Focus

Feature Article

Why Is Employment Still So Strong?

Our Thoughts

- Enter Sandman & Co.
- America's December Doldrums
- BoC Preview: Is This the End?
- Upbeat? Me? Hardly.
- Natural Gas Boom: Reaching an End?

BMO Capital Markets®
We're here to help.™

BMO Capital Markets Economics
economics.bmo.com

Please refer to the end of the document for important disclosures

Enter Sandman & Co.

Douglas Porter, CFA
Chief Economist
douglas.porter@bmo.com

After a strong start to the year, **markets took a step back this week** and bond yields sagged further on renewed doubts over the growth outlook. A particularly soggy U.S. retail sales result in December was the showpiece event, reinforced by a drop in industrial output and some weak regional Fed surveys. And while headline inflation is encouragingly moderating in many major economies—even core trends may be topping out in Canada—oil prices spent most of the week grinding back above $80. Meantime, China's Q4 GDP came in a bit better than expected, but growth for the full year was soft at 3.0%, the first time in decades that it grew more slowly than the global economy. That result was overshadowed by news that China's population dropped last year for the first time since the Great Leap Forward (1961).

But pulling all these various strands together doesn't require guidance from the World Economic Forum in Davos—one only needs to consider 13 headlines from a single copy of the Wall Street Journal to properly analyze all the key trends in the global economy in 2023. From Thursday's version:

1) ***"Retail Sales Post Biggest Drop of 2022.*** *U.S. retail spending fell in December at the sharpest pace of 2022, marking a dismal end to the holiday shopping season as rising interest rates, still-high inflation and concerns about a slowing economy pinched consumers."* The 1.1% drop was much deeper than expected and followed a 1.0% setback in November. However, there are **three things to note** before assuming the consumer is going into a tailspin. First, goods prices also fell 1.1% in the month, so volumes were nowhere near as weak. Second, consumers continue to shift spending away from goods and towards services, so retail sales will underperform overall spending for some time yet. Third, seasonal adjustment factors may not be keeping up with the reality of shifting spending patterns, which are now seeing less emphasis on outlays in December. Even so…

2) ***"Bond Rally Intensifies on Japan Policy.*** *The 2023 rally in U.S. Treasurys picked up new momentum after the Bank of Japan maintained its cap on bond yields while new data pointed to a further slowdown in U.S. inflation and economic activity."* The BoJ's move got the ball rolling, but the trio of retail, production, and PPI reports sent yields really skidding mid-week to below 3.4% for the first time since early September —when the Fed funds rate was 200 bps lower than today. Even with some back-up later in the week, 10-year yields are still under 3.5%, down roughly 40 bps since the start of the year. Adding to the downdraft in yields…

3) ***"Microsoft To Lay Off 10,000, Cites Shaky Economy."*** The article goes on to note that this will be the company's largest layoff in more than eight years and follows a string of cuts from other tech companies. On cue, Alphabet announced a big reduction soon after. Of course, this wave of notices has not been reflected in the macro data—a topic explored in greater detail in this week's ***Focus Feature***—and highlighted by the plunge in the latest initial jobless claims to a mere 190,000. Still, the wave of tech job cuts and the commentary surrounding the moves has reinforced the downbeat view on the broader economy through 2023. Even so…

4) ***"U.S. Accountant Shortage Has Firms Looking Overseas."*** In the here and now, the job market is still incredibly tight, despite the announced reductions. The article notes that the shortage of accountants is prompting small- and medium-sized firms

to look abroad for help for the first time, a practice larger firms have been engaged in for years. Reportedly, more than 300,000 accountants or auditors have left the field in just the past two years. Naturally, the shortage is putting upward pressure on prices—the cost of an audit for non-profits has risen from $3,000 to $10,000, according to one small firm. And, in another sign that inflation may prove stickier…

5) *"Florida's Orange Crop is Smallest in Decades, hit by Weather, Disease."* In just another example of how nothing seems to go right for food price inflation, Florida reportedly had its smallest orange crop in 90 years and less than half the size of last year's output. Juice futures are roughly double levels from two years ago. But, more importantly…

6) *"Oil Demand Seen Hitting Record in 2023."* Despite high prices and even with efforts to decarbonize, global oil demand is expected to rise by 1.9 million barrels per day this year, according to the IEA. The group has bumped up its forecast by 200,000 due to China's rapid reopening. Of course, that's not the only sector that is affected…

7) *"Luxury Brands Start to See Signs of Recovery in China."* The world's largest market for luxury goods prior to the pandemic has seen weak demand due to various disruptions in recent years. However, Bain & Co. expect that Chinese consumers will return to accounting for one-third, or more, of global luxury spending, after sagging to around 18% last year. But the comeback in spending from China's consumers won't drive all commodities…

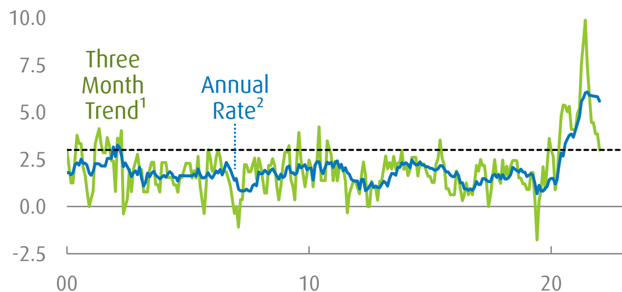
8) *"Lower Aluminum Prices Punish Alcoa."* Even with some commodities reviving in 2023, the bigger picture is that a broad measure of resource prices is almost precisely unchanged from year-ago levels. And, year-ago comparisons in commodities, and consumer inflation, are about to get a whole lot more friendly, since oil and food prices spiked in the wake of Russia's invasion on February 24, 2022. So, expect a lot more headlines like this…

Chart 1

Descending from Eight Miles High

Canada

CPI Excluding 8 Most Volatile Components



[1] (3-mnth % chng : ann.); [2] (y/y % chng)
Sources: BMO Economics, Haver Analytics

9) *"U.K. Inflation Slows for 2nd Month."* Inflation in Britain only backed off a couple ticks to 10.5%, but Canada printed a much bigger drop (6.3% from 6.8%), and the Euro Area confirmed its rate fell almost a full point to 9.2% in December. Perhaps more encouragingly, underlying trends in core inflation are slowing thanks to improved supply chains and cooling demand for goods. As a prime example, appliance prices saw their biggest monthly drop (down 4.1%) on record in Canada. In turn, this has clipped one measure of core inflation to just a 3% annualized pace in the past three months (*Chart 1*); note that this CPIX measure excludes mortgage costs, which have been rocketing. Even so, the mood at Davos was one of concern…

10) *"Leaders Fret About the Fragmenting Global Economy."* Yes, we had to work in a comment from the WEF. While some were a bit more upbeat because of calmer energy costs and the reopening in China, geopolitical frictions, rising protectionism, and "*technology decoupling*" were seen by some leaders as new risks. Meantime, back in North America…

11) ***"Businesses Pessimistic On Growth Outlook."*** The latest Beige Book found that half of the regional districts reported flat or weaker activity at the start of the year. Importantly, many also noted a slowing in consumer price increases. Accordingly…

12) ***"Two Fed Officials Back Quarter-Point Rise."*** Cooler growth and milder inflation have all but locked in a 25 bp rate hike at the February 1 FOMC meeting. We look for a follow-up 25-bp hike at the March meeting, and then a long pause. Some Fed officials are still pushing for a somewhat more aggressive move, taking overnight rates above 5%, but we and markets are now doubting the Fed will quite get there. The Bank of Canada is also expected to deliver a 25 bp hike next week, although that is likely to be the last hike of the cycle—assuming inflation continues on its recent trajectory. And, one always needs to prepare for surprises…

13) ***"Alexa, That Isn't Elvis! Music Shuffle Irks Amazon Prime Users."***

One surprise that no one in financial markets wants to deal with this year is on **the debt ceiling**, but it appears that we are hurtling toward some kind of self-inflicted crisis on that front. (The debt ceiling was notable by its absence from this particular issue of the Journal, which is odd given how overwhelming this topic has become in recent weeks.) Treasury Secretary Yellen announced this week that the $31.4 trillion ceiling has been hit, and extraordinary measures are now being taken to avoid a default. This has been par for the course for the past decade, as both sides take some steps to ultimately work towards a deal before hitting the true wall. What's different this time is the political backdrop, including a hard-core group in the House looking for big spending cuts, and a weakened Speaker, paired with a Senate that likely has little appetite for serious restraint, and a White House that declares it is not going to negotiate. What could possibly go wrong?

