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- ▶ Launches software engineering apprenticeship program

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- ▶ Named to Dow Jones Sustainability Index
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CANADA SNAPSHOT

Economy

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MARKET TRENDS

Construction Labor Shortage

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Home Depot's Path to Success

Who's Liable for Defective Goods Sold Online?

Autodesk University User Conference

Bosch | Dremel

RotoZip | Vermont American

CST/berger | freud | Sia

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US ECONOMY

Exchange Rates September 30, 2019

Euro	1 Euro = \$1.091	\$1.00 = 0.917 Euros
Canadian Dollar	1 CAD = \$0.755	\$1.00 = 1.324 CAD
Japanese Yen	1 Yen = \$0.009	\$1.00 = 108.112 Yen
Chinese Yuan	1 Yuan = \$0.140	\$1.00 = 7.149 Yuan
Mexican Peso	1 Peso = \$0.051	\$1.00 = 19.738 Pesos

Market Watch September 30, 2019

DOW	26,917	1.9%
NASDAQ	7,999	0.5%
S&P 500	2,977	1.7%

The markets all eked out gains for September and the DOW and S&P were both up more than 1% for the quarter, while the Nasdaq fell 0.1%. Both the month and the quarter were tumultuous for the markets, but the Fed's interest rate cut in September pointed to easier monetary policy moving forward. Market fundamentals remain strong, but investors are skittish and worried about the outcome of the US - China trade war.

Consumer Confidence Falls to 125.1

The New York-based Conference Board's Consumer Confidence Index fell to 125.1 in September after slipping slightly to 134.2 in August, according to the Conference Board's latest survey. The Present Situation Index, which is based on consumers' assessment of current business and labor market conditions, dropped to 169.0 after rising to a downwardly revised 176.0 in August. The Expectations Index, which is based on consumers' short-term outlook for income, dropped to 95.8 after falling to a downwardly revised 106.4 in August. The Conference Board said that the escalating and unstable situation on trade and tariffs rattled consumers. Consumers were also less optimistic about the short-term outlook and the labor market. Economists note that a level of 90 indicates that the economy is on solid footing and a level of 100 or more indicates growth. Analysts caution that the real driver behind consumer spending is income growth and that labor market trends are a more accurate predictor of consumer behavior.

Consumer Spending Rises 0.1%

Consumer spending inched up 0.1% in August after rising a downwardly revised 0.5% in July. Core consumer spending rose 0.1% in August after rising 0.4% in July and increasing 4.6% year over year in the second quarter. Personal income rose 0.4% in August after rising 0.1% in July. Wages increased 0.6% and savings rose to \$1.35 trillion from \$1.29 trillion in July. Inflation pressures remained low, with the personal consumption expenditures (PCE) price index excluding the volatile food and energy components edging up 0.1% in August after rising 0.2% in July. That lifted the annual increase for core PCE to 1.8%, the biggest gain since January. The core PCE index is the Fed's preferred inflation measure and has been under the central bank's target of 2% all year.

Consumer Prices Rise 0.1%

The Consumer Price Index (CPI) rose a seasonally adjusted 0.1% in August after rising 0.3% in July. The year-over-year CPI was up 1.7% in August after being up 1.8% in July. Excluding the volatile food and energy categories, core prices were up 0.3% in August after rising 0.3% in July and were up 2.4% from a year ago, the biggest increase in six months.

Unemployment Drops to 3.5%

The unemployment rate dropped to 3.5% in September and the economy added 136,000 new jobs, below expectations of 150,000 jobs. It was the slowest pace of job growth in four months, but employment gains for August and July were revised up by a combined 45,000 jobs. The increase in the average worker pay over the past 12 months fell to 2.9% from 3.2% in August and average hourly earnings were little changed in September after rising by 11 cents an hour in August. Job gains were concentrated in the services sector. Retailers shed 11,000 jobs and gains in construction payrolls were minimal. The relatively weak report coupled with continuing tensions over trade and a slowdown in the global economy fueled hopes that the Fed will cut interest rates again this year. The economy needs to create about 120,000 new jobs each month to keep up with growth in the working-age population.

Durable Goods Orders Rise 0.2%

Durable goods orders rose 0.2% in August after rising 2.0% in July. The continued increase surprised economists, who had expected orders to slump by 1.0%. The increase in order was

held back by a big 0.4% drop in orders for transportation equipment; ex-transportation orders increased 0.5% in August, reflecting strong growth for primary metals and fabricated metal products. Orders for non-defense capital goods excluding aircraft, a key indicator of business spending, fell 0.2% in August after being unchanged in July. Analysts say that businesses have put the brakes on investment plans due to uncertainty over how the tariff situation will be resolved. Nondefense capital goods shipments, which factor into GDP, rose 0.4% in August after falling a downwardly revised 0.6% in July. The durable goods report is very volatile and often subject to sharp revisions.

