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CANADA SNAPSHOT

Economy

Housing & Construction

Retail

Bosch | Dremel

RotoZip | Vermont American

CST/berger | freud | Sia

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US ECONOMY

Exchange Rates April 28, 2023

Euro	1 Euro = \$1.104	\$1.00 = 0.906 Euros
Canadian Dollar	1 CAD = \$0.738	\$1.00 = 1.355 CAD
Japanese Yen	1 Yen = \$0.007	\$1.00 = 136.002 Yen
Chinese Yuan	1 Yuan = \$0.145	\$1.00 = 6.913 Yuan
Mexican Peso	1 Peso = \$0.055	\$1.00 = 18.000 Pesos

Market Watch April 28, 2023

DOW	34,098	2.5%
NASDAQ	12,227	0.6%
S&P 500	4,169	1.5%

All markets finished April in the black, with the DOW having the best month since January. The market was boosted by strong earnings from several big tech companies. The latest data showed inflation slowing and GDP indicated the economy was still growing, albeit slowly.

Consumer Spending Unchanged

Consumer spending was unchanged in March after inching up a downwardly revised 0.1% in February. Spending on services rose 0.4%, driven by housing and utilities as well as healthcare. Spending on goods fell 0.6% as purchases of motor vehicles, mostly new light trucks, decreased. Consumer spending was included in the first report for Q1 GDP, which showed that consumer spending surged 3.7% in the first quarter.

Consumer Prices Rise 0.1% in March

The Consumer Price Index (CPI) rose 0.1% in March after rising 0.4% in February. Consumer prices were up 5.0% year over year after being up 6.0% in February. It was the ninth consecutive month that year-over-year inflation has cooled down. Core inflation, which excludes the volatile food and energy categories, rose 0.4% in March after rising 0.5% in February but remained at 5.6% on an annual basis for the second consecutive month. Though inflation is gradually slowing it remains well above the Fed's preferred level of 2.0%. The personal con-

sumption expenditures (PCE) price index gained 0.1% in March, the smallest increase since last July, after rising 0.3% in February. In the 12 months through March the PCE price index increased 4.2%. That was the smallest advance since May 2021 and followed a 5.1% rise in February. Excluding the volatile food and energy components, the PCE price index rose 0.3%, in March, matching February's gain. The core PCE price index was up 4.6% year over year, a slight decline from 4.7% year over year in February. The Fed tracks the PCE price indexes for its 2% inflation target.

Consumer Confidence Falls to 101.3

Consumer Confidence Index

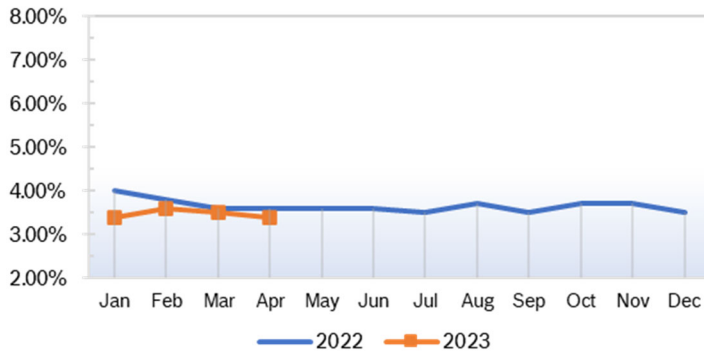


- ▶ The New York-based Conference Board's Consumer Confidence Index fell to 101.3 in April after rising to 104.2 in March.*
- ▶ The Present Situation Index remained at 151.1 in April.
- ▶ The Expectations Index, based on short-term outlooks for income, business and labor market conditions, fell to 68.1 in April after rising to an upwardly revised 74 in March. A level of 80 or below indicates consumers expect a recession.
- ▶ In May 2020 Consumer Confidence was 120.0 but 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 3.4%

