CALGARY & REGION **FALL 2015**

Economic Outlook

2015-2020

calgary economic development

be part of the energy

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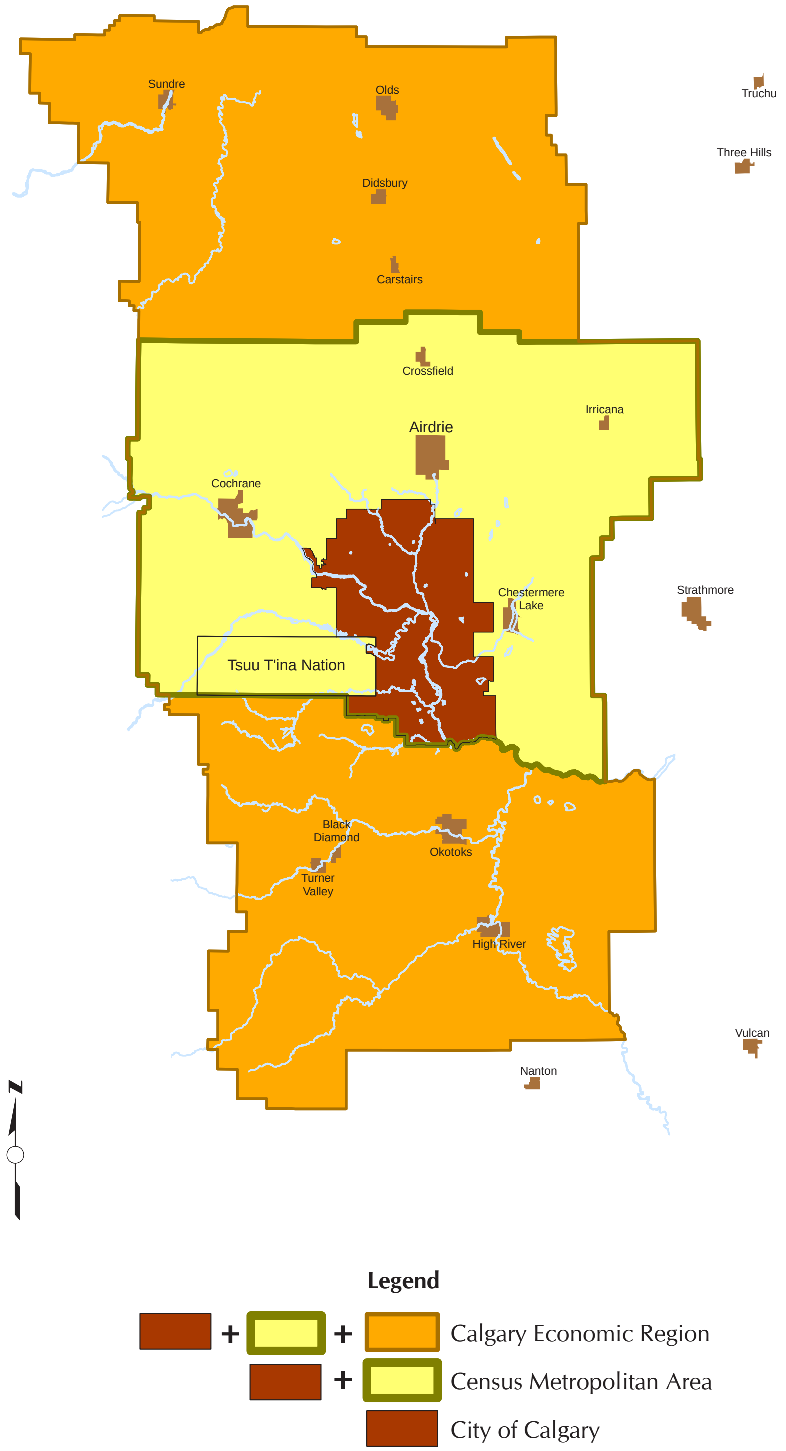
Completed: September 2015

Calgary Economic Region Map



INTRODUCTION

Preamble

The City of Calgary monitors and tracks economic indicators to develop insights on how external events are impacting the local economy throughout the year. The results from this process are published twice annually as the Economic Outlook: once in the spring and then again in the fall. The Economic Outlook presents forecasts for a select number of economic variables.

This document provides an analysis of those factors that are considered most likely to have a significant effect on the local economy over the forecast period.

Purpose

- This publication is created to serve as a reference document to support The City of Calgary in financial and physical planning of the city. It also provides a common basis from which decisions could be made. By monitoring and reporting on the economic region and its environment, decision makers are kept abreast of the opportunities and threats that the region faces.
- This report fills an important information gap as no other publication currently provides a comprehensive analysis of the local economy. Several research institutions restrict their analyses to the Alberta economy and few forecasts and analyses are available for the urban areas within the province.

This report attempts to answer the following questions:

- What is the overall forecast for the rate of growth in the local economy?
- What are the drivers of the local economy?
- How many jobs are expected to be created?
- What is the forecast for population growth in the city and region?
- What is the expected inflation rate?
- What are the implications of the forecast and how will it impact municipal finance?

ASSUMPTIONS

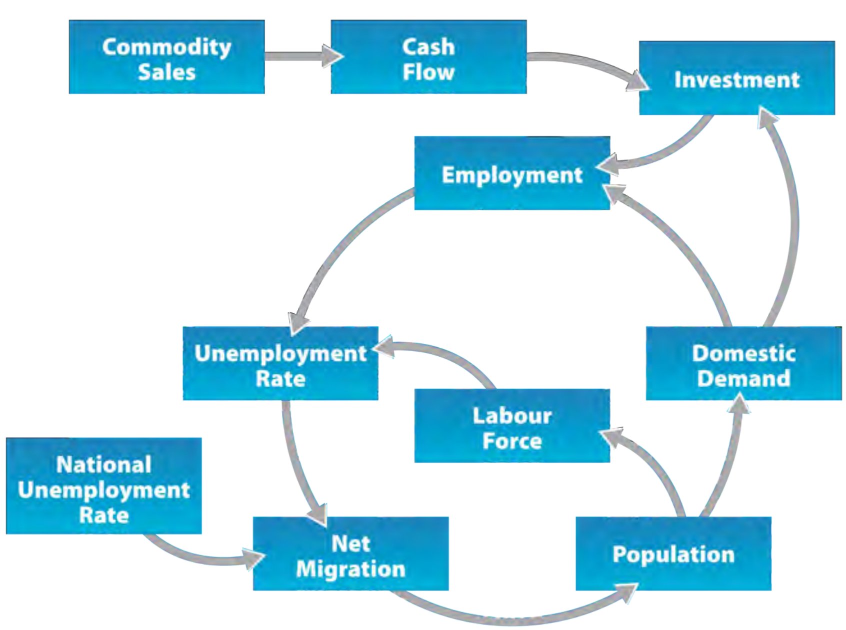
The study area for the economic forecast is the Calgary Economic Region (CER). The CER is a small open economy and is therefore affected by changes outside its borders. For example, political instability in the world's oil producing regions can produce a sharp increase in oil prices, which affects Alberta's energy industry's cash flow and investment in the local economy.

The economic forecast is therefore built on assumptions regarding changes in the world outside of the CER over the forecast period. The key assumptions are as follows:

- World economic expansion throughout the forecast period, and
- Economic growth and job creation in the rest of Canada over the forecast period.

If one or both of these assumptions are not fulfilled then the level of economic activity that is charted in this report would not be realized.

Regional Growth Dynamics



EXECUTIVE SUMMARY

Forecast:

City of Calgary

- Calgary's population will grow to 1.312 million by 2018 and 1.367 million in 2020, up from 1.231 million in 2015. Total population would increase by 135,600 over the 2015-2020 period or by 27,100 annually. Net migration would be the main driver of population growth.
- The overall growth statistic (of 135,600) masks the shifts in the population distribution among different age groups over the 2015-2020 period. The largest population increases would occur in the 35-39 age group (24,000) and the 45-49 age group (19,800). These cohorts correspond with those groups that have high migration rates. While small changes would be seen in the 25-29 age group (200) and the 20-24 age group (-4,200).
- The city's population has increased steadily over time, even in cases when oil prices were declining. Over the period 1971-2014, there were only two periods of annual population decline: 1983 (-2,441 persons) and 1984 (-878 persons).
- Since 1985, population growth has been on an upward trend with some minor fluctuations. The pace of growth accelerated from 2010 to 2014, as Alberta and Calgary outpaced the rest of Canada in employment growth, and created an attractive destination for out of province job seekers.
- The value of building permits will moderate over the forecast period in response to slower growth in demand for residential and non-residential space and higher vacancy rates in various sectors of the real estate market.

Calgary Economic Region (CER)

- Sharply lower oil prices will weigh on the CER's economic growth in 2015. All sectors of the economy will be adversely affected as the energy and related sectors reduce capital expenditures and staffing levels. The local economy will contract by 0.2 per cent in 2015, down from 5.1 per cent growth in 2014. Subsequently, it will increase by 1.7 per cent in 2016 and 3.4 per cent in 2017.
- Total employment in the CER is expected to grow by 1.3 per cent in 2015, down from 3.2 per cent in 2014. Employment would grow by 0.3 percent in 2016, and 2.1 per cent in 2017 as economic activity returns to normal rates.
- The CER's unemployment rate rose to 5.1 per cent in 2014, up from 4.8 per cent in 2013. Slower job creation in Calgary would push the unemployment rate to 6.0 per cent in 2015 and 6.1 per cent in 2016.
- Lower oil prices would depress transportation and heating costs and these lower costs would be transmitted to other areas of the economy. Also, higher vacancy rates would depress shelter costs and reduce the overall inflation rate. However, a lower Canada/U.S. exchange rate should increase the prices for imported consumer goods and services and provide a partial offset to lower inflation rates. The consumer price index should increase by 1.3 per cent in 2015 and then climb to 1.5 per cent by 2016.
- Commodity prices on futures markets are down significantly. Price savings are not being fully passed on to consumers of finished products, instead those prices are being held steady as wholesalers and retailers try to increase their per unit margin in the face of falling sales.

Executive Summary

Assumptions:

Alberta

- The Alberta economy will enter a recession in 2015, as investment in the oil patch plunges in response to sharply lower oil prices.
- Real gross domestic product will rebound in 2016, but the recovery will not be terribly vigorous. As oil prices grow modestly through 2018, real GDP growth will be sluggish.
- Year-to-date prices averaged US$51.8/bbl from January to August. Our baseline assumption is for WTI to average US$50/barrel in 2015 and $US57/barrel in 2016, before the prices rise steadily to about US$70/barrel by 2020.
- Pipeline exports of natural gas into the U.S. are expected to decrease over the next few years because of lower cost of U.S. domestic production and transportation. As a result, low natural gas prices are expected to persist for the next two years. Our baseline assumptions call for AECO-C to average $2.75/GJ in 2015 and $3.15/GJ in 2016.
- Housing starts will not tumble quite as much as they did in 2009.
- Housing starts have actually lagged the rate of household formation since the 2009 recession, leaving most markets in a comparatively favourable position.
- Total employment will grow by 0.8 per cent in 2015 with a slowdown in the goods-producing sector, especially in manufacturing, construction and energy industries.
- Net migration to Alberta will slow down considerably in 2015. This is in response to a reduction in the number of jobs available in Alberta and increased economic incentives to remain in the rest of Canada.

Canada

- A contraction in the level of private investment, especially in the energy and related industries, will constrain short-term growth in Canada.
- There will be short-term downward pressure on the loonie, due to the interest rate differential, when the U.S. Federal Reserve hikes short-term interest rates later this year.
- The prime lending rate is expected to change course toward higher rates in 2016. It will increase aggressively in 2016 and 2017, before settling at 5.5 per cent by 2019.

United States

- The July 30th downward revision of annual real GDP growth for the 2011 to 2014 period reduced the size of the U.S. economy by US$71 billion.
- Real output growth will average 2.4 per cent in 2015 before increasing to 2.7 per cent by 2016. Continued job growth will push the unemployment rate downwards to a 2016 average of 4.9 per cent.

World

- Between July 2014 and September 2015, the WTI oil price saw its value cut in half from US$103 per barrel to under US$50/barrel.
- Low oil prices have different impacts on different economies.
  - For oil producing nations with revenues that are greatly reliant on oil exports, this is devastating. The significantly lower oil price environment has caused oil producing countries and corresponding economic blocs to reduce their economic growth forecasts for 2015 and 2016.
  - For oil consuming nations, the low oil prices are welcomed. Consumers and businesses would experience higher disposable incomes and lower operating costs, respectively.

Forecast Implications (2015-2018)

Variable	Past Cycle 2012-2014 Average	Current Cycle 2015-2018 Average	Forecast Implications
Assumptions			
World			
Real Gross Domestic Product (annual % change)	3.4	3.7	Positive economic growth would increase the economic base of the world economy over the 2015-2018 period. Larger economic and demographic bases should increase the demand for commodities and place upward pressure on commodity prices. This will have a positive impact on the Canadian economy as Canada produces a number of commodities.
The United States			
Real Gross Domestic Product Growth (chained 2009 dollars) (%)	2.0	2.6	Increased demand for Canadian (Alberta) exports such as forestry products would keep demand and prices high. The City of Calgary could expect to pay higher prices to purchase commodities over time.
Canada			
Real Gross Domestic Product Growth (chained 2007 dollars) (%)	2.1	2.0	Modest growth in demand for Canadian (Alberta) exports such as oil and natural gas would increase the energy industry's cash flow and drive investment spending over time. The end result is a larger economy.
Prime Business Loan Rate (%)	3.0	3.5	Higher borrowing costs for The City's suppliers, would increase The City's purchase costs.
Exchange Rate (US$/Cdn$)	0.96	0.81	Lower exchange rates would increase the purchase price of imported goods and services for The City.
Alberta			
Real Gross Domestic Product Growth (chained 2007 dollars) (%)	4.2	1.6	The Alberta economy would contract in 2015 and grow below its potential for the 2015-2018 period and this would relieve the pressure on prices.
Total Employment Growth (%)	2.7	1.2	The Alberta economy will grow below capacity for the rest of the planning period (2015-2018) and this would result in excess capacity and thus relieve the pressure on prices.
Unemployment Rate (%)	4.6	5.4	Employment growth would lag labour force growth.
Housing Starts ('000 Units)	36.7	32.1	Slower population growth would translate into a reduced rate of household formation over the 2015-18 period.
Inflation Rate (%)	1.7	1.8	Inflation rate should remain contained in the province.
Crude Oil Price - WTI (US$/bbl)	95.05	60.25	Lower crude oil price would reduce the price of petroleum based commodities such as diesel fuel and asphalt.
Western Canadian Select - WCS (US$/bbl)	75.79	52.38	The benchmark price for Alberta crude producers should move in the same trend of WTI, with a price gap determined by the transportation constraints.
Alberta Natural Gas Price - AECO/NIT ($/GJ)	3.03	3.29	The impact on The City of Calgary will be mixed. Higher prices would increase The City's operating costs while at the same time increasing revenues.
Industrial Product Price Index (%)	1.33	1.11	Price increases for many commodities and finished products will be substantially lower in the current budget cycle than the previous cycle. However, the cost of goods and services should be higher.
Raw Materials Price Index (%)	-0.53	-0.85	Lower prices for raw materials should ease the production and construction costs of Calgary manufacturers and builders.
Average Wage Rate Increase (%)	3.6	3.1	The wage inflation rate should be lower in the current cycle given lower employment and participation rates and higher unemployment rates in Alberta. However, wage inflation would exceed consumer price inflation. Wage inflation would apply upward pressure on municipal costs.