Chicago PMI Slips to 47.1

The Chicago Purchasing Managers' Index (PMI) fell to 47.1 in September after rising to 50.4 in August. Analysts had expected the Index to remain around 50. Production saw the largest decline, falling 7.6 points to 40.4, the lowest level since May 2009. Order Backlogs fell to 468, Inventories slipped further into contraction and hit a forty-month low of 41.7, and Prices Paid dropped for the month but rose for the quarter rose to 57.7. September's special question concerned supplier delivery times. The majority (65%) expect supplier delivery times to remain unchanged, while 24% anticipate longer times and 11% forecast shorter delivery times. Economists use the Chicago PMI and other regional indicators to gauge the health of the ISM manufacturing index. Analysts noted that eroding business conditions in the Chicago region mirror a nationwide trend. The strong dollar, slowing global economy and trade disputes have curbed demand for goods made in America. Stable although softer growth in the much larger service side has been keeping the economy growing.

Wholesale Prices Rise 0.1%

The Producer Price Index (PPI) rose 0.1% in August after rising 0.2% in July and was up 1.7% year over year. Core producer prices, which exclude food, energy and trade services, rose 0.4% after falling 0.1% in July and were up 1.9% year over year after being up 1.7% year over year in July. The wholesale cost of services climbed 0.3% in August but the wholesale cost of goods fell 0.5%.

Q2 GDP Unrevised at 2.0%

GDP growth was unrevised at 2.0% in the final reading, down from the surprisingly strong growth of 3.1% in the first quarter but still ahead of expectations for 1.8% growth, according to the third and final reading from the Commerce Department. Consumer spending was revised slightly downwards to 4.6%. Business fixed investment dropped at a 1.1% annualized rate, the steepest decline since the fourth quarter of 2015. The category was pulled down by a steep 11.1% decline in spending on structures. Heavy industry has been hurt by the ongoing trade dispute with China, a strong US dollar and a faltering global economy. Corporate profits rose a solid 2.7% year over year after dipping in the first quarter, but business investment declined at an unrevised 0.6% rate, the first contraction since the beginning of 2016.

Job Openings Little Changed

The number of job openings was little changed at 7.2 million on the last business day of July, according to the most recent Job Openings and Labor Turnover Survey (JOLTS) from the U.S. Bureau of Labor Statistics. Over the month, hires edged up to 6.0 million and separations increased to 5.8 million. Within separations, the quits rate and the layoffs and discharges rate were little changed at 2.4% and 1.2%, respectively. The quits rate is viewed by policymakers and economists as a measure of job market confidence.

Fed Cuts Rates 25 Basis Points

The Fed issued its second rate cut of the year in September, dropping the benchmark rate by another 25 basis points to a target range between 1.75% and 2.0%. Fed watchers predict there will be another quarter-point rate cut before the end of the year if trade and geopolitical tensions don't abate. If the US rolls back tariffs levied against China, it is likely that the Fed will sit on the sidelines and not increase rates. The decision was split, with seven out of ten Open Market Committee members voting for the cut. Two preferred to see rates unchanged and one wanted a cut of 50 basis points. The Fed has raised the interest rate nine times since late 2015 after keeping it near zero for eight years.

HOUSING & CONSTRUCTION

Housing Starts Rise 12.3%

Housing starts rose 12.3% in August to a seasonally adjusted annual rate of 1.36 million units from an upwardly revised reading in July. **Single-family starts increased 4.4%** to 919,000 units but were still down 2.7% year over year. Multi-family starts jumped 32.8% to 445,000 units **Regional starts were mixed.** Combined single-family and multifamily starts rose 4.4% in the South. Starts declined 1.8% in the Northeast, 5.6% in the Midwest and 11.3% in the West.

Building Permits Rise 7.7%

Building permits rose 7.7% in August to 1.42 million annual units after rising to 1.34 million annual units in July. **Single-family permits increased 4.5%** to 866,000 units and multifamily permits rose 13.3% to 553,000 units. Regional **permits were mixed.** Year to date, permits were up 5.7% in the Northeast and 1.6% in the South. Permits fell 6.9% in the Midwest and 5.6% in the West.