This isn't the market's first debt ceiling rodeo, and it is so far mostly looking past the coming tempest. The 2011 showdown led to a deep dive in equities and Treasury yields that summer, and saw S&P downgrade the U.S. credit rating as a result of the near-miss episode. Ten-year yields plummeted 142 bps (from 3.22% to 1.80%) in the three months from the start of July to the start of October that year, while the S&P 500 fell by almost 20% over the same stretch. One would suppose that such a lesson from the past would chasten the current crop of politicians—and one would apparently be wrong on that score. Frankly, there's only so much an economist can say about the debt ceiling dance, as the economy and markets are innocent bystanders to the **political game of chicken**.

America's December Doldrums

Michael Gregory, CFA
Deputy Chief Economist
michael.gregory@bmo.com

Last month was not kind to many parts of the U.S. economy. Data released this week showed key sectors recording at least back-to-back declines in activity to end 2022.

Retail sales slid 1.1% in December after sliding 1.0% in November. Some weakness reflected lower prices (e.g., gasoline, discounting owing to elevated retailer inventories). Some reflected lower spending volumes as consumers pulled back in the face of high inflation (purchasing power erosion) and higher loan costs. And, this pullback happened despite continued employment gains and tapping of excess savings, which smacks of a bit of 'battening down the hatches' ahead of rough economic seas. Note that since data began in 1967, such a massive two-month drop

(-2.1%) has only occurred around U.S recessions, aside from some false signals during the mid-1980s.

Industrial production dropped 0.8% in December after falling 0.6% in November. Manufacturing output (more than 70% of the total) plunged 1.3% in a broad-based fashion after slumping 1.1%. Since 1960, such a two-month decline (-2.3%) has only happened when the U.S. economy has been in a recession (with no false signals). This report followed last week's release on the ISM Manufacturing PMI, in which December's index followed November's figure under the 50 level, meaning the factory sector was contracting. The ISM folks reckon that a reading above 48.7 is still consistent with expansion in the broader economy. December's PMI was 48.4, down from 49.0 in November, and slightly below the threshold (which would be consistent with real GDP decreasing at a -0.1% annualized rate).

And how's the manufacturing sector doing so far in January? The headline index of the **New York Fed's Empire State factory survey** was -32.9, down from December's -11.2. Recast on an ISM basis, the index was 45.5, down from 52.1. The marquee metric of the **Philadelphia Fed's manufacturing survey** was -8.9, not as bad as December's -13.7. Again, recast on an ISM basis, the index was 49.2, up from 46.1, but still registered a fifth consecutive sub-50 reading. So far, it appears that manufacturing's downturn continued if not deepened in January.

Housing starts slipped 1.4% in December to 1.382 million units annualized, falling for the fourth consecutive month. **Building permits** moved down for the third month in a row, by 1.6% to 1.330 million. With permits running slower than starts, the prospects are for a further slip in the latter. Meanwhile, in December, home builders were the most pessimistic in more than a decade apart from April 2020, but they were less so in January. Released this week, the **NAHB Housing Market Index** increased to 35 from 31 in December. Although the share of home builders responding that business is 'good' moved up a bit, there's still 65% of them calling it 'bad'.

There was one other interesting factoid in December's report on new residential construction: there was a record number of homes under construction (1.712 million annualized). In past cycles, this would be indicative of a booming construction industry. This cycle, the backlog has more to do with supply chain disruptions and shortages of labour along with materials and components. You can't call home construction completed until the back-ordered windows and doors are delivered to the job site and then installed.

We're building fewer homes because we're selling fewer homes. And we're selling fewer homes because housing demand has collapsed under the double-weight of high mortgage rates and high home prices. Last October-November, 30-year borrowing costs hit 20-year highs above 7%. During the February-April period, the annual rates of home price appreciation (for the major repeat-sales metrics) hit record highs in the 19%-to-21% range. Mortgage rates have been slipping since and home price levels have fallen for the latest four months, but they both remain elevated by recent standards and are still causing some demand damage.

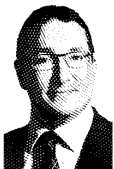
This week we got the latest assessment of that damage. **Existing home sales** fell 1.5% to 4.02 million units annualized, the lowest in more than a dozen years (including the pandemic bottom). This marks the 11th consecutive monthly decrease (how long

has the Fed been hiking rates for again?) for a cumulative decline of more than 38%. For single-family homes alone (with their longer history), only 1980 has seen such a collapse in demand over such an interval.

While we can talk at length about the recession signs popping up across the data landscape, there are none yet planted among the labour market data. Indeed, we ended 2022 with a 223k increase in payroll employment (a two-year low that's still historically high) and a record-high level of labour demand (payrolls plus job openings for November). Demand continues to exceed supply, applying upward pressure on wages and incomes. We ended 2022 with a 717k increase in household employment and an unemployment rate that matched the lowest (3.5%) in more than 53 years.

When the NBER, the official arbiter of recessions, goes about dating business cycles, they look at six key indicators. The most important is payroll employment (at a cycle high) and next is real personal income (excluding transfer receipts) which could set a new cycle high when December data are released next week. The others include household employment (also at a cycle high) along with real PCE (likely down in December), industrial production (see above) and the aggregation of real sales among manufacturers (also see above), retailers (ditto) and wholesalers. It seems that the missing ingredients for a recession are all rooted in the labour market. It's all about jobs now.

BoC Preview: Is This the End?



Benjamin Reitzes
Canadian Rates & Macro Strategist
benjamin.reitzes@bmo.com

The Bank of Canada's January 25 meeting will likely bring one final 25 bp rate hike, pushing policy rates up to 4.5%, matching the highest level over the past two decades. With the overnight rate clearly in restrictive territory, the Bank will be more cautious with rate hikes going forward. However, with inflation still well above target, we anticipate that Governor Macklem and the Governing Council will leave the door open to further hikes just in case the data force their hand. There's an additional wrinkle with this meeting, as we'll get the summary of deliberations for the first time two weeks later. We break down the rationale for a hike into three arguments:

1) The fundamental argument: In the December policy announcement, the Bank stated that it "*will be considering whether the policy interest rate needs to rise further*", a change from deciding by how much to lift rates. Indeed, policymakers signalled the debate has shifted to whether to hike 25 bps or hold fast. Since the December meeting, we've seen two inflation reports, and both showed the BoC's core CPI measures holding above 5% y/y. There was some modest improvement in the short-term metrics (3-month annualized rate), but even those remained well above the 2% target. The small improvements are an encouraging sign that peak inflation is behind us, but aren't anywhere close to slow enough to have the BoC breathing easy.

On the economic front, activity held up better than expected in the second half of 2022. Employment growth was solid, with December surging 100k for the second time in three months. The details weren't quite as strong, but we have yet to see any big cracks forming in the labour market or the economy. The latest Business Outlook Survey softened, but was still consistent with modest GDP growth. Momentum is slowing, but that's exactly what the BoC wants to see following 400 bps of rate hikes in 2022.

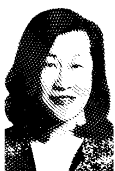
2) The risk management argument: Which way would the Bank of Canada rather miss with policy? Too tight, slowing the economy and inflation quickly, likely driving rate cuts a bit earlier and more aggressively? Or, too loose, allowing inflation to fester and risk losing control of inflation expectations? The BoC has a 2% inflation target, putting their bias squarely on overtightening. While the recent inflation news has been somewhat encouraging, there's no guarantee that the trend continues. Inflation risks remain on the upside, even if less so than a few months ago.

