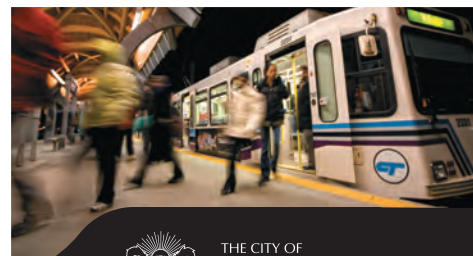


Q3
2010



VOLUME 2

Calgary and Region Economic Outlook 2010-2020







Introduction

The City of Calgary monitors the local economy throughout the year and updates the economic forecast each quarter to provide information for use in the decision making process by Council and Administration.

The forecasts contain economic and demographic information on the regional economy of Calgary. The document that follows presents forecasts of a selected number of economic variables for the period 2010–2020. It provides an analysis of those factors that are considered most likely to have a significant effect on the local economy over the forecast period.

Completed October 2010

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Executive Summary

City of Calgary

- ▶ The 2010 civic census placed the city of Calgary's population at 1,071,600 persons, up from 1,065,500 in 2009, an increase of 6,100 persons. Natural increase was estimated at 10,200 and net migration at -4,200.
- ▶ Total population in the city of Calgary is expected to reach 1,153,100 persons in 2015 and 1,233,800 in 2020, up from 1,071,600 in 2010. Total population in Calgary is expected to increase by 1.4 per cent annually, or by 162,200 between 2010 and 2020. In this period, the number of households should increase by roughly 74,500 units.
- ▶ The aggregate growth statistic masks the shift in the individual cohorts over the forecast period. Significant growth should occur in the 60-64 (34,000 persons) and 65-69 (32,000 persons) age groups. At the same time, the 20-24 (-5,000 persons) and 35-39 (-2,000 persons) groups should experience a decline.
- ▶ The vacancy rate in Calgary's office market fell to 10.8 per cent in Q2 2010, up from 8.6 per cent in Q2 2009. The occupied space was estimated at 53.1 million square feet in Q2 2010, up from 51.0 million square feet in Q2 2009.
- ▶ Construction of new office space is expected to remain weak until the end of the forecast period as vacancy rates remain relatively high. This should have a negative effect on building permit values in the office market.
- ▶ Calgary MLS prices over the short term are expected to fluctuate in response to recent market changes, as the impact of CMHC mortgage insurance rule changes and slower population growth work their way through the system. We anticipate Calgary house prices will finish off the year slightly lower than where they currently are before rebounding.

- ▶ Total housing starts were estimated at 4,953 units in 2009, down from 9,606 units in 2008. Weak economic and demographic changes reduced the demand for housing and caused a decline in new house construction. The forecast shows housing starts are expected to grow in line with demographic requirements.

Calgary Economic Region (CER)

- ▶ Economic activity should become more sustainable by 2011 and 2012 as the region experiences stronger net job creation. The combination of employment and labour income growth should provide a foundation for consumer spending, which accounts for about 60 per cent of the region's gross domestic product. As a result, the Calgary Economic Region (CER) is expected to grow by 3.3 per cent in 2011 and 4.2 per cent in 2012.
- ▶ Total employment averaged 737,000 in first half of 2010 (H1 2010). The job market is expected to show some improvement in second half of 2010 (H2 2010) and total employment is expected to average 754,000 for that period. Consequently, total employment should average 746,000 for the year.
- ▶ The unemployment rate averaged 7.4 per cent in H1 2010. The forecast shows the unemployment rate is expected to average 7.1 per cent for the entire 2010 before falling to 6.5 per cent in 2011.

- ▶ The consumer price inflation rate is estimated at 0.8 per cent in 2010 and should grow to 2.5 per cent in 2011. Inflation rates are expected to increase as the region's spare capacity becomes exhausted.
- ▶ New house construction costs are expected to rise about 2.5 per cent per year over the forecast period. In earlier years of the forecast, cost increases for materials and regulatory compliance should be the primary cause of rising costs. By the end of the forecast, wage inflation from tight labour markets is expected to be the primary contributor to rising construction costs.
- ▶ By 2012 higher interest rates and a tightening labour market should result in increased building costs. By 2015 labour market shortages should result in significant increases in building costs and these higher prices will be sustained for the remainder of the forecast period.
- ▶ Natural gas markets have moved into a period of oversupply since the beginning of the 2008/2009 recession. The U.S. recession has resulted in a significant drop in demand for natural gas particularly in the industrial sector. In addition, the production of shale gas in North America has significantly increased supply.
- ▶ In 2011, natural gas prices are expected to range between \$5.45/GJ to \$3.61/GJ for an average of \$4.25 in 2011. The U.S. economic recovery is expected to remain fragile for most of 2011 and consequently, the demand for natural gas is expected to remain weak. Prices should fall in this type of market. Weak prices should result in reduced drilling activity.
- ▶ Stronger economic growth in 2012 should result in natural gas prices ranging between \$5.45/GJ to \$4.83/GJ for an average of \$5.14/GJ. The reduction of drilling in 2011 and the increase in consumption arising from increased economic growth should result in a reduction in inventory levels, which should push prices upwards.

Alberta

- ▶ The Alberta economy is expected to grow at a modest pace over the next five years. Real GDP is projected to grow close to 3 per cent in 2010, driven by stronger investment in the energy sector.
- ▶ Relatively high crude oil inventory levels in the U.S. combined with a stronger U.S. currency should keep price fluctuations modest in the short term. Crude oil prices are expected to average US\$78 a barrel in 2010. Prices are projected to respond to stronger global economic growth – which would clear the excess supply built up during the recession – and increase to US\$82/bbl in 2011.

Canada

- ▶ Real GDP growth in Canada moderated in Q2 2010 to 2.0 per cent annually after expanding by 5.8 per cent in Q1 2010. This was driven mainly by slower expansion in both consumer spending on non-durable goods and services, and exports, partially offset by stronger growth in imports.
- ▶ The Canadian GDP is expected to grow by 3.2 per cent in 2010 and decline to 2.5 per cent in 2011, before trending down to the long-term rate of growth at 2.2 per cent in 2015-2020.

- ▶ The Bank of Canada raised its target for the overnight interest rate by 25 percentage points to 1 per cent on September 8th. The Bank, however, is expected to suspend further tightening until 2011, given the slower than expected Q2 2010 growth in Canada and the moderation in the global growth rate in H2 2010 and 2011.
- ▶ The value of the Canadian dollar should remain at the current level for the forecast period, which is beneficial for business investments in machinery and equipment. This effect was evident in the Q2 2010 when, the value of imports of machinery and equipment increased by 8.7 per cent.

United States

- ▶ Real GDP growth in the U.S. is expected to average 2.8 per cent in 2010 and 2.4 per cent in 2011, trending towards the long-term rate of growth at 2.5 per cent for the remainder of the forecast period.
- ▶ The Federal Reserve (Fed) decided in August 2010 to keep the target range for the federal funds rate at 0 to 0.25 per cent, in response to concerns about the slow-down of output growth and high unemployment. Given current low rates of resource utilization, low inflation and subdued inflation expectations, the Fed is likely to maintain the federal funds rate at exceptionally low levels for an extended period, until Q4 2011.

World

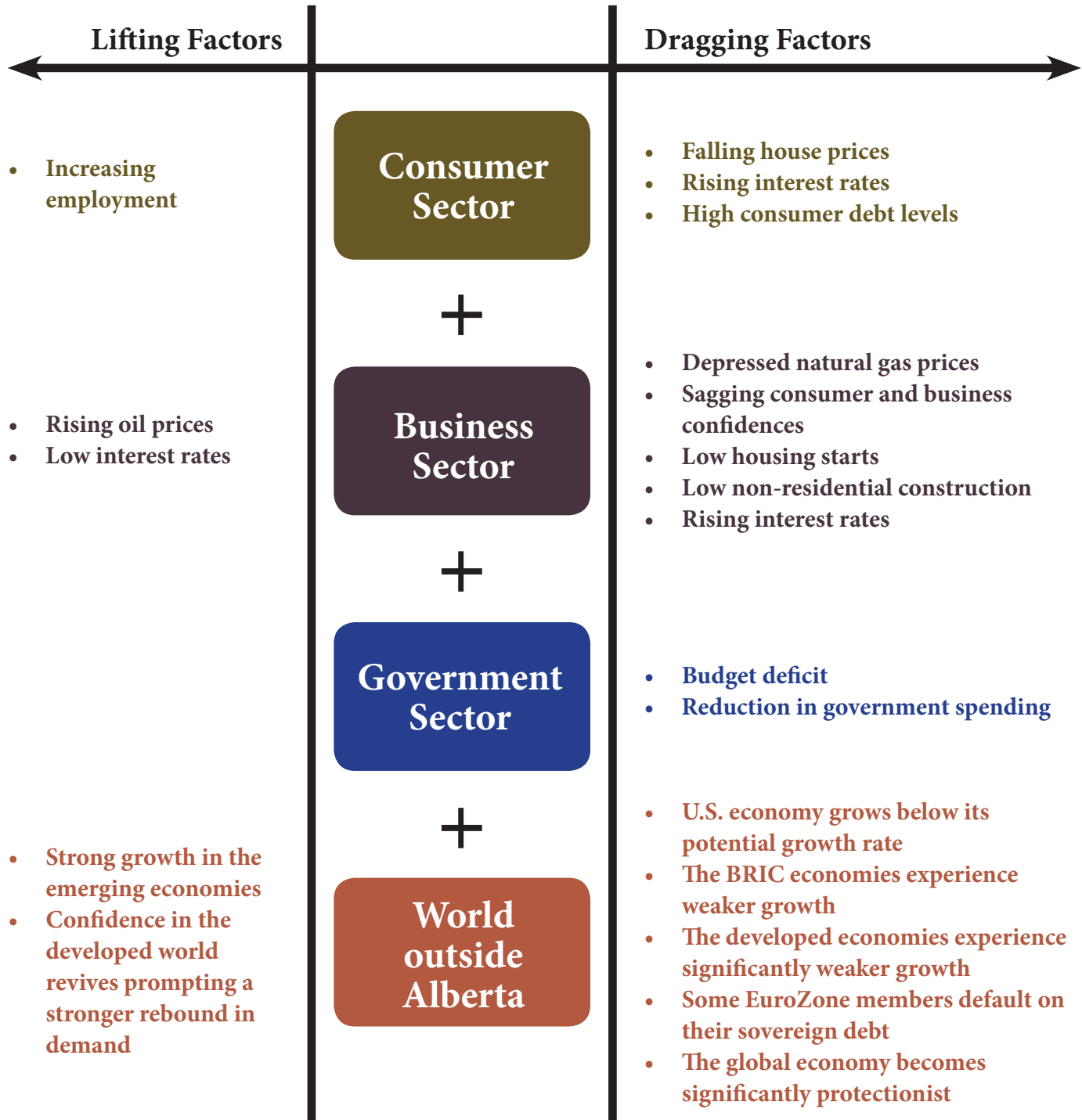
- ▶ After a strong first half in 2010, global economic growth decelerated in the second half of this year in response to the end of fiscal stimulus measures and inventory adjustment.
- ▶ The economy should grow at varying rates making it challenging for different governments to coordinate macroeconomic policies. Much of the advanced world is having a sluggish U-shaped recovery, while emerging markets are experiencing V-shaped recoveries.
- ▶ On average, world output is expected to increase by 3.8 per cent in 2010, and 4.0 per cent in 2011. By 2013, world output should potentially grow at around 4.5 per cent.

Commodity Prices

- ▶ Commodity prices increased significantly after their troughs in 2009, before they began trending downward in May and June 2010, in response to the ferocity of asset price swings.
- ▶ In the second half of 2010, commodity prices should be supported by growth in emerging economies and low interest rates.
- ▶ In 2011, gradual improvements in global demand and money velocity will put upward pressure on commodity prices.

Forecast Risks

The forecast is always subject to both upside and downside risks.



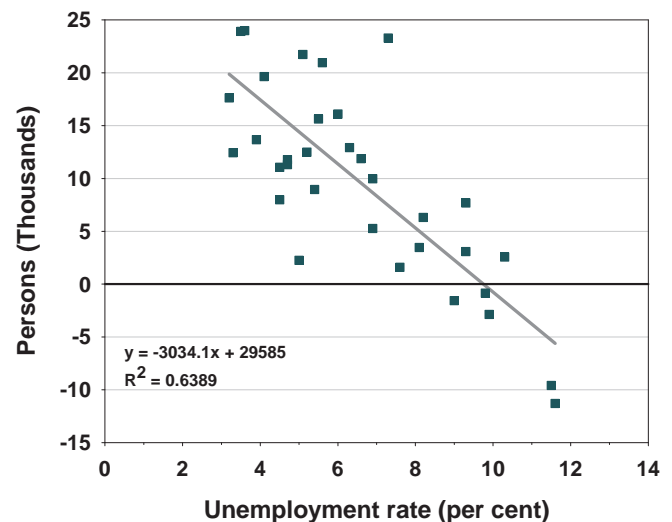


City of Calgary

Population

The 2010 civic census placed the city of Calgary's population at 1,071,600 persons, up from 1,065,500 in 2009, an increase of 6,060 persons. The natural increase was estimated at 10,214 persons while net migration fell by 4,154 persons. The sharp decline in net migration is explained largely by weak labour market conditions in the Calgary Economic Region from 2008 to 2009. For example, total employment shrank by 4,000 positions during this period. In addition, the unemployment rate increased to 6.3 per cent in 2009 from 3.3 per cent in 2008. Reduced job availability therefore made the CER and Calgary relatively unattractive destinations for would be job seekers. The adjoining figure plots the relationship between net migration and the unemployment for the 1976 to 2009 period. It shows that a relatively low unemployment rate is generally accompanied by positive net migration while a relatively higher unemployment rate is associated with a low or negative net migration.

City of Calgary: Net migration and unemployment rate (1976 - 2009)



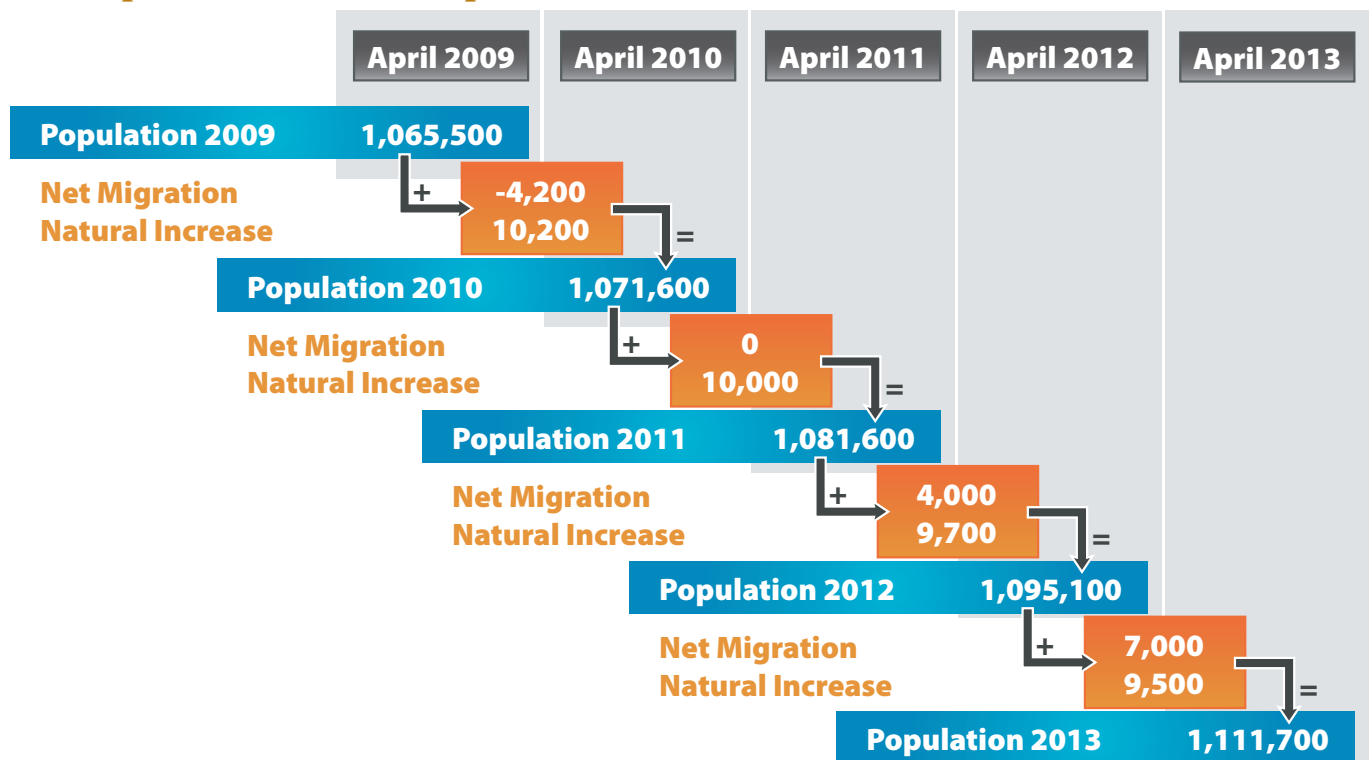
Source: Statistics Canada; Civic Census; Corporate Economics

Population by 5-Year Cohort - City of Calgary

Project Sector	2010	2011	2012	2013	2014	2015
Total Population	1,071,600	1,081,600	1,095,100	1,111,700	1,132,000	1,153,100
Total Net Migration	0	4,000	7,000	11,000	12,000	11,000
Total Births	16,200	16,100	16,000	16,000	16,100	16,200
Total Deaths	6,200	6,300	6,500	6,700	7,000	7,200
Total Natural Increase	10,000	9,700	9,500	9,300	9,100	9,000
Total Population Growth Rate	0.6%	0.9%	1.2%	1.5%	1.8%	1.9%

Source: The City of Calgary, Corporate Economics, August 2010

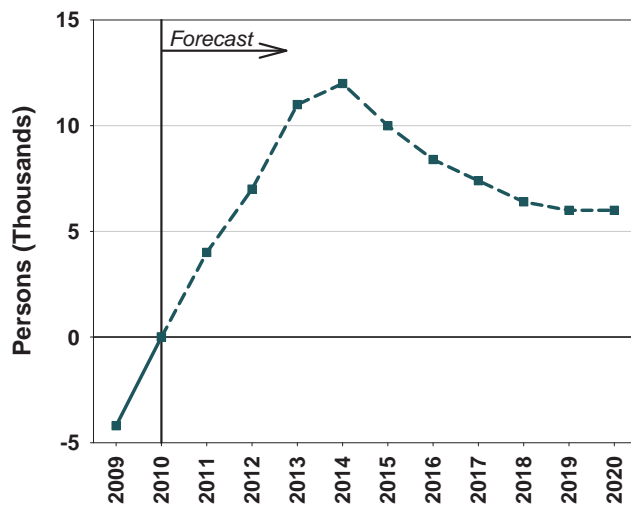
Decomposition of Annual Population Growth (based on Civic Census)



Numbers may not add up due to rounding

Total population in the city of Calgary is expected to reach 1,153,100 persons in 2015 and 1,233,800 in 2020, up from 1,071,600 in 2010. Total population in Calgary is therefore expected to increase by 1.4 per cent annually, or by 162,200 between 2010 and 2020. In this period, the number of households is expected to increase by roughly 74,500 units.

