

Economic Trends

The economic recovery in Alberta is gradually taking root as most sectors are stabilizing or improving. Solid job increases and rising consumer optimism have contributed to a rebound in retail sales. The recovery in the manufacturing sector is also becoming more broad-based, while non-residential building investment appears to have turned a corner following two years of weakness. This month's InFocus introduces the Alberta Activity Index (AAX) which provides a timely estimate of economic activity in the province.

Alberta Household Sector

Elevated unemployment despite job gains

Employment in the province continues to pick up. After increasing in seven of the last eight months, employment advanced in March 2017 with its strongest monthly increase since February 2014. Alberta has now recovered nearly two-thirds of the job losses incurred during the recession (peak to trough). However, unemployment in the province remains high as Albertans continue to join the labour force. The participation rate surged to an 18-month high in March 2017, which kept the unemployment rate elevated at 8.4%. With the job market

Key Indicators

Seasonally adjusted unless otherwise indicated.

Indicator	Latest Month	Value	Change year-over-year (y/y)
Employment (thousands)	March	2,289	-0.1%
Unemployment Rate	March	8.4%	+1.2 p.p.
CPI Inflation (unadjusted)	March	1.3%	-0.2 p.p.
Retail Sales	February	\$6.6 B	+6.3%
Housing Starts (annualized)	March	34,960	+58.4%
Rigs Drilling (unadjusted)	April	85	+193.1%
Manufacturing Shipments	February	\$5.7 B	+16.4%
Exports (unadjusted)	February	\$8.0 B	+36.9%

Source: Statistics Canada, CAODC, CMHC. p.p.= percentage points.

improving, the number of EI claims has come down. While this has contributed to some easing in the number of people receiving regular EI benefits, levels remain elevated.

Retail sales recovering

Retail sales have accelerated in the province, but gains have been confined to a few categories. Retail sales posted the strongest year-over-year (y/y) growth among the provinces in February (6.3%), as higher prices at the pump fueled

gasoline station sales and motor vehicle sales turned around (Chart 1). Excluding gasoline and auto, retail sales were down 3.2% y/y, as spending on other durables and non-durables remained weak. With consumer confidence rising, retail sales have now regained most of the losses incurred during the downturn.

Inflation recedes from recent high

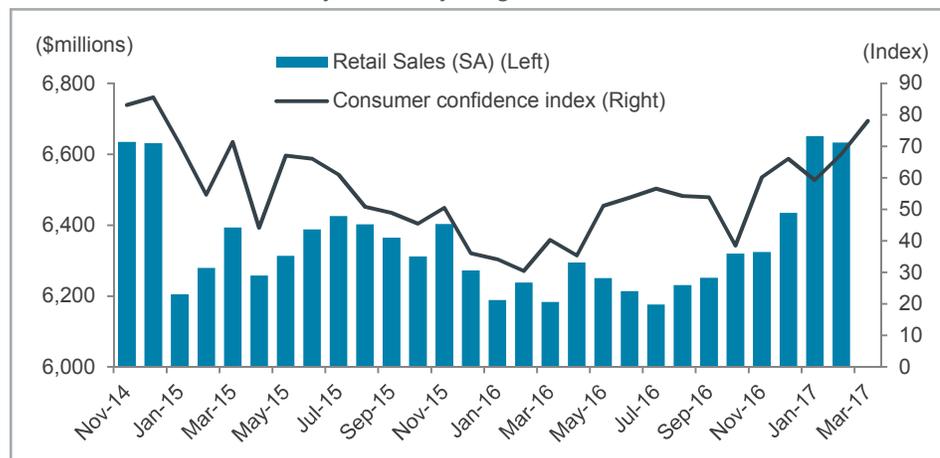
Alberta's consumer price inflation eased in the past two months after accelerating at the beginning of the year. The consumer price index (CPI) rose 1.3% y/y in March, down from 2.5% y/y in January. After jumping in January, the growth in energy prices slowed, which dampened inflation. Meanwhile, service inflation accelerated from under 1% y/y in August 2016 to 1.7% y/y in March 2017.

