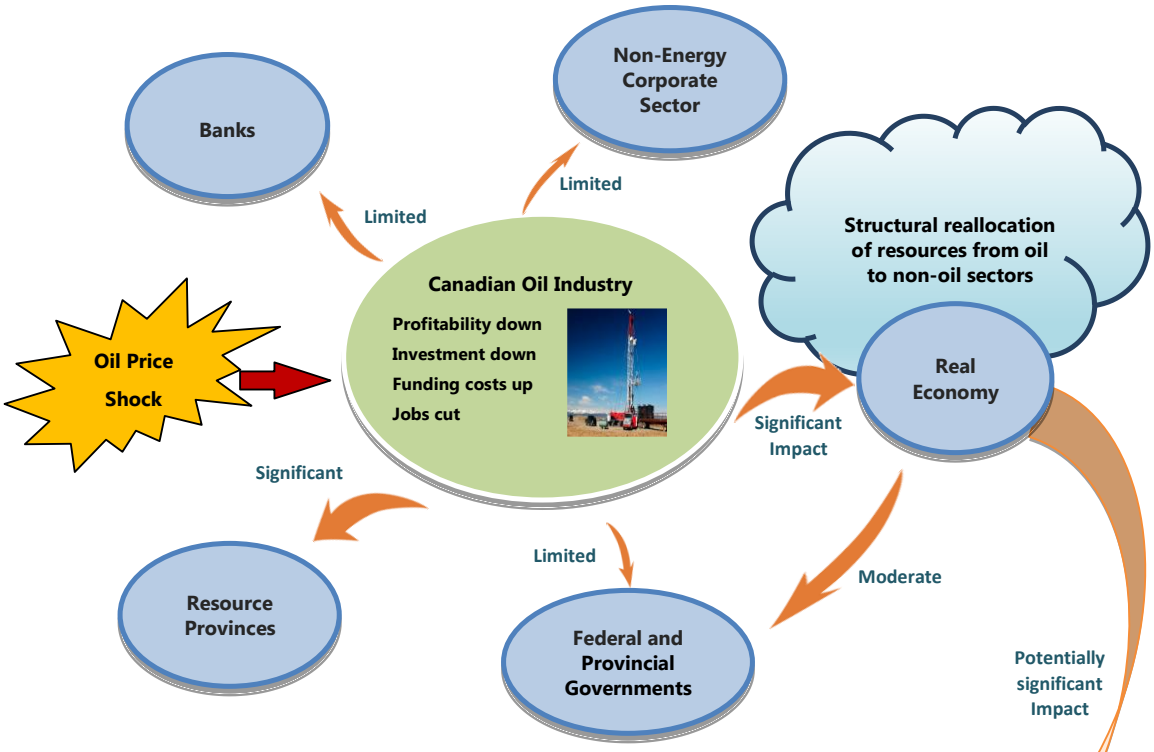
Canada: Contributions to GDP Growth
(Percent change from previous semester, seasonally adjusted)



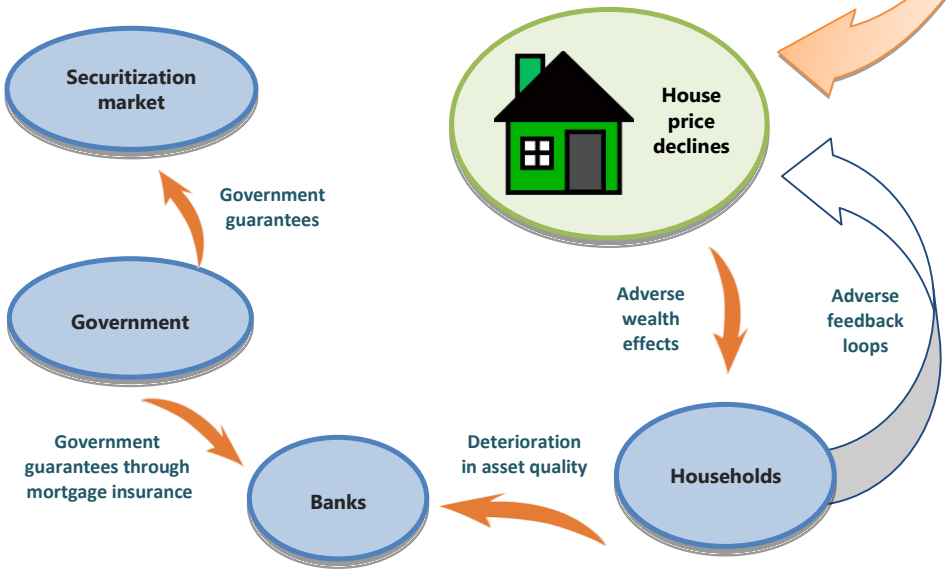
Source: Statistics Canada, Haver Analytics, and IMF staff calculations.

Box 1. Canada: Macro-Financial Linkages from Oil Shock

First Round Effects on the Economy and Banking System



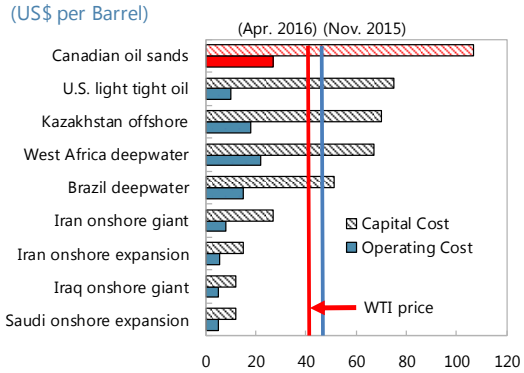
Second Round Effects on Housing Markets



Slowing growth in 2015 reflected:

- Substantially weaker business investment, as oil companies cut investment spending by 40 percent in the face of declining profits. Canadian oil sands producers have high "all-in break-even" costs and their long-term viability is at stake. Those companies involved in upstream activities, in particular, face higher solvency risk and difficulties in raising new financing. The market for high yield debt has been frozen since early 2015 and banks have become more cautious in extending credit. Corporate bond spreads rose by 40 basis points (bp).

Crude Oil Production Costs
(US$ per Barrel)

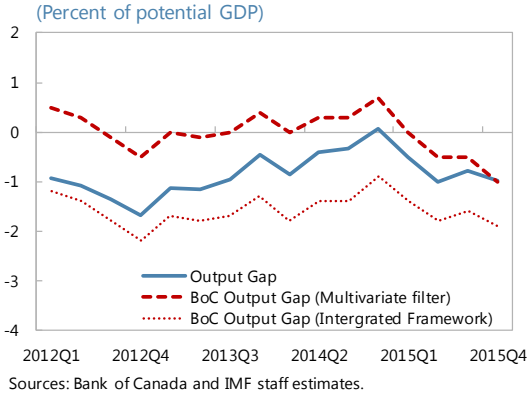


Source: IEA, BloombergBriefs.com and IMF staff estimates.

- A slowdown in private consumption, owing to the impact of the oil shock on employment and house prices in resource-rich provinces. For the country as a whole, growth in real disposable income declined and in early 2016 consumer sentiment with respect to making big-ticket purchases, like a home or a car, fell to its worst level since the 2008–09 recession.
- An uninspiring performance of non-energy exports, which grew well below what would have been expected given the more competitive Canadian dollar and recovery in the U.S. This reflects the erosion of manufacturing capacity during the oil boom years (2002–12), when the real effective exchange rate appreciated by 57 percent, and Canada lost market share in the U.S. (75 percent of Canada's exports go to the United States) to Mexico and China. Weak external demand, beyond the nascent U.S. recovery, was also a factor.

4. With the slowdown in growth, the output gap has re-opened. The output gap narrowed from over 3½ percent of GDP in 2009 to almost zero in 2014. However, with rising slack in the economy, the output gap widened to 1 percent of GDP at the end of 2015. The latest Business Outlook Survey indicates the incidence of labor shortages remains low and the share of involuntary part-time workers remains elevated at 4.5 percent of the labor force. There are no signs of wage pressures.

Canada: Output Gap
(Percent of potential GDP)



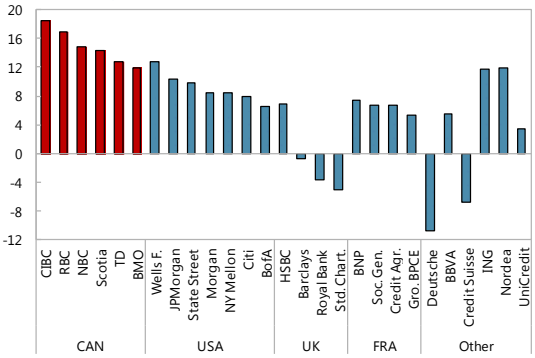
Sources: Bank of Canada and IMF staff estimates.

5. So far in 2016, economic performance has been mixed. While better than expected housing expenditure and exports at the beginning of the year has boosted first quarter growth, they have since slowed suggesting that the growth momentum is unlikely to be sustained in the

second quarter. The Fort McMurray fires could also dampen second quarter growth although the overall impact for the year is likely to be limited.[1]

6. The banking system remains sound but exposure to the oil and gas sector will require higher provisions against expected losses (Figure 4 and Table 6). Canada's banking system is dominated by six banks accounting for 93 percent of bank assets.[2] These banks are among the most profitable in the world, averaging 16 percent return on equity. They have stepped up the pace of business lending in recent years, but household credit which grew by double digits in 2010–11 has slowed to 5 percent today. The expansion in business credit and increase in non-interest income have offset declining interest income margins. As a result, the big six banks have continued to build up capital, with their common equity Tier 1 ratios rising above 10 percent, while non-performing loans (NPLs) remain below ½ percent. The banks' mortgage book is also secured by government guarantees on high risk mortgage loans (those with loan-to-value (LTV) ratios above 80 percent) some of which are pooled to raise financing in the securitization market. Insured mortgage loans account for 50 percent of banks' mortgage loan portfolio. In terms of these banks' exposure to the oil and gas sector:

G-SIBS and Canada D-SIBs: Return on Equity
(As of February 2016, in percent)



Sources: Bloomberg and IMF staff estimates.

- Direct lending is limited to 2 percent of total loans on average, with another 2 percent in undrawn credit lines, but the indirect exposure through household and business lending in resource-rich provinces is a more substantial 13–15 percent.

- Credit quality has deteriorated since 2014. Oil companies' stock prices have fallen by 35 percent, their operating margin has declined by almost 15 percentage points, and their median probability of default has increased sharply (Box 2).

- Loan delinquencies are gradually rising, albeit from low levels. Liquidity constrained companies are struggling to find buyers for their assets, as a result of a substantial decline in mergers and acquisitions activity. Banks are reviewing covenant breaches as part of their "borrowing base re-determination" and may be forced to take provisions for higher credit

[1] It is too early to assess the impact on growth of the Fort McMurray fires. Reconstruction efforts are likely to offset the negative impact on oil production and economic activity. Media reports also suggest that most of the oil sands facilities were not damaged.

[2] The data is taken from the 2014 IMF Financial Sector Assessment Program. There are a few large provincially-regulated deposit takers with assets equivalent to 5 percent of banking sector assets. The big six banks account for 39 percent of total financial system assets.

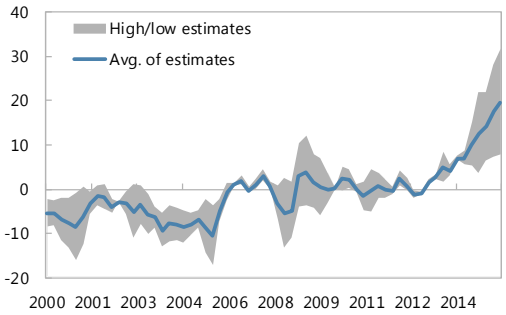
losses.[3] Overall, the estimated increase in provisions is likely to be substantial, but it is from a low base, and will thus hit banks' earnings rather than capital.[4]

- The gradual increase in the overall NPL ratio probably reflects the cushion provided by severance packages, which could last more than a year, and the extension of unemployment benefits provided in the 2016 Budget. So far, the number of insolvencies filed by consumers in Alberta has increased by almost 40 percent from a year ago (Figure 5).

7. More broadly, vulnerabilities in the financial system are rising in the context of the oil shock and elevated household debt. With an economy weakened by the oil shock and historically high household debt (165 percent of disposable income), vulnerabilities in the housing market have increased (Figure 5). Low interest rates keep debt servicing costs manageable but there are important reasons for heightened vigilance:

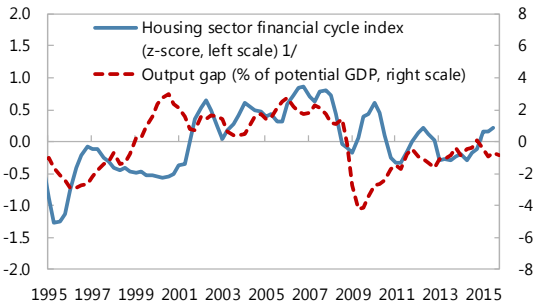
- Although house prices in Alberta and other resource provinces are declining, they are rapidly rising in British Columbia and Ontario (Box 3 and Table 7). Staff estimates national house prices to be about 10–30 percent above their fundamental values.
- The proportion of debt held by highly indebted households (those with debt to income of 350 percent or more) has risen from 13 percent to 21 percent. The bulk of this debt is mortgages held by younger and low- to middle-income households, who have fewer savings to cushion an employment shock in an economic downturn.
- The business and housing cycles are beginning to diverge, and while the gap is smaller than during 2008–09, it is occurring in the context of much higher household debt. The BOC estimates that higher debt, under a stress scenario, leads to 27 percent greater mortgage loan arrears after three years.[5]

Canada: House Prices Deviation from Fundamentals
(In percent)



Sources: CREA, Haver Analytics and IMF staff estimates.

Canada: Business Cycle and Housing Cycle



Source: IMF staff estimates
1/ Measured as average of house price growth, residential mortgage credit growth, real investment growth (all standardized z-score) and a deviation in the residential mortgage credit to GDP ratio from its historical trend.

[3] Every spring and fall the Canadian banks review the credit lines to their corporate customers to determine whether these should be changed to reflect changing credit conditions. As a result of the reviews, banks may increase or decrease credit lines and change loan covenants. In the case of energy companies, an important part of the review is to value the underlying collateral (especially oil in the ground), as well as inventory, machinery and equipment.

[4] Canadian banks are subject to IAS 39 accounting rules which means provisions are taken only if losses have been incurred. Canada will move to IFRS9 in 2018 which will require more timely recognition of expected losses.

[5]The BOC's stress scenario assumes that (i) the unemployment rate will rise by three percentage points; and (ii) the household borrowing rate will rise by 200 basis points, with both staying at this elevated level for three years.

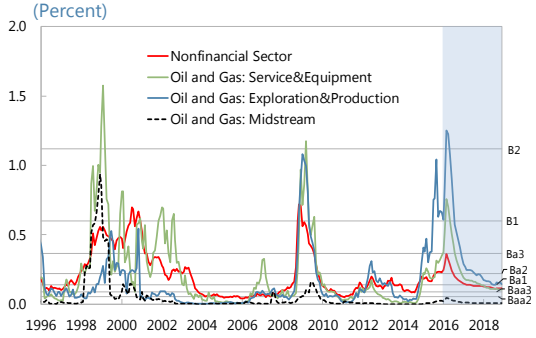
Box 2. Canada: Bank Exposure to Solvency Risk of Oil and Gas Sector

The solvency risk of the Canadian corporate sector, and specifically of oil and gas companies, is estimated using a new corporate default database and a Bottom-up Default Analysis (BuDA) tool developed by Duan et al (2015). BuDA forecasts the median probability of default (PD) by incorporating economy-wide effects, firm-specific balance sheet information, and market-based factors. The model is estimated directly with default and other exit data for the U.S. and Canada. Staff prefers to use the BuDA model to assess corporate solvency risk since the default database and calibration methodology is made available and such hybrid models add predictive power to the pure contingent claims approach derived from the Merton (1973, 1974) model. With the projected PDs, the impact of higher credit risk on bank balance sheets can be assessed using the one-factor Vasicek (1991) model. Higher PDs require banks to raise new provisions to cushion against higher expected losses.

Baseline macroeconomic scenario

Under the baseline scenario for 108 oil and gas companies, projected PDs will increase and stay elevated through most of 2016, but subsequently subside owing to a rebound in external demand and a gradual recovery in oil prices. For a sample of 72 companies involved in oil exploration and production, the median PD is projected to peak at about 1.2 percent in the first half of 2016. This implies a credit rating deterioration of about four notches, from Ba1 to B2, compared to the second half of 2014. PDs of the overall nonfinancial corporate sector are, however, projected to rise to only 0.3 percent, indicating limited spillover from the oil to the non-oil sector.

Median Probability of Default
(Percent)

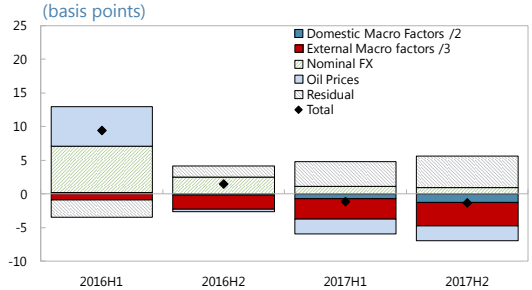


Sources: IMF staff estimates based on BuDA and Moody's rating grades.

BuDA versus Moody's Expected Default Frequency (EDF)

Market analysts typically use Moody's EDFs to assess risks in individual sectors of the economy. For roughly the same sample of 70 companies involved in oil exploration and production (as used in BuDA), Moody's EDF suggests an increase in the median 12-month EDF to an average of 4.5 percent in the first half of 2016, which is larger than projected by BuDA. The difference in PDs and EDFs can be explained by two main factors. First, Moody's EDFs are based on a mapping between the distance-to-default (DtD), which is derived from equity prices and not default data, and the observed default rate of firms with similar DtD "buckets". In general, the EDF curve overestimates the default risk of low- and medium-risk firms. Second, Moody's has on average higher frequency of default observations. Hence, for a given sample, EDFs are likely to be 2 to 4 times as large as BuDA PDs.

Contributions to Changes in Projected Corporate PDs /1
(basis points)



1/ Changes compared to the scenario where the values of the macrovariables are fixed at their December 2015 levels.
2/ Include domestic GDP and unemployment.
3/ Include US growth, short-term and long-term interest rates.
Sources: IMF staff estimates based on BuDA.

Impact on provisions

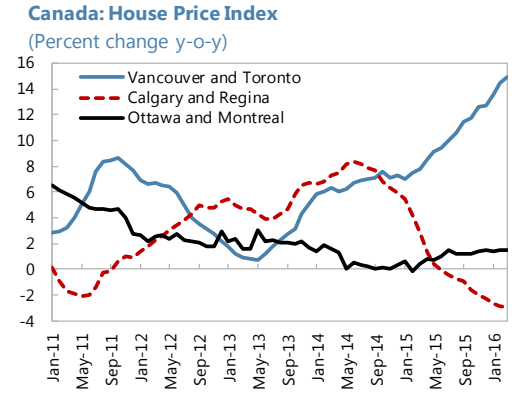
As an illustrative scenario, the projected increase in BuDA PDs suggests that banks may need to at least double provisions against energy loans compared to the average 2015 level. Given the level of provisions at end-2015, the potential impact on earnings could range between 1 to 3 percent of annual net income, therefore leaving capital unaffected.

Box 3. Canada: A Spotlight on Regional Housing Markets

The oil shock has caused housing market trends to "trifurcate" (see heat maps in Table 7).[1] So far, there has been no contagion risk between the diverging markets.

Resource provinces (Alberta and Saskatchewan, accounting for 23 percent of national GDP)

- Alberta's economy has contracted by an estimated 4 percent in 2015 and is projected to shrink by another 1.6 percent in 2016.
- House prices in Calgary and Regina have fallen by 3–4 percent from their peak in 2014 and rental vacancies have quadrupled within the span of one year (October 2014–2015). The decline in house prices followed a massive housing market boom in the mid-2000s when house prices soared by 200 percent (2004–07). With little prospect for a quick recovery in oil prices in the near term, house prices in these regions are likely to continue to trend downward.



Sources: CREA and IMF staff estimates.

- Alberta and Saskatchewan account for 21 percent of total household debt (2012–14) and uninsured mortgages are non-recourse loans.[2] So far, strategic defaults have not occurred in any significant way. Consumer insolvencies have increased by 40 percent over the past year but remain small as a share of total loans (Figure 5).

Non-resource provinces (British Columbia and Ontario, accounting for 49 percent of national GDP)

- British Columbia and Ontario are expected to grow by 2–3 percent this year.
- House prices have been growing by 10–20 percent year-on-year, fueled by cheap borrowing costs, demographic pressures, land supply constraints and foreign demand. Ad hoc survey data suggest that in 2015 Chinese investors accounted for 14 percent of total sales volume ($9 billion) in Toronto and 33 percent of total sales ($12.7 billion) in Vancouver.[3]
- Both British Columbia and Ontario account for 55 percent of total housing debt.

Incidence of Highly Indebted Households 1/

Region	Share of total household debt (percent)	
	2005-07	2012-14
British Columbia and Ontario	8.6	13.1
Alberta and Saskatchewan	1.7	4.4
Quebec and Atlantic provinces	2.4	3.2

1/ Households with a debt-to-income ratio of 350 percent and above.

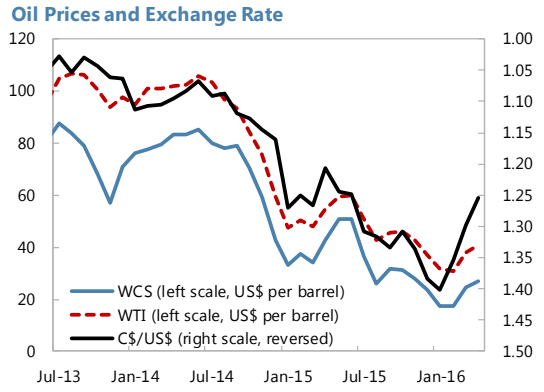
Sources: Bank of Canada's Financial System Review 2015, Ipsos Reid and IMF staff estimates.

Rest of Canada (accounting for 28 percent of national GDP)

- In Quebec where the economy has been growing at about 1 percent, house prices (Montreal) have been rising at a more moderate pace of 1–2 percent. Quebec and the Atlantic provinces account for 24 percent of total household debt.

[1]Financial System Review, December 2015, Bank of Canada.
[2]In the event of default, the bank is not able to go after the other assets of the borrower if the house sells for less than what the borrower owes.
[3]Routledge, Fini and Poon, National Bank of Canada, 2016.

8. The external position is moderately weaker than implied by fundamentals. Despite the depreciated Canadian dollar, the current account has deteriorated. Mimicking the oil price descent, the Canadian dollar has fallen 33 percent against the U.S. dollar since the beginning of 2014. In real effective terms, the exchange rate is now about 20 percent lower than its 2010-peak. Nevertheless, lower export prices of oil and other commodities pushed the trade balance further into negative territory and the current account deficit rose from 2.3 percent of GDP in 2014 to 3.3 percent of GDP in 2015 (Figure 6 and Tables 2–3). With foreign direct investment recording a net outflow, the current account deficit was mostly financed by portfolio inflows and other investment. Staff estimates the current account gap to be between -2 and -1 percent of GDP, smaller than the External Balance Assessment estimate, when supply constraints are taken into account (Annex II). The real effective exchange rate is estimated to be overvalued by 0 to 5 percent relative to medium-term fundamentals and desirable policy settings.



Sources: Haver Analytics and IMF staff estimates.

9. The slowdown in the economy has weakened public finances, with performance at the provincial level diverging along the lines of their resource dependence. In recent years, both the federal and provincial governments have undertaken consolidation measures enabling a narrowing of the general government overall deficit from 4¾ percent of GDP in 2010 to 0.5 percent of GDP in 2014 (Table 5). This was undone by the oil shock, however, and the general government deficit widened again to 1.7 percent in 2015.

- The federal government delivered a surplus (¼ percent of GDP) in 2014 (the first time since 2008), but slipped into a small deficit (¼ percent of GDP) in 2015. Revenue collections performed as expected, with solid personal income and corporate tax revenues, but were offset by higher than expected spending on most expenditure categories.

- Alberta has been hit hard by the lower oil price, due to its heavy dependence on oil royalty revenues (20 percent of total revenues in 2014), and is expecting an operational deficit of 2¾ percent of GDP in FY2015–16 after two consecutive years of surpluses.[6] In contrast, British Columbia and Quebec are expected to maintain operational balance, and Ontario is expected to narrow its operational deficit to 2 percent in FY2015–16, on the back of buoyant revenues and cuts in public wages and administrative costs.

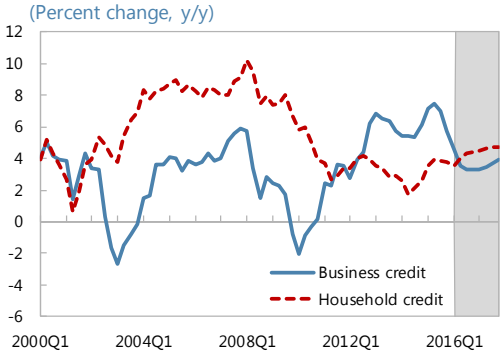
[6] The operational balance numbers are based on provincial accounting that exclude capital spending.

OUTLOOK, RISKS, AND SPILLOVERS

A. Outlook

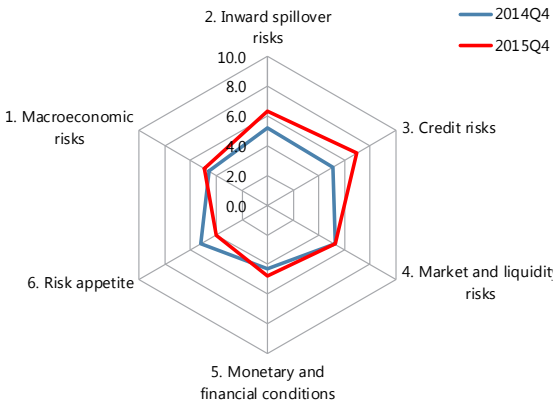
10. A modest recovery in the near term. GDP growth is projected to recover gradually to 1.7 percent in 2016 and 2.2 percent in 2017. The projection assumes another 30 percent decline in investment spending by the energy sector in 2016 since oil prices are likely to be range-bound as markets search for a new equilibrium; a gradual pick up in non-energy exports, as manufacturing regains competitiveness and U.S. demand remains strong; and in line with this, growth in business investment is expected to strengthen starting in 2017 as the drag from cuts in energy-related investment spending dissipates and stronger non-energy exports absorb available capacity. Imports are projected to increase over the medium term and real business credit gradually recovers to sustain the expansion in business investment. Private consumption is expected to remain solid, supported by easy monetary policy and steady increase in household credit. Fiscal stimulus is expected to boost growth and facilitate a faster return to potential.[7]

Real Credit Growth 1/
(Percent change, y/y)



Sources: Haver Analytics and IMF staff estimates.
1/ The explanatory variables for forecasting household credit growth include household consumption and household borrowing interest rates, and those for business credit growth include business investment and business borrowing interest rates.

Canada: Country Financial Stability Map



Note: Away from center signifies higher risks, easier monetary and financial conditions, or higher risk appetite.

11. Cautious optimism over the medium-term outlook. The oil shock has prompted a fundamental process of structural adjustment. Capital and labor are being reallocated from the resource to the non-resource sectors (Figure 2).[8] The manufacturing and services sectors are expected to benefit although it will take time for capacity that was eroded during the oil boom years to be restored. How this transformation plays out will determine the outcome on growth. In this context, supportive

[7] On a calendar year basis, the fiscal stimulus is expected to boost growth by ¼ to ½ percentage points in 2016 and 2017, respectively (see paragraph 20).

[8] Adjustment in the labor market is ongoing. British Columbia and Ontario have shown strong net job growth, especially in the services sector (170,000 jobs has been added between 2014Q4 and 2016Q1). In goods-producing industries, including the higher-paying mining, oil and gas sector, employment has been relatively weak.

demand policies would help facilitate the structural adjustment and make structural reforms that have upfront costs more palatable. Staff assumes a smooth transition that will enable Canada to take advantage of shifting global trade patterns and raise potential growth to about 2 percent in the medium term, which is still lower than the annual average of 2¼ percent over the past 15 years (Table 4).

B. Risks

12. Risks to the outlook are tilted to the downside (Risk Assessment Matrix and Box 5).

- Persistently low energy prices pose an important risk to the economy. Oil companies have already cut cost significantly. A protracted period of low oil prices could force some firms to permanently shut down production, as room for generating additional cost savings or productivity gains would be limited. This would trigger second round effects on investment and growth, as banks shed bad loans and curtail lending. Over the long term, deep industry cutbacks on investment will affect the ability of the oil industry to ramp up production once oil markets start to rebalance.

- Higher uncertainty about global growth prospects and a lack of effective policy response to offset headwinds could lead to persistent weakness in global trade and investment. The U.S. economy is Canada's dominant trading partner, but other economies (Asia and Europe) are still important export markets.

- Spillovers from China to Canada would mostly be felt through a slowdown in trade[9] and weaker commodity prices since there is little direct exposure of Canadian banks to China. According to BOC estimates, if Chinese growth slows by one percentage point Canadian growth would slip one-tenth of a percentage point.[10] By comparison, if the same decline happened to the U.S., the impact on Canada's GDP would be six times greater.[11]

- Tighter global financial conditions due to higher risk aversion and pressure on banks in Europe, or a significant and sudden depreciation of the renminbi could be disruptive to the global financial system, with implications for financial conditions in Canada. A disorderly U.S. monetary policy normalization could also raise Canada's long-term government bond yields

[9] China accounts for 17 percent of Canada's total trade and 4 percent of Canada's exports.