New-Home Sales Rise 7.1%

New-home sales rose 7.1% in August to a seasonally adjusted annual rate of 713,000 units and sales for July were revised upwards. New home sales were up 6.4% from August 2018. The inventory of new homes for sale fell to 326,000 homes in August, a 5.5-months' supply at the current sales pace, down from a 6.4-months' supply in July. The median sales price rose to \$328,400 in August after rising to \$312,800 in July. The median sales price in August 2018 was \$321,400. **Regional new home sales year to date were mixed.** Sales were up 11.7% in the South and 7.8% in the West. Sales were down 16.5% in the Northeast and 10.5% in the Midwest. Sales of new homes are tabulated when contracts are signed and are considered a more timely barometer of the housing market than purchases of previously-owned homes, which are calculated when a contract closes.

Existing Home Sales Rise 1.3%

Existing home sales rose 1.3% in August to a seasonally adjusted annual rate of 5.49 million homes after rising to an upwardly revised reading in July. Sales were up 2.6% from August 2018. **Regional sales were mixed.** Sales were up 7.6% in

the Northeast, 3.1% in the Midwest and 0.9% in the South. Sales dropped 3.4% in the West. Total housing inventory rose at the end of August to 1.86 million after falling to 1.8 million in July and was down 2.6% from August 2018. Unsold inventory is at 4.1-month supply at the current sale pace, up from a 4-month supply in July and down 2.6% from July 2018. The median existing home price for all housing types in July was \$280,800, up 4.7% from August 2018. August was the 90th consecutive month that home prices increased.

Builder Confidence Rises to 68

Builder confidence rose one point to 68 in September from a downwardly revised reading in August, according to the National Association of Home Builders/Wells Fargo Housing Market Index (HMI). Builder confidence has held in the mid-to upper 60s since May. September's reading was the highest level since last October. Solid household formation and attractive mortgage rates are contributing to builders' positive attitudes, but they are still grappling with ongoing supply-side challenges, including a shortage of labor and lots. The HMI indices were mixed in September. The index measuring current sales conditions rose two points to 75, the component gauging expectations in the next six months fell one point to 70 and the index measuring buyer traffic held steady at 50. Looking at the three-month moving averages for regional HMI scores, the Northeast rose two points to 59, the West rose two points to 75 and the South moved up one point to 70. The Midwest was unchanged at 57.

Mortgage Rates Steady at 3.64%

A 30-year fixed-rate mortgage (FRM) was 3.64% at the end of September, up very slightly from 3.58% at the end of August. Rates were 4.72% at the end of September 2018. Freddie Mac expects rates to average 4.5% this year and 4.8% next year. Low mortgage rates have caused a corresponding increase in applications for mortgages and refinancing.

POWER TOOL INDUSTRY

Robert Bosch

Robert Bosch Tool Corporation has formed a three-year partnership with High School District 214's Practical Architectural Construction program. The three-year partnership

with the District's Education Foundation includes the purchase of new Bosch tools for the program and the repair or replacement of damaged tools, as well as outerwear, including boots and jackets, for students to use at outdoor sites through the winter. The program also funds student internships and provides funds to support transportation to job sites and other needs. Bosch has been a longtime District 214 partner. Since the PAC program launched more than 30 years ago, District 214 students have built more than 20 single-family homes within District boundaries, including homes for veterans. They have also completed many other projects, including storage buildings and stadium press boxes.

The Bosch Community Fund is in its second year of a \$15,000 gift to the District 214 Education Foundation to fund the Bosch Blueprint scholarships for students pursuing trades after high school. RBTC North America President and CEO Roger Amrol Jr. said that they are committed to the Robert Bosch Tool Corporation's mission of "Invented for Life."

Robert Bosch is launching a software engineering apprenticeship program to address a shortage of engineers. Bosch noted that many different innovations are impacting the market and the demand for qualified people exceeds the supply. Among the innovative approaches to developing talent is an app they use for assessing personal digital literacy. After the assessment the app makes recommendations about the appropriate levels of training for each person, including machine learning, artificial intelligence, blockchain technology and scrum methodologies. Current labor economics mean it makes more sense for the company to build their own talent pool. In the next 24 months they will need 342 software engineers; they are hoping their new program will address 10% of that need.

Stanley Black & Decker

The Morgan Stanley Laguna Conference:

SB&D was represented at the conference by CFO Donald Allan and VP Investor Relations Dennis Lange.

