



ONTARIO CEMENT MARKET OVERVIEW

ECONOMIC GROWTH, CONSTRUCTION & CEMENT DEMAND
May, 2016

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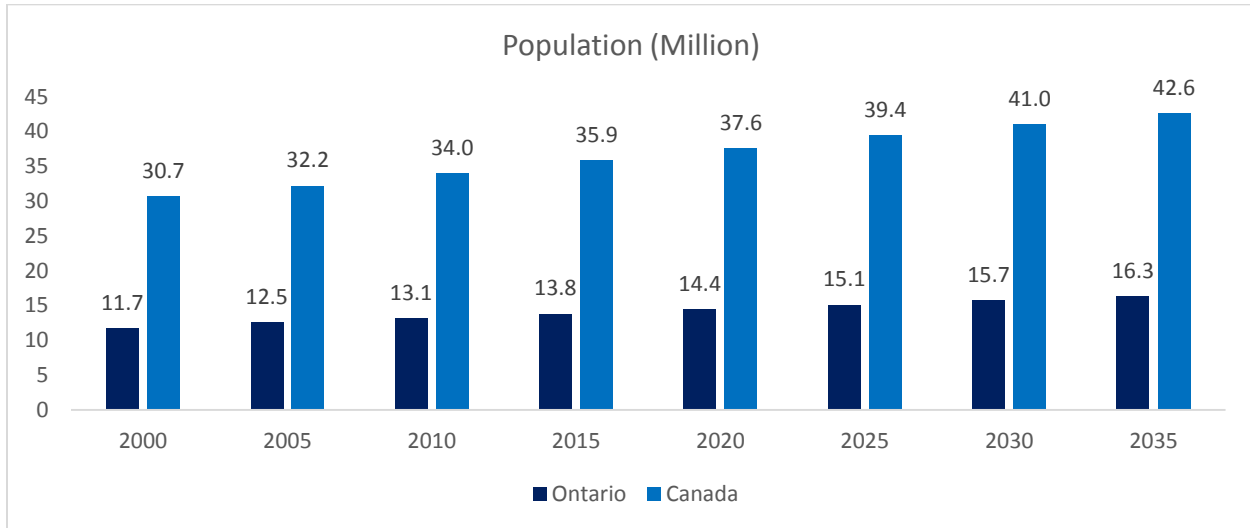
1. Overview & Scope

This report will provide an overview of the current state of the cement industry in Ontario, Canada and provide an outlook for the industry in the near future. Both historical and future economic drivers will be examined to provide an analysis. The cement markets and key economic drivers in the US states of Vermont, New York, Pennsylvania, Ohio and Michigan is considered, since ~30% of the cement produced in Ontario is exported to these markets. The Cement Industry uses various public economic indicators that include but are not limited to construction spending, total construction spending and housing starts including interest rate trends. The most important indicator is population growth as this is directly correlated with cement demand. These factors will be reviewed and future trends will be analyzed to provide an option on economic outlook of the cement industry in the near future.

2. Ontario Economic Trends

The next 5 year outlook for the Ontario economy looks positive after a slow recovery post the 2008-09 crisis. The growth will be driven by increase in household spending, increased exports to the US driven mainly by the lower Canadian dollar, infrastructure spending and lower oil prices, Ontario being a net importer of oil. This is a contrast from the previous 5 year period, where oil prices were high and strong Canadian dollar made cement exports less competitive. During the same time period the US economy especially in the states south of the Great Lakes was coming out of recession and construction demand was adversely affected. One key measure for the cement industry is per capita cement consumption. As a region's population increases or declines, there is a direct effect on cement consumption.

a. Population Trend¹

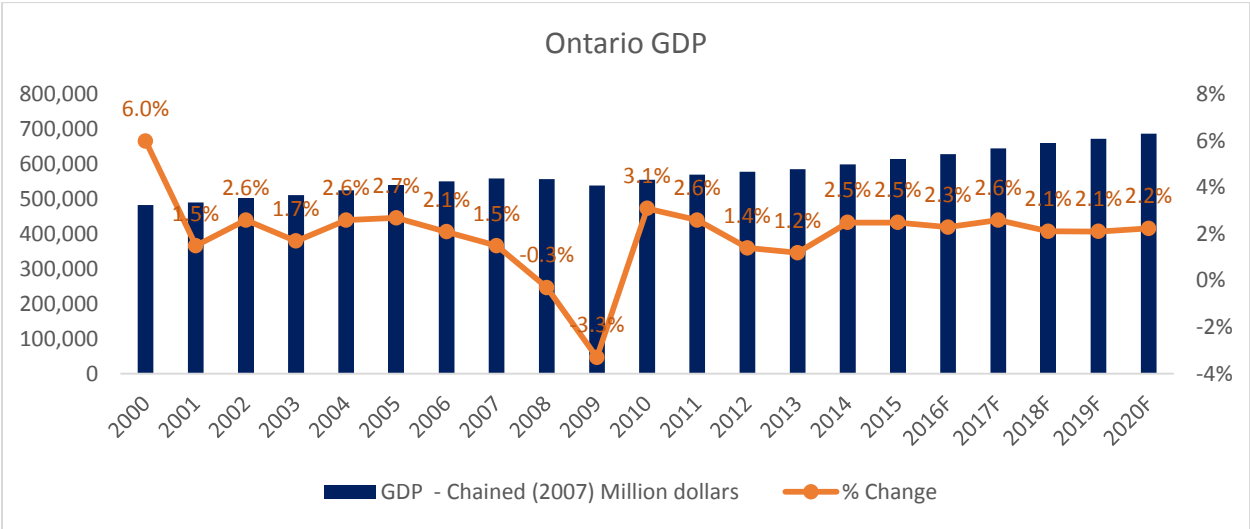


CAGR (%)	Canada	Ontario
2005-2015	1.1%	1.0%
2015-2020	1.0%	0.9%
2015-2025	0.9%	0.9%
2015-2030	0.9%	0.9%

¹ Population data is from Statistics Canada website

The population in Ontario has grown steadily over the past 10 years at an average annual rate of 1% which is in line with the national growth rate, and will continue see similar growth rate in the next 15 years. Ontario has 38% of the Canadian population and this share is expected to remain the same in the next 20 years. The statistics do not take into consideration the resettlement of immigrants to the Greater Toronto Area. It is seen that even after arriving and settling in different parts of the country, immigrants tend to resettle in the Toronto area after some time. This trend has resulted in growing demand for residential property, increased consumer spending and business activity in the region and is expected to continue over the next several years.