[10] China accounts for roughly 7 percent of U.S. exports of value added. IMF staff analysis suggests that a 1 percentage point investment-driven drop in China's output growth would reduce Group of Twenty (G20) growth by ¼ percentage point (Chapter 1, April 2016 WEO).

[11] Senior Deputy Governor Wilkins, in a speech to the Greater Vancouver Board of Trade, April 5, 2016.

as they have generally moved in line with those in the U.S.[12] Shorter yields are likely to rise by less, reflecting perceived differences in monetary policy prospects.

- The key domestic risk is a sharp correction in the housing market. A severe recession that triggers a sharp rise in the unemployment rate could destabilize housing markets, setting off adverse feedback loops in the economy, and leading to greater financial stability risks.[13] Given extensive government-backed mortgage insurance, the impact of a severe housing downturn on the federal fiscal position could be considerable and potentially limit the room for fiscal stimulus down the road (Annex III).

- In a tail risk scenario, all these risks could occur concurrently and intertwine, aggravating macro-financial spillover channels. The probability of such an event occurring is low, but the impact obviously would be very significant. The stress tests of the 2014 FSAP show that the banking system would be able to withstand a major recession scenario that includes a 50 percent drop in oil prices, an increase in the unemployment rate to a peak of 13.2 percent, and a 34 percent decline over 3 years (22 percent in the first year) in house prices. All banks would fall below the supervisory threshold, but the recapitalization needs would be manageable. Furthermore, since the time of the FSAP, banks have improved their capital position. Finally, the Canada Mortgage and Housing Corporation (CMHC) and the private mortgage insurers own earnings and loss absorption capacity provide another layer of cushion between losses on mortgage insurance and the fiscal impact on the government.

13. There is also upside potential to the medium-term outlook. A better than expected recovery in Canadian exports would strengthen business investment and facilitate a faster reallocation of resources from the energy to the non-energy sectors.

14. Furthermore, Canada's strong fundamentals will help mitigate the impact if downside risks materialize. Canada has strong institutions and a track record of consistent policies. Its growth performance has been among the strongest in major advanced economies post-2008. Furthermore, despite rising short-term external debt, Canada enjoys a positive net international investment position because it owns substantial assets overseas. This provides a natural hedge to currency risk on aggregate debt. Its flexible exchange rate is also an important shock absorber.

[12]However, an increase in U.S. interest rates predicated on higher growth and inflation in the U.S., could actually be positive for Canada. The depreciation of the Canadian dollar and higher U.S. domestic demand would boost non-energy exports. All else equal, the Canadian dollar price of oil would also increase as the U.S. dollar appreciates, which would then imply an increase in the value of Canada's oil exports.

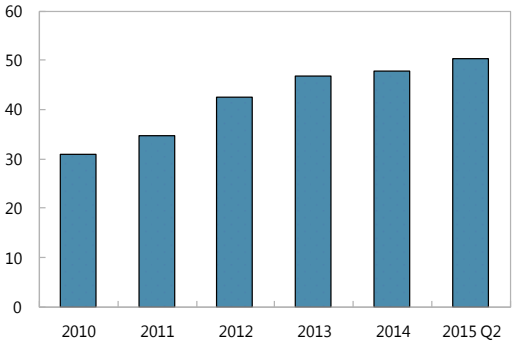
[13] Households are also susceptive to interest rate risks, as about 40 percent of mortgage loans are with variable rates. However, to mitigate this vulnerability, banks require borrowers to qualify for their mortgages at a rate that is the greater of the contractual mortgage rate or the five-year benchmark rate published by the Bank of Canada when taking out a variable-rate mortgage or a mortgage with a fixed term of less than 5 years.

C. Spillovers

15. There are potential outward spillovers from Canada to the Caribbean.

- Canadian banks have had a long historical connection to the region, but low returns and bad debts have led to banks scaling back operations, including closing branches. A materialization of downside risks could exacerbate Canadian banks' ongoing rationalization of their operations in the region. Tourism revenues may also suffer as Canada is a major source of tourist traffic to the region, second only to the U.S.

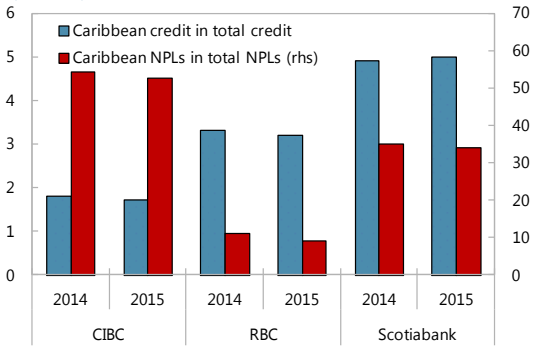
Canadian Banks' Claims on Caribbean
(In billions of USD)



Sources: Bank of Canada and IMF staff estimates.

- A recent World Bank perception survey of correspondent banking relationships (CBRs) indicated pressure on CBRs of local/regional banks in the Caribbean, but did not indicate any material reduction in Canadian banks' CBRs in the region. The Office of the Superintendent of Financial Institutions (OSFI) does not at present collect data on this trend. While it is challenging to gather reliable and conclusive evidence of withdrawal of CBRs, OSFI should take steps to actively monitor the trends in CBRs provided by Canadian banks.

Selected Bank Caribbean Exposures and NPLs
(Percent)



Sources: Bank of Canada and IMF staff estimates.

- Canadian banks are choosing not to step into the gap left behind by retreating global banks, partly because higher regulatory compliance costs have made the risk-reward equation challenging. In this context, Canadian banks are looking for greater clarity in national and international standards, including with respect to regulations to counter money laundering and offshore tax evasion and avoidance (Box 4).

Canada: Risk Assessment Matrix[14]

(Scale—low, medium, and high)

Source of Risks	Relative Likelihood	Impact	Policy Response
Globally-sourced risks			
1. Persistently lower energy prices, reversing only gradually	**High**	**High** Oil companies would be forced to cut not only investment and jobs, but also production as companies become unviable. Loan delinquencies would spike and banks may curtail lending as asset quality suffers, putting a further dampening effect on the housing market and the economy.	Monetary and fiscal policy should be expansionary. At the provincial level, allow automatic stabilizers to operate fully. The BOC can step in to provide liquidity as needed. Ensure adequate loss absorbing buffers in the banking system and conduct regular stress testing. Structural reform policies should be accelerated to facilitate the reallocation of resources to the manufacturing and services sectors. Measures should focus on raising productivity, which would improve external competitiveness, and enhancing long-term growth.
2. Sharp asset price decline and decompression of credit spreads	**Medium /High**	**Low/Medium** Higher interest rates —due to higher risk premiums— would raise debt servicing costs for highly indebted households, while higher funding costs for corporates would lead to a reduction in business investment. Financial institutions, relying on wholesale funding, would also be adversely affected.	
3. Structurally weak growth in key advanced and emerging economies	**Medium /High**	**Medium/High** Canada is an open economy with total trade accounting for 65 percent of GDP. A structural slowdown in the U.S. and other advanced and emerging economies would reduce demand for Canadian exports and lower potential growth.	
Domestically-sourced risks			
4. Sharp house price correction	**Medium**	**High** Homeownership is the single most important source of wealth for households. A sharp reduction in net wealth would hit domestic demand and trigger negative feedback loops in the economy. Non-performing loans in the banking system would increase significantly.	The impact on the banking system would be severe but mitigated by mortgage insurance, and CMHC and private insurers own loss absorbing capacity. Macroprudential policy may need to be eased as a counter-cyclical measure.

[14] The Risk Assessment Matrix shows events that could materially alter the baseline path (the scenario most likely to materialize in the view of IMF staff). The relative likelihood of risks listed is the staff's subjective assessment of the risks surrounding the baseline ("low" is meant to indicate a probability below 10 percent, "medium" a probability between 10 and 30 percent, and "high" a probability of 30 percent or more). The matrix reflects staff views on the source of risks and overall level of concern as of the time of discussions with the authorities. Non-mutually exclusive risks may interact and materialize jointly.

Box 4. Canada: Correspondent Banking Relationships with the Caribbean

***A long history*.** Canadian banks have been in the Caribbean since the 19th century, when Royal Bank of Canada (as Merchants Bank of Halifax) and Scotiabank first set up shop in Bermuda and Jamaica. Today, the two banks and Canadian Imperial Bank of Commerce have numerous branches spread across the archipelago and account for 75–80 percent of all banking assets in Barbados, Grenada and the Bahamas, and 60 percent of the assets of the ECCU banking system. Scotiabank has the largest footprint with C$32 billion in total loans to the region.

Recent trends. Global banks have recently been terminating or restricting their corresponding banking relationships (CBRs) with local/regional banks across the world. In particular, the Caribbean has been potentially affected by declining CBRs, with even central banks not being immune. While it has been challenging to gather conclusive data on these trends, a recent World Bank perception survey[1] indicated pressure on CBRs of local/regional banks in the Caribbean. The potential drivers behind the withdrawal of CBRs are multiple and may relate to business strategy and/or cost/benefit analysis, including in the context of implementation of regulatory obligations, such as capital and liquidity rules, AML/CFT, economic and trade sanctions, and tax transparency. In some instances, withdrawals of CBRs can result from unclear, poorly communicated, or conflicting regulatory expectations. So far, there is no evidence of a macroeconomic impact from the withdrawals of CBRs, and it seems most institutions have found replacements for lost CBRs with varying degrees of difficulty. Concerns have been expressed that pressure from withdrawal of CBRs may be leading to higher costs for remittances and related services, but supporting evidence is still lacking.

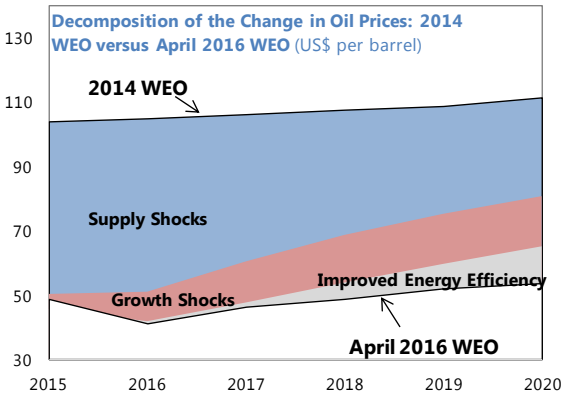
Risk-reward equation. While Canadian banks have no immediate plans to significantly cut CBRs, they are taking a hard look at the risk-return tradeoffs. On the one hand, the cost of regulatory compliance has increased, notably as U.S. regulators have taken a more concerted approach to enforcing AML/CFT regulations and bilateral initiatives like the 2010 U.S. Foreign Account Tax Compliance Act to combat tax evasion. On the other hand, Caribbean consumer businesses have low profit margins and the target consumer population in the region could not bear higher fees, so boosting profit margins through the re-pricing of bank services is not a feasible option. At the present time, Canadian banks see little scope for expanding their presence to fill the gap left by retreating global banks.

[1]Withdrawal from Correspondent Banking: Where, Why, and What To Do About It? World Bank, November 2015.

Box 5. Canada: The Estimated Impact of Lower Oil Prices and Risk Scenarios

Factors driving the decline in oil prices

Relative to 2014, oil prices fell, in annual average terms, by roughly 50 percent in 2015. Futures markets prices suggest a further decline in 2016 and only a very gradual recovery afterwards. As detailed in Arezki and others (2016) and shown in the Chart, changes in oil price projections since the April 2014 WEO can be decomposed into three key factors: increases in oil supply, weaker global activity (as proxied by global real GDP growth), and improved energy efficiency. This decomposition is done using historical and forecast data on oil supply from the International Energy Agency's (IEA) *World Energy Outlook* and the oil model described in Benes and others (2015). Higher oil supply is estimated to account for almost the entire decline in oil prices in 2015, but its importance will diminish over time; weaker global activity and improved energy efficiency would become more important drivers of changes in oil prices after 2016. The IMF model G20MOD is used to illustrate how these individual factors affect Canada's medium-term growth path.



Source: IMF staff calculations.

Estimating the net impact of lower oil prices on Canada's economy

The factors that drive the decline in oil prices matter for Canada's medium-term economic outlook.

- If only supply factors were at play, Canada's GDP level would be lower by 0.5 percent compared to 2014 projections. In this case, the positive impact on the global economy and the U.S. economy in particular, accrue over time and generate demand for Canadian exports, which partially offsets the negative effects on investment and consumption from lower oil prices.
- A demand-induced decline in oil prices would have the largest effect on economic growth in the medium term. The demand and supply factors together (Scenario 2) would lower Canada's GDP in the medium term by 4 percent compared to what was projected in 2014.

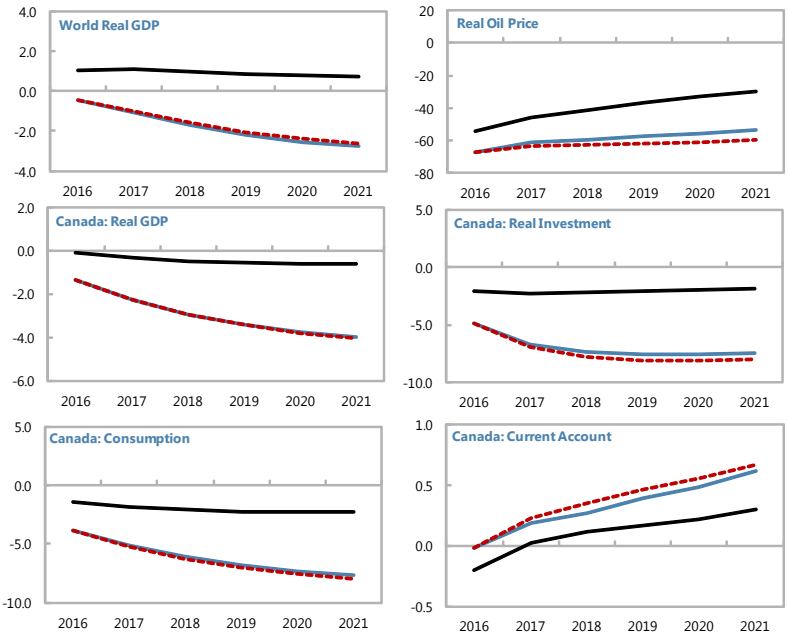
Canada: Estimated Impact of Lower Oil Prices

Percent difference from baseline scenario

Scenario 1: Increase in Global Oil Supply

Scenario 2: Scenario 1 + Decline in Global Growth

Scenario 3: Scenario 2 + Improvement in Energy Efficiency



Source: IMF Staff estimates.

Box 5. Canada: The Estimated Impact of Lower Oil Prices and Risk Scenarios (concluded)

The transmission effects work as follows: similar to Scenario 1, lower oil prices would significantly reduce investment and weaker domestic income would lower private consumption. However, the decline in global aggregate demand added to Scenario 2 (represented by the red-shaded share of the fall in oil prices in the Chart above) would weigh on Canada's exports. As a result, under Scenario 2, global aggregate demand would not be able to offset the negative effects on investment and consumption from lower oil prices.

- Changes in the oil price caused by improvements in energy efficiency are estimated to have a small effect on Canada's GDP.

Risk scenarios

Four scenarios are considered, drawing on the G20MOD simulation exercises elaborated in recent WEOs. In the first scenario, lower-than-expected private investment and higher-than-expected private saving lead to secular stagnation and weaker domestic demand in advanced economies (AEs). In the second scenario, investors' expectations of lower future growth results in lower investment and weaker domestic demand in the emerging market economies (EMs). The third scenario combines the first two scenarios. The fourth scenario illustrates the impact on Canada's growth if G20 countries implement their Brisbane Growth Strategy commitments in terms of product and labor market reforms.

Canada: Downside Risk Scenario

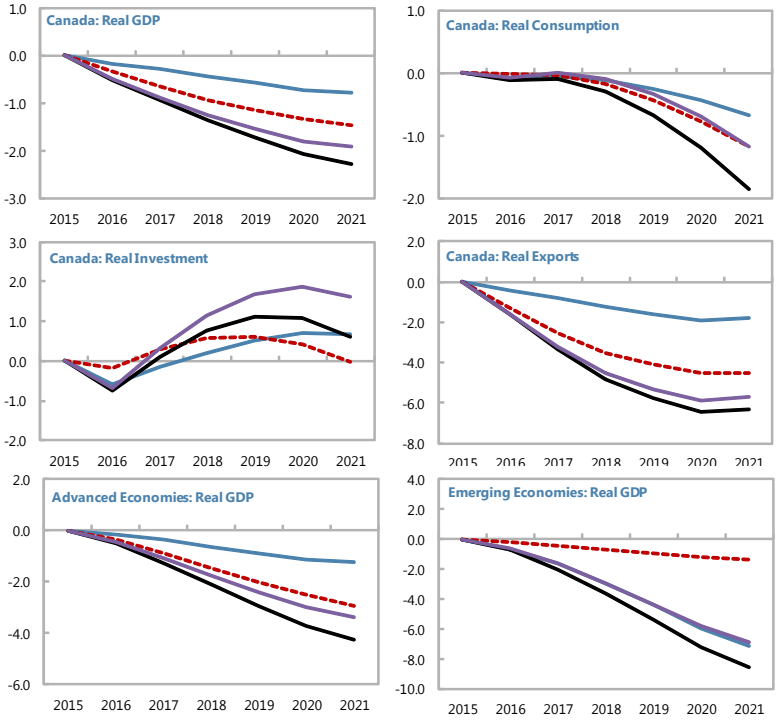
Percent difference from baseline scenario

Scenario 1: Structural Slowing in Emerging Economies

Scenario 2: Secular Stagnation in Advanced Economies

Scenario 3: Scenario 1+Scenario 2

Scenario 4: Scenario 3+Structural Reforms in Progress in G20



Source:IMF Staff estimates.

Secular stagnation in AEs has a larger negative effect on Canadian growth compared with a structural slowdown in EMs, even though the latter triggers a larger decline of oil prices. Under the AE secular stagnation scenario, Canada's GDP level by 2021 would be about 1.5 percent lower than currently projected, while an EM structural slowdown would reduce Canada's GDP by about 0.8 percent by 2021. The two scenarios combined would significantly dent Canada's outlook through both weaker U.S. demand and lower commodity prices. In this case, Canada's GDP level by 2021 would be about 2.3 percent lower than currently projected. Finally, if G20 countries press ahead with product and labor market reform commitments, losses in medium-term output would narrow by 0.4 percentage points compared to Scenario 3.

POLICY CHALLENGES

The policy mix over the near-term should cushion the adverse effects of lower oil prices on the economy while safeguarding financial stability. If downside risks materialize, there is scope for both monetary and fiscal policy to provide additional stimulus to the economy, even as macroprudential measures are stepped up to mitigate potential financial stability risks. With accommodative policies in place, the timing is right for a renewed push on structural reform to position Canada in the long term for new growth opportunities (for traction of past Fund advice, see Annex I).

A. Monetary Policy

16. The current monetary policy stance is appropriate. The BOC should stand ready to cut the policy rate if downside risks materialize and the economy falters. However, with the policy rate at 0.5 percent, the room for additional cuts is limited (Figure 7).

17. It would be appropriate to seek recourse to unconventional monetary policy measures in the event that the economy slows significantly and deflationary risks emerge, but clear communication would be critical. Staff welcomes the BOC's recently updated framework for unconventional monetary policy, which includes forward guidance, large-scale asset purchases, negative interest rates, and funding for credit (Annex IV). The BOC is not committed to any specific order in which these policy measures will be used. Staff agrees that the efficacy of each measure will depend on the economic and financial context and, in some cases, the measures could be mutually reinforcing when used in combination. In the event unconventional monetary policy measures are put to use, the BOC should communicate clearly its diagnosis of the problem and the merits as well as the transmission channels of the measures it plans to pursue.

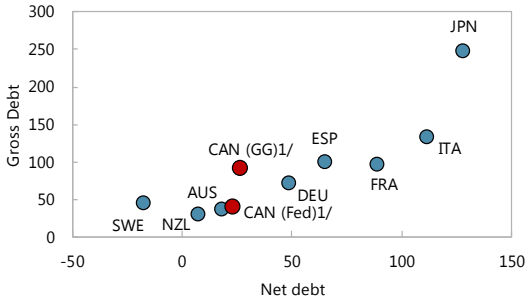
18. Monetary policy is a blunt tool to address housing market vulnerabilities and macroprudential policy should remain the first line of defense in safeguarding financial stability. The costs of using monetary policy for financial stability objectives, or "leaning against the wind", outweigh the benefits, except in circumstances where credit growth is exceptionally high for an extended period. Hence, macroprudential policy should generally be the first port of call to address financial stability risks, and this has indeed been the case in Canada. That being said, the BOC sees a role for monetary policy in financial stability and staff agrees that its risk management approach to monetary policy appropriately takes into account financial stability considerations within its flexible inflation targeting framework.

B. Fiscal Policy

19. The federal government has the fiscal space to support the economy. Canada's overall fiscal position remains strong (Table 5). Although the general government's gross debt is relatively high at about 90 percent of GDP, the gross debt of the federal government is considerably lower at 40 percent of GDP. Including financial assets would further reduce the federal government (net) debt to 23 percent of GDP.

20. The federal government's pro-growth 2016 budget is appropriate. Low interest rates and the low debt burden provide fiscal space without undermining the outlook for medium-term debt sustainability (Annex III). Against this backdrop, the stimulus measures in the 2016 Budget are welcome since they will also help alleviate the burden on monetary policy in providing near-term demand support. A more active role for fiscal policy will strengthen the overall policy mix by reducing the need for further monetary easing and thus limit the scope for excessive risk taking in a low interest rate environment. The stimulus package includes discretionary measures totaling 1¼ percent of GDP spread over FY2016–17 and FY2017–18, more than 40 percent of which are allocated to mostly shovel-ready infrastructure projects. Staff estimates that the measures would boost annual growth by ½ percentage point of GDP in each of the next two fiscal years, based on a conservative fiscal multiplier.[15] In line with this, the overall deficit will increase from ¼ percent of GDP in 2015 to around 1 percent of GDP in 2016 and 2017.

General Government Gross and Net Debt
(Percent of GDP, end 2015)



Sources: WEO database and IMF staff estimates.
1/ CAN(GG) is general government debt, and CAN(Fed) is federal government debt.

- Expenditure measures include: (i) increasing investment in infrastructure (Box 6); (ii) increasing transfers to families with children; and (iii) environmental protection and support for indigenous-communities, and (iv) research development and innovation. Total new infrastructure spending will amount to $60 billion (2½ percent of GDP) over 10 years as part of a commitment to improve productivity capacity.

- On the revenue side, measures include reducing the personal income tax rate for the second tax bracket from

Federal Budget 2016 Measures 1/

	FY2016/17		FY2017/18	
	Billions of C$	Percent of GDP	Billions of C$	Percent of GDP
Housing	1.4	0.1	1.0	0.0
Infrastructure	4.0	0.2	7.3	0.3
Personal income tax	-1.3	-0.1	-2.4	-0.1
Middle class tax cut	1.3	0.1	1.2	0.1
Increasing taxes for couples with children	-1.9	-0.1	-2.0	-0.1
Others	-0.7	0.0	-1.6	-0.1
Measures for households	5.6	0.3	6.4	0.3
Canada child benefit	4.5	0.2	5.4	0.3
Employment insurance	0.5	0.0	0.7	0.0
Others	0.6	0.0	0.4	0.0
Others spending measures	2.1	0.1	3.2	0.1
Corporate income tax	-0.1	0.0	-0.6	0.0
Total	**11.6**	**0.6**	**14.9**	**0.7**

1/ Measures with a negative sign contribute to the budget balance.

[15] The growth impact of the fiscal measures is calculated for each discretionary measure in the text table (with relatively high multipliers assigned to infrastructure and housing measures, and low multipliers to tax measures). Staff estimates the average size of the fiscal multiplier is 0.7 for the first year and 0.9 for the total of the two years. The estimated multipliers are broadly consistent with those for an open economy at a cyclical downturn position, suggested in IMF's guidance note on fiscal multipliers (November 2013). Staff's estimates are also broadly in the range of estimates calculated by DOF, BOC, and the Parliamentary Budget Officer.

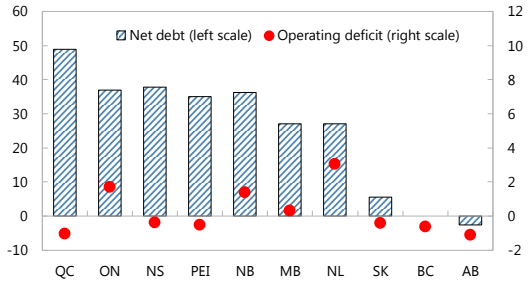
22 percent to 20.5 percent. To cover the loss in tax revenue, the budget includes revenue enhancing measures, including (i) a hike in the top marginal personal tax rate from 29 percent to 33 percent; (ii) abolishing the tax advantage for couples with children filing tax returns together; and (iii) strengthening tax compliance.

- Increasing public infrastructure investment during periods of economic slack and monetary policy accommodation could deliver significant growth dividends.[16] Given uncertainty about demand conditions and the highly complementary nature of infrastructure services, it could help "crowd in" private business investment, which has been weak even before the oil shock.

21. If the economy takes a turn for the worse, additional fiscal easing should be considered, for which there is room. The additional fiscal easing should be temporary and could be achieved by bringing forward planned infrastructure spending or by temporarily cutting personal and corporate income taxes.

22. At the provincial level, greater caution is needed. Among the larger provinces, Quebec has relatively high debt, while Ontario has a relatively high deficit. In these provinces, fiscal consolidation should proceed, but at a gradual pace in order not to offset the federal government stimulus and to support the continuing recovery. Due to its heavy dependence on oil royalties, Alberta's operational balance has turned negative (deficit of 3 percent of GDP), but it still has very low debt. Given that its economy is also significantly weaker than the rest of the country, automatic stabilizers should be allowed to operate fully. Over the medium-term, Alberta should draw on both revenue and expenditure-side measures to close its fiscal gap.

Provincial Fiscal Positions, 2014 1/
(Percent of provincial GDP)



Sources: Department of Finance, Statistics Canada; and Haver Analytics
1/ Net debt is based on public accounts, and operation deficit is based on Canadian Government Financial Statistics. Data for 2015 have yet to be published.

23. Strengthening the medium-term fiscal framework will be important to bolster fiscal credibility. Any stimulus package should be accompanied by a credible medium-term consolidation plan. Medium-term consolidation will also help improve the external position.

- The federal government's commitment to putting the debt to GDP ratio on a downward path is appropriate. In this context, the current balanced budget rule, which is too rigid, should be replaced by a new fiscal rule that is transparent, easy to communicate, and sufficiently flexible to avoid pro-cyclicality (possible options elaborated in the 2014 Article IV Staff Report remain valid). The new rule should be embedded in a multi-year fiscal framework that details measures consistent with the revenue and expenditure projections.

[16] In a sample of advanced economies, a 1 percentage point of GDP increase in investment spending increases the level of output by about 1.5 percent four years after the increase, Chapter 3, October 2014 WEO.

- At the provincial level, fiscal rules should be modified to target the overall balance that includes capital spending, rather than the operational balance. This would clearly establish a link between deficit and debt targets and enhance the credibility of provinces where debt reduction is a medium-term fiscal objective (e.g. Quebec and Ontario).

24. It is essential that the authorities follow through with "Phase 2" of the infrastructure initiative to achieve productivity goals. This will require close cooperation and coordination between federal and provincial authorities. The federal government should take the lead in developing a nation-wide infrastructure plan that identifies infrastructure gaps and prioritizes projects that enhance the economy's productive capacity. Priority projects could include those that reduce urban transportation congestion, and improve and expand trade corridors. As a first step, a forum to bring together and engage all relevant stakeholders should be established. Furthermore, new and innovative sources of funding are needed to support the infrastructure plan to limit the impact on debt at the provincial and municipal level. We welcome the financing options elaborated in the 2016 Budget that include greater involvement of public pension plans, user fees, and more creative use of public private partnerships.

25. As a longer-term reform agenda, the authorities should consider the impact of escalating health care costs and aging pressures on provincial finances. Fiscal gaps at the provincial level could emerge and widen over time, with material implications on provincial debt burdens within a 15–20 year time frame. This puts the onus first and foremost on provinces to adjust their spending priorities.

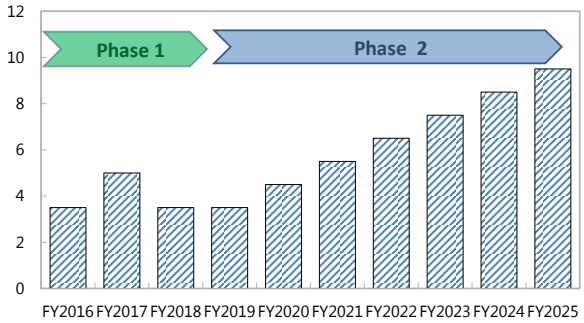
Box 6. Canada: New Infrastructure Investment Initiative

In the 2016 Budget, the Federal government announced a new infrastructure plan, totaling $60 billion (2¼ percent of GDP) over 10 years. The plan will be implemented in two phases. The baseline medium-term projections incorporate only Phase 1 spending plans.

