Fall 2014

CALGARY & REGION ECONOMIC OUTLOOK

2014-2019

calgary economic development
be part of the energy™

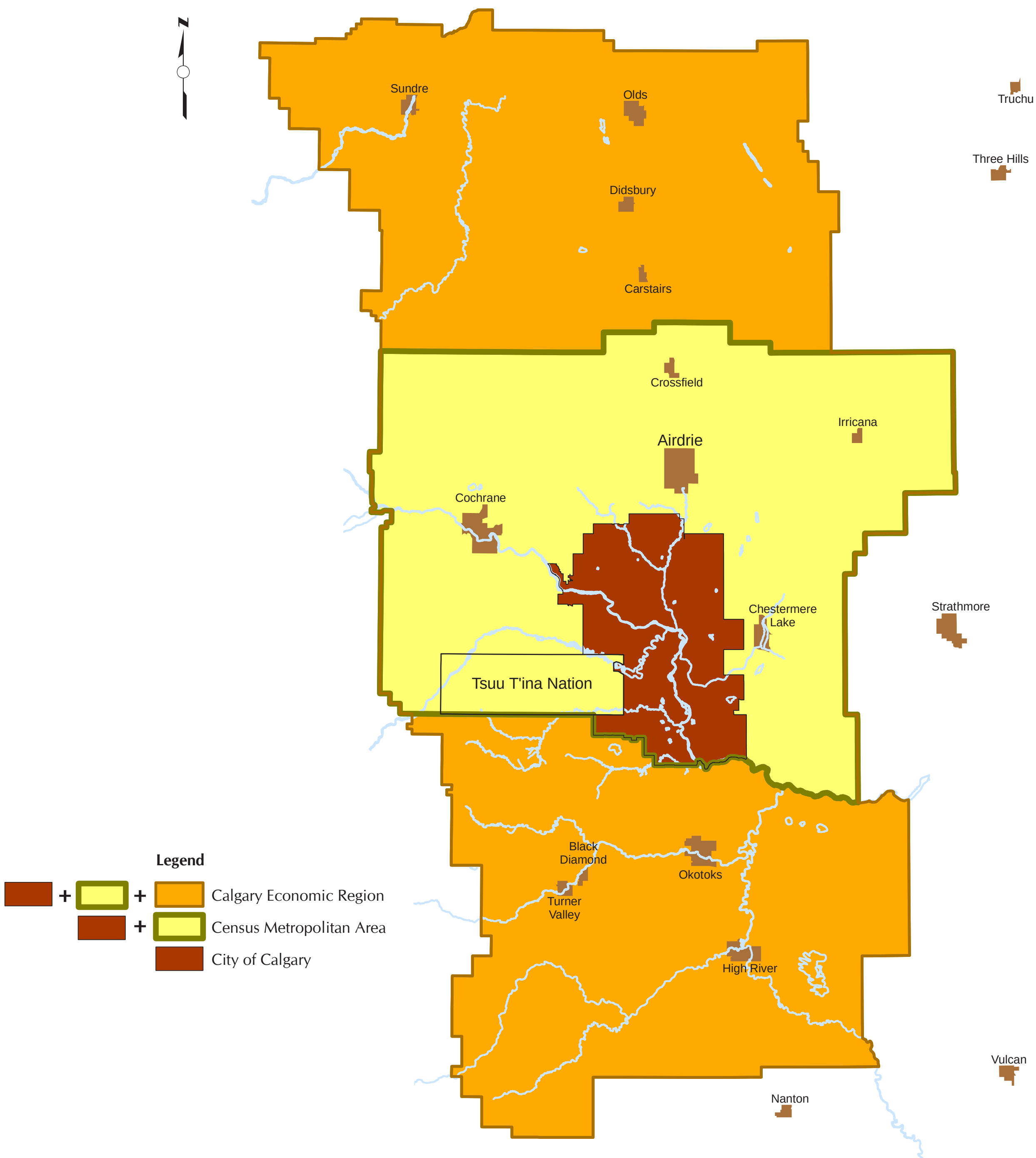
THE CITY OF CALGARY
CHIEF FINANCIAL OFFICER'S DEPARTMENT

Table of Contents

TEXTBOXES

Completed: October 2014

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. It also provides a common basis for decision-making. 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. No other publication currently provides a comprehensive analysis of the local economy. Several research institutions restrict their analyses to the Alberta economy and few analyses and forecasts are available for the urban areas within the province.

This report attempts to answer the following questions:

- What would be the overall rate of growth of the local economy?
- What would be the drivers of the local economy?
- How many jobs would be created?
- What would be the size of the city and region populations?
- What would be the inflation rate?
- What are the implications for municipal finance?

Assumptions

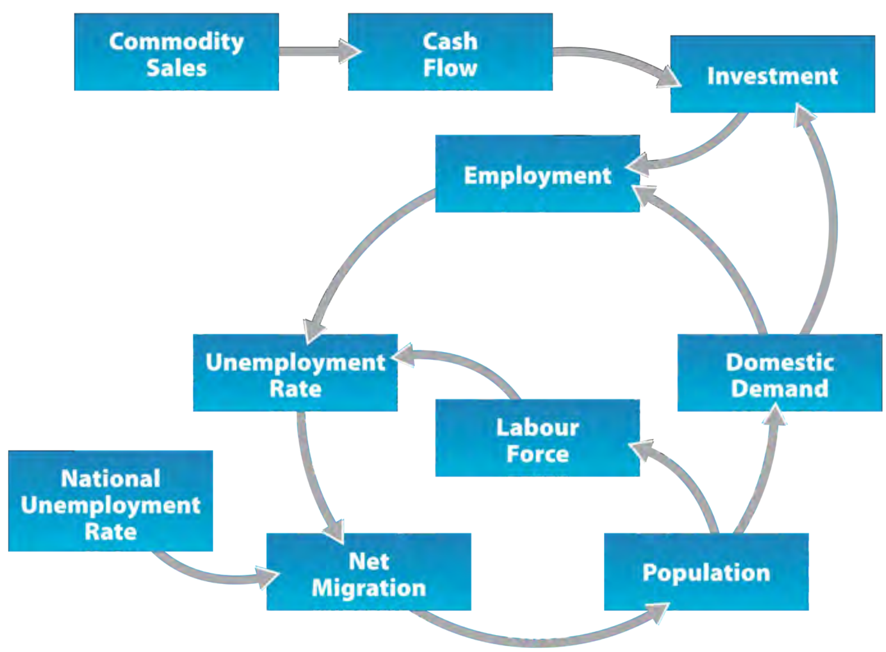
The study area for the economic forecast is the Calgary Economic Region (CER). The CER is a small open economy and is therefore affected by changes outside its borders. For example, political instability in the world's oil producing regions can produce a sharp increase in oil prices and in turn, this 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. If the world economy grows at a sharply slower rate, then local economic activity will follow suit.

Regional Growth Dynamics



EXECUTIVE SUMMARY

Forecast

City of Calgary

- The City of Calgary's population reached 1,195,196 in 2014, according to the 2014 Civic Census, up from 1,156,686 in 2013. The natural population increase was 10,491 in 2013-2014, up from 10,260 in 2012-2013. Net-migration was 28,017 in 2013-2014, up from 19,067 in 2012-2013.
- Calgary's population is projected to increase by 120,500 between 2014 and 2018. In addition, the total number of households is expected to increase by 47,000 units. Net migration will account for the majority of population growth (71,000) over the 2015-2018 period.
- Housing starts in Calgary are expected to amount to 12,800 units in 2014 and 12,500 units in 2015, up from 9,400 in 2013. Housing starts are expected to total 45,600 units over the 2015- 2018 period. This will be in line with household formation (47,600 units) in the period.
- The value of building permits for the twelve months ending July 2014 was estimated at $6.326 billion, up from $5.175 billion for the same period in 2013. The forecast for building permit values is $6.3 billion in 2014. They will eventually decline to $5.0 billion by 2018.

Calgary Economic Region

- The Calgary Economic Region is expected to grow by 3.8 per cent in 2015, down from 4.0 per cent in 2014. Over the forecast period, the aging of baby boomers is expected to impose a drag on the economy's potential growth rate, as they withdraw from the labour force and are replaced by relatively smaller numbers in the succeeding cohorts.
- The inflation rate would average 2.9 per cent in 2014. This is an upward revision from the Spring 2014 forecast of 2.1 per cent. The Calgary Census Metropolitan Area's (CMA) inflation rate is expected to remain above the mid-point of the Bank of Canada's inflation target range of 1 to 3 per cent, from 2015 to 2018. This will result from the relative strength of the Calgary economy.
- Total employment is expected to average 857,000 in 2014, up from 830,000 in 2013 and will climb to 951,000 by 2018. Over the 2014-2018 period, total employment is expected to increase by 2.6 per cent annually.
- Construction inflation has been moderating lately after wild swings in the 2006-2009 period. Over the longer term, there will be softer price escalation because of more stable energy prices and a lower level of commercial construction activity in Calgary (as projects currently under way are completed).
- The Calgary Economic Region's unemployment rate was estimated at 4.8 per cent in 2013, down from 4.9 per cent in 2012 and 5.8 per cent in 2011, as employment growth exceeded labour force growth. With strong population growth in Alberta and Calgary, the local unemployment rate will average 5.1 per cent in 2014 as labour force growth exceeds employment growth.

Assumptions:

Alberta

- This year Alberta's economy is set to clock in a second consecutive 3.9 per cent advance in real GDP. As population growth slows in the coming years, economic growth will also decelerate. Nevertheless, real GDP will expand by an average of 3.1 per cent between 2015 and 2019.
- Employment growth averaged 3.5 per cent in the first seven months in 2014, but the unemployment rate has failed to budge from its year-to-date average of 4.7 per cent. Soaring population growth has led to a sharp uptick in the size of the labour force, meaning that employment gains are barely keeping up.

- The escalation of numerous geopolitical conflicts has led to considerable oil price volatility. Prices for West Texas Intermediate averaged roughly US$101.00/barrel in the first half of the year. Although they have come down in recent weeks, instability in the Middle East threatens to lead to another run-up in the coming months.
- Natural gas prices at AECO have trended significantly higher this year, as the frigid winter that most of North America endured drained storage volumes in order to meet demand for heating. Another particularly cold winter could drive the cost of natural gas even higher. In the medium term, however, prices will remain relatively stable amid ample North American supply.

Canada

- For the forecast period annual real output growth will vary between 2.1 per cent and 2.6 percent. The unemployment rate will decline to 6.3 per cent in 2019. Real output growth will be unbalanced across Canada, with western provinces outperforming their eastern counterparts.
- For the forecast period a rebound of the U.S. economy is expected to lead to interest rate increases and an appreciation of the U.S. dollar. Thus, the Canadian dollar will remain low relative to the U.S. dollar, which will be a boon to Canadian exports.
- The federal government is expected to achieve a budget surplus in 2015, which will ease spending constraints or encourage tax relief. Private business investment, especially non-residential fixed investment, is expected to spur output growth as new machinery and equipment are purchased and demand for labour to operate them increases. Net exports of goods will move to a positive balance phase.
- The Bank of Canada expects that the economy will have returned to full capacity by mid-2016. The prime lending rate is expected to increase from 3.0 per cent in 2013 to 6.7 per cent in 2019.

United States

- U.S. economic output increased at an average rate of 3 percent in the second half of 2013, and after weather disruptions in early 2014 this pattern is expected to resume. Economic growth in the U.S. is expected to gain momentum in 2015 and 2016.
- Output growth will be driven by employment growth, with more than 7 million net new jobs expected between 2014 and 2019, rising household wealth, which boosts consumer confidence, and the expansion of industrial production to meet future demand.
- The International Monetary Fund (IMF) forecasts that the U.S. will not achieve the level of potential output until mid-way through 2019. The duration of below capacity output has been longer for the U.S. than it has been for Canada, but the U.S. economy is expected to return to full capacity more quickly.
- The regional distribution of U.S. economic growth has implications for the Calgary and Alberta economies. The share of Alberta's non-oil exports to the western regions of the U.S. has increased from 48 per cent in 2009 to 52 per cent in 2013. Further growth in the U.S. west will boost Alberta's non-oil exports.

World

- The world economy is expected to gain momentum throughout the forecast period. Developed countries are expected to make a significant contribution to economic growth.
- Excess capacity in the world economy, however, should keep inflation relatively low.

Executive Summary

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)	3.3	4.0	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.
The United States			
Real Gross Domestic Product Growth (chained 2009 dollars) (%)	2.2	2.9	Increased demand for Canadian (Alberta) exports such as oil and 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) (%)	2.0	2.4	Increased 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	4.8	Higher borrowing costs for The City's suppliers, would increase The City's purchase costs.
Exchange Rate (US$/Cdn$)	0.96	0.92	Lower exchange rates would increase the purchase price of imported goods and services for The City.
Alberta			
Crude Oil Price - WTI (US$/bbl)	97.91	95.38	The City spends about $20 million per year on direct Asphalt expenses; i.e. raw Asphalt, aggregate and prepared Asphalt. Asphalt prices figure prominently in major roadway contracts with third party firms. The City spends more than $25 million annually on diesel to operate public transit and other vehicles in its fleet. The City is beginning to operate a fleet of natural gas powered buses, and in the short term, this will slow The City's increase in demand for diesel. Lower prices would reduce the price of petroleum based commodities such as diesel fuel and asphalt.
Natural Gas Price - AECO/NIT ($/GJ)	3.50	5.15	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 (%)	1.72	0.70	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.
Average Wage Rate Increase (%)	4.3	3.2	The wage inflation rate should be lower in the current cycle given lower employment and participation rates in Alberta. However, wage inflation would exceed consumer price inflation. Wage inflation would apply upward pressure on municipal costs.

Forecast Implications (2015-2018) *continued...*

Variable	Past Cycle 2012-2014 Average	Current Cycle 2015-2018 Average	Forecast Implications
Forecast - Calgary			
Economic Region			
Real Gross Domestic Product (%)	3.9	3.6	Economic growth would contribute to an increase in The City's property taxation and revenue bases.
Total Employment ('000 Persons)	831	917	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	2.6	Non-residential construction activity would slow, and this would have a dampening effect on building permit fees.
Unemployment Rate (%)	4.9	4.9	This may constrain The City's ability to attract highly skilled staff and would place upward pressure on The City's operating and capital costs. An increase in the labour force participation rates may act as offset to falling unemployment rates.
CMA - Inflation Rate (%)	1.9	2.2	This would increase the operating costs for Civic partners.
Building Permits ($billion)	6.9	6.1	City revenues from building permits would remain flat. Non-residential revenues may decrease, while residential revenues would increase. Increases may come through inflation adjustments.
CMA - Non-Residential Building Price Inflation (%)	2.4	0.8	The rate of construction cost increases would be relatively lower in this budget cycle but construction costs would still be higher.
City			
Total Population ('000 Persons)	1,157	1,273	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)	25.0	15.8	Positive net migration would be the major contributor to population growth. Most migrants would come from international sources.
Household Formation ('000 Units)	10.5	11.9	The annual growth in households would be slightly higher than in the previous budget cycle.
Housing Starts ('000 units)	10.8	11.4	The City's revenues from residential building permits would be higher than in the last planning cycle.
House Price Index Inflation (%)	4.9	0.8	Higher house prices would continue to add to household wealth. In addition, house price inflation would contribute to the growth in the residential taxbase.

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

Forecast Risks

The increasing number of geopolitical conflicts across the globe (including strained relations between Russia and Ukraine, increasing tensions in Iraq, Syria, Libya and Egypt, increased tensions between the Israeli and Palestinian governments, insurgence of Boko Haram in Nigeria) in 2014 is contributing to business and economic uncertainty as it increases the likelihood of global oil and gas supply disruptions. The trade sanctions imposed on Russia by the United States, the European Union, and the United Kingdom provide a major downside risk to global growth for 2014 and 2015.

The upside risk to global growth is that emerging markets and developing markets react appropriately (using the right balance of monetary and fiscal policy) to rising interest rates in the industrialized nations and accommodate the external demands which drive their exports.

As the United States looks to become more energy sufficient through reliance on its abundant supply of shale gas resources and investments in energy production, Alberta's energy industry will require increased access to emerging and developing markets. Increased access to the Asian market wil be particularly beneficial, with the economies of India and China alone home to a population of over 2 billion people. The current bottleneck in pipeline capacity for Alberta's oil poses a downside risk, given the improving condition in energy security in the United States. Calgary, a beneficiary of support services to the oil sector in Alberta, may find itself facing headwinds as commodity prices, especially oil and gas prices, remain somewhat subdued. Coversely, there is upside potential from the risks posed by geopolitical tensions and extreme weather conditions (along with already low levels of natural gas inventories in Alberta). These concerns will continue to put upward pressure on natural gas and oil prices. Higher prices should drive energy industry investment and add to Calgary's bottom line, increased employment, and investment opportunities in complementary industries[1].

1 Higher oil prices combined with U.S. plans to keep interest rates low into 2015 will put upward pressure on the Canadian dollar. A higher Canadian dollar will make Canadian exports relatively expensive and put net exports at risk of turning negative.

Dragging Factors | **Lifting Factors**

Consumer Sector

Dragging Factors:
- Rising interest rates
- High consumer debt levels
- Negative net migration

Lifting Factors:
- Increasing employment
- Tax relief

+

Business Sector

Dragging Factors:
- Depressed natural gas prices
- Sagging consumer and business confidence
- Low housing starts
- Low non-residential construction
- Rising interest rates

Lifting Factors:
- Rising oil prices
- Low interest rates

+

Government Sector

Dragging Factors:
- Reduction in government spending
- Tax relief

+

World outside Alberta

Dragging Factors:
- U.S. economy slows as interest rates rise
- Russia and Brazil economies experience weaker growth
- Developed economies experience significantly weaker growth
- Escalation of geopolitical instability in Russia-Ukraine, Iraq and Syria
- The global economy becomes significantly protectionist

Lifting Factors:
- Strong growth in the emerging economies such as China and India
- Confidence in the developed world prompting a stronger rebound in demand

City of Calgary

Population

The City of Calgary's population reached 1,195,196 in 2014, according to the 2014 Civic Census, up from 1,156,686 in 2013. Natural population increase was 10,491 in 2013-2014, up from 10,260 in 2012-2013. Net-migration was 28,017 in 2013-2014, up from 19,067 in 2012-2013.

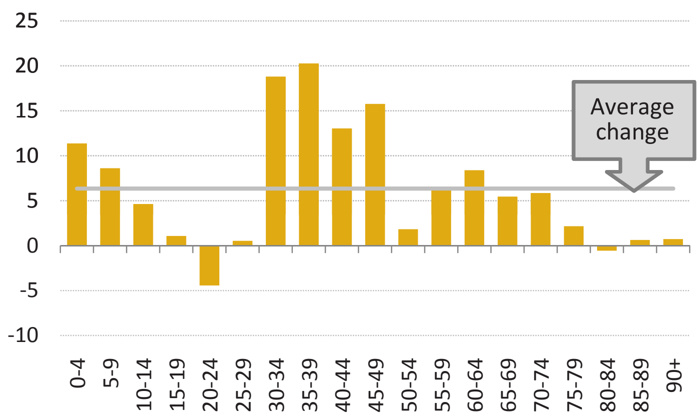
The population increase of 38,508 between 2013 and 2014 was significantly higher than what was projected in the fall of 2013. Inter-provincial migrants were attracted to Alberta and Calgary by a robust provincial job market and pushed by the lack of job opportunities in the rest of Canada. For example, the Calgary Economic Region (CER) has garnered more than ten per cent of Canada's job growth since December 2013. This is remarkable when one considers that the CER only has about four per cent of the nation's population. Net migration is therefore expected to return to more normal levels as the job market in the rest of Canada experiences stronger growth.

Net migration data for the 1997-2013 period, for the city of Calgary and the Calgary Economic Region show that 60 per cent of net migrants to the region settle in Calgary. The population projection for the 2015-2018 period is based on the assumption that this relationship will continue. In addition, net migration to the city averaged 14,200 persons annually between 2000 and 2014. The projection assumes that net migration would total 22,000 in 2014-2015, and decline to 14,000 by the end of the forecast period. This scenario is based on the expectation that economic growth and job creation would strengthen in the rest of Canada from 2015 to 2019, which would reduce the motivation for job seekers to migrate to Alberta and Calgary in search of employment.

Calgary's population is projected to increase by 120,539 between 2014 and 2018[2]. In addition, the total number of households is expected to increase by 47,400 units. Net migration is expected to account for the majority of population growth (71,000) over the 2015-2018 period.

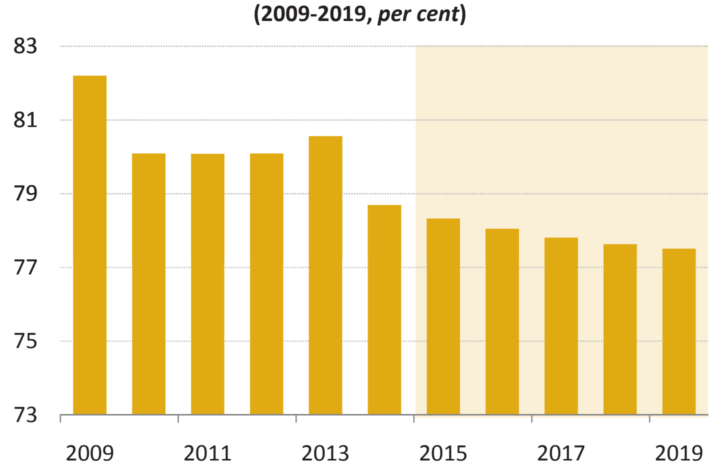
The age distribution of Calgary's population would shift by 2018 in response to the combination of population aging,

City of Calgary: Population change 2014-2018
(*thousands of persons*)



Source: City of Calgary Civic Census, Corporate Economics

City of Calgary's Share of the CER's Population
(2009-2019, *per cent*)



Source: City of Calgary Civic Census, Corporate Economics

net migration and natural increase. The largest population increases would be experienced in the 35-39 cohort (20,000) and the 30-34 cohort (19,000). The shifts in these cohorts would come largely from net migration. The 20-24 cohort is expected to be smaller (-4,000) by 2018. This would have an adverse effect on net migration levels as this demographic group tends to migrate at higher rates than other age cohorts.