Executive Summary

Variable	Past Cycle 2012-2014 Average	Current Cycle 2015-2018 Average	Forecast Implications
Forecast - Calgary			
Economic Region			
Gross Domestic Product (%)	5.5	2.1	The City's revenue base in 2015-2018 would grow relatively slower than in 2012-2014.
Total Employment ('000 Persons)	831	883	Larger employment levels would result in an increased demand for non-residential spaces. This would also increase The City's property tax base.
Total Employment Growth (%)	3.4	1.4	Non-residential construction activity would slow, and this would have a dampening effect on building permit revenues.
Unemployment Rate (%)	4.9	5.6	A higher unemployment rate would increase the number of skilled persons seeking employment and this would relieve the cost pressure on The City.
Inflation Rate (%) (CMA)	1.9	1.9	The rate of consumer price inflation would remain unchanged.
Non-Residential Building Price Inflation (%) (CMA)	2.1	-1.9	Construction costs would be relatively lower in this budget cycle.
City			
Total Population ('000 Persons)	1,157	1,272	Demand for municipal services would be higher in the current budget cycle compared to the previous cycle. In addition, the residential property tax base would be larger.
Total Population Growth (%)	3.1	2.4	The pace of change would be slower compared to the previous cycle.
Net Migration ('000 Persons)	26.3	15.5	Positive net migration would be the major contributor to population growth. Most migrants would come from international sources.
Household Formation ('000 Units)	10.5	10.5	The annual growth in households would be unchanged.
Housing Starts ('000 units)	11.2	9.5	The City's revenues from residential building permits would be lower; assuming all things are equal.
Building Permits ($billion) (city)	5.6	4.8	City revenues from building permits would be lower. Revenue from non-residential activity will decrease relative to the past cycle.
Average Residential MLS Sale Price (% change)	5.2	2.7	Household wealth would grow at a slower pace.

CMA = Calgary Metropolitan Area
Numbers may not add up due to rounding

Forecast Risks

Lower oil prices would have differential impacts on various segments of the Canadian economy. Energy producing companies have experienced reductions in their cashflow and have responded by cutting capital expenditures and staffing levels. Canadian consumers and non-oil businesses, on the other hand, are benefiting from lower transportation and heating costs, which will contribute to higher disposable incomes and operating profits. But over time, the Canadian economy as a whole would be adversely affected as energy companies reduce their demand for plant and equipment from manufacturers in the rest of Canada. The precise impact of lower oil prices on the Canadian economy could be determined through statistical analysis.

Economic simulations show that the magnitude of the reduction in economic activity in Alberta and Calgary would be linked to the depth and length of the oil price reduction. The more prices are reduced and the longer they stay at depressed levels, the more economic activity would be reduced. Conversely, higher oil prices would result in increased economic activity in Alberta. This is the premise for considering the set of upside and downside risks that are related to this outlook.

Downside Risk Factors

Political uncertainty has increased in Europe, with the re-emergence of political instability in Greece. This has added to the downside risk generated by geopolitical tensions. The funding for terror cells, such as ISIS, which relies on oil revenues will diminish. This will weaken their ability to fund terrorist activities around the globe. Russia-Ukraine relations and Russia's relationship with the West continues to provide further geopolitical tensions and downside risks. The Syria refugee crisis has added to the growing uncertainty over the world economic outlook.

The pace of economic growth in China is expected to decelerate as government capital expenditures contract. Also, other Asian emerging and developing markets are expected to slow somewhat. In Africa, the pace of economic activity is expected to quicken. Though the degree of expansion for some, like Nigeria, the largest African economy and a member of OPEC, will be defined by oil price recovery.

Upside Risk Factors

The weakness in the Euro currency relative to the United States dollar should provide significant export opportunities for the eurozone nations. Additional eurozone monetary stimulus through the European Central Bank's quantitative easing program will also bolster eurozone growth prospects.

The inflation forecast for the advanced economies is considerably muted, while emerging markets and developing economies are expected to be stronger. The lower oil price environment has created downward inflation pressure for energy related products in both groups of countries.

The United States is Canada's major trading partner. A stronger United States dollar relative to the Canadian dollar provides a price directed impetus for Canada's manufacturing industry. The ability for the manufacturing industry to capitalize on this opportunity should help mitigate some of the adverse impact of lower capital investment in Canada's energy sector.

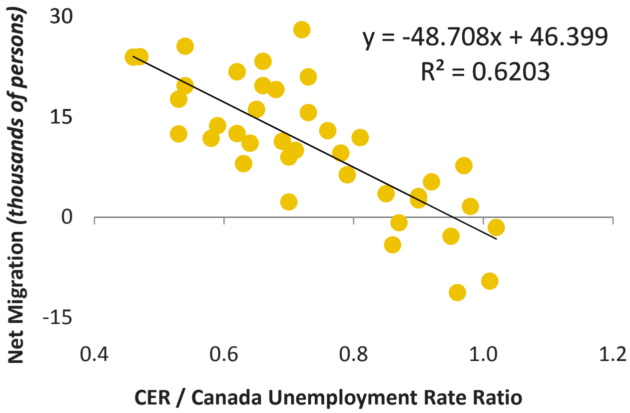
Forecast Risk Factors that could alter the Calgary Economic Region (CER) Outlook

Downside Risk Factors	Sector	Upside Risk Factors
• Rising interest rates • High consumer debt levels • Higher charges for public services • Negative net migration	**Consumer Sector**	• Increasing employment • Slower cost of living growth • Federal government tax relief
	+	
• Greater slump in oil industry cashflow due to extended period of low prices • Sagging consumer and business confidence • Low residential and non-residential construction • Rising interest rates will increase borrowing costs	**Business Sector**	• More rapid oil price increases (for oil industry) • Slower employment cost growth • A prolonged period of low interest rates will keep borrowing costs low
	+	
• Reduction in government spending	**Government Sector**	• Higher user fees and taxes • Higher levels of infrastructure investment
	+	
• Slower growth in U.S. and emerging economies due to withdrawal of monetary stimulus • Developed economies experience significantly weaker growth that stifles demand for Alberta exports • Crude oil supply glut worsens with faster production growth than demand growth • Uncertainty from the Syrian refugee crisis.	**World outside Alberta**	• Strong and more sustained growth in the U.S. and emerging economies • Prompt eurozone recovery and implementation of the EU-Canada trade agreement • Crude oil supply disruptions that result in higher than expected price increases

CITY OF CALGARY

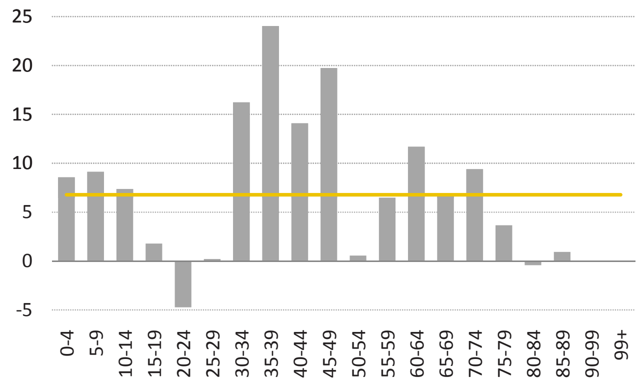
- The 2015 civic census placed Calgary's population at 1.231 million persons, up from 1.195 million in 2014. Net migration accounted for 69.7 per cent of the total population growth.
- The city's population is projected to increase to 1.312 million persons in 2018 and 1.367 million by 2020, up from 1.231 million in 2015. Population growth is therefore estimated at 135,600 persons between 2015 and 2020 or by 27,100 annually. Net migration would account for 57.5 per cent of the total increase. Net migration would fall from 24,909 persons in 2015 to 16,600 by 2020. Slower job growth leading to relatively higher unemployment rates in the local and provincial economies would reduce the attractiveness of Alberta and Calgary as destinations for potential job seekers.
- The overall growth statistic (of 135,600) masks the shifts in the population distribution among different age groups over the 2015-2020 period. The largest population increases would occur in the 35-39 age group (24,000) and the 45-49 age group (19,800). These cohorts correspond with those groups that have high migration rates. While small changes would be seen in the 25-29 age group (200) and the 20-24 age group (-4,200).
- These population shifts would have positive or negative effects on businesses and organizations supplying goods and services to various markets. For example, businesses and organizations that are heavily reliant on entry level workers (20-24) would encounter increasing difficulties in staffing vacant positions as the number of individuals in that cohort would decline over time. Also, post-secondary institutions may not be able to meet their enrolment targets because of the shrinking of the post secondary age cohort (20-24).
- Demographic figures for Calgary show that population has increased steadily over time, with obvious fluctuations in the rate of growth. The city's population grew even in cases where oil prices were declining. Over the period 1971-2014, there were only two periods of population decline: 1983 (-2,441 persons) and 1984 (-878 persons). The impact of the 2008-2009 world-wide recession was observed in the city's population data in 2010, when the population increased by just 6,060 persons. Despite the severity of the recession, population growth remained positive. Based on these observations, Calgary's population will grow over the 2015-2018 period.

Calgary Net Migration & Relative Unemployment Rate (1976 - 2014)



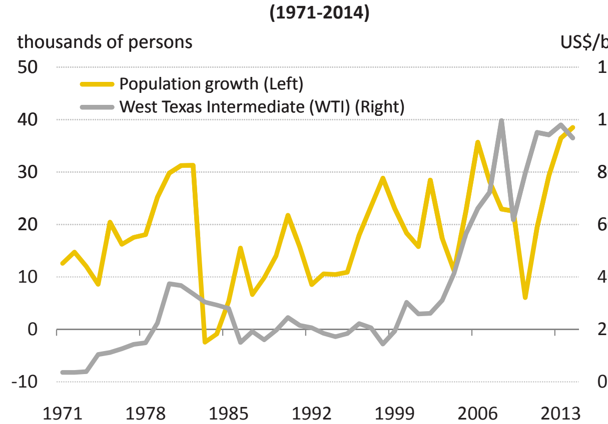
Source: City of Calgary Civic Census, Statistics Canada, Corporate Economics.

City of Calgary: Population Shift
(2015-2020, *thousands of persons*)



Source: City of Calgary Civic Census, Corporate Economics.

City of Calgary Population Growth and Crude Oil Prices
(1971-2014)



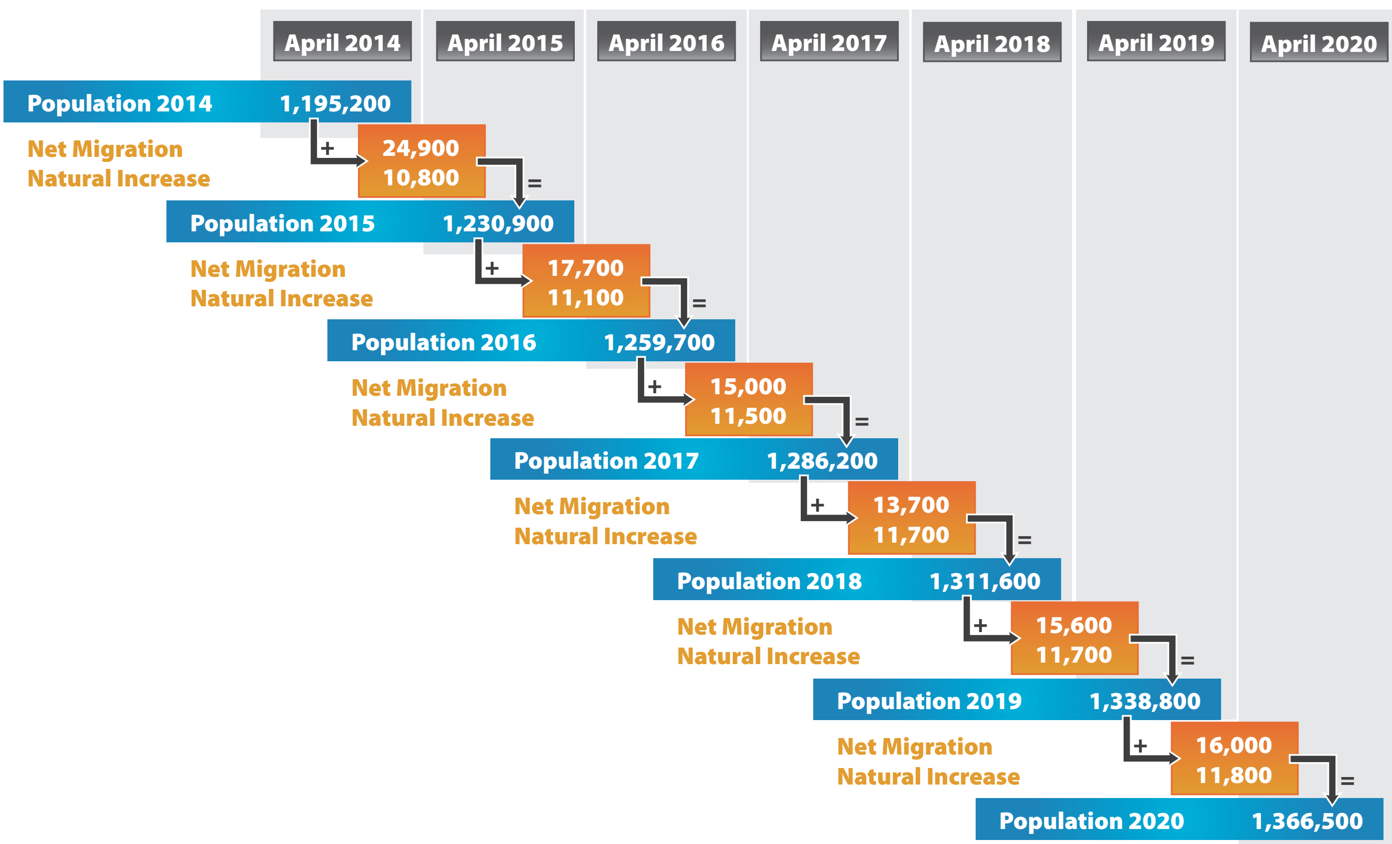
Source: City of Calgary Civic Census, GLJ Publications Ltd., Corporate Economics.

City of Calgary - Population 2014-2020

	2014	2015	2016	2017	2018	2019	2020
Total Population (as April)	1,195,200	1,230,900	1,259,700	1,286,200	1,311,600	1,338,800	1,366,500
Total Net Migration (April - March)	28,000	24,900	17,700	15,000	13,700	15,600	16,000
Total Births (April - March)	16,700	17,400	17,800	18,400	18,700	18,900	19,100
Total Deaths (April - March)	6,500	6,600	6,800	6,900	7,000	7,200	7,300
Total Natural Increase (April - March)	10,500	10,800	11,100	11,500	11,700	11,700	11,800
Total Households (as April)	453,600	462,500	475,000	485,000	494,500	504,700	515,100

Source: The City of Calgary Civic Census, Corporate Economics, August 2015.

