

Market Briefing

Content

US Economy	2
Housing & Construction	3
Power Tool Industry	5
Retail	6
Canada Snapshot	8
Market Trends	9

US ECONOMY

Consumer Spending Rises 0.1% Consumer Prices Rise 0.3% Consumer Confidence Rises to 109.7 Unemployment Falls to 3.6% Chicago PMI Rises to 41.5 Wholesale Prices Fall 0.3% Q1 GDP Revised up to 2.0% Fed Holds Rates Steady

HOUSING & CONSTRUCTION

Builder Confidence Rises to 55 Building Permits Rise 5.2%

- Single-family permits rise 4.8%
 Housing Starts Rise 21.7%
- Single-family starts rise 18.5%
 New Home Sales Rise 12.2%
 Existing Home Sales Rise 0.2%
 Regional Housing Stats
 Mortgage Rates Rise to 6.7%

POWER TOOL INDUSTRY

Robert Bosch Tool Corporation

 Expanding power tools accessories manufacturing in North Carolina

Stanley, Black & Decker

- UBS Global Industrials Conference
- Wolfe Global Industrials and Transportation Conference
- Considers selling International Equipment Group

RETAIL

Retail Sales Rise 0.3%

The Home Depot

- Acquires Temco Logistics
- Focuses on rechargeable outdoor power equipment
- JP Morgan Chase Retail Roundup

Walmart

- Walmart+ Week competes with Prime Days
- Walmart Connect launches new programs

Amazon

- Prime Days
- FTC sues over Prime customer acquisition and retention tactics

CANADA SNAPSHOT

Economy Housing & Construction Retail

MARKET TRENDS

Homeowners Staying Put Al in Ecommerce Retail Sales Forecast Inventory Shrink a Complex Problem Right-Sized More Sustainable Packaging

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 *PTNA.Marketing@us.bosch.com*

© Robert Bosch Tool Corporation. All rights reserved. No copying or reproducing is permitted without prior written approval.

US ECONOMY

Exchange Rates June 30, 2023

Euro	1 Euro = \$1.091	\$1.00 = 0.916 Euros
Canadian Dollar	1 CAD = \$0.755	\$1.00 = 1.324 CAD
Japanese Yen	1 Yen = \$0.007	\$1.00 = 144.500 Yen
Chinese Yuan	1 Yuan = \$0.138	\$1.00 = 7.254 Yuan
Mexican Peso	1 Peso = \$0.058	\$1.00 = 17.147 Pesos

Market Watch June 30, 2023

DOW	34,408	+4.6%
NASDAQ	13,788	+10.2%
S&P 500	4,450	+6.7%

Markets ended a strong first half of the year with an end-of-the month surge that left the Nasdaq up more than 30% year to date, the best first half performance for the tech-heavy index since 1983. The S&P, the index most closely watched by professionals, gained 16% in the first half. The Dow posted a more modest 4% gain. Gains the end of June came after a strong upward revision to Q1 GDP that showed the economy is stronger than first thought.

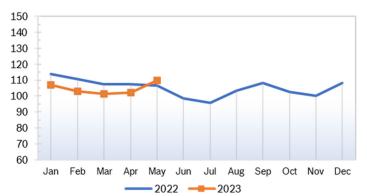
Consumer Spending Rises 0.1%

Consumer spending inched up just 0.1% in May after rising a downwardly revised 0.6% in April. It was the slowest pace in more than two years. Core consumer spending was unchanged after rising a downwardly revised 0.2% in April. While a big slowdown from April, economists noted the deceleration was expected and the economy was still chugging along. Consumer spending for the first quarter was upwardly revised from the 3.7% first reported to 4.2%.

Consumer Prices Rise 0.3%

The Consumer Price Index (CPI) rose 0.3% in May after rising 0.4% in April. Consumer prices were up 4.0% year over year after being up 4.9% year over year in April. The year-over-year increase was the smallest since 2021 and the eleventh consecutive month that year-over-year inflation has cooled down since peaking at 9.1% in June 2022. Core inflation, which excludes the volatile food and energy categories, rose 0.1% in May after rising 0.4% in April and fell to 5.3% year over year from 5.5% year over year in April. Though inflation is gradually slowing it remains well above the Fed's preferred level of 2.0%. The personal expenditures price index (PCE) rose 0.1% in May after rising 0.4% in April and was up 3.8% year over year, the smallest increase since April 2021. Core prices, which exclude the volatile food and energy categories, rose 4.6% year over year in May after being up 4.7% in April. Economists see core inflation as a better predictor of future inflation than overall inflation. The Fed tracks the PCE price indexes for monitoring their 2% inflation target.

