Capital Markets Strategy

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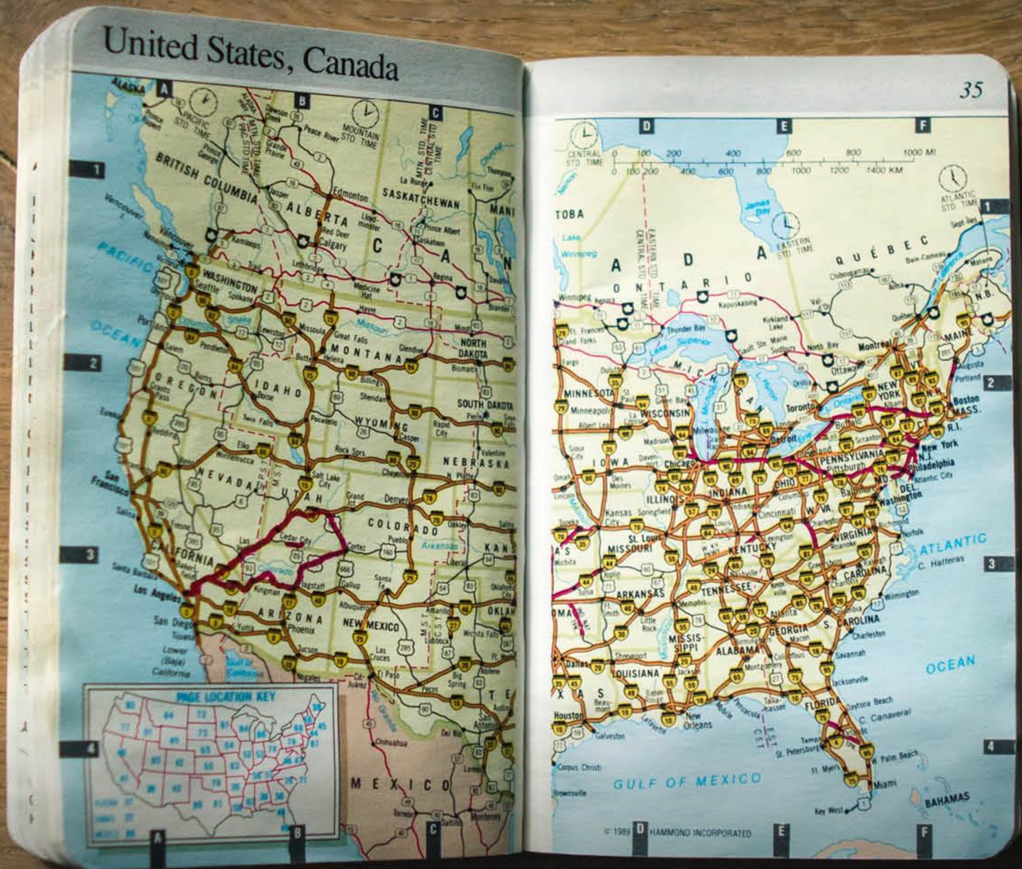

US Labor Markets

A Closer Look at the Data & Recession Thresholds

NOV 2023

“The two most important days in your life are the day you are born and the day you find out why.”

Mark Twain, the “Father of American Literature” (1835 – 1910)

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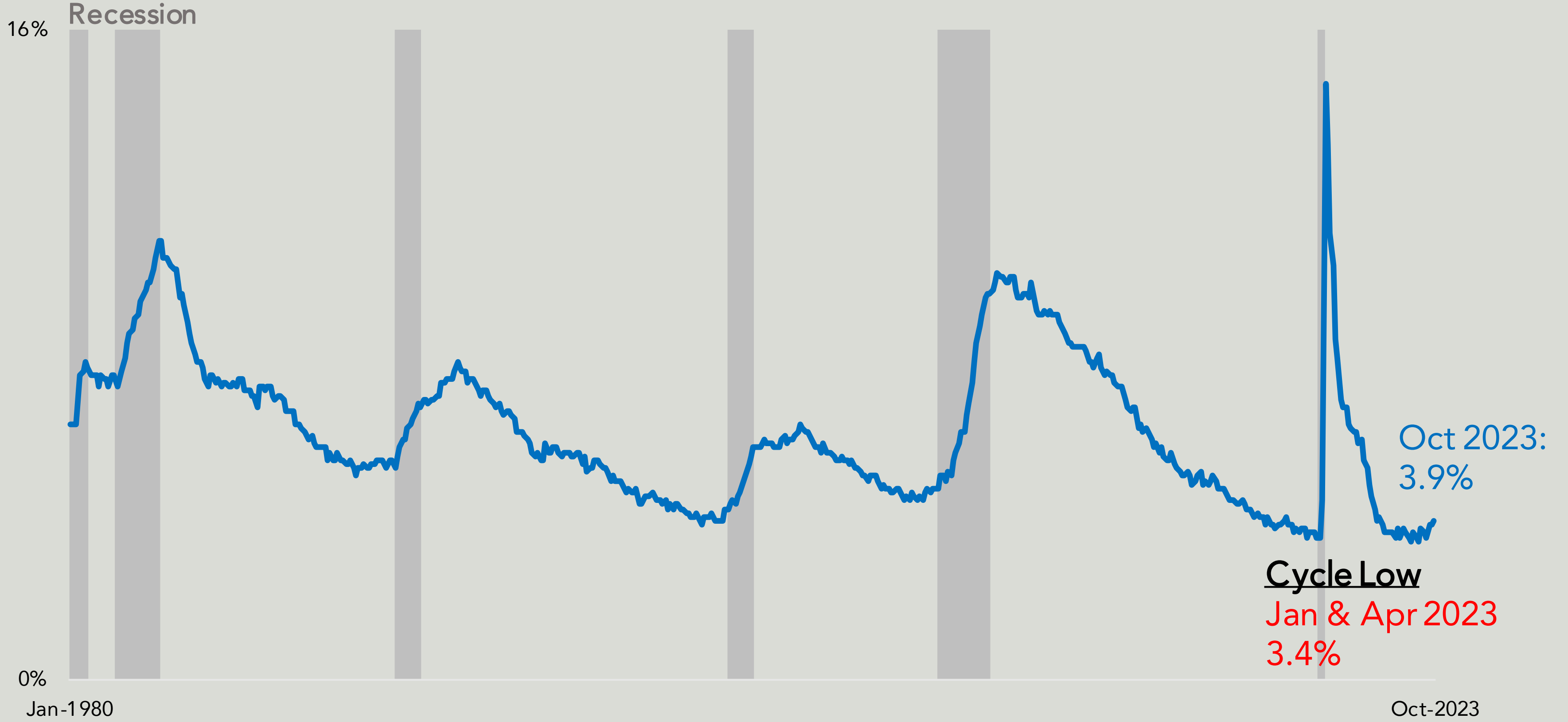
1 Introduction