Multi-units drive housing starts

Housing starts in the province have surged after a slow start to the year. The reversal from January's low was led by a spike in multi-unit starts. The activity was the strongest in Calgary, where building permits surged last year ahead of building code changes that took effect in November 2016. With single family starts remaining stable, province-wide housing starts in March hit the highest level in sixteen months, at almost 35,000

Chart 1: Retail sales rebound with rising consumer confidence

Consumer confidence and year-over-year growth in retail sales



Source: Statistics Canada and Conference Board of Canada

units (annualized). With the increase in starts, however, the number of vacant units continued to swell and remains at record levels in Edmonton and Calgary.

Alberta Business Sector

Oil prices volatile

Oil prices have swung in the past two months as markets weigh rising US production and inventories against geopolitical uncertainties and prospects of continuing supply cuts from OPEC. Oil prices maintained momentum heading into 2017. However, they slipped to below US\$50/bbl in mid-March. After rebounding to over US\$53/bbl in early April on geopolitical uncertainties, prices fell back again to under US\$50/bbl in the last week of April over lingering concerns about high global inventories and rising US production. The weaker Canadian dollar partially offset the impact of lower oil prices on producers' revenues. The Loonie slipped against the US dollar in April on weaker oil prices, recent US import duties on Canadian softwood lumber and trade-related issues. It was trading around 73.5 US cents towards the end of April, down from an average of 75.5 US cents in the first quarter of 2017.

Turnaround in conventional production

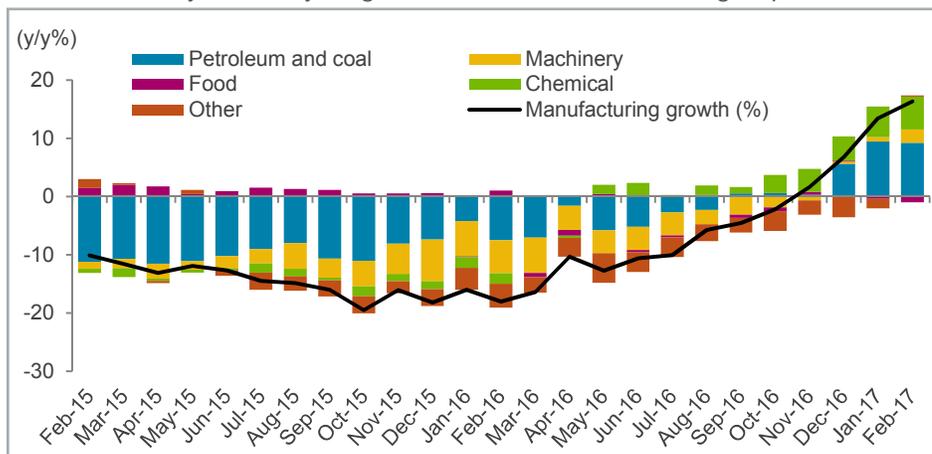
Conventional oil production has increased along with the pickup in drilling activity. After bottoming out in October 2016, conventional production grew for the fourth month in a row in February. This was on the back of a large increase in rigs drilling in late 2016 and early 2017. The recovery in conventional oil combined with continued strength in non-conventional output lifted Alberta's crude oil production to 3.3 million barrels per day in February, a 10% y/y increase.

Broad-based recovery in manufacturing

Manufacturing shipments continue to pick up with most sectors joining the recovery. Shipments grew for the fourth consecutive month in February, reaching the highest level since mid-2015. Although the improvement was mainly driven by higher prices and volumes of petroleum and coal products, other sectors gained momentum (Chart 2). Increased petrochemical production pushed shipments of chemical products to its highest level in almost four years. Rising drilling activity has also supported sales of machinery and equipment, which were more than 50% above the trough in March 2016. Meanwhile, weakness in primary metals and non-metallic mineral products continued to moderate.