Phase 1

To address immediate needs and boost short-term growth, the first phase focuses on *shovel ready* infrastructure projects, amounting to $12 billion over the 2–3 years. The main objectives of this phase are: (i) to upgrade and improve public transit; (ii) to modernize water, and wastewater systems, and address climate change ("Green Infrastructure"); and (iii) to provide affordable housing (including for seniors and the homeless) and to improve housing conditions in First Nations' communities ("Social Infrastructure").

Canada: New Infrastructure Spending 1/
(Can$ billions)

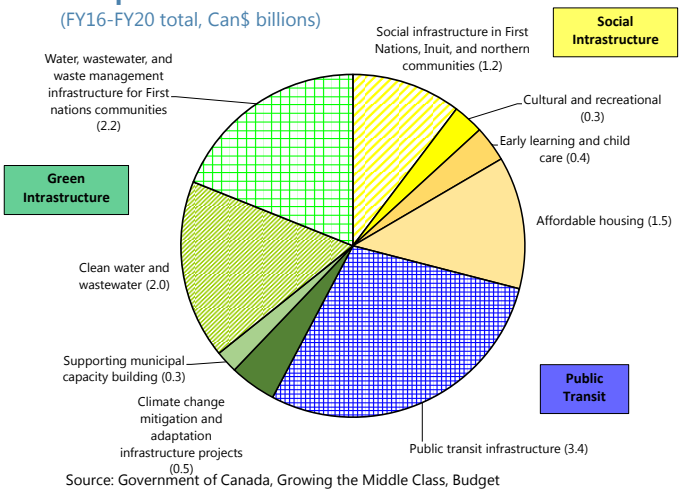


1/ Public transit, green infrastructure, and social infrastructure.
Source: Government of Canada, Growing the Middle Class, Budget 2016

Phase 2

The second phase will be launched over the medium term. The government will aim to invest in larger-scale infrastructure projects that would improve productivity growth and boost potential output. Specifically, the second phase will attempt to expand trade corridors, a system of connecting highways and rail routes that links major commercial centers in the Canada and the U.S. to transport people and goods; and to improve transportation networks in urban areas to reduce congestion and commute time; and lastly, to reduce the carbon footprint of the national energy system. The details of the second phase will be announced next year.

Composition of Phase I Infrastructure Plan
(FY16-FY20 total, Can$ billions)



Source: Government of Canada, Growing the Middle Class, Budget

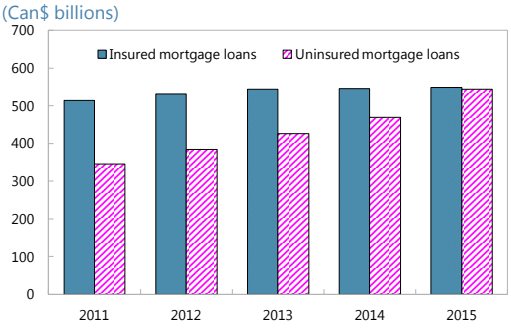
Financing

The government is looking for new innovative financing arrangements to reduce the cost of infrastructure projects at local government levels. It is considering actively engaging public pension funds and global institutional investors to take the lead in planning, building, and operating infrastructure projects but that would still allow the government to be involved. This would reduce the government's direct financial costs.

C. Financial Sector Policies

26. The authorities have been vigilant to housing-related risks, which is the most significant macro-financial vulnerability for Canada. The federal government, CMHC, and OSFI have introduced a host of measures over the past several years, including most recently in December 2015, to reduce risk taking and limit taxpayer exposure to the housing sector (Annex V and text table). These measures have been broadly effective, slowing the pace of mortgage credit expansion from above 10 percent in 2010–2011 to about 5 percent in 2015 and improving the risk profile of new mortgage loans. More than 75 percent of new mortgage originations are uninsured mortgages, those with maximum loan-to-value ratio (LTV) of 80 percent. These loans have a less risky profile, both because of the lower LTV cap and because banks must hold capital against uninsured mortgages.

Insured and Uninsured Outstanding Mortgage Loans
(Can$ billions)



Source: Office of the Superintendent of Financial Institutions

Canada: Recent Macroprudential Policies, April 2015–2016

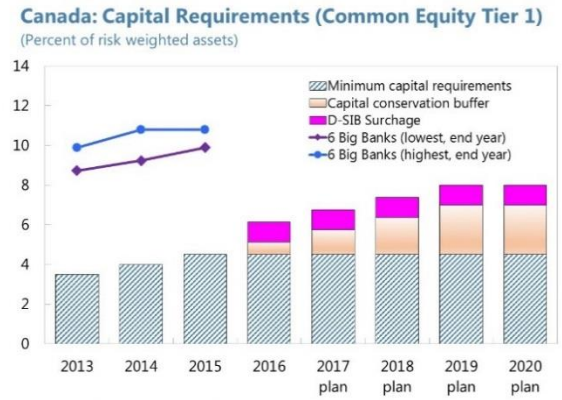
Macroprudential Measures	Stated Primary Objectives
April 2015. CMHC raised mortgage insurance premiums for homebuyers with less than a 10 percent down payment by about 15 percent (effective June 1, 2015)	Strengthen CMHC's capital position
May 2015. The DOF prohibited substitution (replacing an insured mortgage loan with another mortgage loan under existing coverage) or adding new loans into a portfolio insurance pool one year after insurance commitment	Reduce taxpayer exposure by reducing portfolio mortgage insurance and enhance market discipline
December 2015. CMHC announced an increase in guarantee fees under the NHA MBS and CMB programs and a restructuring of the CMB program (effective July 1, 2016)	Encourage the development of private market funding alternatives by narrowing the funding cost difference between government sponsored and private market funding sources
February 2016. The DOF raised the minimum down payment for new insured mortgages for the portion of the house price above Can$ 500,000 from 5 percent to 10 percent	Contain risks in the housing market, reduce taxpayer exposure, and support long-term stability
February 2016. The DOF required that portfolio-insured loans be funded only through CMHC securitization programs (effective July 1, 2016)	Restore portfolio insurance to its original purpose of supporting mortgage funding through CMHC securitization programs

27. Nevertheless, further macroprudential measures will be needed if housing sector vulnerabilities intensify. The mission welcomes OSFI's initiative to introduce a risk-based floor for banks' internal capital models for uninsured mortgages. Beyond this, the authorities could consider introducing a cap on LTI (loan-to-income). This measure would be superior to debt service-to-income limits which become less binding in a low interest rate environment. If national

measures prove inadequate to contain risks, measures that target specific imbalances in regional housing markets would be warranted.

28. Government-backed mortgage insurance has played an important countercyclical role during times of stress, but this benefit needs to be weighed against the potential cost to taxpayers. Government guarantees of insured mortgages are still a sizable 36 percent of GDP as of 2015, even though the government receives premium income from CMHC and private insurers. One option to further reduce the size of the government's contingent liability is to narrow the scope of providing government guarantees more strictly to low and middle-income households.[17] Other options to shrink the government's footprint in the mortgage insurance space could include lender risk sharing by introducing higher deductibles for insured mortgages, and further fine-tuning insurance premiums and securitization fees. Nevertheless, any reform should proceed gradually to preserve the countercyclical role and social objective of facilitating access to housing finance.

29. Prudential policies have strengthened banks' balance sheets and helped ensure system stability. OSFI introduced a three percent leverage ratio in 2015 and a one percent capital surcharge for domestic systemically important banks in January 2016. Quebec Authorite des Marches Financiers also started applying an equivalent capital surcharge to Desjardins, a large cooperative credit union. The capital conservation buffer will be phased in gradually by 2019. On liquidity, OSFI required banks to fully meet the Liquidity Coverage Ratio and plans to introduce the Net Stable Funding Ratio by 2018. Systemically important financial institutions are also required to participate in regular macroeconomic stress test exercises led by OSFI and the BOC to assess the resilience of the financial system to systemic shocks.



Sources: OsFI Guideline on Capital Adequacy Requirements; and SNL

30. Important progress has been made in implementing the 2014 FSAP recommendations (Annex VI). The new Capital Markets Regulatory Authority, which brings together the federal regulator and six provincial regulators to strengthen Canada's capacity to identify and manage systemic risk on a national basis, is a bold step toward enhancing the cooperation between federal and provincial regulators. Other measures have also been taken to engage with provincial regulators, including the BOC providing technical assistance on macro stress testing and model design. Also, CMHC has taken the lead in publishing the results of its stress test, and the BOC is considering how best to integrate quantitative analysis into its

[17]For example, capping the amount of mortgage loans (eligible for insurance) at $400,000 would reduce CMHC's insurance guarantees by about 7 percent of GDP.

financial stability assessment presented in the Financial System Review. This would enhance both the transparency and credibility of financial sector policies.

31. However, concerted efforts are needed to address several major recommendations that remain outstanding.

- The FSAP called for giving clear regulatory mandates to monitor systemic risk to facilitate macro-prudential oversight and carry out system-wide crisis preparedness. The Senior Advisory Committee (SAC) plays these roles on a de facto basis. However, the SAC does not have a mandate for crisis management nor are the members given an explicit financial stability mandate for macroprudential oversight.

- Furthermore, consistent with Basel Core Principles, legislation should be amended to give OSFI sole decision-making authority on prudential criteria. It is important for a prudential authority to make prudential decisions for safety and soundness reasons without the potential for ministerial discretion. While this has not been a problem in practice, ministerial power to override supervisory judgment impinges on operational independence, which is a critical input to supervisory effectiveness.

- Finally, the ability to conduct group-wide supervision is a key component of the Insurance Core principles to promote a consolidated view of risks and prevent arbitrage across differently regulated structures in the group. Legislation should be amended to give OSFI the authority to take supervisory measures at the level of the holding company.

D. Structural Reforms

32. The timing is right for a renewed push on structural reforms to raise Canada's productivity growth, which has lagged behind its peers for many decades and eroded its external competitiveness. The exchange rate depreciation over the last two years has significantly improved the price competitiveness of Canadian non-energy exports. However, the past erosion of capacity in the manufacturing sector may not be easily reversed and places constraints on the pace and extent of export recovery (Box 7, Figure 8, and Appendix 1). Higher labor productivity growth is necessary to restore capacity in the manufacturing sector and, more generally, improve Canada's ability to compete in existing and new export markets. To this end, a multi-pronged approach to promote innovation and investment in physical and human capital is needed.

33. Promoting innovation. Investment in private R&D could generate a significant growth dividend and makes a strong case for supportive fiscal policy.[18] The current fiscal regime gives

[18] "Fiscal Policies for Innovation and Growth" in Chapter 2, Fiscal Monitor, April 2016, IMF.

generous tax incentives to small and medium-sized enterprises (SMEs) relative to large firms.[19] This is because innovation often takes place in small firms but they find it harder to obtain financing.[20] Indeed, between 2010 and 2012, 53 percent of SMEs introduced a product or process innovation in Canada, a performance that was exceeded only by SMEs in Australia, Germany and Switzerland.[21] While the use of R&D tax incentives has helped promote innovation in SMEs, subsidizing SMEs based on their size alone may not be optimal:

- First, it is usually new rather than small firms that introduce new ideas, business models and technologies into the marketplace. High start-up rates (firms 0–2 years old) increase both the likelihood of radical innovation and competitive pressures on incumbents to innovate and adopt new technologies. Canada today has among the lowest start-up rates in the OECD.[22] Its performance in scaling up start-ups, as indicated by the share of start-up microenterprises (1–9 employees) growing into small firms (10–19 employees) after three years, is also average at 5 percent.

- Second, size-based tax preferences can create disincentives for firms to grow larger, creating a "small business trap", which contribute less to productivity and employment growth. About 60 percent of small firms in Canada are more than six years old.

- Third, the lack of large innovative firms may have a negative impact on business innovation in Canada.[23] Through their pivotal role in supply chains, these firms can drive innovation in smaller firms. Their presence is critical to anchor innovation clusters and can help foster a more deeply engrained innovation culture among other cluster members. Large firms also have more resources with which to invest, innovate and export, and they tend to be more productive than small firms.

While fiscal policy can play an important role in promoting innovation, the government should evaluate R&D subsidy policies to ensure that they are cost effective and simple so as to minimize compliance costs and facilitate firm entry, and strike an appropriate balance between direct and indirect support. The overall effective tax rate should not penalize firms from scaling up. In particular, preferential tax treatment of small firms should be re-considered. Well designed tax

[19] The R&D tax credit is provided at a general rate of 15 percent. An enhanced rate of 35 percent is provided to SMEs on their first $3 million in eligible R&D-related expenditures.

[20] In Canada, small businesses (with employment less than 100 persons) make up 70 percent of total employment in the private sector (Source: Industry Canada, 2013, Key Small Business Statistics). Tax incentives take the form of lower corporate tax rates and higher R&D investment tax credit.

[21] Technology and Industry Scoreboard, OECD 2015.

[22] The Dynamics of Employment Growth: New Evidence from 18 Countries" (2014), Chiara Criscuolo, Gal, P.N., Menon, C., Centre for Economic Performance, CEP Discussion Paper No 1274.

[23] No Canadian company appeared on Boston Consulting Group's 2014 list of the world's 50 most innovative companies, a list dominated by large firms that have no equivalents in Canada.

relief targeted to new firms can promote entrepreneurship and innovation, as demonstrated by the successful initiatives in Chile and France.[24]

34. Boosting labor force participation and talent base. Although female labor force participation is fairly high, the current gap (10 percentage points) between male and female labor force participation should be narrowed. Staff analysis indicates that higher female labor force participation could have a positive impact on productivity growth, increasing labor supply at a time when it is stagnant due to demographic reasons. The new Canada Child Benefit is a step in the right direction in providing benefits to low and middle income families, but could be better targeted to boost female labor force participation, including providing more generous child care subsidies for working parents.[25]

35. Investment in human capital and skills training. Canada has a highly educated workforce but more vocational and specialized skills training would help retool the labor force to facilitate labor mobility to high value added activities and meet the challenges of a changing global economy. Canada spends about half of the OECD average on publicly funded training, leaving significant room for improvement.

36. Investment in physical capital. The federal government's planned increase in infrastructure spending will help catalyze private business investment. In addition, lowering interprovincial barriers to trade as well as policies to promote competition in the network sectors would create the right conditions to expand domestic business investment and attract FDI.

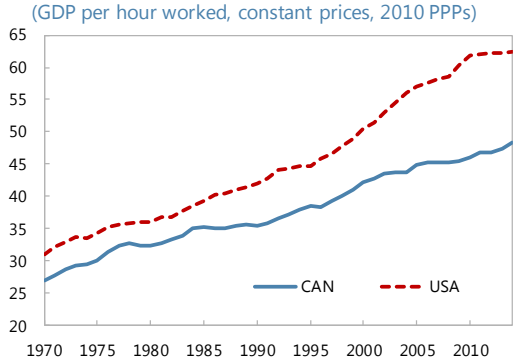
[24] See "Box 2.5. Programs for Young Innovators and Start-Ups Fiscal Policies for Innovation and Growth" in Chapter 2, Fiscal Monitor, April 2016, IMF.

[25] According to Fortin et al (2012), the child care subsidy program in Quebec introduced in 1997 and gradually expanded in the following years is an example with strong positive effects on female labor force participation. The program "paid for itself" as government welfare costs decreased and income taxes increased.

Box 7. Canada: Determinants of Labor Productivity Growth

Canada's productivity growth has declined from 1.5 percent in the 1970s–80s to less than 1 percent today. Canada has been trailing the U.S. since the 1970s but in the 2000s, Canada's productivity gap with the U.S. widened to 20 percentage points.[1] Only recently has Canada narrowed the gap with the U.S., but this is more a reflection of the severity of the 2008-09 financial crisis in the U.S. than a marked improvement in productivity growth in Canada. A shift in resources from the energy to the non-energy sector would result in a temporary drop in productivity but over time higher productivity growth in the non-energy sector would lift overall productivity growth.

Labor Productivity
(GDP per hour worked, constant prices, 2010 PPPs)



Sources: OECD Stat and IMF staff estimates.

A panel regression analysis applied to provincial level data on labor productivity shows investment in four key areas, R&D and innovation, capital deepening, vocational training, and female labor force participation, would raise labor productivity growth. In particular, a 1 percentage point increase in R&D could lead to a 0.05 percentage point increase in labor productivity growth after two years. With regard to capital deepening, complementary investments in skills-training are needed in order to make the best use of the physical investment made and this process takes time to bear fruit. The positive response of labor productivity growth to higher capital deepening only in the second year is suggestive of this effect.

The result on female labor force participation is surprisingly strong, but should be interpreted with caution since research in this area is still new and there are few available country comparisons. Nevertheless, the positive effect could reflect the higher share of women graduating with tertiary education (60 percent) in Canada, or changes in cultural norms such that firms that have a higher propensity to hire women might also be more dynamic in other aspects of production, or better performing firms have a business culture that attract more women. Recent IMF analysis shows significant macroeconomic gains when women are able to participate more fully in the labor market.[2]

Provincial Panel Data Regression Results for Labor Productivity Growth

Category	Variable	Estimated elasticity: After one year	Estimated elasticity: After two years
Investment in physical capital	R&D investment	+0.03	+0.05
	Capital deepening	-0.25	+0.34
Investment in human capital	Vocational training	+0.05	+0.06
Labor force participation	Female labor force participation ratio	+0.52	+0.50

Sources: IMF staff estimates.

Note: Data are yearly and include all 10 provinces in Canada. The sample size is 110-150 observations, depending on specification. All variables are expressed in logs (yearly changes) and are statistically significant at 1-5 percent. Labor productivity is real GDP divided by hours worked. R&D investment is real business R&D investment. Capital deepening is real capital stock divided by hours worked and female labor force participation ratio is female labor force (aged 25-54 years) divided by total female population. Other variables are included in the regressions but not reported in this table as they are not enough statistically significant.

[1] Conference Board, "Labor Productivity: Measuring Productivity in Canada", March 2016.

[2] "Women, Work and the Economy: Macroeconomic Gains from Gender Equity", IMF Staff Discussion Note, September 2013.

AUTHORITIES' VIEWS

37. The authorities agree with staff's assessment of the near-term growth outlook. In their view, the Canadian economy is adjusting reasonably well to the sizable commodity price shock, facilitated by accommodative macro policies and exchange rate depreciation. The contraction of business investment in the commodity sector will continue to be a drag on economic activity, but the effects of the negative factors weighing on the resource sector will become less intense, and the drag on overall GDP growth is expected to wane over 2016. Meanwhile, activity in the rest of the economy is expanding and is expected to be the main source of growth over the next few years. In particular, they expect non-commodity exports to trend upward, spurring investment and employment. The timing and magnitude of these adjustments will determine potential output growth over the medium term.

38. The authorities consider risks around the near-term outlook to remain on the downside and largely external. They underscore that downside risks stem from uncertainty surrounding the future path of oil prices and global growth. On the upside, a faster than expected U.S. growth would increase demand for Canadian exports. The authorities also see some upside for oil prices over the medium term. In particular, reduced access to financing for highly indebted US shale oil producers and political instability in some oil exporters could result in a faster-than-anticipated decline in supply. As non-OPEC supply declines and demand growth remains steady, the current global supply overhang is expected to diminish.

39. Financial stability risks are contained. While the authorities recognize that labor market weakness in resource provinces will likely lead to an increase in loan delinquencies in the coming months, they view the large banks to be well capitalized and able to absorb credit losses. They note the strong growth in specific segments of some regional housing markets and the degree of leverage in the system as a source of some concern. However, as long as interest rates remain low and in the absence of a trigger, which would significantly increase unemployment and reduce household income, the risk of a sharp, broad-based house price correction is viewed as being remote. Furthermore, the authorities noted that the government guaranteed mortgage insurance system would help to protect the financial system in a downturn, allow for mortgage credit to continue to flow, and thus limit the impact from a potential tightening of mortgage credit that could exacerbate a downturn in the housing market.

40. The authorities agree that monetary policy should remain accommodative until the economic recovery has firmed. If the economy were to weaken, a further cut in the policy rate would be considered. The BOC does not see a need for unconventional monetary policies unless the economy weakens substantially, and considers the risk of this occurring as very low.

41. The BOC sees a role for monetary policy to take account of financial stability considerations within its flexible inflation targeting framework. The BOC is prepared to adjust the horizon for returning inflation to target depending on the nature and persistence of

the shocks buffeting the economy. This allows the BOC to take financial stability considerations into account within its current framework.

42. The 2016 federal Budget is aimed at supporting the economy. The authorities believe that in an environment of sustained economic weakness and historically low interest rates, fiscal policy has an important role to play in delivering stronger growth today, and in expanding the economy's growth potential over the long term.

43. The government views public infrastructure investment as critical to spearheading long-term growth and is a strong advocate of this approach among the G20 community. Low labor productivity growth has been a longstanding issue for Canada. Public infrastructure investment that is well designed and executed could redress this problem, improve external competitiveness and open up new export markets, and raise potential output. The authorities view this strategy as particularly relevant in today's "low growth, low inflation" world, where labor input growth is expected to continue to decline in response to slower population growth and aging. The government is seeking to engage private investors to create innovative funding structures to increase the long-term affordability and sustainability of infrastructure in Canada.

44. The federal government is committed to maintaining its low debt burden. In Budget 2016, the federal government announced that it is committed to undertaking investments in the economy while maintaining Canada's fiscal strength by reducing the federal debt-to-GDP ratio to a lower level over a five-year period. A timeline for balancing the budget will be set when growth is forecast to remain on a sustainably higher track.

45. OSFI confirmed that it has not tightened regulations on CBRs, and any changes to Canadian banks' CBRs should have reflected their own business decisions. It is noted that Canadian banks are making decisions about rationalizing correspondent banking relationships from a risk adjusted profitability perspective. OSFI looks forward to participating in the FSB's efforts on this subject.

46. While improvements can be made, the authorities believe Canada's macro-prudential and supervisory frameworks are effective and appropriate in maintaining the safety and soundness of the financial sector. The authorities consider the current approach for macroprudential policy to have worked well, with members of the Senior Advisory Committee (SAC) meeting regularly to share information and discuss systemic vulnerabilities and risks and appropriate policy responses. They believe the SAC structure is flexible, facilitates coordination and a discussion of policy trade-offs among the financial sector principals, and supports a nimble response to emerging issues. OSFI is operationally independent and its administrative guidelines are enforceable in practice because its numerous intervention powers and tools are legally enforceable. OSFI's use of guidelines provides it with the ability to act independently and quickly in the face of emerging risks. OSFI's risk-based approach to group-wide supervision of the largest insurance companies also remains appropriate. It facilitates structured, effective and comprehensive supervisory risk assessments.

STAFF APPRAISAL

47. The oil shock is the first major test of Canada's economic and financial resilience since the 2008 global financial crisis. While there has been a sharp deceleration in growth as oil companies slashed investment spending, the Canadian economy overall is coping well. An accommodative monetary policy stance and exchange rate depreciation have helped cushion the effects of the oil shock. Inflation remains well anchored. Unemployment has edged up, and the negative output gap has widened to about 1 percent of GDP. The economy is projected to recover gradually over the next two years and converge to potential growth of around 2 percent over the medium term. Fiscal stimulus will facilitate a faster return of the economy to potential.

48. The exchange rate is still moderately overvalued despite depreciating significantly since 2014.

49. The macro-financial effects of the oil shock have yet to fully play out, with downside risks adding another layer of uncertainty. The economy is still adjusting to lower oil prices, in part because the reallocation of capital and labor from the resource to the non-resource sectors is, expectedly, taking time. Reflecting the impact of the oil shock and a slowing economy, financial vulnerabilities have become more apparent, as reflected in rising loan delinquencies, albeit from low levels. While the banking system's direct exposure to the energy sector is limited, its indirect exposure to resource rich provinces is more substantial, and will require higher provisions against deteriorating credit performance. More broadly, the weaker economy has re-ignited concerns about the elevated level of household debt and vulnerabilities related to the housing market. Another significant terms of trade shock or a global recession that triggers a sharp increase in the unemployment rate could destabilize housing markets, setting off adverse feedback loops in the economy and leading to greater financial stability risks.

50. The near-term policy challenge is to pursue an appropriate policy mix that is supportive of growth while containing vulnerabilities in the housing market. Monetary and fiscal policy should work together to support the economy. With the policy rate near zero, and in the absence of short-term supply constraints, fiscal policy becomes more potent in stimulating demand as the multiplier effect under these circumstances is stronger. Pursuing greater balance in the policy mix will also help reduce risk taking in a low interest rate environment and discourage households from taking on more debt. Macroprudential policy can be further tightened if imbalances in the housing market threaten to intensify. Enhancing financial sector resilience is critical given considerable macro-financial linkages and housing market vulnerabilities.

51. The long-term policy challenge is to make the best use of the available fiscal space to accelerate structural reform and diversify Canada's future sources of growth. Political resolve along with close collaboration between federal and provincial governments will be necessary to push the agenda forward, ensure efficient implementation, and overcome implementation challenges.

- Fiscal policy can play a catalytic role by increasing public infrastructure investment. If done correctly, public infrastructure investment could pay for itself as debt-financed projects could have large output effects without increasing the debt-to-GDP ratio. Setting up a nation-wide infrastructure plan would help raise the quality of infrastructure investment through, among others, better project appraisal, selection, financing, execution, and rigorous cost-benefit analysis.

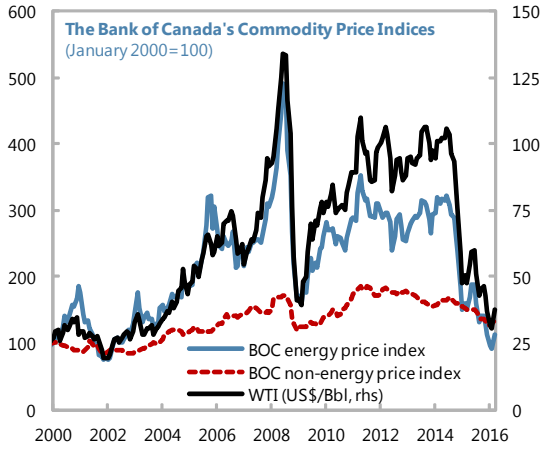
- A multi-pronged approach is needed to improve productivity growth and external competitiveness. Fiscal policy, through targeted R&D tax incentives to promote innovation and competition, more generous childcare subsidies to encourage women to join the labor market, and expanded publicly funded training programs to help workers retool their skills, would place Canada in a better position to compete in existing and new export markets.

52. To ensure fiscal credibility, the easing of the fiscal stance should be accompanied by strengthening the medium term fiscal framework. The federal government's commitment to putting the debt to GDP ratio on a downward path is appropriate but a new fiscal rule is needed to anchor fiscal sustainability and sustain market confidence. At the provincial level, provinces with relatively high debt (Quebec) or a high deficit (Ontario) should continue to consolidate their fiscal positions, but only gradually, so as not to offset the effect of the federal government stimulus, whereas in Alberta, automatic stabilizers should be allowed to operate fully as there is no immediate fiscal sustainability concern.

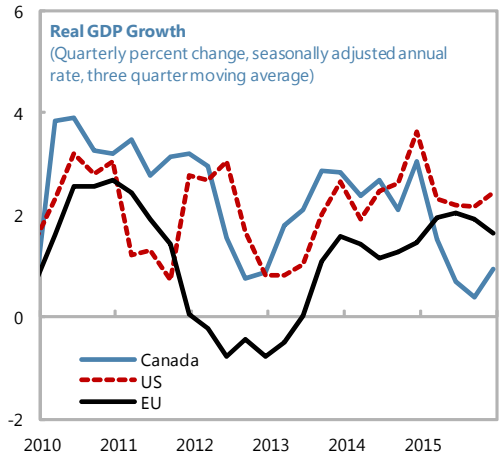
53. It is recommended that the next Article IV consultation take place on the standard 12-month cycle.

Figure 1. Lower Oil Prices Hit The Canadian Economy Hard

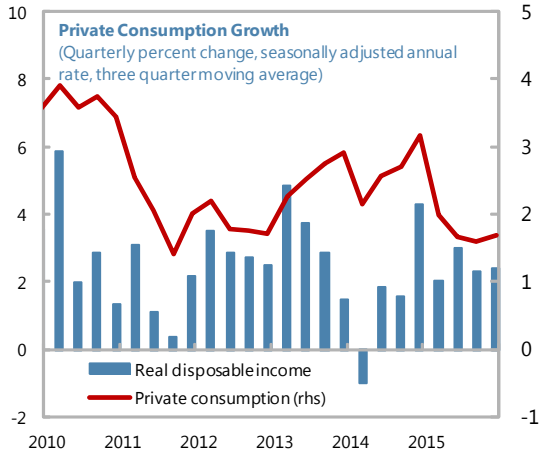
Energy prices have slumped...



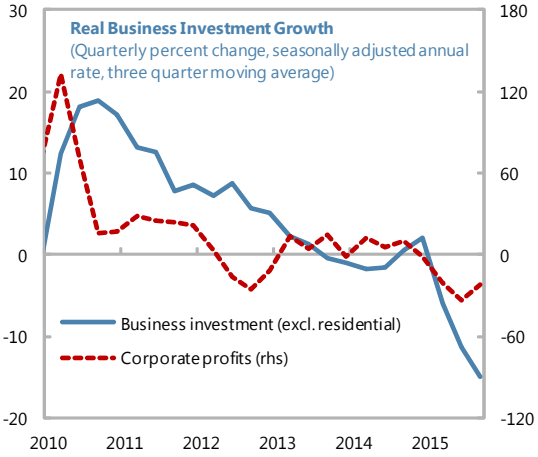
...and the Canadian economy has lost growth momentum.