Decomposition of Annual Population Growth (based on Civic Census)



Numbers may not add up due to rounding

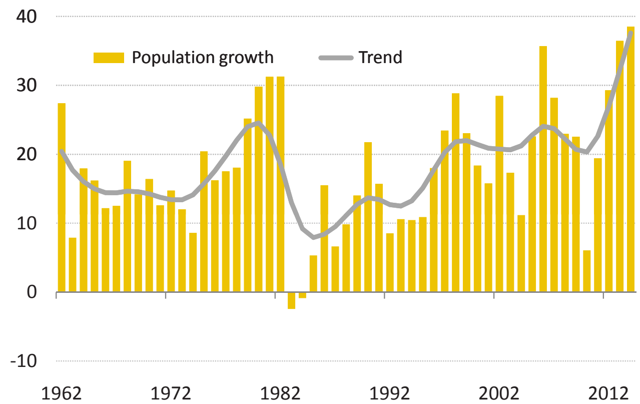
- The accompanying graph shows the year-over-year population change and the time trend for that change. Since 1985, population growth has been on an upward trend with some minor fluctuations. The pace of that trend quickened from 2010 to 2014 as Alberta and Calgary outpaced the rest of Canada in employment growth and created an attractive destination for out of province job seekers. Population growth for most of the period for which migration data is available (1973 to present) showed that population growth was led by net migration which in turn was dependent on relatively strong job creation in Alberta and Calgary. The above analysis shows that the current rate of growth (which is driven by net migration) is unsustainable and therefore likely to moderate in the short to medium term as the pace of growth quickens in Central Canada.
- The value of building permits would moderate over the forecast period in response to slower growth in the need for residential and non-residential space and higher vacancy rates in various sectors of the real estate market. Population growth and household formation from 2015-2018 should moderate from the 2012-2014 period as the attraction for migrants to the Calgary Economic Region and Calgary falls in response to reduced job opportunities.

Real Estate

Residential sector

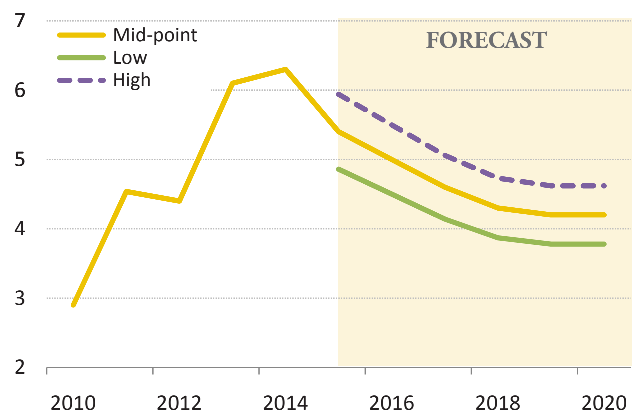
- We have updated our MLS price model this year. Integrating our model of housing demand by dwelling type, we have combined several key variables into a model of housing demand in Calgary. The new model is driven by: the level of unemployment, wages, demographics, interest rates, mortgage rules and labor force participation.
- The new model accurately predicted the spectacular run-up in prices that occurred in Calgary in the early 2000's. However, our model indicates that the market over-corrected by moving a little too high and a little too low when the market correction of 2007-2008 occurred.
- The model shows a slight correction coming this year and next, with pent-up demand causing a price spike in 2017. It is likely that the market will again over-correct and go a bit lower than our model predicts for 2016, followed by going a bit higher than our model shows for 2017. Thereafter, we anticipate modest price increases to 2020 as a demographic shift in Calgary gathers steam with the bulk of the Baby Boom generation (born 1945-1965) looking to downsize and relocate. Beyond 2020 we anticipate little, if any, house price inflation.

City of Calgary Population Growth
(1962-2014, *thousands of persons*)



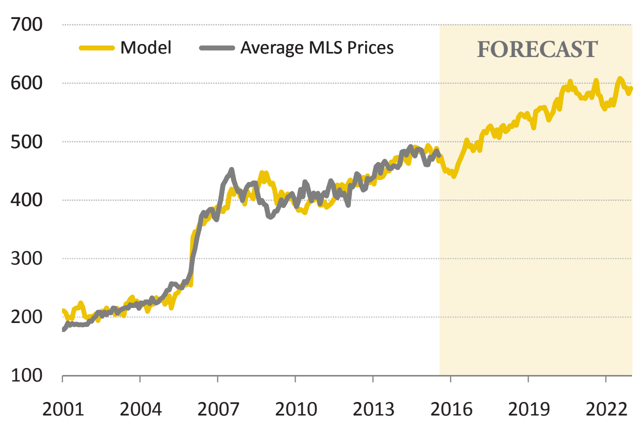
Source: City of Calgary, Corporate Economics.

City of Calgary: Total building permit value
(*billions of dollars*)



Source: City of Calgary, Corporate Economics.

Calgary: Average MLS prices vs. model
(2001-2022, *thousands of dollars*)



Source: Calgary Real Estate Board, Corporate Economics.

Textbox 1 Commercial real estate – where do we go from here?

The *Economic Strategy for Calgary* is the city's guiding document for purposeful diversification, building a strong community and shared prosperity. In measuring progress, the Economic Strategy looks at macro and micro indicators. One of the measurements used as an indicator of the health of Calgary's businesses is the commercial real estate vacancy rate. Office (both downtown and suburban) and industrial vacancy, absorption, and development are all indicators of business confidence. While we are experiencing significant change within some areas of the market, there are opportunities available for businesses to take advantage of.

One of the measurements for the overall health of the Calgary economy is commercial real estate. Office (both downtown and suburban) and industrial vacancy, absorption, and development are all indicators of business confidence. While we are experiencing significant change within some areas of the market, there are opportunities available for businesses to take advantage of.

The ideal vacancy rate range is called a balanced market. This scenario is in between a landlord's market – an under-supply of space where we typically see rapidly rising rental rates – and a renter's market – an over-supply of space where we typically see falling rental rates to induce tenants to renew or relocate. It provides enough available space in the marketplace to allow for the relocation and growth of existing companies and the entrance of new companies.

A balanced vacancy rate in the downtown office market is in the range of 5 to 8 per cent. The suburban office market would be slightly higher at 7 to 10 per cent, due to the smaller nature of the buildings limiting options for larger tenants. The industrial market on the other hand would be slightly lower at 3 to 6 per cent, due to the relatively quick development period required and the high ratio of build-to-suit requirements.

During the financial crisis of 2008-2010 we saw companies inundate the sublease market with space. This pushed vacancy rates up to peaks of 5.2 per cent in the industrial market in Q4 2009, 15.7 per cent in the downtown office market in Q2 2010, and 21.5 per cent for the suburban office market in Q2 2009. However, this was short lived with vacancy returning to balanced territory within 12 to 18 months. While this slowdown is anticipated to last longer than the previous downturn, it is uncertain how much deeper the economic losses will go.

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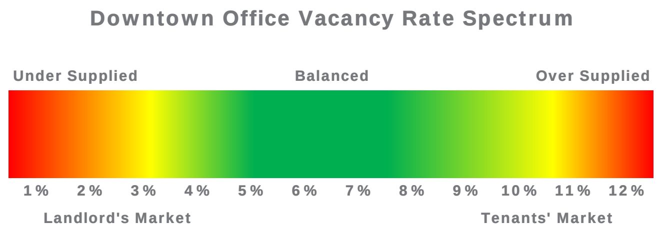
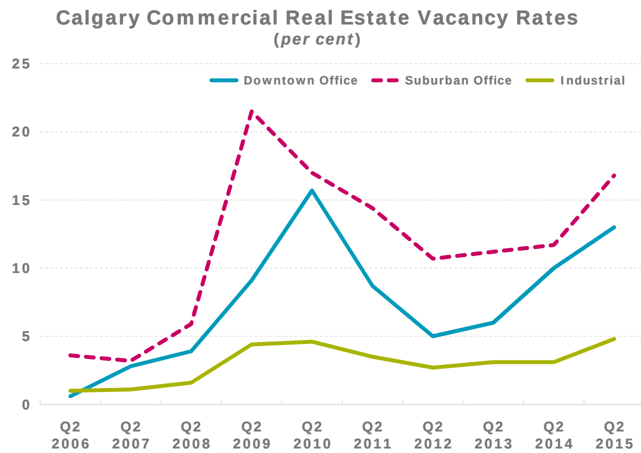


Source: Calgary Economic Development.



Source: CBRE Research, Calgary Economic Development.

Calgary Downtown Office Projects Under Construction

Building Name	Office Size (SF)	Expected Completion	Developer
Calgary City Centre	820,000	Q1 2016	Cadillac Fairview Development Corp.
Eau Claire Tower	588,300	Q4 2016	Oxford Properties Group
707- 5th Street SW	564,000	Q2 2017	Manulife Real Estate
Brookfield Place- East Tower	1,400,000	Q4 2017	Brookfield Office Properties
Telus Sky	430,000	Q4 2017	Telus, Westbank & Allied Properties REIT

Source: CBRE Research, Calgary Economic Development.

Textbox 1 continued.....

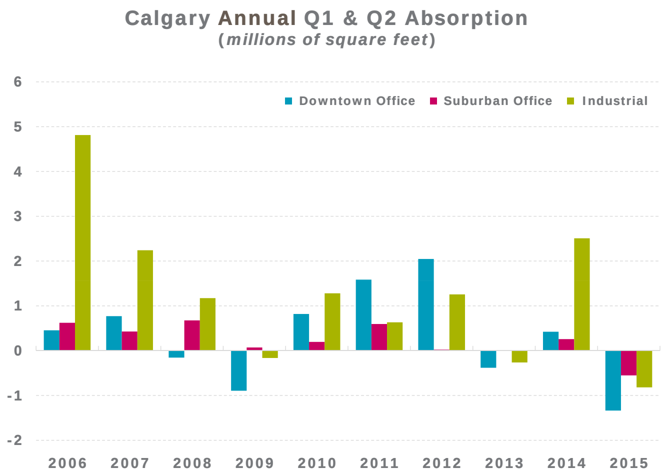
Over the first half of 2015, downtown office vacancy rose from 9.8 per cent to 13.0 per cent. This is due to over 1.3 million square feet of negative absorption. In real estate terms, absorption is the change in occupied space – so negative absorption means space was returned to the market for use by other tenants. If this slowdown has a prolonged duration, we will likely see additional upward pressure on the downtown office vacancy as five office towers, totaling 3.8 million square feet, remain under construction to be completed between early 2016 and 2018.

In the first six months of 2015, the suburban office market saw vacancy increase from 13.1 per cent to 16.8 per cent. This was again due to high levels of negative absorption – over 500,000 square feet – over the first half of 2015. New inventory for the suburban market to date in 2015 also added to the upward pressure on vacancy and included the second phase of Imperial Oil's new Quarry Park campus, Fountain Court, Buildings 1 & 2, and Crowfoot 75 – adding before the project is completed.

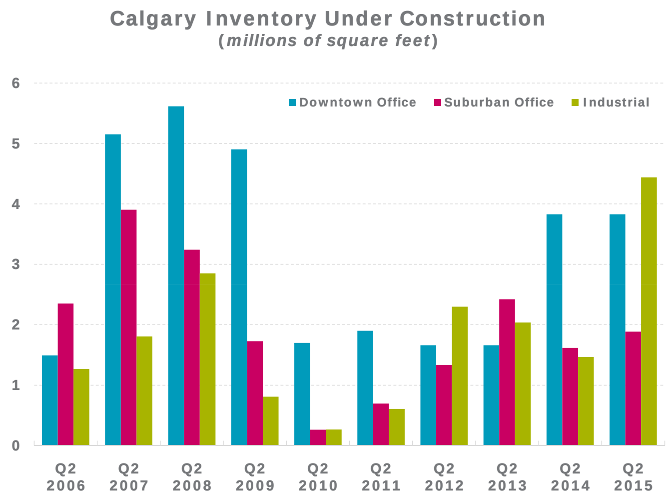
While a rising vacancy and negative absorption environment is a sign of a weakening economy, there are opportunities to be found within it. As the amount of available space continues to increase, there will be more and more pressure on landlords to lower their rents in order to retain their tenants and potentially attract tenants from other buildings or even from other cities, who may have previously viewed Calgary as too difficult or expensive to enter. Tenants should find landlords are more receptive to negotiations in this environment.

After rental rate adjustments, we enter the three Rs of a soft rental market: Renovate, Reposition, or Repurpose. Renovate is low-hanging fruit. You renovate an older building or one with fewer amenities to compete with newer, higher-quality buildings. Reposition is a strategy change. You target a different audience. If you previously were targeting large, multiple-floor using tenants, you shift to accommodating single-floor tenants or multiple tenants on a floor. Alternatively, you target certain types of companies (i.e. make your building the most desirable for technology startups). Repurpose is a game changer. You convert the building to a different purpose altogether. Take an unoccupied office building and turn it into an apartment, hotel or medical centre, for example. In an extreme scenario, you tear the building down and build something else.

All of these scenarios enable better competitiveness for tenants and landlords in the long run. Businesses that are more competitive are likely to emerge from an economic downturn operationally stronger than when they started. Now is the time to start seizing upon these opportunities.



Source: CBRE Research, Calgary Economic Development.



Source: CBRE Research, Calgary Economic Development.