The October US Unemployment Report

The US economy added 150k jobs in October, well short of consensus expectations of 170–180k. In addition, payroll growth from August and September were revised down by 101k, cumulatively. Private payrolls also disappointed in October, only adding 99k payrolls, less than half the September increase of 246k. The October unemployment rate, now at 3.9%, has begun to steadily rise off of cycle lows and is now 0.5 ppts higher than the January and April lows.

US unemployment rate

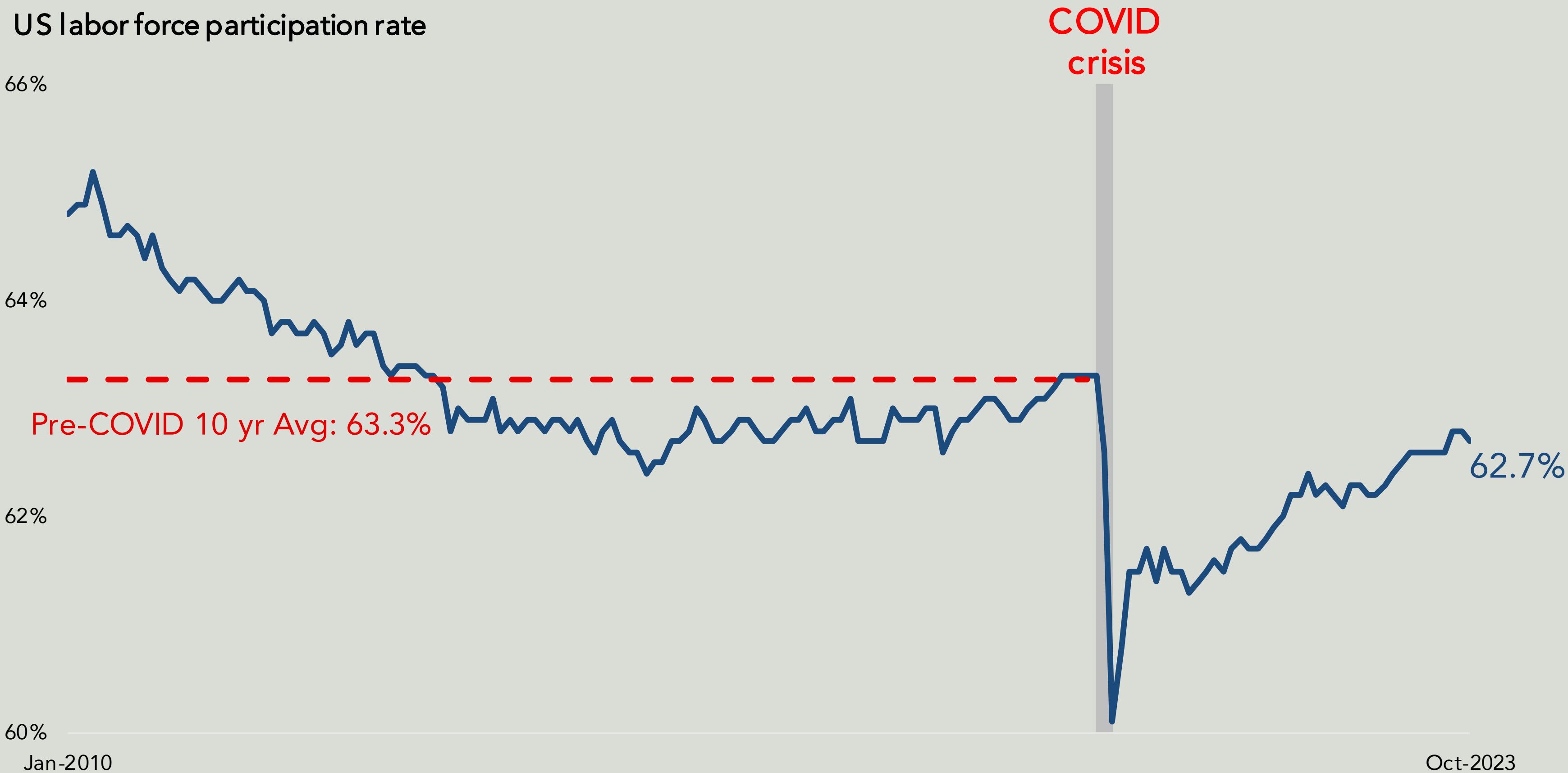


Source: (1) Bloomberg. Data as of November 8, 2023.

US Labor Participation Rate Not Fully Recovered

Although it has recovered from COVID-crisis lows, the US labor force participation rate remains persistently low, still sitting more than a half point below its pre-COVID 10 year average. While a panoply of structural and cyclical factors are at play, numerous economic studies point to aging demographics as a primary explanatory variable, the impact of which accelerated during COVID due to early retirements.