U.S. Unemployment Rates



- ▶ The unemployment rate fell to 3.4% in April after falling to 3.5% in March. Unemployment was 3.5% at the beginning of the pandemic in March 2020.
- ▶ The economy added 253,000 new jobs after adding an average of 345,000 jobs per month in January through March of this year. It was the 28th consecutive month of job growth.
- ▶ The job market is still tight but there are many indications that the red-hot job market is cooling down a bit as some industries lay off people and others hire more cautiously because of the uncertain economic outlook.
- ▶ Wage growth is still running above pre-pandemic levels but is cooling as well as more Americans look for work.
- ▶ The Fed approved their 10th consecutive increase in interest rates in early May but signaled they are ready to pause, a sure sign they view the economy as slowing down.
- ▶ Job openings in March fell to 9.6 million, according to the latest Job Openings and Labor Turnover Survey. It was the lowest level in two years and a further indication that the slowdown in the labor market is becoming more entrenched. It was the third consecutive month that job openings have declined.
- ▶ Transportation, warehousing and construction were among the sectors posting large declines in openings as higher interest rates and fears of a pullback in consumer spending continued to discourage employers from hiring.

Chicago PMI Rises to 48.6

The Chicago PMI rose to 48.6 in April after inching up to 43.8

in March. The 4.8 point increase left the index still below 50, the level that signifies expansion, for the eighth consecutive month. Economists had expected another decline. A PMI number above 50 signifies expanded activity over the previous month; this was the sixth consecutive reading below 50, the level which indicates contraction. 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 0.5%

The Producer Price Index (PPI) fell 0.5% in March after slipping 0.1% in February and was up 2.7% year over year after being up 4.7% in February. It was the mildest year-over-year increase in more than a year. Stripping out volatile food and energy prices, core PPI fell 0.1% in March after rising 0.3% in February and was up 3.4% year over year, a sharp drop from 5.4% in January and February. The PPI peaked at a whopping 11.7% year-over-year increase in March 2022.

Q1 GDP Grows 1.1%

Q1 GDP grew an anemic 1.1% in the first reading from the Commerce Department, down from Q4 growth of 2.5%. Economists had expected GDP growth of around 2% for the first quarter. Declining business investments offset consumer spending that grew a robust 3.7%, the largest increase in two years. Households boosted spending on durable goods by a whopping 17%, much of which reflected a big jump in auto sales. Companies cut investments and reduced production, trimming 2.3% off GDP. Many economists believe that the combination of rising interest rates and stubbornly high inflation will result in a mild recession during the second half of the year. Inflation rose at an annual pace of 4.2% in the first quarter, compared to 3.7% in Q4 last year.

HOUSING & CONSTRUCTION

Builder Confidence Rises to 45

Builder Confidence rose one point to 45 in April after rising two points to 44 in March, according to the National Association of Home Builders/Wells Fargo Housing Market Index (HMI). It was the fourth consecutive monthly increase in confidence. The HMI index gauging current sales conditions rose two points to 51 and the component charting sales expectations in the next

six months increased three points to 50. It was the first time these components both returned to the 50+ range since June 2022. The gauge measuring traffic of prospective buyers remained unchanged at 31. April was the first month during which the traffic component failed to improve this year. The index gauging current sales conditions rose two points to 49 and the gauge measuring traffic of prospective buyers increased three points to 31, which was the strongest traffic reading since September of last year. Sales expectations in the next six months fell one point to 47. Builders continued to reduce prices and offer sales incentives to stimulate sales. Any number over 50 indicates that more builders view the component as good than view it as poor.

Building Permits Fall 8.8%

Overall building permits fell 8.8% in March to 818,000 units after jumping to a 1.52 million unit annualized pace in February. **Single-family permits rose 4.1% in March** to 818,000 units after rising to 777,000 units in February. It was the second consecutive monthly increase in permits. Multifamily permits rose 21.1% to an annualized pace of 747,000 units after rising to 621,000 units in January. Regional permits were mixed.