3) The market argument: Canadian bond yields have rallied aggressively since the start of the year, with everything 5-years and out trading through 3%. That suggests fixed mortgage rates will continue to pull back from the highs. The market is also pricing a series of rate cuts starting in the fall, contributing to an easing of financial conditions. If the BoC refrains from hiking at this meeting, that will only reinforce market expectations that rate cuts aren't too far off and we'll see even more easing priced in. While the BoC isn't overly occupied with the market, easier financial conditions work counter to the goal of dampening inflation pressure, and cannot be a welcome development.

The meeting will also feature a **Monetary Policy Report**. In October, the BoC was looking for softening economic growth into year-end and flat growth in H1, with the potential for a recession. Since then, Q4 GDP growth looks like it will get a modest upgrade to around 1%, while Q1 will be introduced at flat or a small positive. The overall economic picture is a bit better, but the BoC isn't likely to change its GDP forecast materially. On the inflation front, 2022Q4 averaged 6.7% y/y, 0.4 ppts below the October MPR forecast. Look for 2023Q1 to have a 5-handle, as the base effects are going to pull headline inflation down sharply through the first half of the year. Given the latter, expect the BoC to reinforce that it will pay more attention to core inflation trends over the coming months.

Key Takeaways: The fundamentals, risk management, and market moves are all signalling that another 25 bp rate hike is the prudent move. However, the Bank has had a tendency to surprise over the past year, so we cannot rule out a pause. No matter the outcome, we anticipate Governor Macklem will keep the door open to further rate hikes in case core inflation proves stickier than expected.

Upbeat? Me? Hardly.



Jennifer Lee
Senior Economist
jennifer.lee@bmo.com

An interesting exercise was to go back a few years to see what the hot topics were at the **World Economic Forum**. For example, in **2019**, there was a high absentee list. Then-President Trump stayed home to deal with the five-week government shutdown, then-PM May stayed home to deal with Brexit, and President Macron was handling the Yellow Vests. In **2020**, the coronavirus was spreading in China but the WHO said it was "*a bit too early*" to declare a global emergency. And Greta Thunberg made her first appearance, warning leaders that "*our house is still on fire*". In **2021**, as President Biden was in Week 1 of his new job as leader of the free world, the IMF's focus was on the "*race between a mutating virus and vaccines*". Then, in **2022**, discussion at the delayed gathering was all about Russia's invasion of Ukraine, inflation, central bank tightening, and China's slowdown.

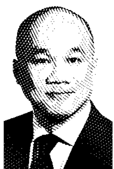
That brings us to **2023**. There seems to be more optimism, mostly caused by the IMF's view that it will likely not downgrade growth for the fourth time. (Yes, the bar is low,

apparently.) And, Managing Director Kristalina Georgieva believes that global growth will "*bottom out this year*" and 2024 will be a year in which "*we finally see the world economy on an upside*". Perhaps she noted all the headlines as she inserted some caution on the final day of the Forum, warning that things weren't "*fabulous*" and to be "*careful not to get*" too upbeat.

Way ahead of you, Kristalina! This week's data out of **China** were not particularly encouraging. Although the economy managed to remain unchanged in Q4, real GDP clocked in its worst growth rate (3.0%) in 2022 since 1976. In Europe, the data were scarce, but one piece of good news was the big jump in German investor sentiment. The **ZEW Survey** landed in positive territory for the first time since the invasion. On the policy front, although it is looking increasingly likely that the Euro Area will escape a severe recession (watch the January PMIs next week to gauge how the year began), the **ECB** made it clear that it was not going to moderate its pace of rate hikes. President Lagarde said: "*stay the course is my mantra for monetary policy purposes*". In fact, according to the Minutes from the last meeting in December, a "*large number*" of policymakers voted for a 75 bp hike but some of them eventually "*expressed their willingness*" for the 50 bp'er, given the more hawkish wording… that "*rates will still have to rise significantly at a steady pace to reach levels that are sufficiently restrictive*". The **BoE** is also expected to raise rates 50 bps as core inflation was stuck at 6.3% last month, not far from a 30-year high, and wages grew at their fastest pace since data started being tracked in 1992. (It will be a tough sell, with consumer confidence at its third-lowest level since the mid-70s.)

So not to worry Kristalina. It is hard to imagine that anyone is getting too upbeat. Hopeful, yes, but not upbeat.

Natural Gas Boom: Reaching an End?



Art Woo
Senior Economist
art.woo@bmo.com

This seems to be a rather remarkable question to be contemplating given Europe is still in the midst of an 'energy crisis'. Thanks to an unexpectedly mild winter thus far in the Northern Hemisphere, **global natural gas prices have fallen below pre-Russian invasion levels**. The European benchmark Title Transfer Facility (TTF) is currently trading at US$17.50-20.00/mmbtu, well below the peak of nearly $75.00 in August. Henry Hub—the North American benchmark—has dipped below US$3.50/mmbtu in recent days, compared to an average of nearly $9.00 in August. However, **we do not believe the natural gas market is headed for an imminent crash**.

First, there is **no guarantee that favourable temperatures will persist** for the rest of the winter, let alone the rest of the year. There is the possibility that the El Niño phenomenon could return in 2023, which could result in more volatile weather conditions (i.e., a hot summer in the Northern Hemisphere). Second, **China's abrupt decision to end its zero-COVID strategy** could lead to a major rebound in LNG demand this year. The IEA estimates that Chinese LNG imports contracted a hefty 20% (~20 bcm) in 2022 due to rolling COVID lockdowns, which made it much easier for Europe to purchase LNG and fill its storage facilities to healthy levels. And, lest we forget, Europe still depends on natural gas imports from Russia (via both pipelines and ships), which could drop to zero depending on Russian geopolitical strategy.

On the flip side, **Europe has made meaningful strides to reduce its consumption of natural gas**, which is estimated to have fallen around 10% (~50 bcm) in 2022.

The combination of fuel switching, demand destruction (e.g., energy-intensive industries like refining metals), an acceleration in renewable capacity additions, gains from efficiency/behavioral changes and ongoing economic weakness should lower consumption further this year. When it comes to supply, it bears mentioning that both the Netherlands and Germany were able to rather quickly build three floating LNG terminals, with the newest opening in the past week. This not only helps reduce Europe's dependence on Russian natural gas but should help prevent TTF from hitting last year's peaks again. Nonetheless, we still expect TTF to trade between $15.00-30.00 this year, well above the pre-pandemic average of $5.50 between 2015 and 2019.

Henry Hub may not mirror movements in Europe, but will nevertheless be influenced by overseas developments. **The U.S. has become a large net exporter of natural gas** and its producers are keen to take advantage of elevated global LNG prices, particularly in Europe and Asia. (Note that Asian LNG is trading above TTF, at US$20.00-25.00/mmbtu, which makes it more profitable for U.S producers to ship across the Pacific.) This process should be aided by the restart of the Freeport LNG terminal (15% of total U.S. LNG capacity) in the coming weeks, which has been offline since June to repair major fire damage. Further out, U.S. LNG capacity is set to expand by 50% in 2024-25 with the completion of three new terminals.

Bottom Line: While downside risks are mounting, thanks in no small part to Europe's efforts at adaptation in the energy crisis, we think it's too early to conclude that the natural gas boom is over. We are forecasting Henry Hub to eventually recover from current levels and average $5.00 in 2023 and $4.50 in 2024.