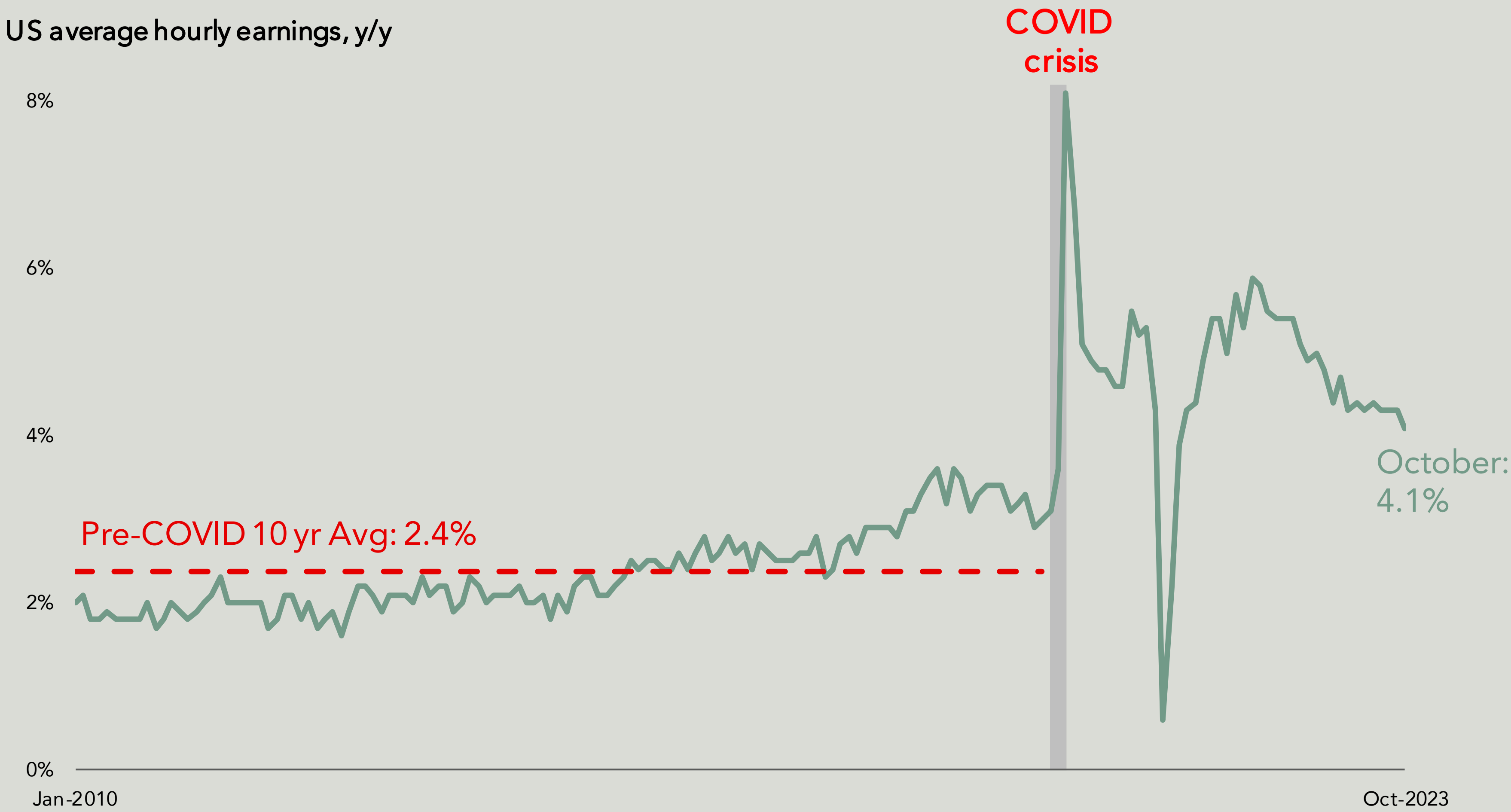
US labor force participation rate



Source: (1) Bloomberg. Data as of November 8, 2023.

US Wage Growth Moderating

While still positive on a "real" basis (i.e., higher than inflation), US wage growth moderated in October to 4.1% y/y, down from levels above 6% in 2021 and the slowest pace of increase in more than two years.