City of Calgary: Net migration assumptions
(2009 - 2020, thousands of persons)



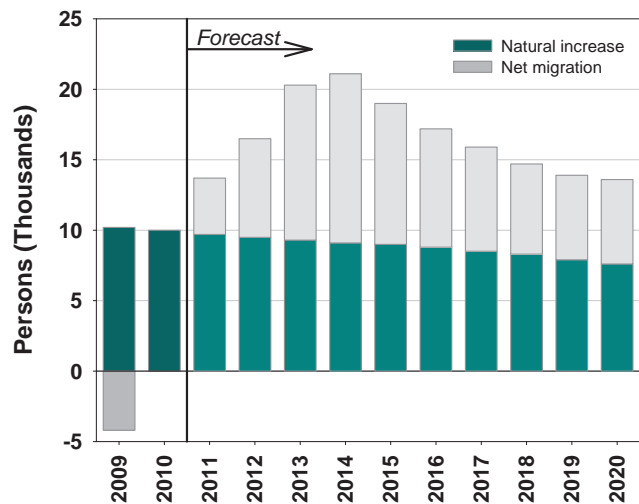
Source: Civic Census; Corporate Economics

The migration assumptions for the projected population are based on the hypothesis that net migration is sensitive to job availability. The current forecast for the Calgary Economic Region shows the unemployment rate is expected to remain above 5 per cent between 2010 and 2012 and then trend downwards to 3.2 per cent by 2020. Economic migration to Calgary is expected to fall below trend from 2010-2012 and then return to more normal levels as the unemployment rate moves below 5 per cent.

Net migration as a source of population growth is expected to increase in significance. Natural

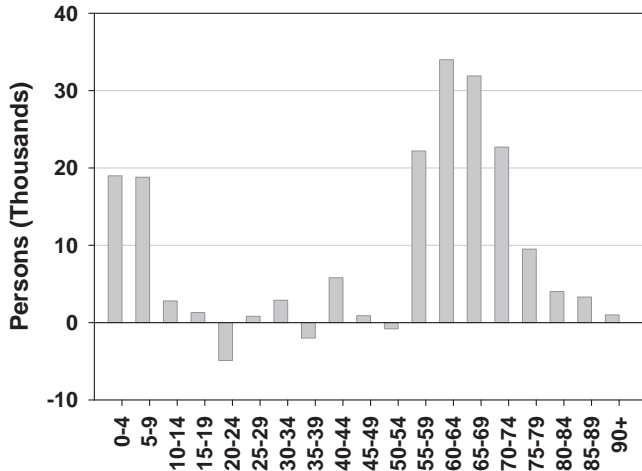
increase, which is defined as total births less total deaths, should fall in absolute value from 10,000 persons in 2010 to 7,600 in 2020. This is as a direct result of population aging where deaths are growing at a faster rate than births. The number of deaths is projected at 6,200 in 2010 and 8,600 by 2020, up by 1,600. While, the number of births is estimated at 16,200 in 2010 and should be 16,200 by 2020. In 2010, natural increase is expected to account for 100 per cent of population growth but by 2020, its contribution falls to 55.9 per cent.

City of Calgary: Source of population growth
(2009 - 2020, thousands of persons)



Source: Civic Census; Corporate Economics

City of Calgary: Population shifts
(2010 - 2020, thousands of persons)



Source: The City of Calgary; Corporate Economics

The aggregate growth statistic masks the shift in the population distribution over the forecast period. A comparison of the population in the individual cohorts in 2010 against the same groups in 2020 reveals that significant growth should occur in the 60-64 (34,000 persons) and 65-69 (32,000 persons) age groups. The 20-24 (-5,000 persons) and 35-39 (-2,000 persons) groups should experience decline. The population 55 years and over is anticipated to increase by 127,000 and the population that is less than 55 should increase by 35,000. The majority of population growth is projected to occur in the eight oldest cohorts (ages 55 to 90 plus) and in the two youngest groups.

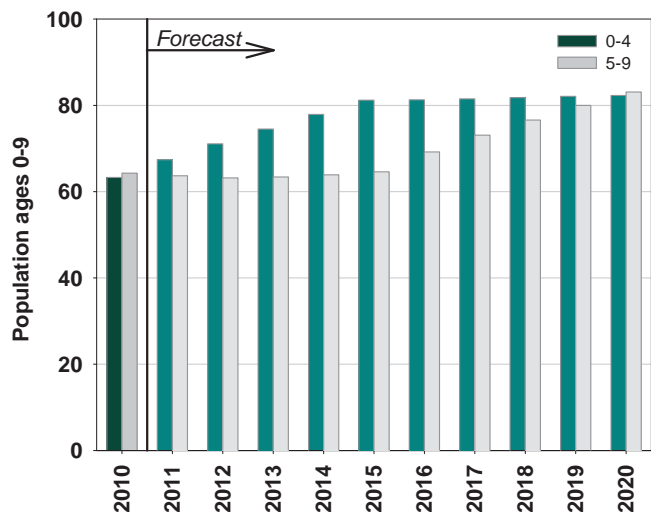
The following cohorts are expected to grow above average (1.4 per cent):

Cohort	Growth Rate (%)
0-4	2.6
5-9	2.5
55-59	2.7
60-64	5.1
65-69	6.5
70-74	6.4
75-79	3.8
80-84	2.2
85-89	3.2
90+	2.3

Source: The City of Calgary; Corporate Economics, August 2010

The remaining cohorts are projected to grow below (1.4 per cent). Specifically, the 20-24 (-0.8 per cent), 35-39 (-0.4 per cent) and 50-54 (-0.2 per cent) groups are projected to be smaller in 2020 compared to what they were in 2010.

City of Calgary: Population ages 0-9 years
(2010 - 2020, thousands of persons)



Source: Civic Census; Corporate Economics

A significant portion of the growth in the under 55 population is found in the 0-4 and 5-9 age groups. The population in both the 0-4 and 5-9 cohorts should increase by roughly 18,000 in each category between 2010 to 2020. The rapid growth in the 5-9 group comes after 2015 and is a lagged response to the rapid growth in the 0-4 cohort that is expected to occur between 2010 and 2014.

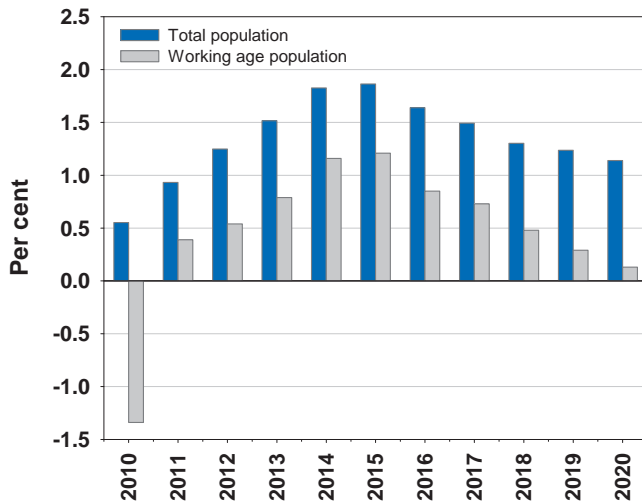
Population Change

Age groups	2010	Distribution %	2015	Distribution %	% Change Annual	2020	Distribution %	% Change Annual
Age 0 to 14	192,900	18.0	212,600	18.4	2.0	231,600	18.8	2.0
Age 15 to 24	145,600	13.6	139,600	12.1	(0.8)	140,200	11.4	(0.4)
Age 25 to 34	157,700	14.7	159,200	13.8	0.2	159,300	12.9	0.1
Age 35 to 44	167,700	15.6	172,100	14.9	0.5	169,600	13.7	0.1
Age 45 to 54	175,500	16.4	173,800	15.1	(0.2)	174,400	14.1	(0.1)
Age 55 to 64	121,800	11.4	155,600	13.5	5.6	176,900	14.3	4.5
Age 65+	110,400	10.3	140,200	12.2	5.4	181,800	14.7	6.5
Total Population	1,071,600	100.0	1,153,100	100.0	1.5	1,233,800	100.0	1.5
Dependency Ratios								
0-14 to 15-64	25.1%		26.6%			28.2%		
65+ to 15-64	14.4%		17.5%			22.2%		
Both to 15-64	39.5%		44.1%			50.4%		

Source: The City of Calgary, Corporate Economics, August 2010

The total dependency rate is estimated at 39.5 per cent in 2010 and should increase to 44.1 per cent in 2015 and 50.3 per cent in 2020. The youth dependency rate is estimated at 25.1 per cent in 2010 and should increase to 28.2 per cent by 2020. The retiree rate is calculated at 14.4 per cent in 2010 and should increase to 22.1 per cent by 2020. This means that 1,000 workers in 2010 would support 251 retired persons and by 2020, the same number of workers would support 282 retired persons.

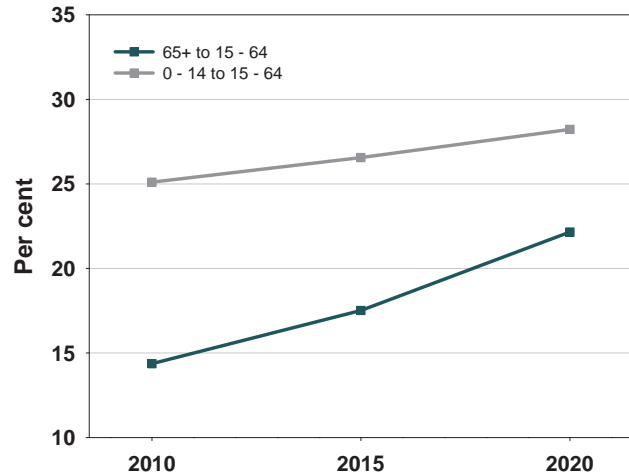
City of Calgary: Population growth rate
(2010 - 2020, per cent)



Source: The City of Calgary; Corporate Economics

The above graph shows that the working age population is projected to grow at an increasingly slower rate than the overall population. This is a direct result of a much smaller number of workers enter the working age cohort than the numbers leaving that cohort. The labour force replacement ratio, which is defined as the ratio of population 15-24 to the population 55-64, was estimated at 0.83 in 2010 and is expected to fall to 0.80 by 2020. This signals an increasing difficulty in obtaining employees of working age (15-64).

City of Calgary: Dependency ratio
(2010, 2015 and 2020, per cent)



Source: The City of Calgary; Corporate Economics

Calgary Market

Office Market:

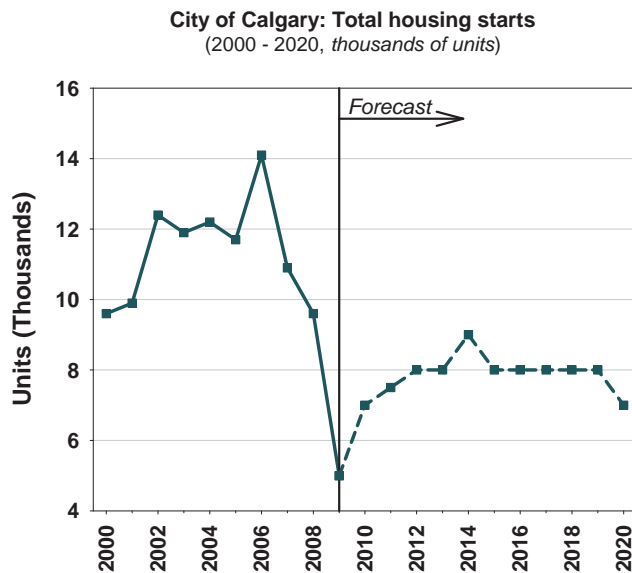
The Calgary office market in Q2 2010 had a vacancy rate of 10.8 per cent with expectations that market vacancy could pass 15 per cent just after the Bow and Eight Avenue Place are added to the office space inventory in 2011. Though the news today indicates a surplus in Calgary's office market, we anticipate it will only be a few short years before this reverses. We anticipate that the Calgary office market will be well supplied by completed towers in 2012, but that increases in employment will require about 1 million square feet of new office space by 2015. Between 2015 and 2020 our analysis indicates that around 6 million more square feet of office space will be required in order to maintain a relatively low office vacancy rate of around 5 per cent.

Residential Market

Calgary MLS prices over the short term are expected to fluctuate in response to recent market changes,

like CMHC mortgage insurance rule changes and slower population growth. We anticipate Calgary house prices will finish off the year slightly lower than where they currently are, before rebounding. The longer term outlook for Calgary house prices depends upon future net migration levels. Our current outlook calls for modest net migration over the forecast horizon as the available pool of international and national migrants shrinks due to ageing demographics while their opportunities increase at home. The resulting impact on Calgary home prices is for house prices to grow at close to the consumer price inflation rate over the early portion of the forecast. By 2016 Calgary businesses are expected to see severe staff shortages and resulting wage increases are expected to push home prices up in the latter part of the forecast.

Total housing starts were estimated at 4,953 units in 2009, down from 9,606 units in 2008. Weak economic and demographic changes reduced the demand for housing and caused the new house construction to fall. The forecast expects housing starts to grow in line with demographic requirements.

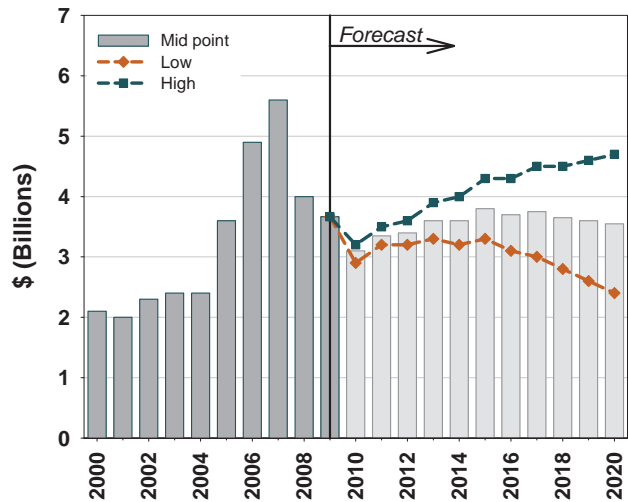


Source: CMHC; Corporate Economics

Total Building Permits (value):

The outlook for building permit values is remarkably stable over the forecast horizon. In the early years industrial, retail and small commercial activity should lift permit values while re-construction activity ramps up. Mid-way through the forecast we expect an increase in residential permitting activity as current capacity in condo markets is used up and there is a need for additional residential construction. By the end of the forecast horizon, residential, industrial, retail and small commercial activity is expected to wane while demand for new office towers and general inflation combine to maintain building permit values.

City of Calgary: Total building permits
(2000 - 2020, billions of dollars)



Source: The City of Calgary; Corporate Economics



Calgary Economic Region (CER)

Gross Domestic Product

The Calgary Economic Region (CER) should grow by 1.6 per cent in 2010, up from -2.1 per cent in 2009. The expansion should be driven by increases in business and government spending. Most of the added output is expected to come from increases in productivity as employees work longer hours. Therefore, increased output would not be accompanied by increased employment.

Economic activity should become more sustainable by 2011 and 2012 as the region experiences stronger net job creation. The combination of employment and labour incomes growth should provide a more solid foundation for consumer spending, which accounts for about 60 per cent of the region's gross domestic product. In this period, government spending is expected to be a drag on economic growth as governments try to place their finances on a firmer footing by reducing the rate of increase in spending. The CER is expected to grow by 3.3 per cent in 2011 and 4.2 per cent in 2012.

The following are examples of government and business expenditures on major infrastructure projects in the Calgary Economic Region:

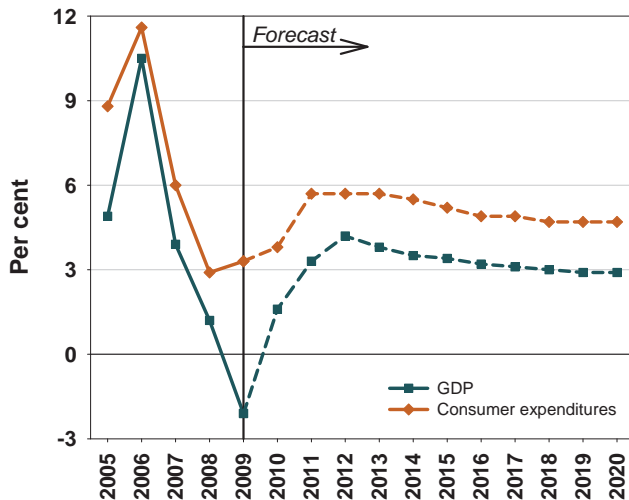
- ▶ Alberta Health and Wellness is spending \$1.3 billion to construct a hospital in south Calgary. Construction on the facility began in 2010 and should finish by 2012.
- ▶ The Calgary Airport Authority plans to construct a new north-south parallel runway at a cost of \$500 million. Construction of the runway should begin in 2011 and finish in 2015.
- ▶ The Calgary Airport Authority plans to spend \$1.3 billion to construct a new concourse. Work on the concourse should commence in 2011 and finish in 2015.
- ▶ The City of Calgary is spending over \$700 million to build the West LRT line. Construction of the facility should cover the period 2010 to 2012.

Major Projects Calgary (planned, recently completed, underway or on hold)

Project Sector	# of Projects	Value of All Projects (\$Millions)	% of Total	# on Hold	Value of On Hold Projects (\$Millions)
Commercial/Retail	33	\$7,194.8	30.0%	3	\$79.0
"Commercial/Retail and Residential"	4	\$2,316.0	9.7%	3	\$1,216.0
Infrastructure	63	\$5,354.8	22.3%	4	\$36.4
Institutional	24	\$3,197.7	13.3%		
Manufacturing	1	\$6.0	0.0%		
Power	3	\$1,648.0	6.9%		
Residential	35	\$2,098.4	8.8%	12	\$1,239.4
Tourism/Recreation	23	\$2,148.8	9.0%		
Total	186	\$23,964.5	100.0%	22	\$2,570.8

Source: Alberta Economic Development Authority, August 2010

Calgary Economic Region: Gross domestic product growth and consumer expenditures (2000 - 2020, per cent)

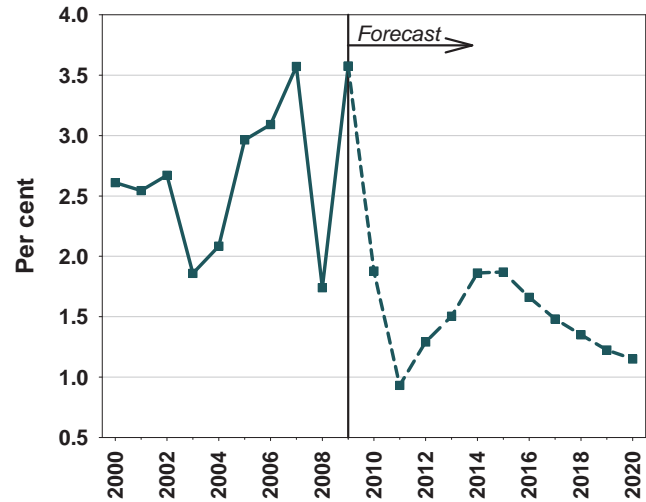


Source: Centre for Spatial Economics; Corporate Economics

Population

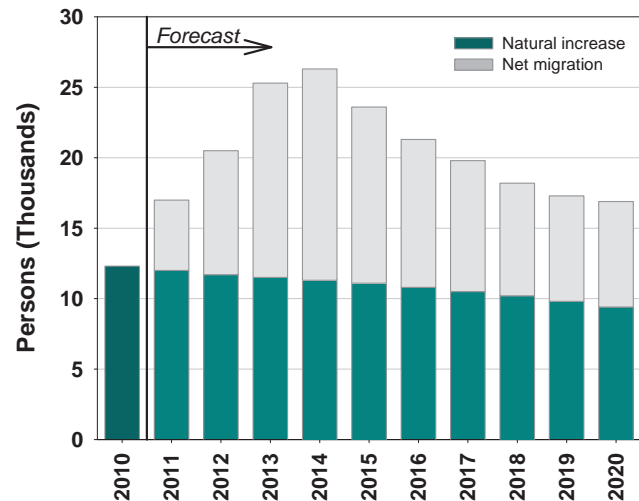
The population in the CER was estimated at 1,320,500 persons in 2010 and should increase by 201,700 to 1,522,200 by 2020. Population growth is expected to be driven by positive net migration in the later stages of the forecast as the unemployment rate differential between Calgary and the rest of Canada increases. Natural increase would be a drag on the overall growth rate as the death rate is projected to grow faster than the birth rate. This is as a direct result of an aging population where the old age groups have higher mortality rates and the numbers of women in the childbearing ages remain relatively constant.