Housing Starts Fall 0.8%

Housing starts fell 0.8% in March to a seasonally adjusted annual rate of 1.42 million annual units after rising more than 9% in February to 1.45 million units. **Single-family starts rose 2.7%** to a seasonally adjusted annual rate of 861,000 units after rising to 830,000 units in February. Single-family starts were down 27.7% from March 2021. Multifamily starts fell 5.9% to 559,000 annual units after jumping nearly 25% to 620,000 units in February. Regional starts were mixed. The number of single-family homes under construction in March was 716,000, the 10th monthly decline. Builders completed just 15,000 more homes than were started, resulting in a decline for the construction pipeline. There are now 958,000 apartment units under construction, which is the highest level since the fall of 1973.

New Home Sales Rise 9.6%

New home sales rose 9.6% in March to a seasonally adjusted annual rate of 683,000 new homes after sales for February were revised downward. New home sales were down 3.4% from March 2022. New single-family home inventory fell for the sixth consecutive month. Inventory was at an 7.6-months' sup-

ply; about six months is considered a normal, balanced market. The median new home sale's price in February rose to \$449,400 in March, up from \$438,200 in February and up 3.2% compared to a year ago. Regional sales were mixed. 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 Fall 2.4%

Existing home sales fell 2.4% in March to a seasonally adjusted annual rate of 4.44 million units after rising to 4.58 million units in February, according to the National Association of Realtors. Sales were down 22.0% from March 2022. The inventory of unsold existing homes rose 1.0% in March to 980,000 homes after being unchanged in February. The median existing-home price was \$375,700, down 0.9% from March 2022. It was the second consecutive month median home prices declined year over year. Prices climbed slightly in three regions but dropped in the West. Unsold inventory remained at a 2.6-months' supply. Properties typically remained on the market for 29 days in March, down from 34 days in February but up from 17 days in March 2022. Regional sales were mixed.

Regional Housing Data

	Northeast	South	Midwest	West
Builder Confidence*	46 (+4)	49 (+4)	37 (+2)	38 (+4)
Building Permits*	-24.5%	-15.7%	-25.3%	-28.1%
Housing Starts*	- 8.3%	-11.5%	-35.5%	-28.2%
New Home Sales**	1.7%	-5.8%	-19.6%	-32.2%
Existing Home Sales*	N/C	-1.0%	-5.5%	-3.5%

* change from previous month **change year over year

Mortgage Rates Rise to 6.4%



- ▶ 30-year fixed-rate mortgages rose to 6.4% at the end of April after falling to 6.3% at the end of March. Mortgage rates were 5.1% at the end of April 2022.
- ▶ While rates rose the last two weeks of April economists expect rates to slowly fall throughout the rest of the year.
- ▶ Home prices and rates are stabilizing, which is good news for homebuyers.

POWER TOOL INDUSTRY

Robert Bosch Tool Corporation

Robert Bosch GmbH acquired US chipmaker TSI Semiconductors, based in Roseville, California. With a workforce of 250, TSI has been producing semiconductor chips since 1984. Robert Bosch plans to invest more than \$1.5 billion in the Roseville site and convert the TSI Semiconductors manufacturing facilities to state-of-the-art processes. The first chips will be produced on 200-millimeter wafers based on the innovative material silicon carbide (SiC) starting in 2026.

The full scope of the planned investment will be heavily dependent on federal funding opportunities available via the CHIPS and Science Act as well as economic development opportunities within the state of California. Vice President Kamala Harris applauded the investment, saying that it will bring down costs, strengthen the supply chain and help rebuild American manufacturing.

Robert Bosch has been producing semiconductors at various locations around the globe for more than 60 years and is widely recognized as an industry leader and expert. Financial terms were not disclosed.

Stanley, Black & Decker

About 2.2 million DeWalt, Stanley and Craftsman fiberglass sledgehammers were recalled by the Consumer Products Safety Council (CPSC). The recall involves several different sizes, lengths and model numbers. The heads can detach while in use and pose an injury risk. Stanley Black and Decker said it has received 192 reports of the sledgehammer detaching. There have been two reports of faulty sledgehammers causing injuries to the head and face. Twenty-five various models are impacted by the recall. The recalled sledgehammers weigh between 2 pounds and 12 pounds and range between 14 inches and 36 inches in length, the CPSC said. About 53,000 sledgehammers sold in Canada were also recalled. SB&D provided a toll-free number and is issuing full refunds.