Headwinds will be stronger than anticipated this year. Headwinds caused primarily by tariffs were estimated at \$370 million in July; the September update estimates that total headwinds will be closer to \$450 million. One of the tactics they will use to deal with the tariff costs is driving price into the market in

a "very surgical" way that will allow them to achieve the right levels of volume. Based on history, they typically get about 30% to 40% price recovery on these types of headwinds.

They've established a margin resiliency program that's focused on driving more value in the procurement organization. They also use technologies like advanced data analytics to help them drive value.

They anticipate there will be some commodity deflation for next year, but how much is still in question.

In most cases their retail partners have been very reasonable about pricing actions they want to take, and they have assured them they want to strike the right balance between volume and price.

They plan to continue to aggressively invest in innovation because it has been a great driver for organic growth.

If they take pricing actions and then the tariffs are rescinded, that will be a benefit to the bottom line. They do not believe they will have to deal with \$300 million in headwinds every year and think that the tariff situation will be resolved one way or the other.

They don't see a housing bubble that would negatively impact consumer demand over the long haul, but they do think there may be a temporary slowdown in consumer demand related to consumer confidence.

Fifteen years ago, cordless was just emerging in the power tools market; today it is an important part of their strategy and a significant part of their business. They think the same opportunity exists in Lawn & Garden today.

They believe Stanley brand and Craftsman can coexist very well. Stanley is eating away at private label and Craftsman is a very unique brand because it goes across so many different products.

The Craftsman rollout is going well. It is up to full strength in Lowe's and they are now rolling out on Amazon and in Menards and in a small way in NAPA Auto Parts. There will be smaller retail programs that will emerge next year.

Right now, they have the opportunity to expand the Craftsman SKU count from 500 to 1,000 over the next two or three years.

With Craftsman manufacturing, they are both outsourcing and licensing and trying to maintain the right split.

The culture in the Craftsman business has changed dramatically in the last 12 months and has become a winning and performance-oriented culture. They have upgraded their talent in the business including the leadership team and the next two layers.

The retail channel in the US continues to be healthy and strong. They see weakness in other countries.

There may be some general headcount reductions to help them combat costs.

Other News:

DeWalt recalled their 40" Multi-Functional Utility Bars because they've received at least 56 reports of the utility bars breaking, along with four reports of injuries. They were sold at The Home Depot and hardware stores nationwide and on Amazon. They were manufactured in Mexico.

SB&D was named to the Dow Jones Sustainability World Index for the second time and the North American Index for the ninth time. The DJSI series is considered the gold standard for corporate sustainability. SB&D's Corporate Social Responsibility strategy is aligned with the United Nations' 2030 Sustainable Development Goals.

SB&D hosted an event to discuss the role of the private sector in advancing progress on crucial global development issues in conjunction with the US Chamber of Commerce Foundation in New York City at the end of September. The event included a series of presentations and discussions that featured examples of how companies are innovating for good and how businesses can lead in coalition building and innovating to move the needle on important issues. A whitepaper will be published in the future.

TTI/Techtronic Industries

Citi Research recently visited TTI's factory in Donguan,

China which has exposure to the last batch of tariffs imposed. Citi reported that TTI should better weather the risk on stronger pricing power so they can raise prices gradually. Citi estimated TTI has at most 25% revenue exposure; more than half of their revenue is immune as they make most value-added parts outside of China.

RETAIL

Retail Sales Rise 0.4%

Retail sales rose 0.4% in August after rising an upwardly revised 0.8% in July according to the latest figures from the Commerce Department. The increase was twice as much as economists were expecting. It was the fifth consecutive month retail sales increased. Core retail sales, which exclude food services, car dealers, building-materials stores and gasoline, rose 0.4% after a downwardly revised gain of 0.9% in July. Core retail sales correspond most closely with the consumer spending component of GDP. Online and other non-store sales were up 1.6% after jumping 1.7% in July. Building materials and garden supply stores jumped 1.4%, the biggest increase in this category since January.

Holiday Retail Sales Forecast

Holiday sales are expected to increase between 4.5% and 5% this year, according to Deloitte's annual holiday forecast. Deloitte also forecast that ecommerce sales will grow between 14% and 18% this year; ecommerce sales rose 11.2% over last year's holiday season. Deloitte does its forecasting based on US Census Bureau figures and the current health of the labor market. The National Retail Federation has not issued their holiday forecast yet.

The Home Depot

The Home Depot has augmented their in-store security cameras with software that tracks individuals' movements throughout their stores using a scan of face geometry, a practice known as faceprinting, according to a new lawsuit filed in federal court in Atlanta. The suit claims this practice is in violation of Illinois' Biometric Information Privacy Act. Texas, Washington and Illinois are currently the only states with biometric privacy laws.