Calgary Economic Region: Population growth rate
(2000 - 2020, per cent)



Source: The City of Calgary; Corporate Economics

Calgary Economic Region: Source of population growth
(2010 - 2020, thousands of persons)

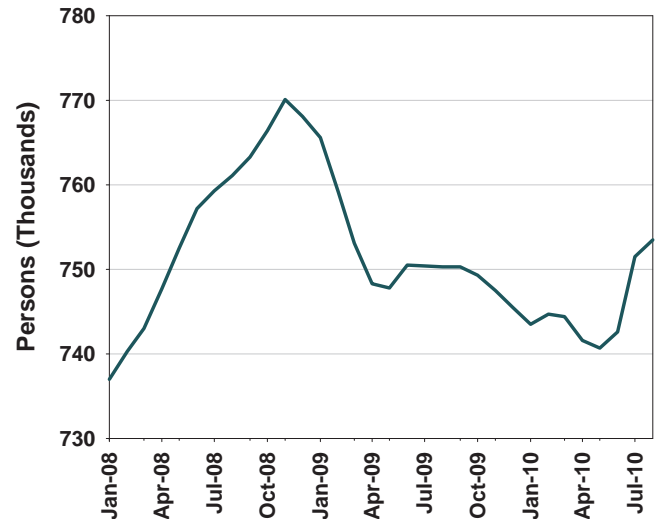


Source: The City of Calgary; Corporate Economics

Labour Market

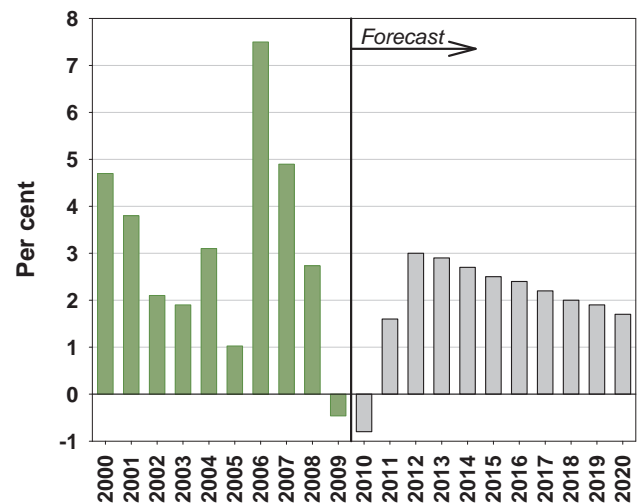
- ▶ The effects of the recession were quite visible in the job market. The CER entered the recession after Canada as a whole and is yet to experience an expansion of the job market. For example, total employment peaked at 771,400 persons in August 2008 and fell with some fluctuation to 733,100 by April 2010. Some of the job losses have since been recovered, but total employment still sits below the August 2008 level.
- ▶ Total employment in the CER averaged 752,000 in 2009, down from 756,000 in 2008. This was the first time since 1992 that total employment has contracted in the CER. The goods producing industries suffered a net loss of 13,000 jobs, and the net gain of 9,000 jobs in the service sector was not enough to erase the losses.
- ▶ Total employment averaged 737,000 in H1 2010. The job market is showing some improvement in H2 2010 with total employment expected to average 754,000 for H2 2010. Consequently, total employment should average 746,000 for 2010.
- ▶ Employment is a lagging indicator and therefore, significant employment growth should appear in the national and local economies from 2011 and onwards. In the initial stages of an economic recovery, employers generally meet additional output by requiring employees to work longer hours and employing longer production runs. Similarly, part-time employment is converted to full-time employment. Faster GDP growth in 2011 and beyond should create an increasing demand for labour. Total employment in the CER is expected to average 758,000 in 2011 and 781,000 in 2012, up from 752,000 in 2009.

Calgary Economic Region: Total employment
(Seasonally adjusted,
January 2008 - August 2010, ; thousands of persons)



Source: Statistics Canada; Corporate Economics

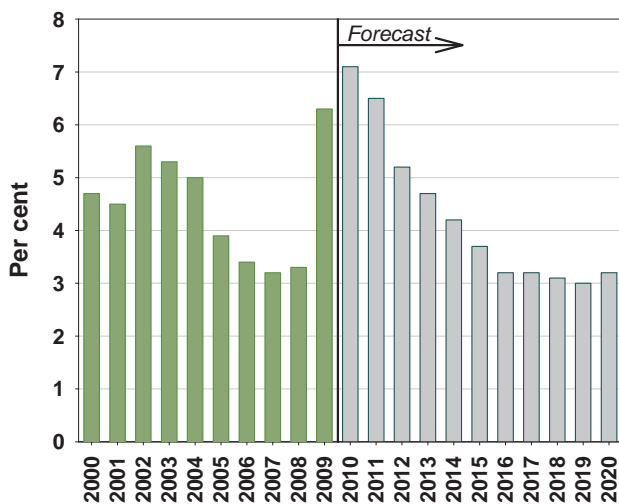
Calgary Economic Region: Total employment growth
(2000 - 2020, per cent)



Source: Statistics Canada; Corporate Economics

- ▶ The unemployment rate averaged 7.4 per cent in H1 2010. The forecast shows the unemployment rate will average 7.1 per cent for 2010 before falling to 6.5 per cent in 2011. The higher unemployment rate would result as the labour force grows faster than employment. The pace of the labour force growth would be influenced by former discouraged workers returning to the work force in response to improved expectations of finding employment and increases in the working age population through population aging and net migration. At the same time, the pace of job creation would be muted as part-time jobs are converted to full-time jobs and existing workers are asked to work longer hours.
- ▶ The unemployment rate should fall to 5.2 per cent by 2012 and 4.2 by 2014 as employment grows at a faster rate than the labour force. Continued aging of the population combined with relatively lower net migration levels should contribute to slower growth in the labour force.

Calgary Economic Region: Unemployment rate
(2000 - 2020, per cent)

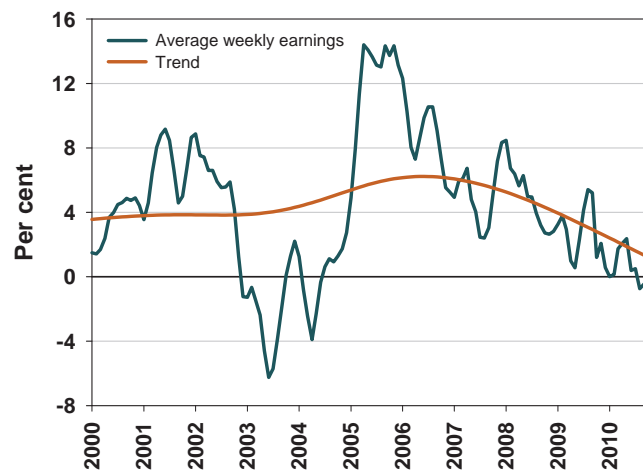


Source: Statistics Canada; Corporate Economics

Wages

- ▶ Wages in Calgary increased by 2.7 per cent in 2009, down from 4.9 per cent in 2008. In Alberta, the wage inflation in 2009 was 3.4 per cent, down from 6.1 per cent in 2008. The moderation of the wage inflation rate resulted from the sharp increase in unemployment. In view of the higher unemployment rates, workers accepted lower wage increases.
- ▶ The average weekly wage rate in the Calgary CMA was estimated at \$980 in the first seven months of 2010, up from \$970 in the same period 2009.
- ▶ Stronger economic growth coupled with reduced unemployment from 2011 to the end of the forecast period should see wage inflation rates increase. Wage increases in excess of inflation in the mid to later stages of the forecast should result in an increase in real disposable income.

Calgary CMA: Average weekly earnings
(year-over-year percentage change, January 2000 - September 2010)

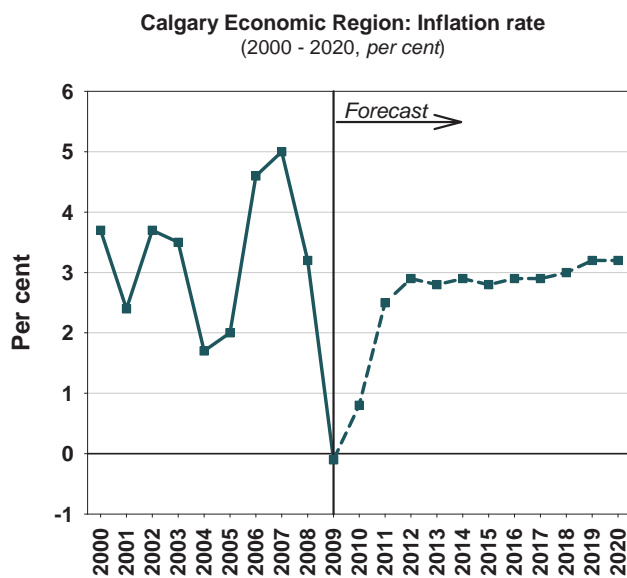


Source: Statistics Canada; Corporate Economics

Inflation (CMA)

Consumer Prices

- ▶ Consumers paid 0.1 per cent less for goods and services in 2009, down from 3.2 per cent a year earlier. In July 2010, the 12 month moving average showed the inflation rate turned positive as it was estimated at 0.4 per cent, down from 1.3 per cent in July 2009. Excess capacity in various markets, such as housing and labour kept the inflation rate modest.
- ▶ The consumer price inflation rate is expected to increase by 0.8 per cent in 2010 and 2.5 per cent in 2011. Inflation rates are expected to increase as the region's spare capacity becomes exhausted.



Source: Statistics Canada; Corporate Economics

New House Price

New house construction costs are expected to rise about 2.5 per cent per year over the forecast period. In earlier years of the forecast, cost increases for materials and regulatory compliance are expected to be the primary cause of rising costs for new home construction. By the end of the forecast, rising construction costs are expected to result from wage increases due to tight labour markets. Though rising wages will be a significant burden to industry, builders are among the swiftest to adopt new techniques, technologies and designs to minimize the impact of price spikes, so we do not anticipate changes in wages to result in large changes to home construction costs. In addition, demographic changes, regulation and overall price changes should push builders to construct more new multi-dwelling properties, while over the forecast horizon single family units will be supplied more by re-construction rather than new development.

Non Residential Building Price

Building construction costs in Calgary are stable owing to slowing residential construction while commercial projects are being completed with few new commercial projects on the drawing board. The medium term outlook continues to show increased demand for Canadian and international exports to China resulting in increased Canadian non-residential building construction material costs. By 2012, we anticipate higher interest rates and a tightening labour market to result in increased building costs. By 2015, labour market shortages will result in significant increases in building costs and these higher prices will be sustained for the remainder of the forecast period as very tight labour conditions are expected from 2015 to at least 2025.



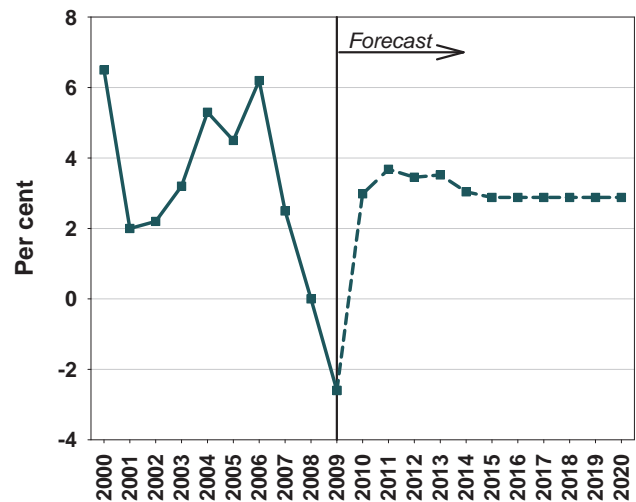
Alberta Economy

Gross Domestic Product

The energy industry was the driver of the province's economy over the last decade, but growth in this sector stalled in 2008 and 2009 due to the economic recession and the discovery of lower priced shale gas in North America.

Oil sands investment in Alberta is expected to offset a shrinking conventional natural gas industry, as oil prices remained stable and sufficient enough to move projects forward that were shelved last year to the development stage. Approximately \$229 billion¹ in major construction projects are either planned or underway in Alberta, with the majority (63 per cent) of the investment occurring in oil sands extraction and upgrading. Energy-related investments should produce spinoff benefits for the entire economy. The export sector should perform below the 5-year average due to the strong Canadian currency and slow economic growth in the U.S. The Alberta economy is expected to grow at a modest pace during the next five years. Real GDP is projected to grow close to 3 per cent in 2010, driven by stronger investment in the energy sector compared to 2009.

Alberta: Gross domestic product growth
(2000 - 2020, per cent)



Source: Statistics Canada; Corporate Economics

¹ Alberta Economic Development Authority (AEDA), August 2010.

Consumer Spending

Stronger job creation during the later stages of the forecast relative to the growth of the labour force should push the unemployment rate down to around 4 per cent by 2015. A tighter labour market should cause wage inflation to trend above consumer price inflation rates and result in growth in real labour incomes. Total retail sales is therefore expected to expand by an average of 3.7 per cent during the forecast period.

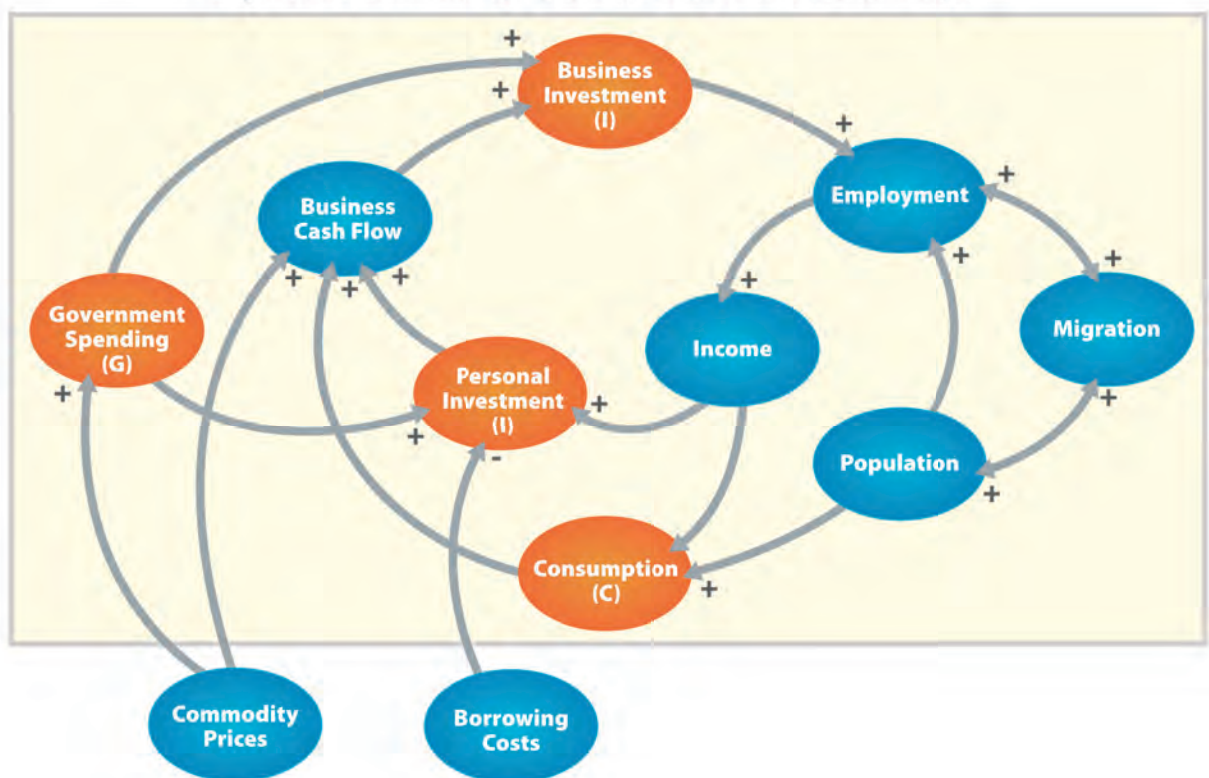
Government Spending

Continued global economic uncertainty, falling markets, a rising Canadian currency combined with

lower natural gas prices and fluctuating oil prices kept provincial government revenues tight during the first six months of the province's fiscal year. The provincial deficit was estimated at \$7 billion in August 2010.

Government spending should increase at a modest pace as weak public finances cause authorities to control spending. Lower natural gas prices combined with the effects of the recent recession eroded government income significantly, resulting in an operating deficit. These factors are expected to restrict government capital expenditures during the analysis period and allow expenditures to grow in line with demographic requirements. Provincial transfers to municipalities may therefore be restricted.

Impact of Commodity Prices on the Overall Economy



Investment

Non-residential

Higher crude oil prices and lower development costs compared to last year improved the projected profitability of many previously shelved projects in Northern Alberta. Although these individual projects are subject to the availability of financial resources and labour, they are expected to increase

output in the medium term and benefit certain segments of the economy, especially manufacturing and services. The production mix in Alberta has experienced a shift from conventional to unconventional reserves. This is prevalent in the natural gas industry, where conventional production is declining and the industry is facing relatively low prices combined with increased production from non-conventional resources. The outlook in the oil industry is brighter due to higher and more stable crude oil prices.

Alberta Major Projects

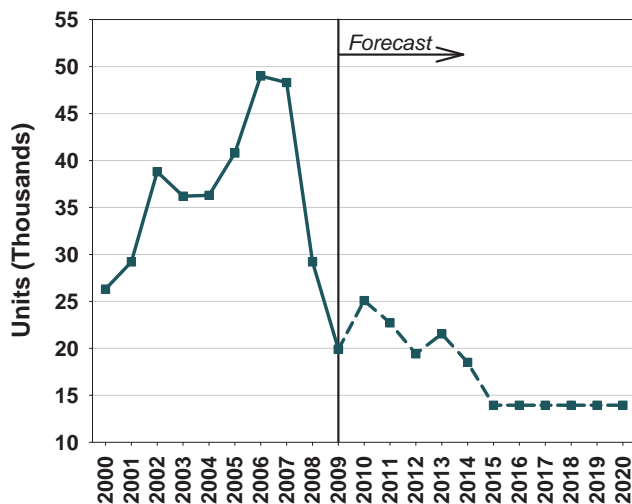
Project Sector	# of Projects	Cost in \$ Millions	# on Hold	Value of On Hold Projects (\$ Millions)
Agriculture & Related	7	\$207.20	0	
Biofuels	13	\$1,653.00	1	\$190.00
Chemicals & Petrochemicals	1	\$35.00	0	
Commercial/Retail	66	\$9,124.70	5	\$204.00
Commercial/Retail and Residential	10	\$3,815.80	4	\$1,227.80
Forestry	1	\$45.80	0	
Forestry & Related	2	\$70.00	0	
Infrastructure	345	\$17,137.50	5	\$89.40
Institutional	149	\$9,184.90	9	\$401.90
Manufacturing	10	\$697.70	0	
Mining	5	\$4,945.00	1	\$4,500.00
Oil & Gas	9	\$1,573.00	0	
Oilsands	56	\$143,864.60	12	\$59,847.00
Other Industrial	8	\$270.70	0	
Pipelines	27	\$6,444.30	2	\$2,018.00
Power	43	\$18,773.50	1	\$200.00
Residential	87	\$5,879.50	22	\$2,793.50
Telecommunications	1	\$650.00	0	
Tourism/Recreation	109	\$4,405.50	3	\$114.80
Total	949	\$228,777.70	65	\$71,586.40

Source: Alberta Economic Development Authority, August 2010

Residential

Improved job availability along with lower unemployment rates should result in wage increase in excess of consumer price inflation. Later in the forecast increased labour income along with population growth should boost the demand for housing. Higher borrowing rates should offset the gains in housing demand during the forecast period. Total housing starts should recover in 2010 and grow at a slower pace to match demographic requirements.