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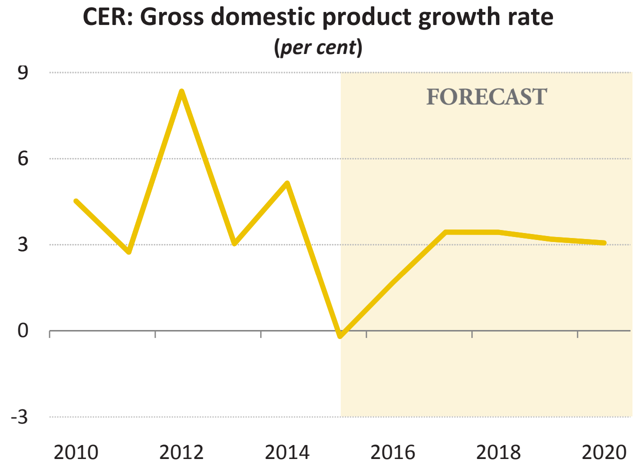
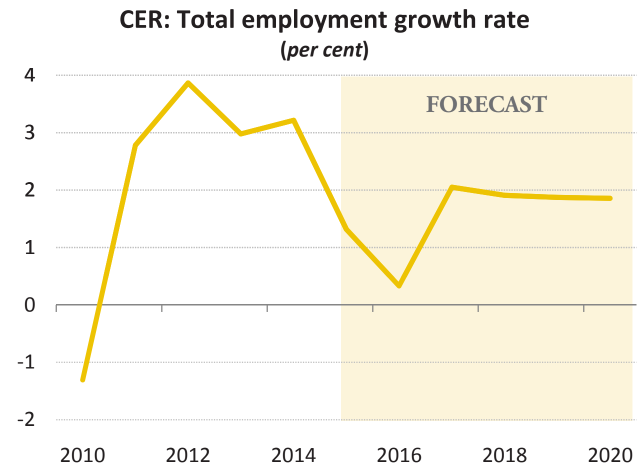
CALGARY ECONOMIC REGION (CER)

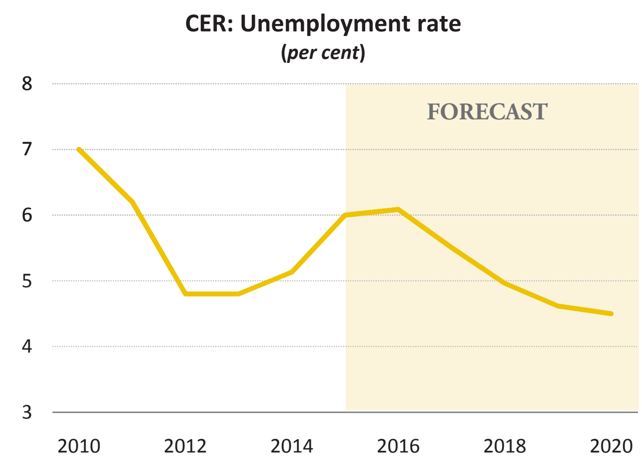
- Economic activity will contract in 2015 as the CER adjusts to sharply lower oil prices. Energy firms have responded by reducing capital expenditures and staffing levels, and this has had a direct and indirect impact on Calgary given its' role as the head office location for the Canadian energy industry. Given the importance of oil to Alberta and Calgary, both sectors of Calgary's economy will be adversely affected. Growth in the number of unemployed, large numbers of individuals fearful of losing their jobs, and falling house prices would combine to weigh against consumer spending and new home construction. In addition, higher vacancy rates in the non-residential sector of the real estate market and reduced employment levels will combine to lower non-residential construction activity.
- The forecast calls for economic activity in the CER to contract by 0.2 per cent in 2015, down from 5.1 per cent in 2014 and then increase by 1.7 per cent in 2016 and 3.4 per cent in 2017.
- The most recent data from Statistics Canada's labour force survey showed an average of 880,000 persons was employed in the Calgary Economic Region in first eight months of 2015, which is an increase of 30,000 over the same period in 2014. Despite announcements of reduced capital spending and job cuts by energy companies, the job numbers from the labour force survey appear to be healthy. On closer analysis, the data shows that year-over-year employment growth peaked at 39,100 persons in April 2015 and fell to 17,500 by August 2015, the last month for which data is available.
- The negative effects of lower oil prices on job creation would extend into the last quarter of 2015 and early part of 2016; given the time delay between oil price reduction and employment impacts. Total employment would grow by 1.3 per cent in 2015, down from 3.2 per cent in 2014. The forecast is for employment to grow by 0.3 percent in 2016, and then by 2.1 per cent in 2017 as growth returns to normal rates.
- The CER's unemployment rate rose to 5.1 per cent in 2014, up from 4.8 per cent in 2013. Robust employment growth was outstripped by even stronger labour force growth. This was because a significant number of migrants, of working age, were drawn to Alberta and Calgary to participate in a healthy job market. At the same time, migrants were pushed from other provinces because of a lack of job opportunities.



Source: Statistics Canada, Corporate Economics.



Source: Statistics Canada, Corporate Economics.



Source: Statistics Canada, Corporate Economics.

- Slower job creation in Calgary in 2015 and 2016 would result in the unemployment rate rising to around 6.0 per cent in 2015 and 2016, respectively. Stronger employment growth from 2017 to the end of the forecast period would cause the unemployment rate to trend downwards to about 4.5 per cent by 2020.
- The inflation rate would average 1.3 per cent in 2015, down from 2.9 per cent in 2014. Sharply lower economic growth arising from lower energy prices would add to the economy's spare capacity and therefore reduce price pressures in consumer markets. Lower energy prices would translate into lower transportation and heating costs. In addition, higher vacancy rates should weigh against rental costs and depress shelter costs. But, higher food prices resulting from a lower Canadian dollar would offset some of the influences of lower oil prices.
- The forecast is for the inflation rate to average 1.5 per cent in 2016 and increase to 2.4 per cent in 2017 as economic growth gains momentum in the local economy.

Non-residential Building Price Inflation

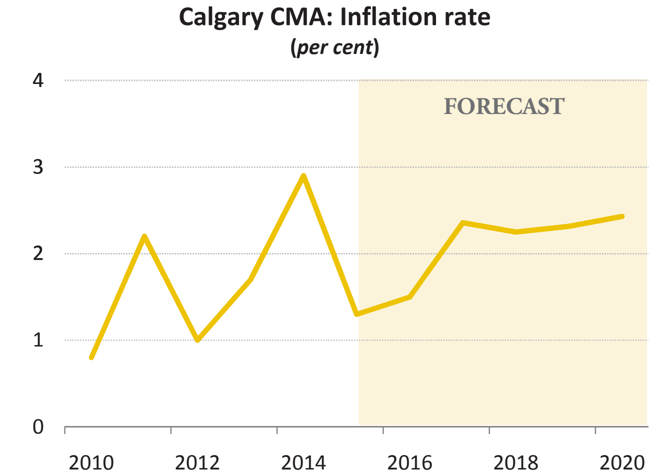
- As expected, builders are seeking to keep prices stable in spite of the recent fall in oil prices. To be fair, the fall in oil prices has not yet translated into significant gas or diesel cost savings for builders, meanwhile the decrease in the value of the dollar has resulted in increased prices of some materials like plumbing and lighting fixtures. As oil price declines finally make their way to the pump, we anticipate some savings to be passed on to commercial construction contracts. Longer term, we anticipate modest construction inflation as oil prices enter a more restrained period.

Commodities:

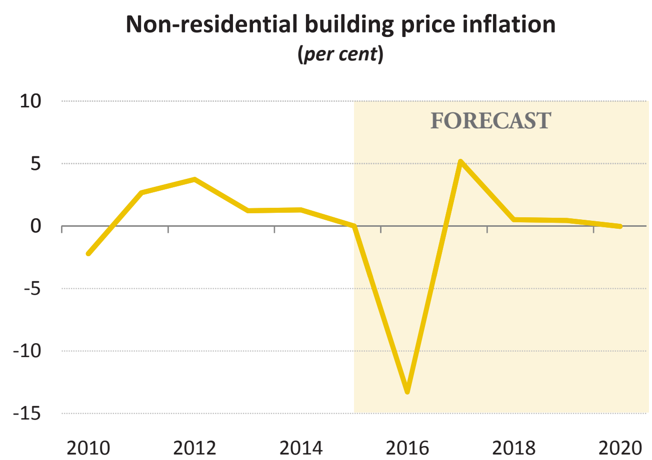
Commodity prices on futures markets are down significantly. Price savings are not being fully passed on to consumers of finished products, instead those prices are being held steady as wholesalers and retailers try to increase their per unit margin in the face of falling sales.

Asphalt

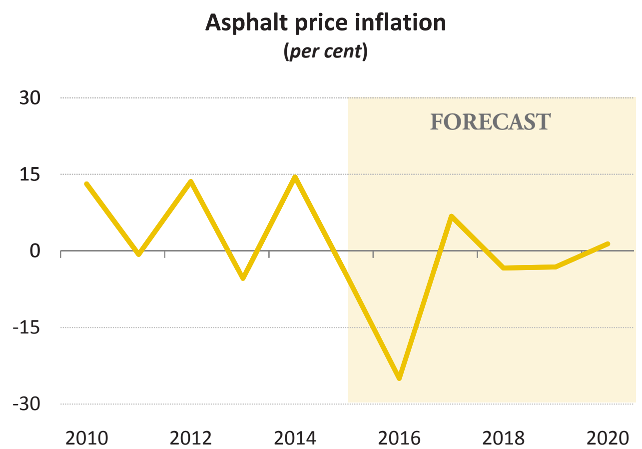
- Futures contracts on supplies have prevented asphalt prices from falling to where spot prices indicate they should be. The futures contracts are keeping market price artificially high.
- Futures contracts for next years' supply are now available on exchanges and we anticipate significant savings to be available in asphalt markets for the next paving season.
- Our current expectation is for asphalt prices to bounce around in the low $500 price range from 2016 onward.



Source: Statistics Canada, Corporate Economics.



Source: Statistics Canada, Corporate Economics.



Source: Statistics Canada, Corporate Economics.

Vehicle Parts

- Our outlook on vehicle parts is unchanged. The largest input into manufacturing and distribution of parts is electricity, the price of which is profoundly resilient to changes in oil prices. Recent changes in electricity prices in Ontario have caused issues in Ontario manufacturing. In response, some of this manufacturing has moved to Manitoba (where electricity prices are about half of what they are in Ontario), some to Mexico. The outlook for vehicle parts calls for moderate increases in prices as the U.S. recovery continues and people begin to splurge on accessories.

Diesel

- Diesel averaged $1.28 per liter last year. With oil prices down, diesel prices have been slowly dropping. Price drops have been muted due to suppliers buying on forward markets, a much less than fully competitive market supplying diesel and some supply bottlenecks. The forecast is for longer term prices to be stable in the low 90 cent range for the forecast horizon.

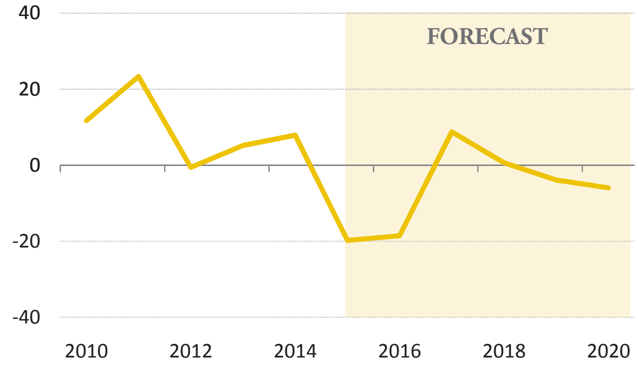
Wood

- Softwood lumber markets continue to languish. U.S. housing continues to favour multi-family dwellings, which do not use much Canadian softwood boards. The outlook for U.S. housing is growth, but the market in the U.S. Northeast, where the greatest concentration of Americans live, continues to languish. Full recovery of this area now seems to have been pushed out yet another year. The delay means the outlook for Canadian wood prices continues to be negative. We continue to believe that if the Canadian softwood lumber industry were to aggressively target the plywood and engineered board business, the industry would fare much better.

Aluminum

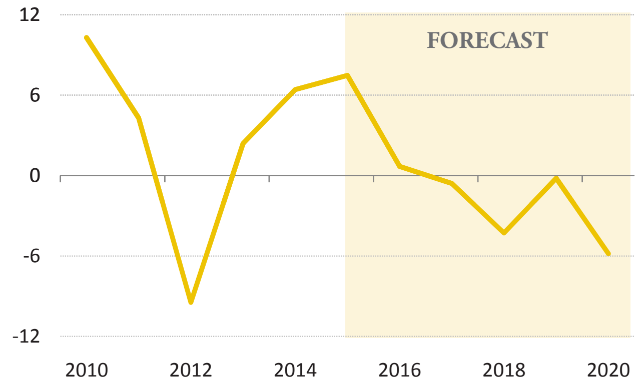
- Lower international demand for aluminum has caused significant price reductions. The high anticipation for increased demand as a primary automotive metal instead of a secondary one, has all but petered out. Yet significant depreciation of the Canadian dollar has rapidly offset declines in international prices. The outlook is for the impact of exchange rate shifts to continue to be felt for a couple of years. After that, decreased global demand impacts will begin to be felt longer-term in Canada.

Diesel oil price inflation
(per cent)



Source: Statistics Canada, Corporate Economics.

Aluminum price inflation
(per cent)



Source: Statistics Canada, Corporate Economics.

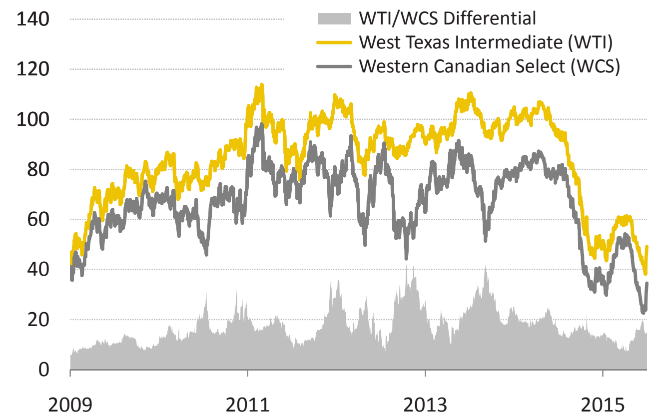
Steel

- Oil price reductions are resulting in fewer wells being drilled and less oilsands investment. Manufacture of pipe used in wells, and machinery and equipment for oilsands production is affected and consequently the outlook for steel in North America is down this year. Increased vehicle sales in the U.S. are generating increased demand for iron with Canadian prices getting some uplift from the shrinking Canadian dollar. This phenomenon will continue to uplift Canadian market prices this year and next.

ALBERTA

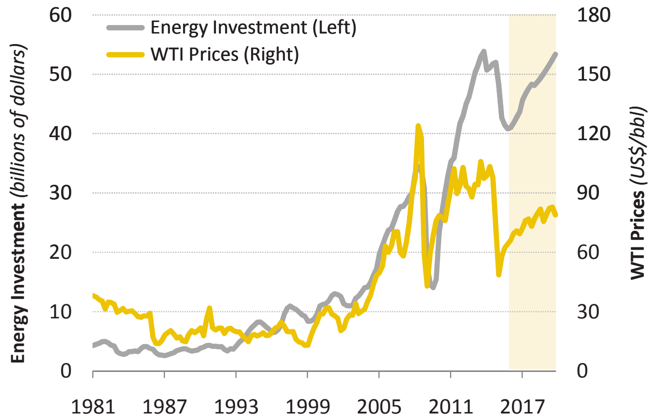
- Crude oil prices are being weighed down by strong supply and weak demand expectations. The market has seen wild swings, with WTI plummeting from a peak of US$106/bbl in June 2014 to below US$38/bbl in late August, before soaring to above US$49/bbl in the last days of August. Beyond the short term, we expect the oil prices to remain low for an extended period as oil markets experience oversupply. The downward pressure on oil prices comes from the expected return of Iran to the world oil markets with the expected doubling of its' oil exports as Western sanctions are lifted and the devaluation of the Chinese currency (Yuan) that makes China's energy imports more expensive. In addition, Saudi Arabia remains reluctant to cut oil production for competitive reasons.
- Year-to-date prices averaged US$51.8/bbl from January to August. Our baseline assumption is for WTI to average US$50/barrel in 2015 and $US57/barrel in 2016, before the prices rise steadily to about US$70/barrel by 2020.
- Investment activity in the oil and gas industry has been curtailed significantly, which should moderate growth in conventional oil production in Alberta over the medium term. The growth in non-conventional production is less responsive to short-term price fluctuations because of relatively large fixed costs. Persistently low energy prices should maintain pressure on Alberta producers to improve efficiency and reduce operating costs. This should translate into job losses and reduction in labour costs.
- The price difference between WTI and Western Canadian Select (WCS) fell to as low as US$7.5/bbl in mid-June, but has increased since then. The discounted WCS prices should lead to a decline in Alberta oil industry revenues, which translates into a reduction in energy related capital investment and a decrease in wells drilled in 2015.
- The price differential highlights the tight pipeline capacity and transportation bottleneck between Alberta and its designated markets. There is still no resolution on any of the major pipeline projects, including Keystone XL, Northern Gateway, Energy East and TransMountain. In the short to medium term, energy transportation should continue to be a concern for Alberta producers.
- Natural gas prices in Alberta were dampened by reduced demand from oil sands operations. The slowdown in the oil market has impacted the North American natural gas market in the form of reduced revenues, constrained cash flows, and significantly less gas-targeted drilling. The AECO C spot averaged C$2.80/GJ in August, 25 per cent lower than a year ago. Growth in shale gas production was the major driver for the high inventories and over supply in the market. Pipeline exports of natural gas into the U.S. are expected to decrease over the next few years because of lower cost of U.S. domestic production and transportation. As a result, low natural gas prices are expected to persist for the next two years. Our baseline assumptions call for AECO-C to average $2.75/GJ in 2015 and $3.15/GJ in 2016.