Population growth in Calgary is projected to be slower (2.2 per cent) than in the Calgary Economic Region (2.6 per cent). Consequently, Calgary would enjoy a declining share of the region's population over the forecast period as the rest of the CER grows at a faster rate than Calgary.

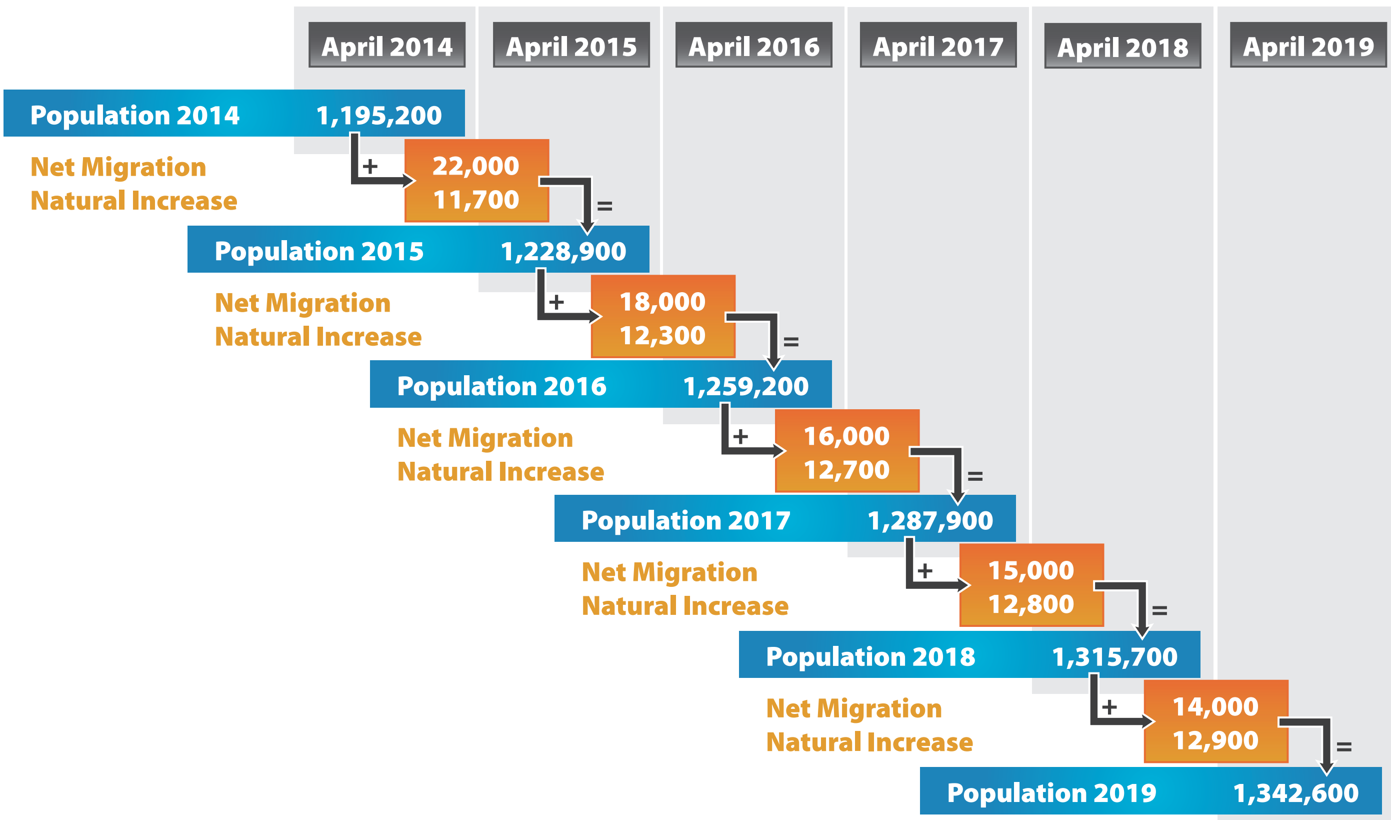
2 Details on this projection are provided in Table 3. An alternative scenario for the city of Calgary's population projection is provided in Table 8.

City of Calgary - Population 2014-2019

	2014	2015	2016	2017	2018	2019
Total Population (as April)	1,195,200	1,228,900	1,259,200	1,287,900	1,315,700	1,342,600
Total Population Growth Rate (April - March)	3.3	2.8	2.5	2.3	2.2	2.0
Total Net Migration (April - March)	22,000	18,000	16,000	15,000	14,000	13,000
Total Births (April - March)	18,400	19,200	19,700	20,000	20,300	20,400
Total Deaths (April - March)	6,700	6,900	7,000	7,200	7,400	7,600
Total Natural Increase (April - March)	11,700	12,300	12,700	12,800	12,900	12,800
Total Households (as April)	453,600	468,100	479,700	490,500	501,000	511,200
Total Household Formation (April - March)	11,100	14,500	11,600	10,800	10,500	10,200

Source: The City of Calgary, Corporate Economics, August 2014

Decomposition of Annual Population Growth (based on Civic Census)

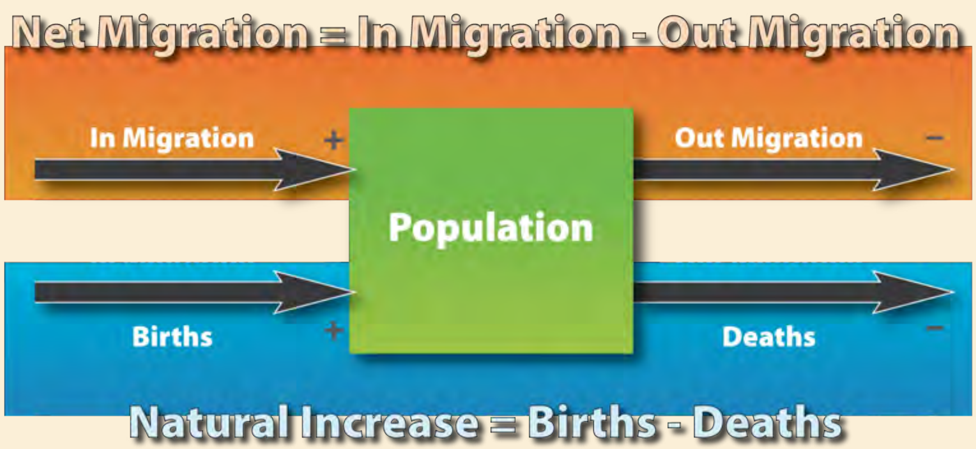


Textbox 1 Population Forecast Methodology

The population projections for Calgary are made using a cohort-survival model. The calculations are built around an identity which states that the current population is the sum of the previous population and the population change that occurred between the current and the previous period. The population change is the sum of natural increase and net migration that has occurred during that time interval. Therefore, Calgary's population as at 2014 is the sum of all population changes over time.

The population projection methodology is sketched in the accompanying diagram. It shows that population increases by in migration and births, and reduces by deaths and out migration. Population growth occurs if the inflows exceed the outflows, and declines occur when the outflows exceed the inflows. An equilibrium situation therefore exists when the inflows and outflows are in balance.

Population Change

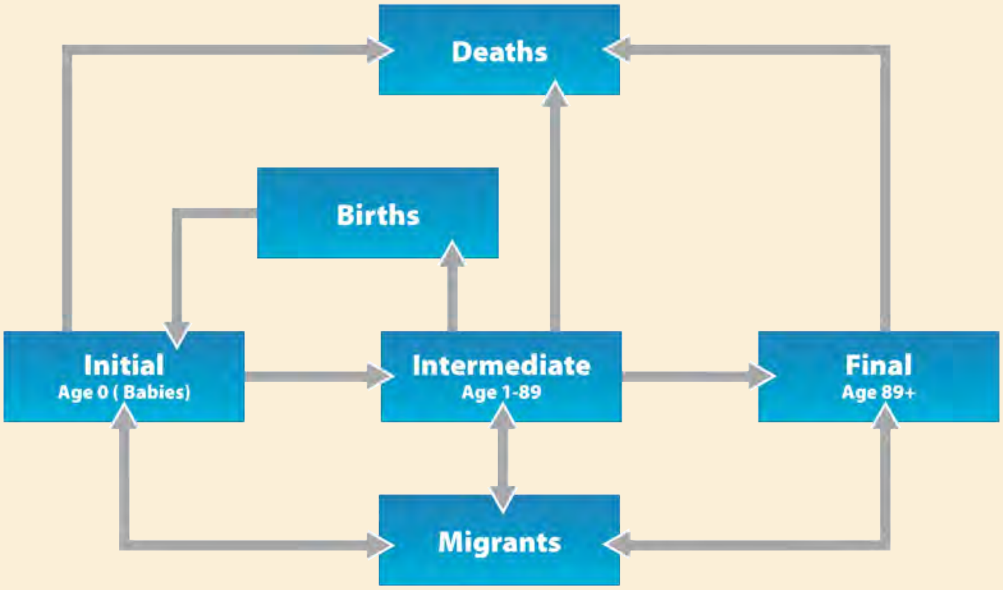


This simple approach could be used to perform short term population projections. Since births, deaths and migration vary across time and by age and sex, very detailed information is required to do either medium or long term population projections. The City of Calgary, uses a mathematical model that calculates population totals for each of 91 discrete age groups and are further disaggregated by sex.

The model's equations could be grouped into three broad categories: initial group, intermediate group and final group. The difference among the groups is based on how each is treated in the model. The population in the initial group is increased by births and in migration and reduced by deaths and out migration. This is the only group where entry is restricted to births and net migration. In other words, population does not age into this group. The intermediate group is entered by aging and in migration. It is exited by death, aging and out migration. The terminal group is exited by death and out migration and differs from other groups in that there is no aging out.

Textbox 1 *Continued....*

Population Projection using Cohort Survival Model



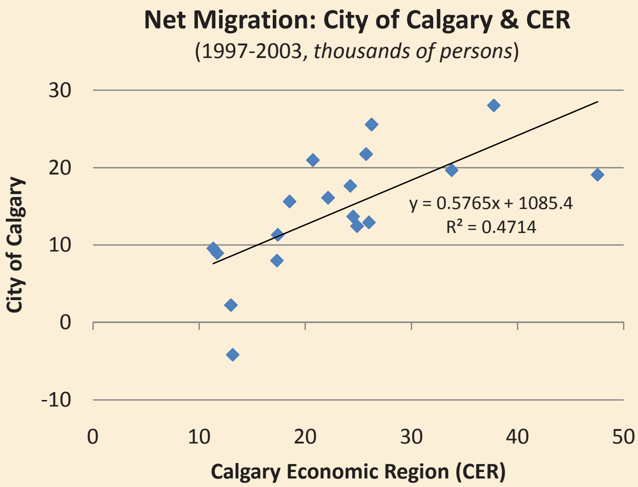
Projection Assumptions

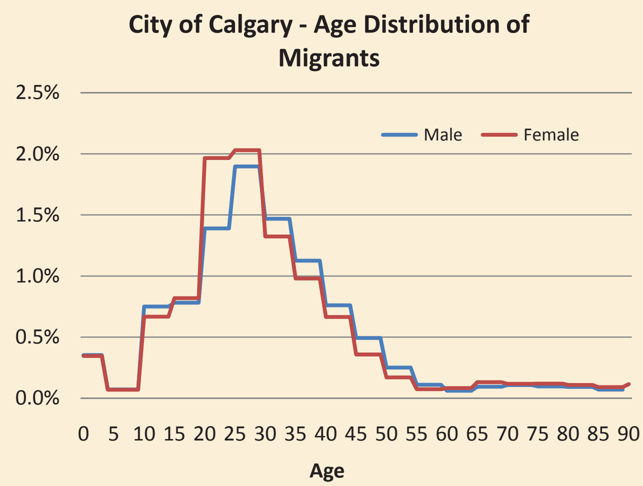
The projection is built on a number of assumptions identified below.

<u>Net Migration</u>

- The current population projections for Calgary are based on the Alberta Treasury Board and Finance's (ATBF) net migration assumptions for the Calgary Economic Region (CER). By using the ATBF's net migration assumptions for the CER, the current population projections are now more linked to those produced by ATBF.
- ATBF has developed three sets of population projections for the CER (low, medium and high). The City's projections for Calgary and the CER are based on ATBF's medium net migration assumptions for the CER. Our current approach represents a departure from the past, when our net migration assumptions were linked to economic assumptions in Calgary and not to the Province's population projections.
- The graph on the next page is a scatter plot of the data for the city of Calgary and the Calgary Economic Region (CER). It shows a positive correlation between migration levels in the city and the CER and indicates that for every ten migrants coming to the region, about five would settle in Calgary.
- The population projections for the city of Calgary are based on the assumption that net migration would total 22,000 persons in 2014-2015 and trend downwards to 13,000 persons by 2018-2019. The age distribution assumptions for net migrants by sex is shown on the next page.

Textbox 1 *Continued....*





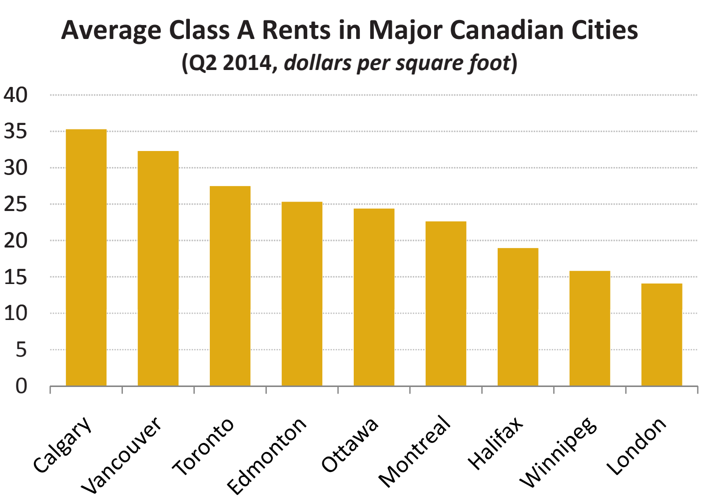
Real estate

Office sector

Calgary currently accounts for 83 per cent of all office construction in Alberta, and across North America Calgary ranks fourth, just behind Toronto. Some 6.7 million square feet will be added to Calgary's 63.9 million square feet over the next five years: 2014: 1.12, 2015: 2.01, 2016: 0.36, 2017: 1.88, 2018: 1.4. Construction of an additional 2 million square feet have been announced but not started yet. All the office construction in Calgary, except one very small project, is Class A.

About 6 million square feet are available, about half headlease and half sublease. Half of all available space is Class A and most of the rest is Class B. Calgary downtown Class A rents are the highest in the country and expectations are that this will continue at least through 2018. A pull-back in Class B and C rent rates seems necessary post 2015, after Quarry Park is completed and Imperial Oil completes its migration out of the downtown core. This will free up an additional 0.5 million square feet that will migrate from Class A to Class B and C, exacerbating recent increases in Class B vacancy.

The City of Calgary's overall office vacancy rate was estimated at 9.2 per cent in the second quarter (Q2) of 2014, up from 7.7 per cent in Q2 2013, as space-absorbed lagged space-added-to-inventory. The vacancy rate is expected to drift down slowly over time in response to employment growth.



Source: CBRE Q2 2014 Canada Office Market View

Residential sector

Residential construction activity over 2012-2014 was driven by strong population growth, which created an increasing market for residential space. With low residential vacancy rates and house price inflation on the rise, conditions are favourable for new home construction. Housing starts for the City of Calgary totalled 12,995 units for the 12 months ending July 2014, up from 8,812 in 2013. Single family starts increased slightly to 4,870 units in 2014, up from 4,593 units in 2013. Meanwhile, multi-family starts climbed to 8,125 units in 2014, up from 4,219 units in 2013.

Across the City, the apartment vacancy rate hovered around 1.0 per cent in 2013, down from the recent average of 1.3 per cent in 2012. Continued high demand for apartments has resulted in the average rent for a 2 bedroom unit increasing to around $1,300 per month.

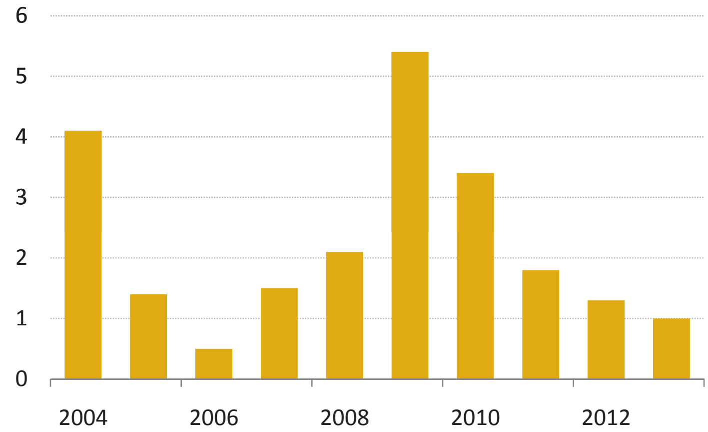
Prices for single family homes in Calgary recently started to show above-inflation appreciation in value for the first time since the last recession. Prices for single family houses are currently 15 per cent higher than they were just before the recession. This is 4 per cent more than general inflation over the same period. Prices for single family homes finally caught up to inflation at the start of 2014 grew faster than general inflation for the first half of the year.

This is the result of higher than anticipated net migration to Calgary. The Calgary economy continues to generate well paying jobs, while the rest of Canada continues to languish in a protracted job slump. Many people in Canada are relatively immobile as they are locked in by housing debt and social connections, yet many still find the means to relocate and start over in Calgary.

Now that house prices have increased to the point where those who bought in 2007-2008 can sell without taking a loss, we anticipate the number of listings to increase. Prices are expected to continue to rise this year before increased listings result in a softer market next year. The primary first home buying age cohort is expected to continue to grow, peaking in 2018. This is expected to drive continued escalation of house prices. After 2018, the demographic picture changes. With a shrinking population in the first-time home buying age group, average prices are expected to stop growing. This is because modest escalation in move-up home prices will be offset by a drop in entry level home prices.

Calgary CMA: Apartment Vacancy Rate

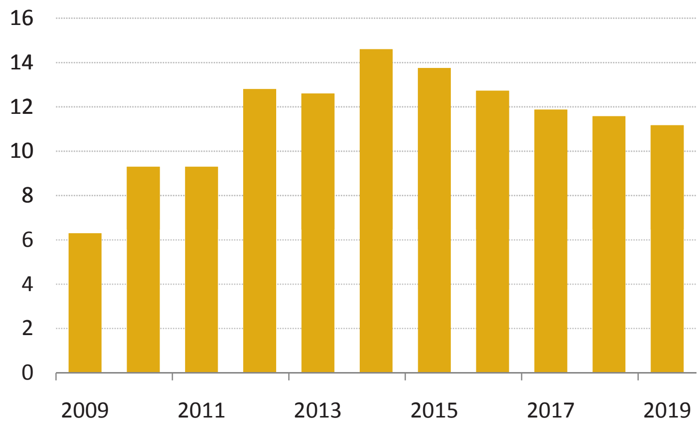
(2004-2013, *per cent*)



Source: Statistics Canada, Corporate Economics

Calgary CMA: Housing Starts

(2009-2019, *thousands of units*)



Source: Statistics Canada, Corporate Economics

With strong economic activity and relatively high levels of population growth from 2015 to 2018, construction activity in the housing sector is expected to remain robust. The Canada Housing and Mortgage Corporation estimates total housing starts in Calgary for the first seven months of 2014 were 8,664 units, up from 5,049 units for the same time in 2013. Multi-family starts increased to 5,772 units in 2014 from 2,335 units in 2013. Annual housing starts in Calgary will total 12,800 units in 2014 and 12,500 units in 2015, up from 9,400 in 2013. Housing starts will total 45,700 units over the 2015-2018 period. This is in line with household formation (47,400 units) over that period.

Textbox 2 The Calgary Economy and Its Effect on the Real Estate Market during 2003-2013

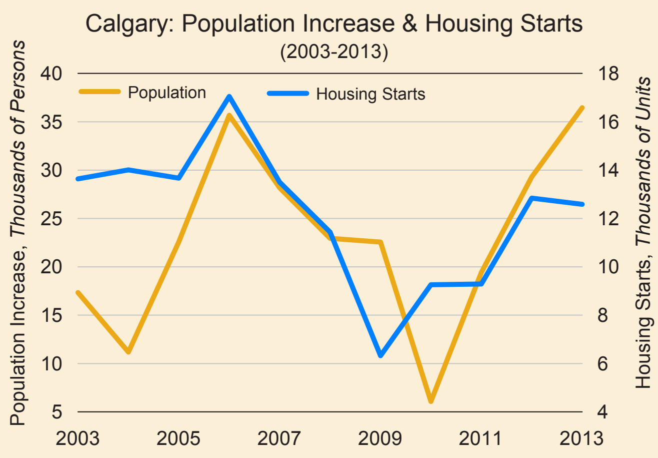
Over the past decade, Calgary saw many changes in its economy, as illustrated by growth in indicators such as gross domestic product (GDP), employment, and population. On their own, these factors do not provide a well rounded explanation of the changes experienced in the real estate market, but when combined they offer a more holistic approach to the analysis.

The Calgary real estate market was strongly influenced by changes in population during the decade. Using Calgary's housing starts as a proxy measure for residential investment provides an insight into the condition of the real estate market, where a rising number of housing starts per year suggest a prospering housing sector. The Calgary Census Metropolitan Area had more than 10,000 housing starts per year for most of these years. The high number of homes breaking ground every year can be attributed to the increase in employment prospects in the Calgary area, which created a surge in population and a jump in the demand for homes.

Alberta and Saskatchewan had the lowest unemployment rates during the period, so it is not surprising that a large portion of migration came from Central and Eastern Canada. With unemployment low, a greater portion of the labour force has the ability to earn an income, increasing the number of people able to buy a home. Moreover, the participation rate averaged 75.5 per cent throughout the term, suggesting that a large number of people in area were willing to stay in the labour force, whether employed or unemployed. Furthermore, the average hourly wage in Calgary had been among the highest in the country, influencing people's decisions to change jobs, move locations, or stay in the labour force.