Alberta: Total housing starts
(2000 - 2020, thousands of units)

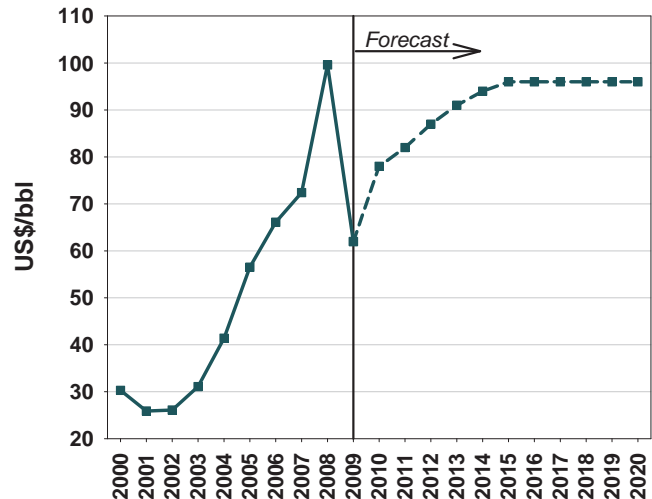


Source: CMHC; Corporate Economics

Oil Price

Since peaking at US\$84 a barrel in April 2010, West Texas Intermediate (WTI) crude oil prices retreated to average US\$77 a barrel in August 2010. Production increase from both OPEC and non-OPEC (including Canada, Brazil and Kazakhstan) countries has kept pace with growth in consumption from non-OECD countries. But, economic uncertainty in the two key consuming regions, the U.S. and China, should soften crude oil demand. Relatively high inventory levels in the U.S., combined with a stronger U.S. currency should keep price fluctuations small in the short term. Crude oil prices are expected to average US\$78 a barrel in 2010.

West Texas Intermediate (WTI) spot oil prices
(2000 - 2020, US\$/bbl)



Source: U.S. Federal Bank Reserve of St. Louis;
Construction Sector Council; Corporate Economics

Natural Gas Price

Natural gas markets have moved into a period of oversupply since the beginning of the 2008/2009 recession. The U.S. recession has resulted in a significant drop in demand for natural gas particularly in the industrial sector. In addition, the production of shale gas in North America has significantly increased supply.

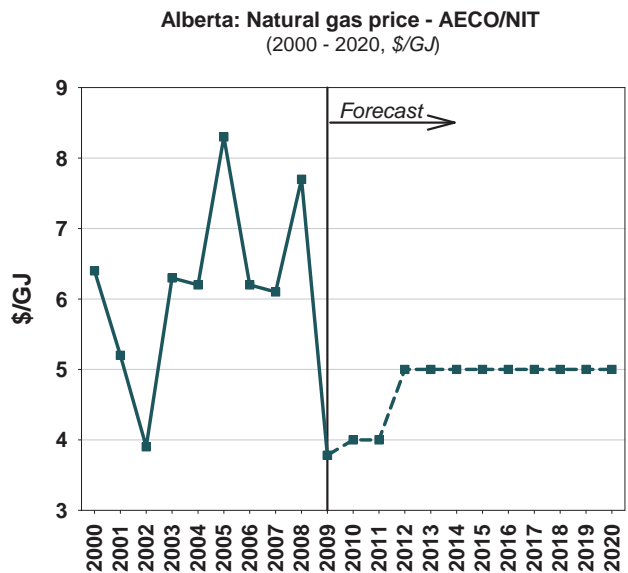
The U.S. economic recovery is faltering in response to the expiration of the various stimulus measures. Slower economic growth should depress the demand for natural gas in the remainder of 2010 and for most of 2011. In the latter part of the forecast period, the consumer sector is expected to grow in harmony with population growth, but per household consumption should be offset by the use of more efficient household appliances. The only other growth sector for natural gas demand should come from the power industry. Given the expected below-average performance of the U.S. economy over the forecast period, the risks to the forecast are weighted towards the lower end of the forecast range. Consequently, prices for the 2012-2014 period are likely to reside below the survey average.

A survey of readily available natural gas price forecasts shows the following:

- ▶ The forecast expects prices to fluctuate within a band of \$4.50/GJ to \$3.86/GJ in 2010 for an average of \$4.30/GJ. The U.S. demand for natural gas is expected to remain weak for the rest of 2010 as the economy falters.
- ▶ In 2011, prices are expected to range between \$5.45/GJ to \$3.61/GJ for an average of \$4.25 in 2011. The U.S. economy is expected to remain weak for most of 2011 and consequently, the demand for natural gas is expected to remain

weak. Price should fall in this type of market. Weak prices should result in reduced drilling activity.

- ▶ Stronger economic growth in 2012 should result in prices ranging between \$5.45/GJ to \$4.83/GJ for an average of \$5.14/GJ. The reduction of drilling in 2011 and the increase in consumption arising from increased economic growth should result in a reduction in inventory levels and this should push prices upwards. In 2013, prices should average \$5/GJ. The momentum that started in the U.S. economy should continue in 2013 and this again would serve to reduce inventories towards more normal levels. In 2014, prices should remain at \$5/GJ. Economic momentum along with reduced inventories should drive natural gas prices higher.



Source: GLJ Energy Publications; Construction Sector Council; Corporate Economics

Net Exports

During the first six months of 2010, total exports from Alberta increased by 20 per cent compared to the same period last year. Exports from the mining and energy industry rose by 21.9 per cent, while trade from manufacturing increased by 18.4 per cent². Alberta's exports faces uncertainties during the forecast period. First, the U.S. economy is stagnating in response to the withdrawal of several stimulus measures. Economic growth south of the border is expected to average 2.7 per cent during the forecast period. Second, the value of the Canadian currency is projected to average 93 cents during the analysis period. A dismal economic performance in the U.S. combined with a high Canadian dollar should limit Alberta's export potential.

2 Government of Alberta. August 2010. Monthly Economic Review. Edmonton, Alberta, Canada.



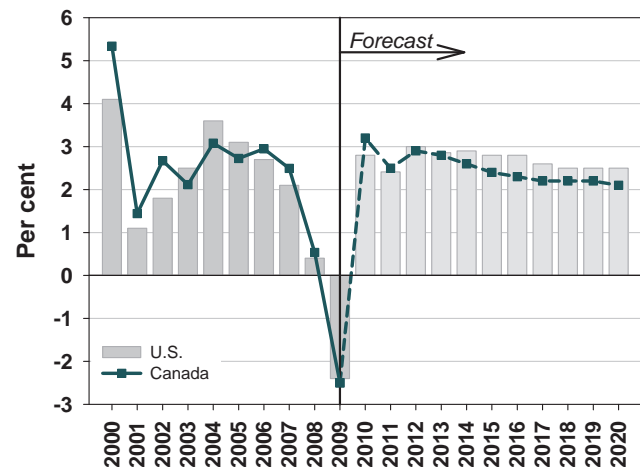
Canadian Economy

Gross Domestic Product

Real GDP growth in Canada moderated in Q2 2010 to an annual rate of 2.0 per cent after expanding by 5.8 per cent in Q1 2010. The growth was driven mainly by slower expansion in both consumer spending on non-durable goods and services, and exports, partially offset by stronger growth in imports.

Entering H2 2010, the GDP growth is expected to further moderate, given the cooling housing sector, a deleveraging of debt by over extended Canadian households, and the weak U.S. recovery that depresses the growth of exports from the Canadian economy. The Canadian GDP is expected to grow by 3.2 per cent in 2010 and decelerate to 2.5 per cent in 2011, before trending down to the long-term rate of growth at 2.2 per cent in 2015-2020.

Canada vs. U.S.: GDP growth
(2000 - 2020, per cent)

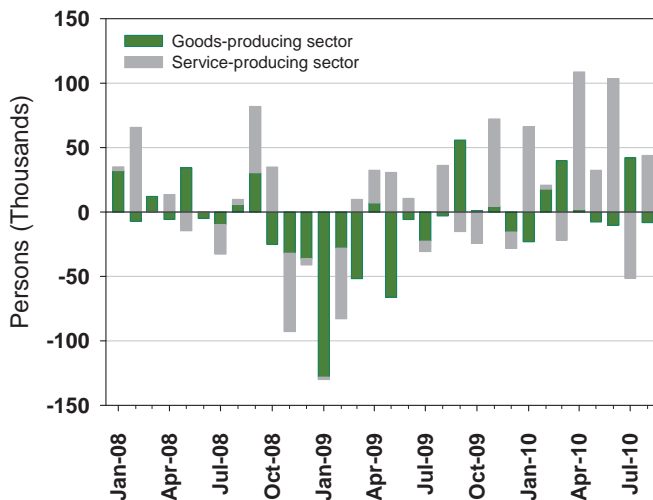


Source: Statistics Canada; U.S. Federal Bank Reserve of St. Louis; Corporate Economics

Labour Market

The labour market in Canada decelerated in August after months of strong gains in the H1 2010. Employers are cautious about hiring given the outlook of slower growth in domestic demand and in exports. Average monthly growth of total employment was 13,200 positions in July and August, compared to 51,400 persons per month in the first half of 2010. Most of the new jobs were added in the Services-producing sector (282,300 out of 334,800) so far this year. After recovering the job losses in the recent recession, further growth in the Canadian labour market relies on stronger economic growth in its trade partners, especially the U.S..

Canada: Total employment change by sector
(seasonally adjusted, month-over-month,
January 2008 - August 2010, thousands of persons)

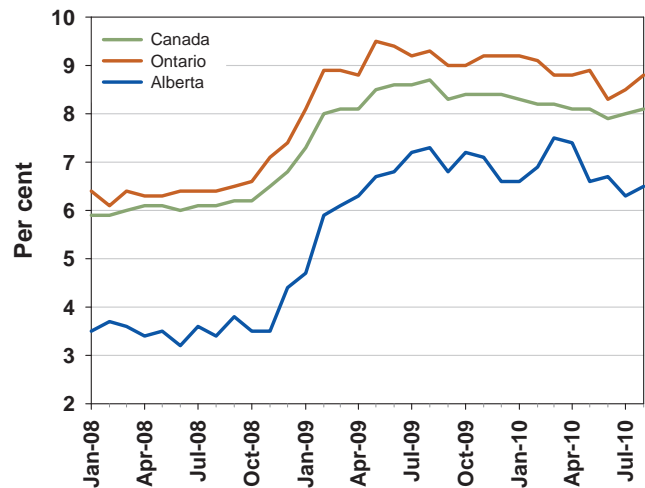


Source: Statistics Canada; Corporate Economics

The seasonally adjusted unemployment rate in Canada edged up to 8.1 per cent in August 2010 from the recent low of 7.9 per cent in June 2010, as more people entered the labour market. Similar trends were observed in Ontario and Alberta. With

improving business confidence and investment intentions in the energy sector, hiring prospects have improved in the Prairie Provinces in the near- to medium-term. Labour markets in these provinces are expected to tighten in 2011-2015, leading to unemployment rates below the national average.

Canada: Unemployment rates
(seasonally adjusted,
January 2008 - August 2010, per cent)



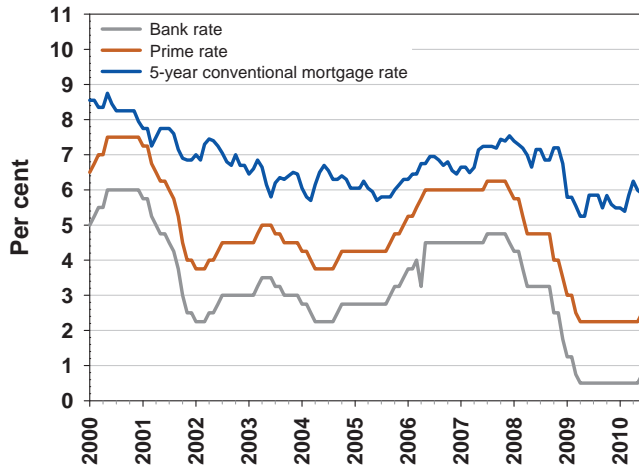
Source: Statistics Canada; Corporate Economics

Monetary Policy and Interest Rates

The Bank of Canada once again raised its target for the overnight interest rate by 25 percentage points to 1 per cent on September 8th, concerned that Canadian households took advantage of exceptionally low interest rates and borrowed from the future for spending in the present on housing and consumption. The Bank is expected to suspend further tightening until 2011, given the slower than expected Q2 2010 growth in Canada and the outlook of a moderation in the global growth in the H2 2010 and 2011.

Canada: Interest rates

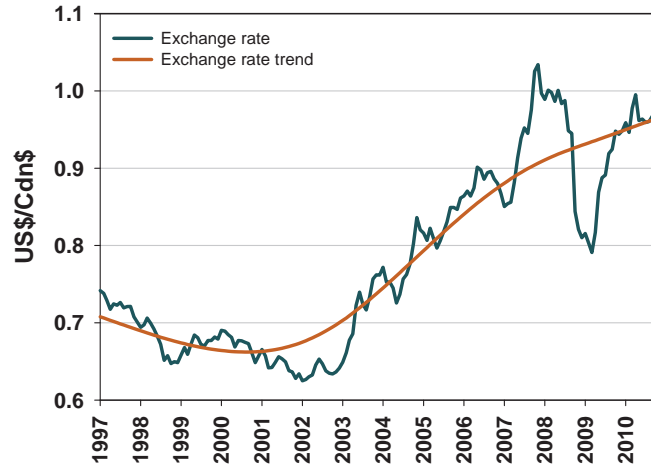
(January 2000 - September 2010, per cent)



Source: Bank of Canada; Corporate Economics

Canada: U.S./Canadian dollar exchange rate

(January 1997 - June 2010, US\$/Cdn\$)



Source: Bank of Canada; Corporate Economics

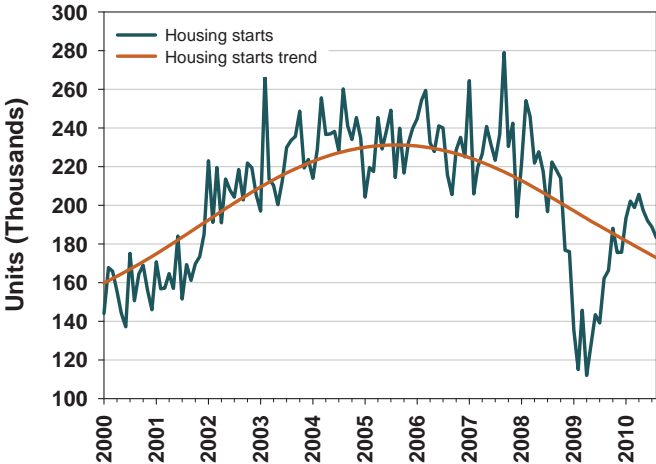
Canadian Dollar

The Canadian dollar stabilized in recent months (June-August) against the U.S. dollar at an exchange rate of 0.96 (US\$/CAD\$). The strong Canadian dollar was supported by higher interest rates and better public finances compared to the U.S.. The value of the Canadian dollar should remain at the current level for the forecast period, which is beneficial to business investments in machinery and equipment. This effect was evident in the Q2 2010 when, the value of imports of machinery and equipment increased by 8.7 per cent.

Residential investment

Residential investment in Canada grew 0.3 per cent in Q2 2010, the slowest quarterly rate of increase since Q1 2009. Canadian housing starts slowed to a seasonally adjusted annual pace of 183,300 units in August 2010, from recent peak of 205,300 units in April 2010. Tighter qualifying criteria for government-backed insured mortgages, increasing interest and mortgage rates and the introduction of the harmonized sales tax in Ontario and British Columbia have worked to reduce housing demand in Canada. In the near- to medium-term, residential investment should contribute moderately to GDP growth.

Canada: Total housing starts in all areas
(seasonally adjusted at annual rates,
January 2000 - August 2010, *thousands of units*)



Source: Statistics Canada; Corporate Economics



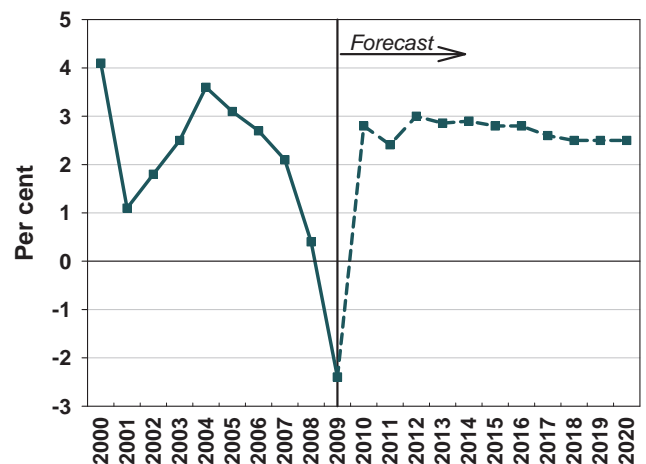
U.S. Economy

Gross Domestic Product

U.S. real GDP grew moderately in Q2 2010 at an annual rate of 1.6 per cent, after expanding 3.7 per cent in Q1 2010 and 5.6 per cent in Q4 2009. The increase in real GDP in the second quarter primarily reflected positive contributions³ from non-residential fixed investment (+2.12 per cent), personal consumption expenditures (+1.38 per cent), exports (+1.08 per cent), federal government spending (+0.72 per cent), and private inventory investment (+0.63 per cent). These contributions to growth were partly offset by the increase in imports (+4.45 per cent).

Near-term challenges facing the sustainability of the U.S. recovery are high unemployment rates, a deeply indebted household sector and a still-depressed housing market. To re-ignite economic growth, the Obama Administration proposed a new \$350 billion stimulus package in September 2010 to help small and medium businesses and create jobs. The real GDP growth in the U.S. is expected to average 2.8 per cent in 2010 and 2.4 per cent in 2011, trending towards the long-term rate of growth of 2.5 per cent in the rest of forecast period.