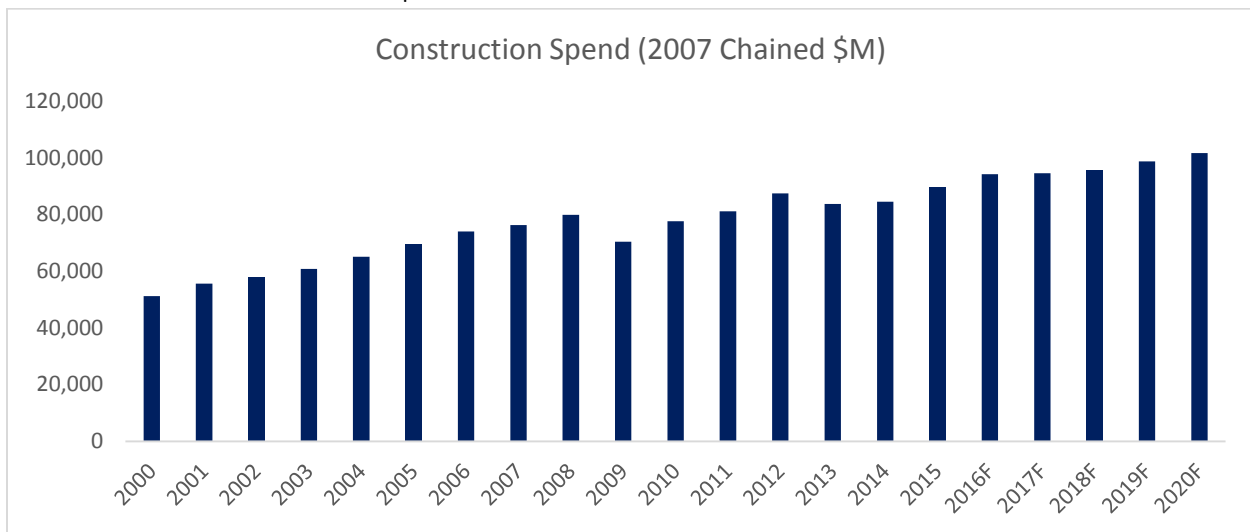
b. GDP²



The Ontario GDP has grown at a yearly average of 1.6% for the past 15 years which is in line with the national average of 1.9%. There has been steady recovery in the economy post the 2008-09 crisis and the current GDP levels are higher than the pre-crisis levels. In the next 5 years the Ontario GDP is expected to grow at an annual average of 2.3% which is higher than the national average of 2.1%. This growth is mainly driven by exports to the US, higher consumer spending and infrastructure spending.

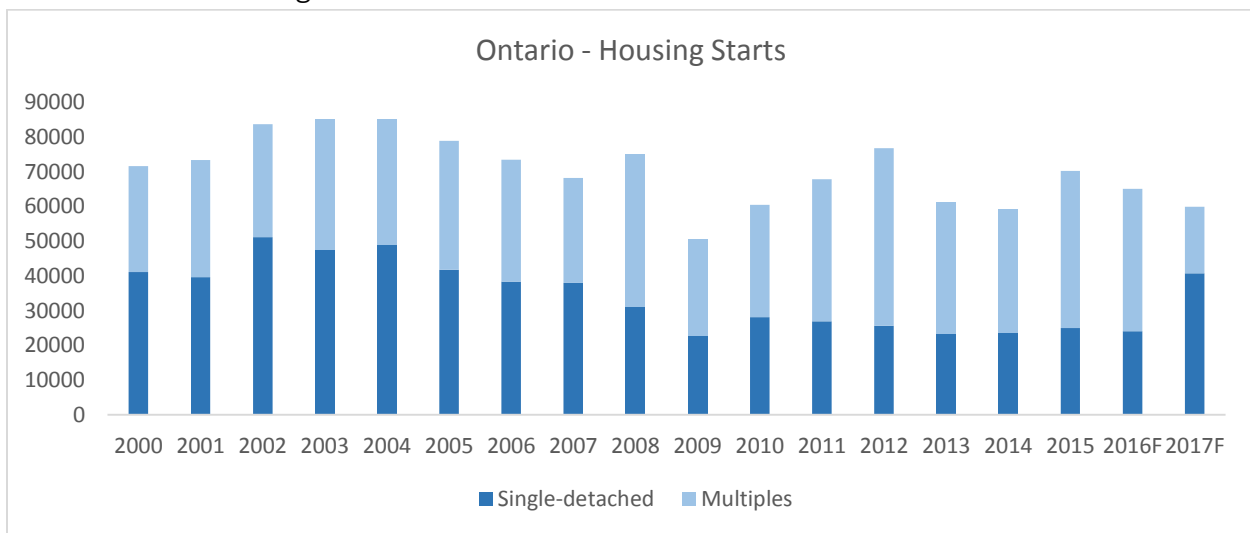
² GDP historical data is from Statistics Canada and forecast data is from RBC Economic forecast Report – March 2016 and CAC Market Intelligence report – spring 2016

c. Construction Spend³



The construction spending in Ontario has grown at a rate of 3.8% on an annual basis for the past 15 year and expected to grow at a rate of 2.6% in the next 5 years. This is higher than the national average growth rate of 1.7%. This growth is mainly driven by the spending in the non-residential segment (CAGR – 4.1%) followed by moderate growth in residential (2.1%) and government segment (2.2%). Currently Ontario accounts for 31% of the total national construction spend and this number is expected to continue to grow over the next several years. Construction spending is correlated to population growth.