Spot Prices for Oil
($US/bbl)



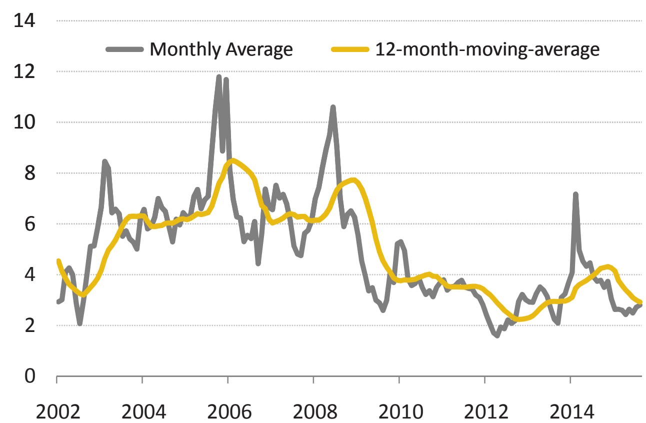
Source: U.S. Energy Information Agency, Bloomberg, Corporate Economics.

Substantial Decline in Alberta Oil and Gas Investment



Source: Conference Board of Canada, Statistics Canada, Corporate Economics.

AECO Spot Market Prices
(*C$/GJ, January 2002 - August 2015*)



Source: GLJ Energy Publications, Corporate Economics.

Textbox 2 Crude Oil - International Market

The first three quarters of 2015 saw average weekly oil prices of the West Texas Intermediate benchmark range between US$39/bbl and US$61/bbl, this variation was much greater than that for the first three quarters of 2014 when prices ranged between US$92/bbl and US$107/bbl.

The currently low level for oil prices was last observed in 2005, when average annual oil price was US$56/bbl. The softness in oil prices has resulted in significantly lower investment and employment levels in the energy sector.

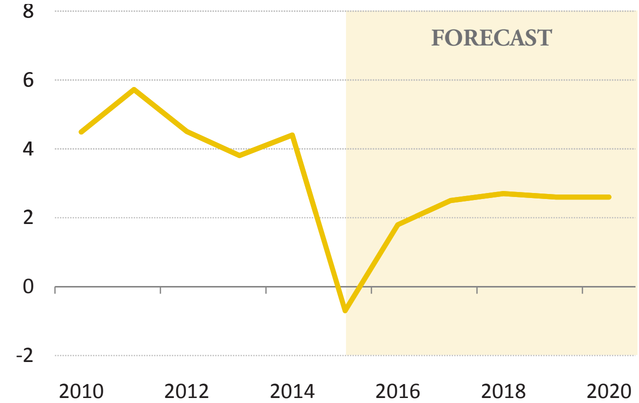
Hydraulic fracking in the energy sector has significantly increased oil production in the United States and has contributed to North America being a swing producer in the global oil market. In 2015, the United States and Iran reached a milestone agreement where Iran would reduce its stock pile of Uranium. This agreement will also remove the embargo on Iran selling oil in international markets and this would put downward pressure on oil prices. As long as Saudi Arabia (the world's major exporter of oil) insists on maintaining its market share we do not expect to see OPEC cut its oil supply, which would provide an upward momentum for oil prices.

The largest consumer of petroleum in the world as of 2010 was China. It surpassed North America for the first time and consumed 25 million barrels a day in 2010, or 29 per cent of global petroleum consumption. China continues to hold this position as the largest petroleum consuming country in the world. The current weak economic data for the first half of 2015 emerging out of China suggest a relatively softer demand for energy products going forward. The implication is a weakness on the demand side for petroleum which fails to contribute any upside momentum for oil prices.

The lower oil prices for oil producing regions presents a significant threat to investments in the oil producing sector and future oil production, while for oil consuming regions the lower oil price environment puts more money in consumers' pockets, and lowers production cost for businesses.

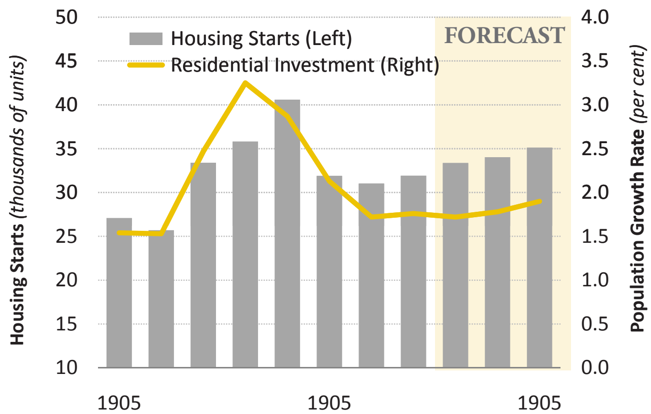
- The energy sector is the primary driver of Alberta's economy in terms of investment, employment and space markets. The weakness in the oil and gas industries is impacting most aspects of the economy through the labour market and capital spending. Consumption has been moderate so far this year due to weak consumer confidence arising from job losses and the fear of job losses. The expenditures from the provincial government remained constrained because of a significant decline in natural resource revenues. A lower exchange rate should benefit manufacturing related exports, while energy and agriculture related exports are still underperforming. The royalty review and corporate tax hikes will deduct from economic growth. We expect Alberta's real GDP to contract by 0.7 per cent in 2015, and recover mildly by 1.8 per cent in 2016 as oil prices grow modestly.
- Overall employment growth in Alberta has slowed significantly but still shows a positive trend in 2015, as the recession in the energy sector and its spinoff industries takes time to materialize. Employment levels in the goods-producing sector has been trending down, especially in manufacturing; construction; mining, and oil and gas; and professional, scientific and technical services industries. Some of the slack was absorbed by job gains in the population based services-producing sectors. However, labour force gains have outpaced hiring gains, resulting in higher unemployment rates in Alberta. The unemployment rate should rise by 1.1 percentage points from last year to 5.8 per cent in 2015. Under the baseline oil price scenario, it will not return to its 2014 level until beyond 2020.
- Wage growth should be limited as a result of a weaker labour market. Alberta average wage rate increases for all industries are expected to be 2.2 per cent in 2015 and 2.9 percent in 2016, barely offsetting consumer inflation. Retail sales in Alberta should retreat from last year's record high levels, although Albertans still spend far more per capita than the Canadian average.
- Population growth will slow considerably in 2015, because of the lower net migration levels. In the last few years, Alberta experienced strong interprovincial in-migration. People moved to Alberta from other provinces and internationally for better job opportunities. That trend will moderate this year, as the economic recession in Alberta results in fewer new jobs. Relatively better economic prospects in Central and Eastern Canada as well as British Columbia will discourage migration from those provinces to Alberta.
- Housing starts will be negatively affected by lower demand as the market remains vulnerable to a deterioration in the employment situation. The volume of home resale has fallen significantly on an annual basis in 2015. Total housing starts in the province are expected to drop from 40,600 units in 2014 to 31,900 units in 2015.

Alberta: Gross domestic product growth rate
(per cent)



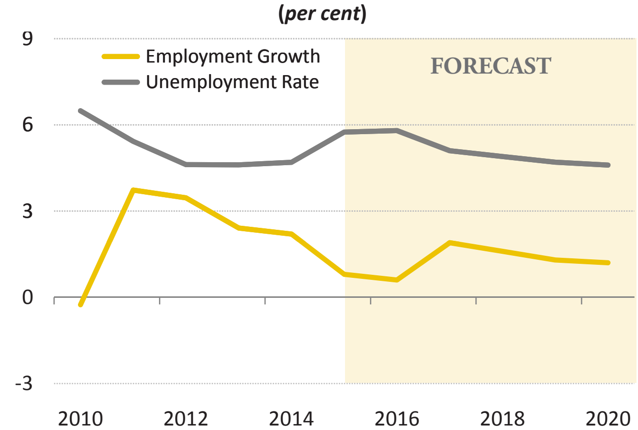
Source: Statistics Canada, Corporate Economics.

Alberta: Housing Starts and Population Growth



Source: Statistics Canada, Corporate Economics.

Alberta: Labour Market
(per cent)



Source: Statistics Canada, Corporate Economics.

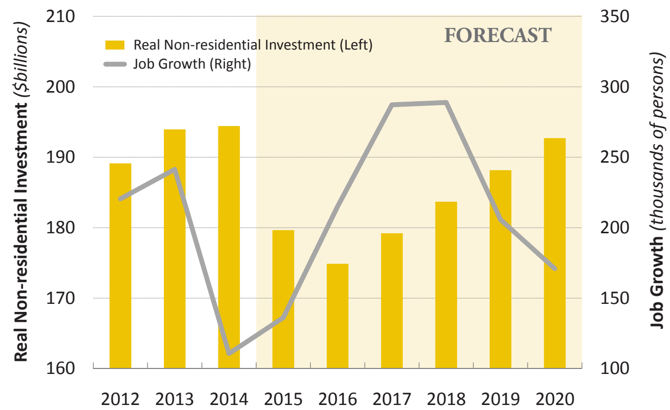
CANADA

- **Investment Contraction and Jobs Slowdown:** After two successive quarters of negative GDP growth for the Canadian economy, the forecast has been revised downwards to reflect a deeper investment contraction and job growth slowdown. Weak investment activity would continue to weigh against GDP growth and therefore GDP is expected to increase by 1.1 per cent for 2015. The decline in investment is expected to weigh heavily on machinery and equipment investment and will be accompanied by a reduction in industrial production. Job growth in 2015 is expected to be 0.8 percent. A 6.9 per cent unemployment rate is expected for 2015. Based largely on modest oil price growth going forward, the unemployment rate is expected to decline gradually to 6.4 per cent by 2018.

- **Short-Term Canadian Dollar Volatility:** The loonie is expected to depreciate by 13 per cent in 2015 relative to the 2014 CAD/USD exchange rate. This is based in part on reduced expectations for the average crude oil price for 2015. It is also based on monetary policy divergence, whereby the Bank of Canada has introduced two bouts of monetary stimulus, while the U.S. Fed is expected to commence overnight rate hikes later this year. Gradual Canadian dollar appreciation will commence in 2016, when the Bank of Canada commences its own sequence of rate hikes. This would reduce the U.S. - Canada interest rate differential. Canadian dollar appreciation will also be supported by a modest oil price recovery. This will continue right through to 2020. The export product that stands to benefit most in the short-term from a sudden deterioration in the value of the Canadian dollar is motor vehicle and parts, which is expected to record a double digit growth rate in 2015.

- **No Short Term Monetary Policy Changes:** Annual real output growth will recover to the 2.1 to 2.4 per cent range for the 2016 to 2020 period. Consumer price inflation is expected to be 1.2 per cent in 2015 and the Bank of Canada is unlikely to provide additional stimulus. Annual consumer price inflation is expected to increase to 2.0 per cent in 2016, with the Bank of Canada likely to respond in the second half of the year with monetary tightening to provide room to respond to unanticipated adverse economic events. The prime lending rate is expected to change course toward higher rates in late 2016. It will increase aggressively in 2016 and 2017, before settling at 5.5 per cent by 2019.

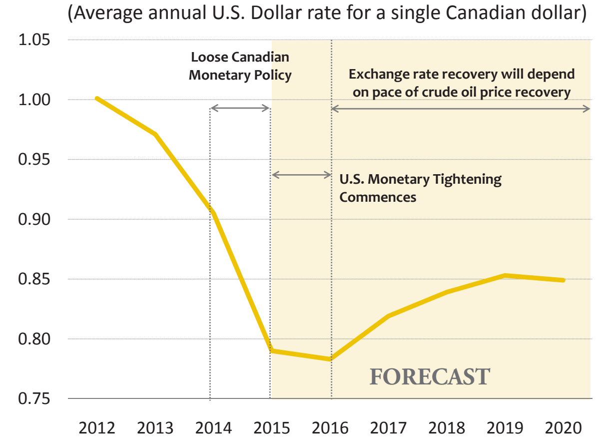
Canada: Job growth despite deep contraction in private investment for 2015 and 2016.



Source: IMF, Corporate Economics.

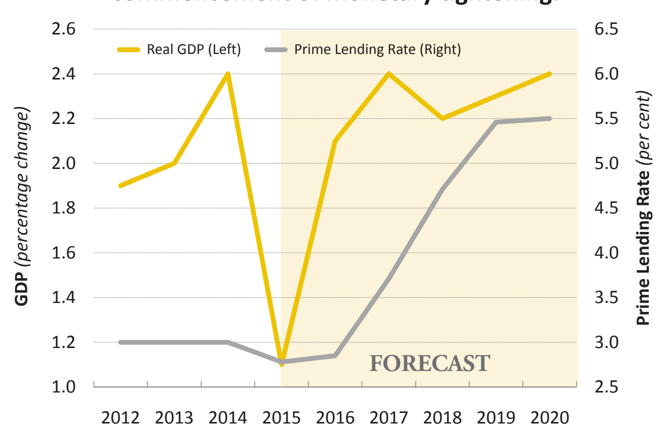
Canada: Rapid depreciation of the Canadian dollar will run its course in 2015.

(Average annual U.S. Dollar rate for a single Canadian dollar)



Source: Government of Alberta, Corporate Economics.

Canada: 2016 will be marked by a return to an above two per cent growth rate for real output and the commencement of monetary tightening.



Source: Consensus Economics, Conference Board of Canada, IHS Global Insight, Corporate Economics.

UNITED STATES

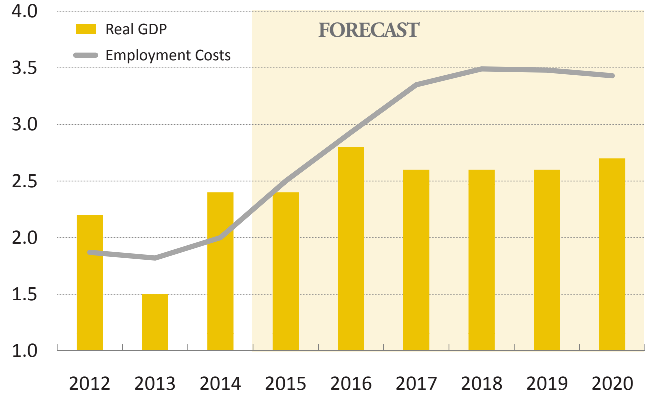
- **Less robust economic recovery:** The July 30th Bureau of Economic Analysis revision of annual real GDP growth estimates for the period from 2011 through to 2014 led to a reduction in the size of the U.S. economy by US$71 billion by the end of 2014. This has necessitated adjustments to the anticipated pace of future economic growth. Consumer spending is now expected to grow at a slower 3.0 per cent pace in 2015. The slight deceleration to 2.9 per cent in 2016 is due to expectations of upcoming monetary policy tightening. Real output growth is expected to be 2.4 per cent in 2015, before increasing to 2.8 per cent in 2016. Economic growth will decelerate to 2.6 per cent by 2018, when the output gap would have been eliminated.