High wages alone do not mean that one place is better than another; the cost of living must be taken into account to determine the standard of living. Calgary saw rapid population changes over the decade in part because the cost of living in Calgary is relatively low when compared to Canada's other major cities such as Vancouver or Toronto. While the price of homes in Calgary has gone up, the increase in average weekly earnings combined with low mortgage rates kept the housing market affordable relative to other major metropolitan areas.

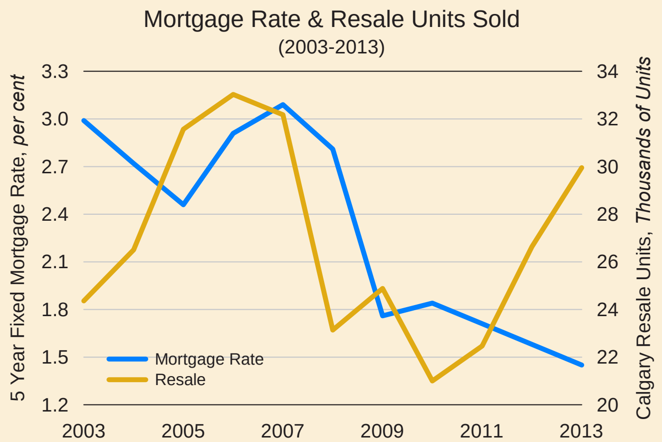
The affordability of Calgary's housing market, combined with increased employment opportunities, drew people to the Calgary area and increased the demand for new home construction. The impact of population growth was also reflected in the Calgary resale market, where sales exceeded 20,000 units in every year of the period. Population growth not only changed demand for owning a home in Calgary, it influenced the rental side of the real estate market as well. The rise in population kept Calgary's residential vacancy rate under 2.0 per cent for most of the period. Consequently, rental rates remained high as they reflected scarcity in the housing market.



Source: Calgary Civic Census, CMHC, Corporate Economics

Textbox 2 *Continued....*

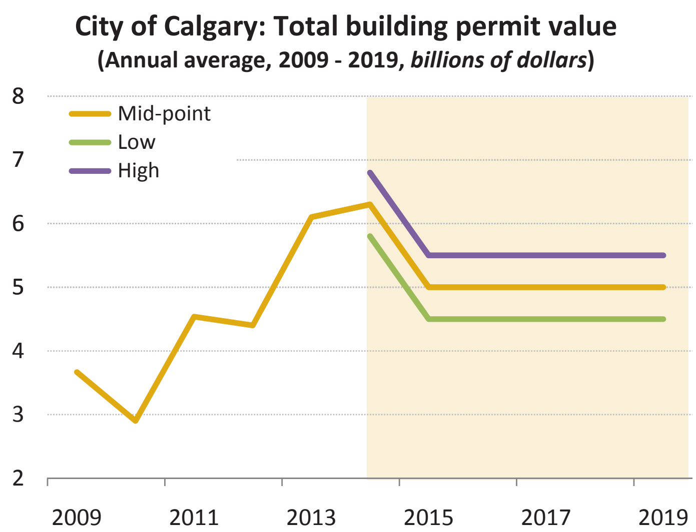
In addition to the affordable nature of Calgary's house prices, mortgage rates remained low, giving people the opportunity to buy homes they could not otherwise afford. The low mortgage rates in the past decade are a product of the Bank of Canada's policies and the condition of the economy. For instance, the last global economic recession decreased the demand for loans by households and businesses, thus the mortgage rate fell in response to reduced demand for mortgage loans. The central bank can also indirectly affect the mortgage rate by adjusting a key interest rate. The overnight rate is the rate which the Bank of Canada charges to the major financial institutions for borrowing money. With mortgage rates low following the last recession, the number of people able to purchase a home rose, creating an increase in demand for new and resale housing.



Source: CREA, Statistics Canada, Corporate Economics

Building permit values

- Total building permit values in Calgary were $ 6.057 billion in 2013, up from $ 4.448 billion in 2012 and $ 4.528 billion in 2011. The value of building permits for the 12 months ending July 2014 was estimated at $ 6.326 billion, up from $ 5.175 billion for the same period in 2013. The value of residential permits was estimated at $ 3.783 billion, up from $ 2.891 billion in this period. Building intentions also improved in the non-residential sector, rising to $ 2.543 billion compared with $ 2.271 billion in 2013. The forecast is for building permits to total $ 6.3 billion in 2014 and decline to $ 5.0 billion by 2018.



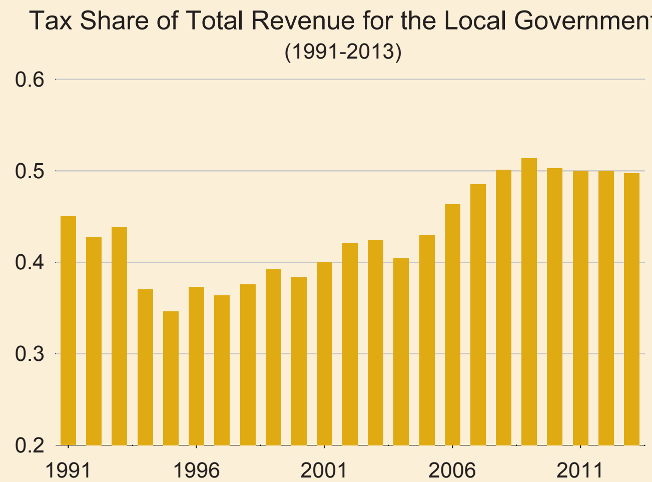
Source: The City of Calgary, Corporate Economics

Textbox 3 Cities as Engines of Growth and Sustainability

Cities are the engines of economic growth and the urban regions where economic activity takes place on a large scale. Cities experience huge volumes with respect to producing and exchanging goods and services, transportation of goods and services, environmental pollution, traffic congestion, noise pollution, waste generation, household residences, commercial and industrial facilities, and recreational facilities. Local governments have a responsibility to ensure that these activities take place in an orderly and efficient manner. As a city or region becomes more economically buoyant relative to others in proximity, the increased opportunities drive businesses and workers to that city or region. The result is an increase in net migration of people to the region which brings along with it a host of additional local government responsibilities, along with their corresponding costs, in that city or region.

Unfortunately, although local government responsibilities have assumed increasing importance, the share of total government tax revenues (at the federal, provincial, and local levels) allocated to the municipal government has declined. The major revenue generation component for local governments is property taxes, and this constituted 49.7 per cent of total revenues generated by the Calgary local government in 2013. Over a 23 year period from 1991 to 2013, property taxes as a share of local government revenue grew from 45 per cent to 50 per cent.

Over the same period, the local government's share of total taxes collected fell by an annual average of 1.8 per cent per year. The responsibilities of the local government grew relative to the two orders of government, however, the shares of total revenues and taxes decreased relative to the other two orders of government. Between 1991 and 2013, the average annual growth of local government revenue was 4.0 per cent. This was outpaced by the average annual growth of local government expenditures of 5.2 per cent. Local government debt per capita increased at an average annual rate of 2.6 per cent per year.



Source: Statistics Canada, Corporate Economics

With the prime rate falling from 10 per cent in 1991 to 3 per cent in 2013, debt financing has been an affordable option.

During this period, average annual population growth was 2.1 per cent, employment growth averaged 3.0 per cent per year, inflation grew at an average annual rate of 2.2 per cent and real GDP grew 3.4 per cent per year. These economic growth components mentioned above contributed to major growth in revenue collection by the provincial and federal orders of government through income taxes, sales taxes and payroll taxes. This assortment of taxes are growth sensitive, unlike property taxes, which are the main revenue source for Alberta local governments designed in policy and legislation to meet the requirements of operating expenditures.

The Calgary local government requires revenue sources that are elastic to growth in order to invest in capital expansion projects for a large growing city. In the last three years, Calgary's population has increased by 104,258 people or 10 per cent. Some growth elastic sources of revenue (currently available to the other two orders of government) will enable local government authorities respond to growing infrastructure requirements without relying on discretionary intergovernmental transfers.

Calgary Economic Region

Output

The Calgary Economic Region grew by 4.4 per cent annually over the 2009-2013 period. This statistic masks the variation in the annual growth rate over that period. In 2009, the economy was in recession as output shrank by 4.0 per cent. In 2010 the economy rebounded by 4.4 per cent, recovering the lost output. From 2011 to 2013, the economy expanded at an average annual rate of 3.7 per cent. The economic recovery and expansion were driven by domestic demand. Strong employment growth and a relatively low unemployment rate acted as a magnet for migrants from the rest of Canada. Employment growth, wage gains, and population growth combined to support consumer spending. Low residential vacancy rates, strong employment growth and relatively low interest rates created conditions that supported new home construction and retail sales.

Economic growth over the forecast period in Alberta and Calgary will be driven by an expanding world economy, along with increased business spending and firm consumer demand. A growing world economy is expected to lead to relatively stable product prices and an expanded market for the region's exports of goods and services. For example, during this period, U.S. economic growth is expected to gain momentum and contribute to increased demand for Alberta's energy exports. Relatively high energy prices are expected to maintain the energy sector's cash flow and support investment activity in the energy industry and related industries over the short to medium term. CER investment spending should remain strong as businesses upgrade their plants and equipment to in order to meet the requirements of a relatively tight labour market and also to gain a competitive edge in productive capacity.

Investment activity in Alberta is expected to remain relatively strong over the 2015-2018 period. Alberta Economic Development monitors major investment projects that have been completed, are underway, or will start in 2 years. These projects have a minimum value of $5 million. As at August 2014, these projects had a value of $221.7 billion. The majority of this ($139.4 billion) will be spent on oil sands and oil and gas projects. The CER is home to the headquarters of several energy firms, and will receive significant economic benefits from this level of investment activity.

Inventory of Major Alberta Projects August 2014 Summary

Sector	Number of Projects	Total Value of Projects	Sector	Number of Projects	Total Value of Projects
Agriculture and Related	6	$315.0 M	Mining	2	$470.0 M
Biofuels	2	$300.0 M	Oil and Gas	17	$18,600.0 M
Chemicals and Petrochemicals	2	$1,550.0 M	Oil Sands	70	$120,758.6 M
Commercial / Retail	89	$9,080.3 M	Other Industrial	11	$242.9 M
Commercial / Retail and Residential	14	$4,096.5 M	Pipelines	49	$24,632.6 M
Forestry and Related	2	$38.0 M	Power	26	$13,604.8 M
Infrastructure	221	$13,317.4 M	Residential	135	$3,926.3 M
Institutional	110	$6,419.0 M	Telecommunications	1	$8.0 M
Manufacturing	2	$54.5 M	Tourism / Recreation	108	$4,249.2 M
			Total	**867**	**$221,663.1 M**

Numbers may not add up due to rounding

Calgary Economic Region (CER)

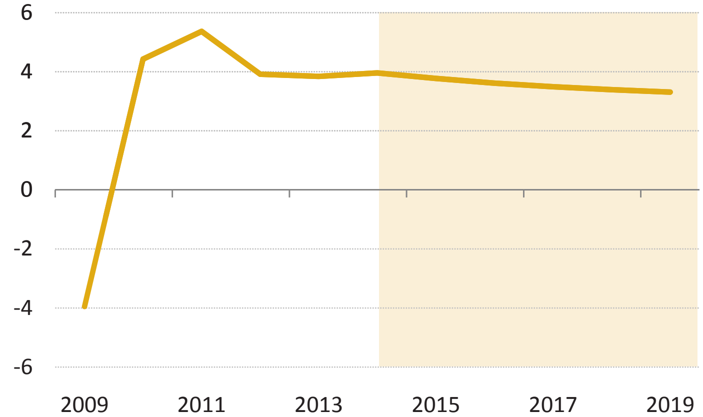
The pace of economic growth will accelerate in 2014, in reaction to faster world growth and increased investment needed to repair residential and non-residential structures damaged by the flood. Also, the combination of strong job creation and relatively low unemployment rates in Alberta is attracting migrants to the province's large urban centres, including Calgary. This is boosting the population-sensitive sectors of the economy such as housing, retail trade, and accommodation. In addition, historically low interest rates, positive employment growth, wage gains, strong population growth, and relative low real estate vacancy rates should combine to support new home construction.

The Calgary Economic Region is expected to grow by 3.8 per cent in 2015, down from 4.0 per cent in 2014. Over the forecast period, the aging of the baby boomers is expected to impose a drag on the economy's potential growth rate, as they withdraw from the labour force and are replaced by relatively smaller numbers in the succeeding cohorts. Employers are expected to pay higher wages to entice workers to stay or join the labour force. Tax cuts and higher labour incomes are expected to increase consumer disposable income and positively impact the retail sector and the overall economy.

Labour market

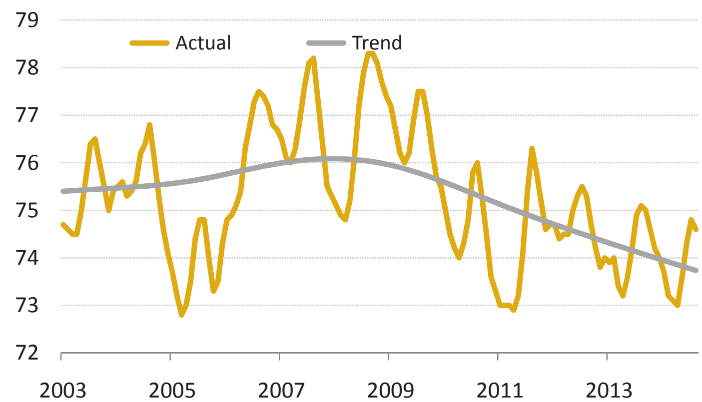
- The Calgary Economic Region's labour force was estimated at 872,000 persons in 2013, up from 847,000 in 2012 and 824,000 in 2011. With the labour force increasing more slowly than the working age population, the labour force participation rate fell to 74.2 per cent in 2013 from 74.7 per cent in 2012. The labour force participation rate remains lower than the pre-recession peak of 76.7 per cent. Some commentators have stated that the decline in the labour force participation rate is explained by population aging. The data does not support this position. A closer look at the data for the CER shows that the more significant reductions in the participation rates occurred among the young and middle aged populations. Those cohorts tend to have the higher rates of net migration. The reduction in the participation rates was therefore due to the high levels of net migration to the province and the CER region in recent years. A strengthening of the labour market in the rest of Canada, along with a decline in local unemployment, should result in an increase in the labour force participation rate in the CER.

Calgary Economic Region: Economic Growth
(2009-2019, *per cent*)



Source: Statistics Canada, Corporate Economics

Calgary Economic Region: Participation Rate
(January 2003-August 2014, *per cent*)



Source: Statistics Canada, Corporate Economics

- Total employment averaged 830,000 in 2013, up 61,900 from its pre-recession peak of 768,100 in 2008 and 74,800 from the recession trough of 755,200. Total employment for the 12 months ending July 2014 was estimated at 847,000, up from 816,000 for the same period in 2013. In the 12 month period, job growth was distributed almost equally between part-time (13,600) and full-time (17,400) employment.

- Total employment will average 857,000 in 2014, up from 830,000 in 2013 and will climb to 951,000 by 2018. Over the 2014-2018 period, total employment is expected to increase by 2.6 per cent annually. Strong population growth will drive consumption and investment activity and support job creation in the CER.
- Between 2011 and 2013, employment growth exceeded labour force growth in the local and national economies. Thus, the CER unemployment rate dropped from 6.2 per cent in 2011 to 4.8 per cent in 2013. The Canadian average unemployment rate also fell to 7.1 per cent in 2013 from 7.3 per cent in 2012. With strong population growth in Alberta and Calgary, the local CER unemployment rate should average 5.1 per cent in 2014 as labour force growth exceeds employment growth. This increase in the unemployment rate will be short-lived. The unemployment rate is expected to fall to 4.7 per cent by 2018, as employment growth outstrips labour force growth in the latter part of the forecast period. This forecast is based on the assumption that economic and employment growth should strengthen in the rest of Canada. A failure of economic recovery in the rest of Canada would see the local unemployment rate remain elevated over the forecast period, as labour force growth exceeds employment growth.

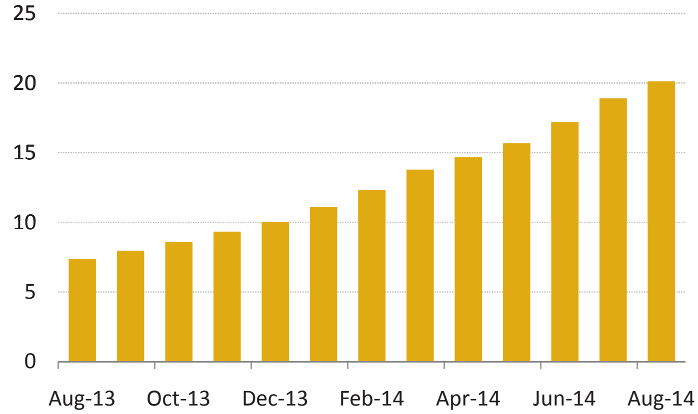
Population

The Calgary Economic Region's (CER) population was estimated at 1.519 million in 2014, up 50,104 from 1.469 million in 2013. During this period, net-migration (37,765) outstripped natural increase (12,335) as the main source of population growth.

The CER's population should increase by 176,155 persons between 2014 and 2018[3]. The majority of the growth will be driven by net-migration (118,650), as the local labour market remains attractive to inter-provincial migrants as a source of employment. The natural increase is projected to remain relatively stable at around 14,000 every year as future increases in the number of births is offset by future increases in the number of deaths.

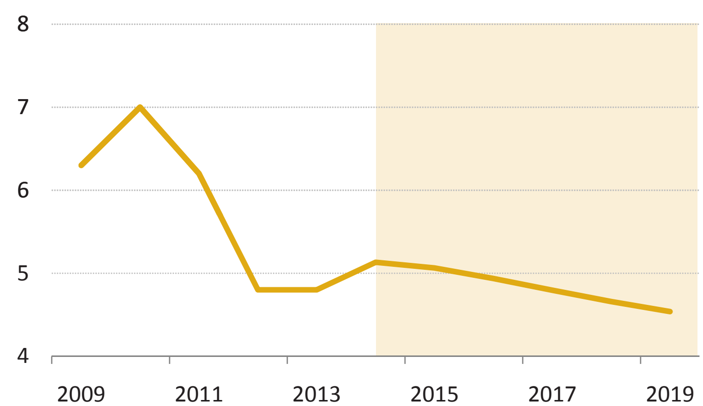
3 Details on this projection are provided in Table 4. An alternative scenario for the CER population forecast is presented in Table 9.

CER's share of Canada's Employment Growth
(12-month-moving-average, Aug 2013-Aug 2014, *per cent*)



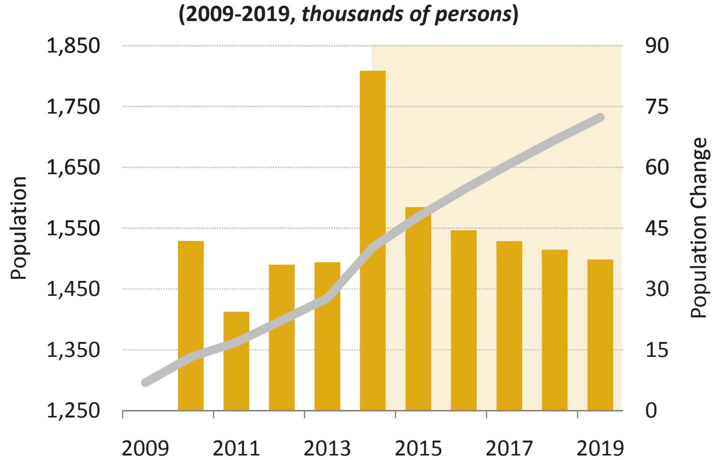
Source: Statistics Canada, Corporate Economics

Calgary Economic Region: Uemployment Rate
(2009-2019, *per cent*)



Source: Statistics Canada, Corporate Economics

Calgary Economic Region: Population
(2009-2019, *thousands of persons*)



Source: Statistics Canada, Corporate Economics

Calgary Economic Region (CER)

The aging of the baby boomer population is expected to lead to increased tightness in Canadian labour markets. Above-average population growth rates are expected to occur in the 55 and over age groups. For example, individuals in the 15-24 age groups, the first-time labour market entrants, are estimated at 194,560 in 2014 and should increase by 2,722 to 197,282 in 2018. Meanwhile, the 55-64 age group, the pre-retirees, is estimated at 174,445 and should increase by 28,713 to 203,158 in 2019. These projections suggest that the number of potential retirees will exceed the number of potential labour market entrants.

With economic growth accelerating in the rest of Canada by 2015 and beyond, employment prospects in the regions outside Calgary are expected to improve and should reduce net-migration to the Calgary Economic Region. The forecast assumes that net-migration will fall from 32,800 in 2014 to 20,700 by 2018.

Inflation

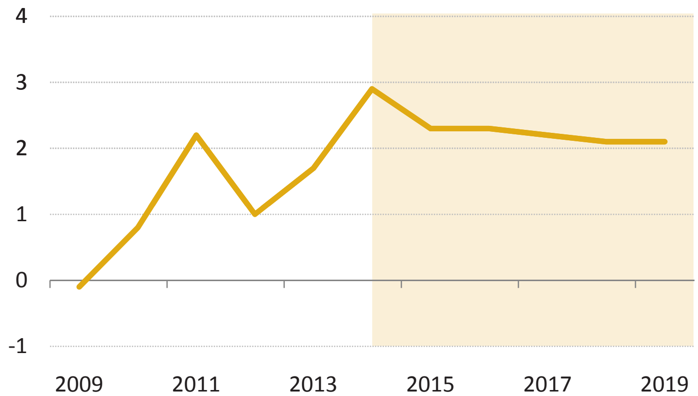
Consumer Prices

- The inflation rate should average 2.9 per cent in 2014. This is an upward revision from the Spring 2014 forecast of 2.1 per cent. After the earlier forecast, the demand for natural gas rose sharply in response to an unusually cold winter causing a spike in prices resulting in higher heating costs for businesses and home owners. Also, extremely low vacancy rates in the residential sector, stemming from strong population growth, drove accommodation costs higher. As a result of the relative strength of the Calgary economy and depreciation of the Canadian dollar, the local inflation rate will remain above the mid-point of the Bank of Canada's inflation target range of 1 to 3 per cent from 2015 to 2018.