Recap

Jennifer Lee
Senior Economist
jennifer.lee@bmo.com

Indications of stronger growth and a move toward price stability are ***good news*** *for the economy.*

	Good News	Bad News
Canada ▪ BoC's BOS points to a softer economic backdrop ▪ Sticky inflation likely to prompt BoC rate hike next week	**Consumer Prices** eased to +6.3% y/y (Dec.)—slowest since February **Industrial Product Prices** -1.1%; **Raw Material Prices** -3.1% (Dec.) **New Motor Vehicle Sales** +5.5% y/y (Nov.)	**Existing Home Sales** -39.1% y/y (Dec.)—pulling **average prices** -12.0% y/y **Housing Starts** -5.5% to 248,625 a.r. (Dec.) **Manufacturing Sales** unch; **Wholesale Trade** +0.5% (Nov.)—but **volumes** only up 0.1% **Retail Sales Volumes** -0.4% **Household Credit** slowed to +6.4% y/y (Nov.) **Construction Investment** -1.4% (Nov.)
United States ▪ Recession worries return to the fore ▪ 30-year fixed rate mortgages hit 4-mth lows of 6.15% ▪ Government hits debt ceiling: cue the "*extraordinary measures*"	**Producer Prices** -0.5% (Dec.)—but core +0.1% **Initial Claims** -15k to 190k (Jan. 14 week) **NAHB Housing Market Index** +4 pts to 35 (Jan.) **Philly Fed Manufacturing Survey** +3.1 pts on an ISM-adjusted basis to 3-mth high of 49.2 (Jan.)	**Retail Sales** -1.1% (Dec.)—with downward revisions; **control measure** -0.7% **Industrial Production** -0.7% (Dec.) **Housing Starts** -1.4% to 1.38 mln a.r.; **Building Permits** -1.6% to 1.33 mln a.r. (Dec.) **Existing Home Sales** -1.5% to 4.02 mln a.r. (Dec.) **Empire State Manufacturing Survey** -6.6 pts on an ISM-adjusted basis to 45.5 (Jan.)
China ▪ Declining population not a shock but concerning	**Real GDP** unch (Q4)—surprisingly did not contract	**Industrial Production** +1.3% y/y; **Retail Sales** -1.8% y/y (Dec.)—slowing **Fixed Asset Investment** +5.1% (2022) **Population** -850,000 (2022)—first drop since '61
Japan ▪ BoJ keeps policy unchanged… but for how long?	**Machine Tool Orders** +1.0% y/y (Dec. P) **Industrial Production** +0.2% (Nov. F)—first increase in three months **Exports** +11.5% y/y (Dec.)	**Core Consumer Prices** +4.0% y/y (Dec.)—a 41-year high **Core Machine Orders** -8.3% (Nov.)
Europe ▪ ECB officials still hawkish ▪ BoE Governor Bailey sounds more comfortable with inflation ▪ Norges Bank on hold, signals March hike ▪ Plenty of strikes in the U.K. and France	**Germany—ZEW Survey** +40.2 pts to 16.9 (Jan.) **Germany—Producer Prices** -0.4% (Dec.) **U.K.—Payrolls** +28,273 (Dec.) **U.K.—Jobless Rate** steady at 3.7% (3 mths to Nov.) **U.K.—Consumer Prices** slowed to +10.5% y/y (Dec.)—but **core** stuck at 6.3% y/y	**France—Retail Sales** -5.0% y/y **U.K.—Average Weekly Earnings ex Bonus** +6.4% y/y (3 mths to Nov.)—fastest in at least 20 years **U.K.—Retail Sales Volumes** -1.0% (Dec.) **U.K.—GfK Consumer Confidence** -3 pts to -45 (Jan.)
Other ▪ Sense of optimism at this year's World Economic Forum ▪ NZ PM Ardern unexpectedly announces plan to resign	**Australia—Westpac Consumer Confidence** +5.0% (Jan.)—2nd improvement in a row	**Australia—Employment** -14,600 (Dec.)

Why Is Employment Still So Strong?

Sal Guatieri
Senior Economist
sal.guatieri@bmo.com

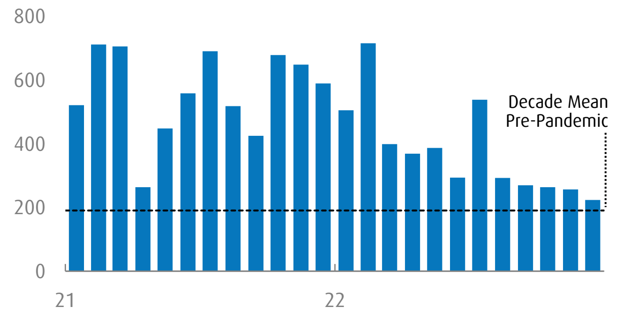
Although job growth has slowed from the rapid reopening pace, it remains much stronger than usual. **U.S. nonfarm payrolls** grew an average of 247,000 per month last quarter, still 30% above the decade norm before the pandemic (*Chart 1*). **Canadian employment** even sped up at year-end after shrinking last summer. What makes this buoyancy odd is that the economy appears to be slowing and businesses expect it to contract. This article tries to explain the puzzle and asks whether it reveals anything about the odds, timing and severity of a downturn.

Businesses have been eager to hire likely because they are still trying to **catch up with demand**. While employment surpassed pre-pandemic levels in late 2021 in Canada and last summer in the U.S., it still falls short of levels that would have been reached had it kept growing at prior rates. The estimated 'jobs gap' is nearly 4% in the U.S. (*Chart 2*) and under 1% in Canada. Much of it reflects the millions of retirees who are still spending but not working.

A second reason for robust hiring is that companies **suspect the downturn will be shallow**, a view shared by most economists. The Bank of Canada's business survey notes, "*While most firms expect Canada to be in a recession within the next 12 months, the majority of those firms think it will be mild*". In this event, hoarding or even adding staff likely makes sense to avoid scrambling for workers when the economy resumes growing. This mindset is ingrained given that openings have been so hard to fill for a while. To wit, the Fed's Beige Book says "*Many firms hesitated to lay off employees even as demand for their goods and services slowed*". We expect the jobless rate to peak at around 5% in the U.S. and 6½% in Canada, levels that are still below three-decade means (5.7% and 7.6%) and peaks (6.3% and 8.1%) reached in the mild 2001 slump (*Chart 3*). So, filling positions could still be challenging after the storm passes.

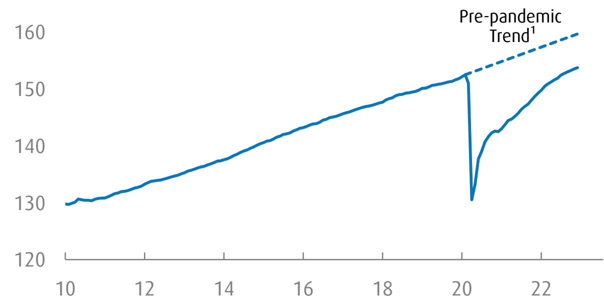
In addition, firms appear to be **adding staff simply to cover illnesses**. On average, 1.5 million American workers were off sick each month in the second half of 2022 (0.9% of total), compared with 1 million in the three

Chart 1
Downshifting, But Not Down



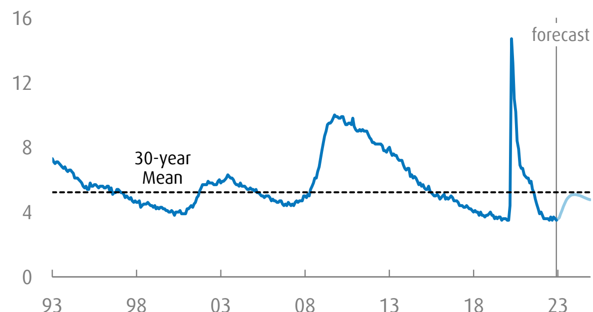
Sources: BMO Economics, Haver Analytics

Chart 2
Catching Up



[1] based on average monthly rate in 10 years before the pandemic
Sources: BMO Economics, Haver Analytics

Chart 3
That Early '00s Show



Sources: BMO Economics, Haver Analytics

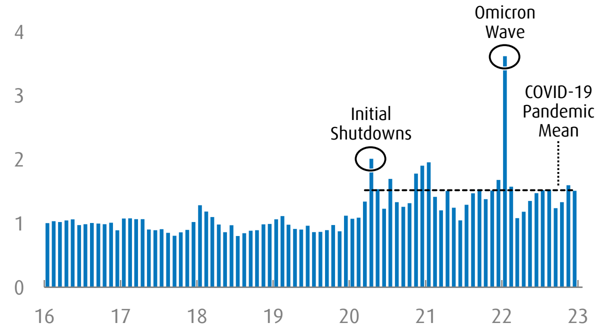
years before the pandemic (*Chart 4*). This, along with a jump in part-time positions, helps explain the recent decline in U.S. work hours. Canada also experienced record rates of worker illness in 2022.