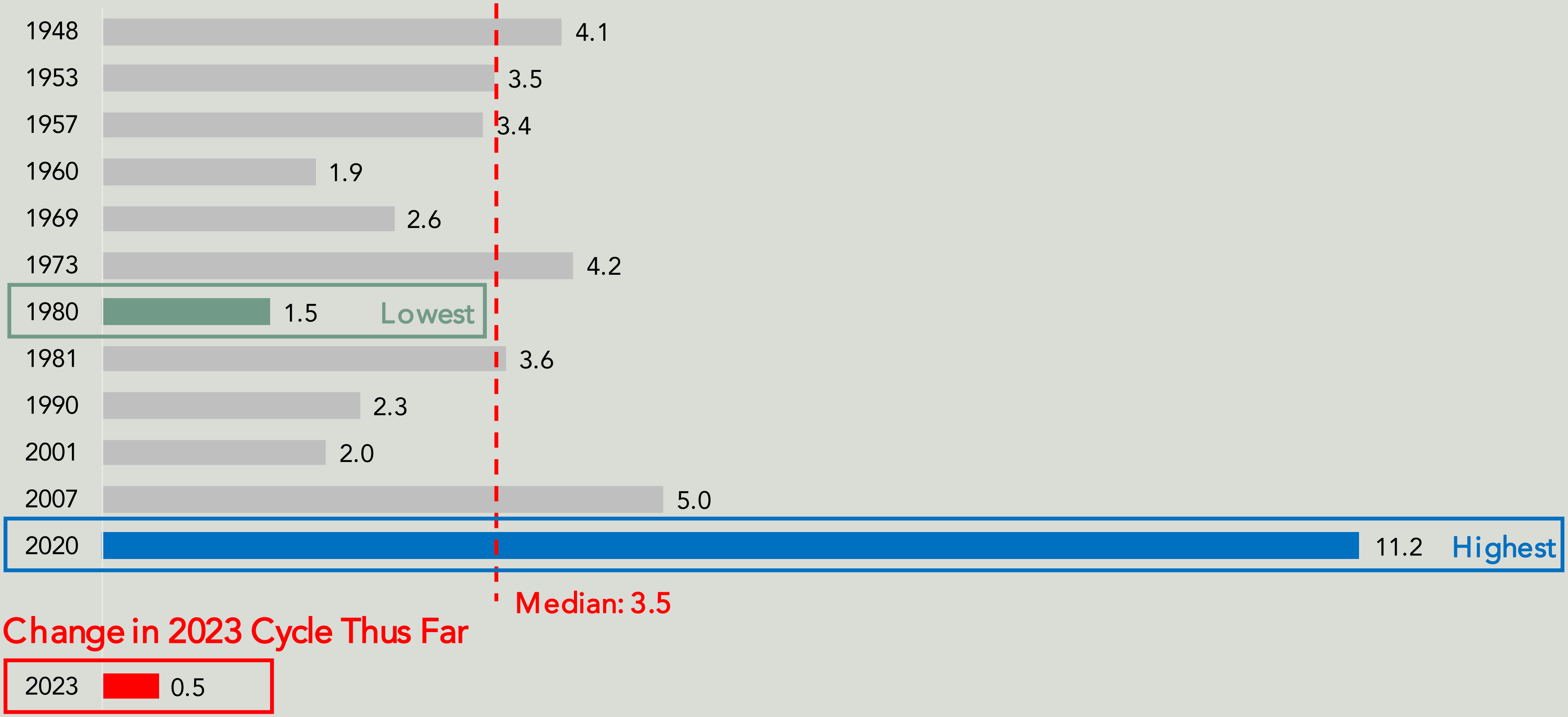


Source: (1) Bloomberg. Data as of November 8, 2023.

Trough-to-Peak Increases in US Unemployment Rate

On average, the unemployment rate rises by approximately 3.5% from its cyclical trough to peak during and after US recessions. Additionally, in every post-WWII recession, the US unemployment rate has risen above 6.0% on each occasion. Should a forthcoming US recession be short and mild, structurally tight post-COVID US labor markets could keep the unemployment rate below 6% for the first time during a US recession.

Change in unemployment rate, from trough to peak, during and after recession (percentage points)



Source: (1) Bureau of Labor Statistics. Data as of November 8, 2023.

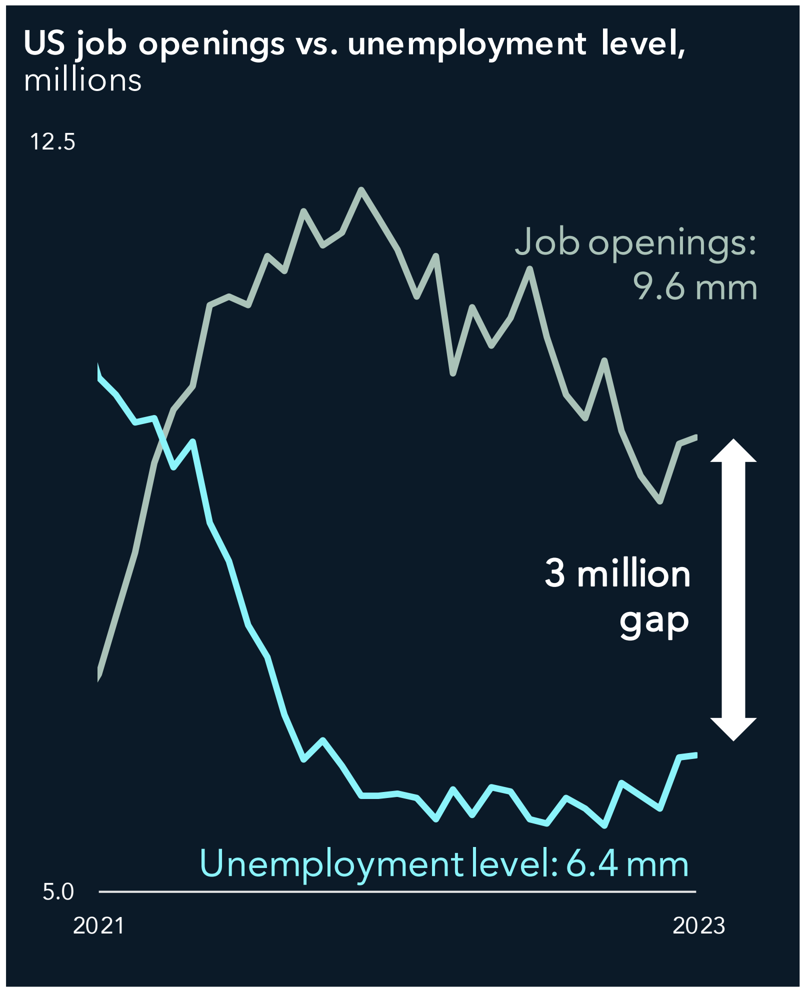
Structurally Tight Labor Markets

Primary drivers of structurally tight labor markets

More COVID-related

- COVID fears
- COVID visa / travel restrictions
- COVID behavior changes
- Elevated consumer savings
- Child & elderly care challenges
- Accelerating baby boomer retirements
- Aging demographics
- Skillset gaps
- Low immigration
- Technology disruption

More STRUCTURAL



Source: (1) Bloomberg. Data as of November 8, 2023.

2 Labor Market Recession Signals

Sahm Rule Signal

The Sahm Rule, published in October 2019 and named after former Federal Reserve and Council of Economic Advisors economist Claudia Sahm, indicates that US recessions historically "begin" when the 3-month moving average of the national unemployment rate rises by 0.5 percentage points or more relative to its low during the prior 12 months. By this historically reliable measure, the +0.33ppt three month average increase in the October unemployment report is still below the +0.5ppt three month average threshold for US recessions.