Non-Residential Building Price Inflation

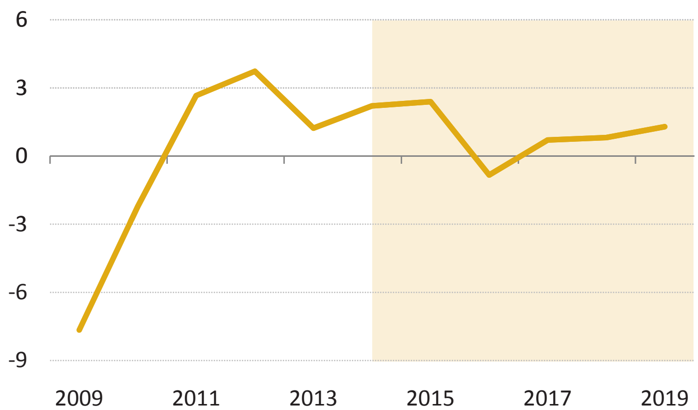
- Construction inflation has been moderating lately after wild swings in 2006-2009. Projects in the oil sands are not drawing workers from Calgary the way they did in recent years, and Calgary has stopped haemorrhaging trades people. However, skilled workers are still in short supply. Energy costs have risen recently, mostly the result of exchange rate softening, and this shift is expected to filter down through the value chains over the next two years. Longer term, more stable energy prices and less commercial construction activity in Calgary, as projects currently under way are completed, both point toward a prolonged period of softer price escalation.

Calgary Economic Region: Inflation Rate
(2009-2019, *per cent*)



Source: Statistics Canada, Corporate Economics

Calgary: Non-Residential Building Inflation Rate
(2009-2019, *per cent*)

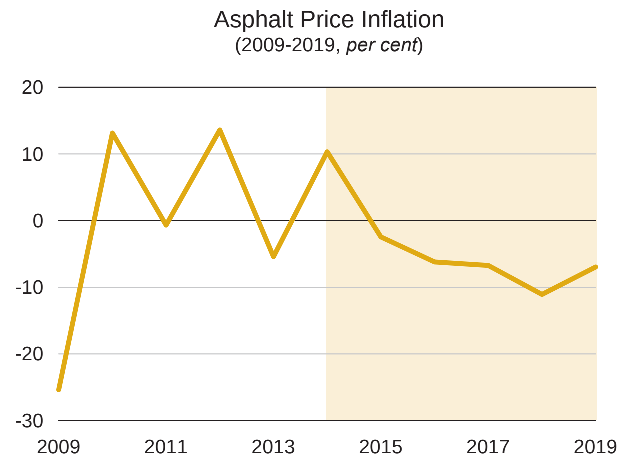


Source: Statistics Canada, Corporate Economics

Commodity Prices

Asphalt

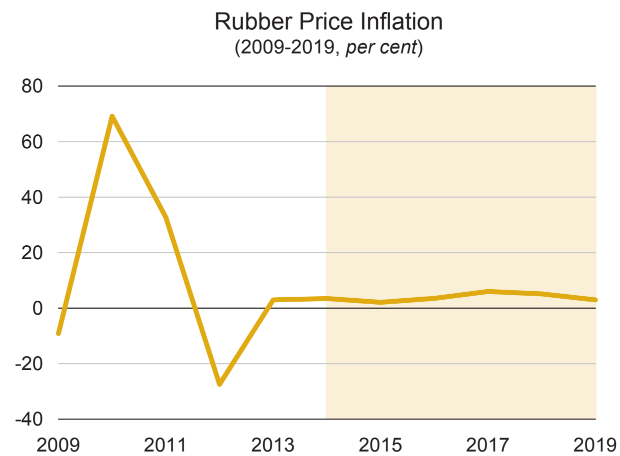
Middle East issues have boiled over in the middle of this years' paving season. Higher oil prices combined with a depreciated Canadian dollar and a new risk premium have pushed asphalt prices slightly higher than were anticipated. Prices were on track to hit our expected average of $755 this paving season but spiked to over $800 in August. In spite of this, market fundamentals have not changed and our outlook for prices to moderate to $ 600 by 2024 still stands. However, because prices have gone up higher recently, hitting the $600 target will require prices to fall by a large amount over the coming years.



Source: Statistics Canada, Corporate Economics

Rubber

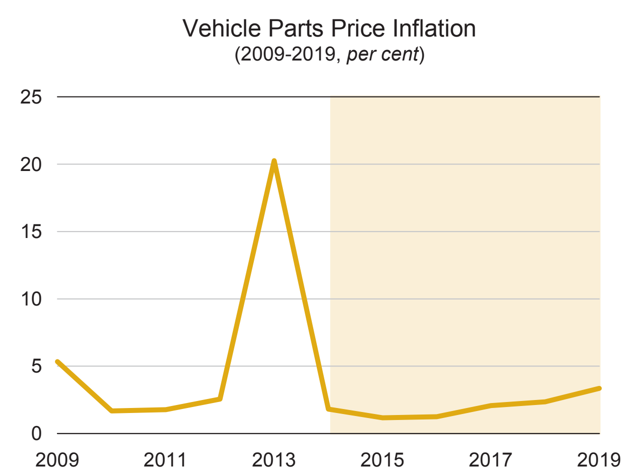
Weather and oil prices cause dramatic shifts in rubber prices, making rubber markets the second most volatile markets in the world, second only to electricity markets. Markets in Thailand are now experiencing increased competition from India, helping to stabilize prices. Meanwhile, vehicle sales in North America are poised to surpass 2007 levels, and remain elevated for several years as pent-up demand in the U.S. is satisfied. Our outlook for rubber prices in Canada calls for modest increases over the next five years, followed by more sedate markets.



Source: Statistics Canada, Corporate Economics

Steel

North American construction steel prices have flat-lined for the past couple of years. Rebar and wire rod prices have shown no significant changes since 2011. Manufacturing steel is showing some signs of life with about a 10 per cent uplift over the past 12 months. This is largely the result of rail oil tank cars reaching the end of their useful life and needing to be replaced, while rail-delivered output from Ft. McMurray continues to increase. Additionally, vehicle manufacturing in the U.S. has shown steady increases and is expected to continue increasing for about another five to seven years before pent-up demand is satisfied and sales drop to more normal levels. Although a growing portion of the market is migrating to aluminum, many parts are still made from steel. The outlook for steel prices in Canada is for modest increases for construction grades while moderate escalation in manufacturing grade prices migrate north of the U.S. border over the forecast term.



Source: Statistics Canada, Corporate Economics

Vehicle Parts

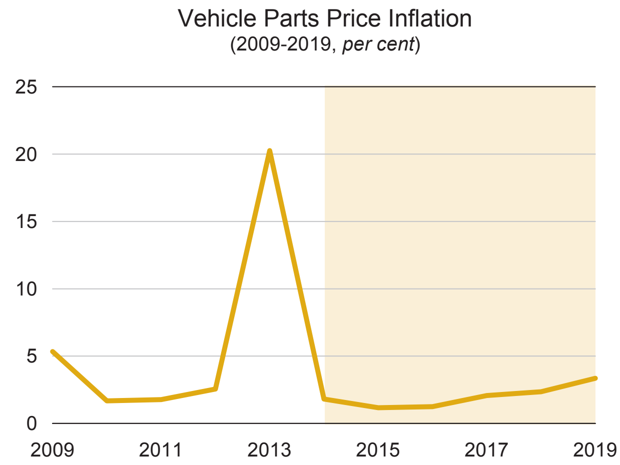
Vehicle sales are now at the same level in the U.S. as they were just before the recession. At an annualized rate of 16.2 million sales, the U.S. auto market has almost fully recovered from the recession. Demand for roughly 20 million vehicles has built up over the past seven years. Satisfying this pent up demand should push vehicle sales well over the 16 million mark for the next five to seven years. Accordingly, our forecast for vehicle parts prices is revised to show escalation throughout the first half of the forecast period followed by significant softening in the latter half.

Although the prices and market for vehicle parts is expected to rise significantly over the next few years, it is questionable how much of this market will be served by Canadian manufacturers. Most U.S. auto assembly plants moved away from Detroit after 2007 and are now served by parts suppliers in the southern U.S. Meanwhile U.S. manufacturers are re-tooling to switch production from steel to aluminum as a result of higher U.S. fuel emission rules. This re-tooling requires significant plant re-design as aluminum can't be moved around a plant with electro-magnets the way steel can. Spill-over activity into the Ontario manufacturing sector, even with a lower valued Canadian dollar, will be muted.

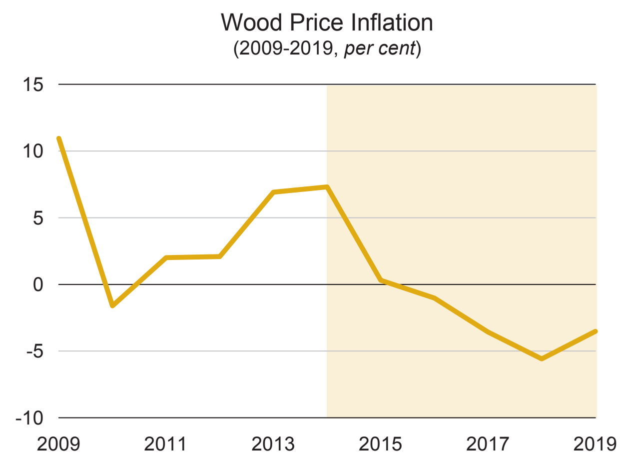
Wood

Canadian wood markets are divided into three sectors: lengths, fibre-board, and pulp. As an input to construction projects and as a component of paper, the City of Calgary is a large consumer of wood products.

An unusually cold winter and active summer weather across the southern U.S. has limited construction activity so far this year, but overall permit activity for 2014 should be on par with 2013 activity. The outlook for construction is for slow improvement beginning next year with completions hitting 1 million units around 2018. Currently, both the U.S. home ownership rate (64.7 per cent), and rental vacancy rate (7.5 per cent) are the lowest they have been since 1996 and are continuing to decline. We do not expect single family completions to reach the capacity of the Canadian lumber industry (1.3 million units) until



Source: Statistics Canada, Corporate Economics



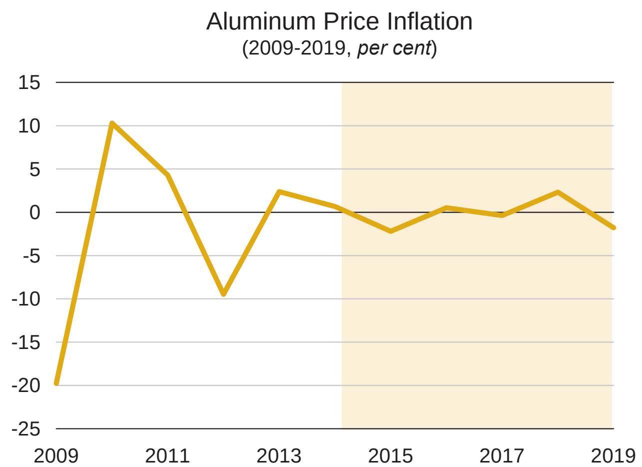
Source: Statistics Canada, Corporate Economics

2022 at the earliest. In that time, Canadian interest rates are expected to rise fairly significantly, which will negatively impact the Canadian construction industry. Combined, the net impact to forestry prices is flat.

Prices for lumber in the U.S. have stabilized at about $ 375 per thousand feet. Exchange rate changes boosted Canadian prices early this year but we anticipate a general softening of prices in Canada through the rest of the forecast horizon.

Aluminum

The 2015 Ford F-150 is rumoured to be made with about 700 pounds of aluminum. With about 900,000 annual sales in North America this single switchover increases demand for aluminum in North America by about 300,000 tons, or about 6 per cent of the North American aluminum market. That will help to boost aluminum prices somewhat with Alcoa reporting recently that global markets are now more in balance than in the prior nine years, when excess supply ruled. That said, China continues to ramp up production and is now estimated to be producing half of the world's 50 million tonnes of aluminum annually. Our outlook for aluminum in Canada is for stable prices leading up to 2020 when international demand is expected to spike due to construction for the 2020 Tokyo Olympics.



Source: Statistics Canada, Corporate Economics

Textbox 4 Beyond Secondary Suites: Calgary's Housing Challenges

Calgary is in an enviable position when compared to Canada's other major cities. Over the past 10 years (2004-2013):

- Calgary's total GDP growth, at 33.8 per cent, was considerably stronger than growth recorded in Vancouver, Toronto and Montreal.
- Calgary's total employment growth of 27.8 per cent has outpaced all other major metropolitan areas.

At the same time, participation rates remain high, unemployment remains among the lowest in the country and employers struggle to find the workers they need to accommodate our rapidly expanding economy. As a result, Calgary is home to the fastest growing population among Canadian cities and metropolitan areas. According to the City's Civic Census, Calgary's population grew by 38,508 people or 3.3 per cent in the year ending March 31, 2014. With 28,017 people migrating to Calgary from elsewhere, net migration accounted for 72.8 per cent of our population growth.

The result is a housing crunch that is leading to higher home prices, low rental vacancy rates and people struggling to find somewhere to live. If we are to continue enjoying the growth we are projecting, we need to ensure accommodation is available for the labour force we are attracting. People are the cornerstone of Calgary's long-term economic prosperity and housing will play an important role in our ability to attract and retain people. Calgary must be concerned with building a range of housing options for all ages, income groups and family types to meet the needs of residents today and tomorrow.

While the response to the housing shortage may sound simple – build more housing, it is much more complex. What kinds of homes should be built and where, single-family or high-rise, inner-city, new development around the periphery of the city or somewhere in between? Should homes be built for home ownership or for the rental market? This text box will explore some of the underlying

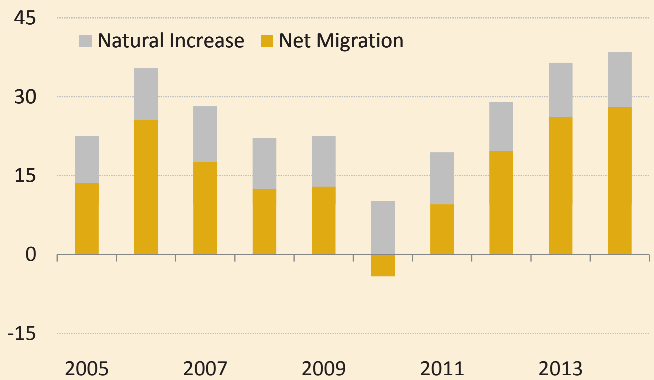
Textbox 4 *Continued...*

factors in population growth and housing demand that need to be considered.

International Migration

In the five civic censuses conducted between 2010 and 2014, the City of Calgary's population has expanded by 123,679. The largest share of this growth, 56.8 per cent has come from net migration to Calgary. While the civic census does not detail the source of migration, Statistics Canada informs us that in the 2009-2013 period, 62.7 per cent of migrants to the Calgary Census Metropolitan Area (CMA) were international migrants. In determining the housing stock to be built, it would be useful to have an understanding of the housing choices of these migrants.

City of Calgary: Population Growth
(2005-2014, *per cent*)

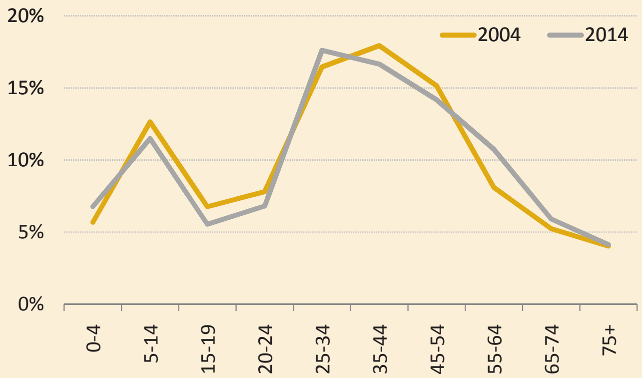


Source: City of Calgary 2014 Civic Census Results

Demographic Shift

Calgary's population is shifting. Calgary's civic census results show that from the year ending March 31, 2004 to March 31, 2014 the population of those aged 0-4, 25-34, 55-64 and 65-74 have increased. These results suggest that in the shorter term we can anticipate a continued demand for housing from young families as well as those moving into retirement. It may be the case that the aging population is a factor driving increased demand for multi-family housing. As people age they consider downsizing and living in areas in closer proximity to retail, recreation and health services.

City of Calgary: Population Growth by Cohort
(2004-2014, *per cent*)



Source: City of Calgary 2014 Civic Census Results

Changing Market Demand

While many of the fastest growing communities in Calgary are located on Calgary's fringe – the Beltline, an inner city neighbourhood, also grew by more than 1,000 people in the past year. Indeed, existing neighbourhoods are absorbing an increasing share of Calgary's growth. Several inner city communities including Eau Claire, Downtown, Bridgeland, West Hillhurst, South Calgary and Manchester all recorded growth over 6 per cent. The Municipal Development Plan sets a target for 33 per cent of population growth through to 2039 to be accommodated within the 2006 developed area.

Textbox 4 *Continued...*

In addition to the population growth in existing communities, the balance of new housing starts has slowly been shifting from single-family homes to multi-family homes. The Canada Mortgage and Housing Corporation (CMHC) reports that multi-family housing accounted for approximately 40 per cent of all Calgary housing starts in 2010. This increased to 50 per cent in 2013 and multi-family housing starts have accelerated in 2014, accounting for 66 per cent of all starts in the January - July 2014 period. According to the CMHC and the Conference Board of Canada, multi-family (condominium) construction in Calgary will continue to rise with population growth.

Income Levels and Affordability

While Calgary remains a lower cost city than Toronto and Vancouver, there are indicators that Calgary is becoming a more expensive place to live. In August 2014, it was reported that Calgary experienced the highest resale house price increase in the country with prices 10.5 per cent higher than one year ago. This was almost double the national average of 5.3 per cent.

At the same time, it was estimated that approximately 18 per cent of Calgary households earned less than 65 per cent of Calgary's median income and spend more than 32 per cent of income on shelter. A limit of 32 per cent of income spent on shelter is a commonly accepted definition of affordability utilized by CMHC. These households would be the most at risk should housing prices rise further. As an example, the median family income in the Calgary CMA is $90,000 generating a maximum affordable purchase price of approximately $280,000. At the same time the overall median price of a home in September, 2014 was $425,000 requiring a family income of $136,000.

For many lower income households, renting is a more viable option to home ownership. However, in Calgary, the total stock of rental housing units has declined by approximately 1,000 units per year (20 per cent) over the last decade. This is one of the contributing factors to rental vacancy rates of less than one per cent. Low rental vacancy rates lead to higher monthly rental costs squeezing lower income households out of the rental housing market.

Conclusion

As Calgary's population growth reaches new heights and housing costs increase at the fastest rate in the country, housing is increasingly appearing at the top of the agenda for many employers, developers and housing organizations. Not acting on these issues could lead to an increase in working homeless, increased numbers of illegal secondary suites, as well as a reduction in our ability to attract workers to Calgary. Multiple stakeholders need to understand current and future market demand to ensure we build a variety of housing for all income levels in both existing and new communities. Calgary needs to look at longer term and shorter term solutions including:

- Policy changes (i.e. corridor program, inclusionary zoning)
- New programs, grants and opportunities for home ownership
- Alberta building code changes
- Diverse housing types to meet the needs of a changing market
- Education, awareness and the removal of myths and misconceptions surrounding residential development in Calgary

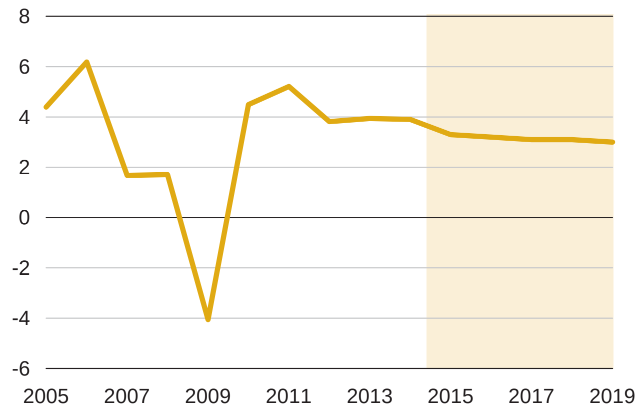
Alberta

- This year Alberta's economy is set to clock in a second consecutive 3.9 per cent advance in real GDP. Solid job growth has helped bolster residential construction and retail trade activity, while oil production continues to rise at a healthy clip in an improving price environment. As population growth slows in the coming years, economic growth will also decelerate. Nevertheless, real GDP will expand by an average of 3.1 per cent between 2015 and 2019. This pace of growth is robust in comparison to other jurisdictions, but sustainable over the medium term.

- In 2013 the province's population expanded by over 100,000 residents as Alberta accounted for a disproportionate share of employment growth in the country. Over the past 12 months, Alberta has created over 50 per cent of new jobs in Canada in spite of the fact that it contains just 11 per cent of the population. However, this is unlikely to continue. The economic recovery in the rest of the country is gaining traction, which will serve to narrow the gap between unemployment rates across provinces. Moreover, if population growth were to remain elevated, the unemployment rate in Alberta would face significant upward pressure. As it converges with the national average, any economic incentive to migrate to Alberta should dissipate. Since we expect the prospects of the other provinces to improve moderately in the coming quarters, population growth is liable to slow to a more sustainable rate of 2.5 per cent in 2015 and 1.8 per cent by 2019.