Can the current durability in labour markets inform about the odds, timing and severity of an expected downturn? To help answer this question, we looked at U.S. labour activity in the three months prior to the eleven recessions in the postwar period, apart from the abrupt pandemic-led one (*Table 1*). The upshot is that labour demand **usually slows before the onset of recession**. Household survey jobs even fell before nearly half of the downturns. One caveat is that none of the figures in the table are statistically significant at conventional levels, so the results do need to be taken with caution. Still, **job growth appears to moderate toward the end of a business cycle**, as one would expect when companies sense trouble and workers become harder to find.

The historical pattern of labour market weakness before a recession makes the current situation unusual for the reasons discussed above. In the U.S., payrolls have risen 0.16% on average in the past three months, just above the seven-decade mean. However, household survey jobs and work hours are weaker than usual, suggesting a softer underbelly than indicated by payrolls. In Canada, the household survey shows above-normal growth in jobs and work hours in the three months to December, while the less-timely establishment report shows sturdy job growth to October though soft work hours. Barring downward revisions to the data, **job markets appear to be doing better than is historically the case before a downturn.** And we haven't even considered the massive number of job openings.

Chart 4
Unhealthy Trend

United States (000s : n.s.a.)
Workers Away Due to Illness



Sources: BMO Economics, Haver Analytics

Table 1
U.S. Labour Demand Before Recessions
(avg. % change in 3 months before start of recession)

Recession	Payrolls	Household Employment	Index of Agg. Work Hours
1948	0.01 ▼	-0.02 ▼	n.a.
1953	0.07 ▼	-0.02 ▼	n.a.
1957	-0.01 ▼	-0.01 ▼	n.a.
1960	0.33 △	0.32 △	n.a.
1970	0.15 △	0.21 △	0.11 ▼
1973	0.32 △	0.43 △	0.36 △
1980	0.12 ▼	0.16 △	-0.14 ▼
1981	0.12 ▼	-0.12 ▼	0.05 ▼
1990	0.04 ▼	-0.01 ▼	-0.08 ▼
2001	0.01 ▼	0.04 ▼	0.07 ▼
2008	0.07 ▼	0.01 ▼	0.09 ▼
Oct.-Dec. 2022	0.16 △	0.08 ▼	-0.08 ▼
1948-2022 Mean	**0.14**	**0.11**	**0.13** [1]

△ = above mean; ▼ = below mean ; [1] = 1964-2022 mean
Sources: BMO Economics, Haver Analytics

The stamina in labour markets suggests three things about a looming recession. First, it **might occur later than anticipated**. We currently expect the downturn to begin early this year, but it could be delayed for several quarters as the full weight of past monetary actions are felt. Second, its **severity could be tempered** if companies continue to hang onto staff, supporting wages, confidence, and spending. And third, it **could be averted entirely**, though likely only if inflation falls more quickly and leads to more accommodative financial conditions. We peg the odds of a soft landing at almost 1 in 3.

Bottom Line: Trying to catch up with elevated demand while facing worker shortages and illnesses, U.S. and Canadian businesses continue to hire in large numbers, raising hopes the recession will be averted or at least be mild. A less sanguine view, however, is that the buoyant labour market might only postpone the downturn, adding stickiness to wage and price growth and more rate hikes to an already aggressive tightening cycle—a situation that would likely not end well.

Economic Forecast Summary for January 20, 2023

	2022				2023				Annual		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
CANADA											
Real GDP (q/q % chng : a.r.)	2.8	3.2	2.9	0.6	-1.5	-1.8	0.0	1.5	5.0	3.5	0.0
Consumer Price Index (y/y % chng)	5.8	7.5	7.2	6.7	5.7	3.7 ↓	3.4 ↓	3.0 ↓	3.4	6.8	4.0 ↓
Unemployment Rate (percent)	5.8	5.1	5.2	5.1	5.4	5.9	6.2	6.4	7.4	5.3	6.0
Housing Starts (000s : a.r.)	243	270	281	259	245 ↑	235 ↑	223	218 ↓	274	263	230 ↑
Current Account Balance ($blns : a.r.)	3.7	10.6	-44.4	-40.0	-36.4	-36.4	-38.6	-40.6	-6.7	-17.5	-38.0
Interest Rates	(average for the quarter : %)										
Overnight Rate	0.33	1.17	2.75	3.92	4.50	4.50	4.50	4.50	0.25	2.04	4.50
3-month Treasury Bill	0.39	1.43	2.91	3.96	4.40	4.45	4.45	4.45	0.11	2.17	4.40
10-year Bond	1.92	2.98	3.01	3.16	3.15	3.25	3.15	3.05	1.36	2.77	3.15
Canada-U.S. Interest Rate Spreads	(average for the quarter : bps)										
90-day	9	33	16	-22	-34	-39	-39	-39	7	9	-37
10-year	-2	5	-10	-67	-53	-52	-51	-50	-8	-18	-52
UNITED STATES											
Real GDP (q/q % chng : a.r.)	-1.6	-0.6	3.2	2.0	-1.4	-2.0	0.0	0.5	5.9	2.0	0.0
Consumer Price Index (y/y % chng)	8.0	8.6	8.3	7.1	5.5	3.9	3.3	3.2	4.7	8.0	4.0
Unemployment Rate (percent)	3.8	3.6	3.5	3.6	3.7	4.3	4.8	5.1	5.4	3.6	4.5
Housing Starts (mlns : a.r.)	1.72	1.65	1.45	1.40	1.36 ↓	1.33 ↓	1.34	1.37	1.61	1.56	1.35 ↓
Current Account Balance ($trlns : a.r.)	-1.13	-0.95	-0.87	-0.87 ↑	-0.85 ↑	-0.85 ↑	-0.86 ↑	-0.87 ↑	-0.85	-0.96	-0.86 ↑
Interest Rates	(average for the quarter : %)										
Fed Funds Target Rate	0.21	0.96	2.63	3.79	4.63	4.88	4.88	4.88	0.13	1.90	4.81
3-month Treasury Bill	0.30	1.10	2.75	4.18	4.70	4.80	4.80	4.80	0.05	2.08	4.80
10-year Note	1.94	2.93	3.10	3.83	3.70	3.75	3.65	3.55	1.44	2.95	3.65
EXCHANGE RATES	(average for the quarter)										
US¢/C$	79.0	78.4	76.6	73.7	74.1	75.0	75.8	76.6	79.8	76.9	75.4
C$/US$	1.27	1.28	1.31	1.36	1.35	1.33	1.32	1.30	1.25	1.30	1.33
¥/US$	116	130	138	141	130	129	129	128	110	131	129
US$/Euro	1.12	1.06	1.01	1.02	1.07	1.08	1.09	1.11	1.18	1.05	1.09
US$/£	1.34	1.26	1.18	1.17	1.23	1.24	1.25	1.27	1.38	1.24	1.25

Blocked areas mark BMO Capital Markets forecasts; up and down arrows (↑↓) indicate forecast changes; spreads may differ due to rounding

Canada

Benjamin Reitzes
Canadian Rates & Macro Strategist
benjamin.reitzes@bmo.com

BoC Policy Announcement and Monetary Policy Report

Wednesday, 10:00 am
Press conference at 11:00 am

See Benjamin Reitzes' Thought on page 6.

United States

Michael Gregory, CFA
Deputy Chief Economist
michael.gregory@bmo.com

Sal Guatieri
Senior Economist
sal.guatieri@bmo.com

Real GDP

Thursday, 8:30 am

	Real GDP	GDP Deflator
Q4 A (e)	**+2.0% a.r.**	**+3.5% a.r.**
Consensus	*+2.6% a.r.*	*+3.2% a.r.*
Q3	+3.2% a.r.	+4.4% a.r.

