FISCAL PLAN

ECONOMIC OUTLOOK

ANNEX

BUDGET 2017

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ECONOMIC OUTLOOK

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KEY ENERGY AND ECONOMIC ASSUMPTIONS

Fiscal Year Assumptions	2015-16 Actuals	2016-17 Estimates	2017-18	2018-19	2019-20
Crude Oil Prices[a]					
WTI (US$/bbl)	45.00	48.00	55.00	59.00	68.00
Light-Heavy Differential (US$/bbl)	13.40	14.20	16.00	18.00	18.60
WCS @ Hardisty (Cdn$/bbl)	40.86	44.50	51.30	53.00	63.40
Natural Gas Price[a]					
Alberta Reference Price (Cdn$/GJ)	2.21	2.15	2.90	2.90	3.00
Production					
Conventional Crude Oil (000s barrels/day)	508	436	416	403	394
Raw Bitumen (000s barrels/day)	2,489	2,488	2,906	3,195	3,296
Natural Gas (billions of cubic feet)	4,255	4,188	4,094	4,026	3,966
Interest rates					
3-month Canada Treasury Bills (%)	0.49	0.50	0.54	0.80	1.20
10-year Canada Bonds (%)	1.46	1.40	2.00	2.40	2.70
Exchange Rate (US¢/Cdn$)[a]	76.3	76.0	76.0	77.5	78.0

Calendar Year Assumptions	2015 Actuals	2016 Estimates	2017	2018	2019	2020
Gross Domestic Product						
Nominal (billions of dollars)	326.4	309.1	325.3	343.0	364.1	385.3
% change	-12.5	-5.3	5.3	5.4	6.2	5.8
Real (billions of 2007 dollars)	310.6	301.9	309.6	316.5	324.2	332.2
% change	-3.6	-2.8	2.6	2.2	2.4	2.5
Other Indicators						
Employment (thousands)	2,301	2263.8[b]	2,285	2,316	2,354	2,397
% change	1.2	-1.6[b]	0.9	1.4	1.6	1.8
Unemployment Rate (%)	6.0	8.1[b]	8.0	7.6	7.1	6.3
Average Weekly Earnings (% change)	-0.3	-2.4[b]	1.4	2.0	2.8	3.0
Primary Household Income (% change)	2.5	-3.5	1.8	3.5	4.3	4.4
Net Corporate Operating Surplus (% change)	-69.3	-35.1	66.4	35.9	29.9	21.9
Housing Starts (thousands of units)	37.3	24.5[b]	24.5	25.7	28.8	30.2
Alberta Consumer Price Index (% change)	1.1	1.1[b]	1.9	2.0	2.0	2.0
Retail Sales (% change)	-4.6	-1.6[b]	2.3	3.3	4.3	4.6
Population (thousands)	4,180	4,253[b]	4,306	4,367	4,430	4,492
% change	1.7	1.8[b]	1.3	1.4	1.4	1.4
Net Migration (thousands)	38.3	40.2[b]	21.2	29.1	31.0	31.8

[a] Forecasts have been rounded

[b] Actual

Fiscal Sensitivities to Key Assumptions, 2017–18[a]

(millions of dollars)

	Change	Net Impact (2017-18)
Oil Price (WTI US$/bbl)	-$1.00	-310
Light-Heavy Oil Price Differential	+$1.00	-285
Natural Gas Price (Cdn$/GJ)	-10 Cents	-45
Exchange Rate (US¢/Cdn$)	+ 1 Cent	-215
Interest Rates	+1%	-230
Primary Household Income	-1%	-160

[a] Sensitivities are based on current assumptions of prices and rates and show the effect for a full 12 month period. Sensitivities can vary significantly at different price and rate levels. The energy price sensitivities do not include the potential impact of price changes on the revenue from land lease sales.

ECONOMIC OUTLOOK 2017–20

THE ROAD TO RECOVERY

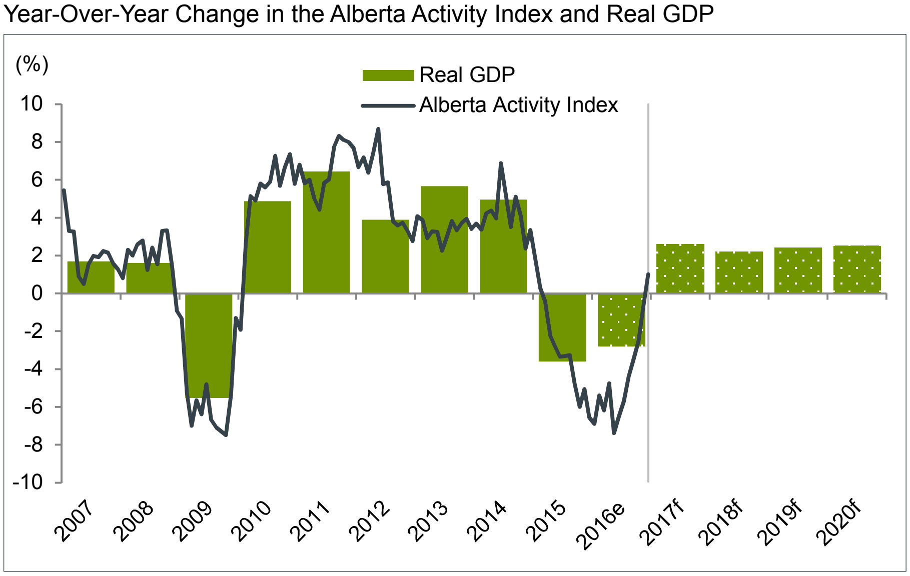
Alberta's economy will expand in 2017, with real GDP forecast to rise 2.6%. Activity is picking up in the province and many economic indicators are now rising (Chart 1), more than two years after oil prices began their descent. However, the recovery is expected to be moderate. The unprecedented decline in incomes during the downturn, particularly corporate profits, will continue to weigh on business investment and consumer spending. With oil prices rising gradually, but not expected to return to pre-recession levels, real GDP is forecast to remain below 2014 levels until 2019.

Exports will drive the return to growth this year. Completed oil sands projects in 2016 and 2017 will see production grow markedly and manufacturing output is also set to expand. The improvement in oil prices is expected to lift oil and gas drilling activity, while government capital spending will also contribute to growth. Rebuilding in Fort McMurray and the bounce back in oil production following last year's wildfire-related disruptions are expected to add around 1% to real GDP growth this year.

As the economy transitions to the lower oil price environment, several factors will help smooth the adjustment. Business costs in the province have moderated and a lower Canadian dollar will continue to support exports. A return to employment growth and slower labour force expansion are expected to facilitate a steady decline in the unemployment rate. Increased infrastructure spending is expected to boost activity and improve productivity. Alberta's population growth, while slowing, is forecast to expand at a faster pace than the Canadian average, supporting consumer spending and housing. Moreover, despite only a moderate recovery, overall incomes and private investment are expected to remain higher than in other provinces.

Chart 1: Alberta beginning to recover

Year-Over-Year Change in the Alberta Activity Index and Real GDP



Sources: Statistics Canada and Alberta Treasury Board and Finance, e-estimate, f-forecast

Alberta has started to emerge from one of its worst recessions, caused by the steepest and most prolonged oil price shock in Canadian history. The Alberta Activity Index (AAX) indicates that the economy has entered recovery mode.*

** Developed by Alberta Treasury Board and Finance, the AAX tracks economic activity closely. It is a weighted average of nine monthly indicators (employment, average weekly earnings, retail trade, wholesale trade, manufacturing, new truck sales, housing starts, rigs drilling, oil production).*

GLOBAL ECONOMY

The global economy is on a more solid footing to start 2017. Growth will be driven by a steady expansion in the US and China and a retreat from recession for Russia and some Latin American economies. The oversupply of oil is beginning to unwind, helped by reduced US production in 2016 and a commitment from OPEC to cut output this year. These factors are key to a sustained recovery in Alberta's export- and commodity -driven economy.

SURPRISING STABILITY AMIDST UNCERTAINTY

After a shaky start to 2016, the world economy improved in the second half of the year. Momentum is expected to carry forward into 2017 and beyond, with global real GDP growth forecast to be around 3.5%. Markets have largely shrugged off the elevated policy uncertainty caused by outcomes in the US election and the Brexit vote, with market measures of volatility at historic lows.

Despite being hit by a number of disruptive shocks over the past five years, global real GDP growth has been remarkably stable between 3.0 and 3.5% (Chart 2). While weak compared to the 2003-07 period, a slowing China and the effects of population aging in the West make it unrealistic to expect growth to return to those levels. This has important ramifications for Alberta, since it reduces the probability of another demand-fueled commodity price boom.

