MarketBriefing

2017 Issue 7 News from the month of June 2017

BOSCH
Invented for life

Bosch
Dremel
RotoZip
Vermont American
CST/berger
freud
Sia

Robert Bosch Tool Corporation
1800 W Central Rd
Mount Prospect, IL
60056 USA
www.boschtools.com

U.S. ECONOMY

EXCHANGE RATES JUNE 30, 2017

Euro	1 Euro = $1.142	$1.00 = 0.876 Euros
Canadian Dollar	1 CAD = $0.771	$1.00 = 1.297 CAD
Japanese Yen	1 Yen = $0.009	$1.00 = 112.058 Yen
Chinese Yuan	1 Yuan = $0.147	$1.00 = 6.780 Yuan
Mexican Peso	1 Peso = $0.055	$1.00 = 18.034 Pesos

MARKET WATCH JUNE 30, 2017

DOW	21,350	1.6%
NASDAQ	6,140	−0.9%
S&P 500	2,423	0.5%

The indexes finished with mixed results for the month of June on global economic concerns and worries that President Trump's ambitious spending plans will be derailed, but all three posted solid gains for the second quarter. The DOW rose 1.6% for the month and 3.3% for the quarter, closing at 21,350, the NASDAQ lost 0.9% for the month but was up 3.9% for the quarter, closing at 21,350 and the S&P, the index most closely followed by economists, rose 0.5% for the month and 2.6% for the quarter, closing at 2,423.

CONSUMER CONFIDENCE RISES TO 118.9

The New York-based Conference Board's Consumer Confidence Index rose to 118.9 in June after falling to 117.9 in May. The Present Situation Index rose to a 16-year high of 146.3 in June after inching up to 140.7 in May. The Expectations Index slipped to 100.6 after dropping to 102.6 in May. It was the third consecutive drop for Expectations. The Conference Board said that consumers still remain optimistic that the economy will continue to expand in the months ahead. Economists say 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 rose just 0.1% in May after rising 0.4% in April. The personal consumption expenditures index (PCE) fell 0.1% in May, dragged down by decreases in prices for consumer goods and energy. Excluding food and energy, the PCE index rose 0.1% and was up 1.4% year-over-year, well below the Fed's target of 2%. After tax incomes grew a solid 0.6% in May after rising 0.4% in April, although most of the increase was due to a $45.4 billion increase in personal dividend income. Wages and salaries increased just $6.7 billion in May after accounting for most of the increase in after tax incomes in April. The personal savings rate rose to 5.5%, the highest rate since last September. Consumer spending is closely watched by economists because it accounts for 70% of U.S. economic activity.

CONSUMER PRICES FALL 0.1%

The Consumer Price Index (CPI) fell 0.1% in May after rising 0.2% in April, and has now fallen in two out of three months after rising slowly but steadily for the preceding year. The CPI was up 1.9% from May 2016, the third consecutive month in which year-over-year gains have eased. Core inflation, which excludes food and energy, rose 0.1% after rising 0.1% in April and was up 1.7% year-over-year, the weakest year-over-year gain in core inflation in two years.

UNEMPLOYMENT RISES TO 4.4%

The unemployment rate inched back up to 4.4% in June after falling to a decade-low of 4.3% in May and the economy added 220,000 new jobs. Job gains for April and May were revised up by a total of 47,000 jobs. Employment growth has averaged 180,000 per month thus far this year, in line with the average monthly gain of 187,000 in 2016. However, over the past three months job gains have averaged 194,000 per month. Employment in most major industries, including construction, was little changed over the month. Average hourly earnings rose by 4 cents to $26.25 and have risen 63 cents per hour or 2.5% thus far this year. The labor force participation rate has stabilized in the past several months, but remains below the rates seen for both men and women over the past two decades. Productivity, inflation and wage growth have all been persistently sluggish. Fed Chair Janet Yellen has said that the economy needs to create just under 100,000 jobs a month to keep up with growth in the working-age population.

DURABLE GOODS ORDERS FALL 1.1%

Durable goods orders fell 1.1% in May after falling 0.7% in April. It was the second consecutive decline in durable goods orders and the largest decline in six months. The decline was primarily due to a big drop in the volatile categories of military and commercial aircraft. Orders excluding transportation, which can also be a highly volatile category, rose 0.1% in May. Orders for non-defense capital goods excluding aircraft, which are seen as a proxy for business spending, fell 0.2% in May after being virtually flat in April. Shipments in the same category, which factor into GDP, rose 0.8% after falling 0.1% in April. The durable goods report is often both volatile and subject to sharp revisions. Wells Fargo noted that recent softness in orders suggests that the surge early in the year is fading and expects the factory sector to slow down.