- **Domestic production facing headwinds:** Industrial production is expected to grow at a rate of 1.9 per cent in 2015, which is a downward revision from the spring 2015 forecast. This is because data on spending on machinery and equipment as well as orders and shipments of capital goods suggest modest growth this year. The U.S. dollar appreciation relative to trading partners continues to restrain exports and boost imports. A surge in industrial production to 2.7 per cent is not expected until 2016. The economy is on track for continued job growth, which will push the unemployment rate downwards to a 2016 average of 4.9 per cent. A gradual oil price recovery will boost business investment in the latter part of the forecast period.

- **Imminent monetary policy tightening:** The Federal Open Market Committee (FOMC) is weighing data on consumer price inflation, wage inflation and the unemployment rate to determine the appropriate timing for monetary tightening. The unemployment rate is firmly below the FOMC's assessment of the maximum rate and employment costs are expected to increase by 2.5 per cent in 2015 and an additional 2.9 per cent in 2016, signalling imminent monetary tightening. Average consumer price growth is expected be 0.3 per cent for 2015. It is, however, largely due to oil price decline in the second half of 2014, which will exit the calculations shortly. A yield curve twist has developed in anticipation of a rate hike. This is a situation where yields on long-term government bonds decline, while yields on short-term treasury bills increase. Short-term yields are more sensitive to central bank policy. Government spending will increase in the latter part of the forecast horizon as the fiscal deficit declines, which will help sustain modest growth rates.

U.S.: GDP acceleration delayed until 2016 and will be accompanied by a spell of high wage growth.

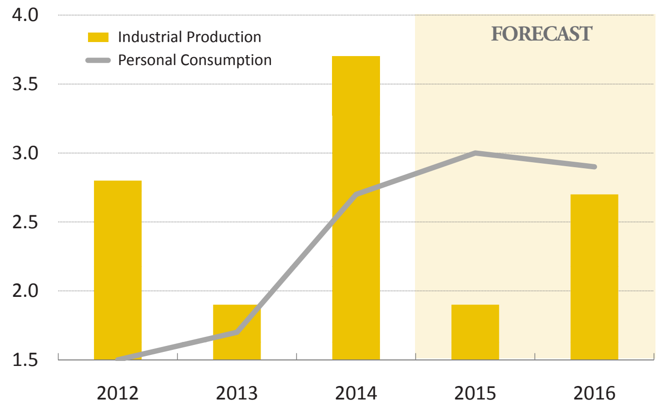
(*Percentage increase on a year earlier*)



Source: Consensus Economics, Congressional Budget Office, Corporate Economics.

U.S.: Slowdown in the pace of industrial production growth in 2015.

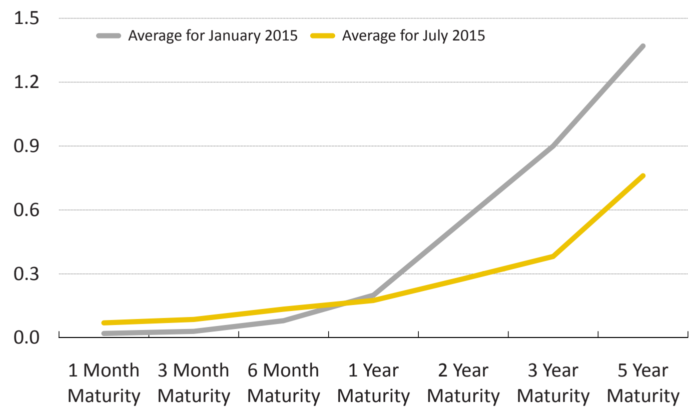
(Monthly average yields for Treasury Bills and Notes, *per cent*)



Source: Consensus Economics, Corporate Economics.

U.S.: Yield curve twist reflects expectation of rate hikes later this year.

(Monthly Average Yields for Treasury Bills and Notes, *per cent*)

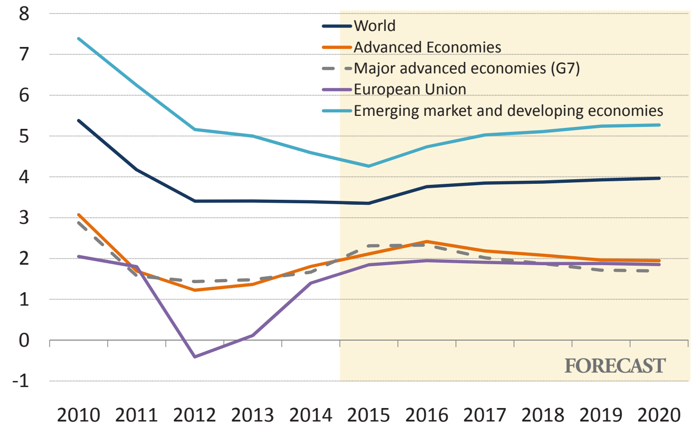


Source: Consensus Economics, Corporate Economics.

WORLD

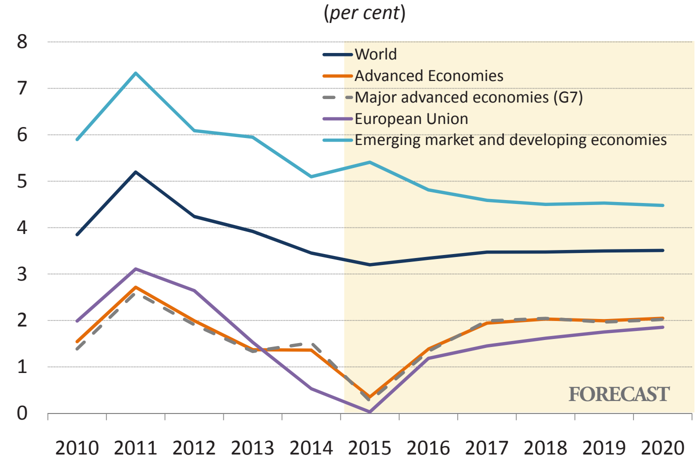
- The world's gross domestic product (GDP) growth in 2014 was 3.4 per cent and should grow by 3.5 per cent in 2015. Slower economic growth in 2015 for emerging market and developing economies, would be offset by faster growth in other global regions. Economic growth would gain momentum and grow by 3.8 per cent by 2016, a significant improvement over the 2014-2015 period. Global economic growth is projected to average 3.9 per cent between 2017 and 2020. The emerging markets and developing economies are projected to grow by 4.7 per cent in 2016, and average 5.2 per cent growth between 2017 and 2020. The advanced economies are projected to grow by 2.11 per cent in 2015, 2.42 per cent in 2016, and at an average rate of 2.04 per cent between 2017 and 2020. The major advanced economies (G7) are projected to grow by 2.3 per cent in 2015, 2.3 per cent for 2016, and are expected to record an average growth rate of 1.83 per cent between 2017 and 2020. The European Union (EU) is projected to grow by 1.85 per cent in 2015, 1.95 per cent in 2016 and average 1.88 per cent between 2017 and 2020.
- Inflation is projected to drop across most global economic regions for 2015. The exception is emerging markets and developing economies, which are projected to record an average rate of inflation of 5.4 per cent in 2015. This is up from 5.1 per cent in 2014. Inflation for emerging markets and developing economies in 2016 is projected at 4.8 per cent and is expected to average 4.5 per cent between 2017 and 2020. Inflation in 2015 is strongly muted for the rest of the global regions, with 0.4 per cent inflation for advanced economies, 0.3 per cent for G7 economies and 0.03 per cent for the EU economy. Inflation should average 3.5 per cent between 2017 and 2020 for the global economy, 2 per cent for advanced economies, 2.01 per cent for G7 economies, 1.7 per cent for the EU and 4.5 per cent for the emerging markets and developing economies.
- Global investment, a major driver of economic activity, is expected to grow as a fraction of global GDP from 24.94 per cent in 2014 to 25.24 per cent in 2015, and even further to 25.51 per cent in 2016. Global investment as a share of GDP is expected to average 26.04 per cent between 2017 and 2020. For advanced economies and the G7, investment as share of GDP will fall in 2015 from the 2014 value. However, investment as a share of GDP is projected to grow in these regions for the rest of the forecast horizon. For the EU, the trajectory will be similar to the G7. For emerging markets and developing economies, investment as a share of GDP will increase from 31.65 per cent in 2014 to 32.15 per cent in 2015. Subsequently, it will drop slightly to 32.14 per cent in 2016, before averaging 32.06 per cent between 2017 and 2020.

World: Gross domestic product (GDP) growth rate
(*per cent*)



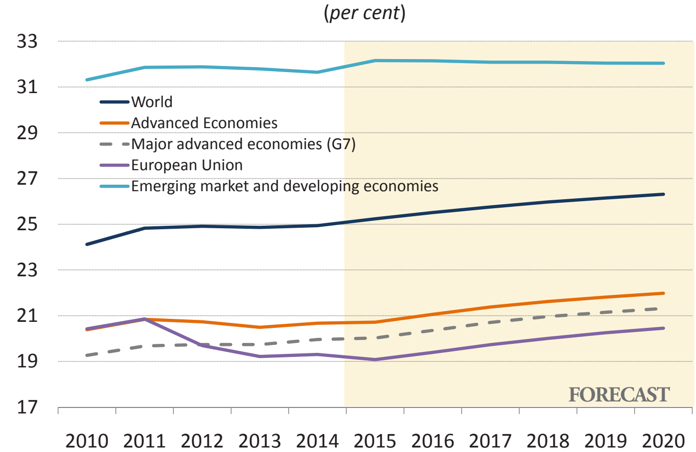
Source: International Monetary Fund, World Economic Outlook Database, Corporate Economics.

World: Inflation rates
(*per cent*)



Source: International Monetary Fund, World Economic Outlook Database, Corporate Economics.

World: Investment as a fraction of GDP
(*per cent*)

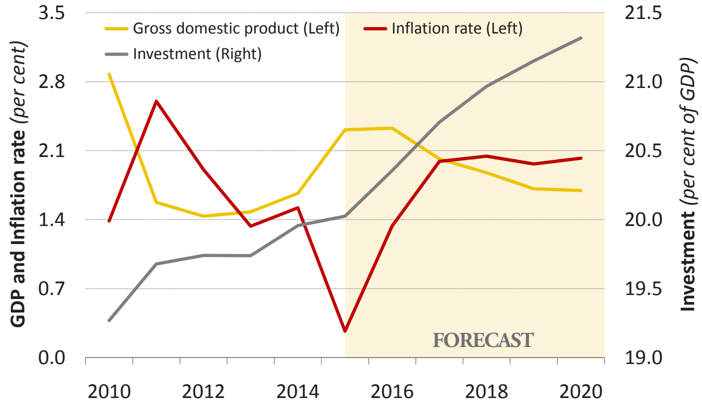


Source: International Monetary Fund, World Economic Outlook Database, Corporate Economics.

REGIONAL ECONOMIC SNAP SHOT

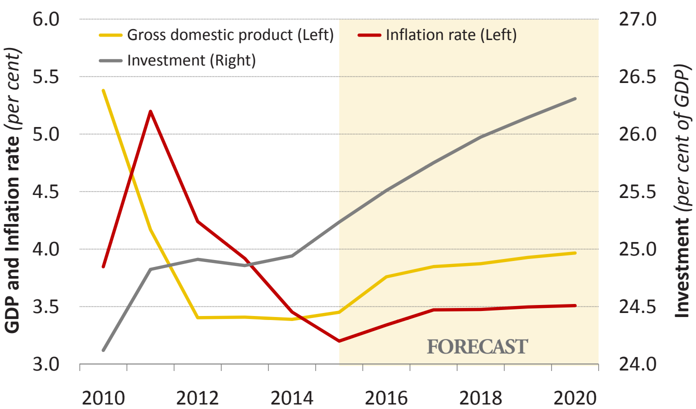
The regional economic snap shot provides you with a quick overview of three regional indicators for each of the sectors that comprises the world. The indicators highlight the comovement of Investment, growth in gross domestic product and inflation rate.

Major Advanced Economies (G7)



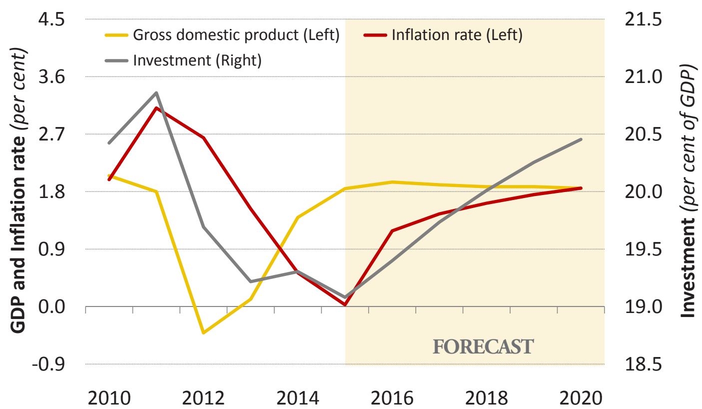
Source: International Monetary Fund, World Economic Outlook Database, Corporate Economics.

World Economy



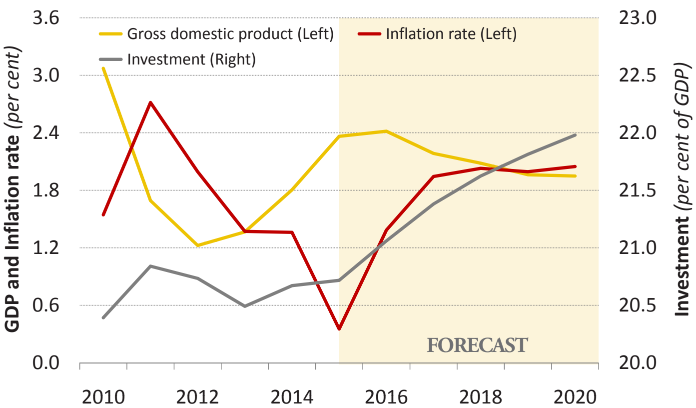
Source: International Monetary Fund, World Economic Outlook Database, Corporate Economics.

European Union (EU)



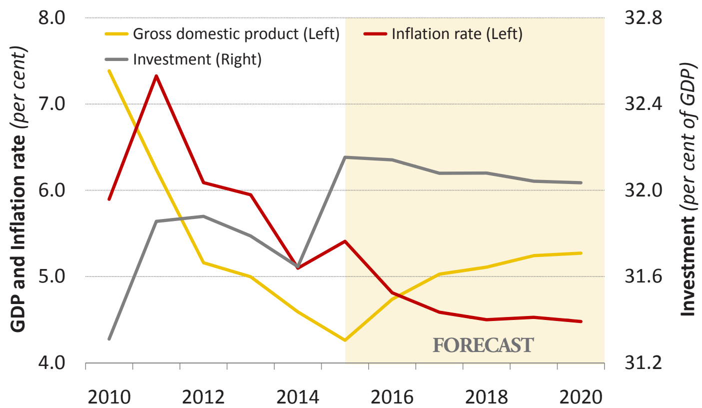
Source: International Monetary Fund, World Economic Outlook Database, Corporate Economics.

Advanced Economies



Source: International Monetary Fund, World Economic Outlook Database, Corporate Economics.

Emerging Market and Developing Economies



Source: International Monetary Fund, World Economic Outlook Database, Corporate Economics.