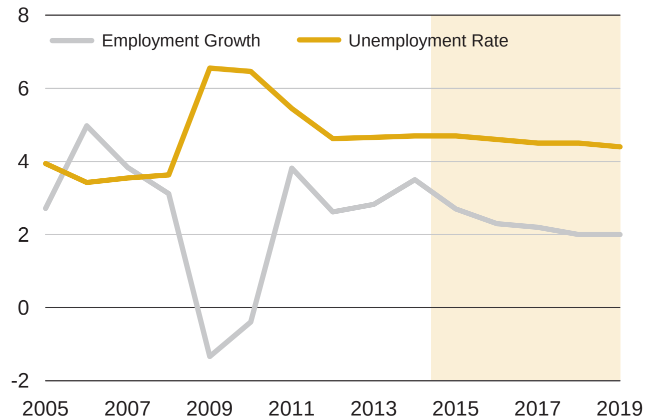
- Employment growth averaged 3.5 per cent in the first seven months in 2014, but the unemployment rate has failed to budge from its year-to-date average of 4.7 per cent. This is in spite of the fact that the participation rate has declined by 0.1 percentage point. Soaring population growth has led to a sharp uptick in the size of the labour force, meaning that employment gains are barely keeping up. This is generally positive news for the economy, however. A substantial reduction in the unemployment rate would lend itself to labour shortages and surging wage rates, which have the potential to derail further investment in the province amid spiralling costs. Alberta's labour market will remain relatively balanced in the coming years, which will ensure that growth remains sustainable rather than liable to overheat.

Alberta: Real GDP Growth
(2005-2019, *per cent*)



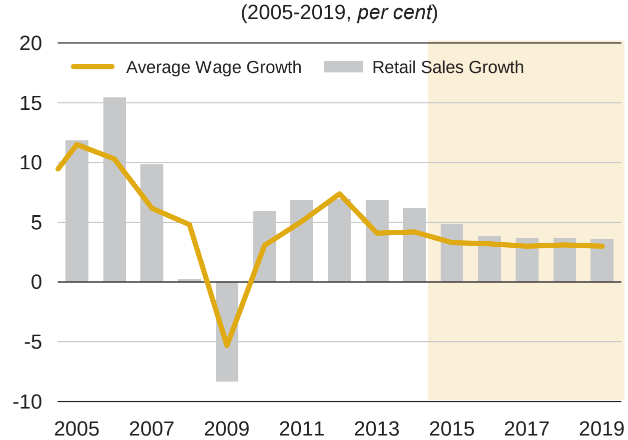
Source: Statistics Canada, Corporate Economics

Alberta: Labour Market
(2005-2019, *per cent*)



Source: Statistics Canada, Corporate Economics

Alberta: Wages and Retail Sales Growth
(2005-2019, *per cent*)



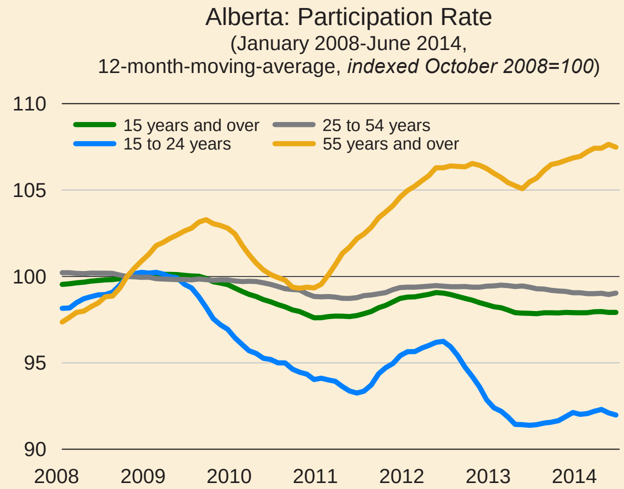
Source: Statistics Canada, IHS Global Insight, Corporate Economics

Textbox 5 Alberta's Low Unemployment Rate Doesn't Tell the Whole Story

In spite of anticipated provincial employment growth of 3.5 per cent this year and 2.7 per cent in 2015, the unemployment rate is expected to hold steady at 4.7 per cent. This is because Alberta's job market has not fully recovered from the economic downturn. Although employment gains are keeping up with population growth, the number of people who have left the labour force or who are involuntarily working part-time instead of full-time remains high relative to pre-recession levels. As things continue to normalize, a rising participation rate will exert upward pressure on the unemployment rate, counterbalancing strong job growth.

The participation rate has a direct impact on the productive capacity of any given economy- it represents the percentage of the working age population (ages 15 and up) that is willing to participate in the labour force. A person's decision to join the labour force is affected by their personal life, including their age, health, and whether or not they have young children. Economic forces also play an important role. Better employment prospects and higher expected wages will increase the participation rate, and vice-versa.

Since hitting its October 2008 peak of 75.3 per cent, Alberta's participation rate has fallen 2.1 percentage points to 73.2 per cent. Little attention has been paid to this development, but it is an important one. All other things being equal, a lower participation rate will translate into a lower unemployment rate, as a smaller labour force means a smaller proportion of them classified as being out of work. A reduction in the unemployment rate because of a lower participation rate is not a positive development. It means that the recovery of Alberta's labour market has been overstated.



Source: Statistic Canada, Corporate Economics

It can be argued that the declining participation rate is due to the aging population, but this is not entirely true. By holding the share of the population in each age group constant, it is possible to separate the change in the participation rate due to the impact of aging from the change related to other factors. The finding is that just 1.0 percentage point of the decline is due to the aging population. The rest is attributable to other factors.

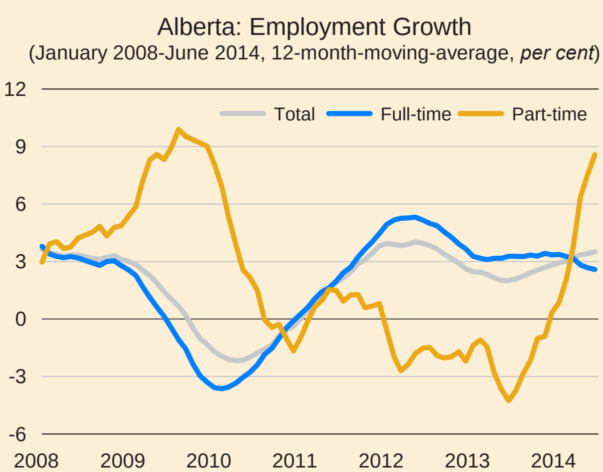
Contribution to Changes in the Participation Rate
(October 2008 to June 2014,*percentage points*)

Age Group	Change in PR Within Age Brackets	Impact of Age Demographics	Residual	Total Change
15+	-1.3	-1.0	0.2	-2.1
15-24	-1.4	-1.8	0.2	-3.0
25-54	-0.3	-0.6	0.0	-0.9
55+	0.4	1.4	0.0	1.9

Textbox 5 *Continued....*

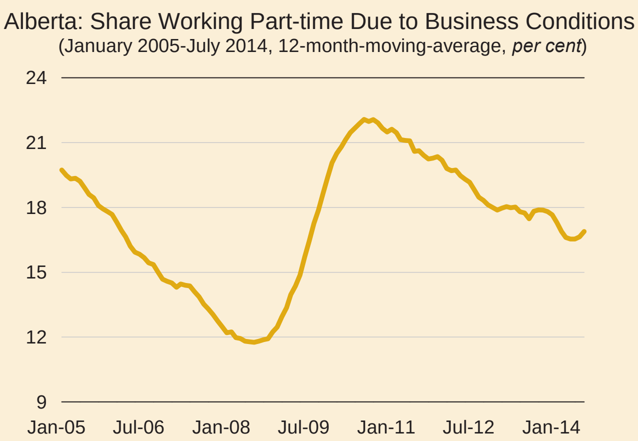
It is unlikely that a dramatic shift in personal lives is compelling more people to exit the labour force. More likely, economic forces, such as job quality and availability, are driving the change. Without this drop in the participation rate the unemployment would be sitting at 6.5 per cent, indicating that Alberta's job market has yet to recover from the recession entirely.

Another factor overstating the strength of the labour market is the proportion of growth in part-time jobs. This year, part-time job growth has been exceptionally high compared with full-time gains. Although many people hold part-time jobs for personal reasons or while they are in school, many people would like to work full-time, but lack the opportunity because there are no job openings. Even when a worker would rather have a full-time job, they do not count as unemployed if they hold a part-time position. Consequently, when the share of employees working part-time grows, the unemployment rate is skewed downwards.



Source: Statistics Canada, Corporate Economics

Statistics Canada publishes reasons for working part-time in the monthly Labour Force Survey. While a large majority of workers choose part-time jobs for personal reasons, 23.4 per cent of part-time workers in July were doing so because of business conditions. A 12-month moving average of this figure puts the number closer to 17.0 per cent, but this is still well above the pre-recession ratio of approximately 12.0 per cent.



Source: Statistics Canada, Corporate Economics

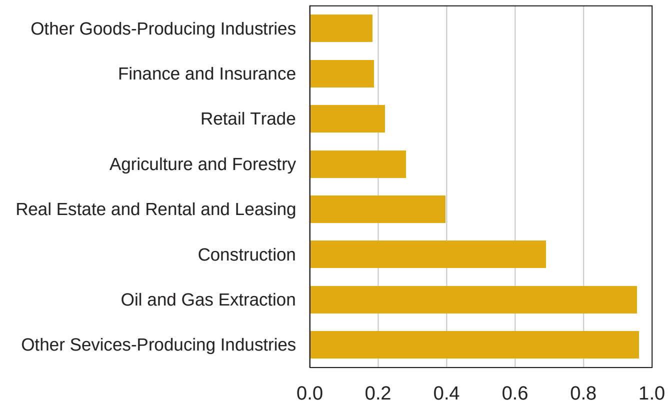
Overall, Alberta's labour market is significantly healthier than that of other provinces. Even so, there is room for improvement. The massive influx of people in recent years has created some slack in the job market, and it will take time for it to be absorbed. In the meantime, the unemployment rate is unlikely to move from its current position as the participation rate recovers some of its losses. This will have a two pronged effect of slowing population growth in the future and keeping wages from any major increases.

- A happy by-product of Alberta's strong labour market is robust wage growth, which is expected to continue in the coming years. Incomes have outstripped consumer inflation in the aftermath of the recession, and we expect wage gains to continue to do so in the coming years, albeit by a narrowing margin. Rising wages do a number of things to further prop up economic growth. They ensure that real estate and the cost of living remain affordable relative to other provinces, adding even further incentive for workers to migrate to Alberta. They also serve to boost consumer-oriented sectors such as retail trade, which has seen enormous growth in recent years. Although the years of double-digit income gains are likely over, annual wage growth at or above 3.0 per cent for the coming years is anticipated. This will lend itself to continual strength in retail sales.

- The residential construction sector was not as quick to recover from the last recession as the rest of the economy. A glut of new homes built in the years preceding the economic downturn significantly diminished the scope for a rebound. Although much of the excess supply has been slowly absorbed, another hefty run-up in housing starts is not expected. Instead, starts will come in around 40,000 units this year and gradually trend downwards through the end of the decade. This rate of construction is well-aligned with demographic demand and will assist in keeping any wild fluctuations in home prices at bay.

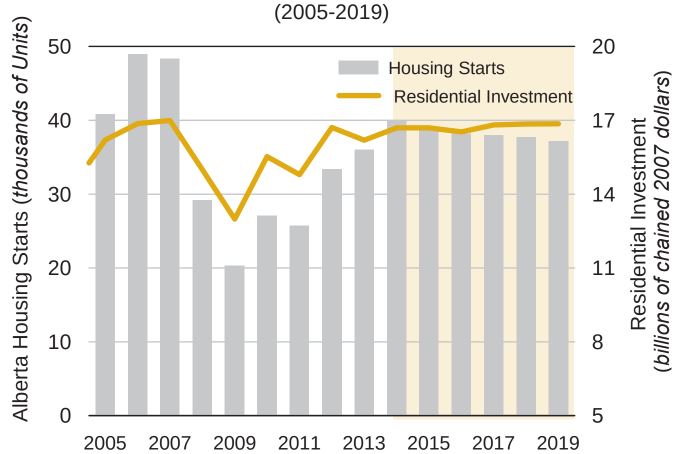
- Inflation roared back to life in Alberta this year, although the driving factors of this acceleration are only loosely related to economic fundamentals. Instead, a frigid winter led to a depletion of natural gas supplies, which drove up costs for heat and electricity. Meanwhile, a drought in California and falling supplies of livestock have compounded the impact of the depreciation of the Canadian dollar and led to further advances in food prices. Because these are transitory factors, inflation is not expected to remain high in the coming years. CPI growth will slow from 2.9 per cent this year to 2.3 in 2015, and remain in the low 2.0 per cent range throughout the rest of the forecast horizon.

Contributions to Real GDP Growth
(2013, *percentage point*)



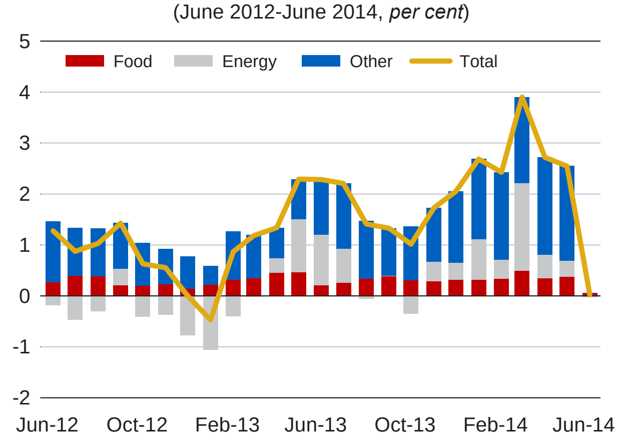
Source: Statistics Canada, Corporate Economics

Alberta: Residential Construction
(2005-2019)



Source: Statistics Canada, IHS Global Insight, Corporate Economics

Alberta: Inflation Components
(June 2012-June 2014, *per cent*)

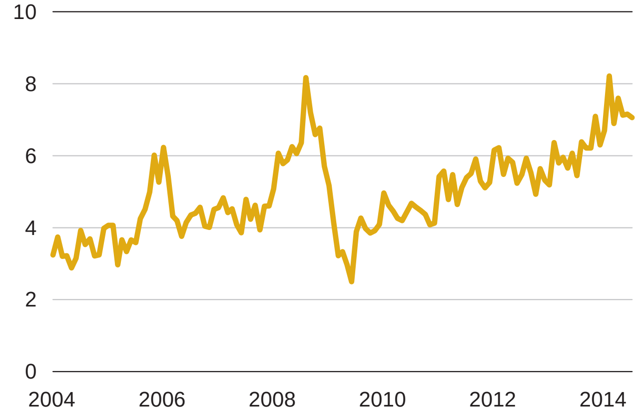


Source: Statistics Canada, Corporate Economics

Assumption:
Alberta

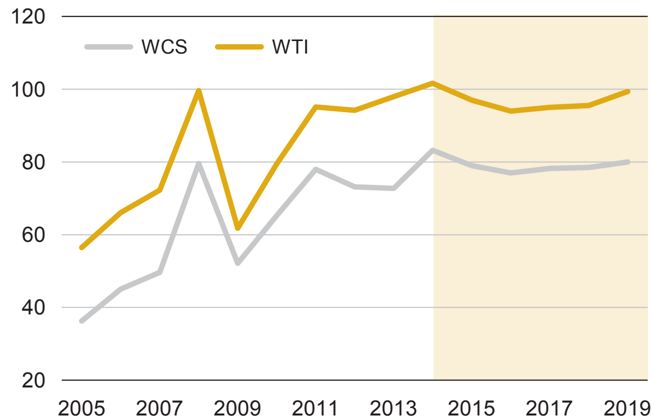
- The escalation of numerous geopolitical conflicts has led to considerable oil price volatility. Prices for West Texas Intermediate (WTI) averaged roughly U.S.$ 101.00/barrel in the first half of the year. Although they have come down in recent weeks, instability in the Middle East threatens to lead to another run-up in the coming months.
- Alberta oil producers have enjoyed a much more favourable price environment this year as the discount on Western Canada Select (WCS) oil has narrowed and stabilized. Refinery capacity for heavy oil has increased in recent months, and the capacity to move oil via railway has more than doubled since January 2013. It is now estimated at 450,000 to 500,000 barrels per day. The oil-by-rail boom has helped ease pipeline bottleneck issues, though uncertainty over the fate of proposed pipeline projects (i.e., Keystone XL, Northern Gateway, Energy East) looms large. As of May, oil production in the province was up 10.4 per cent year-to-date, and export volumes to the United States had risen nearly 3.0 per cent in spite of rapidly growing U.S. tight oil production.
- Natural gas prices at AECO have trended significantly higher this year, as the frigid winter that hit most of North America drained storage volumes in order to meet demand for heating. While American producers have managed to replenish U.S. storage volumes to a reasonable extent, Canadian storage levels remain well below their five-year average and production has been flat. Consequently, Alberta will head into the coming winter in a vulnerable storage position, leaving room for a significant upside risk to natural gas prices. Another particularly cold winter could drive the cost of natural gas even higher. In the medium term, however, prices will remain relatively stable amid ample North American supply.

Alberta: Net Exports
(January 2004-June 2014, *billions of current dollars*)



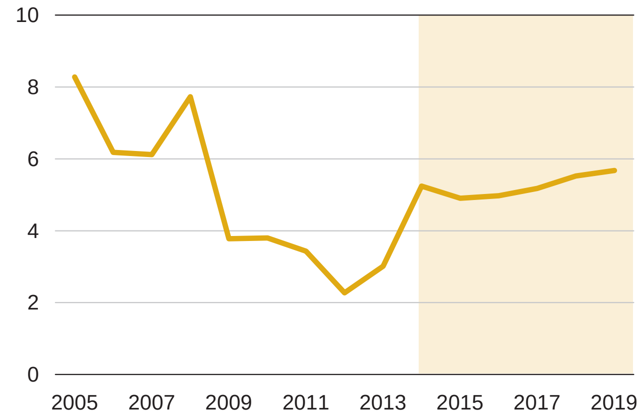
Source: Statistics Canada, Corporate Economics

Crude Oil Prices
West Texas Intermediate & Western Canada Select
(2005-2019, *US$/barrel*)



Source: Alberta Energy, GLJ Publications, Corporate Economics

AECO Natural Gas Price
(2005-2019, annual average, *C$/GJ*)



Source: GLJ Publications, Corporate Economics

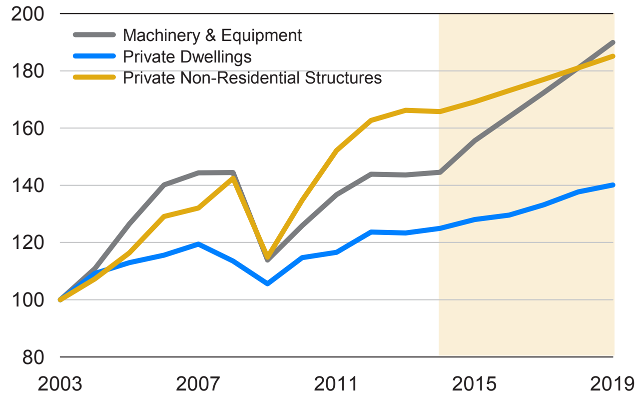
Canada

Following a 20 per cent drop in corporate net profits in 2008 and a further 10 per cent decline in 2009, the business environment has improved with net profits reaching a record high of $ 66 billion in the first quarter of 2014. Corporate balance sheets are healthy, the cost of capital is low, and capital availability is high. In the last three years, real domestic business investment in non-residential structures and machinery and equipment increased at very high average annual rates of 7.2 per cent and 4.5 per cent, respectively. Annual growth of investment in residential structures has been modest, averaging 2.5 per cent. Going forward, real domestic investment growth will slow from exceptionally high rates to the long-run average by 2019. Alberta's construction, transportation and warehousing, and oil and gas industries will continue to lead the way. Investment in Alberta's energy industry could rise further with a reduction in pipeline bottlenecks.

Household savings should be a higher proportion of disposable income between 2013 and 2019 compared with the last decade. A rising household savings rate contributed to a reduction in the growth of household consumption spending between 2009 and 2013, keeping it in line with growth in household income. The household debt service ratio has continued to decline, achieving a record low of 6.97 per cent in the first quarter of 2014, as more households exited less favourable long-term fixed mortgage rates. Going forward, real household consumption spending is expected to contribute less to GDP growth as the household debt service ratio begins to climb and the savings rate remains high. The slower pace of consumption spending will be mostly reflected in the housing market with a minor decline in housing starts driven by a pickup in mortgage rates and slower growth outside the western provinces. Retail sales are expected to grow faster. New motor vehicle sales will continue to increase, driven by growth in truck sales.