Consumer Confidence Rises to 109.7



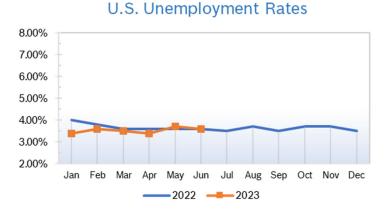
Consumer Confidence Index

- The New York-based Conference Board's Consumer Confidence Index rose to 109.7 in June after falling to 102.5 in May.*
- The Present Situation Index rose to 155.3 in June after falling to 148.9 in May.
- The Expectations Index, based on short-term outlooks for income, business and labor market conditions, rose to 79.3 in June after falling to 71.5 in May. A level of 80 or below historically indicates consumers expect a recession.
- Consumer Confidence fell to 86.9 at the onset of the pandemic in March 2020.

*A level of 90 indicates that the economy is on solid footing; 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.



Unemployment Falls to 3.6%



The unemployment rate fell back to 3.6% in June after rising to 3.7% in May. Unemployment was 3.5% at the beginning of the pandemic in March 2020.

- The economy added 209,000 new jobs, below expectations. The economy added 339,000 new jobs in May. It was the 30th consecutive month of job growth.
- The job market has been surprisingly strong this year despite layoffs in key industries like technology.
- The job market remains very tight but wage growth has continued to cool off despite employers using a variety of tactics to attract and retain employees.
- Job gains were widely spread across many sectors.

Chicago PMI Rises to 41.5

The Chicago PMI rose to 41.5 in June after falling to 40.4 in May. The reading was weaker than expected. The PMI was close to 50 in April, the level that signifies expansion. The PMI has now been below 50 for ten consecutive months. A PMI number above 50 signifies expanded activity compared to the previous month. Looking back to when the series began in 1967, the PMI has ranged from 20.7 in June 1980 to 81.0 in November 1973.

Wholesale Prices Fall 0.3%

The Producer Price Index (PPI) fell 0.3% in May after rising 0.2% in April and was up just 1.1% year over year, the smallest increase since December 2020. The PPI was up 2.3% year over year in April. It was the third decline in wholesale prices in

the past five months. Stripping out volatile food and energy prices, core PPI rose 0.1% in May after rising 0.1% in April and was up 2.8% year over year after being up 3.2% year over year in April. The PPI peaked at a whopping 11.7% year-over-year increase in March 2022.

Q1 GDP Revised Up to 2.0%

Q1 GDP was revised up to 2.0% growth in the third and final reading from the Commerce Department. Growth has now been revised up twice since the initial reading of just 1.1% growth first reported. GDP grew 2.5% in the fourth quarter of 2022. Most of the growth in the first quarter came from upwardly revised consumer spending, which was revised up to 4.2% growth from the 3.7% growth first reported. Rising wages and the big bump in Social Security income also helped boost spending. Business investment in large structures jumped 16%, which could reflect new manufacturing and distribution facilities. The economy has proven surprisingly resilient and the odds of a recession are diminishing, although the Fed may still raise interest rates again to keep tamping down inflation.

Fed Holds Rates Steady

The Fed held rates steady at 5% to 5.25% at their meeting in mid-June after ten consecutive increases that began in March 2022 that took rates from near zero to the current level. According to meeting minutes, the Fed still wants to push inflation back down into their target range of 2% and still intends to raise rates by another half a percent by the end of the year. Fed officials more than doubled their outlook for 2023 economic growth to 1% from 0.4% projected in the March and now think unemployment will only rise to 4.1% by the end of the year compared to 4.5% in the March outlook.

HOUSING & CONSTRUCTION

Builder Confidence Rises to 55

Builder Confidence rose five points to 55 in June after rising to 50 in May, according to the National Association of Home Builders/Wells Fargo Housing Market Index (HMI). It was the sixth consecutive monthly increase in confidence and the first time confidence has exceeded the midpoint of 50 since July 2022. All three major HMI indices posted gains in June. The HMI index gauging current sales conditions rose five points to



61, sales expectations in the next six months increased six points to 62 and traffic of prospective buyers increased four points to 37. About half of all builders continue to offer incentives and 25% offer an average price reduction of 7% to stimulate sales and help offset rising mortgage rates. Any number over 50 indicates that more builders view the component as good than view it as poor.