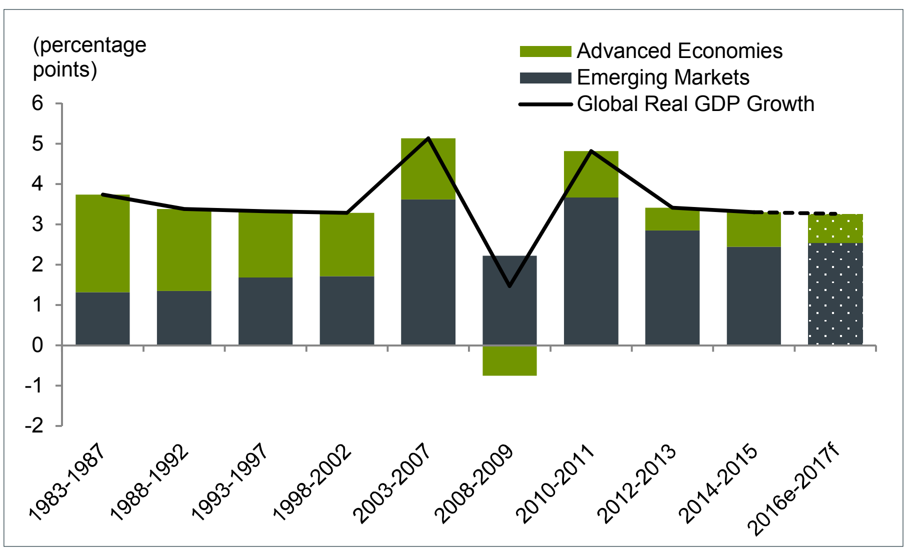
US ECONOMY RETURNS TO FULL EMPLOYMENT

For the first time in almost a decade, the US economy is operating at capacity and is projected to expand at its long-run growth rate of around 2.5%. With low unemployment and accelerating wage growth (Chart 3), consumer confidence has risen to the highest level since 2007. This will help fuel growth in household consumption and ensure continued expansion in the housing sector. Business investment disappointed in 2015 and 2016, due to a larger

International forecasters have lowered their expectations for global growth.

Chart 2: Global growth unlikely to reach recent highs

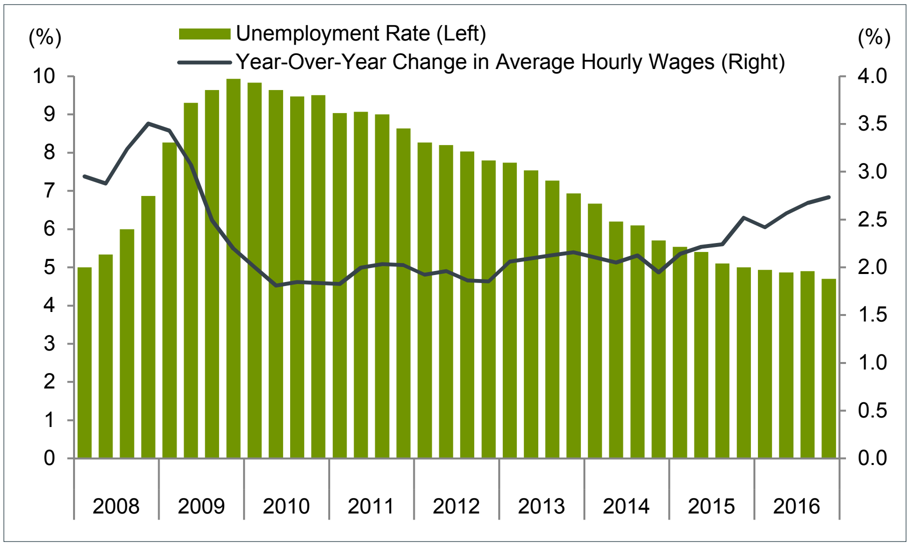
Contribution to Average Annual Real GDP Growth



Sources: International Monetary Fund and Alberta Treasury Board and Finance calculations, e-estimate, f-forecast

Chart 3: US labour market tightening

US Unemployment Rate and Change in Hourly Wages



Source: US Bureau of Labor Statistics

US labour market tightening will lead to continued wage appreciation. Household consumption will be a driver of the US economy as it strengthens in 2017.

than expected drag from the oil and gas industry. Going forward, capital spending should pick up in line with the broader improvement in economic activity and oil prices. Though markets have continued to improve since the election, there is elevated uncertainty about the direction policy will take.

Improving labour market conditions in the US have enabled the US Federal Reserve to begin tightening monetary policy, but it is expected to proceed gradually with further interest rate hikes. Both the US economy and global financial markets have reacted negatively in the past when the Federal Reserve has tried to move too quickly. On a trade-weighted basis, the US dollar is at the highest level in over a decade. This has made it harder for US exporters to compete against foreign firms with weaker currencies.

EMERGING MARKETS KEY FOR OIL DEMAND

Emerging market economies (EME) are the main source of growth in demand for commodities, making them particularly important for Alberta. EME growth is expected to rise in 2017, mostly because higher commodity prices will enable Brazil and Russia to exit recession. Although China remains a driver for the global economy, Chinese growth is expected to continue to ease as the pace of investment transitions to more stable levels. Growth in India is expected to outpace China, as it did for most of 2016, notwithstanding any additional impacts from last year's currency reforms.

Growth in advanced economies will benefit emerging markets, but it also poses financial risks. Higher bond yields in advanced economies have prompted capital outflows from emerging markets and a stronger US dollar increases debt burdens on those EMEs that rely on US dollar -denominated debt.

OIL MARKET RETURNING TO BALANCE

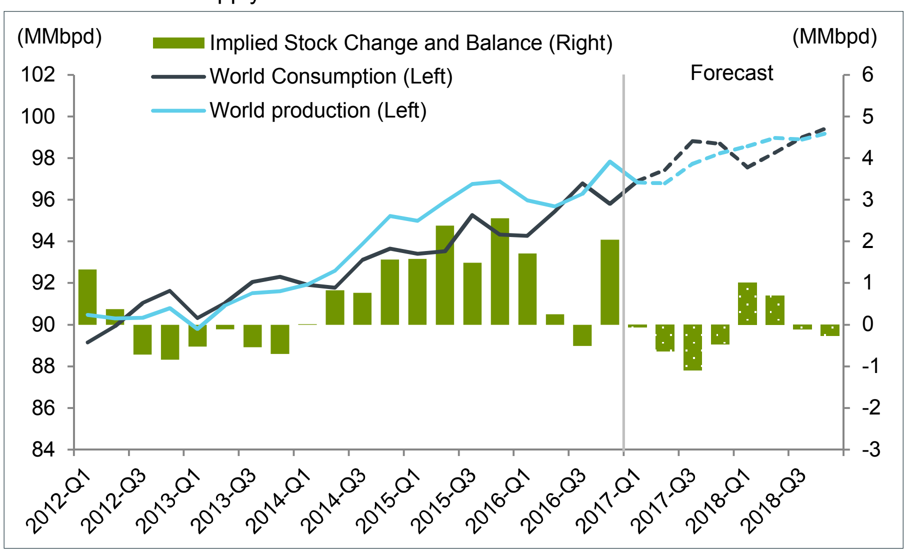
The global oil market has started returning to balance. US oil production fell by over 1 million barrels per day (bpd) between April 2015 and September 2016 due to the sharp contraction in US drilling activity. In addition, OPEC pledged to cut 1.2 million bpd of production in the first half of 2017. The commitment is conditional on a 600,000 bpd cut from non-OPEC producers like Russia. Early signs in 2017 suggest compliance by OPEC members will be high; however, it remains to be seen whether these countries, many of whom are under substantial fiscal pressure, can maintain their commitments. Assuming close to full commitment and annual demand growth of about 1.4 million bpd, the market should return to balance by the middle of 2017 (Chart 4).

A key determinant of the oil price outlook is the supply reaction of US producers to higher prices. Improvements in drilling techniques and technology have lowered breakeven prices for US producers. Since prices firmed above US$50/bbl, US drilling activity has picked up. This is expected to keep prices contained as elevated global inventories gradually unwind. West Texas Intermediate (WTI), the North American benchmark oil price, is forecast to average $US55/bbl in 2017-18.

The oil market is expected to rebalance towards the middle of 2017 as record high inventories decline.

Chart 4: Crude oil inventories start to unwind

Global Crude Oil Supply and Demand Balance

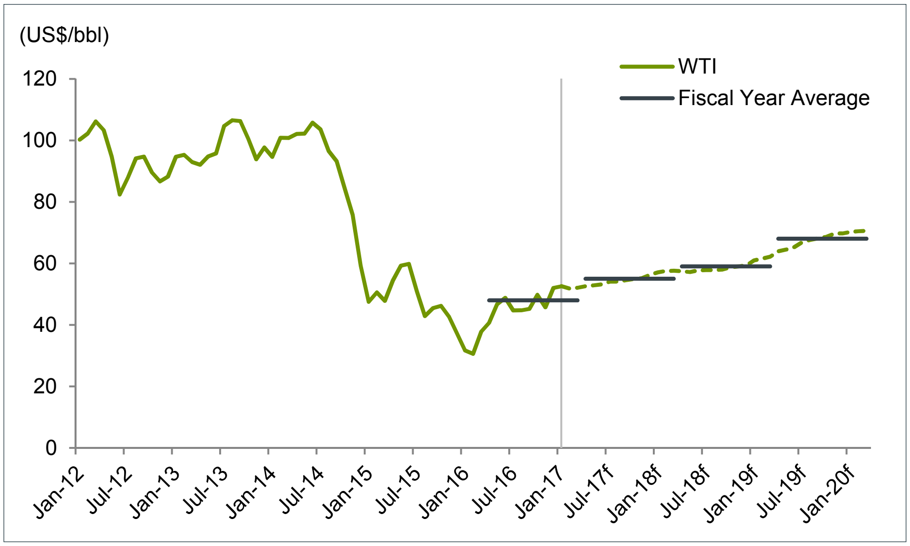


Sources: US Energy Information Administration and Alberta Energy

Over the medium term, it is expected that additional production from other more expensive sources will be required to meet demand, which has been increasing steadily by 1.0-1.5 million bpd annually. WTI is forecast to rise to US$68/bbl by 2019-20 to keep pace (Chart 5), but will remain well below price levels seen in recent years.