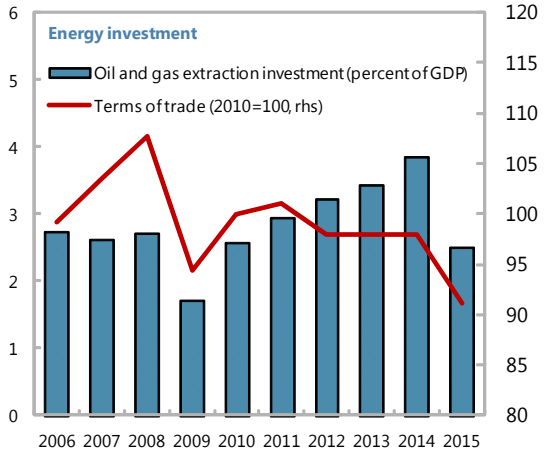
Real private consumption growth has decelerated, as disposable income has weakened.



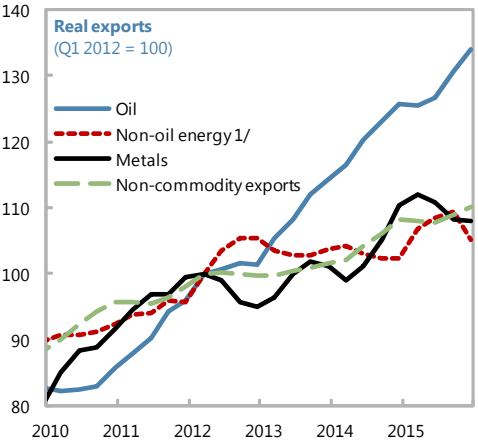
As corporate profits have weakened, business investment fell sharply...



...with energy investment falling sharply in 2015.



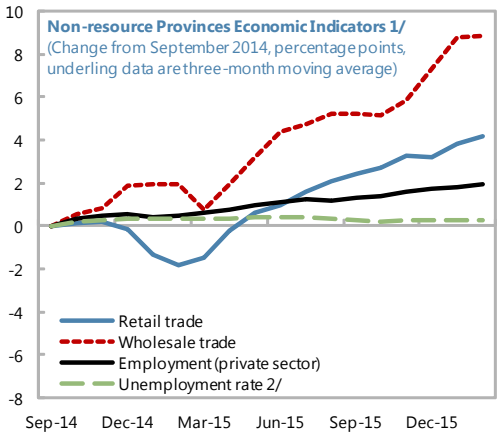
Oil exports continue to increase, while non-commodity exports remain sluggish.



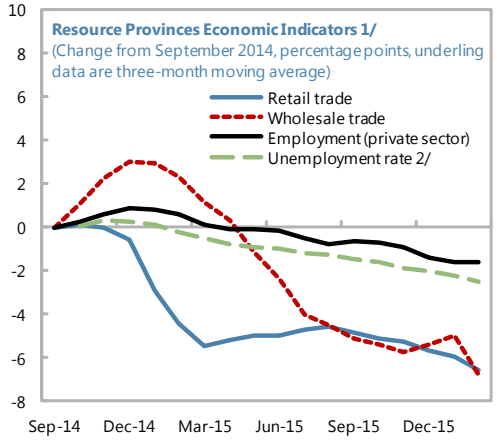
Sources: Statistics Canada; Haver Analytics; Bank of Canada; and IMF staff estimates.
1/ Natural gas, refined petroleum products, electricity and other energy products.

Figure 2. Complex Macro-Financial Channels... Still Unfolding

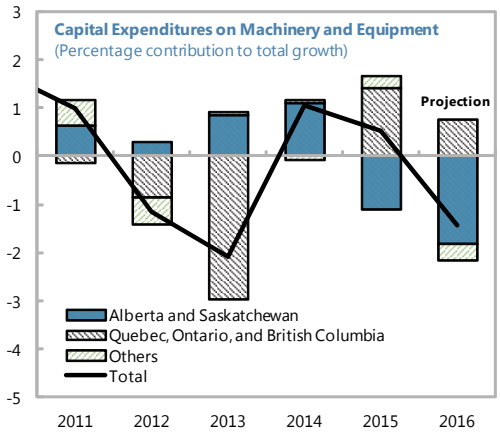
Non-resource provinces are doing well...



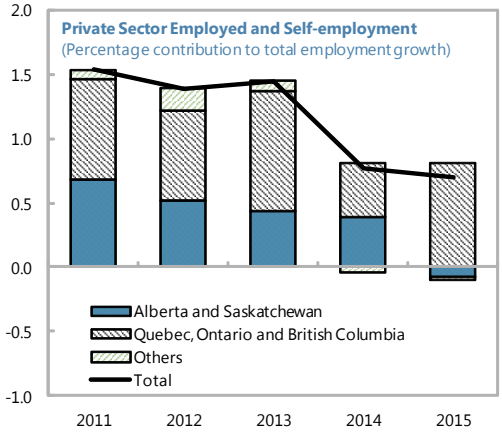
But resource provinces are hurting.



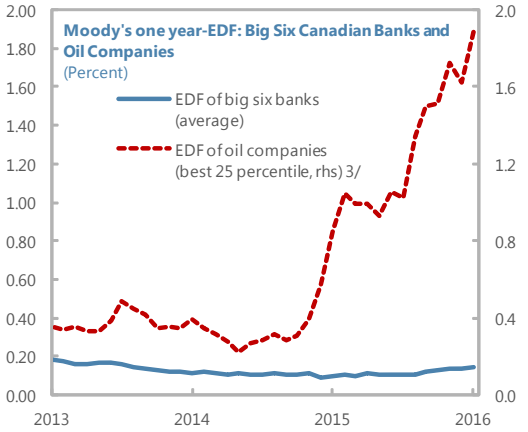
Structural reallocation of capital...



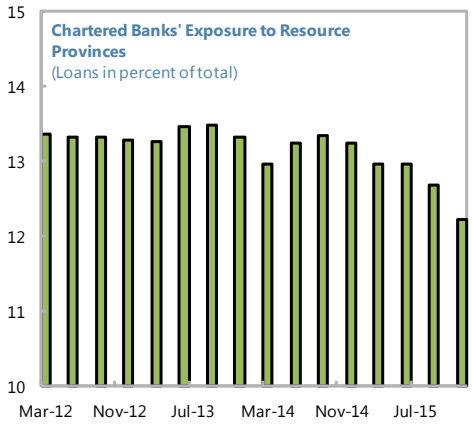
...and labor is ongoing.



Markets consider spillover risk to the banking system to be contained...



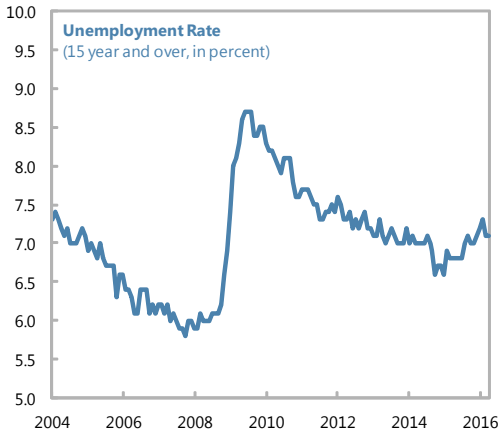
...but banks' exposures to resource provinces are not insignificant.



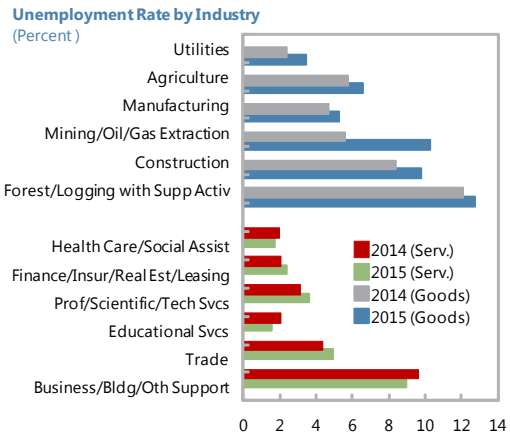
Sources: Moody's Credit Edge, Statistics Canada, Haver Analytics and IMF staff estimates.
1/ Non-resource provinces are Quebec, Ontario and British Columbia; resource provinces are Saskatchewan , Alberta and Newfoundland, but data reflects only Alberta and Saskatchewan.
2/ Values in reverse order.
3/ One year EDF 25 percentile (total sample, 253 energy companies).

Figure 3. Canada's Labor Market Has Fared Relatively Well

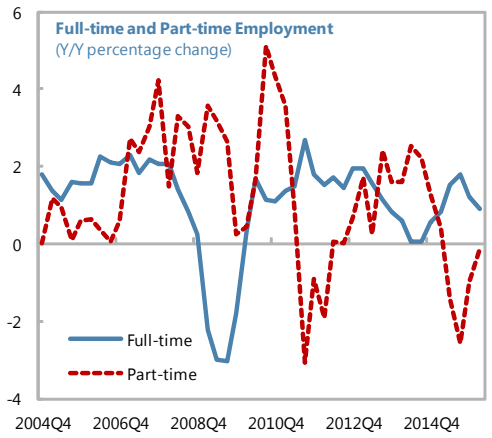
Unemployment rate has edged up...



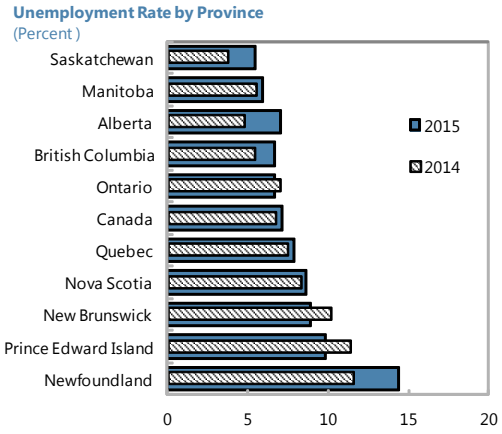
...and resource -related industries.



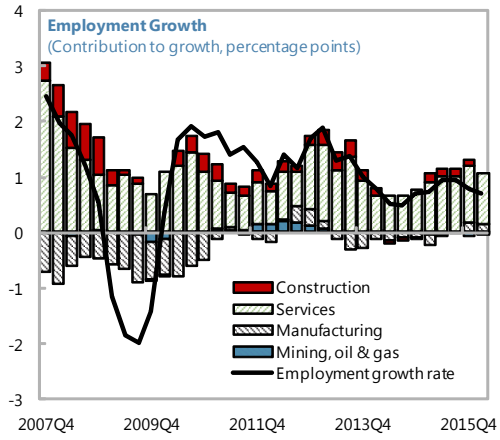
...with more full-time jobs...



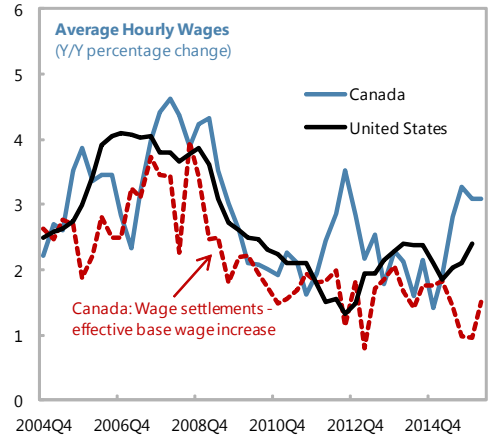
...notably in resource provinces...



But employment growth has held up relatively well overall...



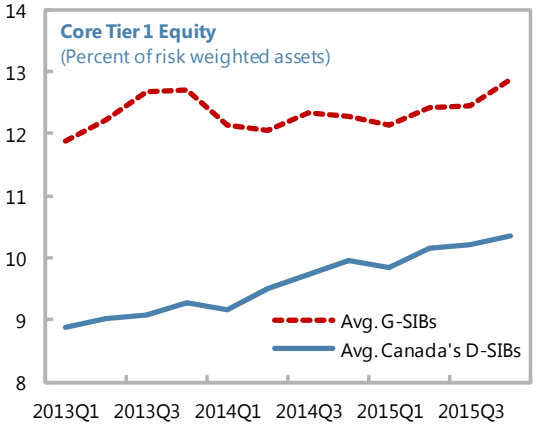
...and solid wage growth.



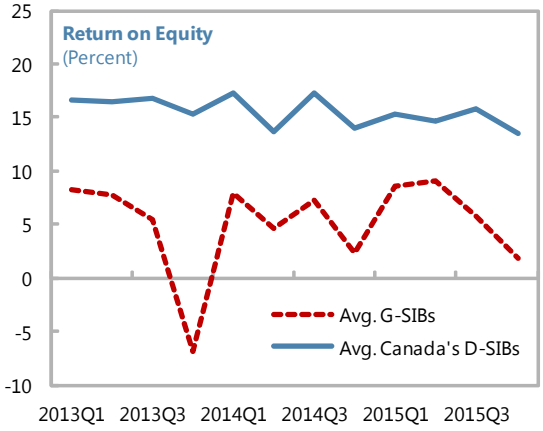
Sources: Statistics Canada; Haver Analytics; and IMF staff estimates.

Figure 4. Financial Sector Remains Resilient But Challenges Are Emerging

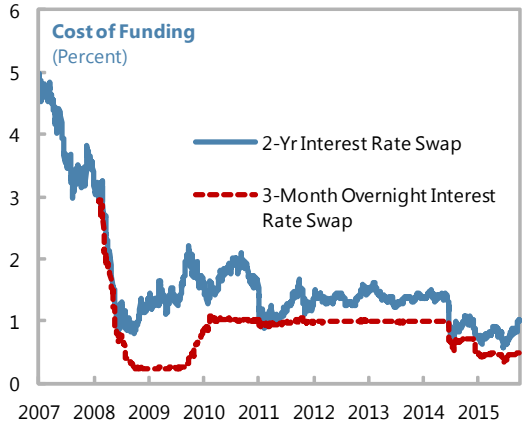
Banks' capital ratios have increased but remained below those of G-SIBs.



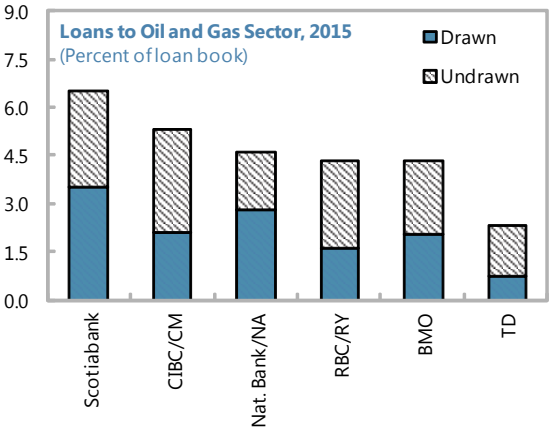
Banks remain highly profitable...



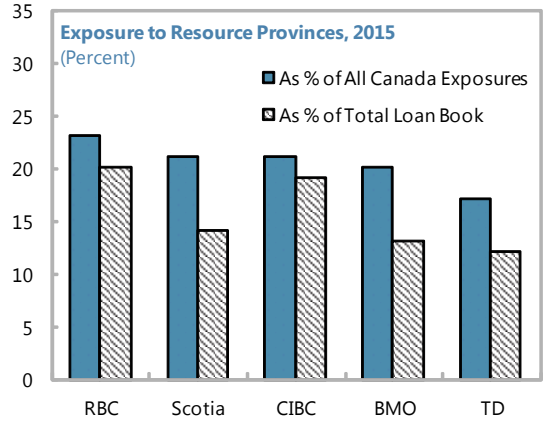
...and funding costs have edged down further.



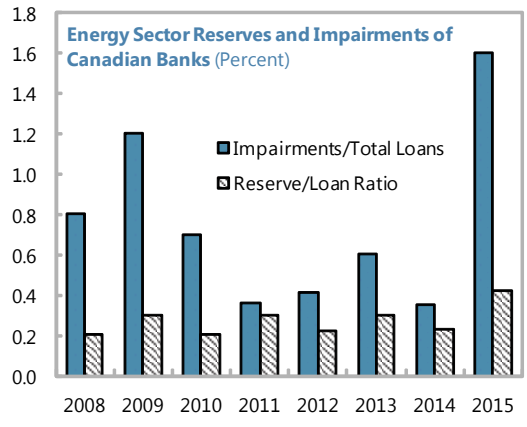
Exposure to oil and gas is limited for most banks...



...but exposure to resource provinces is more significant

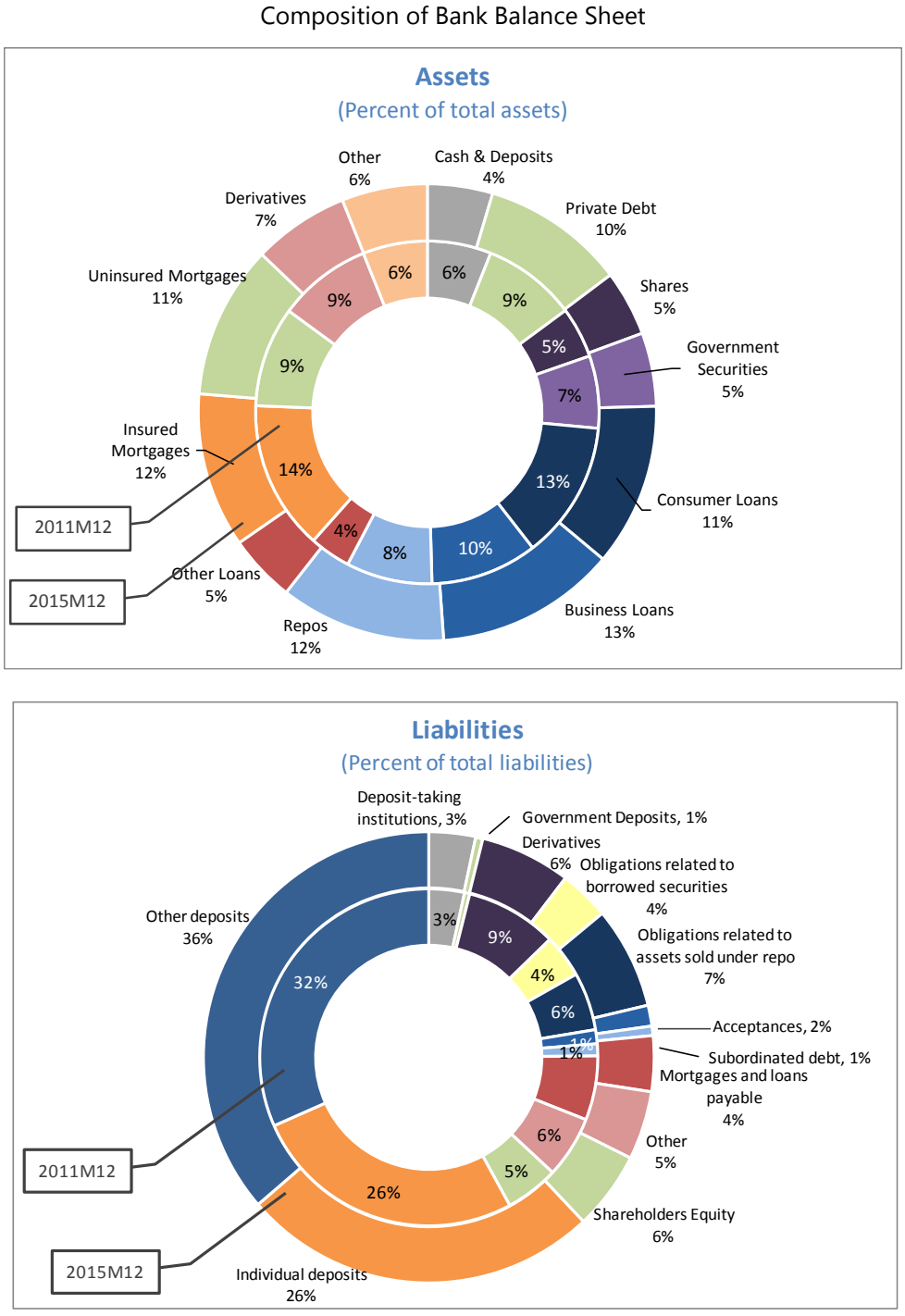


Energy sector impairments have increased relatively to reserves.



Sources: Bank of Canada; SNL, Database; Haver Analytics; Banks' Annual Reports; Barclays; and IMF staff estimates.

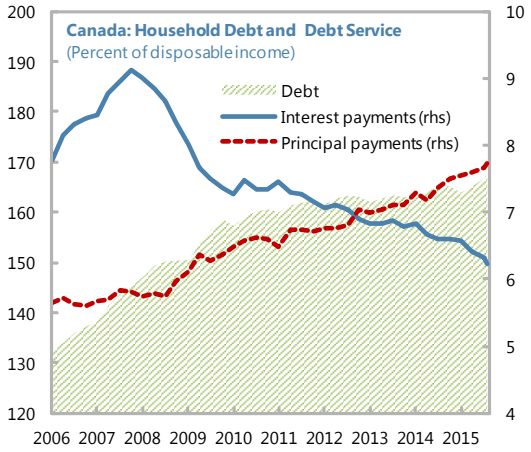
Figure 4. Financial Sector Remains Resilient But Challenges Are Emerging (concluded)



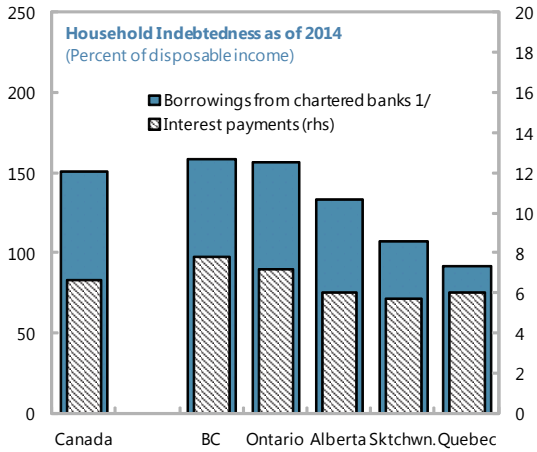
Source: OSFI and IMF staff estimates.

Figure 5. Housing Sector Vulnerabilities Have Increased

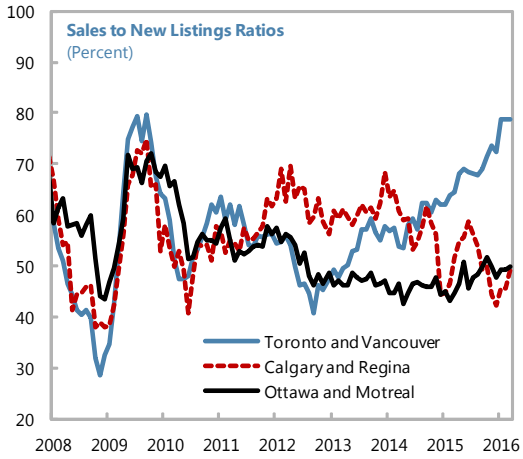
Debt service burden continues to fall, and household debt has risen to an all time high.



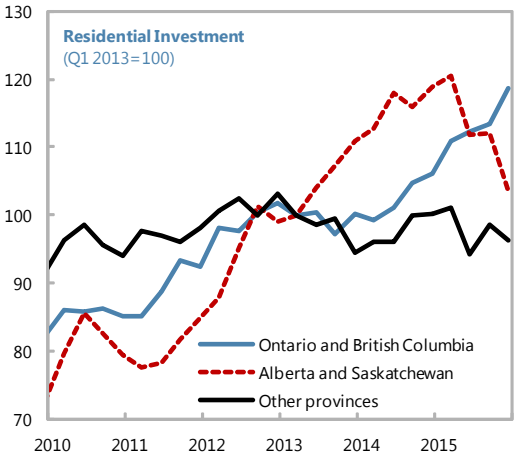
Household debt is high in British Columbia, Ontario, and Alberta.



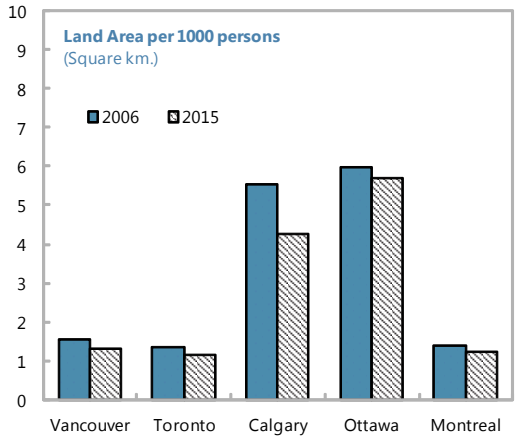
Housing demand is strong in Toronto and Vancouver but weakening in Calgary.



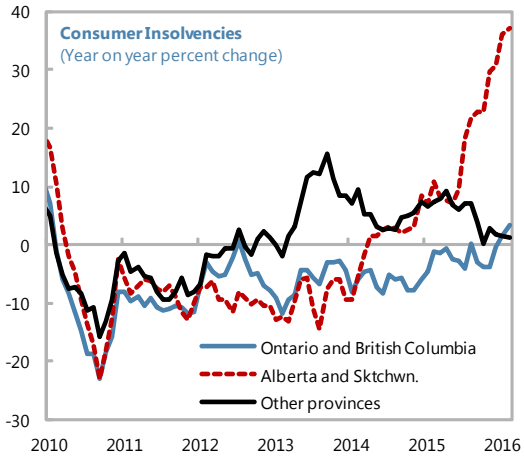
Residential investment has increased in Ontario and British Columbia...



...bumping up against land supply constraints.



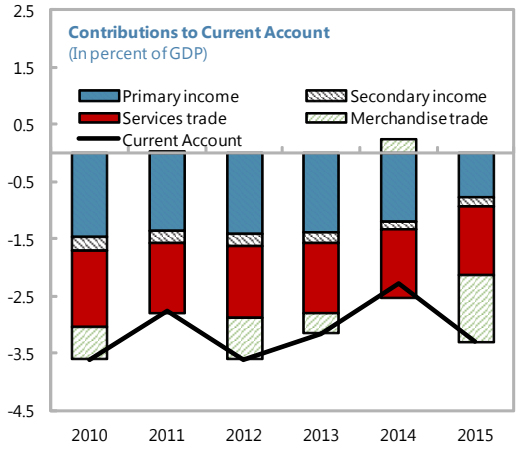
Resource provinces have seen a rapid increase in consumer insolvencies.



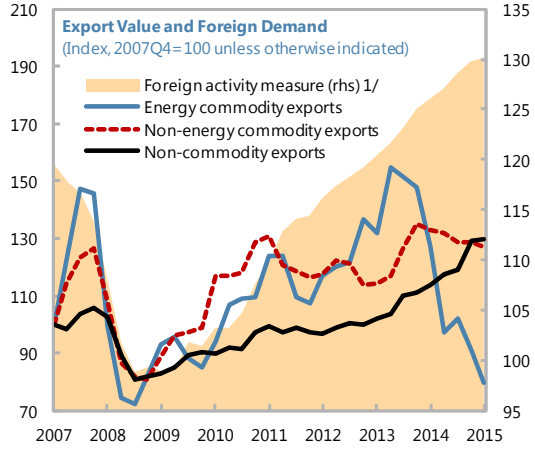
Sources: CREA; CMHC; Haver Analytics; Statistics Canada; and IMF staff estimates.
1/ Consumer loans and residential mortgage loans.

Figure 6. External Sector Has Weakened

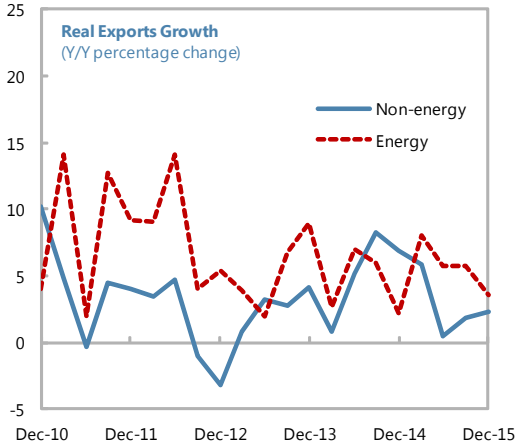
Current account has weakened amid a wider trade deficit.



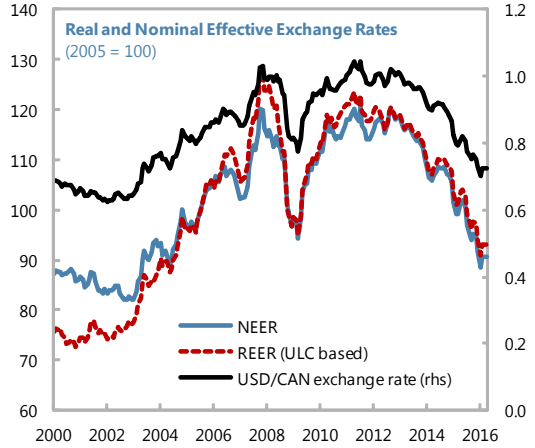
Lower oil prices slashed energy exports value...



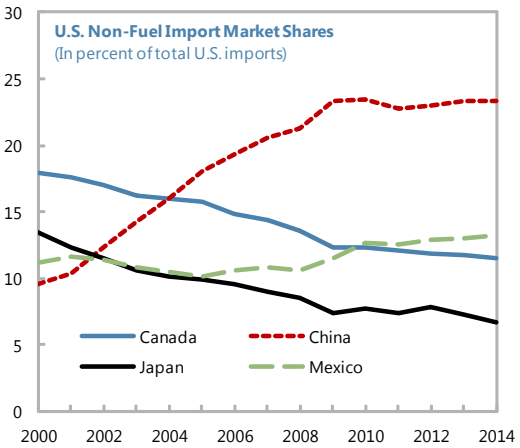
...but not the volume.