Building Permits Rise 5.2%

Overall building permits rose 5.2% in May to 1.49 million annual units after falling to 1.42 million units in April. Singlefamily permits rose 4.8% in May to 897,000 million annual units after rising to 855,000 units in April but were down 25.5% from April 2022. Multifamily permits rose 5.9% to an annualized pace of 594,000 units after falling to 561,000 units in April. Permits rose year to date in all regions.

Housing Starts Rise 21.7%

Housing starts rose 21.7% in May to a seasonally adjusted annual rate of 1.63 million units after inching up to 1.40 million units in April. Single-family starts jumped 18.5% to a seasonally adjusted annual rate of 997,000 units after rising slightly to 846,000 units in April. Despite hitting an 11-month high, starts were down 28.1% from April 2022. Multifamily starts rose 3.2% to 555,000 annual units after March numbers were downwardly revised. Regional starts were mixed.

New Home Sales Rise 12.2%

New home sales jumped 12.2% in May to a seasonally adjusted annual rate of 763,000 homes after rising to 683,000 homes in April, according to the National Association of Home Builders (NAHB). Sales were much higher than expected and up 20.0% from May 2022 and were at the highest level since February 2022. New single-family home inventory dropped to a 6.7 months' supply from 7.6 months in April; about six months is considered a normal, balanced market. The median new home price was \$416,300, down 7.6% on a year-over-year basis in May, but up 3.5% from April. Regional sales were down year to date in all regions. 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 0.2%

Existing home sales inched up 0.2% in May to a seasonally adjusted annual rate of 4.30 million homes after falling to 4.28 million in April, according to the National Association of Realtors. Sales were down 20.4% from May 2022. The median existing-home sales price of \$396,100 was up from April but down 3.1% from May 2022. The inventory of unsold existing homes increased 3.8% in May to 1.08 million homes, a 3.0 months' supply at the current sales pace, up slightly from April. The current supply of existing homes for sale is roughly half what it was in 2019 before the pandemic. Regional sales were mixed year to date.

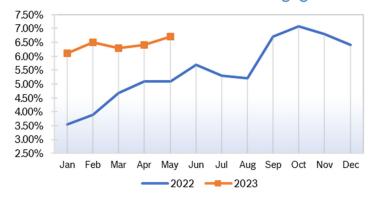
Regional Housing Data

	Northeast	South	Midwest	West
Builder Confidence*	47 (+2)	55 (+3)	43 (+4)	46 (+5)
Building Permits*	-21.1%	-16.5%	-24.7%	-24.1%
Housing Starts**	-11.0%	-12.3%	-15.0%	-24.7%
New Home Sales*	0.8%	1.6%	-2.5%	-20.7%
Existing Home Sales	** -25.4%	-2.7%	-20.8%	-25.5%

* change YTD **change YOY



Mortgage Rates Rise to 6.7%



30-Year Fixed-Rate Mortgage

- 30-year fixed-rate mortgages rose to 6.71% at the end of June after rising to 6.57% at the end of May. Mortgage rates were 5.7% at the end of June 2022.
- The resilient economy and worries over the debt ceiling sent rates up in June.
- Existing home owners remain reluctant to put their homes on the market and give up the low mortgage rate they have and buyers are finding that as prices rise, their money buys less house so are adjusting expectations or waiting for rates to come back down.
- Chronic inventory shortages and a smaller pool of willing buyers and sellers are all contributing to the current state of housing.

POWER TOOL INDUSTRY

Robert Bosch Power Tools

Bosch Power Tools will invest \$130 million to expand their power tools accessory manufacturing in Lincolnton, North Carolina. The new 325,000-square-foot building for manufacturing, logistics and warehouse operations will support manufacturing power tool accessories for products including saws, drills and routers. According to Mike Mansuetti, president of Bosch North America, the expansion is part of Bosch's commitment to develop local manufacturing. The North Carolina Department of Commerce (NCDC) contributed to the expansion through a 12-year Job Development Investment Grant that authorizes the potential reimbursement to Bosch of more than \$2.7 million spread over 12 years based on incremental job creation that the NCDC says will grow the state's economy by more than \$1 billion over the twelve years.