Chart 2: Broad-based recovery in manufacturing shipments

Contribution to year-over-year growth in Alberta manufacturing shipments



Source: Statistics Canada

Energy sector drives exports

Higher oil prices and production are fueling Alberta's exports. They grew almost 37% y/y in February, mainly due to energy exports, which were up almost 60% y/y. Year-over-year growth was also supported by stronger exports of forestry and agricultural products. Other sectors that were largely affected by the downturn, including machinery and equipment, and metal ores, continued to stabilize. As of February, overall exports recovered about half of the losses incurred during the downturn.

Building investment turns a corner

Investment in non-residential building construction improved in the first quarter of 2017, reflecting broad-based increases. This follows seven quarters of consecutive declines. Investment in commercial and industrial projects saw an uptick for the first time since early 2015, while institutional and governmental spending remained strong.

Outside Alberta

Global growth gains momentum

The International Monetary Fund (IMF) expects global economic growth to accelerate from 3.1% in 2016 to 3.5% in 2017 and 3.6% in 2018. The improved outlook is due to better-than-expected economic growth in Europe and Asia as well as continuing expectation for higher US growth this year as consumer confidence, investment, manufacturing, and trade have all picked up. In line with improving global economic activity, China reported higher growth in the first quarter of 2017. Real GDP grew by 6.9% y/y, the fastest pace since the third quarter of 2015.

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inFocus

Introducing the Alberta Activity Index

This inFocus introduces the Alberta Activity Index (AAX), a monthly measure of economic activity in Alberta. The AAX is strongly correlated with real GDP growth and provides a snapshot of economic activity in the province. The full index going back to 1981 can be found on our website (www.finance.alberta.ca/aboutalberta/archive-alberta-activity-index.html).

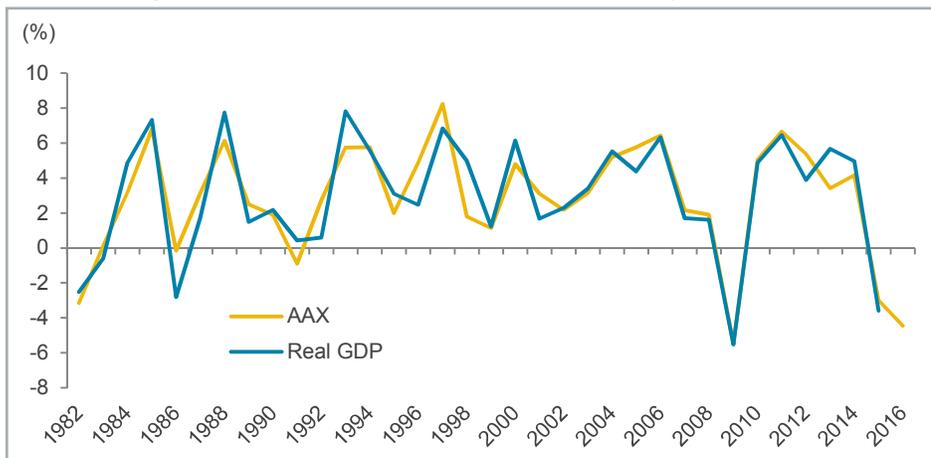
A more timely estimate

Real gross domestic product (GDP) is the most comprehensive measure of economic activity. However, at the provincial level, estimates of real GDP are released with a significant lag. For example, estimates for 2016 will not be available until the preliminary Provincial Economic Accounts are released in May. Moreover, estimates

are only available at the annual frequency, which can mask important in-year variation.