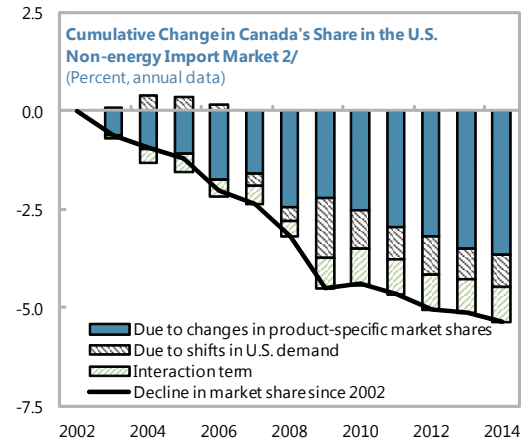
Exchange rate depreciation has helped boost non-energy exports...



... but with a delay as its market share in the U.S. has been eroded...



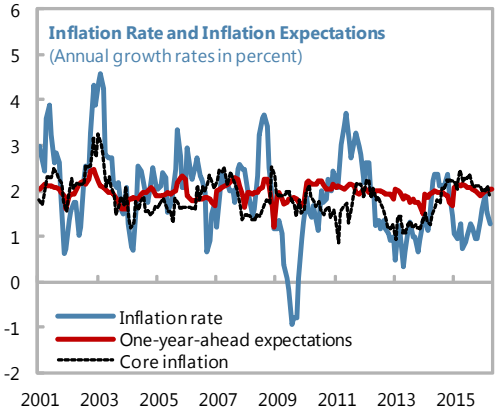
..due to lost competitiveness within product categories.



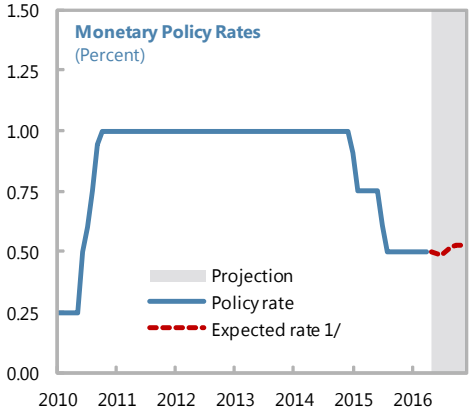
Source: Statistics Canada, Bank of Canada and IMF staff estimates.
1/ Bank of Canada measure for predicting Canadian exports. It captures the composition of demand in the U.S. and elsewhere, also controls for changes in relative prices.
2/ Barnett and Charbonneau (2015).

Figure 7. Monetary and Financial Market Conditions Remain Favorable

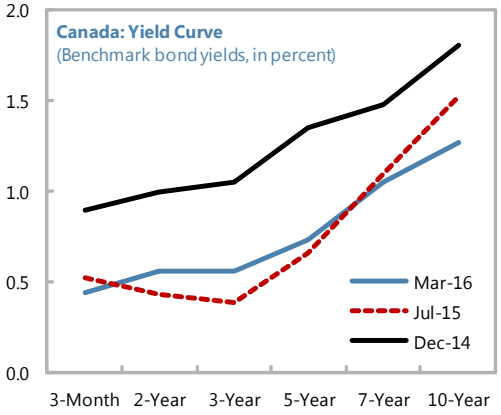
Inflation expectations are well-anchored at around 2 percent.



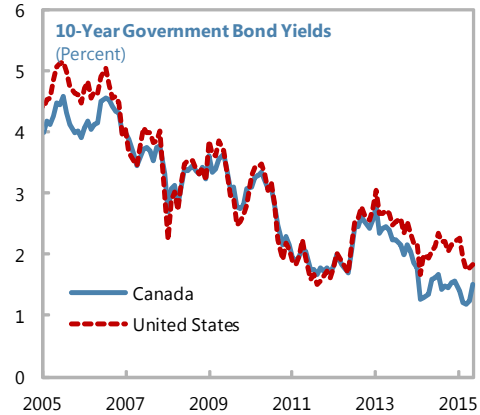
Monetary conditions remain accommodative after two policy rate cuts in 2015.



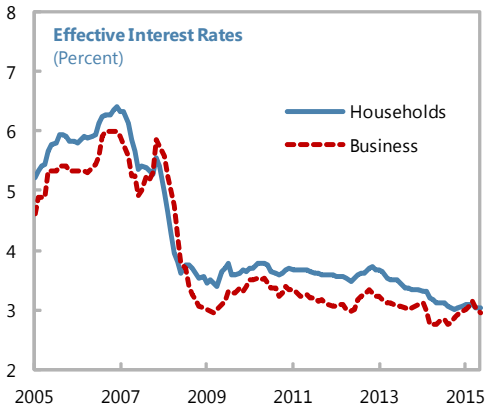
The yield curve has shifted down...



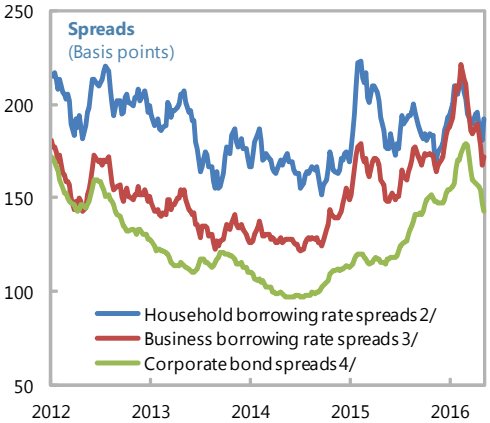
...and yields on 10-year Government of Canada bonds have fallen to historical lows.



Effective cost of borrowing remain low...



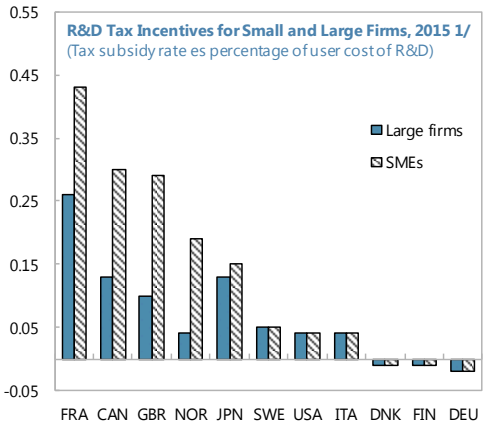
...but recently, spreads have increased



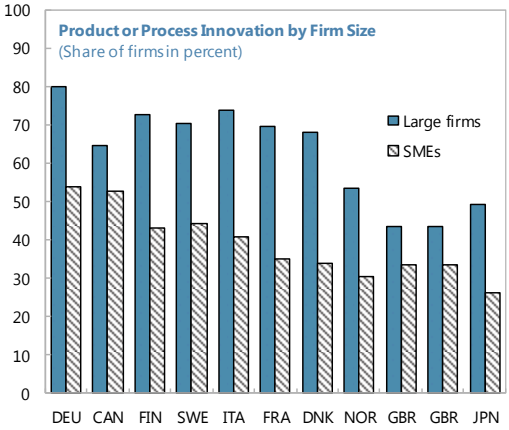
Source: Haver Analytics, Consensus Economics, Statistics Canada, Bank of Canada, Bloomberg, and IMF Staff estimates.
1/ Estimated rate as of May 2016 using Bloomberg's World Interest Rate Implied Probability (WIRP).
2/ Weighted average of various mortgage and consumer loan interest rates minus federal bond average yield.
3/ Estimated effective bank lending rates to business minus federal bond average yield.
4/ FTSE TMX Canada all corporate bond average yield minus federal bond average yield.

Figure 8. Structural Policies

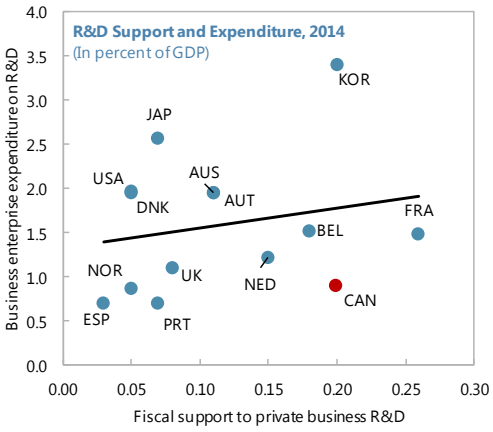
Generous R&D tax incentives are given to SMEs...



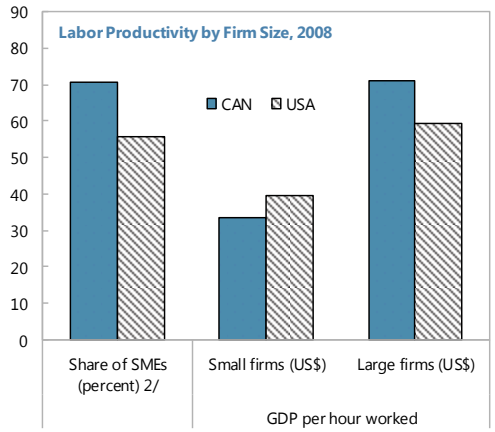
...which have been effective in stimulating innovation by SMEs.



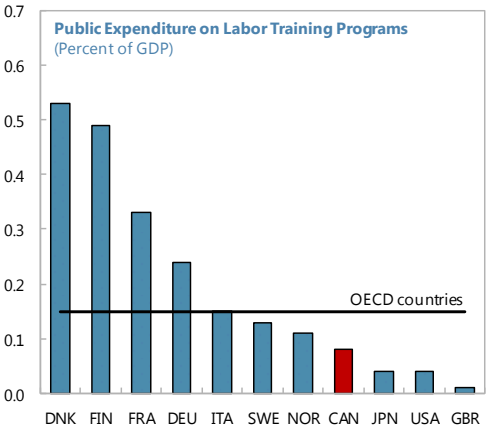
But for the economy as a whole, private R&D expenditure is relatively low.



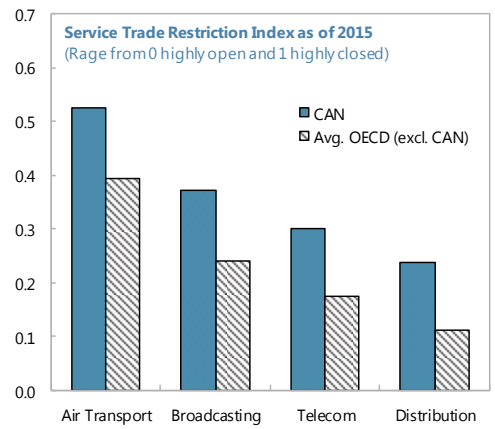
Compared to the U.S. SMEs have a higher share in the economy and are less productive.



There is room to increase publicly funded training...



...and ease trade restrictions in some sectors



Sources: OECD; Baldwin, J.R., D. Laung, and L. Rispoli (2014); and IMF staff estimates.
1/ For calculation of the tax subsidy rate see OECD, R&D Tax Incentive Indicators, July 2015.
2/ Share of large firm business hours worked.

Table 1. Canada: Selected Economic Indicators, 2012–17

(Percentage change, unless otherwise indicated)

Nominal GDP (2015): Can$ 1,986 billion (US$ 1,553 billion) Quota: SDR 11,023.9 million
GDP per capita (2015): US$ 43,316 Population (2015): 35.8 million
Main exports: Oil and gas, autos and auto parts, gold, lumber, copper.

					Projections	
	2012	2013	2014	2015	2016	2017
Output and Demand						
Real GDP	1.7	2.2	2.5	1.2	1.7	2.2
Total domestic demand	2.0	1.9	1.3	0.2	0.4	2.2
Private consumption	1.9	2.4	2.5	1.9	1.8	2.0
Total investment	3.5	2.0	-0.5	-4.6	-3.9	2.7
Net exports, contribution to growth	-0.4	0.4	1.1	0.9	1.2	0.0
Unemployment and Inflation						
Unemployment rate (average)	7.3	7.1	6.9	6.9	7.4	7.5
CPI inflation (average)	1.5	0.9	1.9	1.1	1.4	2.0
Saving and Investment 1/						
Gross national saving	21.3	21.5	22.0	20.5	19.6	20.2
General government	2.1	2.3	3.4	2.5	1.3	1.5
Private	19.2	19.1	18.6	18.0	18.3	18.7
Personal	5.5	5.8	5.0	5.3	5.3	5.3
Business	13.7	13.4	13.6	12.6	13.0	13.4
Gross domestic investment	24.9	24.6	24.3	23.8	23.1	23.1
General Government Fiscal Indicators 1/ (NA basis)						
Revenue	38.5	38.5	38.5	38.6	38.3	38.2
Expenditures	41.0	40.3	39.0	40.3	41.1	40.6
Overall balance	-2.5	-1.9	-0.5	-1.7	-2.8	-2.4
Gross Debt	84.8	86.1	86.2	91.5	92.6	91.0
Net debt	28.2	29.4	28.1	26.7	27.8	26.2
Money and Credit (Annual average)						
Household Real Credit Growth	3.9	3.2	2.3	3.8	4.1	4.7
Business Real Credit Growth	4.4	6.4	5.6	6.8	3.7	3.6
Three-month treasury bill 2/	1.0	1.0	0.9	0.5	0.4	0.4
Ten-year government bond yield 2/	1.9	2.3	2.2	1.5	1.6	1.6
Balance of Payments						
Current account balance 1/	-3.6	-3.2	-2.3	-3.3	-3.4	-3.0
Merchandise Trade balance 1/	-0.7	-0.3	0.2	-1.2	-1.5	-1.1
Export volume	2.5	3.0	5.7	3.4	3.1	3.5
Import volume	3.2	1.8	2.4	0.2	-0.4	3.4
Terms of trade	-1.5	-0.1	-1.3	-6.9	-4.1	1.1

Sources: Haver Analytics and Fund staff calculations.
1/ Percent of GDP.
2/ In percent.

Table 2. Canada: Balance of Payments, 2014–21

(Percent of GDP)

			Projections					
	2014	2015	2016	2017	2018	2019	2020	2021
Current Account								
Current account balance	-2.3	-3.3	-3.4	-3.0	-2.7	-2.5	-2.3	-2.2
Merchandise trade balance	0.2	-1.2	-1.5	-1.1	-0.9	-0.7	-0.5	-0.5
Exports, goods	26.8	26.4	25.7	26.0	26.3	26.6	26.9	27.2
Export volume growth (percentage change)	5.7	3.4	3.1	3.5	4.0	4.0	4.0	4.1
Imports, goods	26.6	27.6	27.2	27.2	27.2	27.3	27.4	27.6
Import volume growth (percentage change)	2.4	0.2	-0.4	3.4	3.6	3.7	3.9	3.9
Services balance	-1.2	-1.2	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9
Primary Income Balance	-1.2	-0.8	-0.8	-0.7	-0.7	-0.7	-0.7	-0.7
Secondary Income Balance	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Capital and Financial Accounts								
Direct investment, net	0.2	-1.2	-0.2	0.0	0.1	0.1	0.1	0.1
Portfolio investment, net	1.0	1.8	1.9	1.4	1.6	1.4	1.4	1.4
Other investment, net 1/	1.4	2.8	1.7	1.5	1.0	1.0	0.9	0.8
Capital account balance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
International reserves	-0.3	-0.5	0.0	0.0	0.0	0.0	0.0	0.0
Statistical discrepancy	0.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0
Memorandum Items								
Terms of trade (percent change)	-1.3	-6.9	-4.1	1.1	0.6	0.5	0.4	0.1
Net international investment position 2/ 3/	5.3	10.2	...	...	...	...	...	...
Assets	171.6	187.6	...	...	...	...	...	...
FDI	69.1	75.3	...	...	...	...	...	...
Portfolio 2/	69.7	76.3	...	...	...	...	...	...
Other	28.4	31.0	...	...	...	...	...	...
Reserves	4.4	5.0	...	...	...	...	...	...
Liabilities	166.3	177.3	...	...	...	...	...	...
FDI	59.4	60.5	...	...	...	...	...	...
Portfolio 2/	78.6	84.1	...	...	...	...	...	...
Other	28.3	32.8	...	...	...	...	...	...
Gross external debt	90.0	108.9	113.9	115.2	116.1	117.0	117.9	118.8
Real effective exchange rate 3/	-5.8	-7.8	...	...	...	...	...	...

Sources: Haver Analytics and Fund staff calculations.
1/ Includes bank, nonbank, and official transactions other than reserve transactions.
2/ Based on market valuation of portfolio stocks and official international reserves.
3/ Percentage change.

Table 3. Canada: External Debt 2007–15 1/

(End period)

	2007	2008	2009	2010	2011	2012	2013	2014	2015
					(In percent of GDP)				
Total All Sectors	57.4	67.8	73.4	73.8	76.0	82.6	83.9	90.0	108.9
Short-term	20.2	23.6	22.9	21.7	22.6	24.7	25.3	28.7	39.3
Long-term	29.3	33.2	38.7	41.4	44.6	48.6	48.7	51.7	59.8
General Government	9.8	11.4	14.6	17.5	20.3	22.4	20.6	20.2	21.7
Short-term	0.7	1.4	1.6	1.6	3.1	3.2	2.8	2.3	2.2
Long-term	9.1	10.0	13.0	15.8	17.2	19.2	17.8	17.8	19.5
Monetary Authorities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Banks	16.8	20.2	20.1	19.5	20.3	22.3	24.1	28.2	39.6
Short-term	16.5	19.5	19.2	17.4	16.7	18.0	19.2	23.1	32.8
Long-term	0.3	0.7	0.9	2.1	3.6	4.3	4.9	5.1	6.8
Other Sectors	22.8	25.2	26.9	26.2	26.6	28.6	29.3	32.0	37.7
Short-term	2.9	2.7	2.1	2.7	2.8	3.5	3.3	3.3	4.3
Long-term	19.9	22.5	24.8	23.4	23.8	25.1	26.0	28.7	33.4
					(In billions of US dollar)				
Total All Sectors	920	925	1,089	1,211	1,315	1,519	1,512	1,563	1,620
Short-term	323	321	340	356	391	454	456	498	584
Long-term	469	453	573	679	771	894	878	897	889
General Government	158	156	216	286	351	411	371	350	323
Short-term	12	19	23	26	54	59	50	40	32
Long-term	146	137	193	260	297	353	321	310	291
Monetary Authorities	0	0	0	0	0	0	0	0	0
Banks	269	275	298	320	351	410	435	490	589
Short-term	265	265	285	285	289	331	346	400	488
Long-term	4	9	13	35	62	79	88	89	101
Other Sectors	366	343	399	429	460	526	528	555	561
Short-term	47	37	31	44	48	64	59	57	64
Long-term	319	306	367	385	412	462	468	498	497

Source: Haver Analytics and IMF Staff estimates.

1/ Short-term instruments include: money market, loans, deposits, trade credits, and other debt liabilities. Long term includes: bonds and notes, loans, and other debt liabilities.

Table 4. Canada: Medium-Term Scenario 2013–21

(Percentage change, unless otherwise indicated)

				Projections					
	2013	2014	2015	2016	2017	2018	2019	2020	2021
National Accounts in constant prices									
Real GDP	2.2	2.5	1.2	1.7	2.2	2.0	2.0	2.0	2.0
Q4/Q4	3.1	2.4	0.5	1.9	2.4	1.8	2.0	2.0	2.0
Net exports 1/	0.4	1.1	0.9	1.2	0.0	0.0	0.0	0.0	0.0
Final domestic demand	1.3	1.6	0.5	0.9	2.1	2.0	1.9	2.0	2.0
Private consumption	2.4	2.5	1.9	1.8	2.0	1.9	2.0	1.9	1.9
Public consumption	0.3	0.3	1.4	1.5	2.2	1.4	1.2	1.6	1.5
Private fixed domestic investment	0.7	0.5	-4.8	-3.2	1.9	2.8	3.0	3.1	3.1
Public investment	-6.3	2.1	2.6	5.1	3.9	2.4	0.3	0.3	0.5
Change in inventories 1/	0.5	-0.4	-0.3	-0.5	0.1	0.0	0.0	0.0	0.0
Nominal GDP	3.8	4.3	0.6	2.0	4.5	4.3	4.2	4.2	4.0
Employment and inflation									
Unemployment rate 3/	7.1	6.9	6.9	7.4	7.5	7.3	7.1	6.9	6.7
Employment	1.4	0.6	0.9	0.6	0.8	1.1	1.1	1.1	1.1
CPI inflation	0.9	1.9	1.1	1.4	2.0	2.0	2.0	2.0	2.0
Core CPI inflation (y/y)	1.2	1.8	2.2	2.0	2.0	2.0	2.0	2.0	2.0
GDP deflator	1.6	1.8	-0.5	0.3	2.3	2.2	2.2	2.1	2.0
Potential output growth	1.9	1.9	1.6	1.5	1.6	1.8	1.9	1.9	1.9
Output gap 4/	-1.0	-0.5	-0.9	-0.8	-0.3	-0.1	-0.1	0.0	0.0
Indicators of fiscal policies									
Federal fiscal balance	-0.6	0.3	-0.2	-0.9	-0.9	-0.8	-0.6	-0.5	-0.3
General government fiscal balance 5/	-1.9	-0.5	-1.7	-2.8	-2.4	-2.1	-1.7	-1.4	-1.1
General government gross debt	86.1	86.2	91.5	92.6	91.0	89.3	87.3	85.3	83.1
General government net debt	29.4	28.1	26.7	27.8	26.2	24.5	22.5	20.5	18.3
Three-month treasury bill 3/	1.0	0.9	0.5	0.4	0.4	0.5	0.8	1.0	1.2
Ten-year government bond yield 3/	2.3	2.2	1.5	1.6	1.6	1.6	1.9	2.1	2.3
External indicators									
Current account balance 2/	-3.2	-2.3	-3.3	-3.4	-3.0	-2.7	-2.5	-2.3	-2.2
Merchandise trade balance 2/	-0.3	0.2	-1.2	-1.5	-1.1	-0.9	-0.7	-0.5	-0.5
Export volume	3.0	5.7	3.4	3.1	3.5	4.0	4.0	4.0	4.1
Import volume	1.8	2.4	0.2	-0.4	3.4	3.6	3.7	3.9	3.9
Terms of trade	-0.1	-1.3	-6.9	-4.1	1.1	0.6	0.5	0.4	0.1
Real effective exchange rate	-3.4	-5.8	-7.8	...	...	...	...	...	...
Saving and investment									
Gross national saving	21.5	22.0	20.5	19.6	20.2	20.6	20.9	21.2	21.4
General government	2.3	3.4	2.5	1.3	1.5	1.6	1.9	2.0	2.2
Private	19.1	18.6	18.0	18.3	18.7	19.0	19.0	19.1	19.2
Gross domestic investment	24.6	24.3	23.8	23.1	23.1	23.3	23.4	23.5	23.6
Personal savings 6/	5.4	4.1	4.4	4.2	4.2	4.5	4.5	4.5	4.6

Sources: Haver Analytics; and IMF staff estimates.

1/ Contribution to growth.
2/ Percent of GDP.
3/ Percent.
4/ Percent of potential GDP.
5/ Includes federal, provincial, territorial, and local governments; and Canada and Quebec pension plans.
6/ Percent of disposable income.

Table 5. Canada: General Government Fiscal Indicators, 2013–21 1/

(Percent of GDP, unless otherwise indicated)

				Projections					
	2013	2014	2015	2016	2017	2018	2019	2020	2021
Federal Government									
Revenue	13.9	13.9	14.1	13.9	13.7	13.6	13.5	13.6	13.7
Income taxes	8.8	8.8	9.0	8.9	8.9	8.7	8.7	8.8	8.8
Expenditures	14.5	13.6	14.2	14.8	14.7	14.4	14.2	14.0	13.9
Program spending	13.2	13.1	13.9	14.5	14.4	14.0	13.7	13.6	13.4
Transfers	8.6	8.5	9.0	9.2	9.1	9.1	9.1	9.1	9.2
Interest payments	1.4	1.3	1.2	1.2	1.1	1.0	0.9	0.9	0.8
Budgetary balance	-0.6	0.3	-0.2	-0.9	-0.9	-0.8	-0.6	-0.5	-0.3
Cyclically-adjusted balance 2/	-0.5	0.4	0.0	-0.8	-0.9	-0.8	-0.6	-0.5	-0.3
Net federal debt	24.4	22.9	23.0	23.3	22.5	21.9	21.2	20.4	19.4
Gross federal debt	40.1	37.6	39.7	39.9	39.1	38.6	37.8	37.0	36.0
Provincial and Local Governments									
Revenue	25.5	25.5	25.3	25.4	25.2	25.2	25.2	25.2	25.3
Income taxes	5.9	6.0	6.1	6.1	6.1	6.1	6.1	6.2	6.3
Expenditures	27.3	26.8	27.4	27.7	27.2	27.0	26.8	26.7	26.6
Interest payments	1.9	1.9	1.9	1.7	1.8	1.8	1.8	1.8	1.7
Budgetary balance	-1.8	-1.3	-2.1	-2.4	-2.0	-1.8	-1.6	-1.5	-1.4
Canada/Quebec Pension Plans									
Revenue	3.2	3.2	3.4	3.4	3.4	3.4	3.4	3.4	3.4
Total spending	2.7	2.7	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Budgetary balance	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5
Consolidated General Government 3/									
Revenue	38.5	38.5	38.6	38.3	38.2	38.0	38.0	38.1	38.2
Expenditure	40.3	39.0	40.3	41.1	40.6	40.1	39.7	39.5	39.3
Overall balance	-1.9	-0.5	-1.7	-2.8	-2.4	-2.1	-1.7	-1.4	-1.1
Primary balance	-1.2	0.0	-0.7	-2.1	-2.1	-1.9	-1.6	-1.4	-1.1
Cyclically-adjusted balance 2/	-1.5	-0.3	-1.3	-2.5	-2.3	-2.1	-1.7	-1.4	-1.1
Net public debt	29.4	28.1	26.7	27.8	26.2	24.5	22.5	20.5	18.3
Gross public debt	86.1	86.2	91.5	92.6	91.0	89.3	87.3	85.3	83.1
Memorandum Items									
Real GDP growth (percentage change)	2.2	2.5	1.2	1.7	2.2	2.0	2.0	2.0	2.0
Nominal GDP growth (percentage change)	3.8	4.3	0.6	2.0	4.5	4.3	4.2	4.2	4.0
Three-month treasury bill (percent)	1.0	0.9	0.5	0.4	0.4	0.5	0.8	1.0	1.2
Ten-year government bond (percent)	2.3	2.2	1.5	1.6	1.6	1.6	1.9	2.1	2.3

Sources: Statistics Canada; Department of Finance Canada; provincial budget reports; Haver Analytics; and IMF staff estimates.

1/ National Accounts basis.

2/ Percent of potential GDP.

3/ Includes federal, provincial, territorial, and local governments; and Canada and Quebec pension plans.