Growth in the U.S. **economy looks to have downshifted to a 2.0% annual rate** in Q4 from 3.2% in Q3 as the thrust of rapidly rising prices and loan costs, coupled with shrinking wealth, begins to overwhelm support provided by excess savings and sturdy labour markets. A big reversal in exports, a further plunge in home building, and slower business spending will likely contribute to the downshift. By contrast, an early start to the holiday shopping season (spurred by aggressive retail discounting) should see consumer spending rise 3.0%, the most in a year. But the discounts also pulled spending forward, with the latest retail sales results indicating that consumers went into partial hibernation at year-end. Despite the expected decent advance for the economy, waning momentum through the quarter raises the risk of an outright contraction in Q1.

Durable Goods Orders

Thursday, 8:30 am

	Durable Orders	Core Orders
Dec. (e)	**+3.2%**	**-0.1%**
Consensus	*+2.9%*	*-0.2%*
Nov.	-2.1%	+0.1%

Lifted by soaring Boeing bookings, **durable goods orders** are expected to grow 3.2% in December. The aircraft manufacturer reported 250 new orders, the highest in exactly five years. (Note that December is traditionally the strongest month of the year, but this hasn't been the case since 2019 owing to the grounding of the 737 Max 8 and the pandemic.) Excluding the transportation sector (and its likely slip in automotive orders), durable goods bookings probably dipped 0.1% with roughly the same for core orders. Recession concerns are slightly trumping the support for capex arising from labour constraints and still decent corporate balance sheets.

Personal Spending & Income

Friday, 8:30 am

	Personal Spending	Personal Income
Dec. (e)	**-0.3%**	**+0.3%**
Consensus	*-0.1%*	*+0.2%*
Nov.	+0.1%	+0.4%

	Core PCE Price Index	
Dec. (e)	**+0.3%**	**+4.4% y/y**
Consensus	*+0.3%*	*+4.4% y/y*
Nov.	+0.2%	+4.7% y/y

Consumers are spending less owing to high inflation and higher borrowing costs, and outlays would be even weaker if not for ongoing job gains and the tapping of excess savings. **Personal consumption expenditures** (PCE) are expected to drop 0.3% in December as a rise in services can't offset a fall in goods (recall the retail sales 'control' metric decreased 0.7%). With PCE prices inching down 0.1%, real spending dipped 0.2%, after a flat November and sturdy 0.5% outcome for October. Momentum was slowing meaningfully through the turn of the year.

Meantime, **personal income** probably increased 0.3% in December, reflecting slower growing average hourly earnings and a second straight ebb in hours worked but sturdy gains in both payroll and household employment. With positive income and negative spending, the personal saving rate should jump to 3.0% from 2.4% in November, which is still less than half the pre-pandemic norm. This means consumers were still tapping their remaining $1.6 trillion of excess savings to help counter price and interest

rate hikes. (Excess savings peaked at $2.4 trillion in December before the dawn of drawdowns.)

The **core PCE price index** should increase 0.3%, pulling down the core inflation rate by three-tenths to 4.4% y/y and a 14-month low. Markets will be focusing on Fed Chair Powell's new inflation fave, the core services ex-housing metric. In November, its annual change was 4.3%, just under the midpoint of the 4%-to-5% range of the past 20 months. We anticipate another range-bound result for December, albeit slower by a tenth or two. While low/mid-4% inflation readings are good news given where we were, this is still double the Fed's target.

Financial Markets Update for January 20, 2023

		Jan 20 [1]	Jan 13	Week Ago	4 Weeks Ago (basis point change)	Dec 31, 2022
Canadian Money Market	Call Money	4.25	4.25	0	0	0
	Prime Rate	6.45	6.45	0	0	0
U.S. Money Market	Fed Funds (effective)	4.50	4.50	0	0	0
	Prime Rate	7.50	7.50	0	0	0
3-Month Rates	Canada	4.37	4.34	3	17	14
	United States	4.64	4.57	7	36	30
	Japan	-0.17	-0.17	-1	1	0
	United Kingdom	3.94	3.98	-4	13	6
	Australia	3.27	3.31	-4	5	1
2-Year Bonds	Canada	3.59	3.66	-7	-34	-46
	United States	4.17	4.24	-6	-15	-25
10-Year Bonds	Canada	2.85	2.90	-5	-32	-45
	United States	3.47	3.51	-3	-28	-41
	Japan	0.38	0.50	-13	0	-4
	Germany	2.16	2.17	0	-23	-40
	United Kingdom	3.33	3.36	-3	-30	-33
	Australia	3.40	3.59	-19	-43	-65
Risk Indicators	VIX	19.7	18.4	1.4 pts	-1.2 pts	-2.0 pts
	Inv. Grade CDS Spread [2]	76	71	4	-5	-6
	High Yield CDS Spread [2]	458	426	32	-19	-26
					(percent change)	
Currencies	US¢/C$	74.49	74.65	-0.2	1.3	1.0
	C$/US$	1.342	1.340	—	—	—
	¥/US$	129.98	127.87	1.7	-2.2	-0.9
	US$/€	1.0824	1.0830	-0.1	1.9	1.1
	US$/£	1.238	1.223	1.2	2.7	2.4
	US¢/A$	69.46	69.68	-0.3	3.3	2.0
Commodities	CRB Futures Index	276.62	275.91	0.3	-0.5	-0.4
	Oil (generic contract)	80.40	79.86	0.7	1.1	0.2
	Natural Gas (generic contract)	3.32	3.42	-2.8	-34.6	-25.8
	Gold (spot price)	1,925.95	1,920.23	0.3	7.1	5.6
Equities	S&P/TSX Composite	20,392	20,360	0.2	4.5	5.2
	S&P 500	3,922	3,999	-1.9	2.0	2.1
	Nasdaq	10,955	11,079	-1.1	4.4	4.7
	Dow Jones Industrial	33,060	34,303	-3.6	-0.4	-0.3
	Nikkei	26,554	26,120	1.7	1.2	1.8
	Frankfurt DAX	15,006	15,087	-0.5	7.6	7.8
	London FT100	7,766	7,844	-1.0	3.9	4.2
	France CAC40	6,989	7,024	-0.5	7.4	8.0
	S&P ASX 200	7,452	7,328	1.7	4.8	5.9

[1] = as of 10:45 am *[2] = One day delay*

Global Calendar — January 23–January 27

	Monday January 23	Tuesday January 24	Wednesday January 25	Thursday January 26	Friday January 27
Japan		**Manufacturing PMI** **Jan. P** Dec. 48.9 **Services PMI** **Jan. P** Dec. 51.1 **Composite PMI** **Jan. P** Dec. 49.7 **Department Store Sales** **Dec.** Nov. +4.5% y/y		**Machine Tool Orders** **Dec. F (e) +1.0% y/y** Nov. -7.7% y/y	**Tokyo CPI** / **Core CPI** **Jan. (e) +4.0% y/y / +4.2% y/y** Dec. +3.9% y/y / +3.9% y/y **CPI Ex. Food & Energy** **Jan. (e) +2.9% y/y** Dec. +2.7% y/y
Euro Area	**EURO AREA** **Consumer Confidence** **Jan. P (e) -20.0** Dec. -22.2	**EURO AREA** **PMI** / **Mfg.** / **Svcs.** / **Comp.** **Jan. P (e) 45.8 / 50.2 / 49.8** Dec. 47.8 / 49.8 / 49.3 **GERMANY** **GfK Consumer Confidence** **Feb. (e) -33.0** Jan. -37.8 **FRANCE** **Business Confidence** **Jan. (e) 102** Dec. 102	**GERMANY** **ifo Business Climate** **Jan. (e) 90.3** Dec. 88.6	**ITALY** **Consumer Confidence** **Jan. (e) 102.5** Dec. 102.5	**EURO AREA** **Private Sector Credit** **Dec.** Nov. +6.3% y/y **GERMANY** **Retail Sales** [D] **Dec.** Nov. -5.1% y/y **FRANCE** **Consumer Confidence** **Jan. (e) 83** Dec. 82
U.K.		**PMI** / **Mfg.** / **Svcs.** / **Comp.** **Jan. P (e) 45.4 / 49.7 / 49.0** Dec. 45.3 / 49.9 / 49.0	**Producer Price Index (Output)** **Dec.** **Nov.** Oct. +0.9% / +17.1% y/y		
Other		**AUSTRALIA** **NAB Business Confidence** **Dec.** Nov. -4	**AUSTRALIA** **Consumer Price Index** **Q4 (e) +1.6% / +7.5% y/y** Q3 +1.8% / +7.3% y/y **NEW ZEALAND** **Consumer Price Index** **Q4 (e) +1.4% / +7.1% y/y** Q3 +2.2% / +7.2% y/y		