Chart 5: Oil prices to gradually improve

West Texas Intermediate



Sources: Wall Street Journal and Alberta Energy, f-forecast

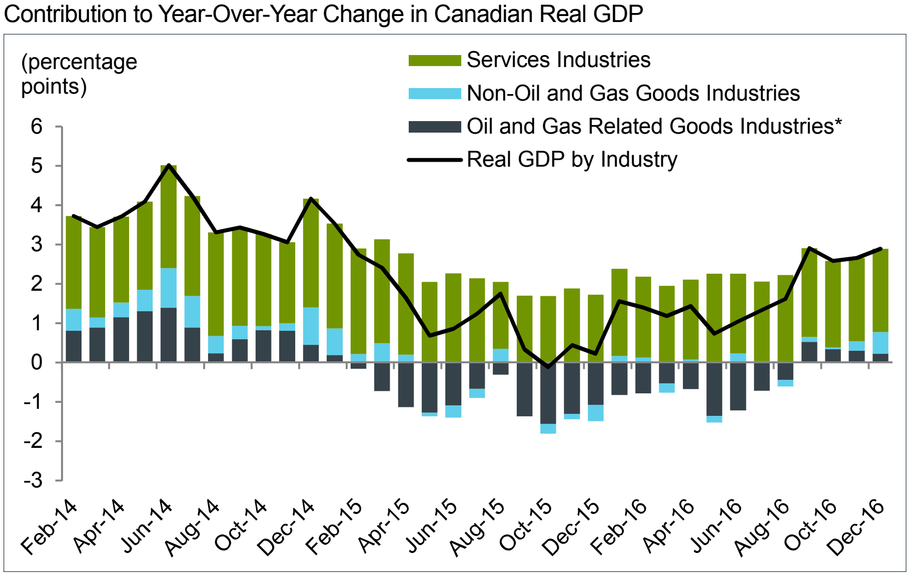
Oil prices are expected to improve as inventories decline and demand grows at a steady pace, but remain well-below levels seen in recent years.

CANADIAN ECONOMY

Economic growth in Canada is expected to improve from weak to modest, rising from 1.4% in 2016 to 2.0% in 2017. This improvement is mostly due to diminishing headwinds from the oil and gas sector as energy investment stabilizes (Chart 6). Residential investment had helped offset some of the declines in oil and gas investment in 2015 and 2016 as its share of the Canadian economy rose to the highest level in over 30 years. However, policy changes aimed at tightening mortgage rules to curb demand and rein in escalating house prices in Toronto and Vancouver will likely dampen investment going forward. Reduced residential investment will be partly offset by increased public spending on infrastructure.

Chart 6: Oil and gas industry no longer subtracting from growth

Contribution to Year-Over-Year Change in Canadian Real GDP



Sources: Statistics Canada and Treasury Board and Finance calculations

* Oil and gas extraction, support services for mining, oil and gas and engineering construction

The Canadian economy is expected to improve as the energy sector picks up.

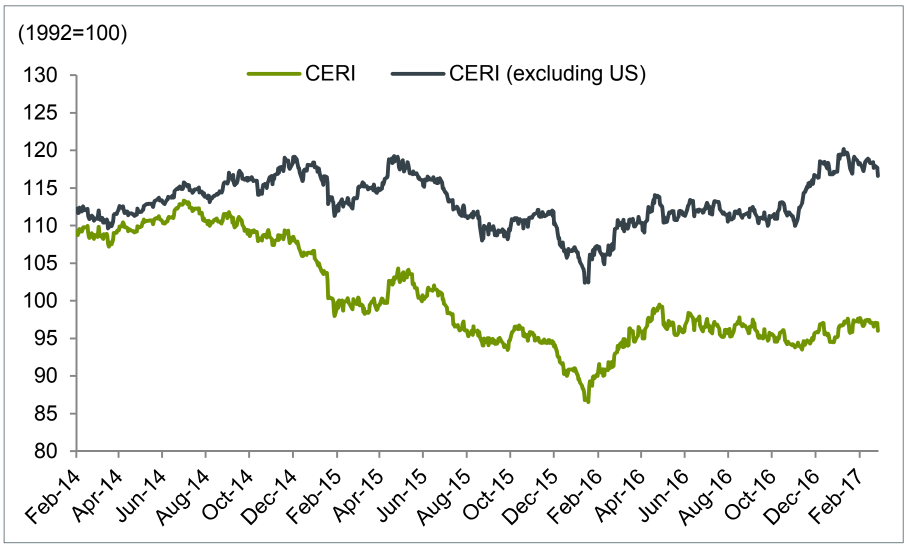
Over the medium term, the Canadian economy is expected to expand close to 2.0%. With investment taking a back seat, growth will be largely driven by household consumption. Energy exports will also be an important source of growth as oil production in Alberta continues to expand. Non-energy exports should improve after growth stalled at the end of 2016, due in part to the substantial appreciation of the Loonie against most of Canada's major trading partners over the course of 2016 (Chart 7). Additional investment in capacity is needed to increase production gains and improve productivity, however, particularly in the manufacturing sector. Some exporters are likely to proceed cautiously with new investment due to uncertainty around US trade policy.

Modest economic growth and subdued inflation should deter the Bank of Canada from raising interest rates in 2017. Despite monetary policy diverging from the US, the Canadian dollar is expected to appreciate gradually along with oil prices, from US¢76.0/Cdn$ in 2017-18 to US¢78.0/Cdn$ in 2019-20.

Although the Canadian dollar has weakened against the US dollar, it has remained strong compared with other currencies.

Chart 7: Loonie depreciates on US dollar strength

Canadian-Dollar Effective Exchange Rate Index*



Source: Bank of Canada

* CERI is a weighted average of Canadian dollar exchange rates against currencies of Canada's major trading partners.

ALBERTA ECONOMY

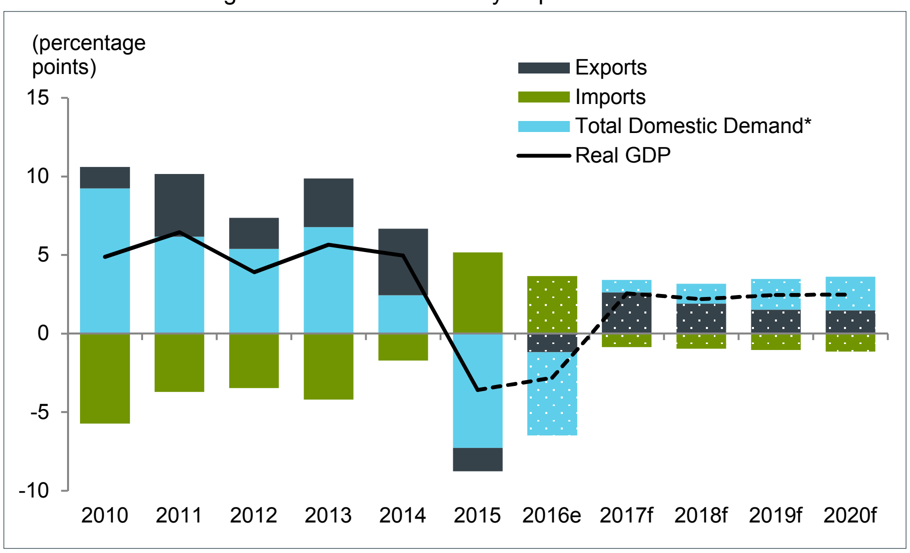
After a two-year recession, the Alberta economy will begin to expand in 2017, growing 2.6%. Growth will be driven by rising exports, along with reconstruction efforts in Fort McMurray and public sector capital spending. This will lead to renewed employment and earnings growth. However, with the steep decline in economic activity and incomes in the province over the past two years and the weak outlook for oil prices, the recovery will be longer than in past recessions. Subdued income growth will keep household consumption in check and business expansion plans constrained. Real GDP is not forecast to return to its previous peak until 2019.

EXPORTS DRIVE ECONOMIC RECOVERY

Alberta's economic recovery will be spearheaded by exports, supported by production growth in several sectors, rising oil prices and a lower Canadian dollar. Real exports are expected to expand by 4.6% in 2017 while imports remain muted due to weak domestic demand. As a result, trade is expected to add 1.8 percentage points to real GDP growth in 2017 (Chart 8). The contribution of trade will diminish over the medium term as export growth slows, while household and business spending pick up.

Chart 8: Demand recovering

Contribution to Change in Alberta Real GDP by Expenditure



Sources: Statistics Canada and Alberta Treasury Board and Finance, e-estimate, f-forecast

* Includes total household, business and government spending

Alberta's recovery will be fueled by exports in 2017.