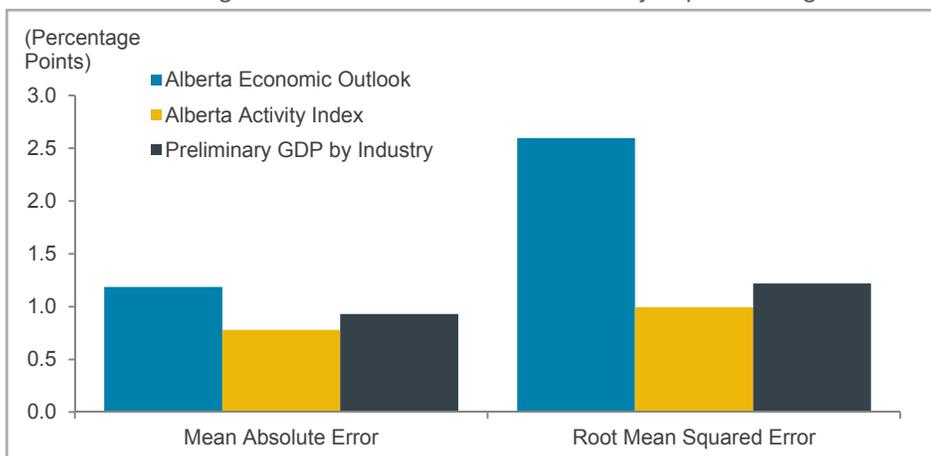
To bridge this gap, Alberta Treasury Board and Finance has developed the Alberta Activity Index (AAX). The index is similar to the Index of Provincial Economic Momentum published by National Bank, but differs somewhat in terms of both the choice of indicators and methodology.

Chart 1. The Alberta Activity Index is highly correlated with real GDP
Annual change of Alberta real GDP and the Alberta Activity Index



Source: Statistics Canada and Treasury Board and Finance

Chart 2. The AAX is a better predictor of prior year growth (1982-2015)
Measures of average error relative to actual real GDP by expenditure growth



Source: Statistics Canada and Treasury Board and Finance

The AAX is based on a weighted average of nine different monthly indicators, each measuring an important aspect of macroeconomic activity. These include employment and average weekly earnings for the labour market; retail trade and housing starts for household spending; wholesale trade, manufacturing and new truck sales for general business activity; and the number of rigs drilling and oil production for the energy sector. The resulting index combines these measures into a single summary figure. A more technical description of how the index is constructed can be found in the box on the following page.

Tracking GDP growth

Unlike real GDP, the Alberta activity index is not a comprehensive measure of every sector of the economy. However, the AAX tracks closely with real GDP growth (Chart 1). The correlation coefficient over 1982 to 2015 is strong at 0.91, with 1 representing perfect correlation.

Improving accuracy

One of the objectives in developing the AAX was to create a proxy for real GDP growth that could be used to improve Treasury Board and Finance's prior-year Budget estimates. This estimate is usually published early in the year after most of the monthly data are available, but before the release of the Provincial Economic Accounts (PEA). These preliminary PEA estimates often undergo substantial revisions in November with the release of the Income and Expenditure Accounts.

On average since 2001, the AAX has been at least as good at predicting the final real GDP by expenditure growth rate as the preliminary PEA estimates. Indeed, the average error was slightly lower for the AAX, though by a statistically insignificant margin (Chart 2). Despite the improvement, the AAX is not meant to be a replacement for official real GDP estimates or model-based forecasts, but rather a complement; another tool to help better understand the economy through the year.

Activity during the most recent downturn

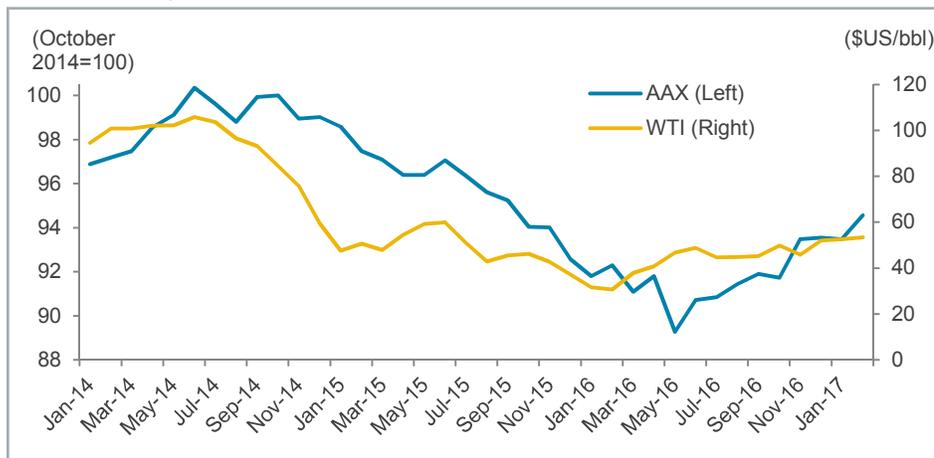
The monthly activity index reveals aspects of the 2015-16 recession that are masked by the annual numbers. The recession was instigated by the precipitous decline in oil prices that began in June 2014 and accelerated towards the end of the year (Chart 3). Activity started to fall in response to oil prices around October 2014 and continued to decline until it reached bottom in May 2016. Activity in May was weighed down because of disruptions to oil production and other economic activities as a result of the Fort McMurray wildfire. The second half of 2016 saw a marked improvement in activity, which in February was up 5.9% from the May trough. The response from the energy, business and household sector was almost immediate. The labour