d. Housing Starts⁴



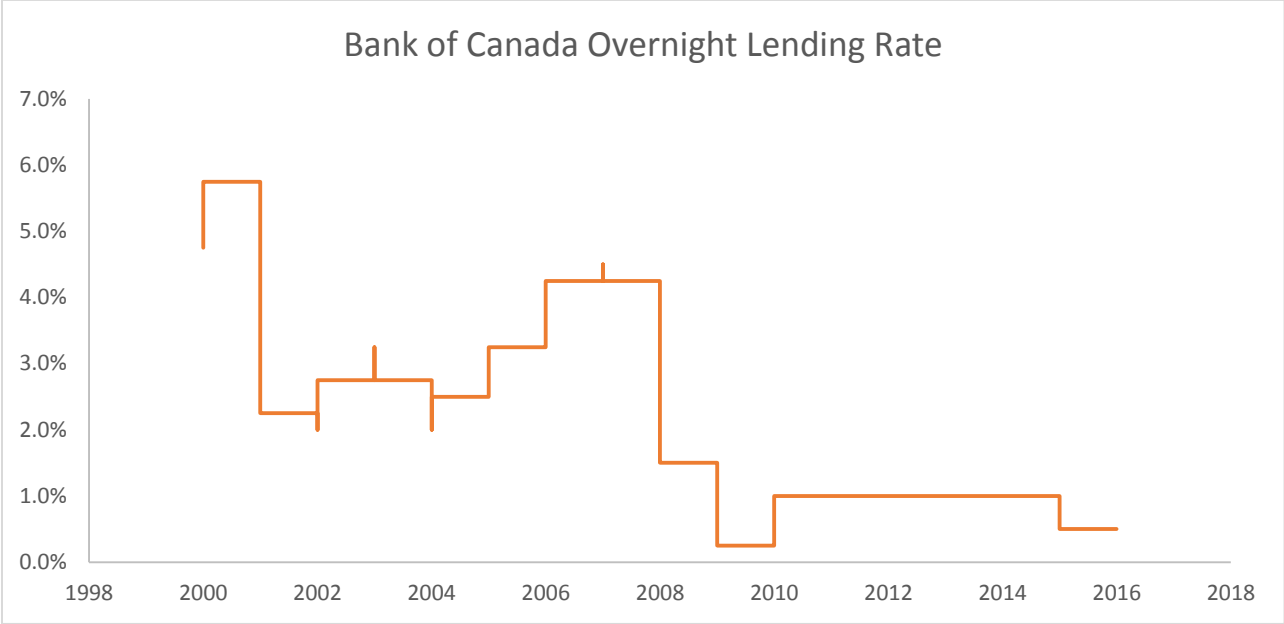
Housing starts have increased since the 2008-09 crisis and growing moderately but still below the pre-crisis levels. It is expected to pick-up speed in the next 3-5 years horizon driven by increase in employment opportunities, investments in manufacturing, growth in exports and lower energy prices.

³ 2012-2013 Construction spend numbers from CAC Market Intelligence report – spring 2016. 2000-2011 construction spend numbers are from PCA 2013 Yearbook

⁴ Housing Starts historical data is from Statistics Canada (sourced from CMHC) and forecast data is from CMHC fourth quarter report

There is a shift in larger urban areas such as Toronto, Vaughan, Kitchener and Ottawa to multifamily developments. This type of housing has higher intensity of cement use as compared to single family housing.

e. Interest Rate⁵

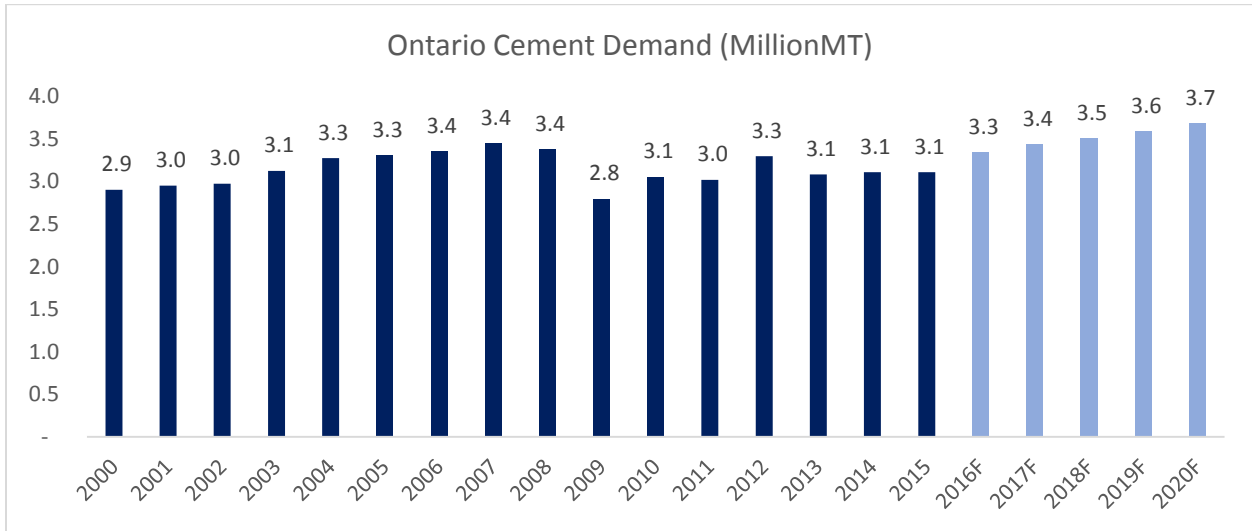


The interest rate environment has been at historical lows post the financial crisis in 2008-09, which has stimulated business investments and growth in residential construction spending. The interest rates are expected to increase over time, as there are strong signs of economic recovery, but the upward trend will be at a much slower pace.