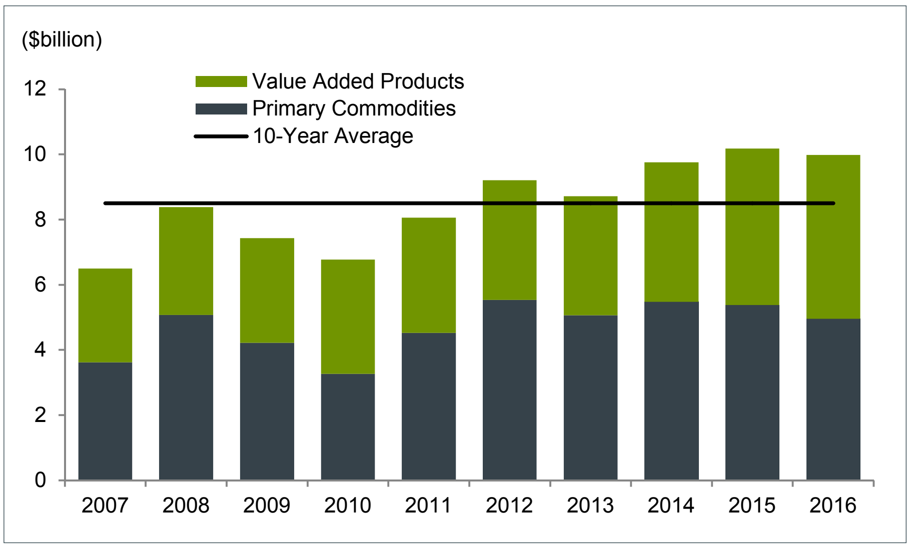
A surge in oil sands output will drive exports. Two major mining projects, the Suncor Fort Hills and CNRL Horizon Phase 3, are expected to come online this year, in addition to several other projects. Overall, more than 600,000 barrels per day (bpd) of new production is expected to lift real oil exports by 16% over the next two years. Growth in 2017 will also be buoyed by a return of production that was deferred because of the Wood Buffalo wildfires. Production growth is forecast to slow starting in 2019 as the last of the projects initiated prior to the downturn are completed, with an additional 150,000 bpd of production capacity added by 2020. The ramp up in oil production over the next three years reinforces the need to expand pipeline infrastructure. Although many companies have invested in crude-by-rail facilities, pipeline access remains critical in a lower oil price environment. The Enbridge Line 3 and Kinder Morgan Trans Mountain Expansion projects, recently approved by the Federal Government, will play a critical role in easing pipeline constraints and supporting industry growth and royalties (Box 1).

Alberta real ***manufacturing*** exports are expected to grow between 3.6 and 4.0% annually over the forecast period. Machinery and equipment manufacturing, which primarily serves the energy sector, will benefit from increased drilling activity in the US. The Sturgeon Refinery is slated to come online in 2017 and the Joffre polyethylene plant expansion began operations at the end of 2016, which will increase chemical and refining product manufacturing. In addition, food manufacturing, which has been a bright spot in Alberta's economy (Chart 9), is forecast to continue expanding. Additional processing capacity from the expected re-opening of the Harmony Beef plant in late 2017 and construction of the Cavendish Farms potato processing plant, facilitated by government infrastructure support, will boost exports over the forecast period.

The proportion of value-added food processing is increasing in Alberta's agri-food sector and supporting export growth.

Chart 9: Agriculture shipments on the rise

Alberta Agri-Foods Exports



Sources: Statistics Canada and Alberta Agriculture and Forestry

In the ***service sector,*** exports will benefit from rising oil prices and a lower Canadian dollar. As global energy sector investment picks up, there will be higher demand for Alberta's engineering and technical expertise. The province should receive an additional boost from tourism in 2017, as free national park entry in celebration of Canada's 150th anniversary is expected to attract record visitors to the province, both from elsewhere in Canada and abroad.

MIXED RESULTS FOR OTHER TRADE SECTORS

The outlook for other trade-driven sectors is mixed over the forecast period. The ***forestry sector*** outlook is positive as North American lumber demand is anticipated to grow, but the 2015 expiration of the latest Softwood Lumber Agreement between the US and Canada could provide significant headwinds for Alberta producers. In the ***agriculture sector***, grain and livestock prices are expected to soften in 2017, although grain exports will be helped by productivity gains in recent years.

BOX 1: IMPORTANCE OF PIPELINE ACCESS

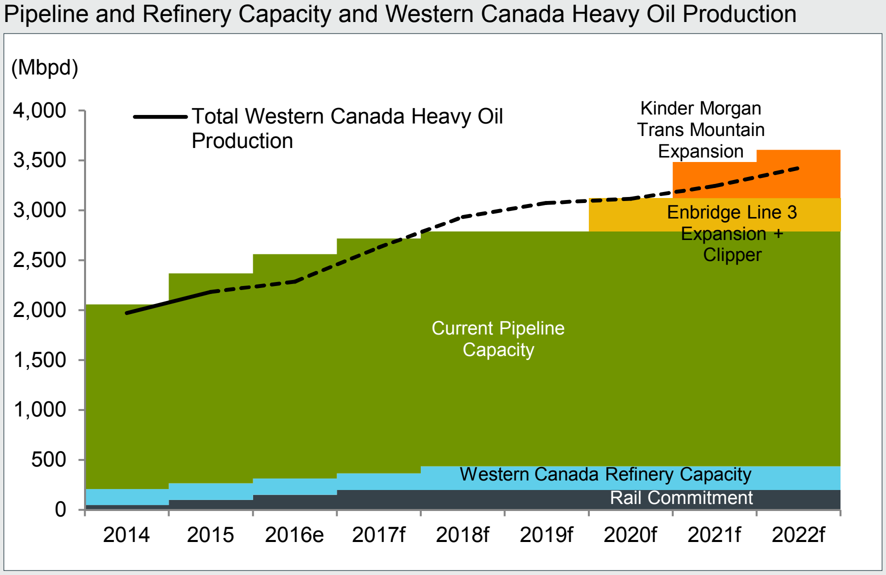
Alberta bitumen is priced at a discount to WTI because of the lower quality of heavy oil and the cost of transporting it to market. This discount is measured through the light-heavy (L/H) differential. Without sufficient pipeline access, oil sands producers incur higher transportation costs shipping their crude by rail, which is an estimated US$2-7/bbl more expensive than by pipeline. This widens the L/H differential and reduces the return, or industry "netback", that Alberta producers receive.

Given the production profile of the oil sands, without additional pipeline access, it is expected that there will not be enough pipeline capacity to accommodate Alberta's oil sands production by early 2018 (Chart 10).The increased use of higher cost rail is forecast to widen the L/H differential from US$16.00/bbl in 2017-18 to around US$18.00/bbl in 2018-19. In addition, access to more lucrative heavy oil markets is necessary for Alberta producers to maximize revenue and increase investment. Currently there is limited pipeline capacity to the two largest heavy oil markets in the world, the US Gulf Coast and Asia.

The approval of the Line 3 replacement and the Trans Mountain Expansion is a critical step in improving market access for Alberta producers. Line 3 is expected to come online in 2020 and the Trans Mountain Expansion in 2021. Alberta Energy estimates that this will allow Alberta producers to receive $2-7 more per barrel compared to a scenario without additional pipeline access. Between 2017-22, this adds an additional $10 billion to oil investment. The higher investment would increase oil sands production capacity by 150,000 bpd by 2022, add around 1.5% to real GDP and lift average annual employment by 12,000 between 2017-22. Higher production and prices would boost royalty payments by $3-9 billion between 2017-22. Keystone XL, which still requires regulatory approval, would further enhance access to markets beyond 2022.

Chart 10: Pipeline access needed for oil sands production

Pipeline and Refinery Capacity and Western Canada Heavy Oil Production



Source: Alberta Energy, e-estimate, f-forecast

Continued growth in oil sands production is expected to surpass pipeline capacity in 2018, leading to a wider differential before pipeline expansions come online in 2020.

CONVENTIONAL INVESTMENT REBOUNDS

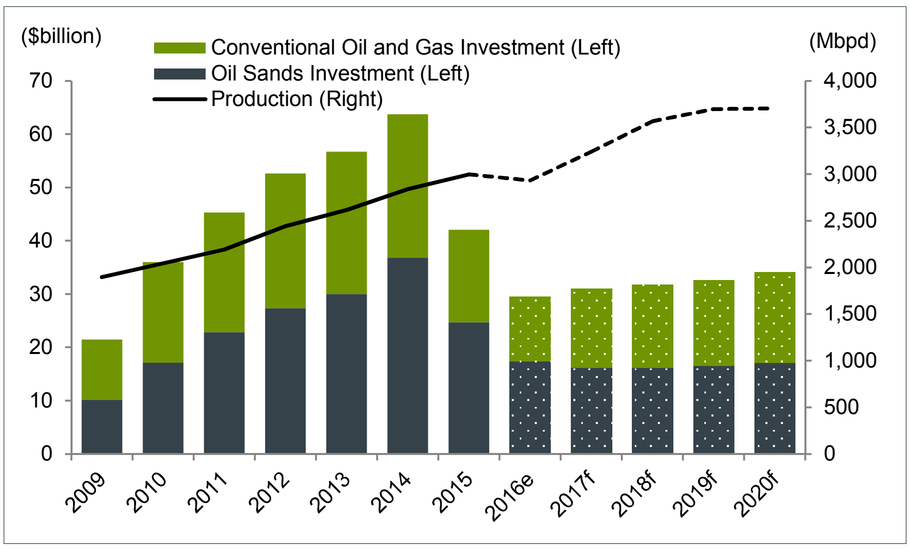
Drilling for oil and higher margin natural gas liquids (NGL), along with improving technology and techniques to raise well productivity, are expected to drive conventional oil and gas activity in the province. The number of rigs drilling began to rise in mid-2016 with the improvement in oil prices. By January 2017, rigs reached the highest level since early 2015. This recovery is expected to continue in 2017 and lift conventional investment by over 20%. With natural gas prices expected to remain low, averaging just below C$3/GJ over the next few years, drillers are expected to continue targeting NGL, whose prices are more closely tied to oil. Natural gas and NGL demand in Alberta will be bolstered by the oil sands sector and growth in petrochemical production and power generation.