CHICAGO PMI RISES TO 65.7

The Chicago Purchasing Managers' Index (PMI) rose to 65.7 in June after rising to 59.4 in May. It was the fifth consecutive month the PMI increased. Four of the five components rose in June, with only Employment falling slightly. New Orders rose by more than 10 points to 71.9 in June, the highest level since May 2014. Production continued to strengthen, rising 4.5 points to 67.7. Order Backlogs continued to rise, reaching levels last seen in July 1994. Inventories fell 3.6 points to 51.9 in June, the lowest level since the start of the year. Prices Paid were broadly stable after easing for three consecutive months. PMI panelists reported continuing increases in the price of steel and plastic products, but said suppliers were holding off passing along price increases.

WHOLESALE PRICES FLAT

The Producer Price Index (PPI) was flat in May after rising 0.5% in April and was up 2.4% over the past 12 months. Energy prices fell 3% in May and food costs fell 0.2%. Core inflation, which excludes volatile food, energy and trade services prices, fell 0.1% in May but was up 2.1% over 12 months. The PPI for inputs to construction was up 3.2% year over year. Steady consumer demand and more stable commodity costs are expected to keep producer prices moving upwards; the strong dollar could moderate increases.

Q1 GDP REVISED UP TO 1.4%

GDP growth in the first quarter was revised up to 1.4% from the 1.2% upward revision of the second reading and the dismal 0.7% first reported, according to the Commerce Department's third and final estimate. The upgrade reflected revised strength in consumer spending and exports and matches the growth rate recorded in the second quarter of 2016. Analysts expect growth to accelerate in the second quarter, fueled by solid hiring and growing consumer spending. The latest estimates from the regional Federal Reserve boards show expected Q2 growth between 2.9% and 3.2%. Since 2000, first quarter GDP has averaged 1.0%, followed by an average growth of 2.6% in the second quarter. Many analysts are forecasting growth for the entire year of around 2.3%, up from 1.6% GDP growth in 2016, which was the poorest showing in five years.

JOB OPENINGS RISE

The number of job openings rose to the highest number on record in April, 6.04 million, from 5.7 million in March, according to the latest Jobs Opening and Labor Turnover Survey (JOLTS). The number of hires fell over the month from 5.3 million to 5.1 million, the lowest since April 2016. There were a total of 6.04 million job openings in April. The high number of openings and the lower number of hires indicates that some employers are still having trouble filling positions, especially for jobs that require specialized skills. There were a total of 5.0 million separations and 3.0 million quits. The quits rate was unchanged at 2.1%. When the most recent recession began in December 2007 there were 1.9 unemployed persons per job opening. The ratio peaked at 6.6 per job opening in July 2009 and trended down through 2015 before leveling off between 1.2 and 1.4. Quits hit a low in September 2009 and now are higher than they were prior to the recession. For most of JOLTS history, the number of hires has exceeded the number of job openings, but since January 2015 this relationship has reversed, with job openings outnumbering hires in most months. A rising quits rate generally leads to faster wage growth. The JOLTS report is one of Fed Chair Janet Yellen's preferred economic indicators.

FED RAISES RATES

The Federal Reserve raised interest rates by 25 basis points to a range of 1.0% to 1.25% at its meeting in mid-June. It was the second rate increase in three months. The Fed cited continued U.S. economic growth and job market strength and announced it would begin cutting its holdings of bonds and other securities this year. The decision was an expected part of the Fed's plan to slowly raise rates. The Fed's policy-setting committee indicated the economy had been expanding moderately, the labor market was continuing to strengthen and a recent softening in inflation was seen as transitory. Fed Chairman Janet Yellen was mostly upbeat about the economy, but said that the Fed would keep a close eye on inflation.

CLIMATE ACCORD WITHDRAWAL CREATES DISCORD

President Donald Trump's decision to pull the U.S. out of the historic Paris Climate Control initiative created divisions among the members of his CEO advisory group. The CEOs of Walmart and IBM will remain on the council, but CEOs of Disney and Tesla are leaving. While he said he would remain, Walmart CEO Doug McMillon said he was disappointed in the decision and thinks it's important for countries to work together to reduce greenhouse gas emissions. Many other prominent members of the council said they disagreed with the decision but feel that remaining on the council allows them to contribute by having an ongoing direct dialogue with the president.

PRESIDENT MEETS WITH IT EXECS

President Trump met with the heads of 18 U.S. technology companies, including Apple, Amazon, Microsoft, Google, IBM and Adobe, looking for help making the government's computing systems more efficient. Trump cited estimates that the government could save up to $1 trillion over 10 years by updating systems, cutting costs, eliminating waste and improving service.