U.S.: Real GDP growth
(2000 - 2020, per cent)



Source: U.S. Federal Bank Reserve of St. Louis;
Corporate Economics

3 Contribution to percent change in real GDP

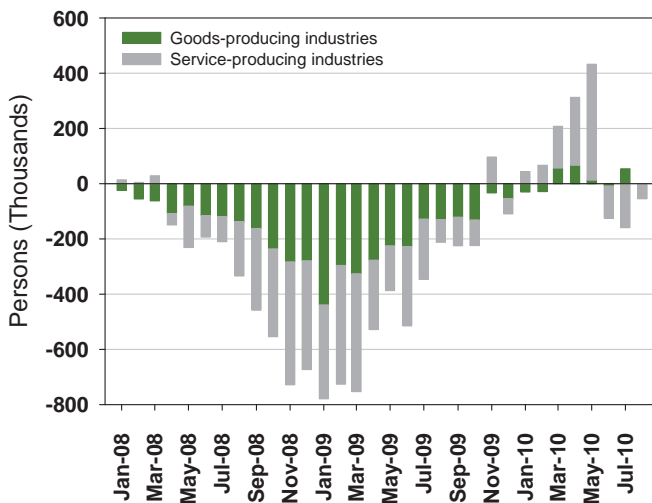
Labour Market

Total non-farm payroll employment in the U.S. declined by 54,000 positions in August 2010, due entirely to the cuts of 114,000 temporary Census workers. While the public sector cut jobs (-518,000) in June-August 2010, the private sector created new jobs (+235,000) and most of them were in the service-producing sector (+197,000). This is a positive sign that the private sector is gradually taking over the wheels of the U.S. economic recovery, albeit at a slower than expected pace.

6.2 million. Most likely the decline of the number of long-term unemployed was due to discouraged workers dropping out of the labour force. In August 2010, there were 1.1 million discouraged workers in the U.S., an increase of 325,000 from a year earlier. Among those employed (139 million), 4.7 per cent of them (6.5 million) held multiple jobs.

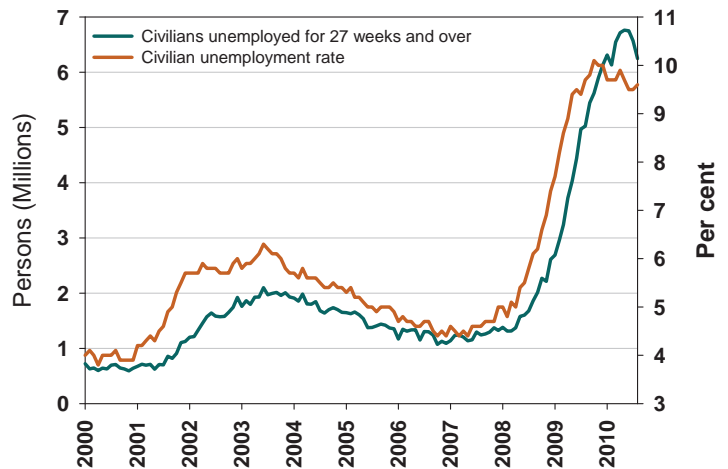
Given the excess labour in the market (14.9 million unemployed persons) and the slower than expected job creations in the private sector, a full recovery in the U.S. job market is expected to take several years.

U.S.: Total employment changes
(month-over-month changes,
January 2008 - August 2010, thousands of persons)



Source: U.S. Federal Bank Reserve of St. Louis;
Corporate Economics

U.S.: Civilian unemployment rate vs. long-term unemployed
(seasonally adjusted, January 2000 - August 2010)



Source: U.S. Federal Bank Reserve of St. Louis;
Corporate Economics

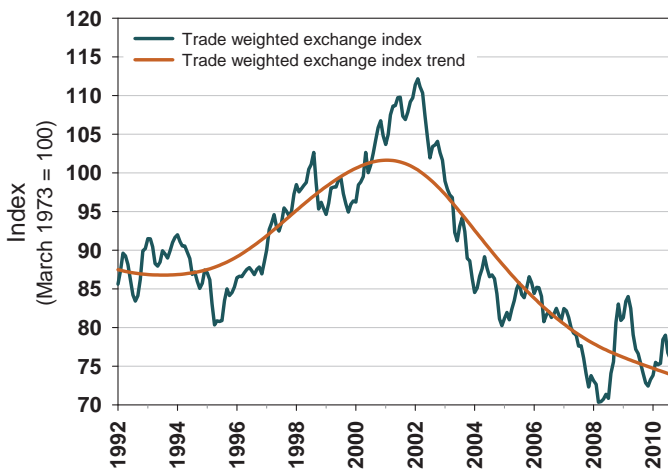
Since the start of the recent recession in 2007, both the unemployment rate and the number of long-term unemployed (Those jobless for 27 weeks and over) increased sharply in the U.S. In August 2010, the unemployment rate declined from recent peak to 9.6 per cent and the number of long-term unemployed declined by 323,000 over the month to

U.S. Dollar

The U.S. dollar strengthened again in recent months against major currencies⁴, a flight to safety caused by the fear of a global financial crisis from government debt problems in Eurozone. However, from a long-term perspective, the status of the U.S. dollar is slowly eroding, while the importance of other currencies (such as Chinese Yuan) is increasing.

U.S.: Trade weighted exchange index - major currencies vs. U.S. dollar

(January 1992 - August 2010, Index March 1973 = 100)



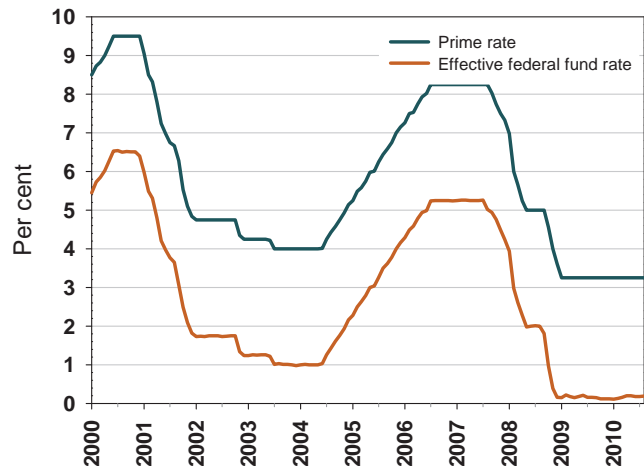
Source: U.S. Federal Bank Reserve of St. Louis; Corporate Economics

Monetary Policy and Interest Rates

The Federal Reserve decided in August 2010 to keep the target range for the federal funds rate at 0 to 0.25 per cent, concerned about the slow-down of output growth and high unemployment. Given current low rates of resource utilization, low inflation and subdued inflation expectations, the Fed is likely to maintain exceptionally low levels of the federal funds rate for an extended period, until Q4 2011.

U.S.: Interest rates

(January 2000 - August 2010, per cent)



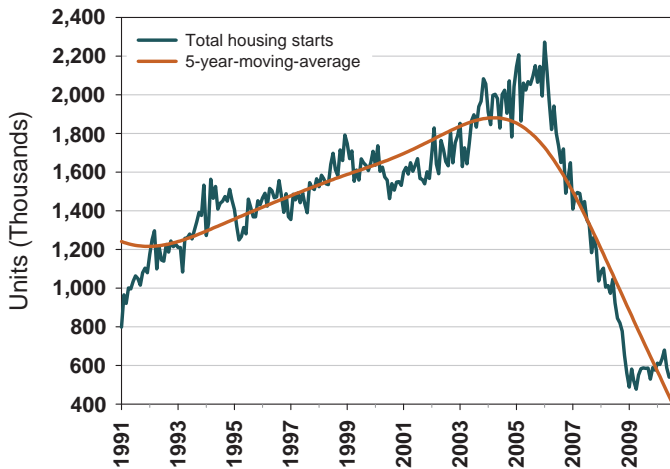
Source: U.S. Federal Bank Reserve of St. Louis; Corporate Economics

⁴ It's measured by the major currency index that includes the Eurozone, Canada, Japan, United Kingdom, Switzerland, Australia, and Sweden, a weighted average of the foreign exchange value of the U.S. dollar against a subset of the broad index currencies that circulate widely outside the country of issue.

Residential investment

The U.S. housing market is still in excess supply, mainly from the high and still rising inventories of foreclosure houses. As a result, the number of total housing starts dropped (- 133,000 units) in July from the recent peak of 679,000 in April 2010. The painfully slow job recovery in the U.S. contributed to the lasting weaknesses in the housing activities. New housing construction is unlikely to contribute to the GDP growth in the near-term, until 2011 at the earliest.

U.S.: Total new privately owned housing starts
(seasonally adjusted,
January 1991 - August 2010, thousands of units)



Source: U.S. Federal Bank Reserve of St. Louis;
Corporate Economics

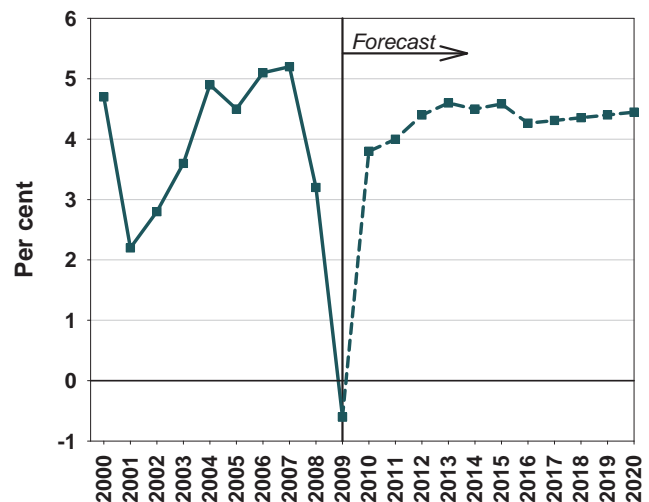


Global Economy

World

- ▶ After a strong first half in 2010, global economic growth decelerated in the second half of this year in response to the end of fiscal stimulus measures and inventory adjustment.
- ▶ The economy should grow at varying rates making it challenging for different governments to coordinate macroeconomic policies. Much of the advanced world is having a sluggish U-shaped recovery, while emerging markets are experiencing V-shaped recoveries.
- ▶ On average, world output is expected to increase by 3.8 per cent in 2010, and 4.0 per cent in 2011. By 2013, world output should potentially grow at around 4.6 per cent.

World: Economic growth rates
(2000 - 2020, per cent)



Source: International Money Fund (World Economic Outlook);
Consensus Forecasts; World Bank; Corporate Economics

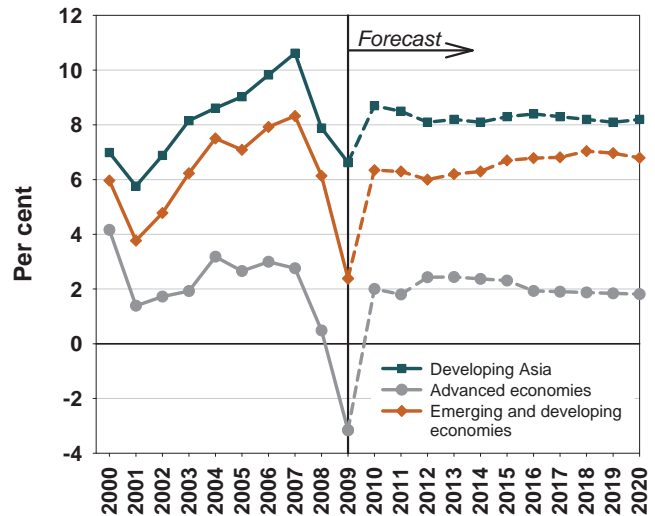
Advanced Economies

- ▶ Growth in advanced economies will decelerate in the second half of 2010 as the policy stimulus is withdrawn, the inventory restocking fades, and the domestic demand is not strong enough to offset external weakness. The concerns of a double-dip are increasing.
- ▶ The United States and some less indebted commodity rich economies are in relatively better situations, while possible risks of L-shaped recoveries exist in Japan and Eurozone.
- ▶ Leading indicators in advanced economies already showed signals of slowing in Q2 2010 and will slow further in the second half of 2010 and 2011. As a group, the growth of advanced economies is expected to be 2.0 per cent in 2010, and 1.8 per cent in 2011.

Emerging Economies

- ▶ Growth in emerging and developing economies will continue to be stronger, but the growth rate will be negatively affected by the slowdown and the structural adjustments in the advanced economies.
- ▶ Emerging Asian countries are expected to grow at 8.5 per cent in 2010, and 7.0 per cent in 2011, due to their strong macro fundamentals and absence of large fiscal imbalance. The ongoing rebound in global trade is also supporting the recovery in emerging and developing economies.
- ▶ As a group, the emerging market is expected to grow at 6.3 per cent in 2010, and 6.0 per cent in 2011.

World: Multi-speed GDP growth rates
advanced economies vs. emerging economies
(2000 - 2020, per cent)



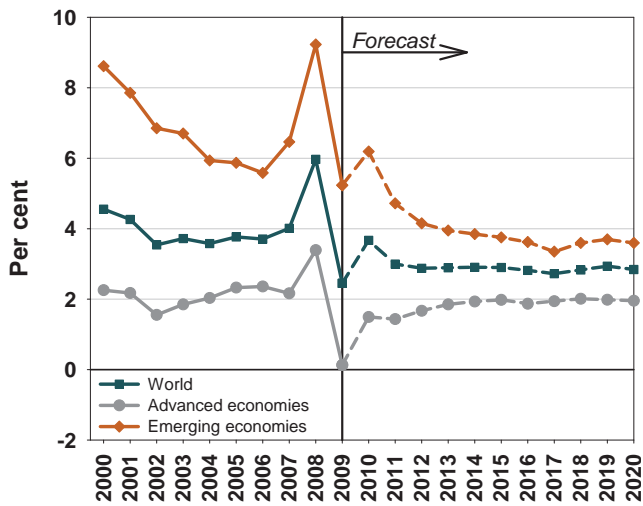
Source: International Money Fund (World Economic Outlook); World Bank; Corporate Economics

World Inflation

- ▶ As global demand weakened, inflation pressures are expected to remain subdued with the fall in prices of many commodities in 2010.
- ▶ In advanced economies, inflation pressures are contained because of low capacity utilization. In some advanced countries, the risks of deflation exist due to the persistence of economic slack in consumption and labour market.
- ▶ Inflation pressures have been rising in emerging economies which have generally registered strong recoveries following the financial crisis. This has supported capital inflows and raised domestic liquidity and a revival of asset price inflation.

- ▶ Advanced economies are expected to see an inflation rate of 1.4 per cent, while emerging economies will experience an inflation of 6.2 per cent in 2010. The average world inflation should be 3.4 per cent in 2010, and 3.0 per cent in 2011.

World: Inflation rates
(2000 - 2020, per cent)

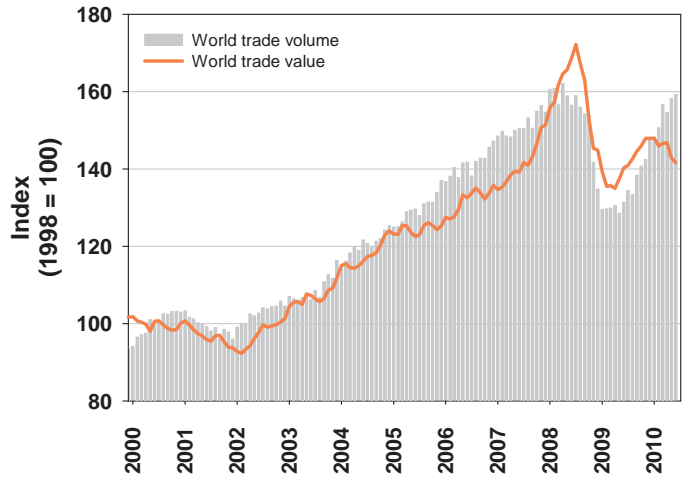


Source: International Money Fund (World Economic Outlook); World Bank; Corporate Economics

World Trade Market

- ▶ World trade is recovering at very rapid rates, led by strong trade flows in emerging markets. After a contraction of 12 per cent in 2009, world trade is expected to grow by 7.5 per cent in 2010 by volume.
- ▶ The rebound in world trade has been supported by global inventory restocking, investment normalization, fiscal stimulus spending on goods and infrastructure, and commodity demand and prices.
- ▶ However, trade momentum will ease later in 2010 and grow at a slower speed in 2011. It will be around 2014 before world trade returns to its pre-recession levels.

World: Trade volume and value
(January 2000 - June 2010, Index 2000 = 100)



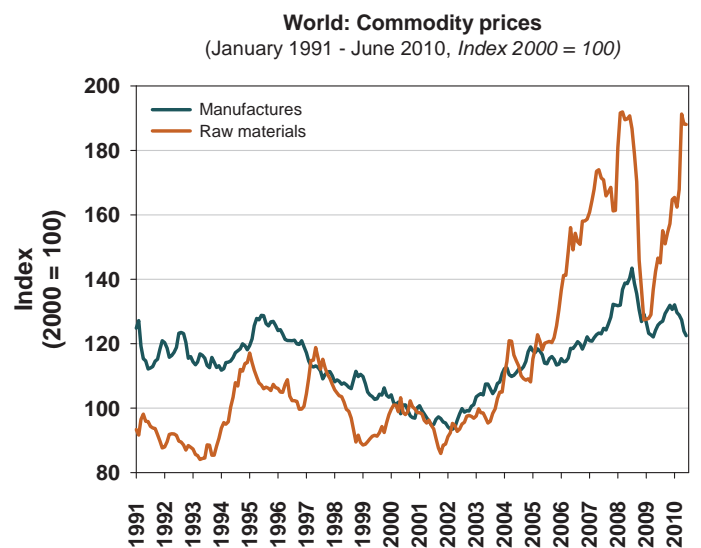
Source: Central Plan Bureau Netherlands; Corporate Economics



Commodity Prices

Commodity Prices

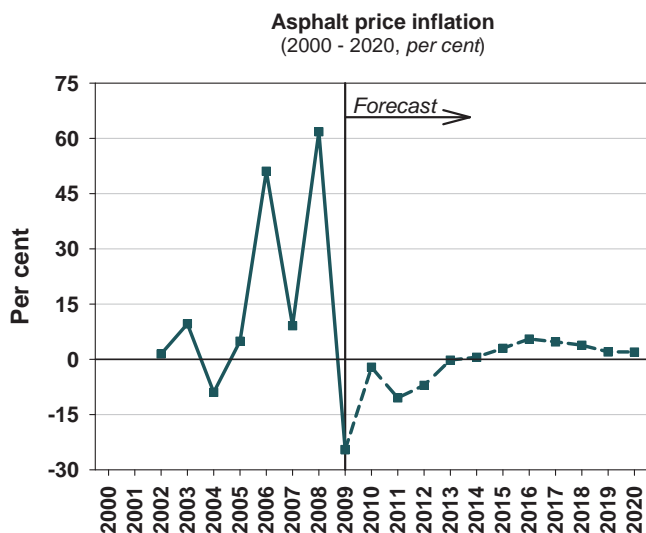
- ▶ Commodity prices increased significantly after their troughs in 2009, before they began trending downward in May and June 2010, in response to the ferocity of asset price swings.
- ▶ In the second half of 2010, commodity prices should be supported by growth in emerging economies and low interest rates.
- ▶ In 2011, gradual improvements in global demand and money velocity will put upward pressure on commodity prices.