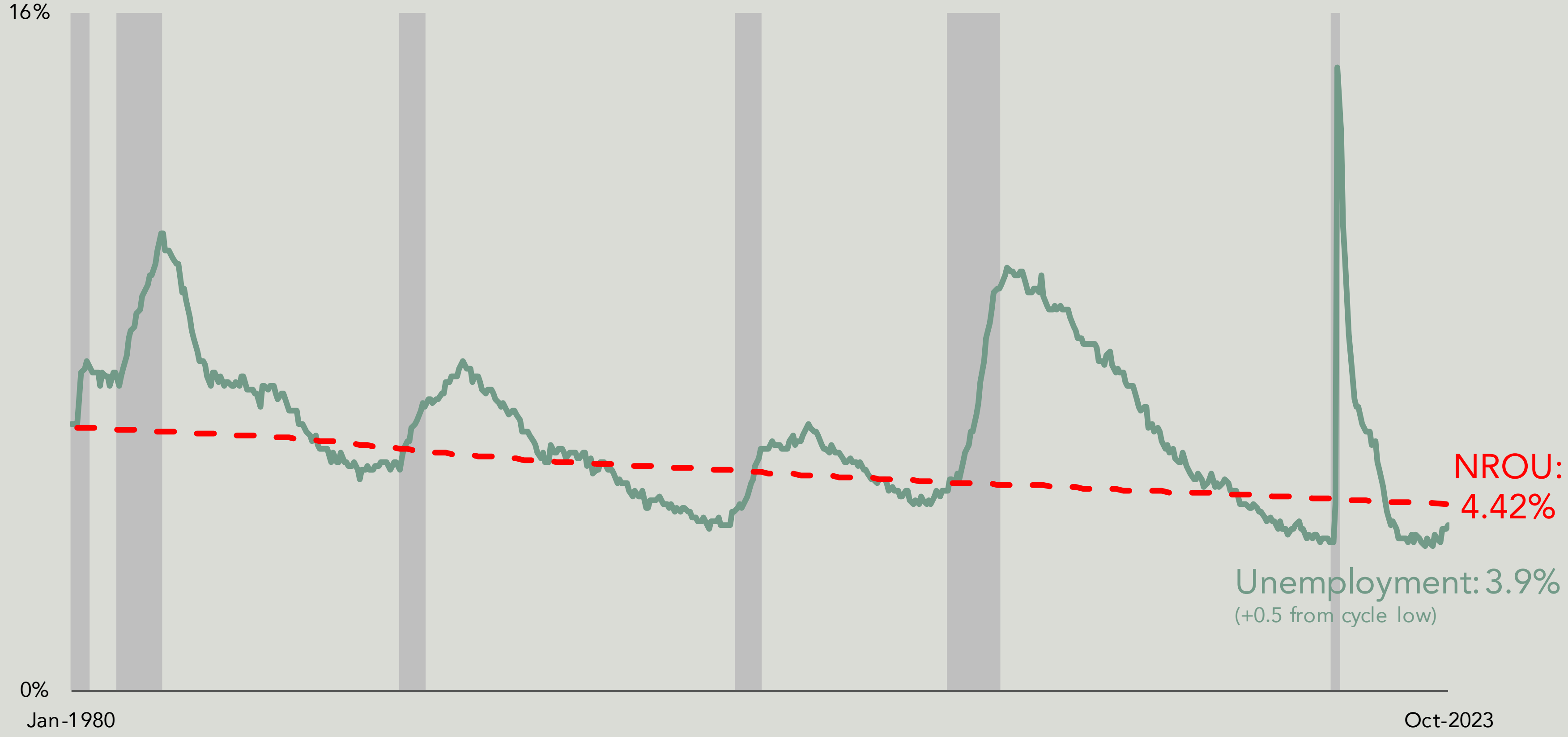
US unemployment rate, 3 month moving average

Source: (1) Bloomberg. Data as of November 8, 2023. Prior 12 month low refers to 3 month moving average.

NROU Threshold Signals

Historically, when the unemployment rate rises above the non-cyclical rate of unemployment (NROU, previously NAIRU), the economy is in a recessionary period. In the current cycle, the unemployment rate is moving closer to NROU, but has not yet surpassed it.

US unemployment rate & NROU



Source: (1) Bloomberg. Data as of November 8, 2023. In July 2021, NAIRU was renamed to NROU, the noncyclical rate of unemployment.

Initial Jobless Claims Signals

The year-on-year increase in four-week average initial jobless claims has only breached 50k on one occasion without a recession. In 2023, the four-week average has not breached 35k and has actually been trending down in recent months.

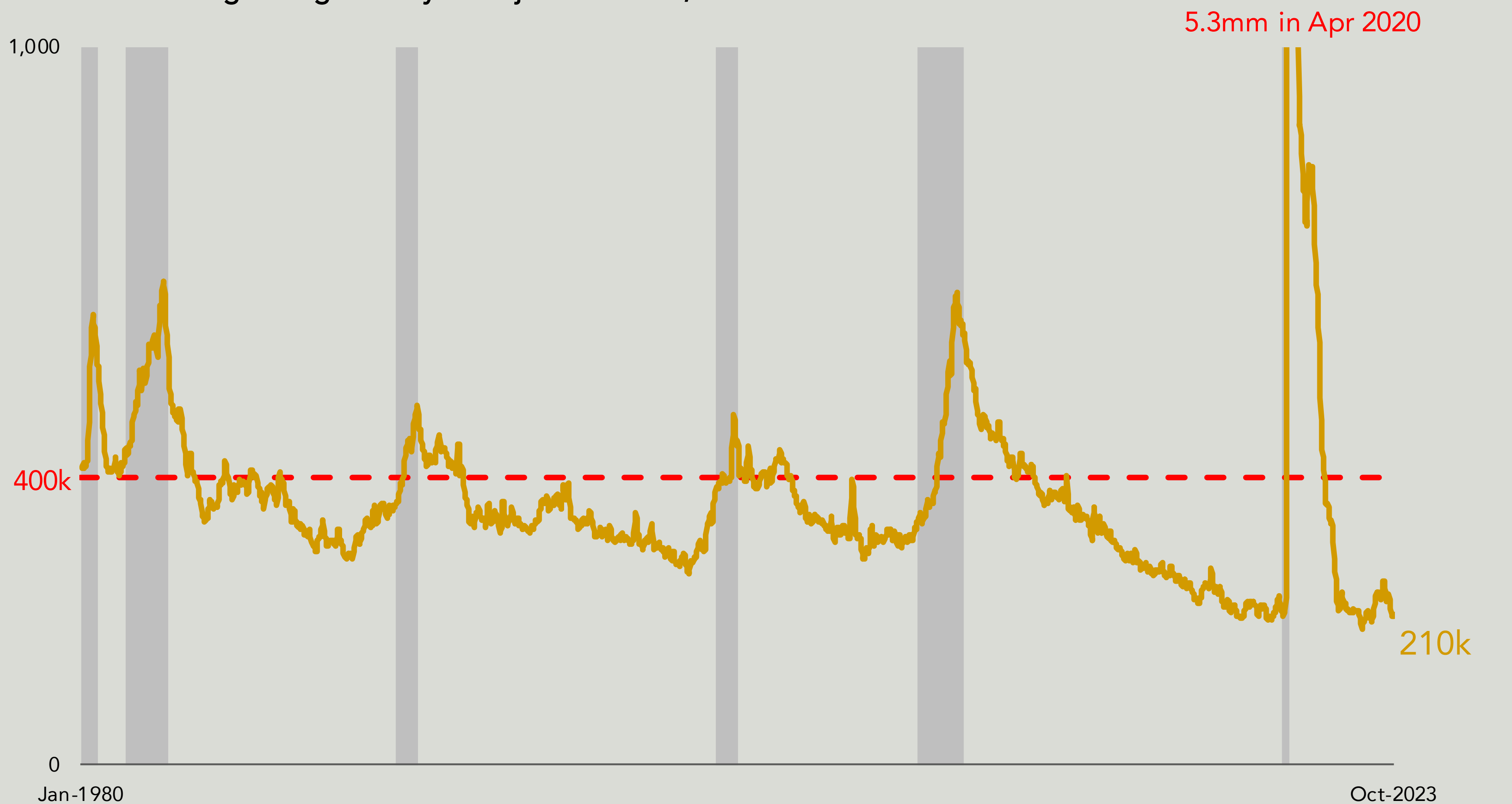
Four week moving average initial jobless claims, y/y increase