HOUSING & CONSTRUCTION

HOUSING STARTS FALL 5.5%

Housing starts fell 5.5% in May to a seasonally adjusted annual rate of 1.09 million units after dropping to 1.17 million units in April. It was the third consecutive monthly decline in starts. **Single-family starts fell 3.9% to** 794,000 units after dropping to 835,000 units in April. Multifamily starts fell 9.7% to 289,000 units after dropping to 337,000 units in April. **Regional starts were mixed.** Starts rose 1.3% in the West and were unchanged in the Northeast. Starts fell 9.2% in the Midwest and 8.8% in the South. Despite the decline, housing starts are up 3.2% from May 2016. Wells Fargo noted that the drop in both single-family starts and permits when homes are selling very quickly may point to growing worker shortages. The number of single-family homes authorized but not started rose 4.0% in May and is up 14.7% from May 2016.

BUILDING PERMITS FALL 4.9%

Building permits fell 4.9% in May to a seasonally adjusted annual rate of 1.17 million units after falling to 1.23 million units in April. **Single-family permits fell 1.9%** to 779,000 units and multifamily permits fell 10.4% to 389,000 units. **Regional permit issuance was mixed.** Permits rose 3.3% in the Northeast. Permits fell 9.4% in the Midwest, 0.3% in the South and 13.1% in the West.

NEW-HOME SALES RISE 2.9%

Sales of newly built, single-family homes rose 2.9% in May to a seasonally adjusted annual rate of 610,000 units. Sales were up more than 12% from May 2016. Sales for the three previous months were also revised up by a total of 34,000 homes, and April's initially reported 11.4% drop was revised to a 7.9% decline. The inventory of new homes for sale remained at 268,000 in May, which is a 5.3-month supply at the current sales pace. Sales continue to be held back by shortages in inventory. **Regional sales were mixed.** New home sales rose 13.3% in the West and 6.2% in the South. Sales fell 10.8% in the Northeast and 25.7% in the Midwest. Wells Fargo noted that they do not expect new home sales to revisit the highs hit during the housing boom, and the market does not have a lot of upside potential because of the constraints on lot development, shortages of workers and credit constraints facing many first-time buyers. 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 1.1%

Existing home sales rose 1.1% in May to a seasonally adjusted annual rate of 5.62 million after falling to a downwardly revised 5.56 million in April. Sales were 2.7% above May 2016. **Single-family home sales rose 1.0% in May** to a seasonally adjusted annual rate of 4.98 million after dropping to 4.95 million in April. Sales were 2.7% above May 2016. Total housing inventory at the end of May rose 2.1% to 1.96 million existing homes available for sale but was still 8.4% lower than a year ago and has fallen year-over-year for 24 consecutive months. Unsold inventory is at a 4.2-month supply at the current sales pace, down from 4.7 months a year ago. **Regional sales were mixed.** Sales rose 6.8% in the Northeast, 2.2% in the South and 3.4% in the West. Sales fell 5.9% in the Midwest. Homes are selling very quickly, with the typical listing on the market for a record-low of 27 days, which is also boosting selling prices with the median home price a record $252,800, up 5.8% from May 2016.

BUILDER CONFIDENCE FALLS TO 67

Builder confidence fell two points to 67 in June from a downwardly revised 69 in May, according to the HMI (National Association of Home Builders/Wells Fargo Housing Market Index). Despite the decline, it was the highest June reading for the index since 2005. The last time the HMI reached this level, existing home sales were roughly double what they are today. All three HMI components posted losses in June but remained at healthy levels. The component gauging current sales conditions fell two points to 73, the index charting sales expectations in the next six months dropped two points to 76 and the component measuring buyer traffic fell two points to 49; it was the only component below 50, the level that indicates improving confidence. The housing market is strengthening, but builders remain frustrated over the ongoing shortage of skilled labor and buildable lots. The three-month moving averages for regional HMI scores all declined, with the Midwest and South falling one point each to 67 and 70, respectively. Scores in the Northeast and West both dropped two points to 46 and 76, respectively. Builders remain optimistic but face ongoing increases in building materials prices, hefty regulatory costs and shortages of both lots and labor, according to the NAHB.

MORTGAGE RATES DROP TO 3.88%

The 30-year mortgage rate fell to 3.88% at the end of June after falling to 3.95% at the end of May. The drop to the lowest rate of the year was prior to a late-month sell off in the bond market that drove up Treasury yields. Mortgage rates will likely increase if yields continue to rise. In June last year 30-year rates averaged 3.48%. Mortgage rates have been volatile, swinging along with yields on the 10-Year Treasury Bond.

POWER TOOL INDUSTRY

ROBERT BOSCH

A Bosch tool kit is one of the program benefits Associated General Contractor (AGC) member business owners and their employees participating in AGC's On The Job program can choose to receive.

STANLEY BLACK & DECKER

From the Electrical Products Group Conference:

Innovation is incredibly important to them, both core innovation, which CEO Jim Loree defined as day-to-day innovation in the product lines, and breakthrough innovation, new ideas that can each generate at least $100 million in revenue. They believe there's a "decent chance" there will be a breakthrough innovation in the next 12 months and a strong chance there will be one in the next 24 months.