⁵ Bloomberg

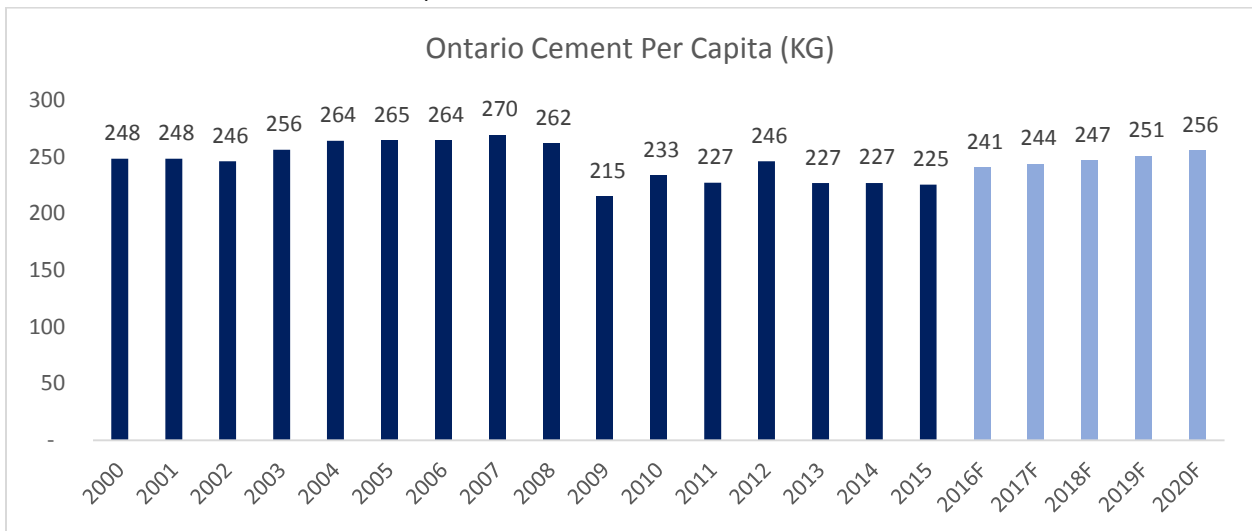
3. Ontario Cement Forecast

a. Cement Demand⁶



Cement demand in Ontario has picked up since the economic downturn in 2008-09 and close to the pre-crisis level. Cement demand has grown moderately at an annual average of 0.5% in the past 15 years and expected to grow at an annual rate of 3.4% in the next 5 years which is higher compared to the national average of 1.8%. The growth is mainly driven by increase in the non-residential construction spending and exports to the US.

b. Cement Intensity



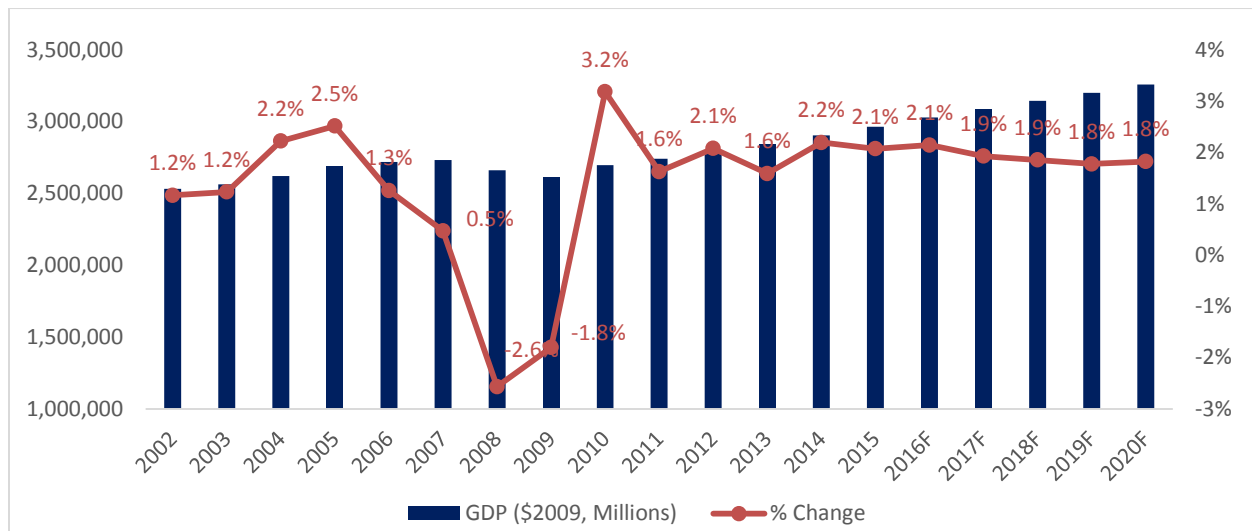
Cement per capita is still lower compared to the pre-crisis levels of 2008-09 and expected to slowly pick-up and get to historical levels in the next 5 years. The overall consumption is reflective of a mature market with levels less than 300kg/person. However, as the rebuilding of infrastructure and constant influx of immigrants to the province, the per capita consumption is expected to remain constant.

⁶ 2009-2020F Cement demand numbers are from CAC – Market Intelligence spring 2016 report. 2000-2008 is from PCA 2013 year book

4. US Target Market⁷ – Economic Trends

The US has a significant effect on the Ontario cement industry. Over 30% of production is exported to the Great Lakes based States. The close proximity to water transport allows for competitive exports from Ontario to the bordering US States. The Ontario cement manufacturer’s product meets the ASTM and ASTHTO specifications required by the various Department of Transportation. The economic activity coupled with the exchange rate during the last few years, slowed exports of product. However with both factors improving, exports are anticipated to increase in subsequent years.