TTI/Techtronic Industries

TTI signed on to the Science-Based Target Initiative which aligns them with the Paris Agreement and commits them to reducing carbon emissions throughout their value chain by 60% by 2030.

RETAIL

Retail Sales Fall 1.0%

Retail sales fell 1.0% in March after falling a downwardly revised 0.2% in February, according to the Commerce Department. It was the largest monthly increase since March 2021 when stimulus checks were delivered. Excluding automobiles, gasoline, building materials and food services, retail sales fell 0.3% after rising 0.5% in February. Sales fell across most categories, but rose 1.9% at online retailers. Core retail sales correspond most closely with the consumer spending component of GDP. Unlike many government reports, retail sales aren't adjusted for inflation and can reflect rising prices or one-time events that boosted spending. 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 named Melanie Babcock vice president of Retail Media+ and monetization. The former vice president of integrated media explained that THD's retail media business has been growing since they launched it in 2019. Suppliers are becoming more comfortable with investing in retail media and it is truly a business now for THD, with its own P&L, rather than a marketing tool. THD targets both Pros and consumers and says that both segments generally begin a project with research, which is often done online or on an app. Even within the Pro community, needs differ greatly, depending on whether they are using THD to fill-in or as their primary supplier. They have been investing in their data gathering and management for years and their ability to market to the different customer segments. Babcock describes it as a hard business because it's a company inside a retailer with a different business model than the retailer.

EVP Merchandising Jeffrey Kinnaird is leaving the company immediately. He'll be replaced by William "Billy" Bastek, a 33-year veteran of The Home Depot who has served in several leadership positions across the merchandising organization. Most recently, he was senior vice president of hardlines, where he was responsible for merchandising and marketing strategies for the hardware and garden departments. Kinnaird could receive millions of dollars and help filing his taxes as part of his severance agreement. Kinnaird, who is Canadian, spent nearly three decades with Home Depot, including nearly five years as president of the Canadian division. He became executive vice president of merchandising in October 2020.

THD launched a Virtual Kids' Workshop that challenges gamers to play and learn by collecting materials needed to build projects. THD's debut in the metaverse is part of their investment in interconnected experiences. Kids' Workshops are meant to introduce a new generation to the fun and accomplishment of home improvement and building things.

Lowe's

Lowe's introduced a suite of Pro-focused tools that build on the success of their MVP Pro Rewards and Partnership Program. According to proprietary research from Lowe's, 61% of Pros expect retailers to help them shop quickly, so they can get back to the job. The suite of tools includes online ordering, seven-day price guarantees, a buy it again option, order tracking and volume pricing.

Lowe's chief marketing officer Marisa Thalberg has left the company as part of a broader reorganization. Lowe's cut Thalberg's role and moved their marketing team under Bill Boltz, executive vice president of merchandising. Thalberg oversaw several high-profile campaigns, including TV commercials on ESPN during the NFL Draft.

Lowe's will install rooftop solar panels at 174 stores and distribution centers nationwide as part of their commitment to achieve net zero greenhouse gas emissions by 2050. The newest installations will include facilities in California, Illinois and New Jersey.

Walmart

Walmart plans to give 20,000 free Walmart+ memberships to moms who give birth in hospitals in the US anytime during the month of May in celebration of Mother's Day. They are partnering with Pampers Hospital Gift Program, which sends new moms home with gift bags. Moms who receive the Walmart+ membership in their Pampers gift bag can redeem their membership through a QR code and personalized number. Their membership will be good for a year from the date it's activated. To tout the giveaway, Walmart is running ads featuring singer and songwriter Cardi B, comedians and actresses Jenny Slate and Janelle James, and actress Stephanie Beatriz. Each person featured in the ads is a mother who shares her tips on being a mom in the clips. Walmart is considered the primary competitor to Amazon's Prime program.