Unlike many companies, they subscribe to a 50/50 theory on cash accumulation; they give fifty percent of the cash back to shareholders and invest fifty percent into their world-class brands and growth platforms. Most companies take 95% of capital and reinvest in mergers and acquisitions (M&A). Their goal is to generate free cash flow that's greater than net income.

They are now investing heavily in what Loree called Industry 4.0, which he says will enable tremendous labor efficiency gains and will enable them to manufacture goods that historically would have been manufactured in developing countries.

He told the audience that thanks to FlexVolt, one battery system could now power all power tools, enabling job sites of the future to be cordless. For this year they have $400 million in manufacturing capacity for FlexVolt and have new SKUs coming out in the fall that could spike demand. They have $200 million in revenue in their guidance, but it could be higher. They have patented the technology required to extend FlexVolt into gas engines, and are trying to understand if patents can be protective as they are in power tools, as they can certainly replace hydraulic power with the FlexVolt battery technology.

They know they are converting accounts from their competitors to FlexVolt, but they don't know yet if the accounts are in a test mode or experimenting; they do not believe they are converting en masse. They are not licensing any technology involved in FlexVolt, they own it all outright.

The Black & Decker acquisition opened their eyes to the power of revenue synergies, and they stopped accounting for them at $500 million. They have done $3 billion in acquisitions since August of last year, and they are now focused on absorbing and maximizing them.

One of the analysts asked about the possibility of them making an acquisition of some sort in outdoor and expanding the FlexVolt technology, and Loree said the answer was "maybe." They need to do more investigative work to better understand the category.

Craftsman is a unique brand and they have intensive customer discussions going on now, primarily with home centers, potentially involving ecommerce. Craftsman will also have a presence in industrial and automotive repair. Craftsman is unique in that as far as they know, it's the only brand that plays in all four of the markets they are focused on: construction, DIY, industrial and automotive repair.

Other News:

DeWalt will launch a fully connected system, including a WiFi mesh network and eventually an Internet of Things platform, designed to enhance productivity, profitability and safety on jobsites. DeWalt's patented WiFi mesh technology uses access points built to withstand the harsh and variable conditions of a construction jobsite. The platform enables contractors to collaborate in real-time across large-scale jobsites and access site information such as prints, schedules, budgets and RFIs. The DeWalt Tool Connect inventory management system is one component of total asset management for contractors.

SB&D will invest more than $29 million in facility upgrades for their plant in Jackson, Tennessee. The expansion is expected to create about 255 new jobs. Jackson is designated a "lighthouse" facility that will serve as a model for new advanced manufacturing techniques, systems and processes. One of the reasons Jackson was chosen was the quality of the current staff and the availability of a high-quality workforce.

SB&D announced a five-year, $50,000 scholarship program at the Tennessee College of Applied Technology.

SB&D has invested in Veloxint Corporation, a developer of nanocrystalline metal alloys with transformational properties based in the U.S. Veloxint is a high-tech startup that's commercializing high-value products and parts based on fundamental science developed at MIT. The alloys are designed from the atomic level up for the thermodynamic stability that is needed for long-term stable operation at elevated temperatures. The two companies have also entered into a technology development agreement to jointly develop metal alloys for applications of mutual interest.

SB&D veteran Jim Cannon is the new CEO of Flir Systems. Flir's largest business is providing thermal imaging cameras for military and security applications, but the company has a new line of technology aimed at contractors and consumers, including a $250 camera that attaches to smartphones and lets users look inside walls.

TTI/TECHTRONIC INDUSTRIES

The city of Greenwood approved a 10-year ad valorem tax exemption on almost $4.5 million worth of property involved in Milwaukee's recent expansion and on an inventory of up to nearly $15.3 million.

TRIMBLE

Trimble acquired privately-held Network Mapping Group Limited headquartered in Knaresborough, United Kingdom. The acquisition expands Trimble's energy solutions portfolio to provide high-value data modeling and 3D visualization services for the utilities industry.

Trimble acquired Innovative Software Engineering, an engineering and systems integration firm that delivers end-to-end mobile and enterprise solutions. The company will operate as part of Trimble's Transportation Segment.

RETAIL

RETAIL SALES FALL 0.3%

Retail sales fell 0.3% in May after rising 0.4% in April and were up 3.8% from May 2016. Most of the decline came from a 2.4% drop in gasoline sales as gasoline prices fell over the month. Core retail sales, which exclude auto sales, gas and building materials, and factor into GDP, were flat in May but sales for April were revised sharply upwards to 0.6% from the 0.2% first reported. Sales at building materials and garden equipment and supplies dealers were flat after rising 0.6% in April as the spring home improvement season got into gear. Sales at non-store retailers, which include internet sales as well as catalog sales, rose 0.8% in May after rising a downwardly revised 0.9% in April. Retail sales account for one-third of all consumer spending, with services making up the other two-thirds.