a. GDP⁸

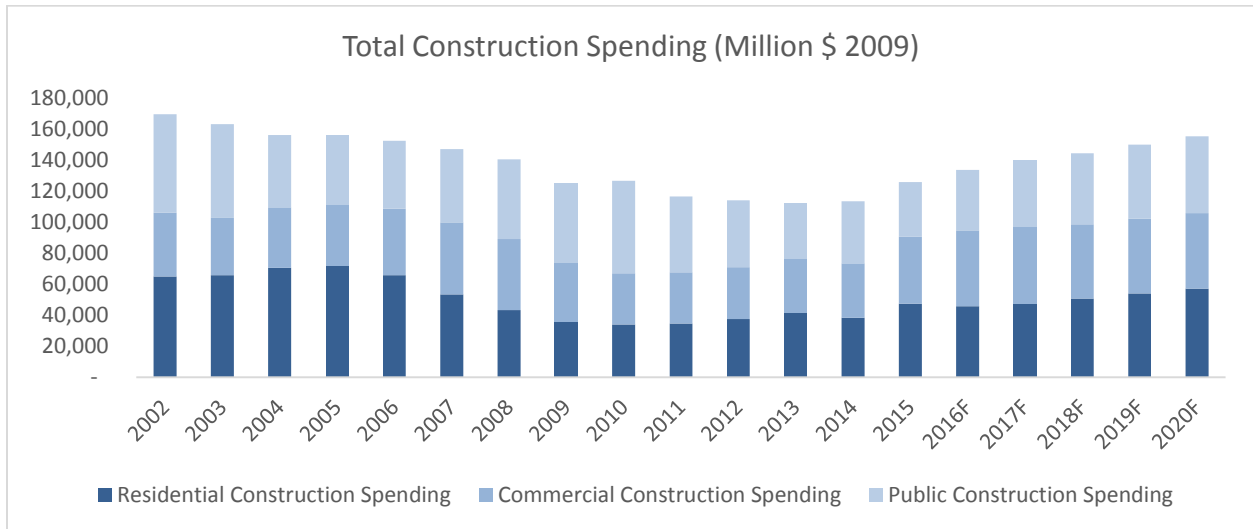


The GDP in the US target market has grown at an average rate of 1.2% for the past 15 years and expected to grow at a rate of 1.9% in the next 5 years which is in line with the US national growth rate of 2.2%. The economy has recovered slowly from the downturn of 2008-09 and expected to pick up speed in the next 5 years.

⁷ US states of New Hampshire, New York, Pennsylvania, Ohio and Michigan which is the primary target market for Ontario cement exports

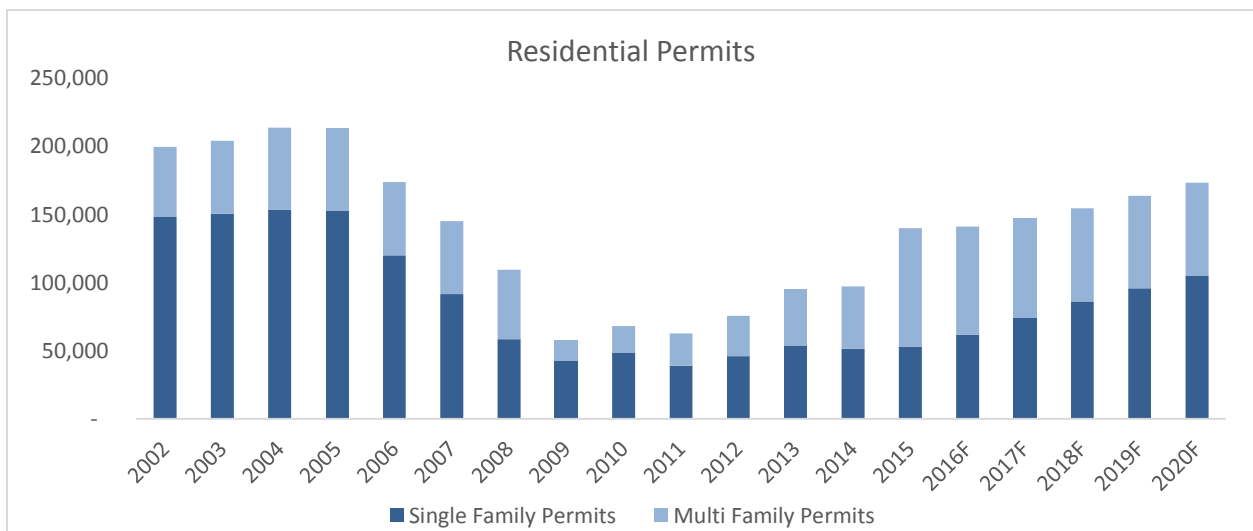
⁸ US GDP data is from PCA Winter 2015-16 State Forecasts

b. Construction Spending⁹



The construction spending in the identified States, dropped by annual rate 2.1% in the last 15 years driven mainly by public construction spending (-3.4%). But the trend has reversed in 2015 and expected to grow at a rate of 4.3% in the next 5 years driven mainly by public spending (6.9%) followed by residential segment (3.8%) and commercial segment (2.5%). The spending is expected to get to the pre-financial crisis levels in the next 5 years.

c. Residential Starts¹⁰

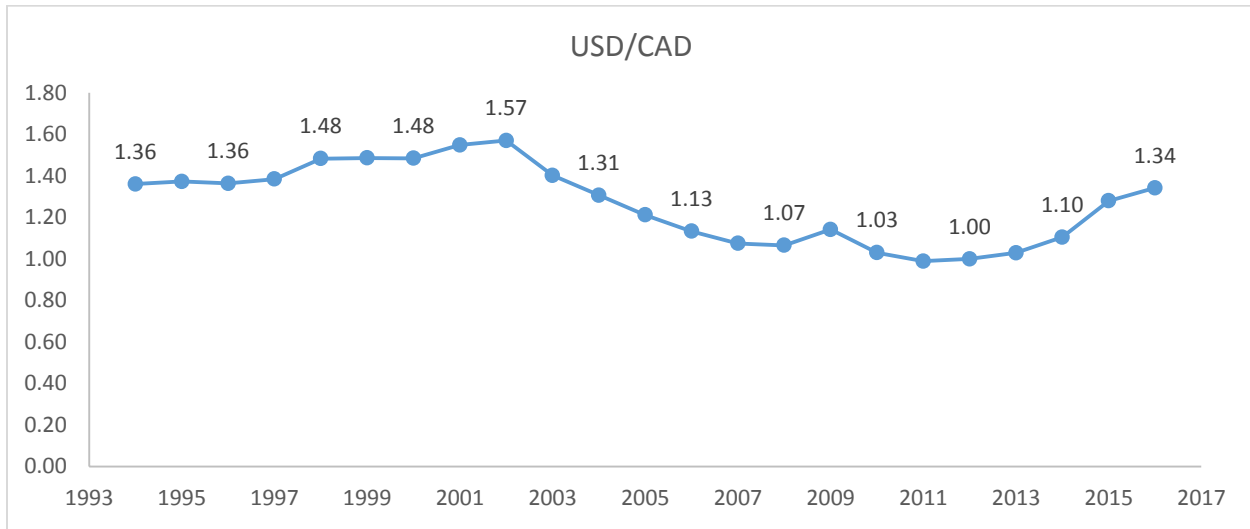


Housing starts has picked up from the lows of 2008-09 and has grown at an annual rate of 15.5% but still below the pre-crisis highs. The growth has been mainly driven by multi-family residential segment which grew at a rate of 34.7% annually. In the next 5 years the housing starts are expected to grow at a rate of 4.4% annually mainly driven by single-family segment (14.7%).