Walmart has begun using AI to negotiate costs and purchasing terms with certain vendors, reportedly accomplishing in days what used to take several weeks. According to Bloomberg, Walmart is using a chatbot developed by the California-based company Pactum to negotiate smaller contracts with suppliers who provide equipment they use rather than products they sell. Research showed that 72% of the suppliers preferred negotiating with the chatbot to negotiating with a human. Pactum said that the technology allowed Walmart to simultaneously negotiate with 2,000 suppliers and save an average of 3%.

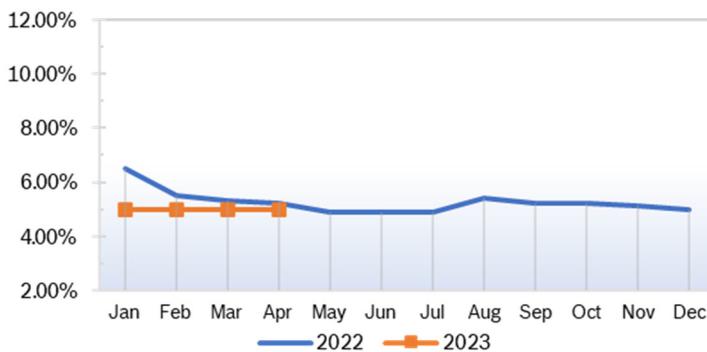
Amazon

Amazon will start charging people \$1 to drop off a free return at a UPS store when there is a Kohl's, Whole Foods or Amazon Fresh location that is closer.

CANADA SNAPSHOT

Unemployment Holds at 5.0%

Canada Unemployment Rates



- ▶ The unemployment rate held at 5.0% in April for the fifth consecutive month and the economy added 41,000 new jobs after adding 35,000 jobs in March. 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 24,000 (+0.8%) in April, following little change in February and March after rising by 59,000 jobs in January.
- ▶ Employment rose in Ontario and Prince Edward Island and fell in Manitoba. Employment was little changed in the other provinces.
- ▶ Year-over-year wage growth was 5.2%, above 5% for the tenth consecutive month. Wage growth needs to cool in order to tamp down inflation.

Consumer Prices Rise 4.3%

Consumer prices were up 4.3% year over year in March after being up 5.2% year over year in February. It was the smallest increase since August 2021. On a monthly basis, the CPI was up 0.5% in March after rising 0.4% in February. On a

seasonally adjusted monthly basis, the CPI rose 0.1%. Statistics Canada noted that inflation has slowed in recent months, rising 1.7% compared to six months ago, but prices remain elevated. Compared with 18 months ago, inflation has increased 8.7%. Shelter costs are rising more slowly now that home prices are falling, but mortgage costs are still increasing.

Bank of Canada Holds at 4.5%

The BoC held interest rates at 4.5% in early April after doing the same in early March. The BoC raised rates a quarter-point in January and increased rates a total of eight times between March 2022 and February of this year. Rates are currently at the highest level in fifteen years. The BoC noted that economic reports point to inflation decelerating and moving closer towards the goal of 2.0%. They now expect inflation to drop to around 3% over the summer.

Housing and Construction News

Housing starts fell to a seasonally adjusted annual rate of 213,865 units in March after climbing to 243,959 units in February, according to Canada Mortgage and Housing Corp. (CMHC). Analysts noted the decline was primarily due to starts returning to more normal, pre-pandemic levels.

Canadian home sales rose 1.4% in March after rising 2.3% in February. Although it was the second consecutive month of higher sales, sales were still down but were down 34.4% on an annual basis, according to the Canadian Real Estate Association. (CREA) The CREA's Home Price Index edged up 0.2% on the month and was down 15.5% annually, while the national average selling price was down 13.7% from March 2022. Sales were in line with 2018 and 2019, and analysts noted that the market has probably blown through some of the pandemic-induced market frenzy. New listings continued to trend down as people anxious to take advantage of high prices drop out of the market.