UPS ADDING HOLIDAY SURCHARGE

UPS will charge retailers extra fees to deliver packages during the busiest weeks before Christmas, saying that they needed to impose the surcharge to offset the additional cost of delivering the high volume of packages. Between November 19 and December 2 they will add a 27-cent charge on all ground packages sent to homes. During the big rush between December 17 and 23, UPS will also charge an additional 81 cents for next-day air and 97 cents for two-or three-day delivery. UPS daily volume swells to more than 30 million packages in the weeks before Christmas compared to 19 million on a normal day.

J.D. POWERS WINNERS

The home improvement category has seen an increase in customer satisfaction, with overall customer satisfaction increasing to 816 from 795 (on a 1,000 point scale). Ace placed first for the 11th consecutive year, with a score of 835. Menards was close behind at number two, with a score of 824 and Lowe's came in at the number three spot with a score of 817. The study is based on responses from 2,750 customers who purchased home improvement-related products from a home improvement retailer within the previous 12 months. It was fielded in February and March of this year.

LUMBER SUIT

Menards and The Home Depot are being sued for allegedly deceiving the lumber-buying public. The lawsuits claim that they market lumber as 4 x 4, when the actual size is 3 1/2" x 3 1/2". Both retailers say it is common knowledge and longstanding industry practice that the terms 2x4 and 4x4 do not describe the width or thickness of those pieces of lumber but rather are nominal designations accepted in industry standards. The suit alleges the public does not know lumber industry standards.

THE HOME DEPOT

From the Oppenheimer Consumer Conference:

THD was represented by EVP Merchandising Edward Decker. The Oppenheimer analyst leading the conference call was Brian Nagel, who is the hardlines and ecommerce analyst.

Household formation is getting back to the average of 1.2 million annually and housing turnover is starting to get back to the historical average of 4%+, or about 5 million transactions, and in general homes are appreciating about 5% annually, all of which makes people more inclined to spend money on their homes. They do not see any looming "black swan" events that would negatively impact the entire economy.

The pace of new product introductions and innovations was described as "staggering." They have a quarterly new products book that is hundreds of pages long.

Decker described lithium-ion batteries and power tools as a category that is truly redefining an industry. They cited battery run time, brushless motors and electronics. New technologies are now extending to outdoor categories. And the cordless category is extending into vacuum cleaners, paint sprayers and pneumatic nailers.

They are continuing to work on simplifying their processes, as complex processes make it difficult for associates to move from one work area to another.

Tractor trailers now arrive flow loaded and packed floor to ceiling, which has allowed them to cut down on the number of trucks needed to deliver product. They also use maps for each delivery that shows receiving how to lay out the department and efficiently deliver the products to the shelves. Better on-shelf availability improves customer satisfaction and reduces inefficiency. Suppliers participate in the savings from these programs.

The Interline integration is going well. They focus on multifamily housing, institutional housing, hotels, dorms, etc., so the product categories are similar but the purchase occasion is different. There is more bulk packaging of things that consumers or even contractors buy individually. The Interline capabilities also let them respond to Pro emergencies much more quickly.

They are very Pro oriented, with the Pro business penetrating 40% of their sales. Now Pros can just use the app to order what they want, and the runner simply has to pick it up at the Pro desk instead of run through the store trying to find everything.

They are now able to offer delivery windows that can narrow down the time in which an order will be delivered to as small as a two-hour window. Ordering with a two-hour window costs more than if the customer has an all-day window, but many customers appreciate the ability to pinpoint a delivery time.

The long recession and slow recovery have created a backlog of jobs that need to be done at the average home, and the consumer is now willing to tackle all those maintenance, repair and improvement jobs they've been putting off.

LOWE'S

A huge mill renovation in Lowe's home town of Mooresville is creating an opportunity for Lowe's suppliers' to have offices and showrooms about five minutes from corporate headquarters. So far suppliers have leased about 100,000 square feet of the 1.1-million-square-foot Merino Mill project. Greenworks Tools is currently the largest supplier with quarters in the mill. Hitachi power tools plans to open a 4,000-square-foot office and showroom.

Lowe's is cutting 125 IT jobs, mostly from their Mooresville headquarters, and sending many of those jobs to Lowe's operations in India. Lowe's has about 1,000 employees in Bangalore, India. Lowe's laid off 2,400 employees in January at the store level and another 525 from corporate offices in February.

Lowe's closed on their $512 million dollar acquisition of Maintenance Supply Headquarters (MSH), based in Houston. MSH carries more than 5,300 products targeted at maintaining and renovating multifamily properties. The acquisition is part of Lowe's commitment to deepen and broaden their relationship with Pros. CEO Robert Niblock says the combined family/multifamily MRO business is expected to generate more than $400 million in annual sales with 16 distribution centers and more than 200 additional outside sales reps.