⁹ US Construction Spending is from PCA Winter 2015-16 State Forecasts

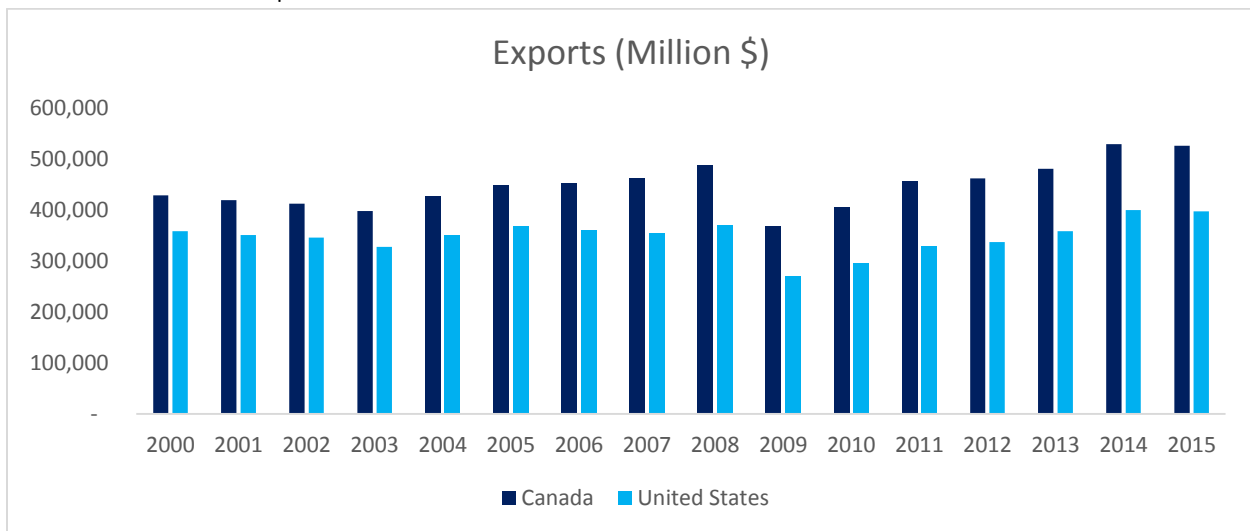
¹⁰ US Residential Starts is from PCA Winter 2015-16 State Forecasts

d. USD-CAD Exchange Rate¹¹



The Canadian dollar has depreciated against the US dollar and is currently close to the historic lows which have made the goods manufactured in Canada competitive in the US market. This has fueled the growth of exports into the US markets.

e. US Exports¹²



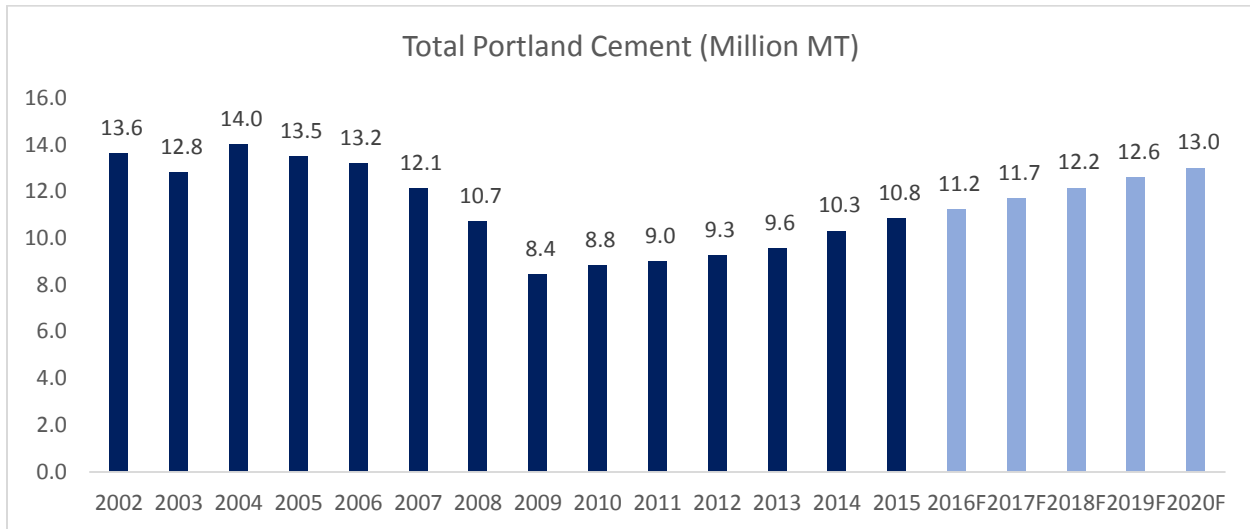
Exports from Canada have grown at an annual rate of 5.4% for the past 5 years and exports to US have grown at the rate of 6.1%. The exports in 2015 have surpassed the pre-crisis levels. US accounts for 76% of the total exports out of Canada.