Source: (1) Bloomberg. Data as of November 8, 2023.

Initial Jobless Claims Signals

The four-week average of weekly initial jobless claims above 400,000 for several weeks has historically signaled US recessions. The four-week average is currently roughly half that level.

Four week moving average weekly initial jobless claims, thousands

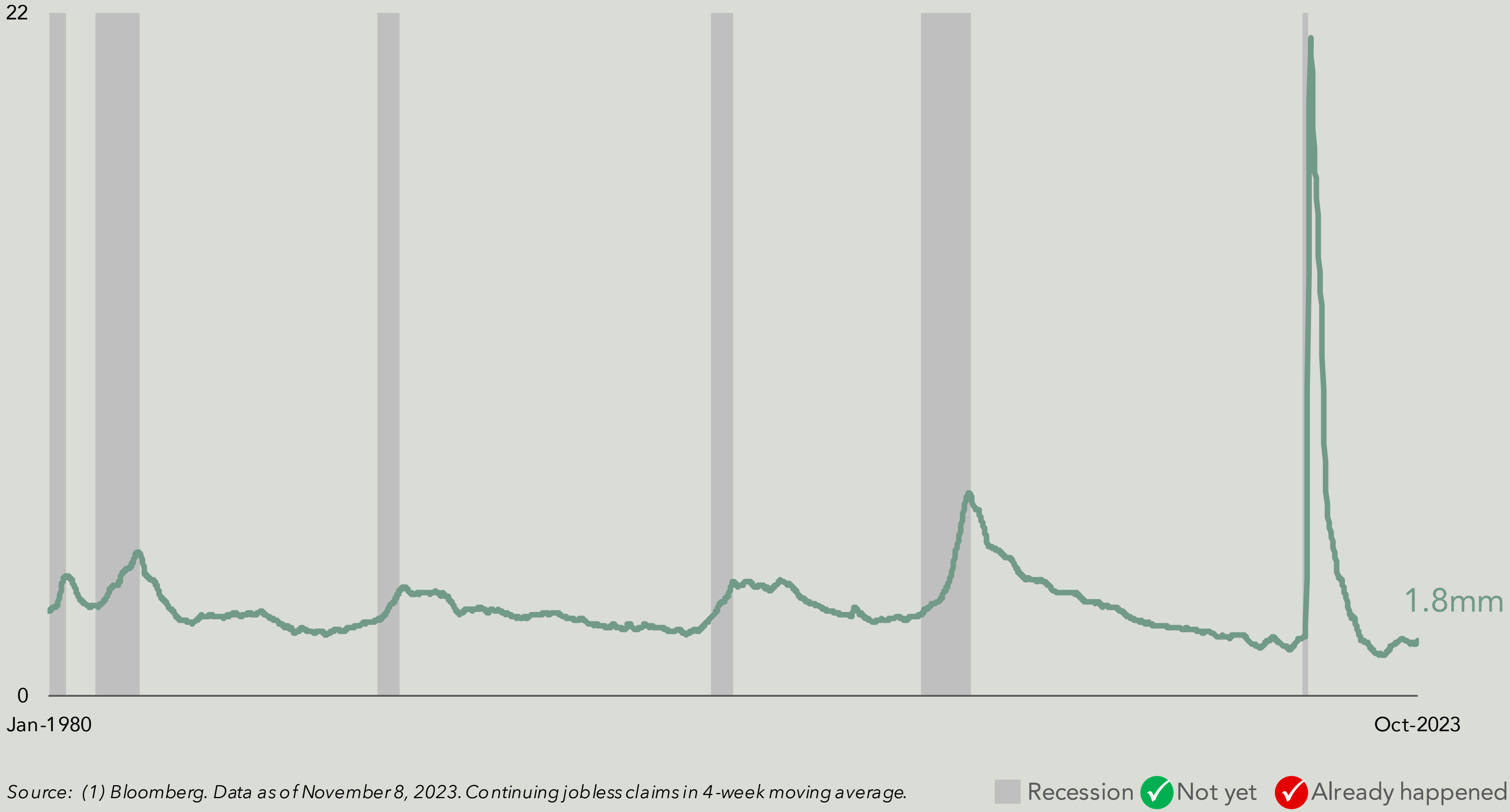


Source: (1) Bloomberg. Data as of November 8, 2023.

Continuing Claims Signals

Prolonged increases in the four week moving average for continuing jobless claims have historically been an accurate real-time indicator of recessions. Average continuing jobless claims have remained relatively stable to date.