Table 6. Canada: Financial Soundness Indicators 2010–15

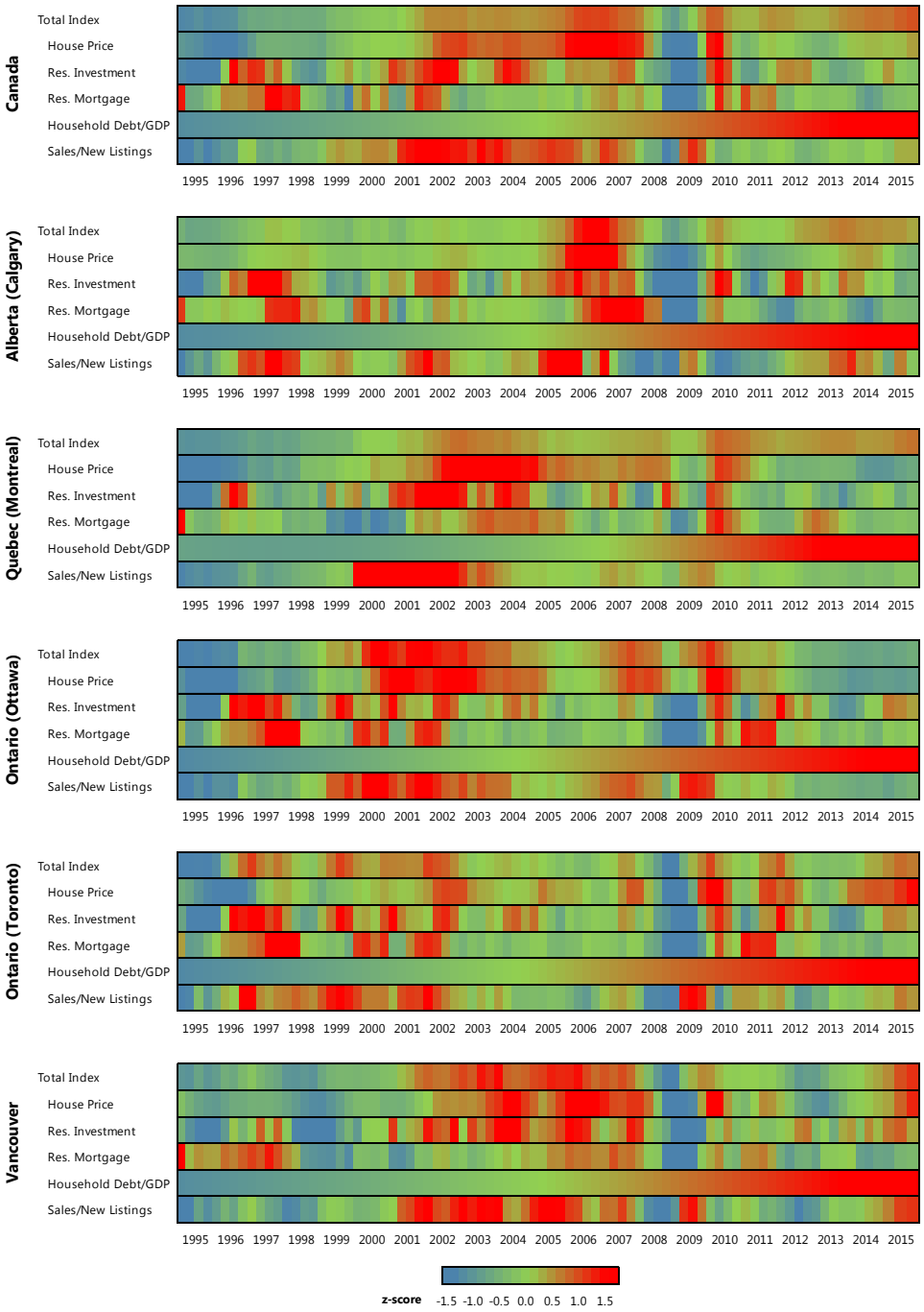
(Percent, unless otherwise indicated)

	2010	2011	2012	2013	2014	2015
Total Assets						
Total assets 1/	3,019.2	3,265.4	3,682.2	3,854.1	4,179.0	4,657.4
Percent of GDP	177.8	180.5	200.2	200.9	209.7	233.3
Nominal GDP	1,698	1,809	1,840	1,918	1,993	1,997
Capital Adequacy						
Total capital ratio	15.6	15.9	16.2	14.3	14.2	14.2
Tier 1 ratio	13.1	13.3	13.4	11.7	11.9	12.1
Capital to assets	4.7	4.9	4.9	5.0	4.9	5.1
Credit Risk						
NPLs net of provisions to capital	10.4	6.6	6.4	6.2	5.5	5.3
NPLs to Gross Loans	1.2	0.8	0.7	0.6	0.5	0.5
Provisions (Individual) to NPL	25.5	30.1	22.3	16.3	17.5	17.2
Sectoral Distribution of Loans						
Residents	74.9	76.7	74.3	73.7	71.6	67.5
Nonresidents	25.1	23.3	25.7	26.3	28.4	32.5
Profitability						
Return on assets	1.1	1.1	1.1	1.1	1.1	1.0
Return on equity	23.0	23.6	22.7	22.3	22.5	20.7
Interest margin on gross income	48.6	49.4	52.0	52.5	51.3	51.1
Trading income to gross income	6.9	4.2	5.3	4.5	3.7	3.8
Non-interest expenses to gross income	65.3	63.8	63.3	62.6	62.8	63.7
Liquidity						
Liquid assets to total assets	15.5	15.2	11.9	11.3	11.0	11.4
Liquid assets to short-term liabilities	51.1	54.1	51.8	47.8	50.5	45.2
Customer deposits to loans	113.6	114.2	96.3	98.2	99.3	101.1
FX and Derivative Risk						
FX loans to total loans	27.4	28.2	26.8	27.7	30.1	33.4
FX liabilities to total liabilities	36.3	40.6	42.4	42.7	49.2	48.4

Sources: IMF FSI database; and IMF staff calculations.

1/ Billions of Canadian dollars.

Table 7. Canada: Heat Maps of Regional Housing Markets



Notes:

1. Colors are based on Z-scores, which are calculated on the annual growth rate of nominal house prices, real residential investment, real residential mortgage loans, on the trend of household debt-to-GDP ratio, and on the level of sales to new listing index. House prices and sales-to-new listing ratios are those for major cities in the sample provinces, while the other variables are those for provinces. The data are quarterly, and the sample period is from Q1 1995 to Q4 2015.
2. Total index is calculated using the principal component methodology.

Annex I. Traction of Past Fund Advice

Consistent with Fund recommendations in the 2014 Article IV consultations, the Bank of Canada has continued to maintain an accommodative monetary policy stance to support growth, while the authorities have tightened macroprudential measures to contain risks in the housing sector. Fiscal policy has become more supportive of growth. Significant progress has been made in implementing the 2013 FSAP recommendations, but there has been less traction with regard to the recommendation on the institutional framework for macroprudential oversight and regulatory independence.

Annex II. External Balance Assessment

	Canada	Overall Assessment
Foreign asset and liability position and trajectory	**Background**. Canada posted a positive net international investment position (NIIP), which rose to C$471.9 billion by end-2015, equivalent to 23.8 percent of GDP. This is in spite of the fact that the increase in foreign liabilities exceeded the increase in foreign assets by C$55 billion. The gain in the NIIP thus resulted entirely from valuation effects of a weaker Canadian dollar. Gross external debt rose by 18.9 percentage points to 108.9 percent of GDP between 2014 and 2015. Banks and other private sector hold 71 percent of the external debt, of which a half is short-term. **Assessment**. The NIIP is sustainable with limited near term risk. External debt has risen sharply but remains modest relative to other advanced economies. Canada's foreign assets provide a hedge against currency depreciation.	**Overall Assessment**: *The external position in 2015 was moderately weaker than implied by medium-term fundamentals and desirable policy settings.* The depreciation of the currency has helped improve Canada's external competitiveness, but it will take time for the economy to adjust to the structural reallocation of resources from the energy to the non-energy sector. Recent developments do not suggest a change in the assessment of the external position in 2015. *In the medium term, the external position is expected to strengthen as non-energy exports gradually benefit from improved price competitiveness and structural improvements in manufacturing capacity.* **Potential policy responses**: Significantly boosting Canada's non-energy exports would require addressing a variety of structural issues in manufacturing and promoting the development of services exports. Policies that could improve Canada's trade competitiveness include measures geared at improving labor productivity; investing in R&D and physical capital; promoting FDI; and diversifying Canada's export markets. A credible medium-term consolidation plan for fiscal policy will also support the external rebalancing.
Current account	**Background**. Canada's current account (CA) deteriorated from -2.3 percent of GDP in 2014 to -3.3 percent of GDP in 2015. Despite the sharp depreciation of the Canadian dollar (30 percent in the past two years) and a compression in imports, a broad-based pickup in non-energy exports did not materialize to offset the decline in oil exports. This is because manufacturing capacity was eroded during the oil boom years (2002-2012) when the real effective exchange rate appreciated by 57 percent. It will take time to reallocate resources from the energy to the non-energy sector and rebuild manufacturing capacity. In terms of the savings-investment balance (S-I), the deterioration in the CA was consistent with a worsening of both the general government S-I balance (by 0.6 percentage points) and the private sector's S-I balance (0.5 percentage points). **Assessment.** The EBA estimates a cyclically adjusted CA gap of -3.4 percent of GDP for 2015. This, however, likely overstates the desirable external adjustment, because it overestimates the norm.1/ Staff assesses that the CA gap is between -2 and -1 percent of GDP.	
Real exchange rate	**Background.** Canada's exchange rate is highly correlated with oil prices. The real effective exchange rate has depreciated by 8.4 percent on an annual average basis between 2014 and 2015. As of April 2016, the REER has remained stable at it average 2015 level. **Assessment.** Both the EBA REER index and level approaches estimate the currency to be undervalued, by 9.9-19.6 percent respectively in 2015. In staff's assessment, however, the extent of undervaluation could be exaggerated for two reasons. First, given Canada's lost manufacturing capacity, further depreciation may be needed to restore competitiveness. Second, Canada's competitors in the US market have also seen their currencies depreciate by similar magnitudes, thus limiting any net gain for Canada.2/ Given the CA gap, staff estimates that the real effective exchange rate is, in fact, overvalued by 0 to 5 percent relative to medium-term fundamentals and desirable policy settings.	
Capital and financial accounts: flows and policy measures	**Background.** The CA deficit in 2015 has been financed primarily by net portfolio inflows. Foreign holdings of Canadian stocks declined largely due to stock market capital losses, but this was offset by an increase in foreign holdings of corporate bonds. Nearly three-quarters of corporate bonds held by non-residents are denominated in foreign currencies compared with one-third of government bonds, and are therefore more sensitive to currency fluctuations. Foreign direct investment recorded a net outflow in 2015. **Assessment**. Canada has a fully open capital account. Vulnerabilities are limited by a credible commitment to a floating exchange rate and a strong and credible fiscal position.	

FX intervention and reserves level	**Background.** Canada has a free floating exchange rate regime, and it has not intervened in the foreign exchange market since September 1998 (with the exception of participating in internationally concerted interventions for other purposes). Canada has limited reserves but its central bank has standing swap arrangements with the U.S. Federal Reserve and four other major central banks (it has not drawn on these swap lines in the past). **Assessment**. Policies in this area are appropriate to the circumstances of Canada.		
Technical Background Notes	1/. There are three reasons why the Canada's CA norm may be below EBA's estimated CA norm. First, the model adjusts for the business cycle using Canada's output gap relative to the world (GDP-weighted average) output gap, while a more relevant measure for Canada is the output gap relative to the United States. Using the US as the benchmark would reduce the CA norm for Canada because the output gap for the United States is slightly larger (more negative) than the world output gap. Second, the EBA overestimates Canada's trade balance by using the WEO global oil prices rather than the lower market price for Canadian oil, particularly, heavy crude oil from western Canada's oil sands (the lower price reflects lower quality). Third, the EBA does not take into account the structural loss in trade competitiveness. 2/. The EBA REER approach does not fully capture the loss in Canada's structural competitiveness for a number of reasons: First, the approach includes commodity terms of trade rather than oil prices as an explanatory variable. However, Canada's REER has mirrored movements in oil prices much more closely than its commodity terms of trade. Second, protracted structural rebalancing in the non-energy sector, in conjunction with a long-term erosion of market share among US imports imply a less competitive economy than the EBA fit could account for. While Canada's currency has depreciated versus the US dollar, so have the currencies of some its key competitors on the US market, like Mexico. Estimates of an adjusted REER that takes account of Canada's relative competitiveness in third markets suggest that Canada's REER has depreciated considerably less than the unadjusted REER. The EBA's estimated REER gap would thus be smaller (less negative). More than half the gain in price competitiveness is undone when competitors are taken into account. See Barnett, Charbonneau and Poulin-Bellisle, "A New Measure of the Canadian Effective Exchange Rate", Bank of Canada Staff Discussion Paper 2016-1.		

Annex III. Public Debt Sustainability Analysis

Canada's public debt remains on a sustainable trajectory over the medium term. Under the baseline, the ratio of gross debt to GDP will peak at about 93 percent in 2016 and gradually decline to 83 percent by 2021. The debt ratio does not rise above 100 percent under most stress scenarios. Sizable financial assets (about 65 percent of GDP) provide an additional cushion. The net debt-to-GDP ratio stood at 27 percent in 2015 and is expected to fall below 20 percent by 2021. Canada's debt dynamics are sensitive to adverse growth shocks.

Baseline scenario

Under the staff's baseline macroeconomic scenario, the general government primary deficit is projected to increase to 2 percent of GDP in 2016 and, with fiscal consolidation, decline to 1 percent by 2021. The increase in the primary deficit along with the decline in nominal GDP growth will raise the general government gross debt-to-GDP ratio to about 93 percent in 2016, declining thereafter to 83 percent by 2021. By the authorities' definition which includes a wider coverage of assets net debt stood at 27 percent of GDP in 2015. If only highly-liquid assets (currency, deposits, and bonds) are included, the net debt-to-GDP ratio was higher at around 62 percent. The net debt ratio is expected to decline from 27 percent to below 20 percent by 2021. Gross financing needs at around 20 percent is high but manageable and will decline to below 18 percent by the end of the projection period. Effective interest rates will stay at historic lows.

Stress tests

- *Primary balance shock*. A deterioration of the primary balance of about one percent of GDP would raise the gross debt-to-GDP ratio by about 2–3 percentage points over the projection period. The sovereign risk premium is assumed to increase by 25 basis points for each one percent of GDP deterioration in the primary balance, resulting in higher gross financing needs of 2–3 percentage points of GDP compared to the baseline.

- *Growth shock*. A lower real GDP growth by one standard deviation for two years starting in 2017 and 2018 will lead to a sharp deterioration in the primary balance, reaching a 4 percent deficit at its peak in 2018. The gross debt-to-GDP ratio will reach 95 percent of GDP in 2018, but would revert to a downward path over the projection period. Gross financing needs will also be larger.

- *Interest rate shock*. An increase in the sovereign risk premium by 200 basis points for two years would raise the effective interest rate ½–¾ percentage points higher than the baseline. The impact on debt and gross financing needs are mild.

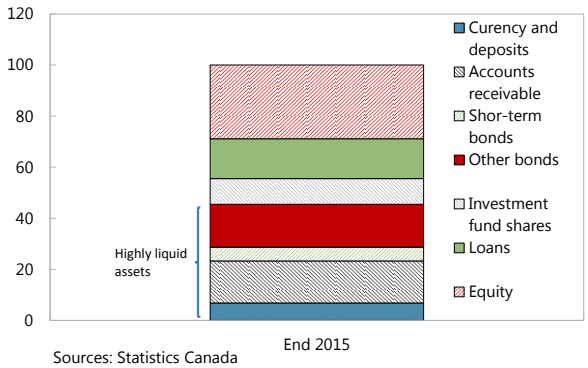
- *Exchange rate shock*. Given that almost 90 percent of Canada's outstanding marketable debt instruments are in Canadian dollars the fiscal impact of an exchange rate shock is minimal, even with the substantial exchange rate depreciation of about 33 percent since 2014.

- *Stagnant growth scenario*. In the event of a confluence of downside risks leading to a structural slowdown in advanced and emerging economies, oil prices fall or stay low for a prolonged period, and the structural adjustment from the resource sector to the non-resource sector takes longer than anticipated, GDP growth could fall below the baseline scenario by ½–1 percentage points for the projection horizon. In this scenario, the gross debt-to-GDP ratio will stay flat at the current level and will not decline.

- *Housing market and contingent fiscal shock*: Under this scenario, a severe recession reduces real GDP by two standard deviations for three years (to -1½ percent), precipitating a housing market crash. Assuming 5 percent of the outstanding amount of government-backed insurance is called the government's non-interest expense would increase by the equivalent to 1¾ percent of GDP. The debt-to GDP ratio would rise above 100 percent of GDP while gross financing needs would reach 25 percent of GDP at its peak. The debt ratio would decline only in 2020.

The sizable general government financial assets provide a layer of cushion against shocks. The general government's financial assets stood at about 65 percent of GDP in 2015, of which about 45 percent (30 percent of GDP) were highly-liquid assets (deposits, short-term papers, and bonds) (Chart).

Canada: General Government Financial Assets Composition
(Percent share of total financial assets 1/)



Sources: Statistics Canada
1/ Total financial assets are on an unconsolidated basis.

In addition, CMHC and the private mortgage insurers own earnings and loss absorption capacity mitigates the fiscal impact of losses on mortgage insurance. Mortgage insurers are well capitalized. Under the Minimum Capital Test (MCT), CMHC holds 365 percent of capital available over the minimum capital required, while Genworth holds 234 percent. CMHC's stress test results show that under severe global deflation stress scenarios (where the unemployment rises to nearly 16 percent and house prices fall by 44 percent), its capital would be significantly depleted to 147 percent of MCT, but still above the regulatory requirement of 100 percent. CMHC conducts annual stress test to set capital levels for the risk it holds.

Public debt has increased in recent years, reflecting the government's policy to fund public sector employee pension plans by issuing new debt. General government debt as reported here does not include unfunded pension liabilities. The vast majority of advanced economies do not report unfunded pension liabilities and as such they are excluded from measures of public sector debt to allow for consistent international comparison. General government debt, including unfunded pension liabilities, would be 109 percent of GDP on a gross basis, and 44 percent of GDP on a net basis in 2015.

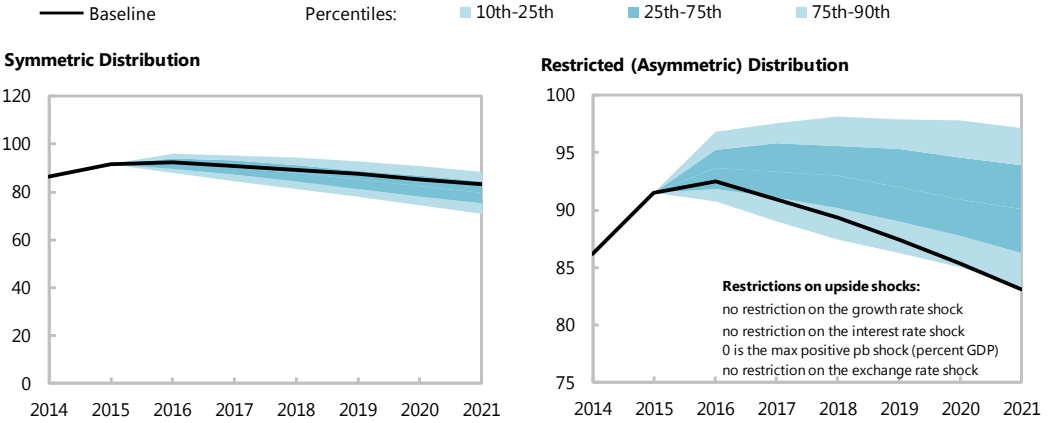
Canada Public DSA Risk Assessment

Heat Map

Debt level [1/]	Real GDP Growth Shock	Primary Balance Shock	Real Interest Rate Shock	Exchange Rate Shock	Contingent Liability shock
Gross financing needs [2/]	Real GDP Growth Shock	Primary Balance Shock	Real Interest Rate Shock	Exchange Rate Shock	Contingent Liability Shock
Debt profile [3/]	Market Perception	External Financing Requirements	Change in the Share of Short-Term Debt	Public Debt Held by Non-Residents	Foreign Currency Debt

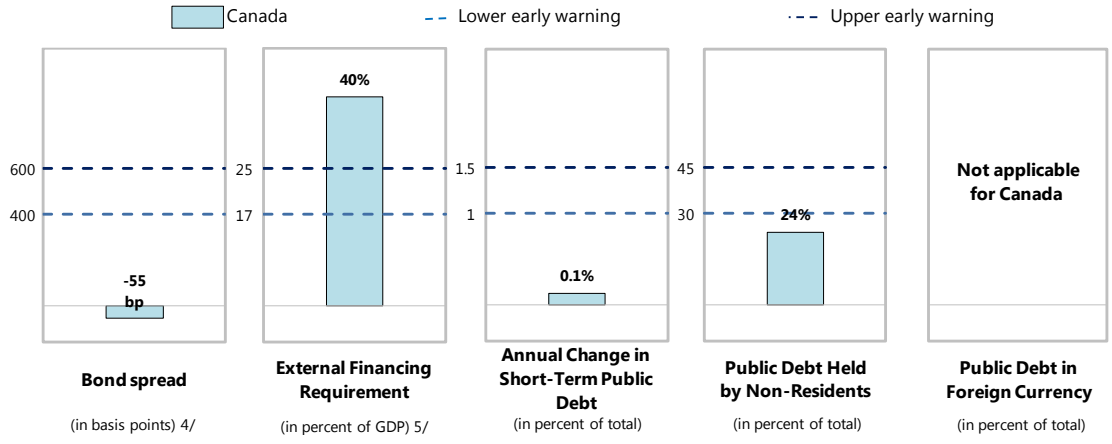
Evolution of Predictive Densities of Gross Nominal Public Debt

(in percent of GDP)



Debt Profile Vulnerabilities

(Indicators vis-à-vis risk assessment benchmarks, in 2015)



Source: IMF staff.

1/ The cell is highlighted in green if debt burden benchmark of 85% is not exceeded under the specific shock or baseline, yellow if exceeded under specific shock but not baseline, red if benchmark is exceeded under baseline, white if stress test is not relevant.

2/ The cell is highlighted in green if gross financing needs benchmark of 20% is not exceeded under the specific shock or baseline, yellow if exceeded under specific shock but not baseline, red if benchmark is exceeded under baseline, white if stress test is not relevant.

3/ The cell is highlighted in green if country value is less than the lower risk-assessment benchmark, red if country value exceeds the upper risk-assessment benchmark, yellow if country value is between the lower and upper risk-assessment benchmarks. If data are unavailable or indicator is not relevant, cell is white.
Lower and upper risk-assessment benchmarks are:

400 and 600 basis points for bond spreads; 17 and 25 percent of GDP for external financing requirement; 1 and 1.5 percent for change in the share of short-term debt; 30 and 45 percent for the public debt held by non-residents.

4/ Long-term bond spread over U.S. bonds, an average over the last 3 months, 04-Feb-16 through 04-May-16.

5/ External financing requirement is defined as the sum of current account deficit, amortization of medium and long-term total external debt, and short-term total external debt at the end of previous period.

Canada Public Sector Debt Sustainability Analysis (DSA) - Baseline Scenario

(in percent of GDP unless otherwise indicated)

Debt, Economic and Market Indicators [1/]

	Actual			Projections					
	2005-2013 [2/]	2014	2015	2016	2017	2018	2019	2020	2021
Nominal gross public debt	76.5	86.2	91.5	92.5	90.9	89.3	87.4	85.3	83.1
Public gross financing needs	15.6	17.6	16.2	19.7	19.9	18.9	18.5	18.3	17.7
Net public debt	25.6	28.1	26.7	27.7	26.2	24.5	22.6	20.5	18.3
Real GDP growth (in percent)	1.8	2.5	1.2	1.7	2.2	2.0	2.0	2.0	2.0
Inflation (GDP deflator, in percent)	2.2	1.8	-0.5	0.3	2.3	2.2	2.2	2.1	2.0
Nominal GDP growth (in percent)	4.0	4.3	0.6	2.0	4.5	4.3	4.2	4.2	4.0
Effective interest rate (in percent) [4/]	5.3	3.9	3.6	3.2	3.3	3.2	3.2	3.1	3.1

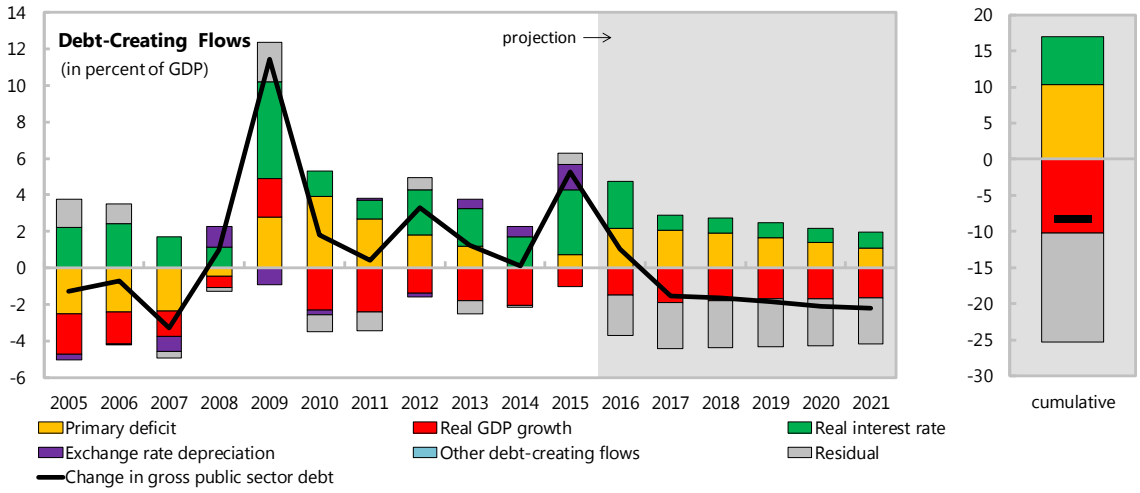
As of May 04, 2016

Sovereign Spreads	
EMBIG (bp) 3/	-39
5Y CDS (bp)	...

Ratings	Foreign	Local
Moody's	Aaa	Aaa
S&Ps	AAA	AAA
Fitch	AAA	AAA

Contribution to Changes in Public Debt

	Actual			Projections							
	2005-2013	2014	2015	2016	2017	2018	2019	2020	2021	cumulative	debt-stabilizing primary balance [9/]
Change in gross public sector debt	1.5	0.1	5.3	1.0	-1.6	-1.6	-1.9	-2.1	-2.2	-8.3	
Identified debt-creating flows	1.3	0.2	4.7	3.2	1.0	1.0	0.8	0.5	0.3	6.8	
Primary deficit	0.5	0.0	0.7	2.1	2.1	1.9	1.6	1.4	1.1	10.3	-0.8
Primary (noninterest) revenue and grant	36.2	35.8	36.5	36.1	35.6	35.4	35.4	35.5	35.6	213.6	
Primary (noninterest) expenditure	36.7	35.8	37.2	38.2	37.7	37.3	37.0	36.8	36.7	223.8	
Automatic debt dynamics [5/]	0.8	0.2	4.0	1.1	-1.1	-1.0	-0.9	-0.9	-0.8	-3.5	
Interest rate/growth differential [6/]	0.9	-0.3	2.6	1.1	-1.1	-1.0	-0.9	-0.9	-0.8	-3.5	
Of which: real interest rate	2.2	1.7	3.6	2.6	0.8	0.8	0.8	0.8	0.9	6.7	
Of which: real GDP growth	-1.3	-2.0	-1.0	-1.5	-1.9	-1.8	-1.7	-1.7	-1.6	-10.2	
Exchange rate depreciation [7/]	-0.1	0.6	1.4	...	...	...	...	...	...	...	
Other identified debt-creating flows	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0 (negative)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Please specify (2) (e.g., ESM and Euro	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Residual, including asset changes [8/]	0.2	-0.1	0.6	-2.2	-2.5	-2.6	-2.7	-2.6	-2.5	-15.1	



Source: IMF staff.

1/ Public sector is defined as general government.

2/ Based on available data.

3/ Long-term bond spread over U.S. bonds.

4/ Defined as interest payments divided by debt stock (excluding guarantees) at the end of previous year.

5/ Derived as [(r - π(1+g) - g + ae(1+r)]/(1+g+π+gπ)) times previous period debt ratio, with r = interest rate; π = growth rate of GDP deflator; g = real GDP growth rate; a = share of foreign-currency denominated debt; and e = nominal exchange rate depreciation (measured by increase in local currency value of U.S. dollar).

6/ The real interest rate contribution is derived from the numerator in footnote 5 as r - π (1+g) and the real growth contribution as -g.

7/ The exchange rate contribution is derived from the numerator in footnote 5 as ae(1+r).

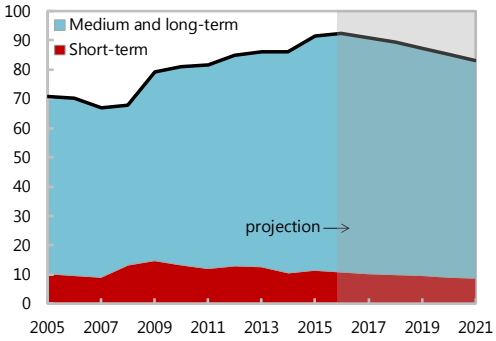
8/ Includes asset changes and interest revenues (if any). For projections, includes exchange rate changes during the projection period.

9/ Assumes that key variables (real GDP growth, real interest rate, and other identified debt-creating flows) remain at the level of the last projection year.

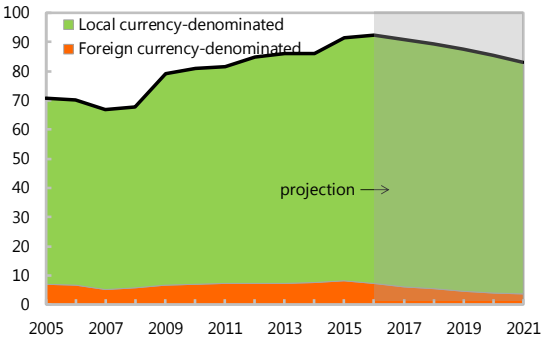
Canada Public DSA - Composition of Public Debt and Alternative Scenarios

Composition of Public Debt

By Maturity
(in percent of GDP)



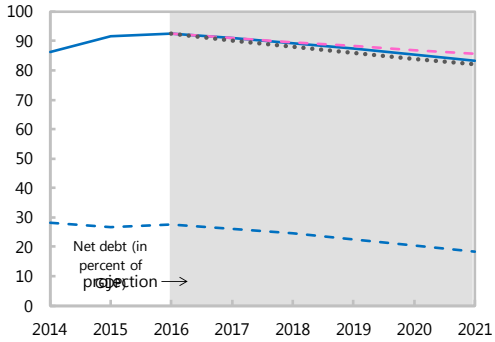
By Currency
(in percent of GDP)



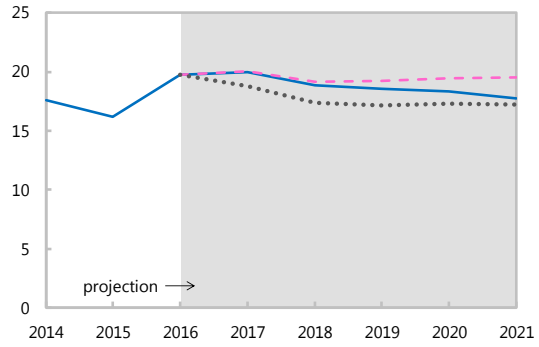
Alternative Scenarios

Baseline — Historical — Constant Primary Balance

Gross Nominal Public Debt
(in percent of GDP)



Public Gross Financing Needs
(in percent of GDP)



Underlying Assumptions

(in percent)

Baseline Scenario	2016	2017	2018	2019	2020	2021
Real GDP growth	1.7	2.2	2.0	2.0	2.0	2.0
Inflation	0.3	2.3	2.2	2.2	2.1	2.0
Primary Balance	-2.1	-2.1	-1.9	-1.6	-1.4	-1.1
Effective interest rate	3.2	3.3	3.2	3.2	3.1	3.1
Constant Primary Balance Scenario						
Real GDP growth	1.7	2.2	2.0	2.0	2.0	2.0
Inflation	0.3	2.3	2.2	2.2	2.1	2.0
Primary Balance	-2.1	-2.1	-2.1	-2.1	-2.1	-2.1
Effective interest rate	3.2	3.3	3.2	3.2	3.1	3.1

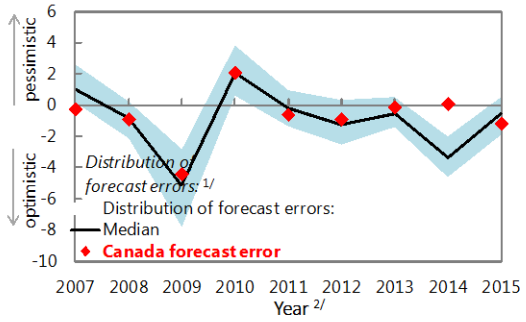
Historical Scenario	2016	2017	2018	2019	2020	2021
Real GDP growth	1.7	1.7	1.7	1.7	1.7	1.7
Inflation	0.3	2.3	2.2	2.2	2.1	2.0
Primary Balance	-2.1	-0.8	-0.8	-0.8	-0.8	-0.8
Effective interest rate	3.2	3.3	3.5	3.6	3.7	3.8

Source: IMF staff.