5. US Export Market - Cement Forecast

¹¹ USD-CAD historical exchange data is from IMF database

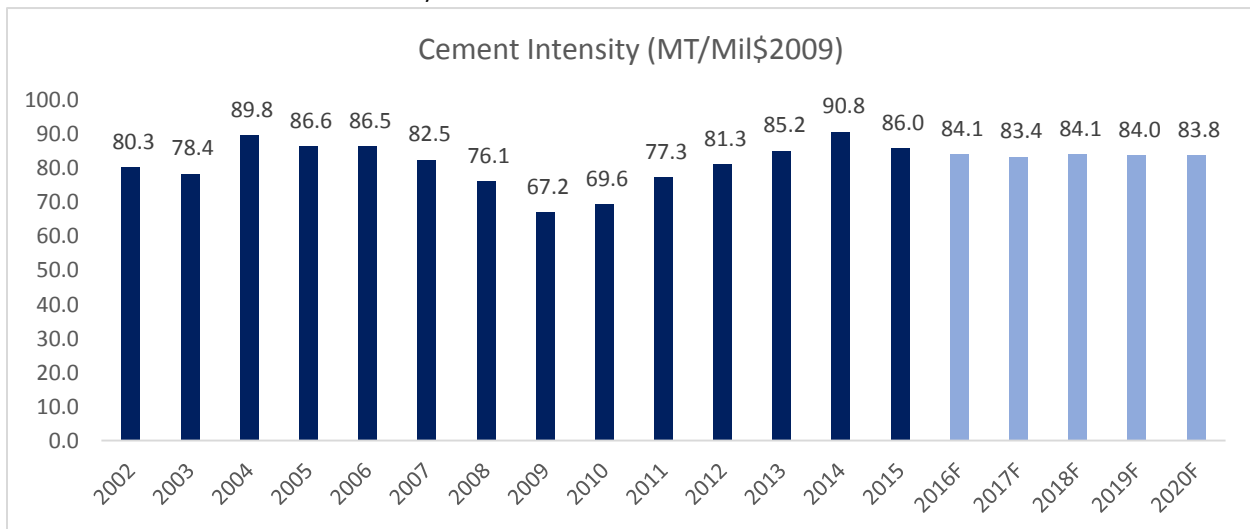
¹² Exports data are from Statistics Canada website. The data set is for total Canada exports and total exports from Canada to US

a. Cement Demand¹³



Cement demand in the US target market has grown steadily post 2008-09 and is expected to reach the pre-crisis level in the next 5 years. The demand had grown at an annual rate of 4.2% in the last 5 years and is expected to continue a similar trend with an annual rate of 3.7% in the next 5 years. The growth is mainly driven by uptick in the general economic environment and increased spending in the residential segment and public infrastructure.

b. Cement Intensity¹⁴



There has been a rapid growth in the intensity of cement consumption post 2008-09 and it is already above the pre-crisis highs. This is a key reason for growth in the cement demand even though the construction spending grew moderately post 2008-09. The current levels of cement intensity are expected to remain stable for the next 5 years.

¹³ US Cement Demand data is from PCA Winter 2015-16 State Forecasts

¹⁴ US Cement Intensity data is from PCA Winter 2015-16 State Forecasts

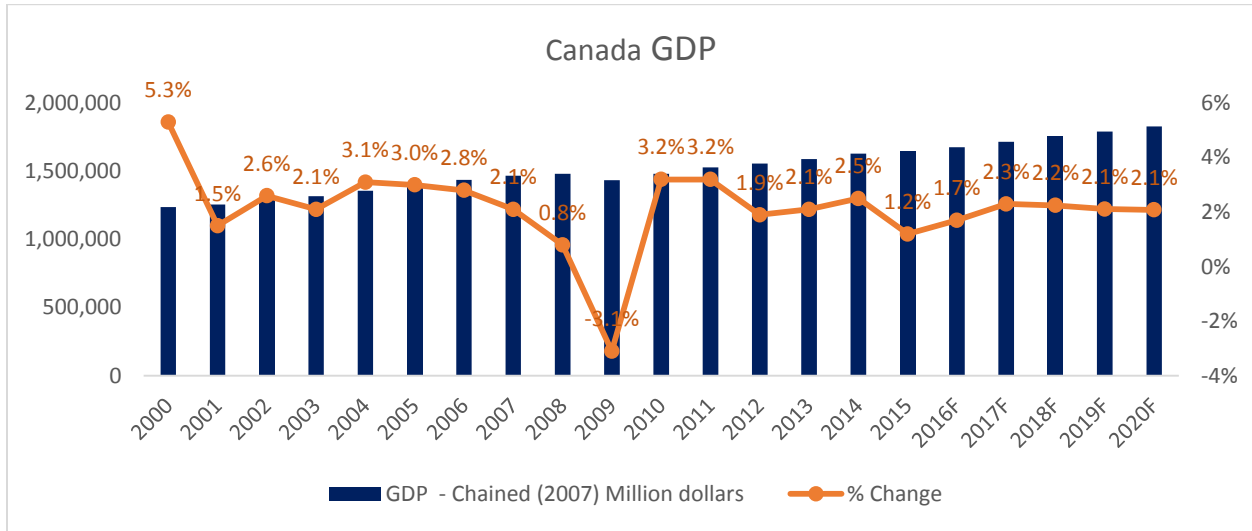
6. Conclusion

The next 5 year outlook for the Ontario produced cement remains very positive mainly driven by

- i. Moderate to high economic growth in Ontario driven by improvement in the general business environment, increased consumer spending, lower unemployment rate, population growth, and increased construction spending mainly on the infrastructure segment and in the residential segment
- ii. The cement exports to the neighboring US states are expected to be strong due to general upbeat in the macro-economic conditions in the target US states driven mainly by construction spending (public segment and residential segment).
- iii. The US/CAD exchange rate is back to historical rates, making cement exports from Ontario to the US competitive to alternatives.