Four week moving average continuing jobless claims, mm

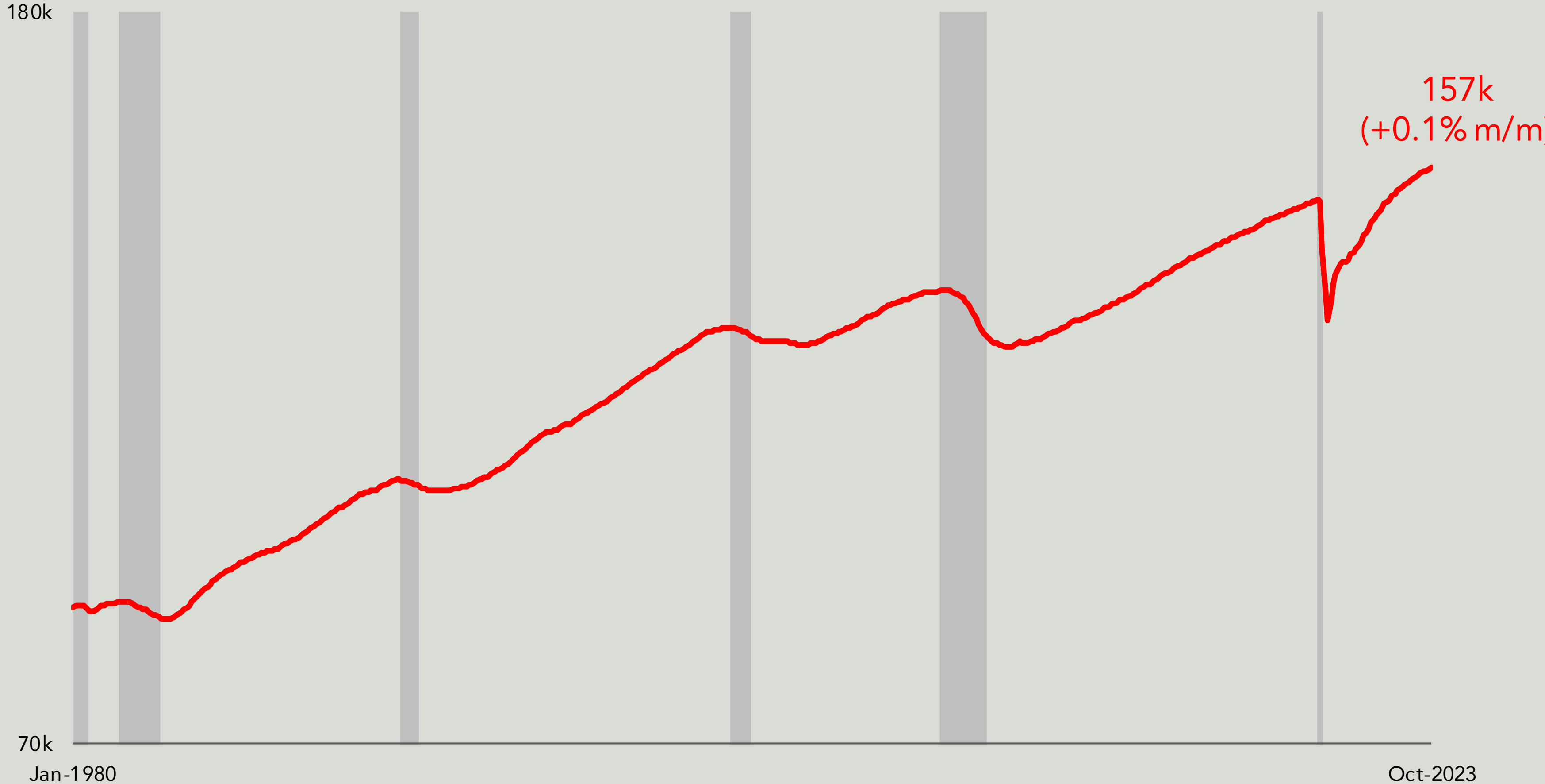


Source: (1) Bloomberg. Data as of November 8, 2023. Continuing jobless claims in 4-week moving average.

Nonfarm Payrolls Signals

The three month moving average for payrolls has historically declined through recessions. In the current cycle, average nonfarm payrolls have been trending upwards, albeit at a slower pace.

Three month moving average nonfarm payrolls



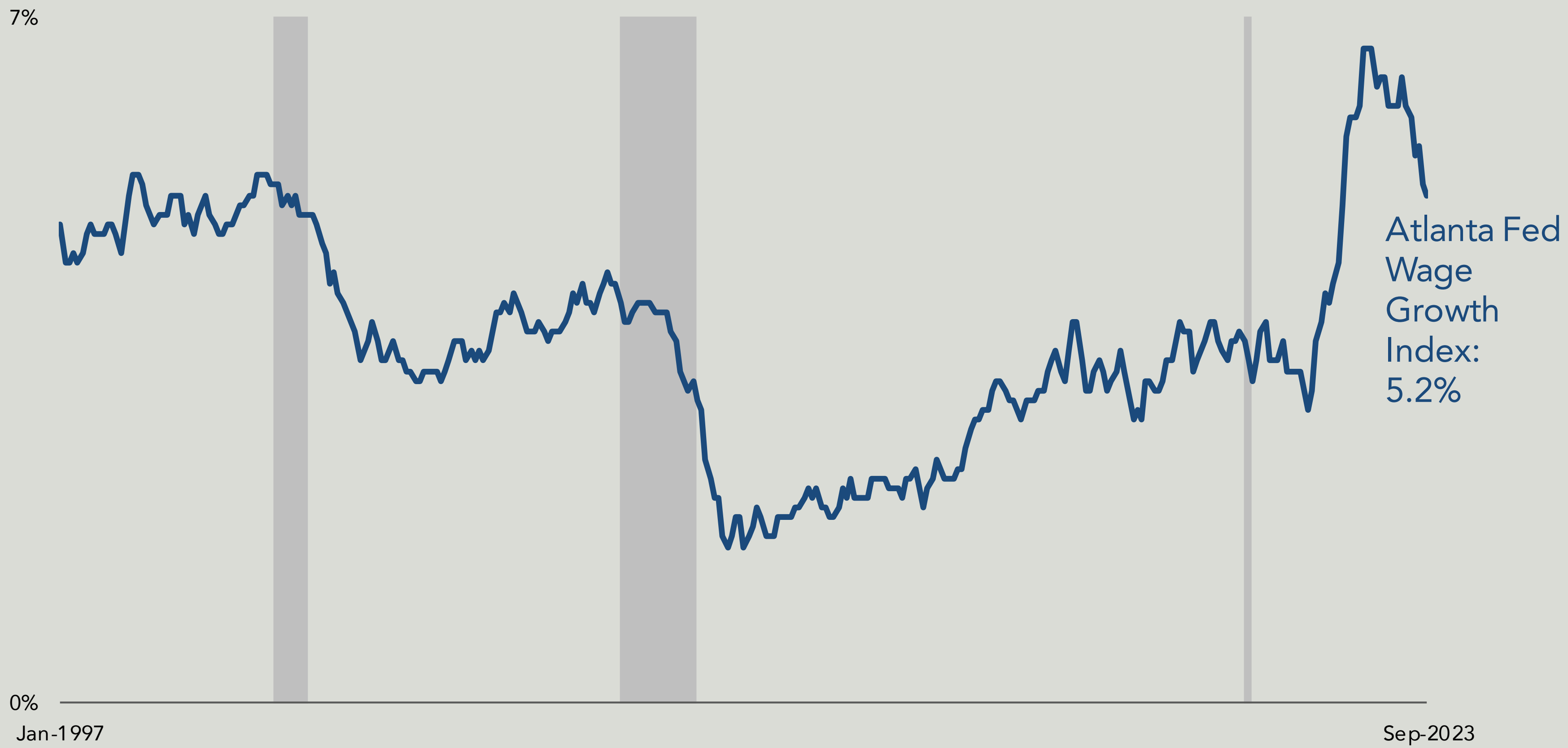
Source: (1) Bloomberg. Data as of November 8, 2023. Nonfarm payrolls is three month moving average.