The increase in conventional oil and gas drilling in 2017 is expected to lift overall energy investment by 4.9% in 2017 (Chart 11), before slowing to an average of 3.3% growth over the forecast period.

Conventional oil investment is responding to the improvement in oil prices, while oil sands investment is expected to fall again in 2017.

Chart 11: Energy investment stabilizing

Alberta Energy Investment and Oil Production



Sources: Statistics Canada and Alberta Treasury Board and Finance, e-estimate, f-forecast

SLOWING TRAJECTORY FOR OIL SANDS INVESTMENT

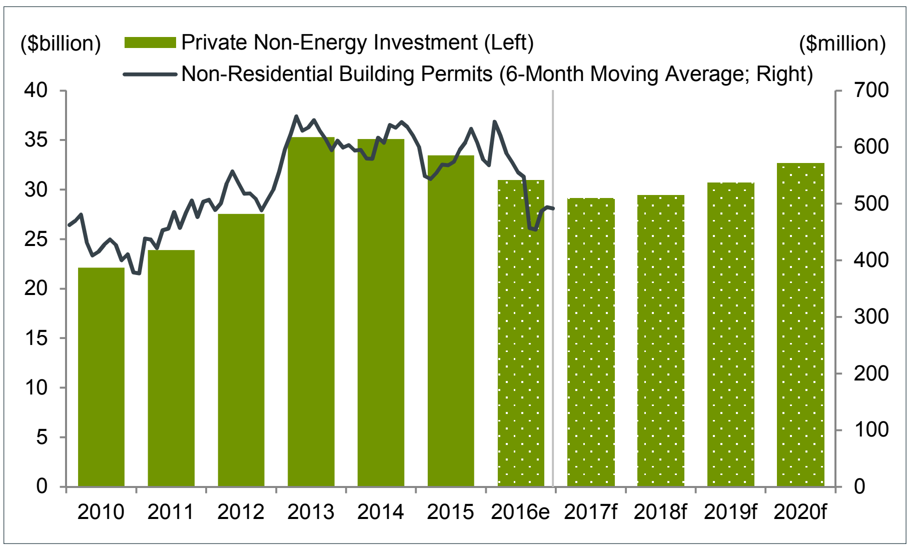
Oil sands investment is expected to remain weak this year before stabilizing in 2018 and then ramping up gradually. The last of the major construction projects that broke ground prior to 2015 will be completed by the end of 2018, while the plunge in oil prices over the past two years has curbed new investment. In addition, cost reductions mean that the amount of capital required to sustain current production and for new projects has declined. Oil sands operators are benefiting from lower labour costs, streamlined maintenance schedules and other efficiencies. Investment in the oil sands is expected to grow in 2019 and beyond as oil prices and pipeline access improve. Even with the modest growth, non-conventional investment in 2020 is expected to be less than half of what it was in 2014. In part, this reflects the leveling off of capital spending that was already underway following the 2010-14 period, when spending more than tripled from 2009 levels.

MUTED OUTLOOK FOR CONSTRUCTION

Outside the energy sector, investment continues to be hampered by declining private sector construction spending. Industrial and commercial construction fell in 2016, with declines accelerating in the second half of the year. There are a number of major commercial and industrial projects that were recently completed or are nearing completion. In particular, the expansion of the Joffre polyethylene plant was completed in 2016 and construction in Edmonton's Ice District is slowing with the completion of the arena and a nearby office tower. Building permits have fallen significantly since the end of 2015, suggesting there will be fewer projects breaking ground in 2017 (Chart 12). As a result, private investment outside of oil and gas is expected to decline by 5.8% in 2017.

Chart 12: Construction spending to recover over medium term

Alberta Non-Oil and Gas Investment and Building Permits



Sources: Statistics Canada and Alberta Treasury Board and Finance, e-estimate, f-forecast

Private sector construction activity is expected to slow in 2017 as large projects continue to wind down. This will be offset by higher government infrastructure spending.

Non-energy business investment is expected to return to growth in 2018 as the economic recovery takes root and business confidence increases. It is expected to grow 1.1% in 2018 and climb to over 6% by 2020. The Petrochemicals Diversification Program will help drive investment in petrochemical production capacity. Two projects, totalling almost $6 billion in investment, have already been approved under the program. Construction is expected to start in the next three years.

Increased infrastructure spending by the provincial government is expected to provide a boost to the economy. Additional spending in the Capital Plan, relative to the March 2015 Capital Plan, is estimated to increase annual employment by around 11,000 and annual real GDP by around 0.8% over the next three years.

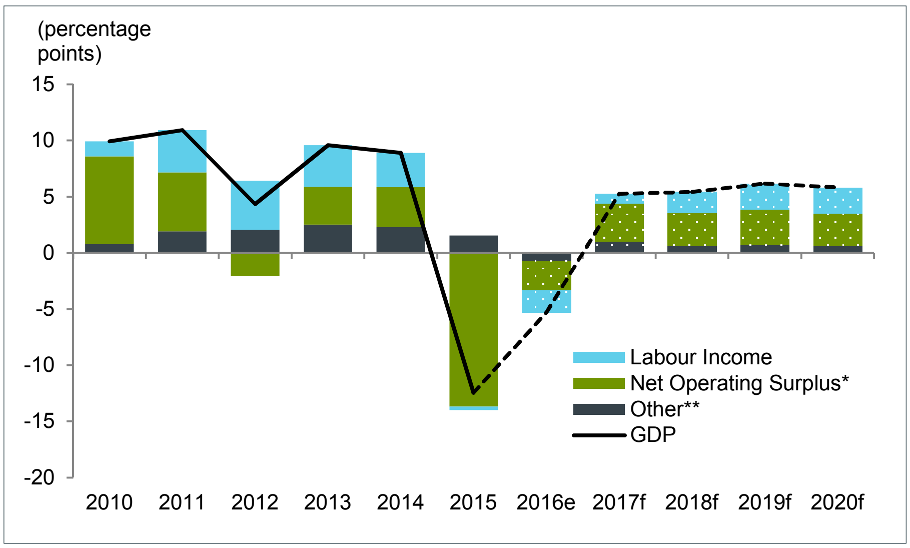
CORPORATE INCOME GROWTH RETURNS

With oil prices strengthening and producers sustaining cost reductions, corporate profits are expected to improve. Net corporate operating surplus, a measure of corporate profits and driver of corporate income tax revenues, is anticipated to grow over 60% in 2017 after an unprecedented decline over the past two years. This will boost nominal GDP, a broad measure of incomes, by over 5% this year (Chart 13). Over the medium term, as economic activity picks up, higher oil prices and efficiency measures implemented during the downturn to improve cost competitiveness will allow for continued profit growth. Nevertheless, net corporate operating surplus is not anticipated to return to pre-recession levels during the forecast period as oil prices remain below US$70/bbl through 2019-20.

A return to corporate income growth will lift nominal GDP in 2017.

Chart 13: Incomes to improve

Contribution to Change in Alberta Nominal GDP by Income



Sources: Statistics Canada and Alberta Treasury Board and Finance, e-estimate, f-forecast

* Includes net operating surplus of corporations and net mixed income

** Includes consumption of fixed capital and taxes less subsidies

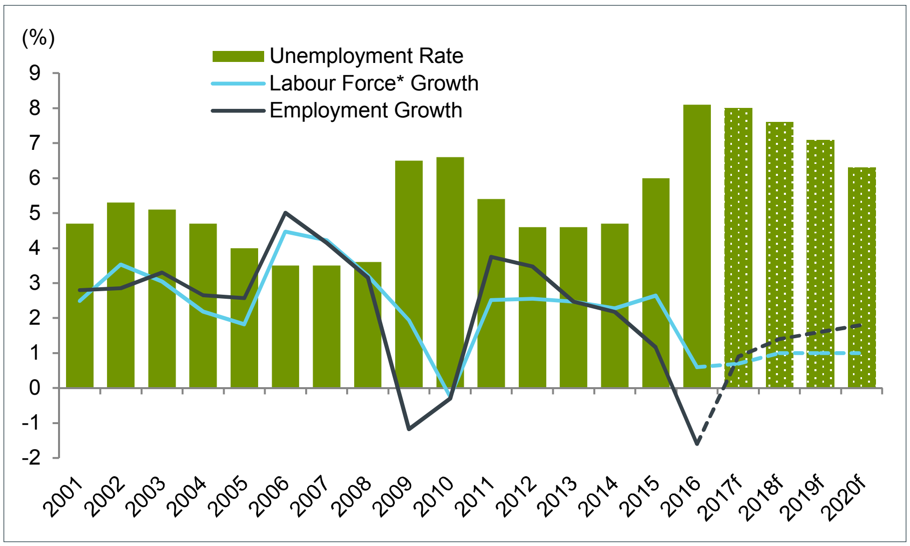
LABOUR MARKET TO RECOVER GRADUALLY

Employment in the province is expected to improve in 2017, carrying momentum from the second half of 2016. Following a decline of over 62,000 jobs from the September 2015 peak to the low in July 2016, the province added around 18,000 jobs by January. Growth was mainly driven by the resource sector as oil prices and drilling activity began to recover. With conventional oil and gas and manufacturing activity increasing this year, the goods sector is expected to drive the jobs recovery. Reconstruction efforts in Fort McMurray and ongoing government infrastructure spending are also expected to contribute. However, lower oil sands and private sector construction spending will limit the gains. Employment is expected to advance a modest 0.9% in 2017 and grow by 1.4% in 2018 (Chart 14), when the level of employment will surpass its previous peak.