Lowe's

A segment of Lowe's "Which Tool Will Win" program began airing on Lowe's YouTube channel. The segment features the "Bosch Building Challenge" with two competing students from the Northland Workforce Training Center.

Walmart

Walmart introduced a new rewards credit card program from Capital One. The program features two new credit cards: the co-branded Capital One Walmart Rewards Mastercard and the private-label Walmart Rewards Card. The Capital One card offers 5% back on purchases at Walmart.com, including Walmart Grocery Pickup and Delivery, plus 5% back on in-store purchases when using Walmart Pay for the first 12 months as a special introductory offer. The card also offers 2% back on Walmart purchases in stores outside of the intro offer, 2% back on restaurants and travel and 1% back on everything else. There's no annual fee and no foreign transactions fee. The Walmart Rewards Card can only be used to shop at Walmart and offers additional benefits, including 2% back on purchases at Walmart Fuel stations. As a comparison, Amazon and Target's cards offer 5% back on store purchases every day.

Walmart is expanding its online grocery delivery options with a new membership program that gives customers unlimited same-day deliveries for \$98 a year, or \$12.98 per month. The program goes head-to-head with Amazon Prime, which costs \$120 per year. Customers can also pay for same-day deliveries as needed, or can have next-day free delivery on orders of \$35 or more for general merchandise and some non-perishable groceries from Walmart.com. The program has been in test in Houston, Miami, Salt Lake City and Tampa, and Walmart says the response has been "positive."

Walmart hired former Amazon lawyer and exec Nuala O'Connor as the company's first chief counsel of digital citizenship. She will oversee Walmart's digital citizenship team and focus on leveraging data and technology as well as advising Walmart on privacy issues, cybersecurity and records management.

Ace Hardware

Ace held their fall convention in Atlanta at the Mercedes-Benz stadium. To kick things off, Ace Chairman Brett Stephenson thanked Home Depot founder Arthur Blank, who owns the

Atlanta Falcons, for sharing the stadium.

Convention Highlights:

Ace introduced their Higher Ground initiative, which will replace their 2020 Vision plan, which has run its course. The five-year plan includes a \$2 billion investment to fuel \$20 billion in retail revenue, up from \$16 billion today.

Ace will boost their advertising spending from \$80 million to \$120 million in no more than five years to combat consumer perceptions that Home Depot carries more Stihl products, Big Green Eggs and Benjamin Moore Paint than Ace does. In reality, the Home Depot does not carry any of those brands, which do not sell to Home Depot, Lowe's, Menards or Walmart.

Ace hammered on the four categories for which they intend to become famous: paint, power, backyards & BBQ and home preservation.

Traffic, conversion and average ticket drive sales; two of those are controlled by employees. Research shows that when a customer receives personal help inside the store, spend increases more than 50%, from \$24.09 to \$37.50.

Ace unveiled their Store of the Future. It's an 8,000 square foot Cornerstone Hardware store they demonstrated on the market floor, saying that merchandising tactics in the store layout are based on analytics of their best-in-class Ace retailers.

BODFS (Buy-online-deliver-from store) was positioned as a strategic imperative, with Ace CEO John Venhuizen noting that BODFS stores have 57% higher sales than stores that simply allow for in-store pickup.

Vanhuizen said that big box retailers like Home Depot and Lowe's are better fits for large home renovation projects but Ace is better at home "preservation" and maintenance, helping people fix, repair and maintain their biggest asset.

Ace acquired home repair franchisor Handyman Matters. The company will be renamed Ace Handyman Services. Handyman Matters was founded in 1998 and offers home improvement, remodeling and maintenance services through 57 franchisees in 23 states. Financial terms were not disclosed. The acquisition gives Ace an entry into the "Do It For Me" market.

According to Vanhuizen, customers have been “begging” Ace to launch in-house home-improvement services.

Amazon

General Motors will make Amazon’s Alexa available for cars, trucks and crossovers beginning with model year 2018. Alexa will be available beginning in the first half of 2020. Users will have access to standard Alexa capabilities and GM will be able to create custom features.

Amazon is launching Amazon PayCode, a free service that lets US customers shop online, receive a PayCode at checkout and take it to Western Union within 24 hours to pay for the order in cash. Amazon says that 8 out of every 10 Americans live within five miles of one of the 15,000 eligible Western Union US locations. Analysts say the procedure creates what is essentially a 24-hour cooling off period that allows people to decide if they really want to make the purchase. Consumer researchers believe the approach may leave Amazon with a high number of abandoned orders. A report from the Federal Reserve’s 2018 Diary of Consumer Payment Choice found that 77% of payments are made in person, and 39% of those are made with cash.