WALMART

About 14,000 people attended Walmart's annual shareholders' meeting in Arkansas. News reports say the mood at the meeting was upbeat and CEO Doug McMillon focused on all the changes and innovations and investments in people as well as technology that Walmart has instituted to be more competitive and take a bigger share of the digital world. Country mega-star Blake Shelton served as host, with Gwen Stefani, Mary J. Blige and The Band Perry among those providing entertainment.

Walmart is testing a new type of delivery service utilizing Walmart employees to drop off packages on their way home. The service has been in a quiet test since April in two stores in New Jersey and one in Arkansas. Packages go from Walmart fulfillment centers to the stores where employees can volunteer to deliver them. An app enables staffers to say how many packages they can drop off, how heavy and large they can be and when they can make deliveries. Walmart wouldn't say how much extra cash employees earn for dropping off packages, but they did say that the program is shaving time off their two-day delivery promise. No word on whether they will expand the service to other stores.

Walmart is telling some tech companies that if they want Walmart's business they can't run applications for Walmart on Amazon Web Services (AWS). Walmart keeps most of its data on its own services and uses services from emerging AWS competitors such as Microsoft's Azure. Reportedly other large retailers have also requested that service providers not use AWS for their data. AWS had $3.66 billion in net sales in the first quarter, which accounted for just 10% of Amazon's revenue but a full 89% of overall operating income.

Walmart acquired menswear online retailer Bonobos for $310 million. The purchase of the upscale menswear retailer is another example of Walmart's attempts to grow their customer base into niche areas where Walmart stores are not strong. Bonobos CEO Andy Dunn, who is joining Walmart's digital team, said he was very concerned that Bonobos customers would be turned off by the association with Walmart, but that thus far it has not affected their new customer acquisition growth.

SEARS

Sears and One World Technologies, a China-based subsidiary of Techtronic Industries, have reportedly resolved their public feud. However, Sears filed another lawsuit against another Craftsman supplier, alleging that Western Forge abruptly ended the relationship they have had with Sears for more than fifty years and refused to resume it unless terms were changed to what Sears called "onerous." Their contract was up the end of April, but reportedly Western Forge led Sears to believe that their agreement would be extended. Western Force was acquired by Ideal Industries in 2010. Sears is asking the court to force Ideal to continue to provide the products they manufacture for six months, or through the end of October.

Sears will cut 400 full-time jobs at their headquarters in Illinois and close another 92 Sears and Kmart stores as part of their plan to save $1.25 billion in costs annually. The closings will bring Sears' store count to about 1,180, down from 2,073 five years ago.

Sears Canada filed for bankruptcy in late June. According to the filing, Sears plan to restructure its debts, not to liquidate. Sears Canada is also closing a quarter of its stores, about 59 locations, as part of a court-ordered restructuring. Sears Holdings owns about 12% of Sears Canada's shares; Sears CEO Eddie Lampert owns 45%. Sears Canada hired the same leading bankruptcy and insolvency advisory firm that represented Target Canada.

Sears opened a freestanding store concept dedicated to two of their strongest categories: Appliances and Mattresses. The Sears Appliances & Mattresses store that opened in Pharr, Texas, is patterned after and expands on the basic concept of the Sears Appliance store that opened in Fort Collins, Colorado last year and has reportedly surpassed projections. The new 20,000 square-foot store includes kitchen vignettes plus a full-scale kitchen with a 122-inch interactive digital display. Using a tablet, shoppers can select common kitchen layouts and appliances and then choose colors and finishes.

ACE HARDWARE

John Sommers is Ace's new VP Merchandising. Sommers is a 23-year veteran of The Home Depot and was most recently VP Merchandising. He's replacing Frank Carrol, who left Ace to become CEO at Broan-NuTone in May.

Lisa Doyle, former VP Learning and Development at Lowe's, is the new head of Retail Training for Ace. In 2011 she was named Chief Learning Officer of the Year by CLO Magazine.

W.W. GRAINGER

Grainger launched a new website, gamut.com. It's designed to provide useful information to industrial professionals looking for time-saving solutions for challenging projects. Gamut.com uses a proprietary information system that manages and organizes a comprehensive list of product attributes, application-specific imagery and rich, technical data. A search produces curated results that help customers quickly find and purchase the products they need to get the job done right. Gamut.com offers more than 400,000 products in 32 categories. Grainger plans to add additional products from stocked inventory over time. Gamut is designed to be used during specific and important buying occasions. Gamut.com orders of $99 or more ship free, with most shipping the same day and frequently arriving within 24 hours. In 2016 more than 60% of Grainger's orders originated via digital channels.