Stanley, Black & Decker

UBS Global Industrials and Transportation Conference:

They are focused on getting their portfolio back to a 4% -6% growth rate, about twice anticipated GDP growth and 35% gross margins.

They're targeting \$750,000 to one billion in overall inventory reduction for this fiscal year.

Tools is running ahead of their projections, with Pro leading the way.

New home construction and repair are down from their pandemic peaks, but are still much stronger than anticipated this year.

They'll be doing more promotions during the second half of the year but that basically means returning to their normal strong promotional activity around the holidays which was curtailed during the pandemic.

Their R&D spending is at a record level and they intend to keep investing in innovation. They'll also be investing in more feet on the street and getting out and talking to end users.

They are currently running many of their facilities at 30% below capacity and will eventually have to increase production to get back to 35% margins. They had approximately 23% margins in the first quarter and are expecting similar margins in the current quarter.

Historically, the secret to the tools and outdoor business has been innovating for the Pro in a very powerful way that produces a big productivity advantage. It's also important to have people out there interfacing with the Pro in-person and demonstrating just how productive these tools can make the individual. That helps drive products through the broader channel base and impacts the DIY consumer as well.



Wolfe Research Global Transportation & Industrials Conference:

The 60,000 SKUs they're eliminating are not 60,000 products. Just one drill bit, for example, could be in several packs. Both their facilities and their channel partners only have room for so much inventory and so many innovative new products. They want all the shelf space and manufacturing space devoted to their products to be very productive.

They will be using more commonly available power tool components to take some of the complexity out of their plants.

Everyone is seeing the same thing: stronger Pro, weaker DIY. They have a relatively strong Pro with consistent purchasing patterns who is willing and able to pay and weaker DIY customer who are more price sensitive, especially at higher price points.

Parts of their supply chain were not performing at peak and now are healing themselves nicely and really improving momentum, even though Tools is still down slightly year over year.

They did about 2% price in the first quarter compared to a big 8% bump in the fourth quarter of 2022.

Other News:

SB&D is reportedly in preliminary discussions to sell its International Equipment Solutions Attachment Group (IES), which produces excavator buckets for construction equipment. SB&D is working with financial advisers to divest themselves of some businesses in order to focus on their core strengths.

RETAIL

Retail Sales Rise 0.3% in May

Retail sales rose 0.3% in May after rising 0.4% in April, according to the Commerce Department. It was the second consecutive month sales increased. Consumer spending rose across most categories, although people spent less on gas, likely due to declining gas prices. Excluding automobiles, gasoline, building materials and food services, retail sales rose 0.2% in May after rising a downwardly revised 0.6% in April. Core retail sales correspond most closely with the consumer spending component of GDP. Core retail sales are mostly goods and not adjusted for inflation. The retail sales report covers about a third of overall consumer spending and doesn't include services, such as travel and entertainment.

The Home Depot

THD acquired appliance delivery and installation company Temco Logistics. Temco has served as one of THD's largest appliance and bulky items delivery partners for more than a decade. THD said the acquisition is important to the appliance experience and delivering on their "customer first" objective to reduce complexity and make appliance deliveries more efficient. Financial terms were not disclosed.

THD announced that by 2028 more than 85% of outdoor power equipment will run on rechargeable battery technology instead of gas, particularly push lawn mowers and handheld outdoor equipment like leaf blowers and trimmers. Transitioning to rechargeable batteries for these categories will eliminate more than two million metric tons of greenhouse gases annually.

According to industry data, using a gas-powered lawn mower for an hour creates as much air pollution as driving 300 miles in an average car. Running a gas leaf blower for an hour creates the same number of emissions as a 1,100-mile drive or driving from Los Angeles to Denver.

THD says that innovating residential lawn equipment away from gas powered combustible engines will help make neighborhoods cleaner and quieter. They believe that it's important to work with their suppliers to increase the number of innovative and sustainable products available to consumers.

JP Morgan Chase & Co. Retail Roundup:

CFO Richard McPhail represented THD at this conference for what facilitator Chris Horvers referred to as a "fireside chat."

Housing wealth in the US has grown from \$20 trillion in 2012 to more than \$50 trillion today while mortgage debt has remained stable. Homeowners are in great shape, the unemployment rate is very low and the rental vacancy rate is at an all-



time low of just 0.6%, compared to an average of 1% - 2%.