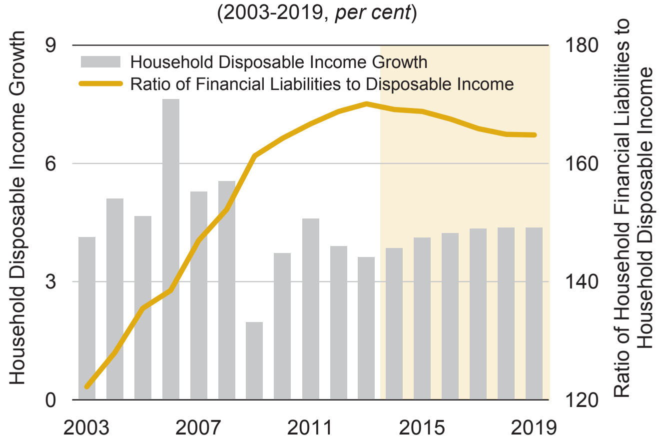
In 2009, Canada transitioned from a net exporter to a net importer of goods, responsible for a declining share of world merchandise trade. The destination of exports is more regionally balanced. The share of exports with destinations in the U.S. was 73.5 per cent, Europe 9.2 per cent and the rest of the world 17.2 per cent in 2000. The respective shares changed to 64.4 per cent, 9.3 per cent, and 26.3 per cent in 2013. This geographical rebalancing has also occurred for imports, with the value of imports from Europe and the rest of

Canada: Increased Investment especially in Machinery and Equipment
(2003-2019, *Index 2003=100*)



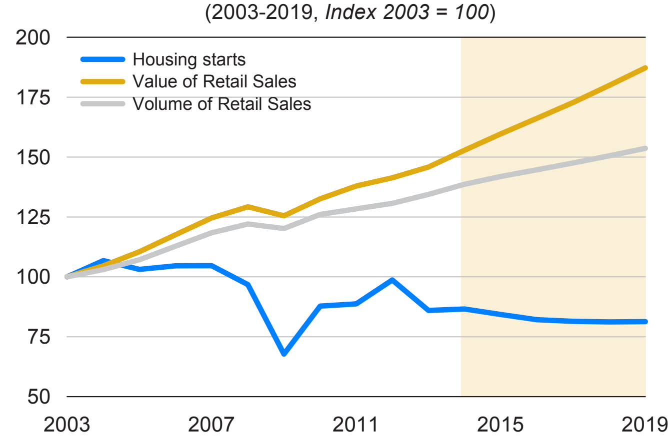
Source: Oxford Economics, Corporate Economics

Canada: Increased Household Earnings and Decreased Indebtedness
(2003-2019, *per cent*)



Source: Oxford Economics, Corporate Economics

Canada: Household Consumption Demand
(2003-2019, *Index 2003 = 100*)



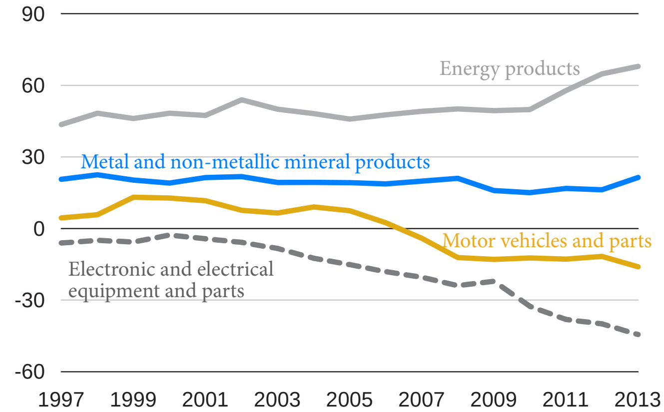
Source: Oxford Economics, Corporate Economics

the world rising while U.S. imports declined. There has been a re-orientation of exported goods away from motor vehicles and electronic and electrical equipment, which together lost 15.4 per cent of the market share of exports, toward energy products and metal and non-metallic mineral products, which gained a 15.2 per cent market share. Net export weakness depressed overall GDP growth over the past four years. A strong dollar fuelled imports but hurt exports, especially non-energy exports. In addition, increased U.S. domestic energy production and limited access to non-U.S. energy markets continue to be a risk to the total value of exports. A weaker dollar during the forecast period will provide some relief to exporters, but pipeline capacity will constrain energy exports.

Manufacturing output growth for motor vehicles and electronic and electrical goods fell 15.2 per cent and 48.5 per cent respectively between 2000 and 2013. The manufacturing industry was the only industry with lower real output in 2013 relative to 2000. The manufacturing industry's recovery is crucial for the provinces of Ontario and Quebec. The manufacturing output slump in these provinces was widespread hitting all industry sub-groups except food manufacturing. This led to weak job growth in these provinces between 2010 and 2013, depressed the national rate of job creation, and encouraged record levels of migrants to Alberta. In 2014, machinery and equipment investment intentions for export-oriented manufacturing industries were higher. Thus, industrial production should grow at a faster pace over the forecast period and will lift manufacturing job creation.

Three factors contributed to slower than required output growth for catch up with potential output in the preceding period. Government spending was a drag because of efforts to balance budgets. Net exports have been weak because of declines in non-energy and non-mineral product exports. Manufacturing output and exports from Ontario and Quebec slumped. Private business investments stagnated as firms raised concerns about the uncertain business environment. This led firms to postpone some projects; favour investments with a shorter payoff period, smaller capital outlays or less risk; and shift investment spending toward new or different segments of demand. These three factors will improve going forward. Government spending will be less of a drag on output growth. The federal government is expected to achieve

Canada: Positive Trade Balance Limited to Energy & Mineral Products
(1997-2013, *billions of dollars*)

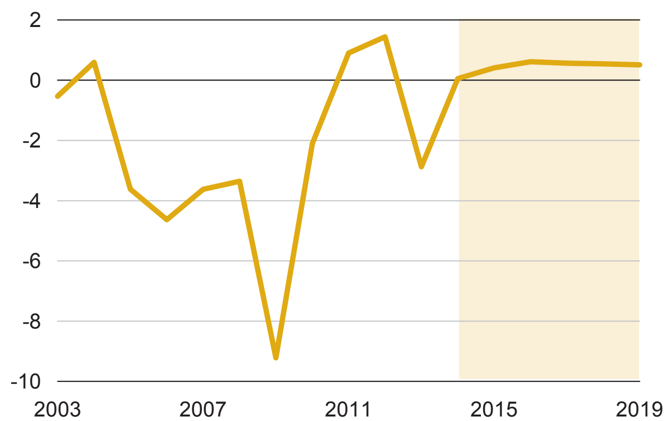


Source: Statistics Canada, Corporate Economics

Canada: Net Merchandise Exports will no longer be a drag
(2003-2019, *Billions of Dollars*)

Source: Oxford Economics, Corporate Economics

Canada: Manufacturing Industry Jobs Recovery
(2003-2019, *per cent*)



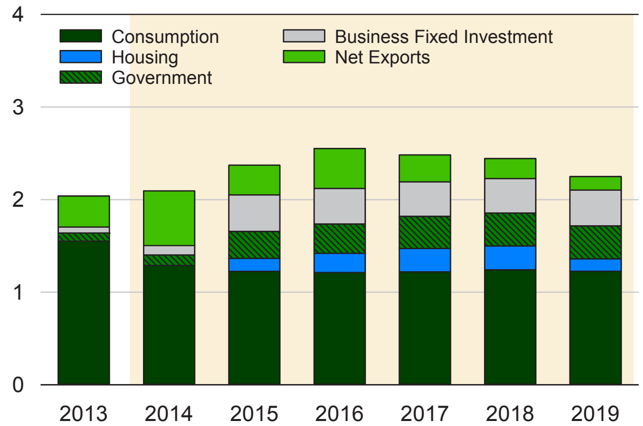
Source: Oxford Economics, Corporate Economics

a budget surplus in 2015, which will ease spending constraints or encourage tax relief. Private business investment, especially non-residential fixed investment, is expected to spur output growth as new machinery and equipment are purchased and demand for labour to operate them increases. Over 800,000 net new jobs will be created between 2014 and 2019. Net exports will move to a positive balance.

The International Monetary Fund (IMF) forecasts that excess capacity will persist throughout the forecast period and that the U.S. economy will return to full capacity earlier than Canada. Part of this slower pace of catch up is due to faster growth of potential output in Canada than in the U.S., while the rest will be due to faster actual output growth in the U.S. The slower growth of real output in Canada will be due to slower employment and labour productivity growth compared with the U.S. Between 2010 and 2013, Canadian real output grew at an average annual rate of 2.2 per cent, split between 1.3 per cent growth in employment and 0.9 per cent growth in labour productivity. The growth in labour productivity was, however, not widespread. Labour productivity declined in several industries-mining and oil and gas; transportation and warehousing; business, building and other support services; educational services; health care and social assistance; and accommodation and food services. For the forecast period, annual real output growth will vary between 2.1 and 2.6 per cent. Labour productivity growth will improve in these industries. More broadly, labour productivity growth will be faster and employment growth slower than in the preceding period. The unemployment rate will decline to 6.3 per cent in 2019. Real output growth will be unbalanced across Canada with western provinces outperforming their eastern counterparts.

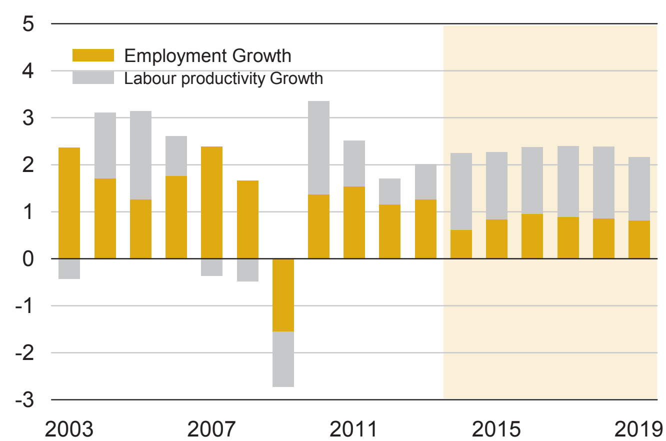
Excess capacity has led to a deviation from the traditional growth path of prices because of weak demand, production and employment. To keep inflation within its 1-3 per cent target range, the Bank of Canada introduced monetary stimulus through sustained reductions in the overnight rate from 4.75 per cent in November 2007 to 0.5 per cent in April 2009, with pass-through to the prime lending rate, which fell from 6.1 per cent in 2007 to 2.4 per cent in 2009. Monetary stimulus led to a rebound of inflation in 2010 and the Bank of Canada's subsequent partial withdrawal of monetary stimulus through interest rate hikes. The resulting rise in the

Canada: Domestic and External Contribution to Real GDP Growth
(2013-2019, *per cent)*



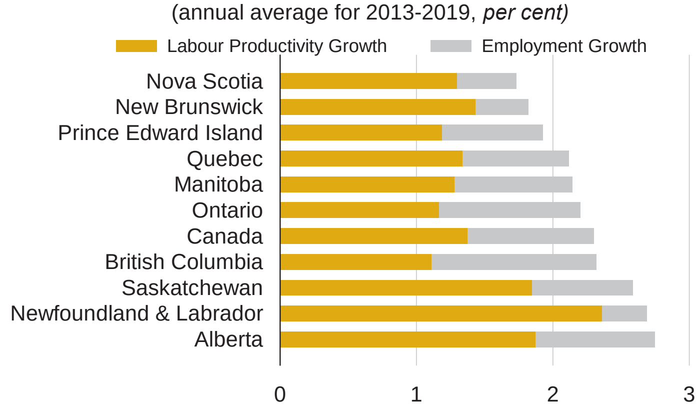
Source: Oxford Economics, Corporate Economics

Canada: Labour Productivity Growth to Outstrip Employment Growth
(2003-2019, *per cent*)



Source: Oxford Economics, Corporate Economics

Canada: Western Provinces will Outperform Eastern Provinces
(annual average for 2013-2019, *per cent)*



Source: Oxford Economics, Corporate Economics

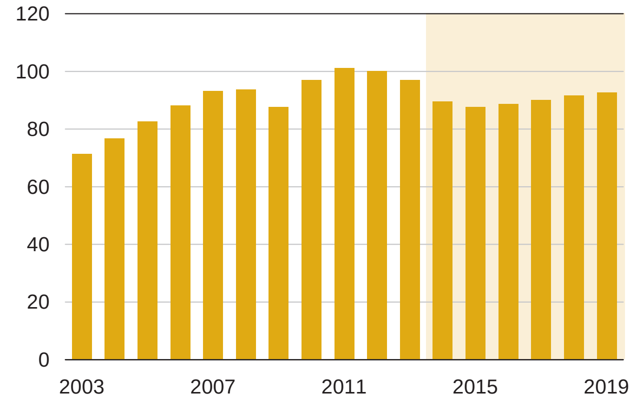
prime interest rate led to a gradual appreciation of the dollar relative to Canada's trading partners. This constrained exports, which became less competitive, and bolstered imports. For the forecast period, a rebound of the U.S. economy is expected to lead to interest rate increases and U.S. dollar appreciation. The Canadian dollar will remain low relative to the U.S. dollar, in the US$0.91/ C$1 to US$0.92/C$1 range, which will be a boon for Canadian exports.

The Bank of Canada expects that the economy will have returned to full capacity by mid-2016. The prime lending rate is expected to increase from 3.0 per cent in 2013 to 6.7 per cent in 2019. Higher mortgage rates will lead to the housing market playing a diminished role in output growth. A key risk to the forecasted path of exchange rate stability is major changes to commodity prices. Softer prices will create a downward pressure on the Canadian dollar, while stronger prices, fuelled by geopolitical tensions ,will create upward pressure.

Public policy-driven labour market improvements are particularly attributable to programs on employment insurance; education and training; and licensing and residency requirements, among others that have been the domain of fiscal policy. To meet the requirements of expanded government programs, Canadian governments increased real consumption spending by 11.0 per cent and real investment spending by 26.5 per cent from 2007 to 2010. This led to the governments' balance moving from a surplus of 2.5 per cent of GDP in 2007 to a deficit of 3.2 per cent of GDP in 2010.

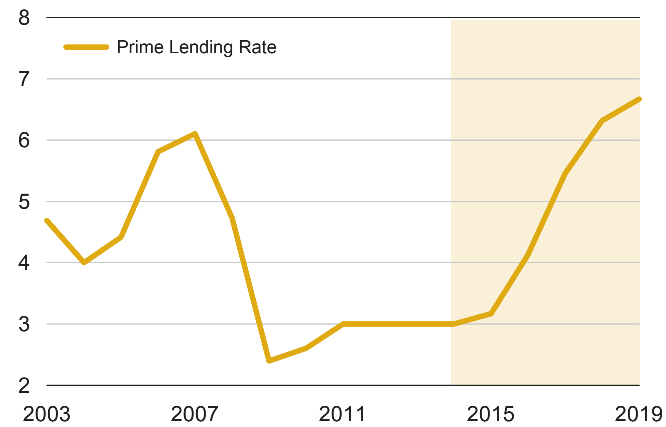
The federal government, after running large deficits to stimulate the economy, shifted its attention to tightening fiscal policy in 2012. Many provincial governments in similar deficit positions also cut back spending. Reduced government spending not only caused public sector job losses but also affected household budgets as wage freezes and subsidy cancellations reduced disposable incomes for affected employees. Public sector finances across Canada are expected to benefit from more robust economic growth and a larger tax base over the forecast period. In particular, personal and corporate income taxes should grow faster with the economic expansion. In addition, the need to provide support for displaced workers will fall. While the federal balance is expected to turn positive in the early part of the forecast period, the balance for provincial governments is expected to remain in a negative position leading to an overall negative balance.

Canada: The Canadian Dollar will Remain Low Relative to the U.S. Dollar
(2003-2019, *US$ per C$*)



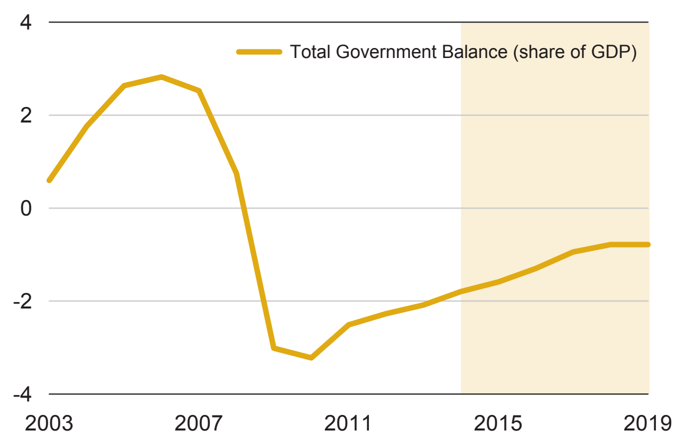
Source: Oxford Economics, IHS Global Insight, Conference Board of Canada, Corporate Economics

Canada: Higher Prime Rates in the Horizon
(2003-2019, *per cent*)



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

Canada: Government Balance to remain negative
(2003-2019, per cent)



Source: Oxford Economics, Corporate Economics

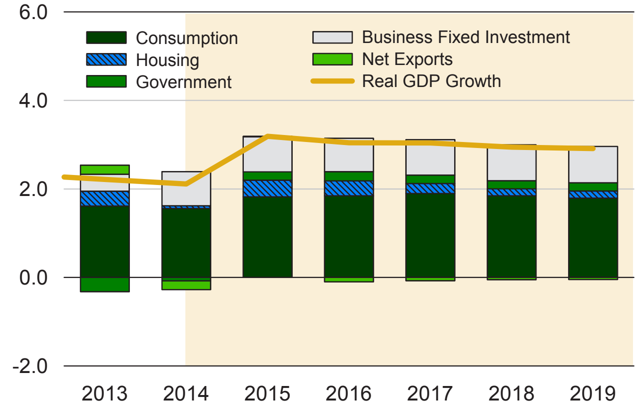
United States

U.S. output growth contracted by 2.9 per cent in the first quarter of 2014 due to bad weather and lower spending on healthcare. The last time the U.S. economy experienced such a contraction was in the first quarter of 2009. The second quarter growth estimate of 4.6 per cent confirmed that this was an aberration. The first quarter result has led to a downward revision of expected output growth for 2014 to 2.1 per cent. For the remainder of the forecast horizon, U.S. output growth is expected to accelerate as the dampening effects of household de-leveraging and fiscal uncertainty dissipate. U.S. economic output increased at an average rate of 3 per cent in the second half of 2013, and this pattern is expected to resume. U.S. employers created an average of 231,000 net new jobs a month between January and June, which is the best half-year result since 1999. Further employment growth, with more than 7 million net new jobs, is expected between 2014 and 2019. Rising household wealth that boosts consumer confidence and the expansion of industrial production to meet future demand are all expected to drive output growth.

The regional distribution of U.S. economic growth also has implications for the Calgary and Alberta economies. Between 2010 and 2013, Canada's western provinces outperformed Canada's eastern provinces and a similar geographical difference in economic performance was apparent in the U.S. For the same period, average annual real GDP growth in the four regions in the eastern part of the U.S.-Great Lakes (3.8 per cent), Southeast (3.4 per cent), New England (3.0 per cent) and Mideast (2.9 per cent) was slower than growth in the four regions to the West-Southwest (6.4 per cent), Rocky Mountain (4.9 per cent), Plains (4.8 per cent), and Far west (4.1 per cent). The share of Alberta's non-oil exports to the western regions of the U.S. has increased from 48 per cent in 2009 to 52 per cent in 2013. Further growth in the U.S. west will boost Alberta's non-oil exports.

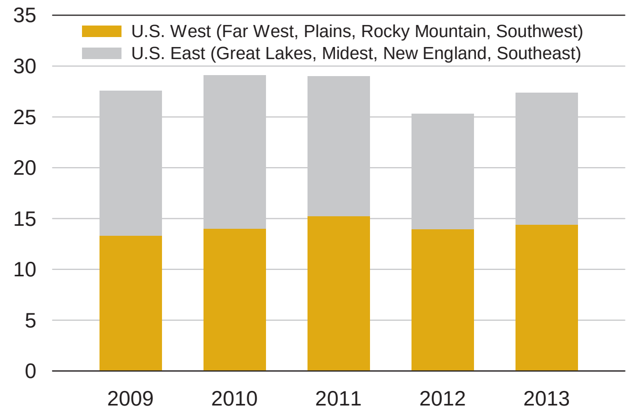
U.S. economic activity declined sharply during the last recession, causing actual GDP to fall further below potential GDP. The increased economic slack was due to weak demand and the resulting under-working of capital, labour, and technology resources. The IMF forecasts that the U.S. will not achieve the level of potential output until mid-way through 2019. The output loss between 2001 and 2018 is expected to be close to half of the 2013 U.S. real GDP. The duration of below capacity output has been longer for the U.S. than it has been for Canada, but the U.S. economy is expected to return to full capacity more quickly.

U.S.: Domestic Contribution to and External Drag on Real Output Growth
(2013-2019, *per cent*)



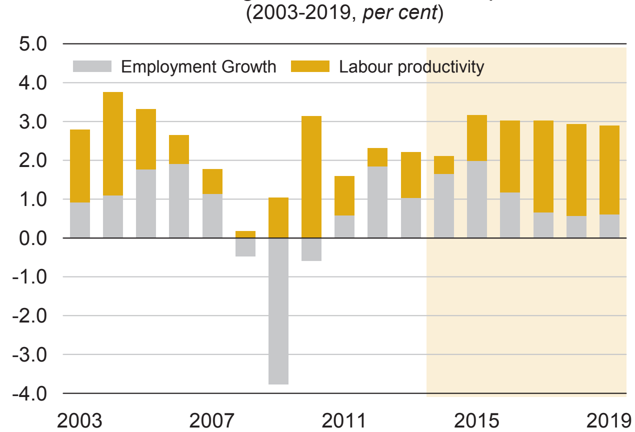
Source: Oxford Economics, Corporate Economics

U.S.: Higher Alberta Non Crude Oil Trade to the Faster Growing U.S. West
(2009-2013, *US$ Billions*)



Source: Bureau of Economic Analysis, Corporate Economics

U.S.: Labour Productivity will Drive Convergence to Potential Output
(2003-2019, *per cent*)



Source: Oxford Economics, Corporate Economics

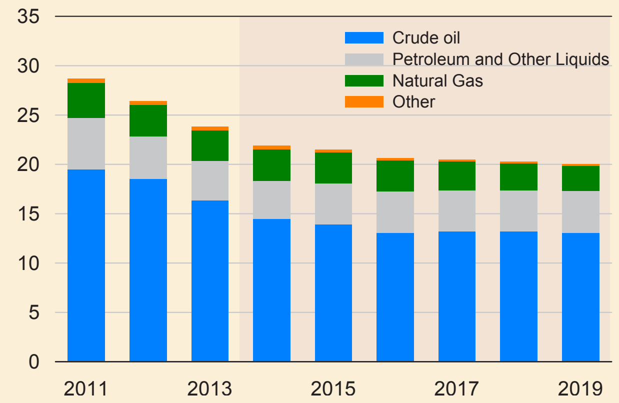
Textbox 6 Implications of Increased U.S. Energy Independence for Canada

Following the oil embargo of the 1970s, energy independence emerged as an important U.S. foreign policy objective. In the decades that followed however, energy dependence grew as net imports of energy products as a share of total energy consumption rose from 8.4 per cent in 1970 to a high of 30.1 per cent in 2005. There has been a turnaround in the last eight years driven by a 12.6 per cent average annual growth of energy exports and a 4.2 per cent average annual decline in energy imports. As a result, net imports of energy products represented only 13.1 percent of the 97.5 quadrillion BTU of energy consumed in the U.S. in 2013.