market responded with a substantial lag and did not start subtracting from growth until late 2015 (Chart 4). A similar pattern played out during the recovery in the second half of 2016, with other sectors recovering before the labour market indicators.

Conclusion

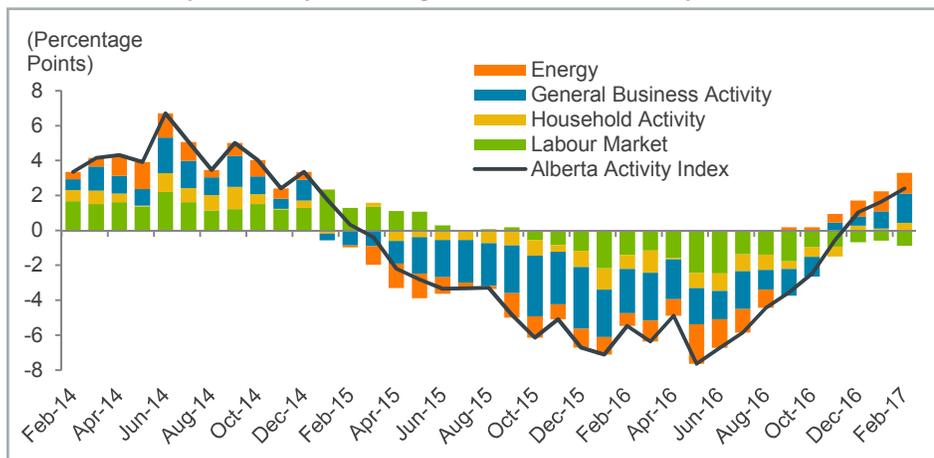
The Alberta activity index provides a summary of economic activity in the province. Though less comprehensive than real GDP estimates, it is more timely and can provide useful insight into the evolution of the economy throughout the year. The index can be found on our website and will be updated monthly coinciding with the release of the *Economic Trends*.

Chart 3. Activity driven lower by falling oil prices
Alberta Activity Index and WTI



Source: Treasury Board and Finance and Haver Analytics

Chart 4. Labour market responded to the downturn with a lag
Contribution to year-over-year change in the Alberta Activity Index



Source: Treasury Board and Finance

Box 1. Technical Details

The 9 indicators were selected to capture important sources of economic activity in the province as broadly as possible. Indicators that display a seasonal pattern have been seasonally adjusted using the X-12 ARIMA method. All indicators that are expressed in dollar terms have been deflated by Alberta CPI. In some instances, series that do not have coverage going back to 1981 have been extended backwards by splicing with related series.

Following these adjustments the index is constructed by taking a weighted average of the logarithmic growth rates of each series. The weights for the growth rates are calculated using the inverse of the standard deviation of the respective series and scaled to sum to one. Since the raw index systematically underpredicts the real GDP growth rate, a bias adjustment is included. For the forecast error comparisons above, an alternative bias adjustment is calculated over a subsample ending in 1999 so as not to include information that would not have been available at the time of the original estimates.

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