Table 1 - Selected Economic Indicators

Rest of the World, United States, Canada, Alberta, Calgary Economic Region (CER) & Calgary Census Metropolitan Area (CMA)

FORECAST COMPLETED: September 2015						BASE FORECAST					
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ASSUMPTIONS											
World											
World Gross Domestic Product (annual % change)	5.4	4.2	3.4	3.4	3.4	3.5	3.8	3.8	3.9	3.9	4.0
The United States											
U.S. Real Gross Domestic Product Growth (chained 2009 dollars) (%)	2.5	1.6	2.2	1.5	2.4	2.4	2.8	2.6	2.6	2.6	2.7
Canada											
Canada Real Gross Domestic Product Growth (chained 2007 dollars) (%)	3.4	3.0	1.9	2.0	2.4	1.1	2.1	2.4	2.2	2.3	2.4
Prime Business Loan Rate (%)	2.6	3.0	3.0	3.0	3.0	2.8	2.9	3.7	4.7	5.5	5.5
Exchange Rate (US$/Cdn$)	0.97	1.01	1.00	0.97	0.91	0.79	0.78	0.82	0.84	0.85	0.85
Alberta											
Alberta Real Gross Domestic Product Growth (chained 2007 dollars) (%)	4.5	5.7	4.5	3.8	4.4	-0.7	1.8	2.5	2.7	2.6	2.6
Total Employment Growth (%)	-0.3	3.7	3.5	2.4	2.2	0.8	0.6	1.9	1.6	1.3	1.2
Unemployment Rate (%)	6.5	5.4	4.6	4.6	4.7	5.8	5.8	5.1	4.9	4.7	4.6
Housing Starts ('000 Units)	27.4	25.5	33.3	36.1	40.6	31.9	31.0	31.9	33.4	34.0	35.1
Inflation Rate (%)	1.0	2.4	1.1	1.4	2.6	0.8	2.0	2.1	2.2	2.3	2.4
Crude Oil Price - WTI (US$/bbl)	79.52	95.13	94.21	97.97	92.97	50.00	57.00	66.00	68.00	69.00	71.00
Western Canadian Select - WCS (US$/bbl)	62.55	71.84	71.90	77.05	78.43	42.25	52.68	56.26	58.34	59.24	60.50
Alberta Natural Gas Price - AECO/NIT ($/GJ)	3.60	3.15	2.19	3.06	3.84	2.75	3.15	3.49	3.76	4.04	4.26
Industrial Product Price Index (%)	1.5	6.9	1.1	0.4	2.5	-1.4	2.0	1.8	2.0	2.0	2.1
Raw Materials Price Index (%)	13.0	19.5	-4.1	0.9	1.6	-16.6	7.9	3.1	2.3	1.8	1.6
Alberta Average Wage Rate Increase for All Industries (%)	4.5	4.4	3.5	3.5	3.8	2.2	2.9	3.7	3.5	3.5	3.5
FORECAST											
Calgary Economic Region (CER)											
Gross Domestic Product (%)*	4.5	2.7	8.3	3.0	5.1	-0.2	1.7	3.4	3.4	3.2	3.1
Total Employment ('000 Persons)	755	776	806	830	857	868	871	889	906	923	940
Total Employment Growth (%)	-1.3	2.8	3.9	3.0	3.2	1.3	0.3	2.1	1.9	1.9	1.9
Unemployment Rate (%)	7.0	6.2	4.8	4.8	5.1	6.0	6.1	5.5	5.0	4.6	4.5
Inflation Rate (%) (CMA)	0.8	2.2	1.0	1.7	2.9	1.3	1.5	2.4	2.3	2.3	2.4
Building Permits ($billion)	3.8	5.5	5.6	7.5	7.3	6.3	5.8	5.3	5.0	4.9	4.9
Low Forecast	N/A	N/A	N/A	N/A	N/A	5.6	5.2	4.8	4.5	4.4	4.4
High Forecast	N/A	N/A	N/A	N/A	N/A	6.9	6.4	5.9	5.5	5.4	5.4
Housing Starts ('000 Units) (CMA)	9.3	9.3	12.8	12.6	17.1	11.2	11.2	12.4	12.7	12.9	13.1
Non-Residential Building Price Inflation (%) (CMA)	-2.2	2.7	3.7	1.2	1.3	0.0	-13.3	5.2	0.5	0.4	0.0

Numbers may not add up due to rounding

* Source: Centre for Spatial Economics, Corporate Economics

** Total population, census divisions and census metropolitan areas, 2001 Census boundaries

Table 2 - Selected Indicators for City of Calgary

City of Calgary											
FORECAST COMPLETED: September 2015						BASE FORECAST					
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
DEMOGRAPHY											
Total Population ('000 Persons)	1,072	1,091	1,120	1,157	1,195	1,231	1,260	1,286	1,312	1,339	1,367
Total Population Growth (%)	0.6	1.8	2.7	3.3	3.3	3.0	2.3	2.1	2.0	2.1	1.9
Net Migration ('000 Persons)	-4.2	9.6	19.7	26.2	28.0	24.9	17.7	15.0	13.7	15.6	16.0
Household Formation ('000 Units)	7.4	4.1	8.1	12.2	8.1	11.1	12.6	10.0	9.4	10.2	10.4
REAL ESTATE											
Residential Market											
Housing Starts ('000 units)	7.3	7.7	10.3	9.4	13.8	9.0	9.0	10.0	10.2	10.4	10.6
Average Residential MLS Sale Price (% change)	4.1	1.2	3.3	6.8	5.5	-3.2	2.1	8.0	4.0	2.5	6.6
Total Building Permits mid point ($billions)	2.9	4.5	4.4	6.1	6.3	5.4	5.0	4.6	4.3	4.2	4.2
Low Forecast	N/A	N/A	N/A	N/A	N/A	*4.9*	*4.5*	*4.1*	*3.9*	*3.8*	*3.8*
High Forecast	N/A	N/A	N/A	N/A	N/A	*5.9*	*5.5*	*5.1*	*4.7*	*4.6*	*4.6*

Numbers may not add up due to rounding

Table 3 - City of Calgary Population Projection

City of Calgary

FORECAST COMPLETED: August 2015		BASE FORECAST						
	2015	2016	2017	2018	2019	2020	2021	2022
Total Population *(as April)*	1,230,900	1,259,700	1,286,200	1,311,600	1,338,800	1,366,500	1,394,900	1,425,900
Total Population Growth Rate *(April - March)*	3.0	2.3	2.1	2.0	2.1	2.1	2.1	2.2
Total Net Migration *(April - March)*	24,900	17,700	15,000	13,700	15,600	16,000	16,600	19,200
Total Births *(April - March)*	17,400	17,800	18,400	18,700	18,900	19,100	19,300	19,500
Total Deaths *(April - March)*	6,600	6,800	6,900	7,000	7,200	7,300	7,500	7,700
Total Natural Increase *(April - March)*	10,800	11,100	11,500	11,700	11,700	11,800	11,800	11,800
Total Households *(as April)*	462,500	475,000	485,000	494,500	504,700	515,100	525,600	537,200
Total Household Formation *(April - March)*	11,100	12,600	10,000	9,400	10,200	10,400	10,600	11,600

Population by Cohort	2015	2016	2017	2018	2019	2020	2021	2022
0-4	83,500	83,600	84,600	86,500	89,000	92,000	93,500	94,500
5-9	74,100	77,300	80,200	82,200	83,200	83,200	83,400	84,400
10-14	67,600	68,300	69,400	70,700	72,600	74,900	78,200	81,200
15-19	68,400	68,900	69,100	69,300	69,500	70,100	70,900	72,100
20-24	83,900	83,500	82,100	80,900	80,500	79,200	79,900	80,800
25-29	106,100	107,100	107,400	106,600	106,000	106,300	105,800	105,900
30-34	111,100	116,700	120,700	123,500	126,100	127,300	127,800	129,100
35-39	103,700	108,600	113,200	117,600	122,300	127,700	133,100	138,000
40-44	101,600	104,200	106,900	109,100	112,200	115,700	120,200	125,400
45-49	86,900	88,800	91,400	96,100	101,200	106,700	109,000	111,900
50-54	87,800	89,300	90,200	89,600	89,200	88,400	90,200	92,900
55-59	76,300	77,900	79,300	80,800	81,700	82,800	84,000	84,600
60-64	56,200	57,900	60,200	63,100	65,800	67,900	69,500	70,500
65-69	43,600	45,700	47,700	49,700	50,300	50,400	52,200	54,300
70-74	29,300	30,400	31,700	32,800	35,400	38,700	40,600	42,400
75-79	20,500	20,900	21,400	22,200	23,000	24,200	25,200	26,200
80-84	15,900	15,700	15,700	15,600	15,500	15,500	15,800	16,200
85-89	9,300	9,600	9,800	10,000	10,100	10,200	10,100	10,000
90-99	5,200	5,100	5,000	5,100	5,100	5,200	5,300	5,300
99+	200	200	200	200	200	200	200	200
Total	**1,230,900**	**1,259,700**	**1,286,200**	**1,311,600**	**1,338,800**	**1,366,500**	**1,394,900**	**1,425,900**

Youth (12-18)	81,200	81,600	82,000	83,300	84,100	85,500	87,400	90,100
Primary School Age 6-17	166,300	169,300	173,600	177,800	181,000	184,000	186,600	191,100
Working Age 15-64	882,000	903,000	920,600	936,600	954,400	972,100	990,500	1,011,300
Seniors 65+	123,800	127,500	131,400	135,600	139,600	144,300	149,400	154,600
Super Seniors 85+	14,600	14,800	15,000	15,300	15,500	15,600	15,500	15,500
Female Super Seniors 85+	9,600	9,600	9,700	9,900	9,900	9,900	9,800	9,800

Numbers may not add up due to rounding

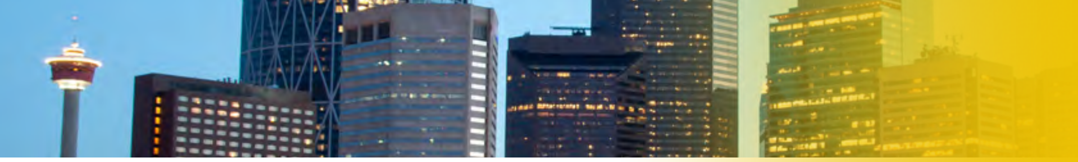


Table 4 - Calgary Economic Region (CER) Population Projection

Calgary Economic Region (CER)

FORECAST COMPLETED: August 2015		BASE FORECAST						
	2015	2016	2017	2018	2019	2020	2021	2022
Total Population *(as April)*	1,536,200	1,571,100	1,602,300	1,631,600	1,662,900	1,694,300	1,726,000	1,760,600
Total Population Growth Rate *(April - March)*	1.1	2.3	2.0	1.8	1.9	1.9	1.9	2.0
Total Net Migration *(April - March)*	-	22,100	18,700	17,100	19,500	19,900	20,700	24,000
Total Births *(April - March)*	-	21,600	21,800	22,000	22,000	22,000	22,100	22,100
Total Deaths *(April - March)*	-	8,800	9,300	9,800	10,200	10,600	11,100	11,500
Total Natural Increase *(April - March)*	-	12,700	12,500	12,200	11,800	11,400	11,000	10,600
Total Households *(as April)*	590,800	604,300	616,300	627,600	639,600	651,600	663,900	677,200
Total Household Formation *(April - March)*	--	13,400	12,000	11,300	12,000	12,100	12,200	13,300

Population by Cohort		BASE FORECAST						
	2015	2016	2017	2018	2019	2020	2021	2022
0-4	98,800	101,200	103,900	106,600	108,900	110,600	111,100	111,500
5-9	93,600	95,800	97,500	98,500	99,100	100,100	102,400	105,100
10-14	83,200	85,800	88,300	91,400	94,800	97,900	100,100	102,100
15-19	87,500	87,500	87,400	87,400	88,500	90,400	92,800	95,700
20-24	102,100	100,700	100,100	99,700	99,700	99,800	99,800	100,600
25-29	126,300	126,300	124,500	122,200	120,800	119,300	117,800	118,200
30-34	139,200	142,500	143,700	143,700	142,600	141,400	141,000	140,000
35-39	125,200	130,200	135,200	140,200	145,300	150,000	153,000	154,800
40-44	117,400	120,000	122,100	124,800	128,300	132,600	137,300	142,700
45-49	109,000	110,300	113,400	116,700	119,400	121,600	124,000	126,300
50-54	112,800	113,200	112,400	111,300	110,400	110,400	111,600	114,700
55-59	102,100	105,000	107,400	108,800	110,400	111,800	112,100	111,400
60-64	76,800	81,800	86,700	92,000	96,300	99,600	102,400	104,700
65-69	57,300	61,200	65,000	66,800	69,800	73,800	78,500	83,300
70-74	37,200	39,400	41,800	46,100	50,100	53,700	57,300	60,800
75-79	27,300	28,100	29,100	30,200	31,900	33,500	35,300	37,600
80-84	20,800	21,000	21,300	21,700	22,000	22,700	23,300	24,100
85-89	12,800	13,600	14,100	14,400	14,700	14,900	15,000	15,300
90-99	6,500	7,400	8,200	8,800	9,400	9,900	10,500	11,000
100+	200	200	200	300	400	500	500	600
Total	**1,536,200**	**1,571,100**	**1,602,300**	**1,631,600**	**1,662,900**	**1,694,300**	**1,726,000**	**1,760,600**

Numbers may not add up due to rounding

Table 5 - Selected Commodity Prices

City of Calgary

FORECAST COMPLETED: September 2015						BASE FORECAST					
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
CONSTRUCTION COMMODITIES											
Iron and steel products	-0.9	1.9	-1.3	-1.1	3.1	3.5	2.4	-6.3	1.0	-2.0	-3.0
Aluminum products	10.3	4.3	-9.5	2.4	6.4	7.5	0.7	-0.6	-4.3	-0.2	-5.8
Wood	-1.6	2.0	2.1	6.9	3.2	0.6	-3.6	-4.1	-4.9	-4.2	-1.7
Asphalt**	13.1	-0.7	13.6	-5.4	14.5	-5.0	-25.0	6.8	-3.3	-3.1	1.4
OPERATIONAL COMMODITIES											
Rubber	69.2	32.8	-27.5	-14.3	6.1	-21.7	7.9	14.4	12.6	4.4	2.2
Diesel oil	11.7	23.3	-0.5	5.2	7.9	-19.8	-18.5	8.8	0.6	-3.9	-6.0
Vehicle parts	1.7	1.8	2.6	0.1	0.9	1.0	2.0	2.6	3.0	3.7	3.8

Numbers may not add up due to rounding

** Based on Ontario Ministry of Transportation Asphalt Price Index

APPENDIX

Demographic Demand for Dwelling in Calgary

In the Fall of 2012 Corporate Economics published a study on the Demographic Demand for Dwellings in Calgary (see page 100 of the Calgary and Region Economic Outlook 2012-2017 available at Calgary.ca/economy).

In that study we presented an alternative method for predicting the demand for residential dwellings which did not rely on what are known as "headship rates". Headship rates are the rate at which each individual age and sex cohort tend to form the head of households in Canada. The rates are computed using surveys and estimation procedures. Instead of using these externally produced estimates we computed the household demand propensities for Calgary using City of Calgary Civic Census data. We then applied these estimates to our population forecast, by age and sex cohort, to produce a forecast of the number of dwellings demanded in Calgary, by dwelling type. This forecast is strictly based upon historical demographic trends and is not responsive to changes in relative prices, changes in tastes, or changes in the availability of housing characteristics, like availability of single family dwellings within 30 min drive of work.