Amazon is reportedly working on speeding up checkouts at physical stores by allowing people to use their hand as a form of identification. They plan to roll out the new tech at Whole Foods stores next year. Customers won’t need to touch the scanner; instead it will use computer vision and depth geometry to identify people.

Amazon held a nationwide job fair in six US cities after opening 30,000 jobs. Amazon Career Day was held in Seattle, Boston, Chicago, Dallas, Arlington, Virginia and Nashville, Tennessee. Amazon is looking for people with all types of experience and education, from technical software engineers to program managers and customer fulfillment.

Amazon expanded their Chicago Tech Hub and plans to create 400 new tech jobs in fields including cloud computing, advertising and business development. All told, Amazon Tech Hubs employ more than 20,000 people.

Amazon ordered 100,000 electric delivery trucks from Michigan-based Rivian, which will manufacture the vehicles in Nor-

mal, Illinois. Amazon will take delivery on the trucks starting in 2021 as part of their goal to become carbon neutral by 2040.

Amazon is opening a new store at Oakbrook Center near Chicago that will sell a mix of the most popular items offered online. The first 4-star store opened in New York’s SoHo neighborhood a year ago, and Amazon has since opened stores in Denver, Seattle and Berkeley, and plans three more in addition to Oakbrook.

CANADA SNAPSHOT

BoC Holds Rates Steady

The Bank of Canada kept its key interest rate unchanged at 1.75% in September but said that the US/China trade conflict is having a more damaging impact on global growth than previously thought. The bank did not issue any statements about future direction, but several comments about the worsening effects of trade tensions on the world economy suggest the bank is prepared to cut rates if necessary.

Unemployment Remains at 5.7%

The unemployment rate remained at 5.7% in September as more people participated in the job market and the Canadian economy added 471,000 new jobs in both full-time (306,000) and part-time (165,000) positions. The bulk of the employment increase in August was in Ontario and Quebec. There were also smaller gains in Manitoba, Saskatchewan and New Brunswick. Employment held steady in the other provinces. The number of private sector employees increased in August, more than offsetting the decline in July. The majority of employment gains were concentrated in the services sector.

Consumer Confidence

Consumer Confidence in Canada decreased to 53 Index Points in September from 55.60 in August. Consumer Confidence in Canada averaged 53.49 Index Points from 2010 until 2019, reaching an all-time high of 57.05 in November of 2018 and a record low of 46.80 in February of 2016. The monthly Index of Consumer Confidence is constructed from responses to four attitudinal questions posed to a random sample of Canadian households.

Consumer Prices Rise 1.9%

The Consumer Price Index (CPI) rose 1.9% year over year in August after rising 2.0% in July, according to Statistics Canada. Excluding gasoline, the index was up 2.4% year over year. The upward pressure on consumer prices is not great enough to spur the BoC to consider an increase in interest rates; in fact, many analysts are predicting that the BoC may cut rates as soon as the end of October. The eight components of the CPI were mixed in July, with some rising and some falling.

Q2 GDP Steady

Following four months of growth, real GDP was essentially unchanged in July as a 0.7% decline in goods-producing industries was offset by a 0.3% increase in services-producing industries. On a three-month rolling average, real GDP increased 0.8%, the same growth rate as in June. The construction sector contracted 0.7% in July, largely offsetting growth in the previous two months. Residential construction was down 1.0% as an increase in single-family construction was offset by a decline in multifamily dwellings and in home alterations and improvements. Engineering and other construction decreased 0.7% while repair construction was down 1.1%. Sales at building materials and supplies dealers fell 2.8% for the month. Non-residential construction (+0.7%) was up for the seventh time in eight months as activity in the commercial, industrial and public sectors increased. The Canadian economy grew 3.7% in the second quarter to \$2.085 trillion CAD, rebounding with its best performance in two years.

Housing and Construction News

Housing starts rose 12% in August, driven by accelerating construction in Ontario and Quebec. Manitoba and the western provinces all saw starts decline. The sharp divide in new construction mirrors the resale home market in Canada, where sales have climbed this year in Ontario and Quebec but weakened across the Prairies and British Columbia. CMHC said that residential construction is still strong and the real estate market is stabilizing after steep declines in 2018.