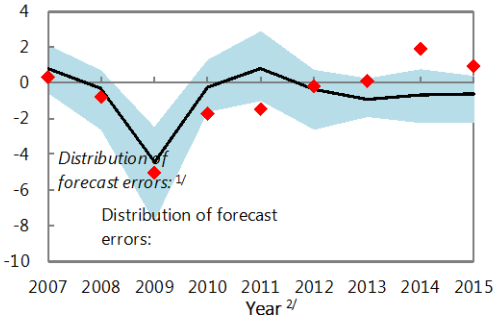
Canada Public DSA – Realism of Baseline Assumptions

Forecast Track Record, versus surveillance countries

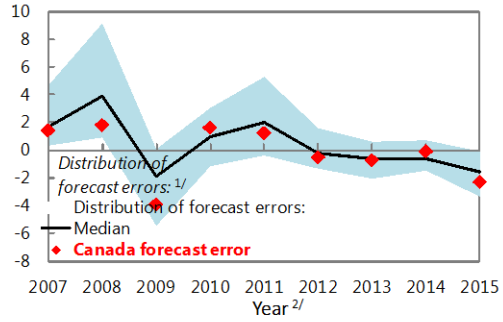
Real GDP Growth
(in percent, actual-projection)
Canada median forecast error, 2007-2015: -0.64
Has a percentile rank of: 41%



Primary Balance
(in percent of GDP, actual-projection)
Canada median forecast error, 2007-2015: -0.18
Has a percentile rank of: 62%

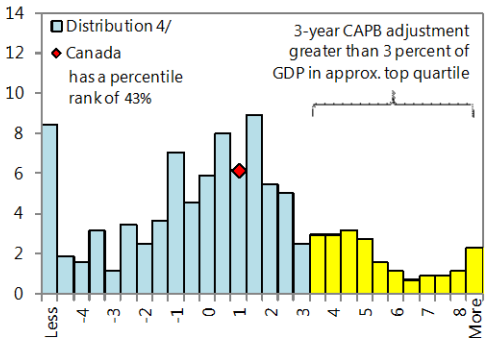


Inflation (Deflator)
(in percent, actual-projection)
Canada median forecast error, 2007-2015: -0.09
Has a percentile rank of: 43%

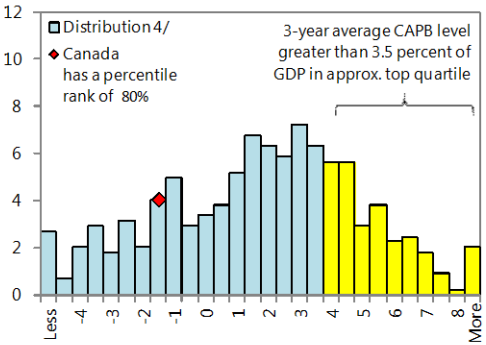


Assessing the Realism of Projected Fiscal Adjustment

3-Year Adjustment in Cyclically-Adjusted Primary Balance (CAPB)
(Percent of GDP)

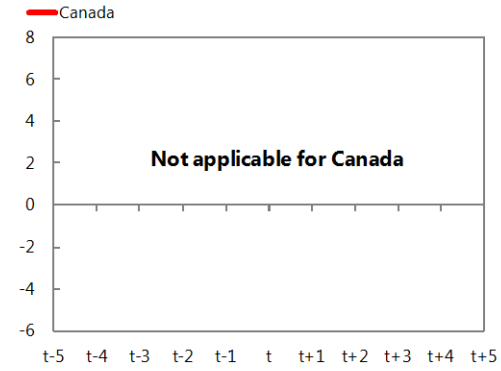


3-Year Average Level of Cyclically-Adjusted Primary Balance (CAPB)
(Percent of GDP)



Boom-Bust Analysis 3/

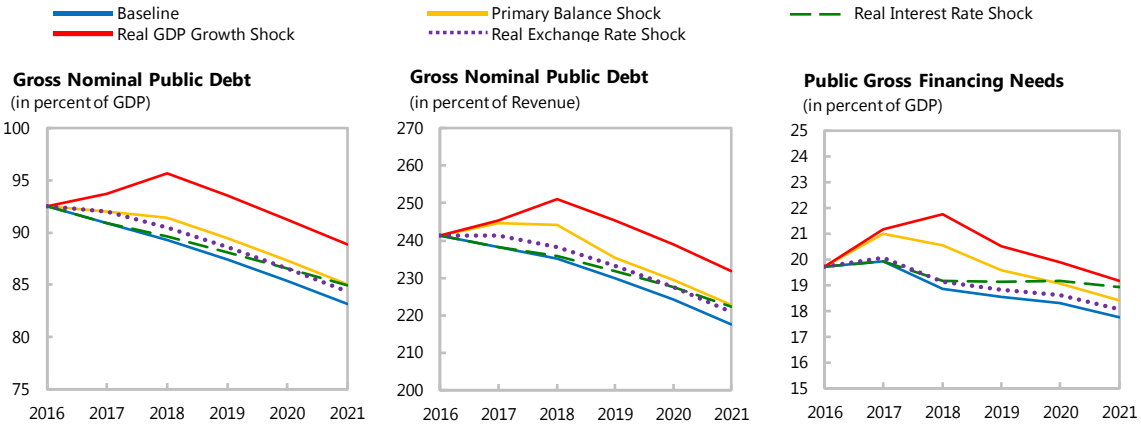
Real GDP growth
(in percent)



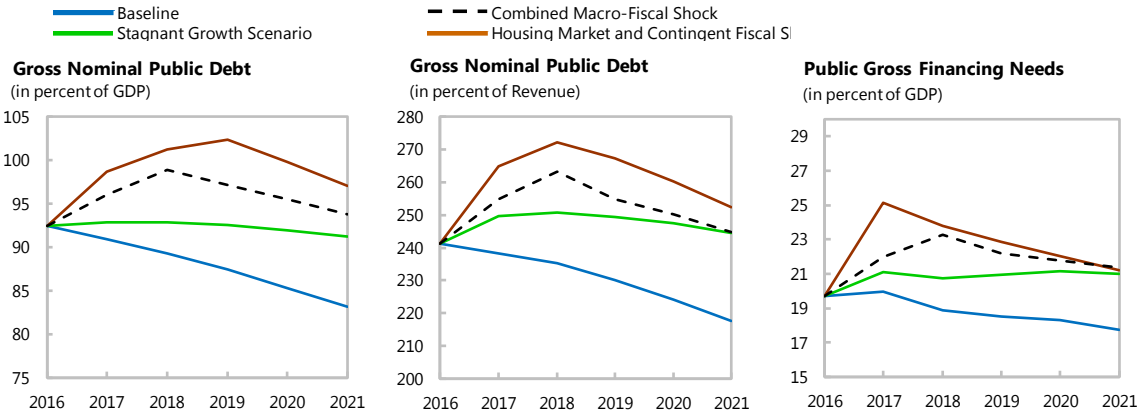
Source : IMF Staff.
1/ Plotted distribution includes surveillance countries, percentile rank refers to all countries.
2/ Projections made in the spring WEO vintage of the preceding year.
3/ Not applicable for Canada, as it meets neither the positive output gap criterion nor the private credit growth criterion.
4/ Data cover annual obervations from 1990 to 2011 for advanced and emerging economies with debt greater than 60 percent of GDP. Percent of sample on vertical axis.

Canada Public DSA - Stress Tests

Macro-Fiscal Stress Tests



Additional Stress Tests



Underlying Assumptions

(in percent)

Primary Balance Shock	2016	2017	2018	2019	2020	2021
Real GDP growth	1.7	2.2	2.0	2.0	2.0	2.0
Inflation	0.3	2.3	2.2	2.2	2.1	2.0
Primary balance	-2.1	-3.1	-3.0	-1.6	-1.4	-1.1
Effective interest rate	3.2	3.3	3.2	3.1	3.1	3.1
Real Interest Rate Shock						
Real GDP growth	1.7	2.2	2.0	2.0	2.0	2.0
Inflation	0.3	2.3	2.2	2.2	2.1	2.0
Primary balance	-2.1	-2.1	-1.9	-1.6	-1.4	-1.1
Effective interest rate	3.2	3.3	3.5	3.7	3.7	3.9
Combined Shock						
Real GDP growth	1.7	0.4	0.3	2.0	2.0	2.0
Inflation	0.3	1.9	1.8	2.2	2.1	2.0
Primary balance	-2.1	-3.4	-4.1	-1.6	-1.4	-1.1
Effective interest rate	3.2	3.4	3.6	3.6	3.7	3.9
Stagnant Growth Scenario						
Real GDP growth	1.7	1.2	1.2	1.2	1.2	1.2
Inflation	0.3	2.3	2.2	2.2	2.1	2.0
Primary balance	-2.1	-3.1	-2.9	-2.6	-2.4	-2.1
Effective interest rate	3.2	3.3	3.2	3.1	3.1	3.1

Real GDP Growth Shock	2016	2017	2018	2019	2020	2021
Real GDP growth	1.7	0.4	0.3	2.0	2.0	2.0
Inflation	0.3	1.9	1.8	2.2	2.1	2.0
Primary balance	-2.1	-2.9	-3.6	-1.6	-1.4	-1.1
Effective interest rate	3.2	3.3	3.2	3.1	3.1	3.1
Real Exchange Rate Shock						
Real GDP growth	1.7	2.2	2.0	2.0	2.0	2.0
Inflation	0.3	3.0	2.2	2.2	2.1	2.0
Primary balance	-2.1	-2.1	-1.9	-1.6	-1.4	-1.1
Effective interest rate	3.2	3.4	3.2	3.2	3.1	3.1
Housing Market and Contingent Fiscal Shock						
Real GDP growth	1.7	-1.4	-1.5	-1.6	2.0	2.0
Inflation	0.3	2.3	2.2	2.2	2.1	2.0
Primary balance	-2.1	-6.6	-2.9	-1.6	-1.4	-1.1
Effective interest rate	3.2	3.3	3.1	3.1	3.0	3.0

Source: IMF staff.

Annex IV. Unconventional Monetary Policy—Preliminary Considerations

Measure	Objectives/International Experience	Aspects of Implementation
Forward guidance: conditional statements about the path of policy interest rates tied to the inflation outlook or other economic variables	Influence the term structure of interest rates in the absence of the actual rate cuts and reduce interest rate volatility due to higher predictability of monetary policy. International experience: Effective in lowering expectations of the future path of policy rates; improving predictability of short-term yields for short horizons; lowering sensitivity of financial variables to economic news (suggesting that markets perceive the guidance as binding). However, qualitative forward guidance could be too vague; time-contingent forward guidance could be time-inconsistent; explicit conditionality in time-contingent forward guidance may dilute the initial commitment; while choosing appropriate thresholds in state-contingent forward guidance could be challenging.	Forward guidance puts a premium on communication and credibility. Bank of Canada (BOC) has strong credibility. The Governor of the BOC solely makes the call on monetary policy which facilitates the implementation of forward guidance, although the Governing Council has influence too.. Successful experience: BOC pioneered time-contingent forward guidance in 2009, indicating that the policy rate target rate would remain unchanged for one year, conditional on the outlook for inflation. This forward guidance expired in April 2010.
Negative policy rates	Boost aggregate demand by engineering negative short-term market rates, with transmission to long-term rates. International experience with negative policy rates is limited. Most countries that have used negative interest rates have implemented them in the form of negative deposit rates applying to excess reserves in the context of QE. These policies have been partially effective in some countries. Negative deposit rates have typically not been passed on to retail customers.	The effective lower bound is estimated to be around -0.5 percent in Canada. A negative interest rate could be introduced through BOC's interest rate corridor system. Canadian banks are unlikely to pass negative interest rates to retail depositors (Retail deposits make up 53 percent of total nonfinancial private sector deposits of charted banks).
Large-scale asset purchases: outright purchases of financial assets, including longer-term government bonds and private assets (e.g. mortgage backed securities and corporate bonds).	Reduce yields for broader segments of financial assets and ease overall financial conditions through portfolio rebalancing. International experience. Reduced U.S. 10-year Treasury yields by 65 to 120 basis points, with a positive impact on real GDP of 2–3 percent by 2012; reduced the U.K. gilt yields by 45 to 150 bps, and increased the level of U.K. GDP by 0.65–1.75 percent. Calibrating the size of QE could be challenging. There are communication challenges around exit (taper tantrum). Central bank balance sheets significantly expanded.	Currently the yield curve is relatively flat. LSAPs "…could include longer-term government securities or private assets such as mortgage-backed and corporate securities."
Funding for credit (FFC): collateralized term lending to banks at a subsidized rate, with banks subjected to certain lending objectives.	Ensure credit flow to the specific sectors of the economy where credit supply is judged to be impaired. International experience: Successful in increasing mortgage lending growth to households but less successful in channeling credit to SMEs and private businesses in the UK.	Canadian banks have strong balance sheets. FFC could be implemented as subsidized collateralized term funding to banks. However, demand rather than supply factors may be at play. If balance sheets are impaired, households and small businesses may save and not borrow.

Annex V. Housing-Related Measures to Safeguard Financial Stability

Table 1. Changes in Mortgage Insurance Rules	
July 2008 (effective in October 2008)	Maximum amortization for new government backed insured mortgages was lowered (from 40 to 35 years) Maximum LTV for new mortgages was reduced (from 100 to 95 percent) Minimum credit score requirement (of 620) was introduced Maximum of 45 per cent total debt service ratio was introduced (the amount of gross income that is spent on servicing debt and housing-related expenses such as heat or condo fees) Loan documentation standards strengthened to ensure reasonableness of property value and of the borrower's sources and level of income
February 2010 (effective in April 2010)	Maximum LTV for insured refinanced mortgages was lowered (from 95 to 90percent) Minimum down payment on properties not occupied by owner was raised (from 5 to 20 percent) More stringent eligibility criteria were introduced (all borrowers are required to meet the standards for a 5-year benchmark fixed-rate mortgage, even if they choose a mortgage with a variable interest rate and shorter term)
January 2011 (effective in March 2011)	Maximum amortization for new government backed insured mortgages was lowered (from 35 to 30 years) Maximum LTV for refinanced mortgages was lowered (from 90 to 85 percent) Government-backed insurance on non-amortizing lines of credit secured by houses (HELOCs) withdrawn in April
June 2012 (effective in July 2012)	Maximum amortization for new government backed insured mortgages was lowered (from 30 to 25 years) Maximum LTV for refinanced mortgages was lowered (from 85 to 80 percent) Maximum gross debt service ratio and maximum total debt service ratios were capped at 39 percent and 44 percent, respectively Government-backed insured mortgages limited to homes with a purchase price of less than $1 million
February 2014 (effective in May 2014)	Mortgage insurance premiums were raised
November 2014 (full implementation by June 30, 2015)	Residential Mortgage Insurance Underwriting Practices and Procedures (Guideline B21) was issued. This guideline: - outlines OSFI's expectations concerning mortgage insurers' governance and internal risk management practices - outlines principles for mortgage insurers' own internal underwriting operations, including setting prudent requirements for lenders and applying appropriate due diligence to lenders' practices - enhances disclosure requirements, which will support greater transparency, clarity and public confidence in mortgage insurers' residential mortgage insurance underwriting practices
April 2015 (effective in June 2015)	Mortgage insurance premiums were raised
December 11, 2015 (effective in February 2016)	The minimum down payment for new insured mortgages increased from 5 to 10 percent for the portion of the house price above $500,000. The 5 percent minimum down payment for properties up to $500,000 remained unchanged
December 11, 2015 (effective in July 2016)	Issuance limits for NHA MBS in 2016 will be kept effectively unchanged as part of the ongoing effort to limit government involvement in the mortgage market
December 11, 2015 (effective in July 2016)	Guarantee fee for NHA MBS and the CMB program will be increased to encourage the development of private market funding alternatives by narrowing the funding cost difference between government sponsored and private market funding sources

Table 2. Other Housing Finance Related Regulatory Measures	
June 2011 (effective on January 1, 2013)	Protection of Residential Mortgage Hypothenar Insurance Act (PRMHIA) and amendments to the National Housing Act assented - Formalizes the rules for government-backed mortgage insurance and other existing arrangements with private mortgage insurers - Provision for the Minister of Finance to charge fees to compensate the Government for its exposure to risk represented by loan insurance
November 2011/January 2012	FIRS standards were implemented requiring banks to report debt securitizations on balance sheet
March 2012	Economic Action Plan 2012 announcements - Canadian banks prohibited from issuing covered bonds backed by government-insured mortgages (sets strong eligibility criteria for mortgages in the cover pool) - CMHC designated as administrator of the covered bond framework - CMHC's mandate was enhanced to include financial stability as an objective of CMHC's commercial activities - CMHC commercial activities subject to OSFI examination
June 2012	Guideline on Sound Residential Mortgage Underwriting Practices (B-20) - A guideline for residential mortgage underwriting practices and procedures was issued by OSFI (including assessment of borrower's background and demonstrated willingness to service debt payment in a timely manner, assessment of borrower's capacity to service debt, assessment of property value/collateral, effective credit and counterparty risk management, comprehensive residential mortgage underwriting policy) - Maximum LTV on the revolving portion of HELOCs cut (from 80 to 65 percent) - Stated Income mortgages are no longer allowed without some verification of income
February 2014	Economic Action Plan 2014 announcements - CMHC will pay guarantee fees to the Receiver General to compensate for mortgage insurance risks (pursuant to NHA 8.2), effective January 1, 2014. This will align CMHC with guarantee fees paid by private mortgage insurers. Fees are 3.25 percent of premiums written and 10 basis points on new portfolio insurance written - CMHC will reduce its annual limit of issuance of portfolio insurance from $11 billion to $9 billion - For 2014, the Minister of Finance authorized $80 billion for NHA MBS (down from $85 billion in 2013) and $40 billion for CMB (down from $50 billion in 2013)
September 2014 (effective on January 1, 2015)	Revised Minimum Capital Test Guideline for property and casualty insurers - The guideline introduces new and updated risk factors and margins plus a revised definition of available capital
May 15, 2015	Amendments to PRMHIA. Substitution of loans in portfolio insurance pools was prohibited to increase market discipline in residential lending and reduce taxpayer exposure to the housing sector
December 11, 2015	CMHC announced changes to its securitization programs - Changes in the guarantee fee schedule (effective July 1, 2016). Fees were raised for large MBS issuers - For 2016, the Minister of Finance authorized $105 billion for NHA MBS and $40 billion for CMB.
	OSFI announced its plan to update the regulatory capital requirements for residential mortgages - OSFI will propose a risk-sensitive floor for one of the model inputs (losses in the event of default) that will be tied to increases in local property prices and/or to house prices that are high relative to borrower incomes - For federally regulated private mortgage insurers, OSFI will introduce a new standardized approach that updates the capital requirements for mortgage guarantee insurance risk. It will require more capital when house prices are high relative to borrower incomes
February 10, 2016 (effective July 1, 2016)	The DOF required that portfolio-insured loans be funded only through CMHC securitization programs

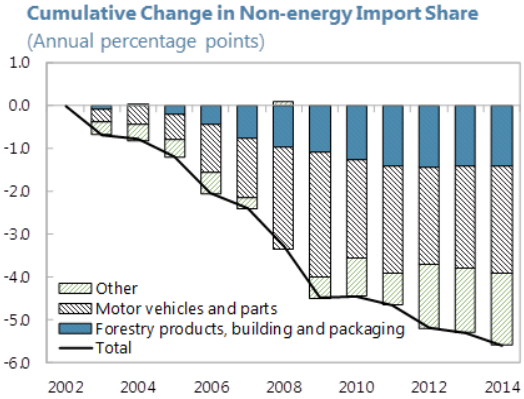
Annex VI. 2014 FSAP Key Recommendations and Implementation

Recommendation	Time Frame	Update since 2014 Article IV
Reduce government exposure to mortgage insurance gradually.	Long term	The authorities introduced a range of measures over the past several years, including more recently in December 2015 (see Section D in the main text).
Include major regulated entities at federal and provincial level in a regular, common stress testing exercise with collaboration between relevant federal and provincial authorities.	Short term	The Bank of Canada has provided quantitative scenarios, detailed macro stress testing instructions, advice and technical assistance to the Autorité des Marchés financiers (AMF) (Quebec) to support their stress testing build out. The Bank also had detailed technical discussions related to macro stress testing capacity building (e.g., probability of default modeling) with the British Columbia Financial Institutions Commission.
Equip OSFI with powers to make its own enforceable rules by administrative means, supplementing the use of guidelines and government regulations; amend legislation on statutory decisions to give OSFI sole decision- making authority on prudential criteria.	Medium term	The authorities do not intend to pursue this recommendation. Authorities' response "OSFI's administrative guidelines are enforceable in practice because its numerous intervention powers and tools are legally enforceable. OSFI's use of guidelines provides OSFI with the ability to act independently and quickly in the face of emerging risks."
Replace certain informal and ad hoc reporting requirements by FRFIs with more formal requirements (in keeping with BCP 1,2 and ICP 1,2)	Medium term	Use of the Regulatory Data Governance Framework to provide a transparent process for prioritizing regulatory data requirements and regulatory data lifecycle management, thereby ensuring that regulatory data is managed as an OSFI-wide strategic enterprise asset. In 2016, the existing ad hoc collection of Own Risk and Solvency Assessment (ORSA) Key Metrics will be replaced with a formal regulatory return.
Adopt a transparent and consistent regulatory regime for group-wide insurance supervision; give OSFI the authority to take supervisory measures at the level of the holding company.	Medium term	The authorities do not intend to pursue this recommendation. Authorities' response, "Canada is satisfied with OSFI's current approach to group-wide supervision of the largest insurance companies and will not be seeking legislative amendments."
Augment OSFI's top-down stress testing framework for banks with risk-sensitive concepts of credit risk input parameters and econometric, model-based efforts using longer time series.	Short term	The authorities will consider this in the future, as the stress testing framework evolves.
Expand financial sector data collection and dissemination with a view to enhancing coverage, regularity, and availability of time-series to facilitate analysis (in keeping with BCP 28, ICP 20, IOSCO 6,7)	Short term	<u>Housing Finance</u> • In 2015, the Department of Finance (DOF) started to regularly collect loan-level data from Canada's three mortgage insurers on quarterly loan originations covering borrower attributes, dwelling characteristics, and mortgage-loan terms. It is shared with the Bank and OSFI to help agencies conduct policy analysis. DOF is reaching out to industry to obtain loan-level origination data from federally unregulated mono-line mortgage lenders and exploring means to better quantify and understand foreign investment in residential real estate. • Statistics Canada will conduct a triennial Survey of Financial Security and annual estimates of household asset and debt distributions with an enhanced focus on mortgage debt. Previously this survey was only conducted on an intermittent basis. • Discussions on data availability and gaps are ongoing amongst Senior Advisory Committee agencies and CMHC. In 2015, CMHC held a series of round tables to obtain industry views on data gaps and solutions. • CMHC has also expanded the information publically available via its Quarterly Financial Reports and expanded coverage of its surveys. In 2015, CMHC published findings from the survey of foreign ownership of condos in 16 Census Metropolitan Areas and in 2016, CMHC will begin collecting data on sales to foreign buyers in Toronto, Montreal and Vancouver through its starts and completions surveys.

Recommendation	Time Frame	Update since 2014 Article IV
		Fixed-Income Markets The Bank and the Investment Industry Regulatory Organization of Canada (IIROC) have implemented a new version of the Market Trade Reporting System (MTRS), which will collect a wealth of transaction-level data from all IIROC-registered broker-dealers, including prices, quantities and counterparties of all bond, bill and repo trades to which an IIROC-registered broker-dealer is a counterparty. IIROC collects the data and will pass a subset of the information to the Bank. MTRS is the successor to the Bank's former aggregate-level trade reporting system, to be decommissioned in 2016. Canadian Securities Administrators Data In September 2015, the Canadian Securities Administrators (CSA) proposed that trade information for all corporate debt securities executed by dealers be made publicly available, subject to delayed dissemination and volume caps, by the end of 2017. The CSA intends to use the information reported to MTRS (described above) relating to corporate debt securities to implement its transparency proposal. Specifically, IIROC will act as an information processor for corporate debt securities and will publicly disseminate trade information relating to those securities, subject to dissemination delay and volume caps. The public consultation period for the CSA notice ended in November. OTC Derivatives Trade Reporting Provincial rules on trade reporting have been in effect in Manitoba, Ontario and Québec since October 1, 2014. The rules require most OTC derivatives transactions involving a "local counterparty" in the three provinces to be reported to a designated trade repository (TR). Currently there are three designated TRs (DTTC; CME; and ICE TV). The trade reporting rule sets out market participants' trade reporting and record retention obligations, the rules for public dissemination of trade data and a trade repository recognition and compliance regime. Public dissemination of market data is set to begin on January 16, 2017, subject to ministerial approval. Other provinces recently published a similar trade reporting rule for OTC derivatives transactions expected to come into force on May 1, 2016, but still subject to ministerial approval. Counterparties to the trade are expected to start reporting before July 29, 2016.
Address shortcomings in risk identification and enforcement in securities regulation.	Short term	In July 2015, the Council of Ministers, comprised of the provincial and territorial Ministers responsible for securities regulation in British Columbia, Ontario, Saskatchewan, New Brunswick, Prince Edward Island and Yukon, and the Minister of Finance Canada, announced that Mr. William A. Black would be the chair of the Capital Markets Regulatory Authority's initial board of directors. In August 2015, participating jurisdictions released an updated consultation draft provincial and territorial capital markets legislation, along with draft initial regulations, for public comment. Participating jurisdictions are assessing the comments received.
Enhance supervisory cooperation among federal and provincial supervisors and subject all systemically significant financial institutions to intensive supervision (BCP 3, ICP3)	Short term	OSFI and the AMF have instituted a new cooperation framework whereby meetings are scheduled on a regular basis to discuss issues of mutual interest, in addition to existing consultation procedures.
Provide a clear mandate to an entity (i) to monitor systemic risk to facilitate macro-prudential oversight, and (ii) to carry out system-wide crisis preparedness.	Short term	The authorities do not intend to pursue this recommendation. Authorities' response, "as noted in the previous FSAP, the regulatory and supervisory framework demonstrates strong compliance with international standards and is well coordinated across the federal oversight bodies. Responsibility for addressing systemic risk remains with the Senior Advisory Committee, a non-statutory body chaired by the Deputy Minister of Finance."
Increase the ex-ante funding of CDIC and enhance its data collection and analysis of depositor profiles.	Medium term	The minimum target level of CDIC's ex ante funding is 100 basis points of insured deposits. CDIC continues to progressively increase its ex ante fund to reach this target.

Appendix I. Trade Competitiveness in Canada

1. Motivation. The conventional wisdom is that Canada's non-energy exports have been held back primarily because the commodity boom led to a real appreciation of the Canadian dollar. This so-called 'Dutch disease' did indeed render some manufacturing industries uncompetitive, in particular forestry products and motor vehicles and parts which together account for almost three quarters of Canada's lost share on the U.S. non-energy imports market during 2002–2014. But while exchange rate movements undoubtedly played a role, our study (Agur, 2016) asks whether this is the entire story. From a policy perspective, the right diagnosis matters greatly: is the recent depreciation by itself enough to regain competitiveness in manufacturing exports?



Sources: Barnett and Charbonneau (2015), with data from Comtrade.

2. Approach. Our study therefore considers whether structural factors are also responsible for the relatively weak performance of Canadian manufacturing exports since 1997. It estimates an export supply regression that spans 8 product categories and 10 provinces over a 17 year sample period (from 1997 to 2014). In this export supply regression, product prices are given because Canada is a small open economy. Foreign demand effects are therefore implicitly captured in the export price deflators. Our study is the first to estimate export supply using granular panel data along both the product and province dimension.[1] The advantages are twofold: (i) the disaggregated data is able to capture divergent trends among provinces, even within the same industry. For instance, real exports of industrial machinery have doubled in Quebec since 2003, while they have remained unchanged in Ontario over the same period; (ii) since all provinces trade abroad at the same exchange rate, the disaggregated data is able to identify differences in structural factors in determining export competitiveness.