In preparing this year's update to the forecast we noted that the model is still accurately reflecting the market mix in Calgary. We also note that housing prices between housing types, as a percent of household annual earnings, have been remarkably steady in Calgary since 2009. Two things have shifted since our original work. One is a greater proportion of younger households, which tend to gravitate more toward the lower priced end of the housing market; e.g. condos, townhouses. This shift is captured in the model. Another shift is the availability of dwellings, particularly condos, within close proximity to the primary work destination in Calgary – downtown. That availability has dramatically improved.

Based on historical preferences our model indicates that the condo market may be over-supplied by about 5,000 units and the single family market may be under-supplied by about 7,000 units. This indicates a potential preference shift for some people from house ownership, usually in the suburbs, to condo ownership, now available in better proximity to the downtown core. Next year, when City Clerks is next scheduled to add age and sex to the civic census questions, we will be able to check our methodology to see if preferences have changed or if new affordability issues are at play.

What follows is this year's update to Corporate Economics' Demographic Demand for Dwellings in Calgary, by housing type.

Demographic Driven New Housing Demand in Calgary by Housing Type

Demand for Dwellings in Calgary (as of April in each calendar year)

(Number of Units)

Type	Year							
	2015 Stock	2015	2016	2017	2018	2019	2020	2021
Single Family	275,897	291,247	298,155	304,421	310,368	316,844	323,346	330,146
Duplex	34,166	33,709	34,379	35,097	35,889	36,720	37,595	38,412
Apt/Condo	111,185	105,663	108,307	110,550	112,509	114,589	116,690	118,775
Townhouse	52,113	52,722	53,930	55,196	56,556	57,974	59,495	61,023
Conversion	17,548	17,475	17,766	17,980	18,179	18,435	18,671	18,969
Other (multi)	3,146	5,302	5,414	5,524	5,635	5,751	5,868	5,990
Total	494,055	506,118	505,302	517,716	529,427	540,791	551,735	562,209

Type	Year								
	2022	2023	2024	2025	2026	2027	2028	2029	2030
Single Family	337,668	345,822	354,100	361,815	369,395	374,923	380,539	387,577	394,383
Duplex	39,211	39,985	40,781	41,582	42,469	43,339	44,191	45,031	45,847
Apt/Condo	121,140	123,703	126,315	128,683	131,235	132,771	134,369	136,540	138,445
Townhouse	62,598	64,227	65,849	67,454	69,105	70,754	72,425	74,042	75,661
Conversion	19,311	19,696	20,098	20,483	20,870	21,083	21,335	21,719	22,094
Other (multi)	6,121	6,257	6,395	6,526	6,652	6,765	6,877	6,999	7,115
Total	572,992	583,680	594,260	604,740	614,688	624,471	634,102	643,584	652,942

Demand for Completions of New Housing Construction (as of April in each calendar year)

(Number of Units)

Type							
	2015	2016	2017	2018	2019	2020	2021
Single Family	15,350	6,908	6,266	5,947	6,476	6,502	6,800
Duplex	-457	670	718	792	831	875	817
Apt/Condo	-5,522	2,644	2,243	1,959	2,080	2,101	2,085
Townhouse	609	1,208	1,266	1,360	1,418	1,521	1,528
Conversion	-73	291	214	199	256	236	298
Other (multi)	2,156	112	110	111	116	117	122
Total	12,063	11,833	10,817	10,368	11,177	11,352	11,650

Type	Year								
	2022	2023	2024	2025	2026	2027	2028	2029	2030
Single Family	7,522	8,154	8,278	7,715	7,580	5,528	5,616	7,038	6,806
Duplex	799	774	796	801	887	870	852	840	816
Apt/Condo	2,365	2,563	2,612	2,368	2,552	1,536	1,598	2,171	1,905
Townhouse	1,575	1,629	1,622	1,605	1,651	1,649	1,671	1,617	1,619
Conversion	342	385	402	385	387	213	252	384	375
Other (multi)	131	136	138	131	126	113	112	122	116
Total	12,734	13,641	13,848	13,005	13,183	9,909	10,101	12,172	11,637

Glossary

AECO C

Is the central natural gas spot market price for Alberta, measured in CAN$ per gigajoule. Joule is the international measure of energy. One gigajoule corresponds to one billion joules.

Account surplus

Occurs when a nation's total exports of goods, services and transfers exceed its total imports of these items.

Advanced economies

Currently composed of 31 developed countries: Australia, Austria, Belgium, Canada, Cyprus, Denmark, Finland, France, Germany, Greece, Hong Kong SAR, Iceland, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Malta, Netherlands, New Zealand, Norway, Portugal, Singapore, Slovenia, Spain, Sweden, Switzerland, Taiwan Province of China, United Kingdom and the United States.

Aggregate demand

The sum of consumer, government and business spending and net exports.

Baltic Dry Index (BDI)

The Baltic Dry Index (BDI) is a popular financial barometer to track worldwide international shipping prices of various dry bulk cargoes. It is a number issued daily by the London-based Baltic Exchange. The index provides an assessment of the price of moving the major raw materials by sea.

Baby-Boomer Generation (BBG)

Those born between January 1st 1946 and December 31st 1964.

Commodities

Goods usually produced and/or sold by many different companies. It is uniform in quality between companies that produce/sell it in the sense that we cannot tell the difference between one firm's product and another. Examples of commodities include oil, electricity, metals, cement and agricultural products, such as wheat, corn, rice.

Consumer price index (CPI)

The Consumer Price Index (CPI) is an indicator of the consumer prices encountered by consumers. It is obtained by calculating, on a monthly basis, the cost of a fixed "basket" of goods purchased by a typical consumer during a given month. The basket contains products from various categories, including shelter, food, entertainment, fuel and transportation. Since the contents of the basket remain constant in terms of quantity and quality, the changes in the index reflect price changes. The CPI is a widely used indicator of inflation (or deflation) and indicates the changing purchasing power of money in Canada.

Core inflation rate

Rate of inflation in the Consumer Price Index excluding food and energy.

Defined benefit plan (DB)

A defined benefit plan provides a retiree with a pre-determined percentage of his/her working salary when he/her retires.

Defined contribution plan (DC)

A defined contribution plan (DC) provides with a pension benefit based on the accumulated contributions from both an employee and his/her employer and investment income by the pension administrator.

Dependency ratio

The ratio of the sum of the population under 15 years and over 64 years divided by the working age population (15 years to 64 years)

Double-dip recession

A double-dip recession refers to a recession followed by a short-lived recovery, followed by another recession. The technical measurement of double-dip is when gross domestic product (GDP) slides back to negative after several quarters of positive growth.

Economic region

The area generally correspondent to a region used by the province for administrative and statistical purposes.

Economy

The term economy refers to the institutional structures, rules and arrangements by which people and society choose to employ scarce productive resources that have alternative uses in order to produce various goods over time and to distribute them for consumption, now and in the future, among various people and groups in society. In a free-market economy like Canada's the laws of supply and demand determine what, how and where goods and services should be produced, who should consume them and when. A "strong' or "healthy" economy is usually one that is growing at a good pace.

Employment rate

The number of employed persons expressed as a percentage of the working age population.

Euro zone

Denomination given to the European Union members that adopt the Euro as their currency. As of 2007 there were 15 countries in the Euro Area: Belgium, Germany, Ireland, Greece, Spain, France, Italy, Cyprus, Luxembourg, Malta, The Netherlands, Austria, Portugal, Slovenia and Finland.

European Union or European Economic Community

Initially conceived as a way of avoiding war among European countries, it is currently the most sophisticated and advanced form of economic integration, encompassing the free movement of people, goods and services among its members which is presently at 27. Note that membership in the European Union does not automatically lead to adoption of the Euro.

Eurostat (Statistical Office of the European Community)

It produces data for the European Union and promotes harmonization of statistical methods across the member states of the European Union.

Emerging economies

This is a reference to countries that, due to growth performance, are considered in transition between developing and developed countries. The most important emerging economies are Brazil, China, India and Russia, sometimes referred to as BRIC.

Fiscal policy

Also called budgetary policy, the overall program for directing government spending and taxation for the purpose of keeping the actual Gross Domestic Product (GDP) close to the potential full employment GDP, but without overreaching that potential and causing inflation.

Fixed exchange rate

Sometimes called a pegged exchange rate, is a type of exchange rate regime wherein a currency's value is matched to the value of another single currency or to a basket of other currencies, or to another measure of value, such as gold.

Glossary

Goods-producing industry

Includes agriculture, forestry, fishing, mining, oil and gas extraction, utilities (electric, gas and power), construction and manufacturing.

Gross domestic product (GDP)

GDP is a measure of the value of all goods and services produced by the economy. Unlike Gross National Product (GNP), GDP only includes the values of goods and services earned by a region or nation within its boundaries.

Home market value

An indicator to compare houses across the country. This indicator is based on an 1,800 sq. ft., seven-room, three-bedroom, two-bath home in a suburban community where middle income Canadian families of four reside.

Housing markets

Consists of two markets: new house and re-sale markets referred to as MLS (Multiple Listing Service). Each is described by different parameters and followed closely by different statistical bodies: the Planning and Building Department with The City of Calgary and Statistics Canada for new houses, and The Canadian Real Estate Association for the re-sale market.

Housing units

A general term that refers to single-family houses, townhouses, mobile homes and/or condominiums.

Index

An economic tool that allows for data comparison over time. An index number is used to indicate change in magnitude (cost or price) as compared with the magnitude at some specified time.

Inflation rate

A measure of the percentage change in the Consumer Price Index for a specific period of time.

In-migrants

Persons currently living within a census metropolitan area (CMA), that five years earlier lived elsewhere in Canada or abroad.

Labour force

The working age population, which includes employed and unemployed people.

Labour force participation rate

The participation rate refers to the number of people who are either employed or are actively looking for work. It is the ratio between the labour force and the working age population.

Major advanced economies (G7)

Composed of seven countries: Canada, France, Germany, Italy, Japan, United Kingdom, and the United States

Migrants

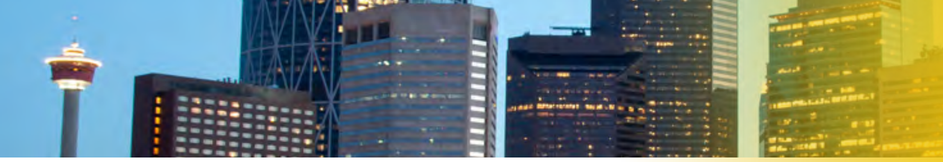
Persons who lived in a different census subdivision (CSD) than the one they lived in five years earlier (internal migrants) or who lived outside Canada (external migrants or immigrants).

Monetary policy

Refers to government measures undertaken to affect financial markets and credit conditions with the ultimate objective of influencing the overall behaviour of the economy. Monetary policy is usually the responsibility of the central banks, such as the Bank of Canada.

Non-accelerating inflation rate of unemployment (NAIRU)

This is the rate of unemployment consistent with an economy that is growing at its long-term potential so there is no upward or downward pressure on inflation. It changes over time primarily because of demographic shifts and technological advancements.



OECD

It is the acronym for Organization of Economic Cooperation and Development. It currently has 30 members, all from developed economies in Europe, North America, Asia and Oceania. It was created in 1961 and aims to foster prosperity and fight poverty through economic growth and financial stability.

OPEC

Organization of Petroleum Exporting Countries. It has 12 country members; Algeria, Angola, Ecuador, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.

Old age dependency ratio

The ratio of the population over 64 years divided by the working age population (15 years to 64 years).

Recession

A period in which the economy experiences two consecutive quarters of gross domestic product decreases. During this temporary period there is a decline in industrial production and trade.

Reserve currency

A reserve currency, or anchor currency, is a currency that is held in significant quantities by many governments and institutions as part of their foreign exchange reserves. It also tends to be the international pricing currency for products traded on a global market, and commodities such as oil, gold, etc.

Service-producing industries

Includes trade, transportation and warehousing, finance, insurance and real estate, professional, scientific and technical services, management administrative and other support, educational services, health care and social assistance, information, culture and recreation, accommodation and food services, other services, and public administration.

Unemployment rate

The number of unemployed persons expressed as a percentage of the labour force.

West Texas Intermediate (WTI)

Also known as Texas Sweet Light, a type of crude oil used as a benchmark in oil pricing and the underlying commodity of the New York Mercantile Exchange's oil futures contracts. This oil type is often referenced in North American news reports about oil prices, alongside North Sea Brent Crude.

Western Canadian Select (WCS)

WCS is one of many petroleum products from the Western Canadian Sedimentary Basin oil sands. WCS behaves as a benchmark price for heavy crude for the Canadian market. The price for WCS crude oil is subjected to a discount against West Texas Intermediate that reflects its lower quality and higher refining costs.

Working age population

Corresponds to all persons aged 15 years and over, with exception of the following: persons living on Indian reserves, full-time members of the regular armed forces and persons living in institutions. The working age population refers to the non-institutional population.

Yield Curve Twist

A yield curve line plots the interest rates, at a set point in time, of bonds having equal credit quality, but differing maturity dates. A yield curve twist arises when both short-term and long-term interest rate yields do not move in the same direction resulting in a steepening or flattening of the curve. A steepening of the yield curve typically signals short-term expectation of a decrease in the overnight rate (monetary stimulus) or the continuation of a low rate policy accompanied by long-term expectation of this being insufficient to keep inflation in check. A flattening of the yield curve signals short-term expectation of an increase in the overnight rate (monetary tightening) accompanied by more moderate inflation expectations going forward.

Calgary

WHO WE ARE

Corporate Economics provides services in four areas: forecasting, information provision, policy analysis and consulting. We also monitor the current economic trends which allows us to develop unique insights on how external events are impacting the local economy and the Municipal government. We are experienced at researching different economic topics and have developed reliable methods of forecasting and analysis.

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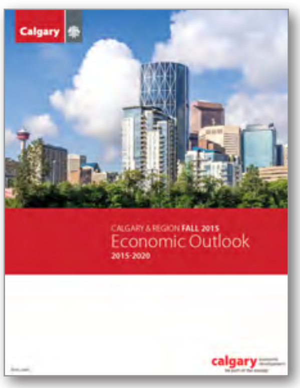
Many of our publications are available on the internet at **www.calgary.ca/economy**.

Forecasting



- Calgary & Region Economic Outlook
- Energy Reports on Natural Gas and Crude Oil

Information Provision

- Labour Market Review
- Inflation Review
- Current Economic Analysis
- Housing Review

Policy Analysis

- A Case of Fiscal Imbalance: The Calgary Experience
- Diesel Fuel Price Pass-Through in Calgary
- Calgary Residential and Commercial Real Estate Markets

Corporate Research Analyst: Estella Scruggs

Sources:
Statistics Canada, CMHC, CREB, MLS, Bank of Canada, Conference Board of Canada, GLJ Energy Publications, The City of Calgary, Centre for Spatial Economics, IHS Global Insight, U.S. Federal Bank Reserve of St. Louis, International Money Fund (World Economy Outlook), World Bank, Central Plan Bureau Netherlands, Calgary Economic Development, and others.