Even as employment declined in 2016, people continued to join the labour force in Alberta. This caused the unemployment rate to rise to 8.1%. Although employment is expected to increase in 2017, the number of new entrants in the labour force will rise at almost the same pace. This will keep the unemployment rate elevated at 8.0% in 2017 (Chart 14). Beyond 2018, growth in employment is forecast to surpass labour force growth. As the participation rate declines towards a 35-year low due to population aging, the unemployment rate will fall steadily to 6.3% by 2020.

Chart 14: Unemployment rate to ease

Alberta Labour Market Indicators



Sources: Statistics Canada and Alberta Treasury Board and Finance, f-forecast

* The number of people working or looking for work

The unemployment rate will fall gradually as employment grows faster than the labour force.

EARNINGS REVERSE COURSE

A return to employment growth in the high-paying goods sector will have a positive impact on earnings in 2017. After falling for the second consecutive year, average weekly earnings (AWE) will grow 1.4% in 2017 before gradually accelerating to 3.0% by 2020. While this will keep Alberta's wages above the national average, and likely the highest among provinces, it will take until 2018 before AWE returns to its 2014 peak. Similarly, after declining 3.5% in 2016, primary household income will grow at a modest rate of 1.8% in 2017 before improving over the medium term. Primary household income is a key driver of personal income taxes.

POPULATION GROWTH CONTINUES

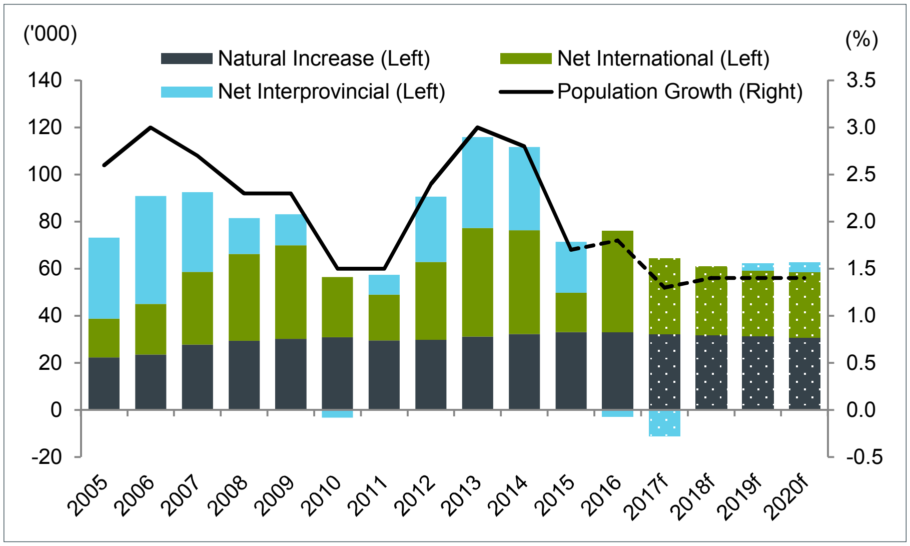
Population dynamics in Alberta are shifting due to the slowdown in Alberta's labour market. Although population growth remains above the national average, the pace of growth is slowing due to weaker migration. The number of Albertans leaving for opportunities in other provinces accelerated through 2016. This trend is expected to continue into 2017, with the net outflow of interprovincial migrants forecast to reach 11,000. However, natural increase and elevated international migration are expected to more than offset the outflow to other provinces and drive population growth of 1.3% in 2017 (Chart 15). Immigration will total 42,000, supported by a strong national immigration target of 300,000.

Population growth is forecast to pick up from 1.3% in 2017 to 1.4% by 2020. Immigration is forecast to remain strong at above 35,000 annually through 2020, while natural increase will continue to provide a solid base for expansion due to Alberta's young population. However, with slower economic growth over the forecast compared with the pre-recession period, net interprovincial migration is expected to make a relatively small contribution to growth.

Solid immigration has offset net outflows of migrants to other parts of Canada.

Chart 15: Natural increase and immigration drive population growth

Change in the Alberta Population by Component



Sources: Statistics Canada and Alberta Treasury Board and Finance, f-forecast

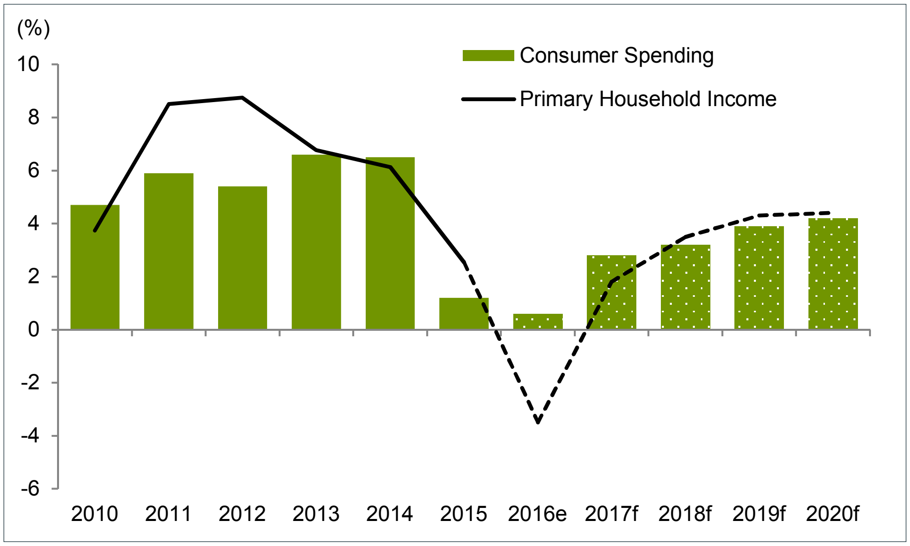
HOUSEHOLDS CONTINUE TO ADJUST

Slower population growth and limited employment gains are expected to limit growth in consumer spending this year. Household expenditures are forecast to grow a modest 2.8% (Chart 16), or 0.9% in real terms (adjusted for inflation). Growth in more discretionary spending on durables and semi-durables will be subdued as modest earnings growth keeps consumers cautious. In the housing market, the completion of projects started prior to the downturn led to record inventories of multi-unit builds in Calgary and Edmonton in 2016 (Chart 17), high rental vacancy rates and downward pressure on rents. This is expected to weigh on housing starts this year. Despite rebuilding efforts in Fort McMurray, starts are anticipated to be 24,500 in 2017, unchanged from 2016 levels.

Over the medium term, an expanding population, relatively low interest rates and Alberta's high per capita income are expected to support housing and consumer spending. However, given the slower pace of the recovery, consumer spending growth will average 3.5%, about 1.5 percentage points less than the average over the previous 20 years. Housing starts are forecast to increase to around 30,000 by 2020.

Chart 16: Muted growth in consumer spending

Change in Nominal Alberta Household Consumption and Income

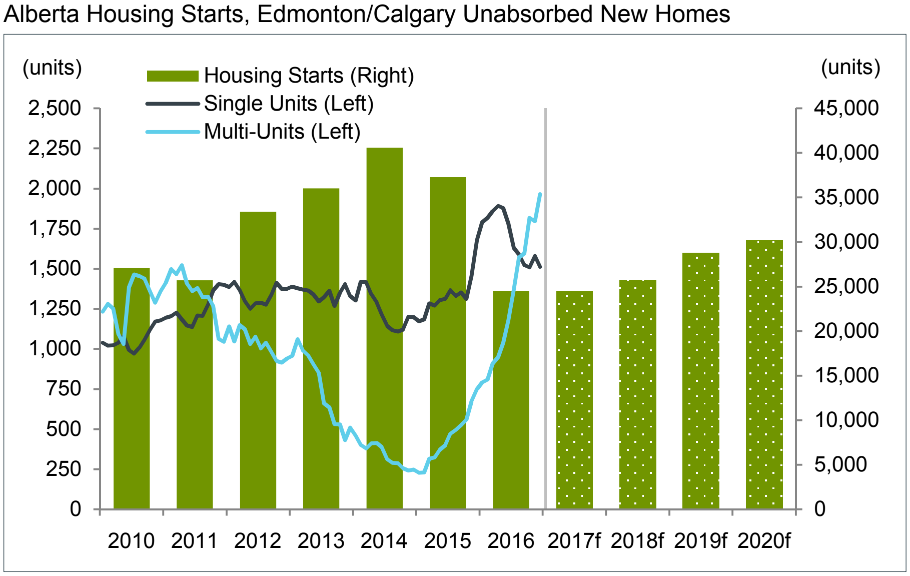


Sources: Statistics Canada and Alberta Treasury Board and Finance, e-estimate, f-forecast

Household spending is expected to remain subdued.

Chart 17: Multi-unit inventories at record levels

Alberta Housing Starts, Edmonton/Calgary Unabsorbed New Homes



Sources: Canadian Mortgage and Housing Corporation and Alberta Treasury Board and Finance, f-forecast

Rising multi-unit inventories will weigh on housing starts in 2017.