Source: Central Plan Bureau Netherlands; Corporate Economics

Asphalt

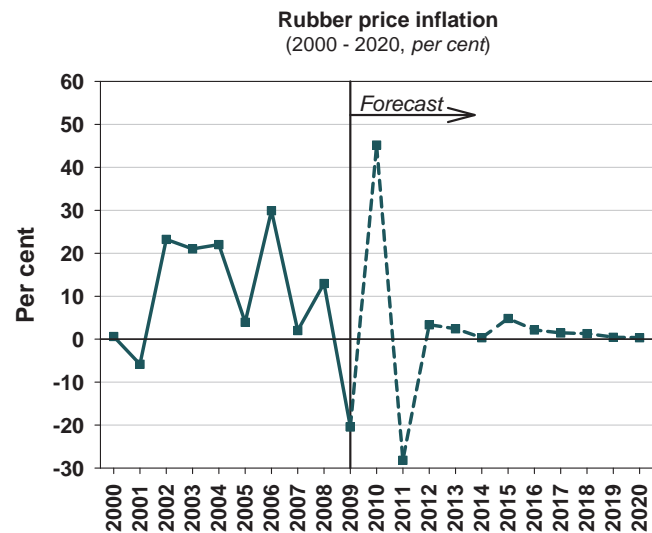
Increasing production from Alberta tarsands will result in increased supply of Asphalt. The market conditions of rising interest rates, a relatively high Canadian dollar and slowly rising oil prices all continue to point to slowly falling Asphalt prices over the longer term horizon. In the longer term future a reduction in government programs like road resurfacing will put more downward pressure on Asphalt prices. Demand for new houses, with new asphalt roofs, will soften over the next few years as interest rates rise, but will then increase as population demographics result in a resurgence of home construction at the same time as homes built during the “boom” years see their first re-roofing cycle. This appears to be the only looming source of increasing asphalt prices over the next 10 years.



Source: Statistics Canada; Corporate Economics

Rubber

Production of natural rubber is up this year, but it still hasn't recovered completely from the storms of 2009. Production of natural rubber is slightly lower than 2008 levels with synthetic production in high demand. Demand from eastern countries has increased with tire demand from India and China leading. The market is currently experiencing stress as recent increases in demand have outstripped the markets supply ability. As more natural and synthetic production comes online over the next few years we anticipate prices to soften and stabilize. Before then prices are spiking slightly higher than we anticipated last quarter.

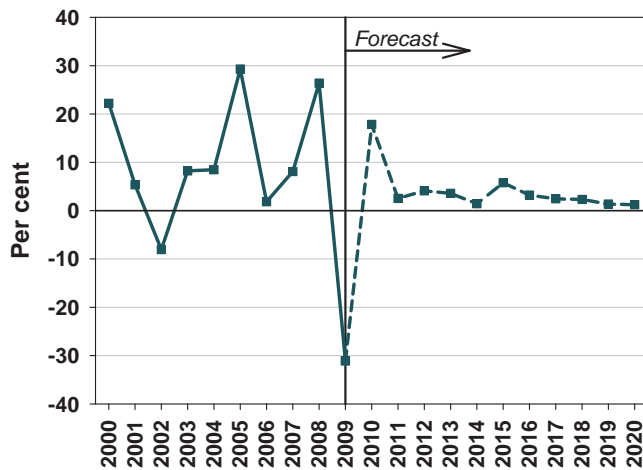


Source: Statistics Canada; Corporate Economics

Diesel

Diesel prices in the U.S. continue to hover around US\$3/Gal. Alberta Diesel prices are expected to rise appreciably this year as the shock of the rising Canadian dollar wears off while commercial and some residential construction continues. We still anticipate that in 2011 construction activity will soften reducing pressure on diesel fuels. Longer term we expect moderate increases in diesel prices mirroring moderate increases in oil prices.

Diesel oil price inflation
(2000 - 2020, per cent)

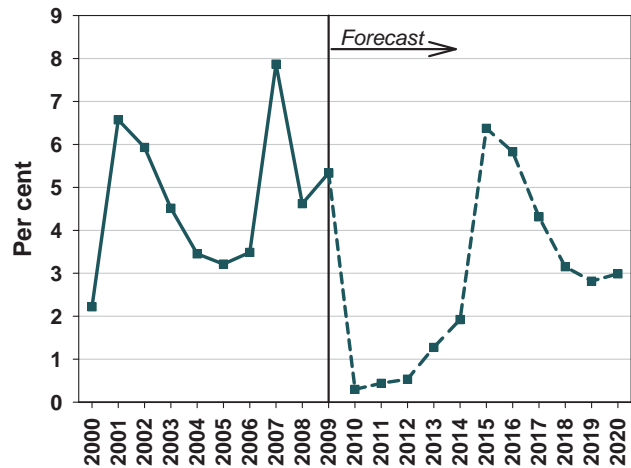


Source: Statistics Canada; Corporate Economics

Vehicle Parts

Vehicle parts and accessory demand is significantly low and we continue to anticipate that this will continue for a few more years. We continue to anticipate that higher parts prices won't materialize until the U.S. labour market tightens in 2014-2015. Longer term we anticipate modest price appreciation in vehicle parts as the market for detailing work slowly returns.

Vehicle parts price inflation
(2000 - 2020, per cent)

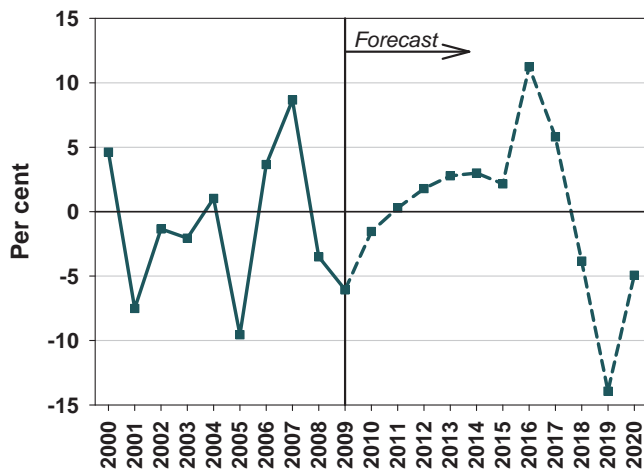


Source: Statistics Canada; Corporate Economics

Wood

There seems to be no end to the decline in U.S. house prices in some markets while other markets have seen some price and construction increases. The overall outlook for U.S. housing however is quite dismal with millions of houses in some state of foreclosure and vacancy. Over the next 5 years the outlook for Canadian lumber continues to be for decreased demand and depressed prices. We anticipate U.S. construction will recommence around 2013 and will build to overshooting supply needs by 2017 before settling down in 2020 at normal replacement levels of about 1.2 million units per year. The rapid return of construction and overshoot of 2015-2020 will generate wild swings in Canadian lumber prices.

Wood price inflation
(2000 - 2020, per cent)

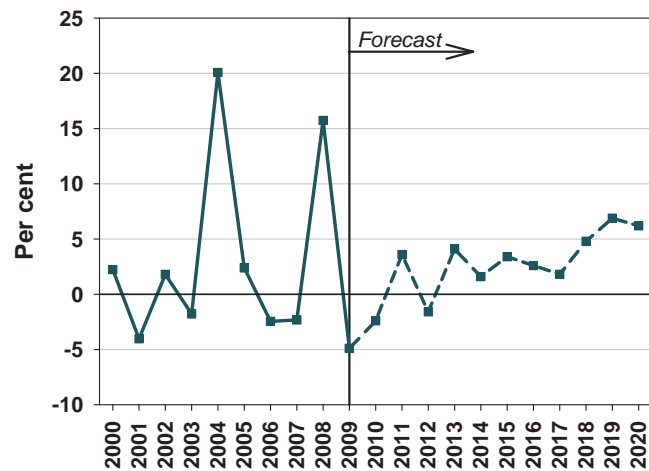


Source: Statistics Canada; Corporate Economics

Steel

Steel prices are more volatile now that the market has gone to a shorter contract; quarterly versus annual. Producers and some consumers are now learning how to hedge their bets in this more volatile environment. Against this backdrop European and American demand are expected to be muted while the globe recovers from the recent recession. The latest stimulus package announced will do something to boost demand for steel, particularly railroad, but it will not boost global markets significantly. Shipbuilding is the one large demand for steel which has yet to show signs of recovery and this activity likely won't recover until several years after international trade approaches pre-recession levels. We do not foresee this occurring until the end of our forecast horizon and as such we anticipate softer price escalation until later in the forecast.

Iron and steel price inflation
(2000 - 2020, per cent)

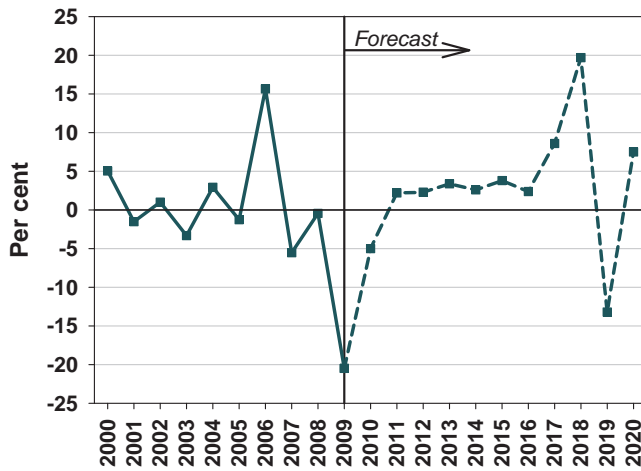


Source: Statistics Canada; Corporate Economics

Aluminum

Aluminum is showing some resiliency as auto makers in India and China are seeing strong demand for their product causing them to announce plans to expand their production. Even so, demand is off from what we were previously expecting, owing to the significant financial issues that have hit Europe recently. We expect robust Asian demand to maintain market prices while excess supply capacity prevents price spikes. By 2016 excess supply capacity should be employed so we anticipate a return to volatile price swings later in the forecast.

Aluminum price inflation
(2000 - 2020, per cent)



Source: Statistics Canada; Corporate Economics

Table 1 - Selected Economic Indicators (2000-2009)

Rest of the World, United States, Canada, Alberta, Calgary Economic Region & Calgary CMA

FORECAST UPDATED: September 2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
ASSUMPTIONS										
Global Economy										
World Gross Domestic Product (annual % change)	4.8	2.3	2.9	3.6	4.9	4.5	5.1	5.2	3.2	-0.6
The United States										
U.S. Real Gross Domestic Product growth (chained 2000 dollar) (%)	4.1	1.1	1.8	2.5	3.6	3.1	2.7	2.1	0.4	-2.4
Canada										
Real Canada Gross Domestic Product growth, (chained 2002 dollar) (%)	5.3	1.4	2.7	2.1	3.1	2.7	2.9	2.5	0.5	-2.5
Prime Business Loan Rate (%)	7.3	5.8	4.2	4.7	4.0	4.4	5.8	6.1	4.7	2.4
Exchange Rate (US\$/Cdn\$)	0.67	0.65	0.64	0.72	0.77	0.83	0.88	0.94	0.94	0.88
Alberta										
Gross Domestic Product (%)	6.5	2.0	2.2	3.2	5.3	4.5	6.2	2.5	0.0	-2.6
Total Employment Growth (%)	2.5	3.0	2.3	2.8	2.5	1.5	4.5	4.9	2.9	-1.0
Unemployment Rate (%)	5.0	4.6	5.3	5.1	4.6	4.0	3.5	3.5	3.5	6.3
Housing Starts ('000 Units)	26.3	29.2	38.8	36.2	36.3	40.8	49.0	48.3	29.2	19.9
Inflation Rate (%)	3.5	2.3	3.4	4.4	1.4	2.1	3.9	4.9	3.2	-0.6
Crude Oil Price - WTI (US\$/bbl)	30.3	25.9	26.1	31.1	41.4	56.5	66.1	72.4	99.6	62.0
Alberta Power Pool Prices (\$/MWh)	133.0	71.5	43.7	63.1	54.9	70.2	80.5	66.9	87.4	49.5
Alberta Natural Gas Price - AECONIT (\$/GJ)	6.4	5.2	3.9	6.3	6.2	8.3	6.2	6.1	7.7	3.8
FORECAST										
Calgary Economic Region (CER)										
Gross Domestic Product (%)*	8.7	1.3	2.6	1.6	4.5	4.9	10.5	3.9	1.2	-2.1
Total population**	1,022	1,048	1,076	1,096	1,119	1,152	1,188	1,230	1,251	1,296
Total Employment ('000 Persons)	576	598	611	623	643	649	700	735	756	752
Total Employment Growth (%)	4.7	3.8	2.1	1.9	3.1	1.0	7.5	4.9	2.7	-0.5
Unemployment Rate (%)	4.7	4.5	5.6	5.3	5.0	3.9	3.4	3.2	3.3	6.3
Inflation Rate (%) (CMA)	3.7	2.4	3.7	3.5	1.7	2.0	4.6	5.0	3.2	-0.1
Building Permits (\$billion)	2.5	2.5	2.9	3.0	3.1	4.3	6.0	7.1	5.1	4.5
<i>Low Forecast</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<i>High Forecast</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
Housing Starts ('000 Units) CMA	11.1	11.3	14.3	13.6	14.0	13.7	17.0	13.5	11.4	6.3
Non-Residential Building Price Inflation (%) CMA	4.5	3.3	2.2	3.1	6.7	6.9	12.8	17.7	13.7	-7.7

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 1 - Selected Economic Indicators (2010-2020)

Rest of the World, United States, Canada, Alberta, Calgary Economic Region & Calgary CMA

	BASE FORECAST										
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ASSUMPTIONS											
Global Economy											
World Gross Domestic Product (annual % change)	3.8	4.0	4.4	4.6	4.5	4.6	4.3	4.3	4.4	4.4	4.4
The United States											
U.S. Real Gross Domestic Product growth (chained 2000 dollar) (%)	2.8	2.4	3.0	2.9	2.9	2.8	2.8	2.6	2.5	2.5	2.5
Canada											
Real Canada Gross Domestic Product growth, (chained 2002 dollar) (%)	3.2	2.5	2.9	2.8	2.6	2.4	2.3	2.2	2.2	2.2	2.1
Prime Business Loan Rate (%)	2.6	3.7	5.4	6.1	6.4	6.4	6.4	6.1	6.1	6.1	6.1
Exchange Rate (US\$/Cdn\$)	0.96	0.98	0.98	0.97	0.96	0.94	0.93	0.94	0.94	0.94	0.94
Alberta											
Gross Domestic Product (%)	3.0	3.7	3.5	3.5	3.0	2.9	2.9	2.9	2.9	2.9	2.9
Total Employment Growth (%)	0.7	2.1	1.8	2.2	2.0	1.8	1.8	1.8	1.8	1.8	1.8
Unemployment Rate (%)	6.8	6.2	5.6	5.0	4.5	4.0	4.0	4.0	4.0	4.0	4.0
Housing Starts ('000 Units)	25.1	22.7	19.4	21.5	18.5	14.0	14.0	14.0	14.0	14.0	14.0
Inflation Rate (%)	1.6	2.2	2.0	1.9	2.0	2.3	2.3	2.3	2.3	2.3	2.3
Crude Oil Price - WTI (US\$/bbl)	78	82	87	91	94	96	96	96	96	96	96
Alberta Power Pool Prices (\$/MWh)											
Alberta Natural Gas Price - AECO/NIT (\$/GJ)	4	4	5	5	5	5	5	5	5	5	5
FORECAST											
Calgary Economic Region (CER)											
Gross Domestic Product (%)*	1.6	3.3	4.2	3.8	3.5	3.4	3.2	3.1	3.0	2.9	2.9
Total population**	1,321	1,333	1,350	1,370	1,396	1,422	1,446	1,467	1,487	1,505	1,522
Total Employment ('000 Persons)	746	758	781	804	826	847	867	886	904	921	937
Total Employment Growth (%)	-0.8	1.6	3.0	2.9	2.7	2.5	2.4	2.2	2.0	1.9	1.7
Unemployment Rate (%)	7.1	6.5	5.2	4.7	4.2	3.7	3.2	3.2	3.1	3.0	3.2
Inflation Rate (%) (CMA)	0.8	2.5	2.9	2.8	2.9	2.8	2.9	2.9	3.0	3.2	3.2
Building Permits (\$billion)	3.8	4.1	4.2	4.4	4.4	4.7	4.5	4.6	4.5	4.4	4.4
<i>Low Forecast</i>	3.6	3.9	3.9	4.0	3.9	4.0	3.8	3.7	3.4	3.2	2.9
<i>High Forecast</i>	3.9	4.3	4.4	4.8	4.9	5.3	5.3	5.5	5.5	5.6	5.8
Housing Starts ('000 Units) CMA	8.4	9.0	9.6	9.6	10.8	9.6	9.6	9.6	9.6	9.6	8.4
Non-Residential Building Price Inflation (%) CMA	-4.6	-0.3	8.4	4.0	3.0	8.6	4.2	2.6	2.7	1.1	2.2

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
(2000-2009)

City of Calgary

FORECAST COMPLETED: September 2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
DEMOGRAPHY										
Total Population ('000 Persons)	861	877	905	922	933	956	992	1,020	1,043	1,065
<i>Total Population Growth (%)</i>	<i>2.2</i>	<i>1.8</i>	<i>3.2</i>	<i>1.9</i>	<i>1.2</i>	<i>2.4</i>	<i>3.7</i>	<i>2.9</i>	<i>2.2</i>	<i>2.2</i>
Net Migration ('000 Persons)	11.3	8.0	21.0	9.0	2.3	13.7	25.6	17.6	12.4	12.9

REAL ESTATE

Residential Market

Housing Starts ('000 units)	9.6	9.9	12.4	11.9	12.2	11.7	14.1	10.9	9.6	5.0
New House Price Inflation (%)	2.4	2.5	5.2	5.2	5.5	7.0	43.6	16.2	0.6	-6.7
Total Building Permits mid point (\$billions)	2.1	2.0	2.3	2.4	2.4	3.6	4.9	5.6	4.0	3.7
<i>Low Forecast</i>										
<i>High Forecast</i>										

Numbers may not add up due to rounding

Table 2 - Selected Indicators
(2010-2020)

City of Calgary											
	BASE FORECAST										
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
DEMOGRAPHY											
Total Population ('000 Persons)	1,072	1,082	1,095	1,112	1,132	1,153	1,172	1,190	1,205	1,220	1,234
<i>Total Population Growth (%)</i>	<i>0.6</i>	<i>0.9</i>	<i>1.2</i>	<i>1.5</i>	<i>1.8</i>	<i>1.9</i>	<i>1.6</i>	<i>1.5</i>	<i>1.3</i>	<i>1.2</i>	<i>1.1</i>
Net Migration ('000 Persons)	0.0	4.0	7.0	11.0	12.0	10.0	8.4	7.4	6.4	6.0	6.0
REAL ESTATE											
Residential Market											
Housing Starts ('000 units)	7.0	7.5	8.0	8.0	9.0	8.0	8.0	8.0	8.0	8.0	7.0
New House Price Inflation (%)	0.5	6.2	3.2	2.5	0.6	3.7	2.7	1.1	1.1	-0.4	1.3
Total Building Permits mid point (\$billions)	3.1	3.4	3.4	3.6	3.6	3.8	3.7	3.8	3.7	3.6	3.6
<i>Low Forecast</i>	<i>2.9</i>	<i>3.2</i>	<i>3.2</i>	<i>3.3</i>	<i>3.2</i>	<i>3.3</i>	<i>3.1</i>	<i>3.0</i>	<i>2.8</i>	<i>2.6</i>	<i>2.4</i>
<i>High Forecast</i>	<i>3.2</i>	<i>3.5</i>	<i>3.6</i>	<i>3.9</i>	<i>4.0</i>	<i>4.3</i>	<i>4.3</i>	<i>4.5</i>	<i>4.5</i>	<i>4.6</i>	<i>4.7</i>

Numbers may not add up due to rounding

Table 3 - City of Calgary Population Projection (2010-2020)