[D] = date approximate

Upcoming Policy Meetings | Bank of England: Feb. 2, Mar. 23, May 11 | European Central Bank: Feb. 2, Mar. 16, May 4

Monday January 23

Canada

8:30 am — **New Housing Price Index**
- **Dec. (e)** — **-0.2%** — **+3.7% y/y**
- Nov. — -0.2% — +4.1% y/y

United States

10:00 am — **Leading Indicator**
- **Dec. (e)** — **-0.7%**[c]
- Nov. — -1.0%

11:30 am — 13- & 26-week bill auctions $108 bln

Tuesday January 24

Canada

11:15 am — Cash management bond buybacks $0.5 bln

United States

9:45 am — **S&P Global PMIs (Jan. P)**

10:00 am — **Richmond Fed Manufacturing Index**
- **Jan. (e)** — **-5**[c]
- Dec. — 1

11:30 am — 52-week bill auction $34 bln

1:00 pm — 2-year note auction $42 bln

Wednesday January 25

Canada

8:30 am — **Manufacturing Sales**
- **Dec. A**
- Nov. — unch

10:00 am — **BoC Policy Announcement and Monetary Policy Report**

11:00 am — **BoC Governor Macklem and Deputy Governor Rogers hold press conference**

United States

7:00 am — **MBA Mortgage Apps**
- **Jan. 20**
- Jan. 13 — +27.9%

11:30 am — 2-year FRN auction $24 bln

1:00 pm — 5-year note auction $43 bln

Thursday January 26

Canada

8:30 am — **Survey of Employment, Payrolls, and Hours (Nov.)**

8:30 am — **Wholesale Trade**
- **Dec. A**
- Nov. — +0.5%

Noon — 30-year bond auction $1.5 bln

10-year bond auction announcement

United States

8:30 am

	Real GDP	**GDP Deflator**
Q4 A (e)	**+2.0% a.r.**	**+3.5% a.r.**
Consensus	*+2.6% a.r.*	*+3.2% a.r.*
Q3	+3.2% a.r.	+4.4% a.r.

8:30 am

	Durable Orders	**Core Orders**
Dec. (e)	**+3.2%**	**-0.1%**
Consensus	*+2.9%*	*-0.2%*
Nov.	-2.1%	+0.1%

8:30 am — **Goods Trade Deficit**
- **Dec. A (e)** — **$88.5 bln**[c]
- Nov. — $82.9 bln

8:30 am — **Wholesale and Retail Inventories (Dec. A)**

8:30 am — **Chicago Fed National Activity Index**
- **Dec. (e)** — **-0.10**
- Nov. — -0.05

8:30 am — **Initial Claims**
- **Jan. 21 (e)** — **210k (+20k)**[c]
- Jan. 14 — 190k (-15k)

8:30 am — **Continuing Claims**
- **Jan. 14 (e)** — **1,658k (+11k)**
- Jan. 7 — 1,647k (+17k)

10:00 am — **New Home Sales**
- **Dec. (e)** — **614,000 a.r. (-4.0%)**
- *Consensus* — *620,000 a.r. (-3.1%)*
- Nov. — 640,000 a.r. (+5.8%)

11:00 am — **Kansas City Fed Manufacturing Activity**
- **Jan. (e)** — **-6**[c]
- Dec. — -9

1:00 pm — 7-year note auction $35 bln

Friday January 27

Canada

Ottawa's Budget Balance[D]
- **Nov. '22**
- Nov. '21 — -$1.4 bln

United States

8:30 am

	Personal Spending	**Personal Income**
Dec. (e)	**-0.3%**	**+0.3%**
Consensus	*-0.1%*	*+0.2%*
Nov.	+0.1%	+0.4%

8:30 am — **Core PCE Price Index**

Dec. (e)	**+0.3%**	**+4.4% y/y**
Consensus	*+0.3%*	*+4.4% y/y*
Nov.	+0.2%	+4.7% y/y

10:00 am — **Pending Home Sales**
- **Dec. (e)** — **-3.0%**
- *Consensus* — *-1.0%*
- Nov. — -4.0%

10:00 am — **University of Michigan Consumer Sentiment**
- **Jan. F (e)** — **64.6**[c]
- Jan. P — 64.6
- Dec. — 59.7

[C] = consensus [D] = date approximate [R] = reopening

Upcoming Policy Meetings | Bank of Canada: Mar. 8, Apr. 12, June 7 | FOMC: Jan. 31-Feb. 1, Mar. 21-22, May 2-3

General Disclosures

BMO Capital Markets is a trade name used by BMO Financial Group for the wholesale banking businesses of Bank of Montreal, BMO Harris Bank N.A. (member FDIC), Bank of Montreal Europe p.l.c, and Bank of Montreal (China) Co. Ltd, the institutional broker dealer business of BMO Capital Markets Corp. (Member FINRA and SIPC) and the agency broker dealer business of Clearpool Execution Services, LLC (Member FINRA and SIPC) in the U.S., and the institutional broker dealer businesses of BMO Nesbitt Burns Inc. (Member Investment Industry Regulatory Organization of Canada and Member Canadian Investor Protection Fund) in Canada and Asia, Bank of Montreal Europe p.l.c. (authorised and regulated by the Central Bank of Ireland) in Europe and BMO Capital Markets Limited (authorised and regulated by the Financial Conduct Authority) in the UK and Australia. BMO does not represent that this document may be lawfully distributed, or that any financial products may be lawfully offered or dealt with, in compliance with any regulatory requirements in other jurisdictions, or pursuant to an exemption available thereunder. This document is directed only at entities or persons in jurisdictions or countries where access to and use of the information is not contrary to local laws or regulations. Their contents have not been reviewed by any regulatory authority. Bank of Montreal or its subsidiaries ("BMO Financial Group") has lending arrangements with, or provide other remunerated services to, many issuers covered by BMO Capital Markets. The opinions, estimates and projections contained in this report are those of BMO Capital Markets as of the date of this report and are subject to change without notice. BMO Capital Markets endeavours to ensure that the contents have been compiled or derived from sources that we believe are reliable and contain information and opinions that are accurate and complete. However, BMO Capital Markets makes no representation or warranty, express or implied, in respect thereof, takes no responsibility for any errors and omissions contained herein and accepts no liability whatsoever for any loss arising from any use of, or reliance on, this report or its contents. Information may be available to BMO Capital Markets or its affiliates that is not reflected in this report. The information in this report is not intended to be used as the primary basis of investment decisions, and because of individual client objectives, should not be construed as advice designed to meet the particular investment needs of any investor. This document is not to be construed as an offer to sell, a solicitation for or an offer to buy, any products or services referenced herein (including, without limitation, any commodities, securities or other financial instruments), nor shall such Information be considered as investment advice or as a recommendation to enter into any transaction. Each investor should consider obtaining independent advice before making any financial decisions. This document is provided for general information only and does not take into account any investor's particular needs, financial status or investment objectives. BMO Capital Markets or its affiliates will buy from or sell to customers the securities of issuers mentioned in this report on a principal basis. BMO Capital Markets or its affiliates, officers, directors or employees have a long or short position in many of the securities discussed herein, related securities or in options, futures or other derivative instruments based thereon. The reader should assume that BMO Capital Markets or its affiliates may have a conflict of interest and should not rely solely on this report in evaluating whether or not to buy or sell securities of issuers discussed herein.

Dissemination of Economic Publications: Our publications are disseminated via email and may also be available via our web site https://economics.bmo.com. Please contact your BMO Financial Group Representative for more information.