Retail Sales Fall 0.2%

Retail sales decreased 0.2% to \$66.3 billion in February after rising to \$66.4 billion in January. Sales fell in 4 of 9 subsectors, representing 48.0% of retail trade. The decline was led by lower sales at gasoline stations and general merchandise retailers. Core retail sales, which exclude gasoline stations and fuel vendors and motor vehicle and parts dealers,

increased 0.1%. In volume terms, retail sales decreased 0.7% in February. Retail sales fell in six provinces.

Retail Ecommerce Sales Fall 0.1%

On a seasonally adjusted basis, retail ecommerce sales were up 7.8% to \$3.7 billion in February, accounting for 5.5% of total retail trade, compared with 5.1% in January.

Retail Notes

About 53,000 DeWalt, Stanley and Craftsman fiberglass sledgehammers sold in Canada were recalled. The recall involves several different sizes, lengths and model numbers. The heads can detach while in use and pose an injury risk. Stanley Black and Decker said it has received 192 reports of the sledgehammer detaching. There have been two reports of faulty sledgehammers causing injuries to the head and face. Twenty-five various models are impacted by the recall. The recalled sledgehammers weigh between 2 pounds and 12 pounds and range between 14 inches and 36 inches in length. About 2.2 million sledgehammers sold in the US were also recalled. SB&D provided a toll-free number and is issuing full refunds.

THD EVP Merchandising Jeffrey Kinnaid, who left the company suddenly in April, is Canadian, spent nearly three decades with Home Depot, including nearly five years as president of the Canadian division. He became executive vice president of merchandising in October 2020.

GDP Rises 0.4%

Real GDP rose 0.4% in February after rising 0.5% in January. Both goods-producing and services-producing industries edged up 0.1% after rising in January. Overall, 12 of 20 industrial sectors posted increases. The construction sector expanded 0.3% in February, as all subsectors were up for a second month in a row. Residential building construction (+0.3%) posted a second consecutive increase after declining in the last five months of 2022. Home alterations and improvement, which was a big reason residential building construction fell in 2022, drove gains in both January and February. Engineering and other construction activities continued to expand, rising 0.3% in February. Non-residential building construction (+0.4%) posted a third consecutive increase, driven by gains in both new building construction and alterations and improvement. Retail trade fell

0.5%, the first decline for this sector in three months, driven by falling sales at gasoline stations.

Consumer Prices Rise 4.3%

The Consumer Price Index (CPI) rose 4.3% year over year in March after rising 5.2% in February. It was the smallest increase since August 2021 (+4.1%). On a year-over-year basis, Canadians paid more in mortgage interest costs, which was offset by a decline in energy prices. Excluding food and energy, prices were up 4.5% year over year in March, following a 4.8% gain in February; excluding mortgage costs, the CPI rose 3.6%, after increasing 4.7% in February. On a monthly basis, the CPI was up 0.5% in March, following a 0.4% gain in February. On a seasonally adjusted monthly basis, the CPI rose 0.1%.

MARKET TRENDS

Q1 Remodeling Index Remains High

The National Association of Home Builders (NAHB) Westlake Royal Remodeling Market Index (RMI) rose one point to 70 for the first quarter.

The Current Conditions Index dropped two points to 75 and two of the three components of the index dropped as well. The component measuring large remodeling projects (\$50,000 or more) fell three points to 71 and the component measuring small remodeling projects (under \$20,000) dropped two points to 77. The component measuring moderately-sized remodeling projects (at least \$20,000 but less than \$50,000) remained unchanged at 78.

The Future Indicators Index increased two points to 64. The component measuring the current rate at which leads and inquiries are coming in rose two points to 59 and the component measuring the backlog of remodeling jobs increased two points to 69.

NAHB noted that remodelers remain generally optimistic although some are noting the negative effects of higher interest rates and a shortage of materials. Customers are reportedly still undertaking large projects but are more frequently paying cash.

An RMI of 70 is consistent with NAHB's projection that the market will grow in 2023, but at a slower pace. The overall RMI is calculated by averaging the Current Conditions Index and the Future Indicators Index. Any number over 50 indicates that more remodelers view remodeling market conditions as good than poor.