Home sales were up in most of Canada's largest markets in August, including B.C.'s Lower Mainland, Calgary, Winnipeg, the Greater Toronto Area, Ottawa and Montreal. A solid job market and a drop in five-year fixed mortgage rates is helping to spur activity. On a month-over-month basis, home sales in August were up 1.4%, the sixth consecutive move higher. Sales

were up in slightly more than half of all local markets, with gains led by Winnipeg and an improvement in B.C.'s Fraser Valley. The actual national average price for a home sold in August was about \$493,500, up almost 4% from August 2018. Excluding the Greater Toronto and Greater Vancouver regions, the national average price was less than \$393,000, while the year-over-year gain was 2.7%. The increase in sales came as the number of newly listed homes rose 0.4% in July.

The Canadian Real Estate Association has upwardly revised home sales projections for the year and now expects national home sales to recover to 482,000 units in 2019, an increase of 19,000 units from the June forecast. Sales are forecast to rise by 7.5% to 518,100 units next year. That's still off the high of 540,000 sales hit in 2016, according to CREA. British Columbia sales are expected to decline 5.4% this year compared to 2018 and sales are also depressed in Alberta, Saskatchewan and Newfoundland and Labrador. Manitoba, Quebec and New Brunswick are expected to set new annual sales records. Prices are expected to stabilize at a national average of \$491,000 because of the diverging trends of Eastern and Western Canada. Average prices in 2019 are expected to fall in B.C., Alberta and Saskatchewan, while rising in Ontario, Quebec and the Maritimes. CREA projects the national average price to gain by 2.1% next year to \$501,400, remaining below its 2017 level.

Retail Sales

Retail sales increased 0.4% in July to \$51.5 billion, the first increase in retail sales in three months. Higher sales were reported in 6 of 11 subsectors representing 71% of retail trade. Sales at building materials and garden equipment and supplies dealers decreased 3.2% after increasing 5.0% in June. Provincially, retail sales were up in six provinces, with the largest increases observed in Ontario and, to a lesser extent, the Prairie provinces. On an unadjusted basis, retail ecommerce sales were \$1.8 billion in July, accounting for 3.2% of total retail trade. On a year-over-year basis, retail ecommerce increased 32.8%, while total unadjusted retail sales were up 3.7%.

MARKET TRENDS

Construction Labor Shortage

The US has been short of workers in the construction industry since the Great Recession, which began in 2008. The construction industry lost approximately 1.5 million jobs during the Great Recession, and has not yet gained them back. The JOLTS report shows that construction is still short about 350,000 workers, with the shortage of skilled labor growing more challenging as the economic expansion continues.

NAHB Chief Economist Robert Dietz says the construction industry is suffering from a shortage of the Five Ls: lack of labor, lack of lots, lack of lending for builders and land developers, lumber and materials issues and law issues. This has created a housing deficit, which in turn has created a shortage of inventory and home prices that are rising faster than incomes and inflation. There is a chronic shortage of single-family homes and apartments, with supply running well behind demand. Part of the problem is the aging existing workforce, which took a big hit during the Great Recession. Many people who left the industry to find work have retired, or never returned. The many issues contributing to the shortage make it challenging to address. Dietz says “there is no silver bullet.”

NAHB surveys of young adults ages 18 to 25 show that construction is not high on their list of desirable occupations. They want jobs that are less seasonal, less physical and involve computers and digital technology.

Changes in immigration policy that have slowed immigration have also affected the labor force; out of all major occupations, construction has the highest number of foreign-born workers. The opioid crisis is also creating problems and impacting the labor force. A study from the Cleveland Fed concluded that prescription opioids can account for 44% of the decrease in men’s participation in the labor force and a 17% decline in women’s between 2001 and 2015.

It takes 8 to 12 years for a craft professional to be fully trained and become truly competent. The research report “Construction Industry Training in the US & Canada” found that a 1% investment in labor training increased productivity by 11% and decreased turnover 14%, absenteeism 15%, injury 27%

and rework 25%. The numbers prove that the benefits of training far outweigh any cost in time and money.

Pay Going Up for Construction Staff

Survey respondents predict increases of about 3.5% - 4% in construction staff payrolls both this year and next year, according to the annual compensation survey by Personnel Administration Services. Overall salary increases have averaged 3.7% in three of the last four years. Experienced superintendents are in demand, as they are considered key to getting projects completed on time and on budget. Benefits are also very important, with more candidates considering the ability to balance work and life by cutting commuting time or getting more time off or other family benefits equally important.