City of Calgary

FORECAST COMPLETED: August 2010

	BASE FORECAST										
(Persons except rates)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total population	1,071,600	1,081,600	1,095,100	1,111,700	1,132,000	1,153,100	1,172,000	1,189,500	1,205,000	1,219,900	1,233,800
Total net migration	0	4,000	7,000	11,000	12,000	10,000	8,400	7,400	6,400	6,000	6,000
Total natural increase	10,000	9,700	9,500	9,300	9,100	9,000	8,800	8,500	8,300	7,900	7,600
Total births	16,200	16,100	16,000	16,000	16,100	16,200	16,300	16,300	16,300	16,200	16,200
Total deaths	6,200	6,300	6,500	6,700	7,000	7,200	7,500	7,800	8,000	8,300	8,600
Total population growth rate	0.6%	0.9%	1.2%	1.5%	1.8%	1.9%	1.6%	1.5%	1.3%	1.2%	1.1%

Population by five-year cohort

	BASE FORECAST										
(Ages)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
0-4	63,300	67,400	71,100	74,500	77,900	81,200	81,300	81,400	81,500	81,600	81,700
5-9	64,300	63,700	63,200	63,400	63,900	64,600	69,100	73,000	76,400	79,600	82,600
10-14	65,300	64,700	65,100	65,400	66,200	66,800	66,900	66,700	66,800	67,000	67,300
15-19	69,000	67,900	67,300	67,200	67,500	67,600	67,700	68,400	68,900	69,300	69,500
20-24	76,600	75,400	74,300	73,500	72,700	72,000	71,600	71,400	71,200	71,000	70,700
25-29	76,300	76,200	76,600	77,400	78,600	80,000	79,900	79,300	78,700	77,300	76,000
30-34	81,400	79,800	78,900	78,400	78,700	79,200	80,000	80,800	81,700	82,500	83,300
35-39	85,400	84,700	84,600	84,100	84,300	84,200	83,600	83,100	82,600	82,500	82,400
40-44	82,300	83,700	85,000	86,200	87,100	87,900	88,100	88,400	88,000	87,800	87,200
45-49	89,100	86,800	84,900	83,500	82,900	83,500	85,500	87,100	88,300	89,000	89,400
50-54	86,400	88,400	89,400	90,400	90,800	90,300	88,600	87,000	85,600	84,700	85,000
55-59	69,400	73,000	76,900	80,400	83,800	86,800	89,400	90,700	91,700	91,800	90,900
60-64	52,400	55,400	57,600	60,500	64,300	68,800	72,700	76,800	80,200	83,400	86,000
65-69	35,600	37,700	41,300	44,800	48,100	51,200	54,500	56,800	59,500	63,100	67,100
70-74	26,000	26,900	28,000	29,900	31,700	33,800	36,000	39,600	42,800	45,700	48,500
75-79	21,000	21,200	21,600	21,900	22,600	23,300	24,300	25,400	27,000	28,600	30,400
80-84	15,300	15,900	16,300	16,700	16,900	17,200	17,500	17,900	18,100	18,600	19,100
85-89	8,600	9,000	9,200	9,700	10,000	10,600	11,000	11,300	11,500	11,700	11,800
90+	3,900	3,800	3,800	3,800	4,000	4,100	4,300	4,400	4,500	4,700	4,900
Total	1,071,600	1,081,600	1,095,100	1,111,700	1,132,000	1,153,100	1,172,000	1,189,500	1,205,000	1,219,900	1,233,800

Numbers may not add up due to rounding

UPDATED BY CORPORATE ECONOMICS, SEPTEMBER 2010

Table 4 - Calgary Economic Region Population Projection (2010-2020)

Calgary Economic Region

FORECAST COMPLETED: August 2010

	BASE FORECAST										
(Persons except rates)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total population	1,320,500	1,332,800	1,350,000	1,370,300	1,395,800	1,421,900	1,445,500	1,466,900	1,486,700	1,504,900	1,522,200
Total net migration	0	5,000	8,800	13,800	15,000	12,500	10,500	9,300	8,000	7,500	7,500
Total natural increase	12,300	12,000	11,700	11,500	11,300	11,100	10,800	10,500	10,200	9,800	9,400
Total births	20,000	19,800	19,700	19,700	19,900	20,000	20,100	20,100	20,100	20,000	20,000
Total deaths	7,600	7,800	8,000	8,300	8,600	8,900	9,200	9,600	9,900	10,200	10,600
Total population growth rate	2.2%	0.9%	1.3%	1.5%	1.9%	1.9%	1.7%	1.5%	1.3%	1.2%	1.1%

Population by five-year cohort

	BASE FORECAST										
(Ages)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
0-4	78,000	83,100	87,700	91,800	96,100	100,100	100,200	100,400	100,600	100,700	100,800
5-9	79,200	78,500	77,900	78,100	78,800	79,700	85,200	90,000	94,200	98,200	101,900
10-14	80,500	79,700	80,200	80,700	81,600	82,400	82,500	82,300	82,500	82,600	83,000
15-19	85,000	83,600	83,000	82,900	83,200	83,400	83,500	84,400	85,000	85,500	85,800
20-24	94,400	92,900	91,500	90,600	89,600	88,800	88,400	88,000	87,800	87,600	87,200
25-29	94,100	94,000	94,400	95,400	97,000	98,700	98,600	97,900	97,100	95,400	93,800
30-34	100,300	98,400	97,300	96,600	97,000	97,600	98,700	99,700	100,800	101,800	102,800
35-39	105,200	104,400	104,200	103,700	103,900	103,900	103,100	102,500	101,900	101,800	101,700
40-44	101,400	103,200	104,800	106,300	107,300	108,300	108,700	109,100	108,600	108,300	107,600
45-49	109,800	107,000	104,600	103,000	102,200	103,000	105,400	107,400	108,900	109,700	110,300
50-54	106,400	109,000	110,200	111,400	112,000	111,300	109,200	107,200	105,600	104,500	104,800
55-59	85,500	89,900	94,800	99,100	103,300	107,000	110,300	111,800	113,100	113,300	112,200
60-64	64,500	68,300	71,000	74,500	79,300	84,800	89,700	94,600	98,900	102,800	106,000
65-69	43,900	46,400	51,000	55,200	59,300	63,100	67,200	70,100	73,400	77,800	82,800
70-74	32,000	33,100	34,600	36,800	39,100	41,700	44,400	48,800	52,800	56,400	59,800
75-79	25,900	26,100	26,600	27,000	27,900	28,800	30,000	31,300	33,400	35,300	37,500
80-84	18,900	19,500	20,100	20,600	20,900	21,200	21,600	22,000	22,300	23,000	23,600
85-89	10,600	11,000	11,400	11,900	12,400	13,000	13,500	14,000	14,200	14,400	14,600
90+	4,900	4,700	4,700	4,700	4,900	5,100	5,300	5,400	5,600	5,800	6,000
Total	1,320,500	1,332,800	1,350,000	1,370,300	1,395,800	1,421,900	1,445,500	1,466,900	1,486,700	1,504,900	1,522,200

Numbers may not add up due to rounding

UPDATED BY CORPORATE ECONOMICS, SEPTEMBER 2010

Table 5 - Selected Commodity Prices
(2000-2009)

City of Calgary

FORECAST UPDATED: September 2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Construction Commodities										
Iron and steel products	2.2	-4.0	1.8	-1.8	20.1	2.4	-2.5	-2.3	15.7	-4.9
Aluminum products	5.1	-1.5	1.0	-3.3	2.9	-1.3	15.7	-5.5	-0.4	-20.5
Wood	4.6	-7.5	-1.3	-2.1	1.0	-9.6	3.7	8.7	-3.5	-6.1
Asphalt**	N/A	N/A	1.4	9.6	-9.0	4.9	51.1	9.1	61.8	-24.5
Operational Commodities										
Rubber	0.6	-5.8	23.2	21.0	22.0	3.9	29.9	2.0	13.0	-20.4
Diesel Oil	22.2	5.3	-8.1	8.2	8.5	29.3	1.9	8.1	26.4	-31.1
Vehicle Parts	2.2	6.6	5.9	4.5	3.5	3.2	3.5	7.9	4.6	5.3

Numbers may not add up due to rounding

** Based on Ontario Ministry of Transportation Asphalt Price Index

Table 5 - Selected Commodity Prices
(2010-2020)

City of Calgary

FORECAST UPDATED: September 2010

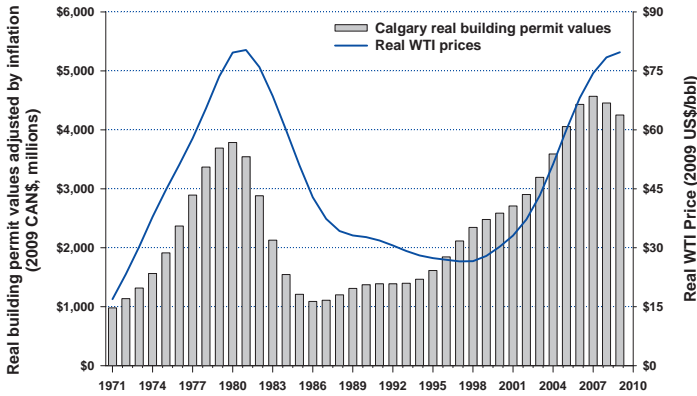
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Construction Commodities											
Iron and steel products	-2.4	3.6	-1.6	4.1	1.6	3.4	2.6	1.8	4.8	6.9	6.2
Aluminum products	-5.0	2.2	2.3	3.4	2.6	3.8	2.4	8.6	19.7	-13.2	7.5
Wood	-1.5	0.3	1.8	2.8	3.0	2.2	11.3	5.8	-3.8	-13.9	-4.9
Asphalt**	-2.1	-10.5	-7.1	-0.2	0.5	3.0	5.5	4.7	3.8	2.0	2.0
Operational Commodities											
Rubber	45.2	-28.2	3.3	2.4	0.3	4.8	2.1	1.4	1.3	0.4	0.3
Diesel Oil	17.9	2.5	4.1	3.6	1.5	5.8	3.2	2.5	2.3	1.4	1.3
Vehicle Parts	0.3	0.4	0.5	1.3	1.9	6.4	5.8	4.3	3.2	2.8	3.0

Numbers may not add up due to rounding

** Based on Ontario Ministry of Transportation Asphalt Price Index

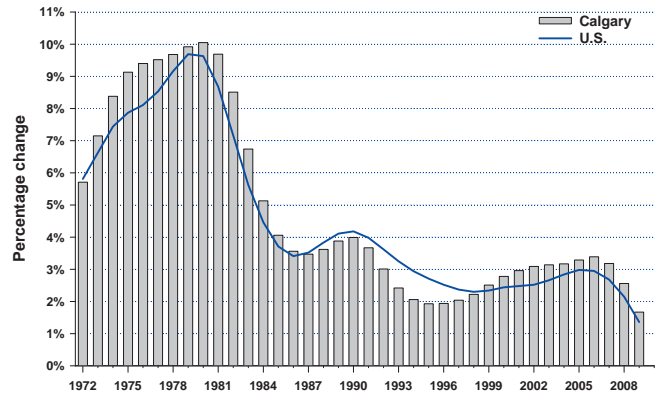
Business Cycles

City of Calgary: Real building permit values & real WTI prices (1971 - 2009)



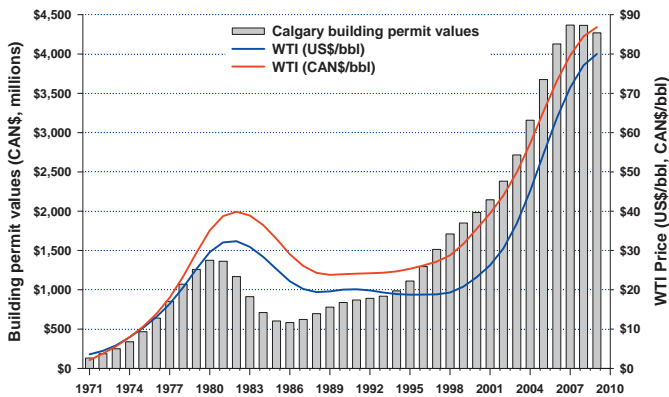
Source: City of Calgary DBA, U.S. Federal Reserve Bank of St. Louis, Corporate Economics

City of Calgary & United States: Inflation rate (1972 - 2009)



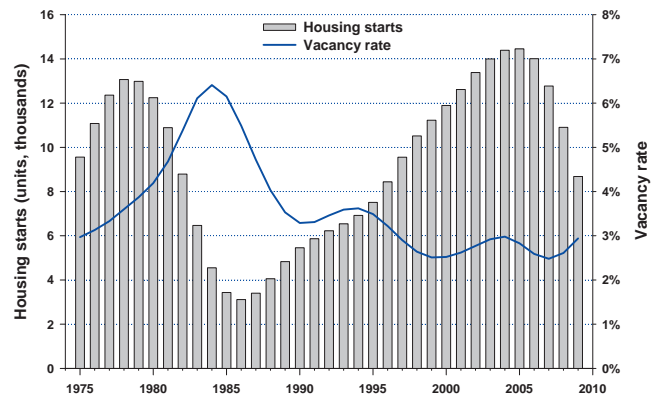
Source: Statistics Canada, U.S. Federal Reserve Bank of St. Louis, Corporate Economics

City of Calgary: Building permit values & nominal WTI prices (1971 - 2009)



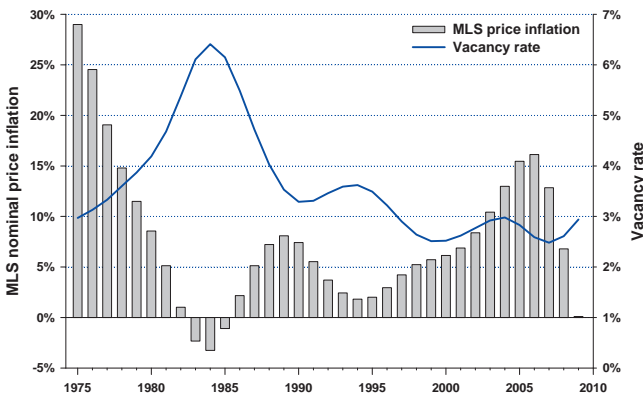
Source: City of Calgary DBA, U.S. Federal Reserve Bank of St. Louis, Corporate Economics

City of Calgary: Housing starts (CMA) & vacancy rate (1975 - 2009)



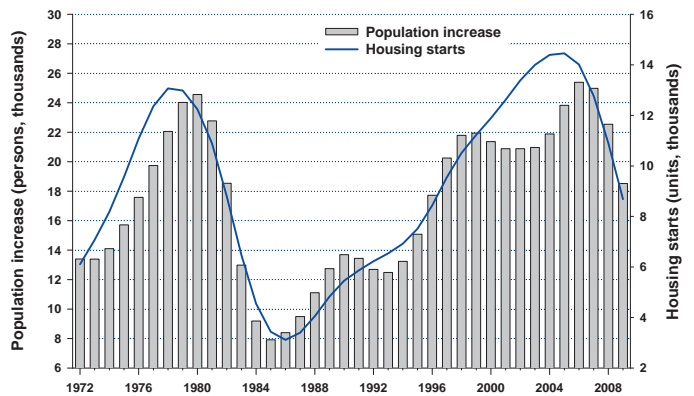
Source: City of Calgary Database, CMHC, Corporate Economics

City of Calgary: MLS nominal price inflation & vacancy rate (1975 - 2009)



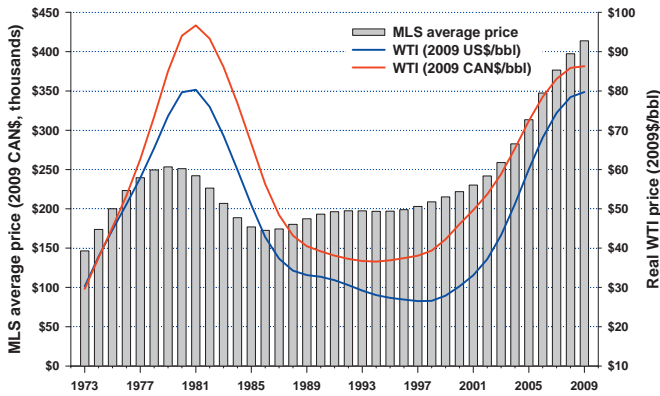
Source: City of Calgary Database, CREB, Corporate Economics

City of Calgary: Population increase & (CMA) housing starts (1972 - 2009)



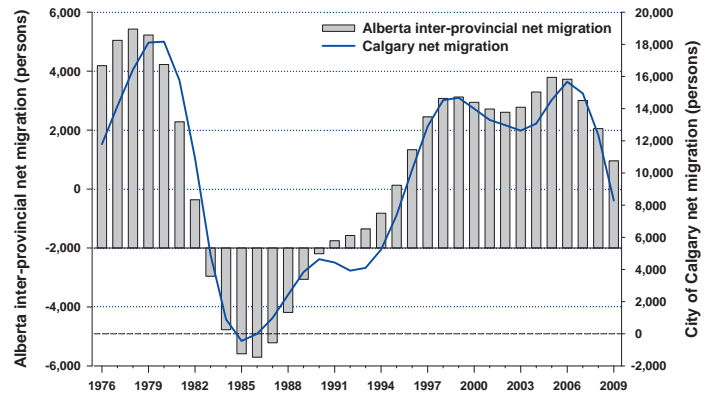
Source: City of Calgary Database, CMHC, Civic Census, Corporate Economics

City of Calgary: MLS average prices & real WTI prices (1973 - 2009)



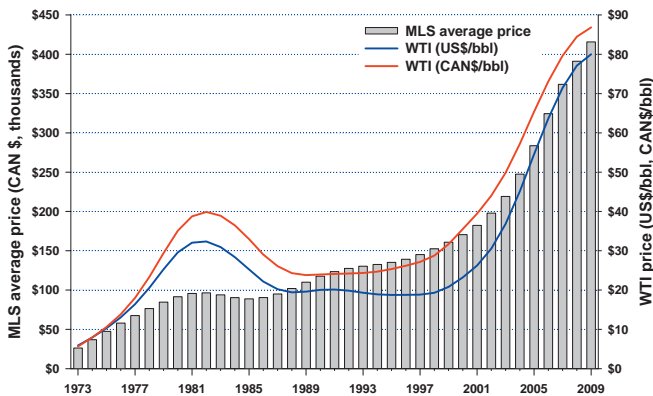
Source: City of Calgary Database, CREB, U.S. Federal Reserve Bank of St. Louis, Corporate Economics

City of Calgary & Alberta: Net migration (1976 - 2009)



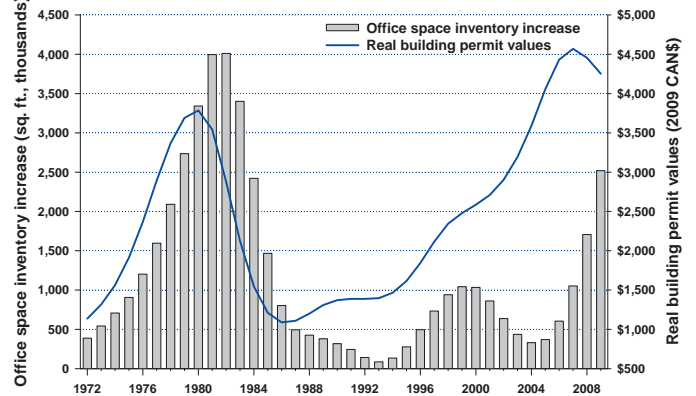
Source: City of Calgary Database, Civic Census, Statistics Canada, Corporate Economics

City of Calgary: MLS average prices & nominal WTI prices (1973 - 2009)