They believe they will compensate for flat consumer spending by taking market share. When people improve their homes they also improve their standard of living and the value of their homes.

They think of the year as two halves rather than quarters. The wet start to the spring affected sales, but they always get what they call the "bathtub effect." That means spring always happens, it just depends on when.

McPhail reiterated that about half of the approximately \$900 billion addressable home improvement market is accounted for by Pros, and they are committed to growing their share of this dependable market by delivering benefits that will help them get a share of bigger jobs and primary contracts.

THD wants to give Pros the ability to run their entire project through one supplier because that will save them time and money and simplify their lives. THD believes that is a unique proposition that they are in a unique position to deliver on.

Right now the project pipeline is very fragmented; the average large Pro reports dealing with at least a dozen suppliers. THD believes that the program will also benefit small Pros, because everyone wants to be able to work more efficiently. For Pros, time is money.

At their recent store managers meeting they asked all the managers with 20 years of experience or more to stand up. They were overwhelmed when almost everyone in the room rose to their feet. That means the great majority of store managers have dedicated their entire career to the Home Depot. They believe that is unique in their sector and in retail overall. Many retailers have upped their starting wages, but much of the billion dollars they've invested in talent has gone to highly tenured employees; every hourly associate got a nice wage increase.

Walmart

Walmart is taking advantage of Amazon Prime Days by kicking off a July promotion called "Walmart+ Week." The event will last four days, from Monday, July 10 to Thursday, July 13. Starting at noon EST on Monday, members of the Walmart+ paid subscription program will have early online access to savings, including exclusive deals and limited time offers, on thousands of products across categories including electronics, home, toys and fashion.

Walmart+ Week will open to all Walmart customers at noon on Tuesday, June 11 before Amazon Prime Days officially kick off. The Walmart event runs one day longer, ending Thursday night.

Walmart also is offering exclusive limited time offers just for Walmart+ members during the event, including six months of unlimited Panera Sip Club membership for five dollars per month and a monthly \$5 MyPanera reward, as well as "buy one, get one" tickets to all Six Flags parks.

Walmart Connect is testing in-store demonstrations that offer customers product samples as they walk through the store. Suppliers will also soon be able to seamlessly integrate demos into their campaigns across digital and in-store experiences.

Walmart Connect launched their in-store demo pilot in April 2023 with 25 stores. They are currently offering demos each weekend at more than 120 stores with the aim of expanding to 1,000 by the end of the year. Part of the goal of the test is to determine how to enhance the omnichannel experience, such as by pairing a demo cart with QR codes that link back to a curated Walmart.com landing page.

Walmart Connect is giving brands their first opportunity to directly target Walmart customers through the Walmart Radio medium. They're introducing ad spots to the in-store Walmart Radio audio out-of-home (OOH) platform, giving suppliers the ability to purchase ads by region or by store to target key markets with campaigns.

Amazon

Amazon Prime Days will be July 11 and July 12th and will have a greater focus on products for small business than in the past. Prime Day will officially kick off at 3:00 a.m. EST July 11, but Amazon was already leaking specials and offering pre-Prime Day deals in mid-June. Amazon is reportedly offering a new program that will allow Prime members to request an invitation to get access to certain deals that are expected to sell out.



Amazon will soon begin recruiting 2,500 small businesses to take part in the program dubbed Amazon Hub Delivery. Participating stores include everything from florists to gas stations. They will receive an average of 30 packages a day with instructions to "deliver to customers in your area when you have time during the day." No prior delivery experience is required. Businesses will be paid for each package they deliver in weekly direct deposits, up to \$27,000 annually. If the average stands, that amounts to \$2.50 per package. Stores in Alabama, Alaska, Arkansas, California, Florida, Iowa, Indiana, Illinois, Massachusetts, Minnesota, North Carolina, North Dakota, New Jersey, New York, Ohio, South Dakota, and Washington will be part of the pilot program.

The FTC is suing Amazon for allegedly duping millions of consumers into joining Prime in order to buy something and then making it practically impossible for them to cancel.