Remodeling to accommodate aging in place is popular, with 64% of remodelers reporting doing aging-in-place work during the first quarter, with bathroom projects like grab bars and curbless showers being particularly common.

Generative AI for Business

Amazon joined the generative AI race and introduced Bedrock, a generative AI platform developed for businesses rather than consumers. The tools offered by Bedrock include two major language models designed by Amazon: Titan Text, which is a chatbot similar to ChatGPT that can create text for things like blog posts and emails, and Titan Embeddings, which helps with search personalization.

Customers will be able to customize the Titan models to their own data and needs, but the information they input will not train the Titan models, so all data will remain safe from other customers and competitors, according to Amazon.

Bedrock will also include models from Google-backed startups AI21, Anthropic, and Stability AI, which turns text into images, according to Amazon. Amazon says that they are "democratizing access" to AI development by offering a secure online service for businesses to build their own applications, which Amazon says is more efficient and less expensive than other choices because Amazon believes they can run AI software more efficiently and cheaply than their competitors.

Microsoft has a big lead in the AI race thanks to its multibillion-dollar investment in OpenAI, the creator of the ChatGPT chatbot. Analysts say one of the differences between Bedrock and other generative AI is that others are consumer-facing and Bedrock offers a platform for companies that want to incorporate generative AI capabilities.

In January, Amazon announced a \$35 billion investment in data centers across Virginia as part of their expansion of Amazon Web Services.

Will Artificial Diamonds Revolutionize Computer Networks?

Amazon is teaming up with a unit of De Beers to grow artificial diamonds, betting that custom-made gems could help revolutionize computer networks. Amazon Web Services' Center for Quantum Networking focuses on next-generation ways to transmit data securely over longer distances. Quantum networking uses subatomic matter to deliver data in a way that goes beyond today's fiber-optic systems.

The diamonds would be part of a component that lets the data travel farther without breaking down. Conventional signal repeaters can't handle information in this form, known as qubits. De Beers is hoping to find a new application for industrial diamonds, more commonly used for lenses. Being able to use them in quantum computing would be a big opportunity for both companies. A diamond is the solid form of the element carbon. Its crystal structure makes it the hardest and most thermally conductive material occurring in nature. Diamonds also naturally pick up a limited number of impurities, such as nitrogen atoms, that give them color, which are actually beneficial for use in a quantum-based network.

Retail Theft Leads to Store Closings

Major retailers in the US have been forced to shut down stores due to millions of dollars in losses as rampant theft plagues big box stores across the country. Walmart recently shuttered 17 stores in nine states, including all of their stores in Portland and four stores in Chicago as shoplifting losses became too great to justify keeping the stores open. In 2021 retailers lost a combined \$94.5 billion to shrink and organized retail crime incidents soared by 26.5%, according to the 2022 National Retail Security Survey. Self-checkouts have also made it easier for people to walk out without paying for items. In many cities, thefts under \$950 are not prosecuted, effectively giving opportunistic thieves a license to steal.

Anti-Counterfeiting Exchange

Trafficking in counterfeit goods globally is approaching a trillion dollar problem. In 2020, the Department of Homeland Security called on the private sector to take a more active role in detecting and preventing the trafficking of counterfeit goods.

Amazon introduced the Anti-Counterfeiting Exchange (ACX), an industry collaboration designed to make it safer to shop online and more difficult for counterfeiters to move among different stores to attempt to sell their counterfeit goods. ACX allows participating stores to share information about confirmed counterfeiters who attempted to use their services to try to sell counterfeit products. By sharing information about these counterfeiters, ACX participants can identify and stop perpetrators more quickly. An independent third party ensures anonymity for participants so they can share information and make quick referrals to law enforcement.

Amazon has already detected hundreds of matching accounts where the same counterfeiter tried to create selling accounts on Amazon and at least one other store operator. ACX allows information about a counterfeiter to be shared immediately through the exchange, allowing other stores to stop the counterfeiter more quickly. Amazon invited all retailers and marketplace service providers to join the ACS and fight back against counterfeiters.