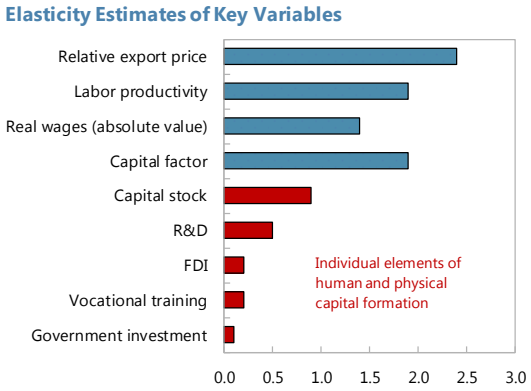
3. Methodology. The dependent variable is real export growth. The independent variables are factors of production that define the cost efficiency, availability and quality of inputs into the production process, and should thus determine the relative trade performance of a country to its peers. In our regression, wages and export prices capture the relative cost of producing a unit of export good, and labor productivity represents the production efficiency frontier. Variables relating to physical and human capital formation represent the availability and quality of factors of production. This latter group of variables, however, exhibits a high degree of multicollinearity. To mitigate this problem, the study applies factor analysis to extract a common factor from these

[1] While not used in export supply regressions before, the province dimension of Canadian trade data has been extensively applied as part of the literature on "border effects" (provincial borders versus the U.S. border). See Suvankulov (BOC WP 2015-28) for a review of this literature.

variables, henceforth the "capital investment", to collectively represent physical and human capital accumulation. The elasticity estimate for capital investment as well the separate estimates of the variables representing this joint factor is reported in the results. Estimation results of the panel regressions are shown in the table below.

4. Panel regression results. Our results show that cost and efficiency, namely relative prices, real wages and labor productivity, have a strong impact on Canada's trade competitiveness (Table 1). These factors essentially capture three different aspects of price competitiveness. The relative price of exports is the variable with the largest impact. While exchange rate movements take time to pass on to prices, these results indicate that Canada's non-energy export performance is quite sensitive to the value of the Canadian dollar. Reduced input costs (lower wages) and increased output efficiency (labor productivity) also significantly affect export performance. But wages and labor productivity are slower moving variables and their impact on export growth is quantitatively smaller than for exchange rates. Importantly however, our study finds that there is more to improving manufacturing export growth than improving price competitiveness alone.

5. The most important implication of this study is that structural variables matter for Canadian manufacturing exports. We see this from the collective impact of "capital investment": a 1 percentage point higher growth of capital investment as a whole translates to almost 2 percentage points more rapid real export growth. Breaking down to the variables comprising the capital investment factor suggests the following implications for structural policies:



Sources: Statistics Canada and IMF staff estimates.

- The accumulation of physical capital (machinery, factories, etc.) has the largest impact on manufacturing exports among the capital factors of production, with a 1 to 1 increase on real export growth. Well-targeted projects, especially in infrastructure development, could stimulate ("crowd in") business investment, and thereby improve competitiveness. In the long run capital accumulation is also a key determinant of labor productivity. Physical capital can thus also indirectly raise export growth, because it lifts labor productivity.

- Policies to promote R&D spending by businesses would also have a big pay off as a 1 percentage point rise in R&D brings about 0.5 percentage point faster export growth. But company spending on innovation and capacity to innovate continue to score well below levels in the U.S. In fact, "insufficient capacity to innovate" is ranked as Canada's most problematic factor for doing business.[2]

[2] World Economic Forum 2015–2016 report.

- Inward FDI into the Canadian manufacturing sector plays a role in raising export performance too, with 0.25 percentage point faster export growth for a 1 percentage point increase in inward FDI.

- Given the already high level of education in Canada, the positive coefficient suggests that more specialized or job-specific, vocational training could be a particularly effective way to improve job skills and job matching in the manufacturing sector.

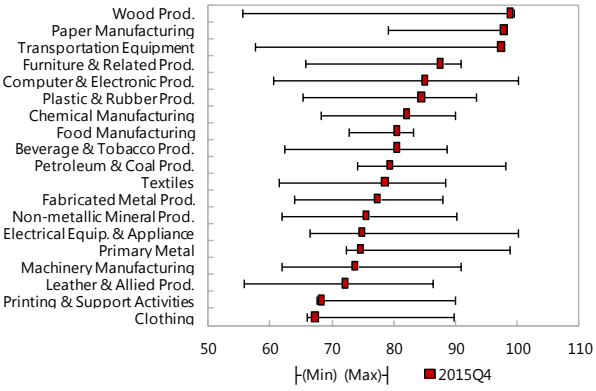
- Government investment has the lowest impact but it is not significant. It is likely that this variable captures the residual impact of government investment above and beyond what can explained by infrastructure investment.

In sum, while exchange rate depreciation will support the rebalancing toward non-energy exports, external competitiveness does not depend on prices alone. Quality matters too, and this is where greater investment in the capital stock, training, and innovation at the firm level may reap double dividends, raising both the capacity and the quality of production and exports.

6. Implications for exporting industries. Looking across Canadian manufacturing industries, which are the most likely to benefit from structural measures? And which structural measures would be more relevant? We draw on a study by the Conference Board of Canada ranks export industries by supply-side and demand-side constraints, as summarized in the figure below.

7. Supply constrained. The automotive industry and wood products manufacturing are major industries that face relatively high U.S. demand today. The increase in demand has been fueled by the exchange rate depreciation of the Canadian dollar over the past two years and also by components of U.S. demand that have been performing well recently, namely U.S. consumption for the automotive industry and U.S. residential investment for the wood products industry.[3] However, the two sectors have limited capacity to respond to the higher demand because they are already operating at near 100 percent capacity. The erosion in manufacturing capacity during the early 2000s would need to be restored to take full advantage of the increase in demand for these products. Structural reform to expand capacity, including investment in human and physical capital and putting in place the right conditions to attract FDI would help boost exports.

Capacity Utilization Rates: Actual and Historical Min and Max
(Percent of utilization)



Sources: Statistics Canada, Haver Analytics and IMF staff estimates.

[3] Binette, De Munnik and Melanson (2015) "An Update – Canadian Manufacturing Exports: Past Performance and Future Prospects," Bank of Canada Discussion Paper 2015-10.

8. Demand constrained. Industries such as the manufacturing of metal products, industrial machinery, plastic and rubber products, and aircraft and parts, and computer and electronic products have plenty of capacity but global demand for these products has declined.

a. Metal products are highly dependent on global construction demand. Exports of metal products grew rapidly when construction activity was booming in China; in particular, between 2002 and 2012 Canadian metal products exports to China increased eightfold. Since the slowdown in the Chinese economy, exports have declined, leaving the industry with low capacity utilization.

b. Industrial machinery, plastic and rubber products and aircraft and parts are dependent on US business investment, which has seen sluggish growth in recent years.[4]

c. Computer and electronic exports has suffered a setback mainly because Blackberry, which has been Canada's prime exporter, has seen a deep fall in its share of the global Smartphone market (table).

In these industries where demand is constrained, exchange rate deprecation would help tilt price competitiveness in favor of Canadian exports. However, the Canadian dollar is a commodity currency that fluctuates with the oil price. An increase in the oil price would appreciate the currency and wipe out any gain in competitiveness. Structural measures that improve labor productivity and innovation are essential to enable these industries to compete in existing and new export markets, and claw back market share. For firms in industries at the technological frontier, innovative success is a prerequisite for sustained growth.

Table 1. Worldwide Smartphone Operating System Market Share
(In percent)

Period	Android	iOS	Windows Phone	BlackBerry OS	Others
2015Q2	82.8	13.9	2.6	0.3	0.4
2014Q2	84.8	11.6	2.5	0.5	0.7
2013Q2	79.8	12.9	3.4	2.8	1.2
2012Q2	69.3	16.6	3.1	4.9	6.1

Source: IDC, Aug 2015.

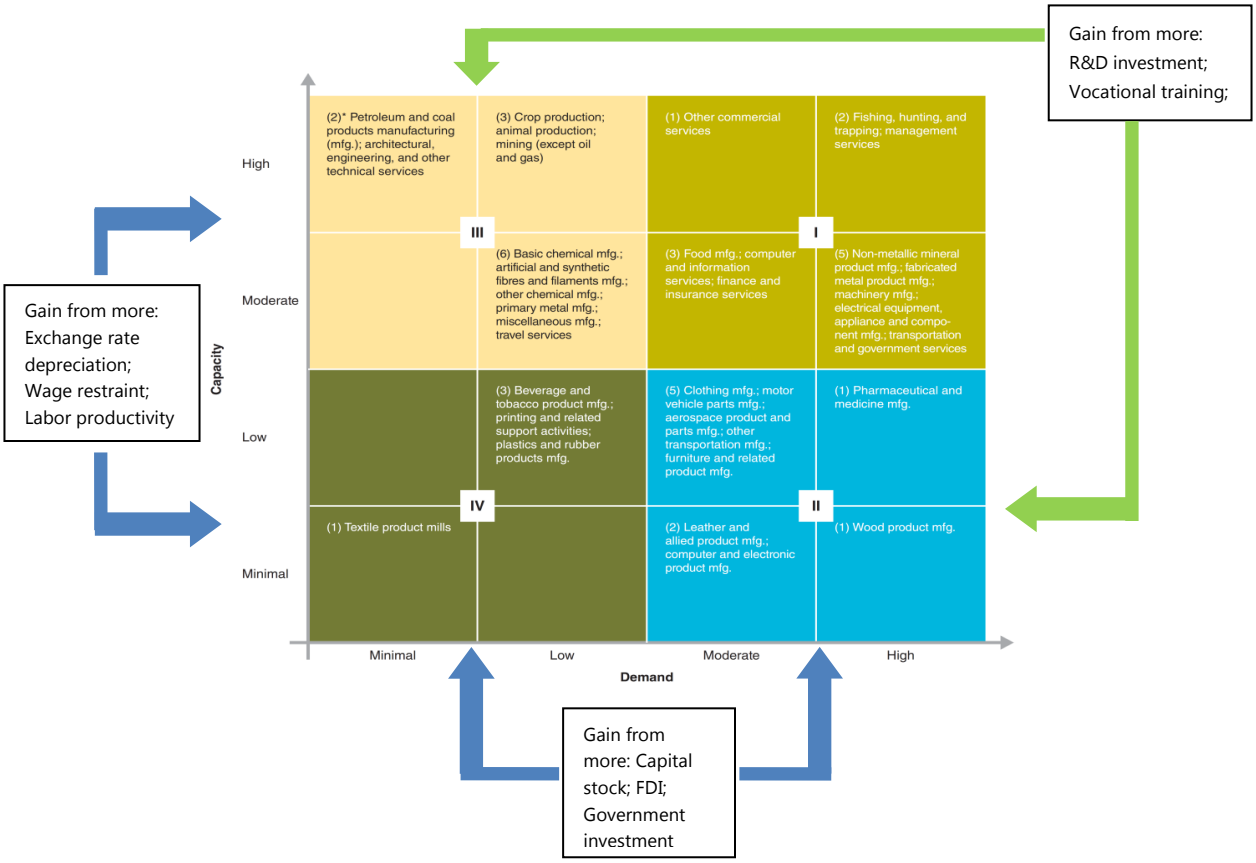
[4] IMF Canada Selected Issues Paper (January 2015).

Table 2. Panel Regression Results

Specification	Baseline	Full	Ex-FDI
Effects	Random	Random	Random
Dependent variable (1 lag)	Log Exports	Log Exports	Log Exports
Relative Export Price	2.138***	2.081***	2.418***
	(0.184)	(0.186)	(0.175)
Capital Stock	0.951***	0.849***	0.910***
	(0.159)	(0.247)	(0.194)
Labor Productivity	2.165***	2.241***	1.882***
	(0.487)	(0.572)	(0.434)
Real Wages	-1.331***	-1.506***	-1.476***
	(0.151)	(0.253)	(0.169)
R&D per industry	0.264***	0.262***	0.344***
	(0.0514)	(0.0531)	(0.0503)
R&D per province	0.129**	0.158**	0.115*
	(0.0608)	(0.0681)	(0.0626)
Vocational Training		0.0314	0.184**
		(0.0997)	(0.0901)
FDI	0.201***	0.212***	
	(0.0408)	(0.0411)	
Government Investment		-0.0705	
		(0.115)	
Female Labor Force Participation		0.00333	0.0250**
		(0.0119)	(0.0101)
Energy Share of provincial GDP	-0.0148**	-0.0170**	
	(0.00620)	(0.00731)	
Population Density per province	0.0587***	0.0468**	0.0822***
	(0.0226)	(0.0234)	(0.0219)
Observations	1,200	1,200	1,360
Number of ID	80	80	80
R-squared	0.5804	0.6018	0.5706

Standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Manufacturing Exports by Industry: Capacity to Expand, U.S. Demand and Policy Priorities



Sources: Canadian Conference Board 2016 publication "Canada's Next Trade Era: Which Industries Are Prepared to Take on US Demand" and staff additions.

INTERNATIONAL MONETARY FUND

CANADA

STAFF REPORT FOR THE 2016 ARTICLE IV CONSULTATION—INFORMATIONAL ANNEX

May 20, 2016

Prepared By

The Western Hemisphere Department
(in consultation with other departments)

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FUND RELATIONS

(As of March 31, 2016)

Membership Status: Joined 12/27/1945; Article VIII

General Resources Account:	**SDR Million**	**Percent of Quota**
Quota	11,023.90	100.00
Fund holdings of currency	10,048.77	91.15
Reserve Tranche Position	975.16	8.85
Lending to the Fund		
New Arrangements to Borrow	698.50	

SDR Department:	**SDR Million**	**Percent of Allocation**
Net cumulative allocation	5,988.08	100.00
Holdings	5,700.60	95.20

Outstanding Purchases and Loans: None.

Latest Financial Arrangements: None.

Projected Obligations to Fund:

(SDR Million; based on existing use of resources and present holdings of SDRs):

			Forthcoming		
	2016	2017	2018	2019	2020
Principal					
Charges/Interest	0.23	0.25	0.25	0.25	0.25
Total	0.23	0.25	0.25	0.25	0.25

Implementation of HIPC Initiative: Not Applicable.

Implementation of Multilateral Debt Relief Initiative (MDRI): Not Applicable.

Implementation of Post-Catastrophe Debt Relief (PCDR): Not Applicable.

Exchange Rate Arrangements: The authorities maintain a "free floating" exchange rate regime. The exchange rate regime is free from exchange restrictions and multiple currency practices. The Canadian authorities do not maintain margins with respect to exchange transactions. However, the authorities may intervene to maintain orderly conditions in the exchange market. There are no taxes or subsidies on purchases or sales of foreign exchange. Canada has accepted the obligations of Article VIII, Sections 2, 3, and 4 (a), and maintains an exchange system that is free of restrictions on

the making of payments and transfers for current international transactions. Canada maintains exchange restrictions for security reasons, based on UN Security Council Resolutions, that have been notified to the Fund for approval (most recently in June 10, 2014) under the procedures set forth in Executive Board Decision No. 144–(52/51).

Last Article IV Consultation: The Staff Report for the 2014 consultation with Canada was considered by the Executive Board on January 28, 2015 (IMF Country Report No. 15/22). Canada is on a 12-month consultation cycle.

The 2016 Article IV discussions took place in Toronto, Montreal, Calgary, and Ottawa during April 19–May 6, 2016. The team comprised Cheng Hoon Lim (head), Kotaro Ishi, Yulia Ustyugova, Bengt Petersson (all WHD), Itai Agur (SPR), Sanjay Hazarika (MCM), and Takuji Komatsuzaki (FAD). Messrs. Werner and Srinivasan (both WHD) joined the mission for concluding meetings in Ottawa. Ms. Young and Mr. Lessard (OED) accompanied the mission, and Mr. Dupont (OED) attended the concluding meetings. The mission met with Minister of Finance William Morneau, Bank of Canada Governor Stephen Poloz, Deputy Minister of Finance Rochon, Bank of Canada Senior Deputy Governor Wilkins, other senior officials, and provincial government representatives. A press conference was held on May 9 in Washington DC. Outreach activities included presentations of analytical work at Bank of Canada and Ministry of Finance, and discussions with finance industry, academic, business sector representatives, and think tanks.

FSSA Participation and ROSC Assessments

Canada–Financial System Stability Assessment–Volume II: Report on Observance of Standards in the Financial System	www.imf.org June 30, 2000

Summary: The FSSA report concluded that Canada has a stable and highly advanced financial system, which is among the soundest in the world. It is supported by a well-developed regulatory system that shows a high degree of compliance with major international standards. The FSSA report made a few recommendations to further strengthen the regulatory framework and financial system's resilience, most of which have already been addressed, including:

- Introducing capital requirements for the guarantees in life insurance segregated fund (completed by end-2001);
- Tabling legislation granting the Office of the Superintendent of Financial Institutions (OSFI) powers to remove a financial institution's director or senior officer if the person is deemed not suitable to hold that office based on a number of criteria. The latter legislation brought Canada into broad compliance with the Basel Core Principles;
- Making significant progress in harmonizing securities regulation and improving coordination among provincial securities regulators, including through a newly created association of securities regulators, the Canadian Securities Administrators. Although there remain multiple regulators at the provincial level, a Senate commission was created

to develop specific recommendations on further harmonization and streamlining of securities regulation.

Canada: Report on the Observance of Standards and Codes—Fiscal Transparency Module — IMF Country Report No. 02/51, 03/12/02

Summary: The report found that fiscal management in Canada meets the requirements of the fiscal transparency code, and in a number of instances represents best practice. In particular, it highlighted the use of private sector economic forecasts. Fiscal management was also commended for its statistical integrity, impartial tax administration, open procurement, and a transparent regulatory process.

The report found several areas where further improvements would be desirable, including: (i) the preparation of timely, current year estimates of federal and provincial budgets on a comparable basis, (ii) a comprehensive account of the procedures for the budget cycle and expenditure management system, (iii) systematic reporting of the use of reserves for non-economic contingencies, (iv) resumption of publication of reconciled national and public accounts forecasts of major aggregates over the forecast horizon, and (v) publication by all governments of quasi-fiscal activities.

Many of these issues have been addressed, including: (i) the release by Statistics Canada of consolidated data for federal and provincial budgets for 2001–02 (on a Financial Management System basis); (ii) the publication of comprehensive descriptions of budget and expenditure management procedures, including a joint document entitled "Budgeting in Canada" by the Government and the OECD, detailed accounts of policies and procedures on expenditure management at the website of the Treasury Board Secretariat, and the explanation of the budget cycle and process in Budget and Update documents; and (iii) publication of reconciled national and public accounts forecasting.

Canada: Report on the Observance of Standards and Codes—Data Module — IMF Country Report No. 03/328, 10/23/03

Summary: Canada's macroeconomic statistics are comprehensive, timely, and accurate and thus adequate to conduct effective surveillance of economic and financial policies. Official institutions responsible for the compilation and dissemination of the macroeconomic datasets are supported by adequate legal and institutional frameworks. These frameworks protect confidentiality and ensure that statistical work is conducted within a quality assurance program and with sufficient resources. Integrity is ensured by the professionalism of the staff, transparency in statistical policies and practices, and the provision of ethical guidelines for staff. Compilers generally follow internationally accepted guidelines in the production of the macroeconomic statistics, which is well-supported by excellent efforts to develop source data that facilitate a high degree of accuracy and reliability. Statistics are generally relevant, well documented, available with good frequency on a timely basis, and readily accessible to users, who trust them as objective.

While recognizing the high quality of the macroeconomic data, the report makes

recommendations to further strengthen the statistical system, most of which are already being addressed, including these priorities:

- Articulate the roles of Statistics Canada and the Bank of Canada in producing financial sector statistics and explore possibilities for more data sharing of monetary and financial statistics;
- Estimate consumption of fixed capital at replacement cost rather than historic costs now used for the corporate sector in the Canadian System of National Accounts (CSNA);
- Disseminate information on the sources and methods used in compiling quarterly public sector statistics for the quarterly CSNA; and
- Reclassify certain transactions that are not recorded in line with the 5th edition of the Balance of Payments Manual (*BPM5*).

Canada: Report on the Observance of Standards and Codes—FATF Recommendations for Anti-Money Laundering and Combating the Financing of Terrorism — IMF Country Report No. 08/372, 12/11/08

Summary: Canada's anti-money laundering and combating the financing of terrorism (AML/CFT) framework was last assessed by the Financial Action Task Force (FATF) and the Asia Pacific Group on Money Laundering (APG) in March 2007. Shortcomings were identified in particular with respect to the scope of customer due diligence, the implementation of AML/CFT supervision, and the effectiveness of the financial intelligence unit (FINTRAC). Since 2007, Canada submitted six follow-up reports to the FATF, the last one in February 2014, and took a number of steps to strengthen the framework in these areas. The next mutual evaluation of Canada will be conducted by the Fund and is scheduled in the fourth quarter of 2015.

Canada: Financial System Stability Assessment-Update — IMF Country Report No. 08/59, 02/13/08

Summary: The FSSA update concluded that Canada's financial system is mature, sophisticated, and well-managed. Financial stability was underpinned by sound macroeconomic policies and strong prudential regulation and supervision, and well-designed deposit insurance and arrangements for crisis management and failure resolution. The banking system appeared sound, with stress tests showing that the major banks could withstand sizeable shocks, although they did faces some challenges related to the global financial turmoil that started in mid-2007. Also, there were some concerns about bank attempts to build on their secure domestic position, to enter highly competitive foreign markets or complex activities. The update reiterated the advantages of moving towards a single securities regulator, including the streamlining of policy development, reductions in compliance costs, and improved enforcement. However, it also recognized the significant improvements to the regulatory system from the creation of the Canadian Securities Administrators (CSA), and the implementation of the passport system.

Canada: Financial System Stability Assessment-Update IMF Country Report No. 14/29, 02/03/14

Summary: The FSSA Update found that Canada's financial system successfully navigated the global financial crisis, and stress tests suggest that major Canadian financial institutions are resilient to credit, liquidity, and contagion risks arising from a severe stress scenario. Elevated house prices and high household debt remain an area of concern (despite the substantial level of government-guaranteed mortgage insurance), though targeted prudential and macro-prudential measures are proving to be effective. The regulatory and supervisory framework demonstrates strong compliance with international standards. Nevertheless, the Update called for more clarity around the legal independence of OSFI and for assigning stronger prudential responsibilities to this regulator. In the securities markets, provincial regulators and the federal government have made significant progress in implementing a robust and harmonized framework, but challenges remain in enforcement, risk identification, and timely policy making. The FSSA Update argued that the federal system of safety nets is credible, although there is no single body with an explicit mandate to take a comprehensive view of systemic risks or to undertake crisis preparedness. Improving cooperation between federal and provincial authorities would further reinforce system-wide oversight arrangements.

Technical Assistance: Not Applicable.

Resident Representative: Not Applicable.

STATISTICAL ISSUES

The quality, coverage, periodicity, and timeliness of Canada's economic data are considered to be adequate both in the context of the Article IV consultation and for purposes of ongoing surveillance. Canada has subscribed to the Fund's Special Data Dissemination Standard (SDDS), and its metadata are posted on the Fund's Dissemination Standards Bulletin Board (DSBB). The data ROSC was published on October 23, 2003.

Real Sector. Statistics Canada provides timely and adequate data in monthly, quarterly, and annual frequency thereby facilitating the analyses of economic developments and policy assessments within a quantitative macroeconomic framework. In May 2001, Statistics Canada effected a smooth transition from Laspeyres methodology for estimating real expenditure-based GDP to Fisher index formulae, which enabled more accurate comparison between Canada and other G-7 countries. In October 2012, Statistics Canada started aligning the Canadian System of National Accounts (CSNA) with the SNA2008 international standard. The changes introduced in the CSNA2012 included, among others, capitalization of research and development, move to replacement cost-based valuation of consumption of fixed capital, and valuing equity more consistently at market price. Additional changes were introduced with the 2014 release of the CSNA, which for the most part did not have a significant impact on GDP and represented the development of new accounts, improved integration between the CSNA and Government Finance Statistics, additional detail, and presentational changes that better align with international standards (see, Statistics Canada). In 2015

Statistics Canada carried out comprehensive revision to the Canadian System of Macroeconomic Accounts (CSMA). The four main sources of revision with that release of the CSMA were: the integration of Government Finance Statistics, the improved treatment of defined benefit pension plans, the measurement of financial services purchased by households', and updated measures of national wealth.

Fiscal Sector. Statistics Canada provides quarterly data (a Statement of Government Operations along with a Balance Sheet) on the general government and its subsectors following the *Government Finance Statistics Manual 2001* (*GFSM 2001*) recommendations. In November 2014, Statistics Canada published the provisional (unconsolidated) data on Canadian Government Finance Statistics (CGFS) for 2008–2012 (see, Statistics Canada). This covers the statement of operations for all components of general government, as well as federal and provincial and territorial government business enterprises. Data on the functional expenses were also released. Subsequently, in February 2015, estimates for financial flows and the balance sheet of the general government and government business enterprises for 2007–2012 were published (see Statistics Canada). In March 2016, Statistics Canada published Consolidated Government Finance Statistics data for 2008-2014 for the first time (see Statistics Canada). In addition, the Department of Finance Canada provides monthly and annual data on the federal government's budget (according to the national presentation) and tax policies. The provided data enable adequate assessment of the impact of fiscal policy measures on Canada's economic performance.

Financial Sector. The Bank of Canada and OSFI provide monthly and quarterly data on the broad range of financial variables. However, the 2013 FSSA Update recommended that financial sector data collection and dissemination should be expanded with a view to enhancing coverage, regularity, and availability of time-series to facilitate analysis.

Monetary Sector. The Bank of Canada provides timely and adequate coverage of daily, weekly, monthly, and quarterly data related to the monetary sector.

External Sector. Statistics Canada provides timely information on a quarterly frequency on the balance of payments, external debt, and the international investment position. Department of Finance Canada provides monthly data on Official International Reserves in a format comparable to the IMF's reserve data template, thus enabling adequate surveillance. Data are published at http://www.fin.gc.ca/pub/oir-ro-eng.asp.

Canada: Table of Common Indicators Required For Surveillance

	Date of latest observation (For all dates in table, please use format dd/mm/yy)	Date received	Frequency of Data[6]	Frequency of Reporting[6]	Frequency of Publication[6]	Memo Items: Data Quality – Methodological soundness[7]	Memo Items: Data Quality – Accuracy and reliability[8]
Exchange Rates	Same day	Same day	D	D	D		
International Reserve Assets and Reserve Liabilities of the Monetary Authorities[1]	May 2, 2016	May 2, 2016	W	W	W		
Reserve/Base Money	May 2, 2016	May 2, 2016	W	W	W	LO, O, LO, LO	O, O, O, O, O
Broad Money	May 2, 2016	May 2, 2016	M	M	M		
Central Bank Balance Sheet	May 2, 2016	May 2, 2016	W	W	W		
Consolidated Balance Sheet of the Banking System	May 2, 2016	May 2, 2016	M	M	M		
Interest Rates[2]	Same day	Same day	D	D	D		
Consumer Price Index	April 2016	May 20, 2016	M	M	M	O, O, O, O	O, O, O, O, NA
Revenue, Expenditure, Balance and Composition of Financing[3] – General Government[4]	2015 Q4	Dec 2015	Q	Q	Q	O, O, O, O	O, O, O, O, O
Revenue, Expenditure, Balance and Composition of Financing[3]– Central Government	Feb 2016	Apr 29, 2016	M	M	M		
External Current Account Balance	2015 Q4	Feb 29, 2016	Q	Q	Q	O, O, LO, O	O, O, O, O, O
Exports and Imports of Goods and Services	Mar 2016	May 4, 2016	M	M	M		
GDP/GNP	2015 Q4	Mar 1, 2016	Q	Q	Q	O, O, O, LO	O, O, O, O, O
Gross External Debt	2015 Q4	Mar 10, 2016	Q	Q	Q		
International Investment Position[5]	2015 Q4	Feb 29, 2016	Q	Q	Q		

[1] Any reserve assets that are pledged or otherwise encumbered should be specified separately. Also, data should comprise short-term liabilities linked to a foreign currency but settled by other means as well as the notional values of financial derivatives to pay and to receive foreign currency, including those linked to a foreign currency but settled by other means.

[2] Both market-based and officially-determined, including discount rates, money market rates, rates on treasury bills, notes and bonds.

[3] Foreign, domestic bank, and domestic nonbank financing.

[4] The general government consists of the central government (budgetary funds, extra budgetary funds, and social security funds) and state and local governments.

[5] Includes external gross financial asset and liability positions vis-à-vis nonresidents.

[6] Daily (D); weekly (W); monthly (M); quarterly (Q); annually (A); irregular (I); and not available (NA).

[7] Reflects the assessment provided in the data ROSC published on October 23, 2003 and based on the findings of the mission that took place during January 22–February 5, 2003 for the dataset corresponding to the variable in each row. The assessment indicates whether international standards concerning (respectively) concepts and definitions, scope, classification/sectorization, and basis for recording are fully observed (O), largely observed (LO), largely not observed (LNO), not observed (NO); and not available (NA).

[8] Same as footnote 8, except referring to international standards concerning (respectively) source data, assessment of source data, statistical techniques, assessment and validation of intermediate data and statistical outputs, and revision studies.