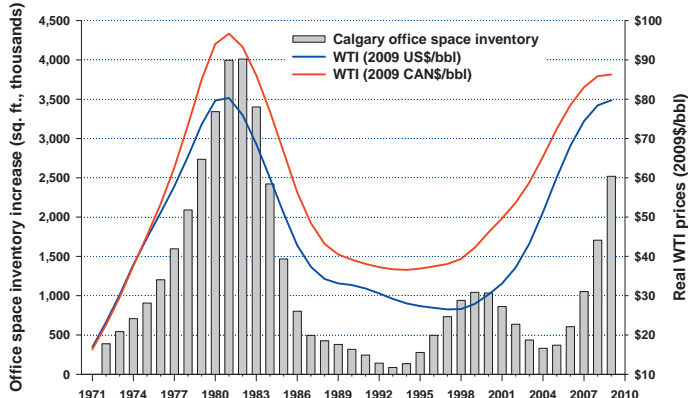
Source: City of Calgary Database, CREB, U.S. Federal Reserve Bank of St. Louis, Corporate Economics

City of Calgary: Office space inventory increase & real building permit values (1972 - 2009)



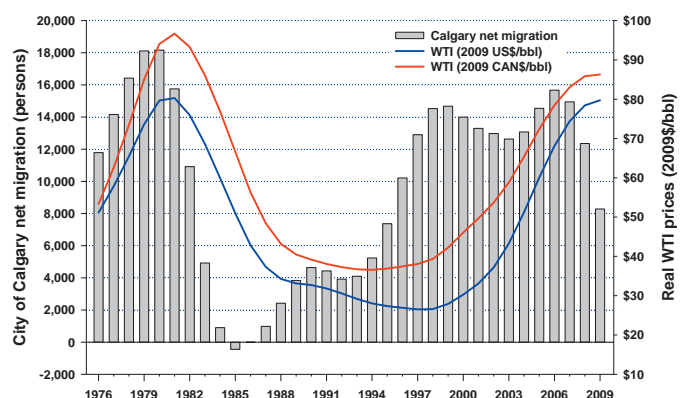
Source: Various agencies, City of Calgary Database, Corporate Economics

City of Calgary: Office space inventory increase & real WTI prices (1971 - 2009)



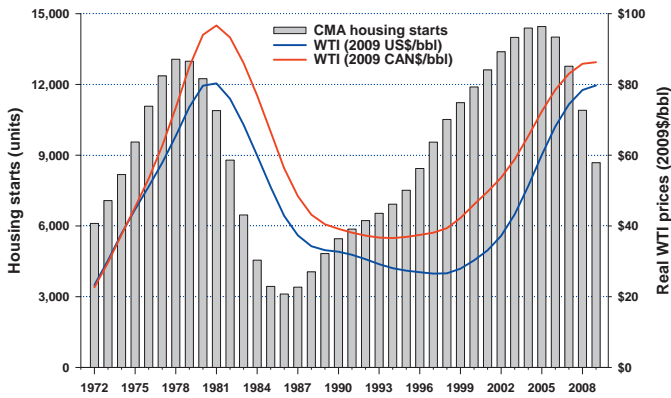
Source: Various agencies, U.S. Federal Reserve Bank of St. Louis, Corporate Economics

City of Calgary: Net migration & real WTI prices (1976 - 2009)



Source: Civic Census, U.S. Federal Reserve Bank of St. Louis, Corporate Economics

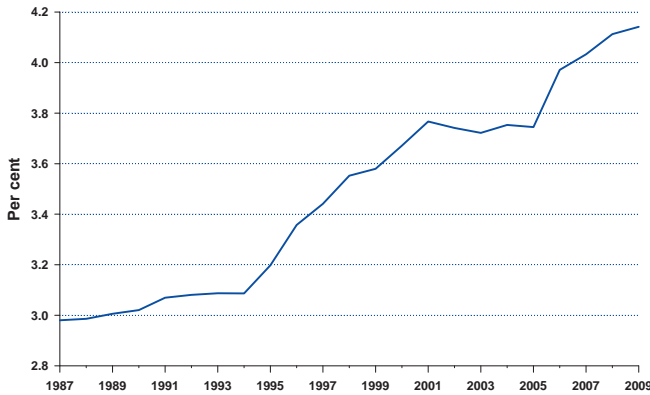
CMA: Housing starts & real WTI prices (1972 - 2009)



Source: City of Calgary DBA, U.S. Federal Reserve Bank of St. Louis, Corporate Economics

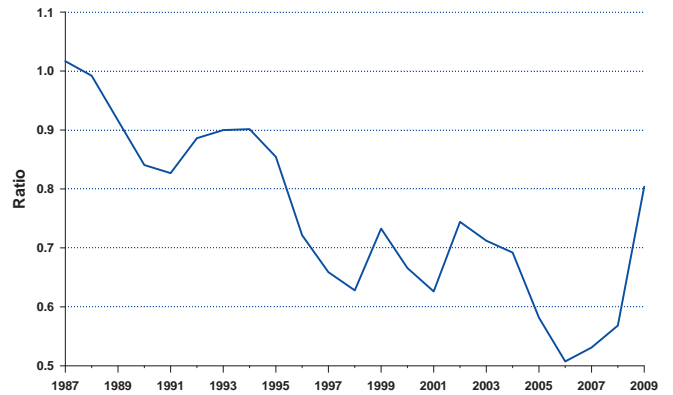
■ Calgary compared to Canada

Calgary / Canada: Total employment (1987 - 2009)



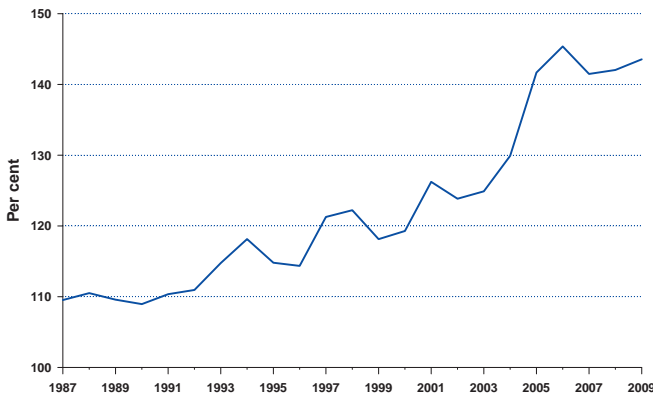
Source: Conference Board of Canada, Corporate Economics

Calgary / Canada: Unemployment rate (1987 - 2009)



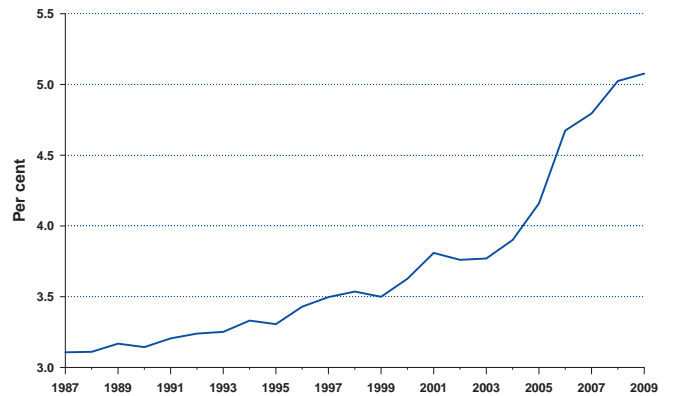
Source: Conference Board of Canada, Corporate Economics

Calgary / Canada: Wages and salaries per employee (1987 - 2009)



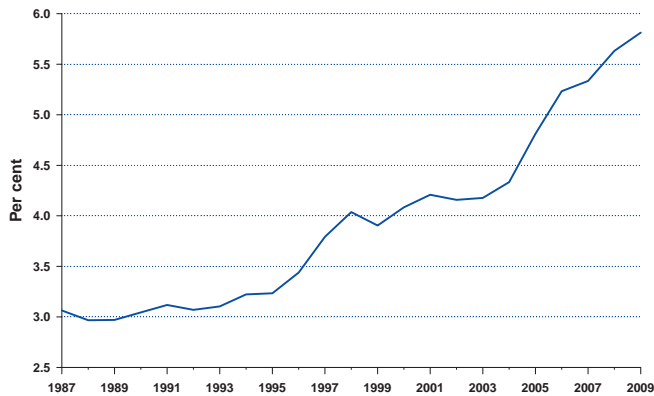
Source: Conference Board of Canada, Corporate Economics

Calgary / Canada: Employer and employee contribution to EI (1987 - 2009)



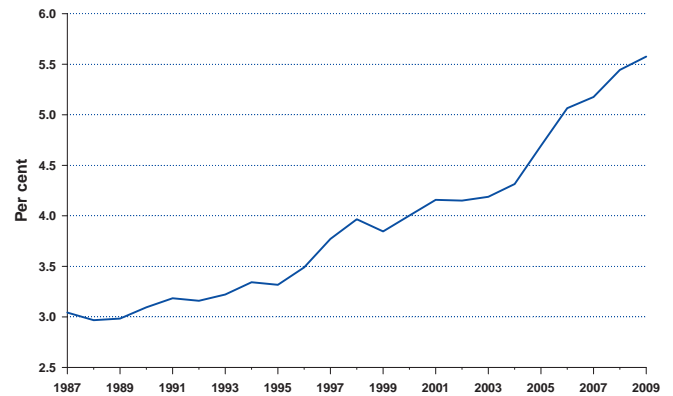
Source: Conference Board of Canada, Corporate Economics

Calgary / Canada: Personal income taxes - federal and provincial (1987 - 2009)



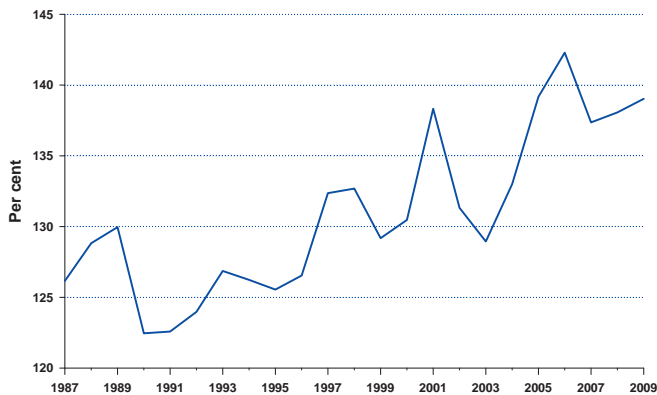
Source: Conference Board of Canada, Corporate Economics

Calgary / Canada: Total transfers from persons to government (1987 - 2009)



Source: Conference Board of Canada, Corporate Economics

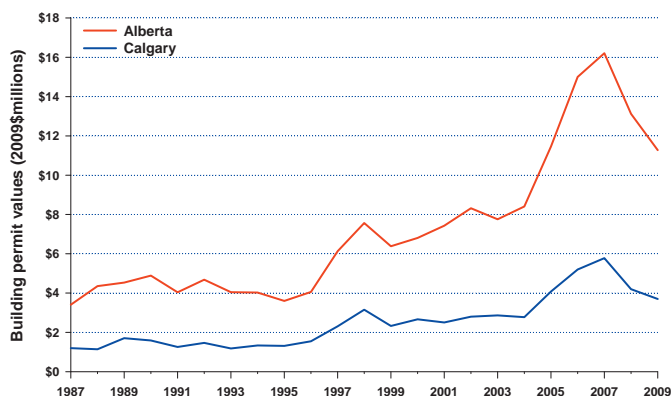
Calgary / Canada: Real personal disposable income per capita (1987 - 2009)



Source: Conference Board of Canada, Corporate Economics

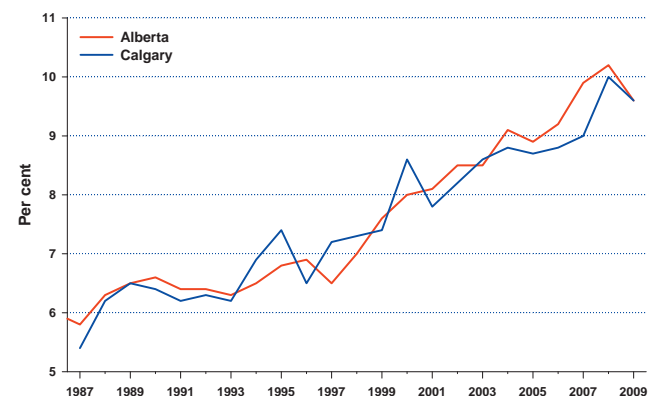
■ Construction in Alberta and Calgary

Alberta and Calgary: Real building permit values (1993 - 2009)



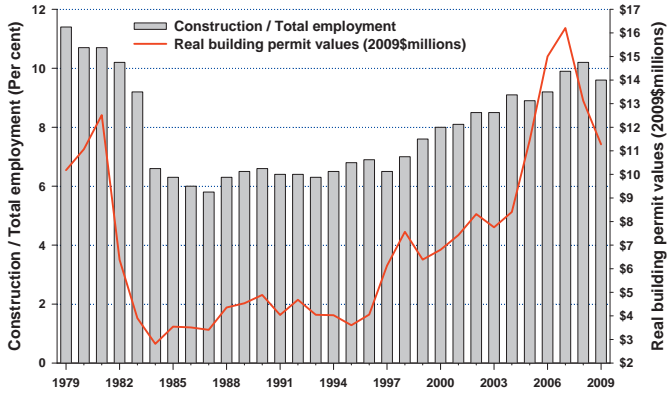
Source: Statistics Canada, Corporate Economics

Alberta and Calgary: Construction share of total employment (1987 - 2009)



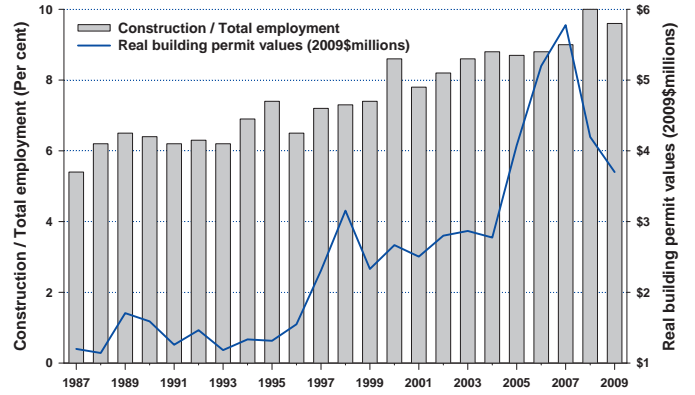
Source: Statistics Canada, Corporate Economics

Alberta: Construction / Total employment and real building permit values (1979 - 2009)



Source: Statistics Canada, Corporate Economics

Calgary: Construction / Total employment and real building permit values (1987 - 2009)



Source: Statistics Canada, Corporate Economics

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.

Clyde Pawluk

Senior Corporate Economist

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Clyde's current focus is on strategic business planning, alternative revenue streams and policy analysis. He has held various positions at The City including; Associate Economist, Regulatory Analyst, Student-at-Law, Energy Specialist and Senior Corporate Economist. Over the years he has represented The City at courts, government bodies, tribunals and before external stakeholders as analyst, prosecutor, counsel, negotiator, and as official representative of The Corporation. He has provided analysis to different City business units to assist them with their budgeting needs and has overseen many intervention matters and projects.

Stanley Kongnetiman

Corporate Economist

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Stanley's main responsibilities include analyzing and forecasting the Alberta economy and energy prices. He maintains the population projection model, contributes to the section's various publications such as Calgary's Quarterly Economic Outlook, and is currently working on the section's system dynamics model.

Jolanta Szewczyk

Corporate Economist

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Jolanta contributes to various business unit publications, including the Calgary and Region Socio-Economic Outlook covering analysis of the real estate (residential and non-residential) markets in Calgary and Alberta. Her other interest is modeling and environmental economics. She set up the methodology for carbon dioxide (CO₂) data collection for The City of Calgary and the Calgary Community. The methodology for The City of Calgary included an economic analysis of CO₂ Abatement Costs and this method was used to build an automated IT system for data collection for The City.

Ivy Zhang

Corporate Economist

Tel: 403.268.2005 or ivy.zhang@calgary.ca

Ivy's current focus is on economic forecasting and public policy analysis. She is responsible for the monthly Calgary's Labour Market Review and the quarterly Calgary's Economic Outlook. She also worked on several economic analysis and municipal finance projects relating to the impact of fiscal imbalance between the municipal and federal or provincial governments on The City of Calgary. Since joining The City of Calgary, Ivy has provided analyses to various business units in broad areas such as municipal finance, budgeting, regional planning, real estate markets monitoring, and energy markets monitoring.

Wendy Fan

Corporate Economist

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Wendy's current focus is public policy analysis, econometric estimation, and system dynamic modelling and simulation. Her responsibilities include monitoring and forecasting world economic growth, inflation fluctuation and global trade changes. Wendy maintains Calgary's Monthly Inflation Review. She also contributes to various municipal research projects including importance of cities, brownfield redevelopment, Calgary real estate market, population projection, diesel fuel price changes, and parking problem in Calgary.

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 construction inflation and current economic indicators, and maintains a number of business unit publications and presentations. She is excited about the upcoming projects which include economic modelling and analysis.

Glossary

AECO C

Is the central natural gas spot market price for Alberta, measured in CAN\$/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.

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, 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 rate

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

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 such as 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 area

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 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.

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 rooms, three-bedroom, two-bath home in 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 Services). 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 total labour force expressed as a percentage of the working age population.

Major advanced economies (G7)

Composed of seven countries: Canada, France, Germany, Italy, Japan, United Kingdom, 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.

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 aiming to foster prosperity and fight poverty through economic growth and financial stability.

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

Also Known as Texas Sweet Light, is a type of crude oil used as a benchmark in oil pricing and the underlying commodity of 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.

Working age population

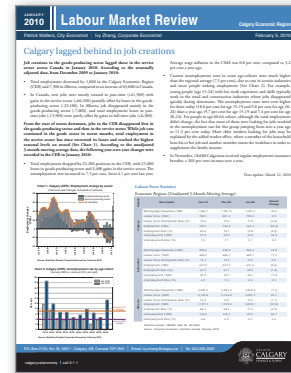
Corresponds to all persons aged 15 years and over, with exception of the following: persons living on Indian reserves, full time members of the regular armed forces, and persons living in institutions.

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

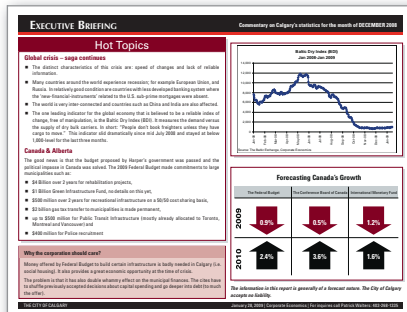
Monthly
Energy Markets and
the Economy



Monthly
Review of Economic Trends:
Labour Market Review



Commentary
Executive Briefing



Quarterly
Calgary's Quarterly Economic
Outlook



Who We Are

Over the past ten years Corporate Economics has researched dozens of economic topics and developed reliable methods of forecasting and analysis. Monitoring economic trends allows us to develop unique insights on how external events are impacting the local economy and the Municipal Corporation. We provide services in four areas: forecasting, information provision, consulting and policy analysis.

Corporate Research Analyst: Estella Scruggs

The City of Calgary provides this information in good faith. However, the aforementioned organization makes no representation, warranty or condition, statutory express or implied, takes no responsibility for any errors and omissions which may contained herein and accepts no liability for any loss arising from any use or reliance on this report.

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

For more information, please contact:

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