AMAZON

Amazon set the newswires on fire when they announced they were acquiring Whole Foods Market for $13.7 billion. News analysts say that we are in the midst of an evolution in retail, and this is definitely a shot across the bow in the growing war for the consumer's wallet between Amazon and Walmart. The acquisition would immediately give Amazon 450 stores nationwide with upscale customers who reportedly can be assumed to already be Amazon shoppers, with many Amazon Prime members included. Both Amazon and Whole Foods said that they have no intention of changing the quality standards that people expect from Whole Foods, and that they hope to make Whole Foods as customer-centric as Amazon is as well as improve Whole Foods' use of technology. According to Whole Foods CEO John Mackey the entire deal from introduction to agreement took just six weeks.

Amazon recently opened a flagship bookstore in a New York City mall at a location that used to be a Borders bookstore. According to the *New York Times,* Amazon has plans to open six more stores this year. Amazon Prime customers can use their smartphones to purchase products; others can use a credit card or debit card, but cash is not accepted.

Amazon will cut Prime membership prices for three groups of people receiving government assistance, in what analysts say is a bid to go after Walmart's core customer base. Reportedly about 20% of the U.S. population receives government assistance. Those people will be offered a Prime membership for $5.99 a month, less than the normal $10.99 a month or $99 annual plan.

Amazon is also offering shoppers another reason to sign up for Prime. The new program, called Amazon Prime Reload, allows members to earn a 2% bonus every time they reload their Amazon gift card balance with cash from their checking account. The bonus is given in the form of rewards that can be used to make purchases on Amazon. The program lets Amazon avoid credit card fees and adds an additional incentive for people to sign up for Prime membership.

MARKET TRENDS

CONSTRUCTION'S LAGGING PRODUCTIVITY GAINS HIGHLIGHTS NEED FOR TECH

Construction is one of the least-digitized industries in the world. Total economic output per worker, or productivity, has remained essentially flat since the end of World

War II. In many other industries there have been productivity gains of as much as 1,500%, according to a McKinsey report from earlier this year. Stagnant productivity, combined with the sector's labor shortage, makes the construction industry "ripe for a robotic takeover," where it could reap benefits of technology, according to Recode. As of February 2017, nearly 200,000 construction jobs were left unfilled across the U.S., according to the Bureau of Labor Statistics. In addition, on average, 98% of construction megaprojects go over budget, so even small improvements in efficiency could result in hundreds of millions in savings. The construction sector could save $127.3 billion annually by making more use of drones in site planning, project updates, and safety enhancements, according to PwC. Among companies developing drones specific to the industry is Autodesk, which is working with a drone company to develop drone technology that can geotag photos, push data to the cloud and create orthomosaic image files.

FREE CONSTRUCTION TECHNOLOGY COURSES

ConTech Academy, powered by Autodesk MIM 360, is a new online, on-demand continuing education site for construction pros. The academy promises to teach people how to use the newest construction technology. Courses include Quality in the Digital Age, Site Safety with Mobile, Site Surveys with Drones and Site Layout with Robotic Total Stations. Attendees learn at their own pace and can earn free continuing professional development credits, download practical guides, templates and starter packages, learn new technical skills and trends and get tips from construction experts. All courses are free at https://contechacademy.bim360.autodesk.com.

LOWES PARTNERS WITH VIRGINIA TECH

Lowe's and Virginia Tech are working to develop an exosuit, a wearable robotic suit with lift-assist technology for Lowe's store employees, that is designed to help employees lift and move product through the store more efficiently and with less muscle fatigue. The idea came out of Lowe's Innovation Lab, which focuses on disruptive technology. The Lab envisioned a future where the use of technology could give employees "superpowers" and help maximize performance.

PRINT A 3D HOME

MIT is working on a robotic system that can 3D print homes at remote sites using a variety of materials, including the earth that's immediately at hand. The robotic 3D platform, known as the Digital Construction Platform, should mimic biology by viewing the building as an organism digitally designed and built with a system that seamlessly connects and supports the whole. The technology is focused on building without the necessity of parts while producing not only the basic structure but also interior elements. Working from a mobile, tracked platform, one of the newest 3D printing systems promises to enlarge and extend the technology to the construction of buildings in isolated areas and harsh conditions. Still in development at the Massachusetts Institute of Technology, the robotic 3D printing system has successfully built the walls of a 50-foot-diameter, 12-foot dome in less than 14 hours.

APPLE ENTERS SMART HOME MARKET

Apple introduced an Intelligent Home Speaker during their recent Developer's Conference. Strategy Analytics forecasts more than 12 million smart home speakers will be purchased globally in 2017, with Amazon's Echo accounting for 80% of the volume. Apple's entry, called the Home Pod, will sell for about $350 in the U.S., U.K. and Australia, and will be available in December. The main version of Amazon's Echo is $180; Google's Home speaker is $130. People will be able to interact with Apple's assistant Siri as well as control smart devices, but Apple says they are also focusing on delivering a higher-quality music experience.