RISKS TO THE ECONOMIC OUTLOOK

Given the Alberta economy's high reliance on global trade and commodities, the outlook is subject to a number of risks:

- A reversal of OPEC's policy to cut production, increased non-OPEC production (e.g. from US shale producers) and/or lower demand growth could put downward pressure on oil prices and weaken Alberta's economic outlook. Conversely, extension of OPEC's production cuts beyond the first half of 2017, a muted increase in non-OPEC production and/or acceleration of demand growth could put upward pressure on prices and strengthen the outlook.
- A move towards more protectionist trade policies by the US could trigger tariffs on Canadian goods and services, impacting Alberta's terms of trade and negatively affecting the outlook.
- Slower population growth due to higher-than-expected out-migration would weigh on consumer spending and housing in the province.
- Canadian and Alberta households remain exposed to rising interest rates. If rates rise more rapidly than anticipated, rising debt-servicing costs could have a negative impact on consumption and overall growth.
- Should pipeline expansion projects be delayed or cancelled, transportation costs for the oil industry would remain elevated and the light-heavy differential could widen, impacting profits and investment sentiment in the industry

ECONOMIC OUTLOOK
ANNEX

BENCHMARKING TABLES

Oil Price Benchmark

West Texas Intermediate (US$/bbl)

Organization	2017	2018	2019	2020
National Forecasting Agencies				
Conference Board of Canada (Feb/17)	54.00	57.50	64.00	68.00
IHS Global Insight (Jan/17)	53.20	55.64	62.30	69.33
Centre for Spatial Economics (Feb/17)	50.52	60.40	68.91	75.18
Banks and Investment Dealers				
CIBC World Markets (Jan/17)	53.00	58.00	n/a	n/a
Credit Suisse (Jan/17)	55.00	62.50	62.50	62.50
Goldman Sachs (Jan/17)	55.63	55.00	55.00	50.00
Laurentian Bank (Dec/16)	66.25	n/a	n/a	n/a
RBC Capital Markets (Dec/16)	56.00	63.00	75.00	75.00
Scotiabank (Jan/17)	58.00	61.00	n/a	n/a
Toronto Dominion Bank (Dec/16)	53.50	56.50	n/a	n/a
Industry Analysts				
U.S. Energy Information Administration (Feb/17)	53.46	56.18	n/a	n/a
GLJ Petroleum Consultants (Jan/17)	55.00	59.00	64.00	67.00
Sproule Associates Limited (Dec/16)	55.00	65.00	70.00	71.40
Confidential Forecasts Provided to Alberta Energy[a]				
Average	56.00	58.00	66.00	71.00
High	66.25	65.56	79.85	89.59
Low	50.52	53.13	55.00	50.00
Average of All Private Forecasts	55.00	59.00	65.00	69.00
Government of Alberta (calendar year)[b]	54.00	58.00	66.00	71.00

[a] Alberta Energy also surveys, on a confidential basis, private sector forecasts from PIRA, KBC, BMO Capital Markets, IHS CERA, and Wood Mackenzie; the futures price of oil is also included in the basket. The annual figures presented here are the average forecast prices from these sources. High/Low forecasts may represent one of the confidential forecasts. The private sector average, consultant average and Government of Alberta forecasts have been rounded to the nearest dollar.

[b] The Government of Alberta forecast is based on the average of the confidential forecasts provided to Alberta Energy except in 2017 when the lowest of these forecasts is used.

Includes forecasts finalized on or before February 10, 2017.

Both the Government of Alberta and the private sector underestimated the WTI oil price for 2016, by 12.3% and 5.4% respectively.

How Oil Price Forecasters Fared in *Budget 2016*

West Texas Intermediate (US$/bbl)

Organization (#)	How did they do in Budget 2016?
National Forecasting Agencies (3)	40.24
Banks and Investment Dealers (7)	42.75
Industry Analysts (3)	42.20
Confidential Forecasts (6)	38.00
Average	41.00
Government of Alberta (calendar year)	38.00
2016 Actual	43.32

Sources: Alberta Energy and Alberta Treasury Board and Finance

Natural Gas Price Benchmark

Henry Hub (US$/MMBTU)[a]

Organization	2017	2018	2019	2020
National Forecasting Agencies				
Conference Board of Canada (Feb/17)	3.16	3.30	3.40	3.60
IHS Global Insight (Jan/17)	3.35	2.95	2.93	3.18
Centre for Spatial Economics (Feb/17)	3.07	3.55	4.21	4.88
Banks and Investment Dealers				
CIBC World Markets (Jan/17)	2.95	2.80	n/a	n/a
Credit Suisse (Jan/17)	3.25	3.50	3.50	3.50
Goldman Sachs (Jan/17)	3.20	3.00	3.00	3.00
RBC Capital Markets (Dec/16)	3.30	3.40	3.50	3.50
Scotiabank (Jan/17)	3.25	3.15	n/a	n/a
Toronto Dominion Bank (Dec/16)	3.20	3.30	n/a	n/a
Industry Analysts				
U.S. Energy Information Administration (Feb/17)	3.43	3.70	n/a	n/a
GLJ Petroleum Consultants (Jan/17)	3.60	3.20	3.40	3.60
Sproule Associates Limited (Dec/16)	3.50	3.50	3.50	4.00
Confidential Forecasts Provided to Alberta Energy[b]				
Average	3.30	3.40	3.50	3.70
High	3.63	3.83	4.34	4.90
Low	2.95	2.53	2.45	2.66
Average of All Private Forecasts	3.30	3.30	3.40	3.60
Government of Alberta (calendar year)	3.20	3.20	3.40	3.50

[a] The natural gas price is the US price of gas at Henry Hub Louisiana, as this is the benchmark for natural gas prices in the rest of North America. The Alberta Government forecast in the table above is the Alberta Reference Price (used in natural gas royalty calculations) adjusted for the exchange rate and transportation costs to be equivalent to the price of Alberta natural gas at Henry Hub Louisiana.

[b] Alberta Energy also surveys, on a confidential basis, private sector forecasts from PIRA, Petral, IHS CERA, NYMEX and Wood McKenzie. The annual figures presented here are the average forecast prices from these sources. High/ Low forecasts may represent one of the confidential forecasts.The private sector average, consultant average and Government of Alberta forecasts have been rounded to the nearest ten cents.

Includes forecasts finalized on or before February 10, 2017.

How Natural Gas Price Forecasters Fared in *Budget 2016*

Henry Hub (US$/MMBTU)

Organization (#)	How did they do in Budget 2016?
National Forecasting Agencies (3)	2.60
Banks and Investment Dealers (7)	2.67
Industry Analysts (3)	2.50
Confidential Forecasts (5)	2.50
Average	2.60
Government of Alberta (calendar year)	2.60
2016 Actual	2.55

Sources: Alberta Energy and Alberta Treasury Board and Finance

Both the Government of Alberta and the private sector slightly overestimated natural gas prices in 2016, by 2.0%.

Light-Heavy Oil Price Differential Benchmark

WTI-WCS Price Differential (US$/bbl)

Organization	2017	2018	2019	2020
National Forecasting Agencies				
Conference Board of Canada (Feb/17)	15.01	14.80	14.33	14.33
Centre for Spatial Economics (Feb/17)	17.00	18.00	19.00	20.00
Banks and Industry Analysts				
Credit Suisse (Jan/17)	14.00	15.00	15.00	15.00
RBC Capital Markets (Dec/16)	14.78	16.84	16.07	16.07
GLJ Petroleum Consultants (Jan/17)	15.01	14.99	14.98	15.03
Sproule Associates Limited (Dec/16)	13.57	14.29	14.81	14.51
Confidential Forecasts Provided to Alberta Energy[a]				
Average	11.70	14.40	13.30	14.40
High	17.00	18.00	19.00	20.00
Low	6.77	11.42	5.45	11.00
Average of All Private Forecasts	13.40	15.10	14.60	15.20
Government of Alberta (calendar year)	15.30	17.80	18.30	17.60

[a] Alberta Energy also surveys, on a confidential basis, private sector forecasts from IHS CERA, PIRA, Wood MacKenzie, KBC and BMO Capital Markets. The annual figures presented here are the average forecast prices from these sources. High/ Low forecasts may represent one of the confidential forecasts. The private sector average, consultant average and Government of Alberta forecasts have been rounded to the nearest ten cents.

Includes forecasts finalized on or before February 10, 2017.

Canadian Long-Term Interest Rate Benchmark

10-Year Government of Canada Bonds (%)

Organization	2017	2018	2019	2020
National Forecasting Agencies				
Conference Board of Canada (Feb/17)	1.65	2.14	2.61	3.09
IHS Global Insight (Jan/17)	2.31	2.77	3.46	3.68
Centre for Spatial Economics (Feb/17)	1.30	1.80	2.60	3.40
Banks				
BMO Capital Markets (Feb/17)	1.75	2.00	n/a	n/a
CIBC World Markets (Jan/17)	1.69	1.83	n/a	n/a
Laurentian Bank (Dec/16)	1.76	n/a	n/a	n/a
National Bank (Feb/17)	2.04	2.54	n/a	n/a
RBC Royal Bank (Feb/17)	2.45	3.10	n/a	n/a
Scotiabank (Jan/17)	1.83	2.15	n/a	n/a
Toronto Dominion Bank (Dec/16)	1.79	2.03	n/a	n/a
High	2.45	2.77	3.46	3.68
Low	1.30	1.80	2.60	3.09
Average of All Private Forecasts	1.86	2.11	2.89	3.39
Government of Alberta (calendar year)	2.00	2.30	2.60	2.80

Includes forecasts finalized on or before February 10, 2017.