CANADA SNAPSHOT

Unemployment Rises to 5.4%



Canada Unemployment Rates

- The unemployment rate rose to 5.4% in June after rising to 5.2% in May after holding at 5.0% for five months. The economy added 60,000 new jobs in June. Unemployment reached a record low of 4.9% in June and July 2022. In January 2021 unemployment peaked at 9.4%.
- All of the job gains were in part-time work in the private sector, where employment is up by nearly 300,000 jobs since April 2022.
- Employment in wholesale and retail trade increased by 33,000 in June, the third consecutive monthly increase.
- Construction employment declined by 14,000 jobs.
- Employment rose in Ontario, Nova Scotia, Newfoundland and Labrador, fell in Prince Edward Island and was little changed in other provinces.
- Year-over-year wage growth was 4.2%, the first time in nearly a year wage growth has been below 5%. Wage growth needs to continue to cool down in order to tamp down inflation.

Consumer Prices Rise 3.4%

Consumer prices were up 3.4% year over year in May after being up 4.4% year over year in April. It was the smallest increase since June 2021. The slowdown was largely driven by lower year-over-year prices for gasoline. Excluding gas, the CPI



was up 4.4% year over year. While the Bank of Canada (BoC) targets 2% annual inflation, their target for this year is to get inflation down into the 3% range. Interest rates have exceeded the bank's target rate for the past two years. Central bank economists expect inflation to fall rapidly in the coming months, but it may take longer for interest rates to come down.

BoC Raises Interest Rates to 4.75%

The Bank of Canada (BoC) surprised everyone when they abruptly raised rates a quarter-point to 4.75% in June after previously signaling that rate increases were likely on hold for the foreseeable future. The move was in response to Canada's surprisingly strong economy and fears that inflation might heat up. Rates are now at their highest level since 2001. Analysts are speculating that more rate increases may be forthcoming until demand and the resulting inflation cool down.

Housing and Construction News

Housing starts fell 23% in May to a seasonally adjusted annual rate of 202,494 units from a slightly revised 261,357 units in April as groundbreaking decreased on multiple unit and single-family detached urban homes, according to the Canadian Mort-gage and Housing Corporation (CMHC). The decrease was greater than expected.

Canadian home sales rose 1.4% year over year in May to 54,000 units (not seasonally adjusted). Seasonally adjusted sales were up 5.1% from April to 40,220 units, according to the Canadian Real Estate Association (CREA). It was the fourth consecutive month of higher sales and the first time since June 2021 that sales were up year over year.

Q1 GDP Rises 3.1%

GDP grew a robust 3.1% in the first quarter, well ahead of forecasts. Stronger than expected GDP and several months of good job growth made it more likely that the central bank would raise rates, which it did in early June.

GDP was essentially unchanged in April, although the manufacturing sector fell 0.6%, the first decline in four months. The construction sector rose 0.4% overall, although residential construction declined.

Retail Sales Rise 1.1% in April

Retail sales rose 1.1% to \$65.9 billion in April after falling to \$65.3 billion in March. Sales increased in eight of nine subsectors. Core retail sales, which exclude gasoline stations and fuel vendors and motor vehicle and parts dealers, increased 1.5% in April after increasing 0.3% in March. In volume terms, retail sales increased 0.3% in April. Sales were up in eight provinces.

Retail Ecommerce Sales Fall 6.1%

On a seasonally adjusted basis, retail ecommerce sales were down 6.1% to \$3.6 billion in April, accounting for 5.5% of total retail trade compared with 5.9% in March.

Retail Notes

Canadian Tire signed a seven year deal with Microsoft to use Microsoft's Azure technology to modernize CT's systems and infrastructure and leverage Azure's AI capabilities in order to better serve Canadian Tire's customers. Canadian Tire said the deal will "greatly expedite" their digital capabilities.

MARKET TRENDS

Homeowners Staying Put

With a nationwide shortage of housing and record-high home prices, more homeowners are choosing to stay in their properties versus move or upgrade to new ones. The deficit doesn't just affect owner-occupied properties. Rental housing is also increasingly scarce. Today nearly half of American homeowners are living in the first home they purchased.

Of those who have lived in their home more than six years, 61% will choose to renovate instead of move. These homeowners are staying in their homes and spending considerable resources on remodeling, renovations, and redecorating.

Mortgage rates have more than doubled from last year and housing prices have not declined significantly in most areas, producing a situation where people stay put choose to stay even when they'd like to move to get more room or a better lifestyle.