The U.S. economy is on a trajectory toward increased energy independence. Canada's net energy exports to the U.S. have continued to increase while those for the rest of world have declined sharply. From 2005 to 2013, Canada was the only country with a sustained increase in petroleum exports to the U.S., rising at an average annual rate of 4.6 per cent from 2.181 million to 3.125 million barrels per day. For the rest of the world, there was a 6.6 per cent average annual decline.

U.S. imports of natural gas have declined for all countries, with net imports from Canada falling from a high of 3,301 billion cubic feet in 2007 to 1,875 billion cubic feet in 2013. The U.S. Energy Information Administration (EIA) forecasts further declines to 2019. While Canadian crude oil exports to the U.S. will remain high during the forecast period, natural gas exports will continue to fall. Growth in Canadian crude exports will likely slow over the longer term. The decline in future U.S. energy import requirements will affect Canadian energy exports to the U.S. This makes the need for alternative markets for Alberta's energy products pressing.

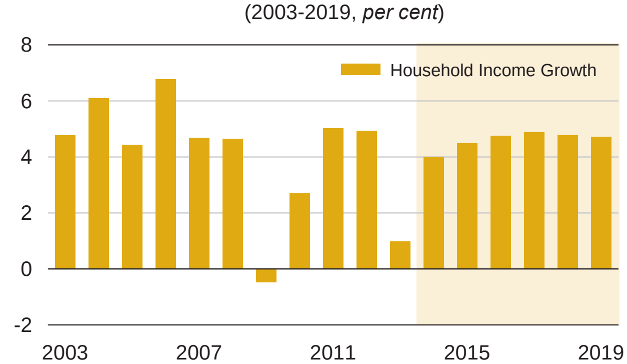
U.S. Energy Imports
(2011-2019, *Quadrillion Btus*)



Source: U.S. Energy Information Administration, Corporate Economics

Personal incomes are expected to grow faster over the forecast period than they did the decade before. Between 2003 and 2013, the average annual growth rate was 4.1 per cent, driven by fast growth in dividend (5.9 per cent) and rental (9.5 per cent) income. Going forward, faster personal income growth will be due to faster growth of wages and salaries. Further wage and salary growth is expected as the labour market recovery gains momentum. Average annual employment growth will be faster than the 0.4 per cent rate recorded last decade. However, disposable income as a share of personal income is expected to fall from its 2012 level of 89.1 per cent. This is because the payroll tax holiday that granted a 2.0 per cent reduction in employees' social security contributions has expired.

U.S.: Higher Household Income will be driven by Wage Growth
(2003-2019, *per cent*)



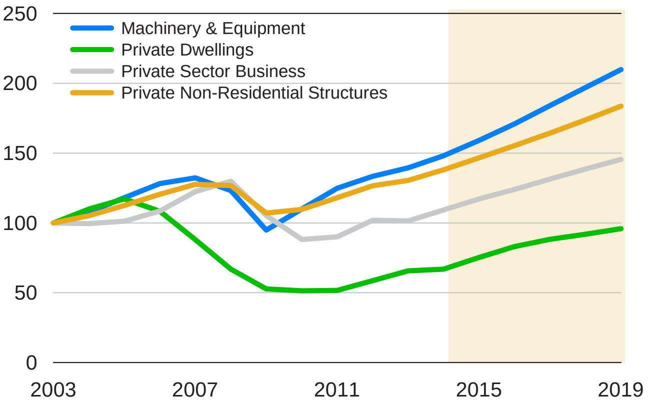
Source: Oxford Economics, Corporate Economics

U.S. businesses are performing very well, with corporate profits before tax for the second quarter of 2014 at a record high of U.S.$ 2.1 trillion. Businesses are also holding an estimated U.S.$ 6 trillion of cash and equivalents. In the last five years, business pessimism held back investment. With the recent rise in consumer confidence, domestic business investment will become a more important driver of U.S. economic growth in the next five years. From 2002 to 2012, gross private domestic investment had an average annual growth of 0.6 per cent. Over the forecast horizon, the average annual growth in gross private domestic investment is expected to be between 4 and 5 per cent. This pace of investment growth will come close to the fastest growth rate experienced in the late 1990s. Fixed residential structures will be the preferred form of investment to ensure that housing construction catches up with demographic requirements, followed by investment in equipment and software. Investment in fixed non-residential structures will have the lowest growth. High domestic investment will also require inputs from the external economy. Greater overall investment in equipment is significant to the Canadian manufacturing sector. The faster rate of acquisition of new machinery in the U.S. bodes well for faster growth of Canada's manufacturing sector.

Real merchandise exports increased at an average annual rate of 5.3 per cent between 2002 and 2012. Nevertheless, the share of world merchandise exports fell. In 2007, China usurped the U.S. as the country with largest share of global merchandise exports and the Chinese market share of world exports doubled in the last decade. Almost all the decline in U.S. market share is attributable to machinery and transportation, food and live animals, and crude materials. Between 2002 and 2012, the real value of imports increased at an average annual rate of 3.1 per cent but the share of world merchandise imports fell. For the forecast period, both exports and imports are expected to grow at faster rates. Between 2000 and 2013, the growth rate of Alberta's real exports to the U.S. was the third fastest among Canadian provinces, with only Saskatchewan and Newfoundland & Labrador outperforming Alberta. Ontario and Quebec held back export growth to the U.S. with the combined value of their nominal exports declining by C$ 58 billion. Alberta will continue to be a beneficiary of faster U.S. import growth.

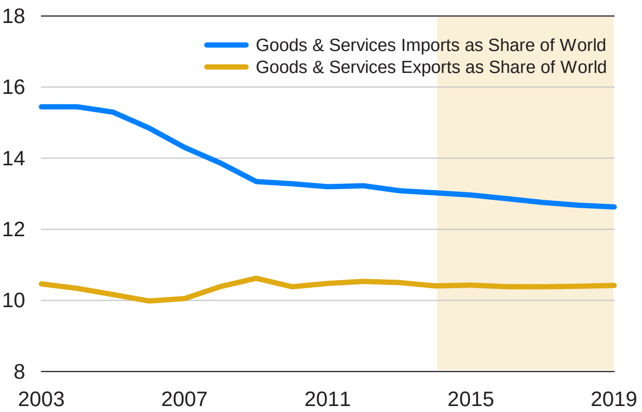
Persistent deviation from potential output has been a concern for U.S. policymakers. Excess capacity ordinarily translates into very low price growth or price declines because of weak demand. In 2009, the U.S. economy experienced deflation of 0.3 per cent. The post-recession deflation episode was short-lived thanks to monetary stimulus introduced by the U.S. Federal Reserve (known colloquially as "the Fed") with near zero interest rates, QE1 and

U.S.: Growth for all Categories of Private Investment
(2003-2019, Index *2003=100*)



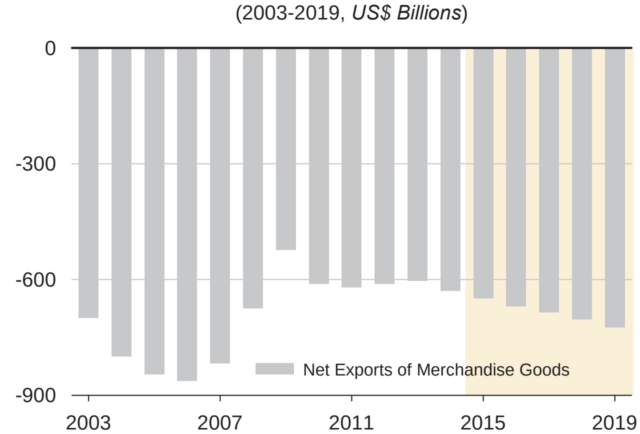
Source: Oxford Economics, Corporate Economics

U.S.:Declining Share of World Trade
(2003-2019, *per cent*)



Source: Oxford Economics, Corporate Economics

U.S.: Net Exports of Merchandise Goods
will Remain Negative
(2003-2019, *US$ Billions*)



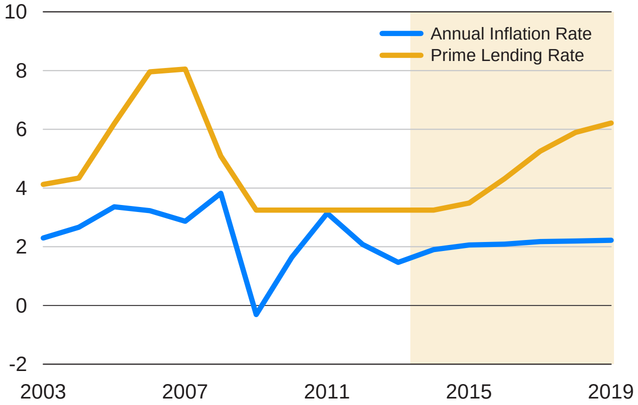
Source: Oxford Economics, Corporate Economics

QE2. Annual inflation rebounded in 2010 rising to 1.6 per cent from 2009 and even further to 3.1 per cent in 2011. Deviation of the unemployment rate from the non-accelerating inflation rate of unemployment (NAIRU) is another concern for the U.S. Fed with its dual mandate-to mitigate deviations of inflation from its long-run goal of 2 per cent and deviations of unemployment from the Federal Open Market Committee (FOMC) assessment of the maximum level (currently 6.5 per cent). Although the U.S. unemployment rate fell from 9.6 per cent in 2010 to 8.1 per cent in 2012, it remained too high, causing the Fed to increase monetary stimulus (with QE3).

The unwinding of the Fed's stimulative measures is closely linked with the pace of the U.S. labour market recovery and the resulting decline in the unemployment rate. The withdrawal of monetary stimulus was announced in December 2013 with "measured" reductions in the Fed's asset purchase program. A reduction of the Fed's outstanding credit to pre-recession levels will take longer than the forecast period. The removal of monetary stimulus will extend to the hiking of the federal funds rate during the forecast period. The resulting increase in interest rates will lead to a gradual appreciation of the U.S. dollar. International trade has been a drag on economic growth in recent years, with exports constrained by the weak Euro area. The introduction of monetary stimulus by the European Central Bank is expected to result in depreciation of the euro relative to the dollar which should make U.S. exports less price-competitive. All other things being equal, this will lead to a deterioration of the U.S. merchandise trade balance.

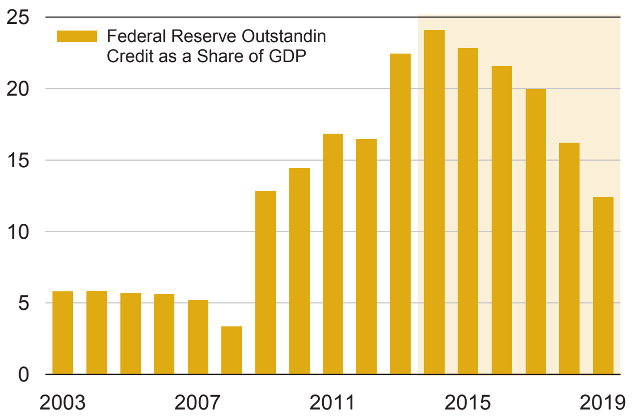
To help lower the unemployment rate, the U.S. government adopted stimulative fiscal policy. U.S. federal government spending increased 17.9 per cent from US$2.98 trillion in 2008 to US$3.51 trillion in 2009. This resulted in an expansion of the federal budget deficit from 3.1 per cent to 9.8 per cent of GDP. Considerable fiscal stimulus remained in the U.S. economy through to 2011. This led to an accumulation of public debt which more than doubled in four years rising from US$5.04 trillion in 2007 to US$10.13 trillion in 2011. In order to restrain the growth of the federal debt, the Budget Control Act of 2011 was enacted. It imposed caps on federal discretionary funding for the 2012-2021 period which led to an immediate fall in this spending category. The original legislation also had automatic spending cuts for mandatory funding for 2014 and 2015, which have been swapped by the Bipartisan Budget Act of 2013 for back-loaded savings closer to the end of the 2014-2023 period. The withdrawal of fiscal stimulus is complete and the expectation is that more fiscal tightening is forthcoming. No growth in real government spending and a slight increase in real government revenue will help lower the government deficit as a share of GDP.

U.S.: The Prime Rate will Start to Climb in 2015
(2003-2019, *per cent*)



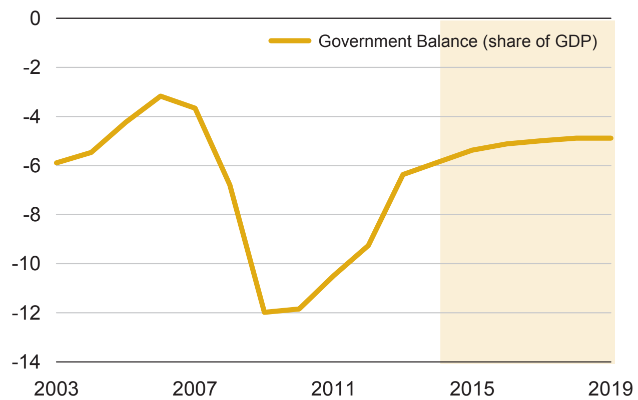
Source: Oxford Economics, Corporate Economics

U.S.: Federal Reserve QE Induced Outstanding Credit will Decline
(2013-2019, *per cent*)



Source: Oxford Economics, Corporate Economics

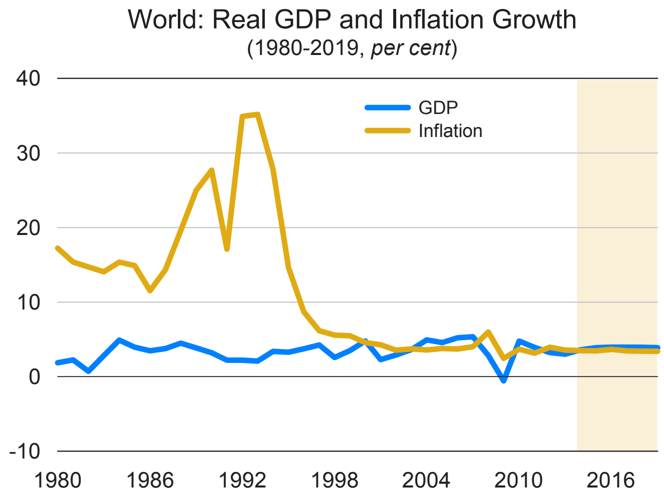
U.S.: The Government Sector will Remain in Deficit
(2003-2019, *per cent*)



Source: Oxford Economics, Corporate Economics

World

- In 2013, global economic growth was led by the emerging and developing economies. Most industrialized nations were preoccupied with domestic fiscal restraints and debt deleveraging. In North America, the United States recovery was restrained by both political and economic disruptions as the debt ceiling crisis from the previous year created a wave of uncertainty which depressed both business and consumer confidence. Quantitative easing (QE) in the U.S. provided the springboard for a resurgence of economic growth in 2014. In the United Kingdom, the central bank also embarked on expansionary monetary policies. But there is renewed pessimism about a sustained recovery in Europe. The recovery remains vulnerable to the Russia-Ukraine crisis.
- Global growth in 2014 should be driven by the industrialized nations, unlike the previous periods when the developing and emerging markets were the major drivers of global growth. The forecast is for the world economy to gain momentum through the end of the decade. Developed countries are expected to make a significant contribution to economic growth.



Source: IMF, 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: August 2014						BASE FORECAST					
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
ASSUMPTIONS											
World											
World Gross Domestic Product (annual % change)	-0.6	4.8	3.9	3.2	3.0	3.6	3.9	4.0	4.0	3.9	3.9
The United States											
U.S. Real Gross Domestic Product Growth (chained 2009 dollars) (%)	-2.8	2.5	1.6	2.3	2.2	2.1	3.1	3.0	3.0	2.6	2.6
Canada											
Canada Real Gross Domestic Product Growth (chained 2007 dollars) (%)	-2.7	3.4	2.5	1.7	2.0	2.3	2.6	2.4	2.4	2.3	2.2
Prime Business Loan Rate (%)	2.4	2.6	3.0	3.0	3.0	3.0	3.2	4.1	5.5	6.3	6.7
Exchange Rate (US$/Cdn$)	0.88	0.97	1.01	1.00	0.97	0.91	0.91	0.92	0.92	0.92	0.92
Alberta											
Alberta Real Gross Domestic Product Growth (chained 2007 dollars) (%)	-4.2	4.8	5.5	3.7	3.9	3.9	3.3	3.2	3.1	3.1	3.0
Total Employment Growth (%)	-1.4	-0.4	3.8	2.6	2.8	3.5	2.7	2.3	2.2	2.0	2.0
Unemployment Rate (%)	6.6	6.5	5.4	4.6	4.7	4.7	4.7	4.6	4.5	4.5	4.4
Housing Starts ('000 Units)	20.3	27.1	25.7	33.4	36.0	40.0	38.7	38.2	38.0	37.7	37.2
Inflation Rate (%)	-0.1	1.0	2.4	1.1	1.4	2.9	2.3	2.3	2.2	2.1	2.1
Crude Oil Price - WTI (US$/bbl)	61.80	79.50	95.10	94.10	98.00	101.64	97.00	94.00	95.00	95.52	99.40
Western Canadian Select - WCS (US$/bbl)	52.10	65.30	77.97	73.14	72.80	83.22	79.00	77.00	78.25	78.50	80.00
Alberta Natural Gas Price - AECO/NIT ($/GJ)	3.80	3.80	3.43	2.27	3.00	5.24	4.91	4.98	5.18	5.53	5.68
Industrial Product Price Index (%)	-3.5	1.5	7.0	1.0	0.5	3.7	-0.7	1.0	1.1	1.4	1.1
Raw Materials Price Index (%)	-22.9	13.0	19.5	-4.0	0.9	6.2	-3.4	1.3	0.0	1.4	0.8
Alberta Average Wage Rate Increase for All Industries (%)	4.4	1.3	1.7	4.8	3.9	4.2	3.3	3.2	3.0	3.1	3.0
FORECAST											
Calgary Economic Region (CER)											
Gross Domestic Product (%)*	-4.0	4.4	5.4	3.9	3.8	4.0	3.8	3.6	3.5	3.4	3.3
Total population**	1,296	1,338	1,362	1,398	1,435	1,519	1,569	1,613	1,655	1,695	1,732
Total Employment ('000 Persons)	765	755	776	806	830	857	882	906	929	951	972
Total Employment Growth (%)	-0.4	-1.3	2.8	3.9	3.0	3.2	2.9	2.7	2.5	2.4	2.3
Unemployment Rate (%)	6.3	7.0	6.2	4.8	4.8	5.1	5.1	4.9	4.8	4.7	4.5
Inflation Rate (%) (CMA)	-0.1	0.8	2.2	1.0	1.7	2.9	2.3	2.3	2.2	2.1	2.1
Building Permits ($billion)	4.5	3.8	5.5	5.6	7.5	7.7	6.1	6.1	6.1	6.1	6.1
Low Forecast	N/A	N/A	N/A	N/A	N/A	7.1	5.5	5.5	5.5	5.5	5.5
High Forecast	N/A	N/A	N/A	N/A	N/A	8.4	6.8	6.8	6.8	6.8	6.8
Housing Starts ('000 Units) (CMA)	6.3	9.3	9.3	12.8	12.6	14.6	13.8	12.7	11.9	11.6	11.2
Non-Residential Building Price Inflation (%) (CMA)	-7.7	-2.2	2.7	3.7	1.2	2.2	2.4	-0.8	0.7	0.8	1.3

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: August 2014						BASE FORECAST					
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
DEMOGRAPHY											
Total Population ('000 Persons)	1,065	1,072	1,091	1,120	1,156*	1,195	1,229	1,259	1,288	1,316	1,343
Total Population Growth (%)	2.2	0.6	1.8	2.7	3.2	3.4	2.8	2.5	2.3	2.2	2.0
Net Migration ('000 Persons)	-4.2	9.6	19.7	26.1*	28.0	22.0	18.0	16.0	15.0	14.0	13.0
Household Formation ('000 Units)	7.4	4.1	8.1	12.2	8.1	11.1	14.5	11.6	10.9	10.6	10.2
REAL ESTATE											
Residential Market											
Housing Starts ('000 units)	5.0	7.3	7.7	10.3	9.4	12.8	12.5	11.6	10.9	10.6	10.2
House Price Index Inflation (%)	-7.8	2.7	-1.2	2.5	5.7	6.6	2.4	-0.8	0.7	0.8	1.3
Total Building Permits mid point ($billions)	3.7	2.9	4.5	4.4	6.1	6.3	5.0	5.0	5.0	5.0	5.0
Low Forecast	N/A	N/A	N/A	N/A	N/A	5.8	4.5	4.5	4.5	4.5	4.5
High Forecast	N/A	N/A	N/A	N/A	N/A	6.8	5.5	5.5	5.5	5.5	5.5

Numbers may not add up due to rounding * Revised

Table 3 - City of Calgary Population Projection

City of Calgary

FORECAST COMPLETED: August 2014		BASE FORECAST						
	2014	2015	2016	2017	2018	2019	2020	2021
Total Population (as April)	1,195,200	1,228,900	1,259,200	1,287,900	1,315,700	1,342,600	1,368,400	1,394,900
Total Population Growth Rate April - March)	3.3	2.8	2.5	2.3	2.2	2.0	1.9	1.9
Total Net Migration (April - March)	22,000	18,000	16,000	15,000	14,000	13,000	14,000	14,000
Total Births (April - March)	18,500	19,200	19,700	20,000	20,300	20,400	20,400	20,300
Total Deaths (April - March)	6,700	6,900	7,100	7,200	7,400	7,600	7,800	8,000
Total Natural Increase (April - March)	11,700	12,300	12,700	12,800	12,900	12,800	12,600	12,300
Total Households (as April)	453,600	468,200	479,700	490,500	501,000	511,200	520,900	530,900
Total Household Formation (April - March)	11,100	14,500	11,600	10,800	10,500	10,200	9,700	10,000