United States / Canada Exchange Rate Benchmark

(US¢/Cdn$)

Organization	2017	2018	2019	2020
National Forecasting Agencies				
Conference Board of Canada (Feb/17)	74.7	75.7	77.1	77.8
IHS Global Insight (Jan/17)	75.6	79.6	82.1	85.6
Centre for Spatial Economics (Feb/17)	76.9	78.1	80.0	80.7
Banks				
BMO Capital Markets (Feb/17)	73.7	75.0	n/a	n/a
CIBC World Markets (Jan/17)	73.5	72.0	n/a	n/a
Credit Suisse (Jan/17)	75.0	78.0	78.0	78.0
Laurentian Bank (Dec/16)	78.5	n/a	n/a	n/a
National Bank (Feb/17)	72.8	73.0	n/a	n/a
RBC Royal Bank (Jan/17)	72.5	75.2	n/a	n/a
Scotiabank (Jan/17)	72.3	75.5	n/a	n/a
Toronto Dominion Bank (Dec/16)	74.4	76.0	n/a	n/a
Other				
Bloomberg Forward Curve (Feb/17)	76.3	76.9	77.5	78.1
High	78.5	79.6	82.1	85.6
Low	72.3	72.0	77.1	77.8
Average of All Private Forecasts	74.7	75.9	78.9	80.0
Government of Alberta (calendar year)	75.5	77.1	77.9	78.0

Includes forecasts finalized on or before February 10, 2017.

Alberta Real Gross Domestic Product Benchmark

(% change)

Organization	2016	2017	2018	2019	2020
National Forecasting Agencies					
Conference Board of Canada (Feb/17)	-2.7	2.8	1.9	2.1	2.3
IHS Global Insight (Jan/17)	-2.7	2.1	2.6	2.3	2.0
Centre for Spatial Economics (Feb/17)	-2.2	2.4	2.5	2.4	3.0
Banks					
BMO Capital Markets (Feb/17)	-2.7	2.0	2.2	n/a	n/a
CIBC World Markets (Feb/17)	-2.7	2.4	1.7	n/a	n/a
Laurentian Bank (Feb/17)	-2.7	2.3	2.9	n/a	n/a
National Bank (Feb/17)	-2.3	2.0	1.3	n/a	n/a
RBC Royal Bank (Dec/16)	-3.0	2.2	3.3	n/a	n/a
Scotiabank (Jan/17)	-2.7	2.1	2.4	n/a	n/a
Toronto Dominion Bank (Dec/16)	-2.8	2.1	2.3	n/a	n/a
High	-2.2	2.8	3.3	2.4	3.0
Low	-3.0	2.0	1.3	2.1	2.0
Average of All Private Forecasts	-2.6	2.2	2.3	2.3	2.4
Government of Alberta (calendar year)	-2.8	2.6	2.2	2.4	2.5

Includes forecasts finalized on or before February 10, 2017.

Alberta Nominal Gross Domestic Product Benchmark

(% change)

Organization	2016	2017	2018	2019	2020
National Forecasting Agencies					
Conference Board of Canada (Feb/17)	-5.3	4.9	4.4	n/a	n/a
IHS Global Insight (Jan/17)	-2.9	4.8	4.0	4.2	3.9
Centre for Spatial Economics (Feb/17)	-5.0	8.6	3.4	5.9	7.1
Banks					
BMO Capital Markets (Feb/17)	n/a	n/a	n/a	n/a	n/a
CIBC World Markets (Feb/17)	-5.0	7.9	5.2	n/a	n/a
Laurentian Bank (Feb/17)	-5.2	6.9	5.4	n/a	n/a
National Bank (Feb/17)	-3.9	6.0	3.4	n/a	n/a
RBC Royal Bank (Dec/16)	-3.9	8.8	8.4	n/a	n/a
Scotiabank (Jan/17)	-4.6	6.1	5.4	n/a	n/a
Toronto Dominion Bank (Dec/16)	-5.1	4.1	4.0	n/a	n/a
High	-2.9	8.8	8.4	5.9	7.1
Low	-5.3	4.1	3.4	4.2	3.9
Average of All Private Forecasts	-4.5	6.5	4.8	5.1	5.5
Government of Alberta (calendar year)	-5.3	5.3	5.4	6.2	5.8

Includes forecasts finalized on or before February 10, 2017.

Alberta Primary Household Income Benchmark

(% change)

National Forecasting Agencies	2016	2017	2018	2019	2020
Conference Board of Canada (Feb/17)	-2.5	2.4	3.3	3.7	4.2
IHS Global Insight (Jan/17)	-2.3	4.1	4.4	4.1	3.7
Centre for Spatial Economics (Feb/17)	-5.6	2.2	2.9	4.2	5.1
High	-2.3	4.1	4.4	4.2	5.1
Low	-5.6	2.2	2.9	3.7	3.7
Average of All Private Forecasts	-3.5	2.9	3.5	4.0	4.3
Government of Alberta (calendar year)	-3.5	1.8	3.5	4.3	4.4

Includes forecasts finalized on or before February 10, 2017.

Alberta Net Corporate Operating Surplus Benchmark

(% change)

National Forecasting Agencies	2016	2017	2018	2019	2020
Conference Board of Canada (Feb/17)	-55.7	70.3	16.2	23.5	19.9
IHS Global Insight (Jan/17)	-53.2	15.8	18.9	6.4	6.3
Centre for Spatial Economics (Feb/17)	-4.0	76.3	22.8	17.2	20.7
High	-4.0	76.3	22.8	23.5	20.7
Low	-55.7	15.8	16.2	6.4	6.3
Average of All Private Forecasts	-37.6	54.1	19.3	15.7	15.6
Government of Alberta (calendar year)	-35.1	66.4	35.9	29.9	21.9

Includes forecasts finalized on or before February 10, 2017.

Alberta Employment Benchmark

(% change)

Organization	2017	2018	2019	2020
National Forecasting Agencies				
Conference Board of Canada (Feb/17)	0.6	1.0	1.3	1.5
IHS Global Insight (Jan/17)	1.1	1.7	1.6	1.2
Centre for Spatial Economics (Feb/17)	0.4	1.5	2.1	2.4
Banks				
BMO Capital Markets (Feb/17)	0.4	0.7	n/a	n/a
CIBC World Markets (Feb/17)	0.7	0.7	n/a	n/a
Laurentian Bank (Feb/17)	0.6	1.7	n/a	n/a
National Bank (Feb/17)	0.2	0.7	n/a	n/a
RBC Royal Bank (Dec/16)	0.2	1.1	n/a	n/a
Scotiabank (Jan/17)	0.5	0.8	n/a	n/a
Toronto Dominion Bank (Dec/16)	0.3	1.0	n/a	n/a
High	1.1	1.7	2.1	2.4
Low	0.2	0.7	1.3	1.2
Average of All Private Forecasts	0.5	1.1	1.7	1.7
Government of Alberta (calendar year)	0.9	1.4	1.6	1.8

Includes forecasts finalized on or before February 10, 2017.

Alberta Unemployment Rate Benchmark

(%)

Organization	2017	2018	2019	2020
National Forecasting Agencies				
Conference Board of Canada (Feb/17)	8.4	7.7	6.8	6.1
IHS Global Insight (Jan/17)	7.7	6.9	6.0	5.6
Centre for Spatial Economics (Feb/17)	8.0	7.4	6.8	6.2
Banks				
BMO Capital Markets (Feb/17)	8.3	7.8	n/a	n/a
CIBC World Markets (Feb/17)	8.2	7.6	n/a	n/a
Laurentian Bank (Feb/17)	8.1	7.4	n/a	n/a
National Bank (Feb/17)	9.0	8.5	n/a	n/a
RBC Royal Bank (Dec/16)	8.2	7.3	n/a	n/a
Scotiabank (Jan/17)	7.9	7.6	n/a	n/a
Toronto Dominion Bank (Dec/16)	8.4	7.9	n/a	n/a
High	9.0	8.5	6.8	6.2
Low	7.7	6.9	6.0	5.6
Average of All Private Forecasts	8.2	7.6	6.5	6.0
Government of Alberta (calendar year)	8.0	7.6	7.1	6.3

Includes forecasts finalized on or before February 10, 2017.

Alberta Housing Starts Benchmark

(thousands)

Organization	2017	2018	2019	2020
National Forecasting Agencies				
Conference Board of Canada (Feb/17)	24.7	26.8	27.3	28.7
IHS Global Insight (Jan/17)	27.9	31.2	32.4	32.9
Centre for Spatial Economics (Feb/17)	27.0	31.9	33.8	36.4
Banks				
BMO Capital Markets (Feb/17)	25.0	27.0	n/a	n/a
CIBC World Markets (Feb/17)	23.0	24.0	n/a	n/a
Laurentian Bank (Feb/17)	23.0	25.0	n/a	n/a
National Bank (Feb/17)	24.2	23.7	n/a	n/a
RBC Royal Bank (Dec/16)	24.0	26.3	n/a	n/a
Scotiabank (Jan/17)	25.0	26.0	n/a	n/a
Toronto Dominion Bank (Dec/16)	23.3	23.0	n/a	n/a
Other				
Canada Mortgage and Housing Corporation (Sep/16)[a]	22.8	24.4	n/a	n/a
High	27.9	31.9	33.8	36.4
Low	22.8	23.0	27.3	28.7
Average of All Private Forecasts	24.5	26.3	31.2	32.7
Government of Alberta (calendar year)	24.5	25.7	28.8	30.2

[a] The annual numbers are averages of CMHC's high and low scenarios.

Includes forecasts finalized on or before February 10, 2017.