Additional Matters

This report is directed only at entities or persons in jurisdictions or countries where access to and use of the information is not contrary to local laws or regulations. Its contents have not been reviewed by any regulatory authority. BMO Capital Markets does not represent that this report may be lawfully distributed or that any financial products may be lawfully offered or dealt with, in compliance with regulatory requirements in other jurisdictions, or pursuant to an exemption available thereunder.

To Australian residents: BMO Capital Markets Limited and Bank of Montreal are exempt from the requirement to hold an Australian financial services licence under the Corporations Act in respect of financial services they provide to wholesale investors (as defined in the Corporations Act). BMO Capital Markets Limited is regulated by the UK Financial Conduct Authority under UK laws, and Bank of Montreal in Hong Kong is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission which differ from Australian laws. This document is only intended for wholesale clients (as defined in the Corporations Act 2001),Eligible Counterparties or Professional Clients (as defined in Annex II to MiFID II) and Professional Investors (as defined in the Securities and Futures Ordinance and the Securities and Futures (Professional Investor) Rules under the Securities and Futures Ordinance of Hong Kong).

To Canadian Residents: BMO Nesbitt Burns Inc. furnishes this report to Canadian residents and accepts responsibility for the contents herein subject to the terms set out above. Any Canadian person wishing to effect transactions in any of the securities included in this report should do so through BMO Nesbitt Burns Inc.

To E.U. Residents: In an E.U. Member State this document is issued and distributed by Bank of Montreal Europe plc which is authorised and regulated in Ireland and operates in the E.U. on a passported basis. This document is only intended for Eligible Counterparties or Professional Clients, as defined in Annex II to "Markets in Financial Instruments Directive" 2014/65/EU ("MiFID II").

To U.K. Residents: In the UK this document is published by BMO Capital Markets Limited which is authorised and regulated by the Financial Conduct Authority. The contents hereof are intended solely for the use of, and may only be issued or passed on to, (I) persons who have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the "Order") or (II) high net worth entities falling within Article 49(2)(a) to (d) of the Order (all such persons together referred to as "relevant persons"). The contents hereof are not intended for the use of and may not be issued or passed on to retail clients.

To Hong Kong Residents: In Hong Kong, this report is published and distributed by Bank of Montreal. Bank of Montreal (incorporated in Canada with limited liability) is an authorized institution under the Banking Ordinance and a registered institution with the Securities and Futures Commission (CE No. AAK809) to carry on Type 1 (dealing in securities) and Type 4 (advising in securities) regulated activities under the Securities and Futures Ordinance (Cap 571 of the Laws of Hong Kong). This report has not been reviewed or approved by any regulatory authority in Hong Kong. Accordingly this report must not be issued, circulated or distributed in Hong Kong other than (a) to professional investors as defined in the Securities and Futures Ordinance and the Securities and Futures (Professional Investor) Rules under the Securities and Futures Ordinance of Hong Kong, or (b) in circumstances which do not result in or constitute an offer to the public in Hong Kong.

To Israeli residents: BMO Capital Markets is not licensed under the Israeli Law for the Regulation of Investment Advice, Investment Marketing and Portfolio Management of 1995 (the "Advice Law") nor does it carry insurance as required thereunder. This document is to be distributed solely to persons that are qualified clients (as defined under the Advice Law) and qualified investors under the Israeli Securities Law of 1968. This document represents the analysis of the analyst but there is no assurance that any assumption or estimation will materialize.

To Korean Residents: This report has been provided to you without charge for your convenience only. All information contained in this report is factual information and does not reflect any opinion or judgement of BMO Capital Markets. The information contained in this report should not be construed as offer, marketing, solicitation or investment advice with respect to financial investment products in this report.

To Japan Residents: This report has not been reviewed by any regulatory authority in Japan. This report is provided for information purposes only and it should not be construed as an offer to sell, a solicitation to buy, or a recommendation for any security, or as an offer to provide investment management or advisory or other services in Japan. Securities may not be offered or sold in Japan by means of this report or any other document other than to Qualified Financial Institutions within the meaning of item (i) of Article 17-3 of the Government Ordinance to enforce the Financial Instruments and Exchange Act (Kinyu Shohin Torihiki Ho Sekou Rei). Unless specified otherwise, the securities that may be offered to you are not and will not be registered in Japan pursuant to the Financial Instruments and Exchange Acts.

To Taiwanese Residents: This report is not intended to constitute investment advice nor a public offer for any investment products to investors in Taiwan. This report should only be accessed by investors in Taiwan that are qualified to invest in investment products pursuant to relevant Taiwanese laws and regulations, and subject to sales restrictions as set forth in the relevant Taiwanese laws and regulations. BMO Capital Markets has not and will not secure the required licenses in Taiwan for the offer of securities and investment services. Any offer of securities has not been and will not be registered or filed with or approved by the Financial Commission of Taiwan and/or other regulatory authority pursuant to relevant securities laws and regulations of Taiwan, and may not be issued, offered or sold within Taiwan through a public offering or in circumstances which constitute an offer that requires a registration, filing or approval of the Financial Supervisory Commission of Taiwan and/or other regulatory authority in Taiwan under relevant securities laws and regulations of Taiwan. No person or entity in Taiwan has been authorized to offer or sell the securities in Taiwan.

To PRC Residents: This material does not constitute an offer to sell or the solicitation of an offer to buy any financial products in the People's Republic of China (excluding Hong Kong, Macau and Taiwan, the "PRC"). BMO and its affiliates do not represent that this material may be lawfully distributed, or that any financial products may be lawfully offered, in compliance with any applicable registration or other requirements in the PRC, or pursuant to an exemption available thereunder, or assume any responsibility for facilitating any such distribution or offering. This material may not be distributed or published in the PRC, except under circumstances that will result in compliance with any applicable laws and regulations.

To Singapore Residents: This report is intended for general circulation and does not and is not intended to constitute the provision of financial advisory services, whether directly or indirectly, to persons in Singapore. You should seek advice from a financial adviser regarding the suitability of the investment products, taking into account your specific investment objectives, financial situation or particular needs before you make a commitment to purchase the investment product. This report has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, it should not be circulated or distributed, nor may the securities described herein be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (a) to an institutional investor or a relevant person as defined in and pursuant to and in accordance with the conditions of the relevant provisions of the Securities and Futures Act of Singapore or (b) otherwise pursuant to and in accordance with the conditions of, any other applicable provision of the SFA.

To Thai Residents: The contents hereof are intended solely for the use of persons qualified as Institutional Investors according to Notification of the Securities and Exchange Commission No. GorKor. 11/2547 Re: Characteristics of Advice which are not deemed as Conducting Derivatives Advisory Services dated 23 January 2004 (as amended). BMO and its affiliates do not represent that the material may be lawfully distributed, or that any financial products may be lawfully offered, in compliance with any regulatory requirements in Thailand, or pursuant to an exemption available under any applicable laws and regulations.

To U.S. Residents: BMO Capital Markets Corp. furnishes this report to U.S. residents and accepts responsibility for the contents herein, except to the extent that it refers to securities of Bank of Montreal.

These documents are provided to you on the express understanding that they must be held in complete confidence and not republished, retransmitted, distributed, disclosed, or otherwise made available, in whole or in part, directly or indirectly, in hard or soft copy, through any means, to any person, except with the prior written consent of BMO Capital Markets.

ADDITIONAL INFORMATION IS AVAILABLE UPON REQUEST

BMO Financial Group (NYSE, TSX: BMO) is an integrated financial services provider offering a range of retail banking, wealth management, and investment and corporate banking products. BMO serves Canadian retail clients through BMO Bank of Montreal and BMO Nesbitt Burns. In the United States, personal and commercial banking clients are served by BMO Harris Bank N.A., (Member FDIC). Investment and corporate banking services are provided in Canada and the US through BMO Capital Markets.

® Registered trademark of Bank of Montreal in the United States, Canada and elsewhere. ™ Trademark Bank of Montreal in the United States and Canada. © COPYRIGHT 2023 BMO CAPITAL MARKETS CORP. A member of BMO Financial Group