AI in Ecommerce

Amazon caused a stir when they posted two job openings that seemed to signal they were going to implement an AI strategy for ecommerce. Amazon wants to use generative AI to make searching their website more interactive and conversational. This would be a major change from their legacy keyword and filter-based search. Ecommerce has been incorporating AI since the early 2000s, so this is a logical extension that will personalize user experiences. Chatbots use AI to answer questions and send targeted push notifications. Online retailers use AI to deliver personalized ads to shoppers.

The global AI market is projected to grow at a compound annual growth rate of 21.4% between 2022 and 2030. That means people can expect to see more AI in all aspects of life. AI capabilities will also become much more sophisticated and advanced. Currently Google, Microsoft and other big players in AI are grappling with how to regulate the industry, prevent AI misuse and protect user privacy while taking advantage of the next technological frontier.

Retail Sales Forecast

The National Retail Federation (NRF) projects that retail sales will grow between 4% and 6% this year to between \$5.13 trillion and \$5.23 trillion this year. The NRF forecast excludes motor vehicles, gasoline and restaurants. Retail sales grew 7% last year to \$4.9 trillion. The average annual retail growth pre-pandemic was 3.6%. NRF noted that recent developments in the financial markets and banking sector as well as some unresolved public policy issues complicate the outlook.

NRF expects consumers to keep spending, but the pace is likely to be uneven and hard to project. Non-store and online sales, which are included in the total figure, are expected to grow between 10% and 12% year-over-year to a range of \$1.41 trillion to \$1.43 trillion.

Physical stores are still the primary point of purchase, accounting for about 70% of total retail sales. NRF projects fullyear GDP growth of around 1%, about half of the growth in 2022, but expects goods and services to grow between 3% and 3.5% for the year.

Despite the resilient labor market, NRF anticipates job growth will slow down in the coming months to be more inkeeping with slower economic activity and the prospect of tighter credit and high interest rates. NRF thinks that unemployment will grow to more than 4% by the end of this year.

Inventory Shrink a Complex Problem

Overall, the NRF estimates there was \$94.5 billion in inventory losses in 2022, attributed to run-of-the-mill shoplifting, organized retail crime (ORC) and employee theft. Employee theft is a growing issue, with nearly 57% of retailers identifying "internal theff" as a growing risk over the past five years, and 20.7% of those saying the threat has become much more of a problem, according to a recent survey by the National Retail Federation (NRF). Employee theft often occurs earlier in the supply chain, from backrooms and distribution centers, so products never make it to the floor. It's a sensitive issue for retailers, whose reputations are built, in part, on customer service and trust.

Target CEO Brian Cornell has been a very vocal proponent for combatting inventory shrink at all levels and has raised Target's wages to \$15 to \$24 an hour across the country, well above the federal minimum wage and that of many states. They are also promoting their Dream to Be program, which offers free tuition for workers earning a degree at more than 40 schools, colleges and universities.

The NRF survey suggests that few retailers are focused on this issue and that 70.9% of retailers don't have a specific financial threshold that dictates when an employee who steals will be prosecuted. Today many retailers caution employees not to attempt to detain or intervene if they suspect someone is stealing, for fear of turning a non-violent crime into a serious incident that threatens customer and employee safety.

Right-Sized More Sustainable Packaging

In June, Walmart announced they would ensure that everything they ship arrives in more sustainable materials in packaging sized and suitable for what was ordered and using more recyclable materials and components.

They will be using several tactics, including moving from plastic to recyclable paper mailers, right-sizing cardboard-box packaging, giving customers the option to consolidate shipping on ecommerce orders, opting out of single-use plastic bags for



online pickup orders, and last-mile delivery efficiencies that reduce mileage and delivery times, according to Walmart.

Walmart says they can eliminate about 2,000 tons of plastic waste by January 31, 2024, the end of their fiscal year. Shipping products that can be safely packed in paper mailers will help eliminate some of the 65 million plastic mailers that are generally single-use and not recyclable. Analysts who reported on this story noted that Amazon has a persistent problem and a reputation for shipping items in unsuitable packaging padded with way too much bubble wrap.

Large boxes and plastic envelopes are expensive to produce and ship but often big retailers have no other options readily available unless they work to change shipping methodologies from where an item originates and stock a wider range of packaging sizes and types.

Fulfillment is a difficult task but one that can really benefit from even small reductions in cost and improvements in efficiency. Both Walmart and Amazon have thousands of distribution centers across the country.

Walmart has already eliminated single-use plastic bags (and some paper bags) in many states, instead offering reusable bags for \$0.74.