Population by Cohort		BASE FORECAST						
	2014	2015	2016	2017	2018	2019	2020	2021
0-4	81,000	82,300	84,700	88,200	92,400	97,200	99,100	100,300
5-9	71,900	75,000	77,700	79,600	80,500	80,400	81,700	84,100
10-14	65,600	66,400	67,300	68,600	70,200	72,400	75,500	78,200
15-19	66,400	67,000	67,200	67,400	67,500	67,900	68,400	69,300
20-24	81,500	81,300	79,900	78,400	77,000	74,700	74,600	74,500
25-29	103,000	104,900	105,700	105,000	103,600	102,600	100,300	98,000
30-34	107,800	114,800	119,900	123,700	126,600	128,000	127,000	126,500
35-39	100,700	106,400	111,600	116,500	121,000	125,900	130,900	135,000
40-44	98,600	102,100	105,500	108,300	111,700	115,200	119,300	123,600
45-49	84,400	86,800	89,800	94,800	100,200	105,700	108,200	111,100
50-54	85,300	86,800	87,900	87,500	87,100	86,400	88,400	91,200
55-59	74,100	75,700	77,300	79,100	80,600	82,400	83,900	84,800
60-64	54,600	55,800	57,800	60,300	62,900	65,000	67,300	69,100
65-69	42,300	44,000	45,700	47,400	47,700	47,600	49,300	51,500
70-74	28,400	29,500	30,600	31,700	34,300	37,500	39,200	40,800
75-79	19,900	20,200	20,600	21,300	22,100	23,300	24,400	25,500
80-84	15,400	15,200	15,100	14,900	14,900	14,800	15,200	15,600
85-89	9,000	9,200	9,300	9,600	9,600	9,700	9,600	9,600
90+	5,200	5,400	5,600	5,700	5,900	6,000	6,100	6,300
Total	**1,195,200**	**1,228,900**	**1,259,200**	**1,287,900**	**1,315,700**	**1,342,600**	**1,368,400**	**1,394,900**

12-17	78,900	79,300	79,700	80,800	81,500	82,700	84,300	86,700

Numbers may not add up due to rounding

Table 4 - Calgary Economic Region (CER) Population Projection

Calgary Economic Region (CER)

FORECAST COMPLETED: August 2014		BASE FORECAST						
	2014	2015	2016	2017	2018	2019	2020	2021
Total Population (as April)	1,518,800	1,569,000	1,613,500	1,655,300	1,695,000	1,732,200	1,768,900	1,806,000
Total Population Growth Rate (April - March)	3.4	3.3	2.8	2.6	2.4	2.2	2.1	2.1
Total Net Migration (April - March)	36,200	30,100	27,200	25,100	22,800	22,300	23,100	23,000
Total Births (April - March)	22,800	23,600	24,200	24,600	25,000	25,200	25,300	25,400
Total Deaths (April - March)	8,800	9,200	9,700	10,100	10,500	10,800	11,300	11,700
Total Natural Increase (April - March)	14,000	14,400	14,500	14,600	14,500	14,300	14,000	13,700
Total Households (as April)	584,200	603,500	620,600	636,600	651,900	666,200	680,300	694,600
Total Household Formation (April - March)	--	19,300	17,100	16,100	15,300	14,300	14,100	14,300

Population by Cohort		BASE FORECAST						
	2014	2015	2016	2017	2018	2019	2020	2021
0-4	96,600	101,200	106,200	111,500	116,900	121,700	123,900	125,500
5-9	91,800	93,800	95,600	96,900	97,700	98,900	103,100	107,900
10-14	82,500	85,200	87,900	90,800	93,700	95,900	97,700	99,400
15-19	89,500	90,000	90,100	90,300	91,300	92,900	94,600	96,700
20-24	105,100	106,300	107,000	106,800	106,000	104,900	104,000	103,500
25-29	125,900	128,600	129,500	130,000	130,300	129,900	128,700	128,100
30-34	137,500	143,500	147,300	149,600	150,300	150,400	150,500	150,100
35-39	123,700	130,300	136,700	143,000	149,300	154,900	159,100	161,900
40-44	116,300	120,000	123,100	126,900	131,300	136,100	141,300	146,900
45-49	107,600	110,000	114,200	118,200	121,200	123,900	126,700	129,300
50-54	110,600	111,300	110,900	110,500	110,500	111,000	112,900	116,800
55-59	99,600	102,900	105,500	107,400	109,200	110,700	111,100	110,600
60-64	74,800	79,600	84,600	89,800	93,900	97,600	100,600	103,100
65-69	55,500	59,500	63,200	65,300	68,200	72,200	76,700	81,400
70-74	36,200	38,400	41,000	45,300	49,200	52,600	56,100	59,400
75-79	26,400	27,300	28,400	29,600	31,300	33,100	34,900	37,100
80-84	20,200	20,700	21,000	21,400	21,800	22,400	23,000	23,800
85-89	12,500	13,200	13,700	14,200	14,500	14,600	14,900	15,100
90+	6,600	7,000	7,500	7,900	8,400	8,700	9,100	9,500
Total	**1,518,800**	**1,569,000**	**1,613,500**	**1,655,300**	**1,695,000**	**1,732,200**	**1,768,900**	**1,806,000**

Numbers may not add up due to rounding

Table 5 - Selected Commodity Prices

City of Calgary

FORECAST COMPLETED: August 2014						BASE FORECAST					
(per cent)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CONSTRUCTION COMMODITIES											
Iron and steel products	-3.0	-0.9	1.9	-1.3	-1.1	2.4	0.2	3.0	-1.6	4.6	1.3
Aluminum products	-19.8	10.3	4.3	-9.5	2.4	0.7	-2.2	0.5	-0.4	2.3	-1.8
Wood	11.0	-1.6	2.0	2.1	6.9	7.3	0.3	-1.0	-3.6	-5.6	-3.5
Asphalt**	-25.4	13.1	-0.7	13.6	-5.4	10.3	-2.4	-6.2	-6.7	-11.1	-6.9
OPERATIONAL COMMODITIES											
Rubber	-9.2	69.2	32.8	-27.5	3.0	3.5	2.1	3.5	6.0	5.2	3.0
Diesel oil	-31.6	11.7	23.3	-0.5	5.2	1.5	1.1	-2.6	-0.9	-0.9	-0.4
Vehicle parts	5.3	1.7	1.8	2.6	20.3	1.8	1.2	1.2	2.1	2.4	3.3

** Based on Ontario Ministry of Transportation Asphalt Price Index

Numbers may not add up due to rounding

Table 6 - Calgary Economic Region Real Gross Domestic Product by Industry

Calgary Economic Region (CER)

FORECAST COMPLETED: August 2014						BASE FORECAST					
(chained 2007 $millions)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Agriculture, forestry, fishing & mining	24,510	25,586	25,801	29,669	29,642	30,388	31,619	32,722	34,827	35,510	37,105
Utilities	1,804	1,445	1,606	1,798	2,065	2,147	2,228	2,313	2,386	2,463	2,555
Construction	7,342	8,504	9,132	9,174	10,131	10,542	10,944	11,356	11,670	12,115	12,561
Manufacturing	5,711	6,489	6,737	7,353	6,315	6,535	6,803	7,087	7,331	7,517	7,819
Retail & distribution	7,191	7,965	8,575	8,631	8,870	9,246	9,557	9,930	10,228	10,571	10,982
Transportation & warehousing	3,872	3,964	4,238	4,311	4,781	4,970	5,148	5,358	5,534	5,731	5,900
Finance, insurance, real estate & leasing	15,793	16,647	16,040	17,344	17,753	18,699	19,207	20,009	20,641	21,499	21,715
Professional, scientific & technical services	7,202	6,963	7,628	8,238	8,454	8,769	9,121	9,413	9,781	10,110	10,449
Business, building & other support services	2,462	1,982	2,177	2,144	2,529	2,624	2,727	2,830	2,921	3,027	3,123
Education	3,067	3,200	3,226	3,565	3,707	3,855	3,999	4,139	4,281	4,421	4,584
Health	4,148	4,219	4,364	4,266	4,970	5,165	5,356	5,547	5,738	5,938	6,154
Information, culture & recreation	3,447	3,706	3,725	3,957	3,822	3,964	4,124	4,274	4,413	4,565	4,715
Accommodation & food services	1,682	1,542	1,825	2,113	2,226	2,312	2,398	2,491	2,573	2,663	2,747
Other services	1,642	1,658	1,567	1,887	1,717	1,790	1,848	1,921	1,986	2,051	2,123
Public administration	3,251	3,175	3,379	3,508	3,396	3,530	3,669	3,797	3,934	4,062	4,194
Total	**91,726**	**95,519**	**100,043**	**104,703**	**109,094**	**113,410**	**117,684**	**121,936**	**126,188**	**130,462**	**134,779**
Growth Rate (%)	***-3.68***	***4.13***	***4.74***	***4.66***	***4.19***	***4.0***	***3.8***	***3.6***	***3.5***	***3.4***	***3.3***

Source: Oxford Economics, Corporate Economics

Table 7 - Calgary Economic Region Employment by Industry

Calgary Economic Region (CER)

FORECAST COMPLETED: August 2014						BASE FORECAST					
(thousands of persons)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Agriculture, forestry, fishing & mining	64.0	59.7	58.6	73.8	69.4	71.2	75	76	79	79	80
Utilities	8.6	6.0	5.8	7.5	7.7	8.0	8.2	8.4	8.6	8.8	9.0
Construction	73.4	74.4	75.2	75.8	79.5	82.2	84.4	86.9	89.2	91.0	93.0
Manufacturing	47.3	49.5	53.0	55.3	47.6	48.9	49.8	51.9	53.5	54.4	55.5
Retail & distribution	106.1	110.9	116.2	112.3	112.6	116.2	119.3	121.9	126.5	129.5	133.5
Transportation & warehousing	42.6	41.5	42.4	44.4	48.7	50.3	51.7	53.1	54.5	55.8	57.1
Finance, insurance, real estate & leasing	49.7	47.6	41.7	44.8	46.9	48.4	49.8	51.1	52.4	53.7	54.9
Professional, scientific & technical services	85.4	79.8	89.8	89.8	100.2	102.5	107.2	108.9	112.8	114.9	118.0
Business, building & other support services	30.7	27.0	28.9	26.7	31.1	32.1	33.0	33.9	34.8	35.6	36.3
Education	45.0	44.8	43.6	47.0	47.6	49.1	50.5	51.9	53.2	54.5	55.8
Health	70.3	77.6	79.8	77.2	89.3	92.2	94.9	97.5	99.9	102.3	104.6
Information, culture & recreation	36.1	36.8	36.2	34.7	35.8	37.0	38.1	39.0	40.0	41.0	41.8
Accommodation & food services	43.3	40.3	46.5	50.4	51.2	53.1	54.6	56.1	57.5	58.8	59.7
Other services	36.0	34.9	33.8	40.2	37.3	38.5	39.6	40.7	41.7	42.7	43.7
Public administration	26.5	24.5	24.7	26.3	25.3	26.1	26.8	27.6	28.3	28.9	29.6
Total	**765.0**	**755.3**	**776.2**	**806.2**	**830.2**	**856.7**	**881.9**	**905.8**	**928.8**	**950.9**	**972.5**
Growth Rate (%)	***-0.40***	***-1.27***	***2.77***	***3.86***	***2.98***	***3.19***	***2.94***	***2.72***	***2.53***	***2.39***	***2.27***

Source: Oxford Economics, Corporate Economics

Table 8 - City of Calgary Population Projection

(Assumes annual population growth in the city of Calgary will be 40,000 persons)

City of Calgary								
FORECAST COMPLETED: August 2014		BASE FORECAST						
	2014	2015	2016	2017	2018	2019	2020	2021
Total Population (as April)	1,195,200	1,235,200	1,275,200	1,315,200	1,355,200	1,395,200	1,435,200	1,475,200
Total Population Growth Rate (April - March)	6.7	3.3	3.2	3.1	3.0	3.0	2.9	2.8
Total Net Migration (April - March)	28,300	27,400	26,600	25,900	25,400	24,900	24,600	24,400
Total Births (April - March)	18,400	19,500	20,400	21,300	22,000	22,500	23,000	23,400
Total Deaths (April - March)	6,700	6,900	7,000	7,200	7,300	7,500	7,600	7,800
Total Natural Increase (April - March)	11,700	12,600	13,400	14,100	14,600	15,100	15,400	15,600
TOTAL POPULATION GROWTH	-	40,000	40,000	40,000	40,000	40,000	40,000	40,000

Population by Cohort		BASE FORECAST						
	2014	2015	2016	2017	2018	2019	2020	2021
0-4	81,000	82,300	85,000	89,100	94,500	101,000	105,000	108,500
5-9	71,900	75,000	77,700	79,500	80,400	80,200	81,500	84,100
10-14	65,600	66,500	67,500	68,900	70,600	72,800	75,900	78,600
15-19	66,400	67,200	67,800	68,300	68,700	69,400	70,100	71,100
20-24	81,500	82,400	82,300	82,200	81,900	80,200	80,800	81,000
25-29	103,000	106,900	110,400	112,600	113,800	115,500	115,500	114,800
30-34	107,800	116,400	123,900	130,600	136,900	141,900	144,700	147,300
35-39	100,700	107,800	114,900	122,100	129,000	136,400	144,100	151,000
40-44	98,600	103,000	107,800	112,400	117,700	123,500	130,000	136,600
45-49	84,400	87,100	90,800	96,700	103,100	109,900	113,900	118,400
50-54	85,300	87,000	88,400	88,300	88,400	88,100	90,600	94,200
55-59	74,100	75,300	76,500	77,900	79,300	81,200	82,900	84,200
60-64	54,600	55,400	56,700	58,400	60,100	61,200	62,600	63,900
65-69	42,300	43,900	45,200	46,500	46,300	45,500	46,400	47,800
70-74	28,400	29,300	30,300	31,200	33,600	36,600	38,100	39,400
75-79	19,900	20,100	20,300	20,900	21,400	22,400	23,300	24,200
80-84	15,400	15,100	14,900	14,600	14,400	14,200	14,400	14,700
85-89	9,000	9,100	9,200	9,300	9,300	9,300	9,100	9,000
90+	5,200	5,400	5,600	5,800	5,900	6,000	6,100	6,200
Total	**1,195,200**	**1,235,200**	**1,275,200**	**1,315,200**	**1,355,200**	**1,395,200**	**1,435,200**	**1,475,200**

Numbers may not add up due to rounding

Table 9 - Calgary Economic Region (CER) Population Projection

(Assumes annual population growth in the city of Calgary will be 40,000 persons)

Calgary Economic Region (CER)

FORECAST COMPLETED: August 2014		BASE FORECAST						
	2014	2015	2016	2017	2018	2019	2020	2021
Total Population (as April)	1,518,800	1,579,900	1,640,200	1,699,700	1,758,600	1,816,900	1,874,800	1,932,500
Total Population Growth Rate (April - March)	6.7	4.0	3.8	3.6	3.5	3.3	3.2	3.1
Total Net Migration (April - March)	47,100	45,600	44,300	43,200	42,300	41,600	41,000	40,700
Total Births (April - March)	22,800	23,900	25,000	25,900	26,800	27,600	28,300	28,900
Total Deaths (April - March)	8,800	9,300	9,800	10,200	10,700	11,200	11,700	12,200
Total Natural Increase (April - March)	14,000	14,700	15,200	15,700	16,100	16,400	16,600	16,700
TOTAL POPULATION GROWTH	-	61,100	60,300	59,500	58,900	58,300	57,900	57,600

Population by Cohort		BASE FORECAST						
	2014	2015	2016	2017	2018	2019	2020	2021
0-4	96,600	101,500	107,100	113,600	120,400	127,100	131,800	136,000
5-9	91,800	93,900	95,900	97,500	98,600	100,300	105,000	110,500
10-14	82,500	85,900	89,300	92,900	96,200	98,800	100,800	102,600
15-19	89,500	90,800	92,100	93,600	95,900	98,900	101,900	104,900
20-24	105,100	108,000	110,700	112,700	113,800	114,600	115,300	116,100
25-29	125,900	130,700	134,500	138,100	141,600	144,500	146,400	148,400
30-34	137,500	145,200	151,400	156,600	160,500	164,200	168,000	170,900
35-39	123,700	131,500	139,700	148,100	156,700	164,900	171,900	177,500
40-44	116,300	120,900	125,300	130,500	136,600	143,400	150,600	158,300
45-49	107,600	110,600	115,500	120,500	124,600	128,600	132,800	136,800
50-54	110,600	111,600	111,600	111,700	112,400	113,700	116,400	121,200
55-59	99,600	103,000	105,900	108,000	110,100	111,900	112,800	112,700
60-64	74,800	79,700	84,800	90,100	94,400	98,200	101,500	104,200
65-69	55,500	59,600	63,500	65,700	68,700	72,900	77,500	82,400
70-74	36,200	38,600	41,300	45,700	49,900	53,400	57,200	60,700
75-79	26,400	27,400	28,700	30,100	32,000	34,000	35,900	38,300
80-84	20,200	20,800	21,300	21,800	22,400	23,100	23,900	24,900
85-89	12,500	13,300	13,900	14,500	15,000	15,300	15,600	16,000
90+	6,600	7,000	7,600	8,100	8,600	9,000	9,500	10,000
Total	**1,518,800**	**1,579,900**	**1,640,200**	**1,699,700**	**1,758,600**	**1,816,900**	**1,874,800**	**1,932,500**

Numbers may not add up due to rounding

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.

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.

Glossary

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.

Old age dependency ratio

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

Quantitative Easing (QE)

This is an unconventional approach to providing monetary stimulus. It is used when the conventional approach of lowering the overnight rate is no longer an option because the rate is already at or near zero per cent. It involves a central bank buying large quantities of securities from banks to inject new cash into them. Like lowering interest rates, it stimulates the economy by encouraging banks to make more loans.

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.

Biographies

Patrick Walters

City Economist

Tel: 403.268.1335 or patrick.walters@calgary.ca

Patrick Walters has an interest in applying quantitative methods to solve operational questions. He is experienced in building forecasting and simulation models and has presented to professional bodies such as the System Dynamics Society.

Before joining The City of Calgary, he served as Senior Economist and Economist with The City of Edmonton, the Alberta Government and Environment Canada. Patrick earned a Master's degree in Economics from York University with specializations in Labor Economics, Industrial Relations and International Economics. He has a bachelor's degree from the University of Toronto.

Clyde Pawluk

Senior Corporate Economist

Tel: 403.268.2643 or clyde.pawluk@calgary.ca

Clyde's current focus is on econometric modeling, financial and public policy analysis. He has held various positions at The City and has represented The City at courts, tribunals, government agencies and departments, and before external stakeholders as analyst, prosecutor, counsel, negotiator, and official representative. He has provided analysis to various City business units to assist them with their budgeting needs and has overseen various intervention matters and projects. Clyde has a B.A. in Economics (1992), M.A. in Economics (1995), a LL.B. (2003) and was called to the Alberta Bar in 2004. When he is away from his desk you might find him hiking, biking or cross-country skiing.

Chukwudi Osuji, Ph.D

Senior Corporate Economist

Tel: 403.268. 3752 or chukwudi.osuji@calgary.ca

Chukwudi Osuji's current areas of interest include urban and regional planning, econometric modeling; with emphasis on nonparametric and wavelet applications, and public policy. He taught at University of Michigan-Dearborn, Lawrence Technological University in Southfield Michigan, Wayne State University in Detroit Michigan, Imo State University, Imo State Nigeria and worked for JD Powers and Associates in Troy Michigan as an Econometrician. Chukwudi has a BSc degree (1991) in Physics from University of Windsor, a M.A degree (1993) in Economics from the University of Windsor and a Ph.D degree (2001) from Wayne State University, Detroit, Michigan. Chukwudi also enjoys working on his automobiles, and spending lots of time with his three children.

Oyinola Shyllon

Corporate Economist

Tel: 403.268.2005 oyinola.shyllon@calgary.ca

Oyin currently focuses on municipal finance, economic forecasting and policy analysis. His responsibilities include monitoring and forecasting trends in the Canadian and U.S. economies as well as the Calgary labour market.

He has prior experience with the Washington D.C. based Results for Development Institute and the World Bank working on the economics of human development, public policy and public finance. Before joining The City of Calgary, he also served as a Budget Officer with the Government of Alberta. Oyin has graduate degrees with specialization in development economics (Dalhousie University) and public administration (Harvard University). He enjoys coaching and playing soccer, and spending time with family and friends when not at work.

Biographies

Jillian Kohut

Associate Economist

Tel: 403.268.5059 or jillian.kohut@calgary.ca

Jillian's current focus is on policy analysis, macroeconomic forecasting, and energy market analysis. She is also involved in a number of monthly publications aimed at updating City employees on the current state of the economy. Prior to joining The City of Calgary, Jillian worked for a macroeconomic forecasting firm in the private sector in Toronto's financial district. She also held positions in the energy industry. Jillian obtained her B.A. (2011) in Economics from the University of Calgary, and her M.A. (2012) in Economics from the University of Toronto. Outside of work, she spends her days rock climbing, skiing, hiking, and kayaking.

Estella Scruggs

Corporate Research Analyst

Tel: 403.268.5556 or estella.scruggs@calgary.ca

Estella's interest is in monitoring national and regional economic behaviours. Her responsibilities include providing a common and current database for various analytical and forecasting models, and responding to inquiries from various parts of The City. She also prepares current statistical reports such as inflation review, construction inflation, and current economic analysis, and maintains a number of business unit publications and presentations. She is excited about the upcoming projects which include economic systems modelling and analysis. She has a bachelor's of science in electrical engineering.

Daniel Gee

Student Economist

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.

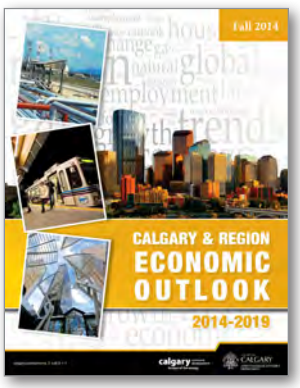
For more information, please contact:

Patrick Walters
403.268.1335 or patrick.walters@calgary.ca

Estella Scruggs
403.268.5556 or estella.scruggs@calgary.ca

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
- Construction Inflation

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

Source:
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, and others.