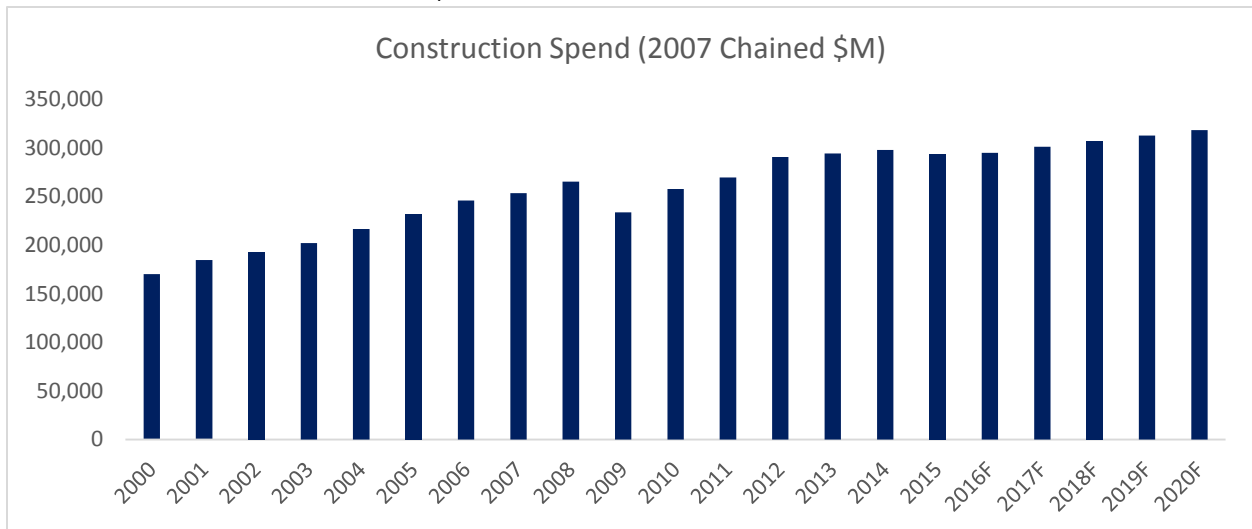
Appendix

1. Canada - GDP¹⁵



CAGR (%)	Canada
2000-2015	1.9%
2015-2020	2.1%

2. Canada - Construction Spend¹⁶

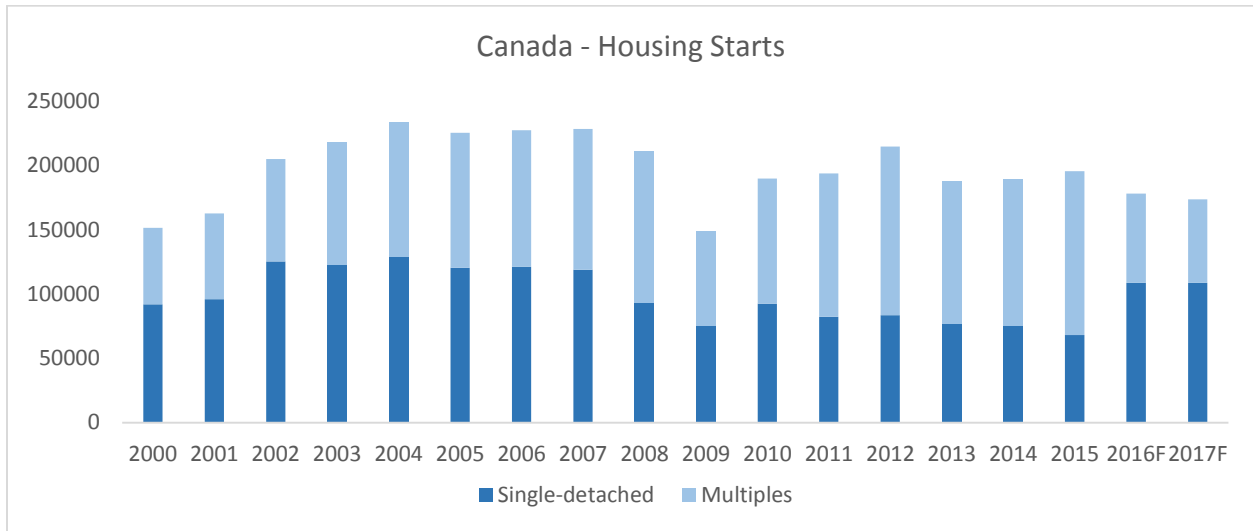


CAGR (%)	Canada
2000-2015	3.7%
2015-2020	1.7%

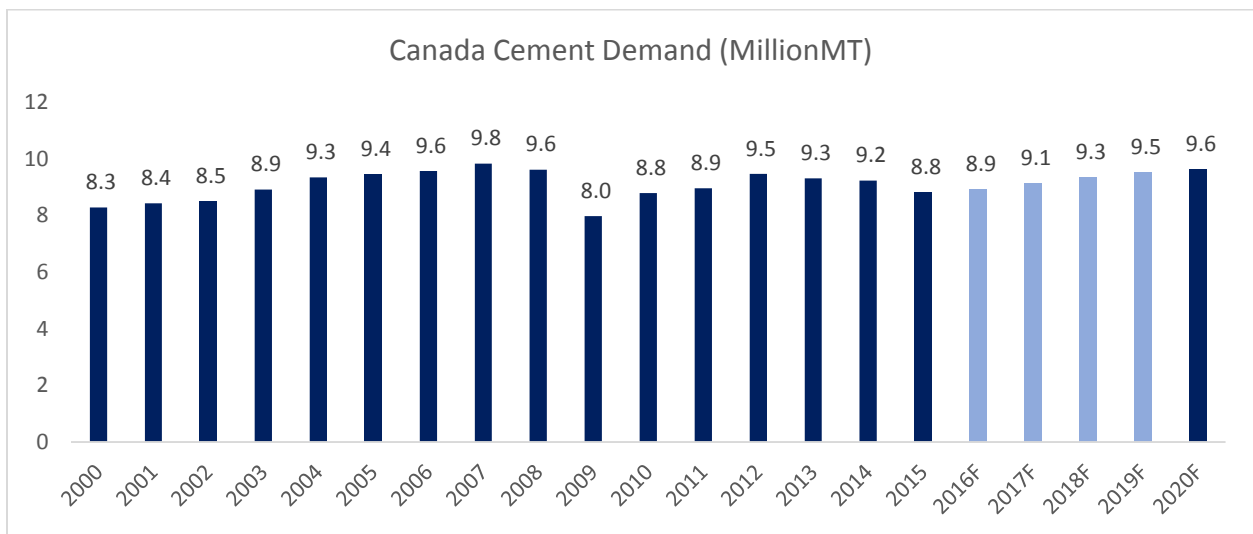
¹⁵ GDP historical data is from Statistics Canada and forecast data is from RBC Economic forecast Report – March 2016 and CAC Market Intelligence report – spring 2016

¹⁶ 2012-2013 Construction spend numbers from CAC Market Intelligence report – spring 2016. 2000-2011 construction spend numbers are from PCA 2013 Yearbook

3. Canada - Housing Starts¹⁷



4. Canada - Cement Demand¹⁸



CAGR (%)	Canada
2000-2015	0.4%
2015-2020	1.8%

¹⁷ Housing Starts historical data is from Statistics Canada (sourced from CMHC) and forecast data is from CMHC fourth quarter report

¹⁸ 2009-2020F Cement demand numbers are from CAC – Market Intelligence spring 2016 report. 2000-2008 is from PCA 2013 year book