Drones Aid Construction

Advances in artificial intelligence and the chronic shortage of labor have construction companies scrambling to find alternatives to the traditional laborer, according to a recent article in the *Arizona Daily Star*. Job titles such as robotics technician and virtual construction supervisor are now listed on recruiting sites. The University of Arizona is planning to add classes in these areas to their civil engineering program. Tucson-based Sundt Construction has 15 drones working in fleets across Arizona, Texas and California that capture photo documentation and mapping data. SAM, an acronym for semi-automated mason, is a brick-laying robot that can lay up to 350 bricks an hour, much faster than human. Augmented robotics in exoskeletons can be worn by construction workers to improve strength and lessen wear and tear on their bodies from physical labor. Drones can map a site in 30 minutes; another hour of data crunching on the computer shows where pipes and infrastructure should be placed. Once the exterior of a building is completed, drones can use thermal cameras to measure temperatures in the building and identify spots where there might be excessive heating or cooling escaping the building before clients occupy it.

Autodesk University User Conference

By 2050 the global construction industry will need to produce an estimated 14,700 buildings every day just to support the world’s growing population. That massive challenge is also a massive opportunity, and tools that analyze data and manage complex jobsites will play a growing role in construc-

tion, according to Autodesk, which produces a variety of BIM (Building Information Management) software. Contractors say that switching to data-driven project management requires a big commitment; many contractors collect and record a wealth of project data, but don't really use it for analysis. Royal BAM, a contractor in the Netherlands converted to digitized data in 2017 and says that digitizing 95% of project data points has helped them achieve a 20% improvement in quality and safety and also allow them to spend 25% more time focusing on tasks and "risk items." The rise of prefabrication is also impacting construction, with on-site assembly of prefabricated components speeding up project timetables by as much as 30% while also requiring up to 50% fewer on-site workers.

Sustainable Startups

More than 400 young entrepreneurs applied to be part of Target's incubator program focused on Gen Z entrepreneurs. Since the program began in 2013 Target has had four accelerator programs that have run 13 boot camps for more than 100 startups. Although the companies given the opportunity to participate are diverse, several of this year's winners have one thing in common: they are focused on sustainability. Startup Tarravive wants to make compostable straw, cups and cutlery out of crop scrap. Another startup is focused on turning harvests that would otherwise go to waste into dried fruits, and Pulp Pantry is making chips out of leftover juice pulp. There's also one working on creating an online marketplace for female artists making sustainable fashions around the world. Each company selected gets \$10,000 in seed money and gets to go to seven weeks of boot camp. Several products that have come out of the incubator have been tested at Target, and some are on shelves now.

Home Depot's Path to Success

Carol Tome, the CFO of Home Depot since 2001, retired at the end of August. She played a key role in helping the company turn sales around and crafting a retail strategy that helped THD become a real retail powerhouse. In 2014 she was one of three candidates in serious contention to succeed Frank Blake as CEO. Ultimately Craig Menear got the nod, but Tome stayed on as CFO. She'll be succeeded by Richard McPhail, whom she has helped to groom for the role over many years. In a recent interview with the *Wall Street Journal*, Tome reflected on Home Depot's growth and the challenges that lie ahead. She recommended they sell HD supply and get back to focusing on the

core business. They had to exit businesses, close stores and take new stores out of the pipeline. She found it personally stressful to have to tell associates at stores that were closing they were out of a job; it made her vow never to allocate capital to a store that needed to be closed or a business that needed to be sold. When she started with Home Depot, there were 75,000 households per home improvement store. By the time the Great Recession hit, there were just 33,000 to 35,000 households; the market was getting saturated. They had to prove they could survive the recession and outperform their competitors. Her advice to CFOs dealing with tough situation was to be business-people first and finance people second; you have to be able to speak the language of the business, figure out what motivates people and how to be an inspirational leader, not a numbers cruncher. She also noted that the role of a great CFO is to be a partner; to debate tactics and strategies from a factual basis, but once the play is called, get behind it and run it full out.

Who's Liable for Defective Goods Sold Online?

There is a potentially precedent-setting case in Pennsylvania that could determine that retailers who sell goods through an online marketplace are liable for defective goods. A three-judge panel of the 3rd US Court of Appeals reinstated a suit by Heather Oberdorf that had been dismissed by the Middle District Court. She sued Amazon over an allegedly defective dog collar she bought online. She was seeking damages for injuries, including the loss of sight in one eye suffered while walking her dog on a retractable leash that broke and subsequently hit her in the face. After the incident neither the victim nor Amazon was able to locate the vendor; the lower court dismissed her suit, but the Appeals Court found that Amazon can indeed be sued for product liability because Amazon has substantial control over the vendors who sell on their website. No news yet on how Amazon intends to respond.