MILLENNIALS WORK HARDER, EARN LESS

Inflation adjusted wages have fallen since 2000. Recent estimates from the Department of Labor show that inflation-adjusted wages for college graduates have fallen more than 5% since 2000. Wages for high school graduates have fallen 11%. The Census Bureau estimates that millennials with full time jobs earn $2,000 less in inflation-adjusted wages than their peers did in 1980. And expectations are changing. People born in 1940 had a 92% chance of earning more than their parents, those born in 1950 had a 79% chance, but those born in 1980 have just a 46% chance of earning more than their parents. And more than

20% of 18–34 year-olds live in poverty. There are several theories as to what is causing this decline in the standard of living. Some speculate that it's the enormous debt load created by the grandparents and parents of millennials that is weighing down the economy; others blame it on stagnant productivity and massive student debt.

WHY PEOPLE AREN'T BORROWING AGAINST THEIR HOMES

Americans have a tradition of borrowing against the equity in their homes to do home renovations and finance big purchases. Housing equity now equals 58% of home values, the highest point since 2006, and only 3.2 million of the 76 million owned households in the U.S. have negative equity; in 2011 there were 11 million households with negative equity in their homes. However borrowing against home equity is still near the post-recession low.

Banking analysts say that despite low interest rates it's become harder to borrow. The web of lending regulations created after the financial crisis is still in place and banks are demanding nearly pristine credit before they will write equity lines. That has dampened what is called the wealth effect, the tendency of households to spend more when home values rise. Americans carry slightly more debt than before the recession, but that is primarily due to huge increases in student loans.

Healthier home equity borrowing could add three-quarters of a percentage point to GDP each year, according to estimates from the New York Fed. Younger and less affluent Americans are less likely than before the recession to own a home or have much equity to borrow against. Older, wealthier Americans now own a larger share of America's housing wealth, but are less likely to borrow for big purchases or projects. In 2017 Americans over 60 owned one-third of housing equity, up from one-fifth in 2006. Homeowners with credit scores above 780 own half of all housing equity, up from 40% a decade ago.

Americans borrowed an average of $181 billion annually against homes from 2000 through 2003, before the reckless borrowing of the housing bubble. From 2012 through 2015 they borrowed just $21 billion annually. Banks must now hold more money in reserve for each equity line they extend, so the business is less attractive to banks than making loans that require lower reserves. And Fannie Mae and Freddie Mac can now send home loans that default back to the banks that provided them, and Fannie and Freddie loans are now costlier because they are required to impose higher fees.

EMPTY NESTS FILLING BACK UP

Millennials ages 20–26 expect to pay off their student debt by an average age of 35, although 14% of them think they'll still be paying it off when they are 50, and 32% plan to have it paid off before they turn 30. Their parents may be surprised to learn that one of the ways they hope to meet their goals is by moving back home after college, according to TD Ameritrade's Young Money Survey. The survey revealed that 32% said they owed anywhere from $10,000 to more than $50,000 on student loans. Nearly half of the post-college millennials surveyed admitted they have moved back home, and 25% of those still in school plan to do so after they graduate. They won't be embarrassed about living with Mom and Dad until they are at least 30 years old. Student debt impacts their plans in many other ways, saying it would delay them buying a home (40%) saving for retirement (31%), moving out of their parents' home (27%), having children (25%) and getting married (21%).

AMAZON PRICE-MATCHING SERVICE

An online price-matching service launched in Seattle in 2015 has a goal of helping shoppers find "Amazon.com prices" at brick-and mortar stores. PriceLocal recently added 10,000 new stores to its database, including Walmart. The service already includes Home Depot. PriceLocal adds a button to a web browser. When a customer finds an item they want on Amazon, they can click on the PriceLocal button and a local store will respond if it can match the Amazon Prime price for the item. Store owners or employees get emails and text messages with the customer's request. If the store agrees to match Amazon's price, the customer is emailed a coupon to buy the item in store. The service works only with Amazon Prime-eligible items or items with free shipping.

PRICE GYMNASTICS ON AMAZON MARKETPLACE

Amazon's marketplace opened in 2000 and now sales on the marketplace account for 49% of the goods Amazon ships. Of the more than 2 million registered sellers, 100,000 each sold more than $100,000 in goods in the past year, according to Amazon. What most consumers don't realize is that prices on the marketplace can literally change in minutes as sellers use complex algorithms to end up in the coveted BUY box, raising and lowering prices in response to demand. Some of the more sophisticated companies like Feedvisor claim to use artificial intelligence to learn the market dynamics behind every item in a catalog. Sellers who rely on Feedvisor let the system handle price increases and avoid bidding wars that can cause sudden "flash crashes." Amazon itself is noted for monitoring product categories and jumping into categories that are selling well, even going so far as to develop a house-branded version of the product. For example, the price of a pack of Duracell brand AAA batteries fluctuates from day to day on Amazon, but the price of Amazon's own brand of AAA batteries is stable, and at the time of this report Amazon brand batteries cost nearly fifty percent less per battery than Duracell's.