Recession Not yet Already happened

Wage Growth Signals

US wage growth has historically experienced prolonged and sharp declines during recessions. Though still positive on a "real" basis (i.e., higher than inflation), US wages have been declining since June 2022, an early signal of a softer labor market.

Atlanta Fed wage growth index, y/y



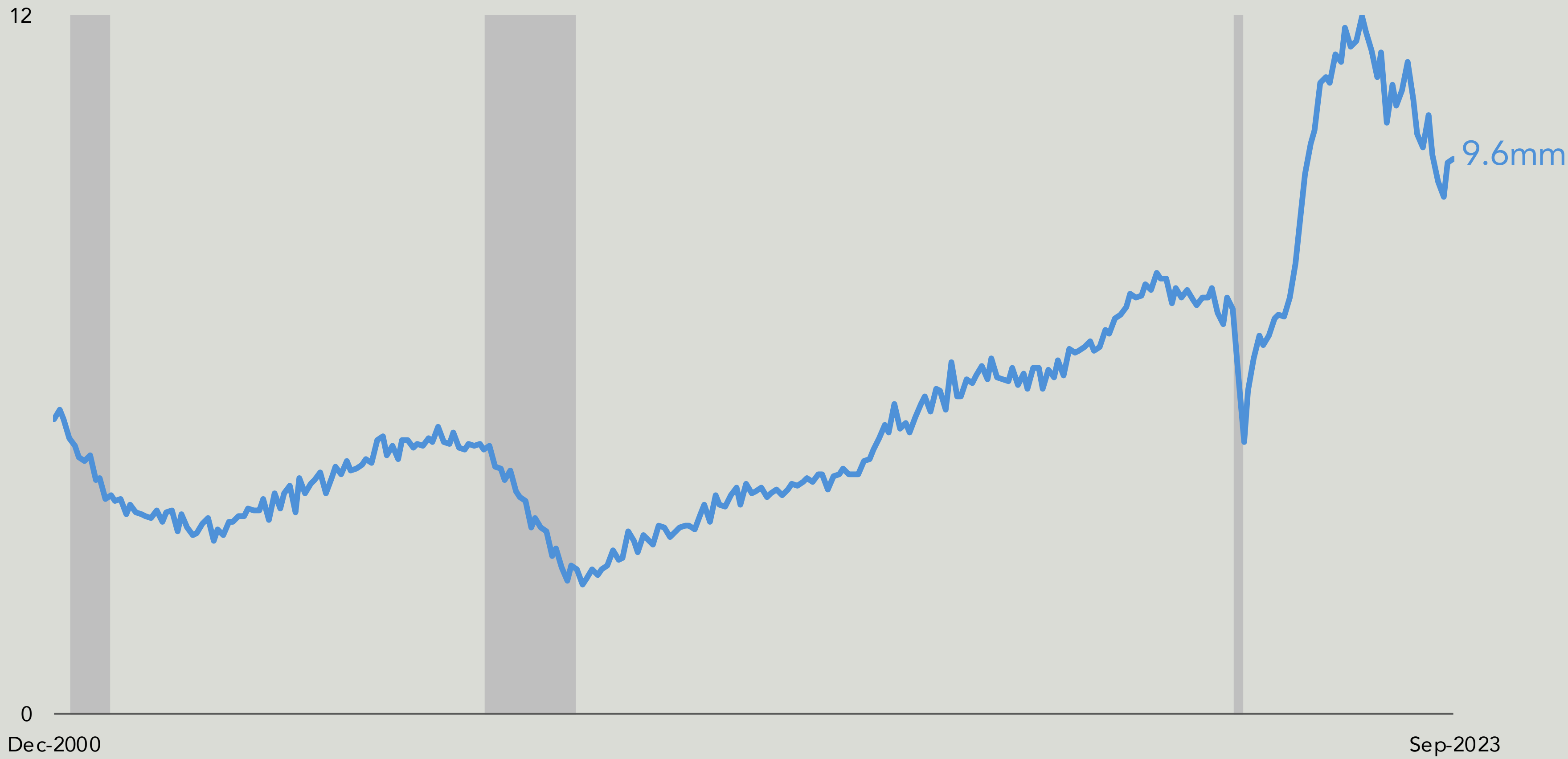
Source: (1) Bloomberg. Data as of November 8, 2023. Wage growth is Atlanta Fed Wage Growth Tracker. It is the three month moving average of median wage growth, hourly data.

Recession Not yet Already happened

JOLTS Data Signals

Historically, the JOLTS data has shown a significant decline in job vacancies leading into economic recessions. Job openings have slowly declined since March 2022; however, the number of open positions is still higher than the number of unemployed in the US economy.

US job openings, mm



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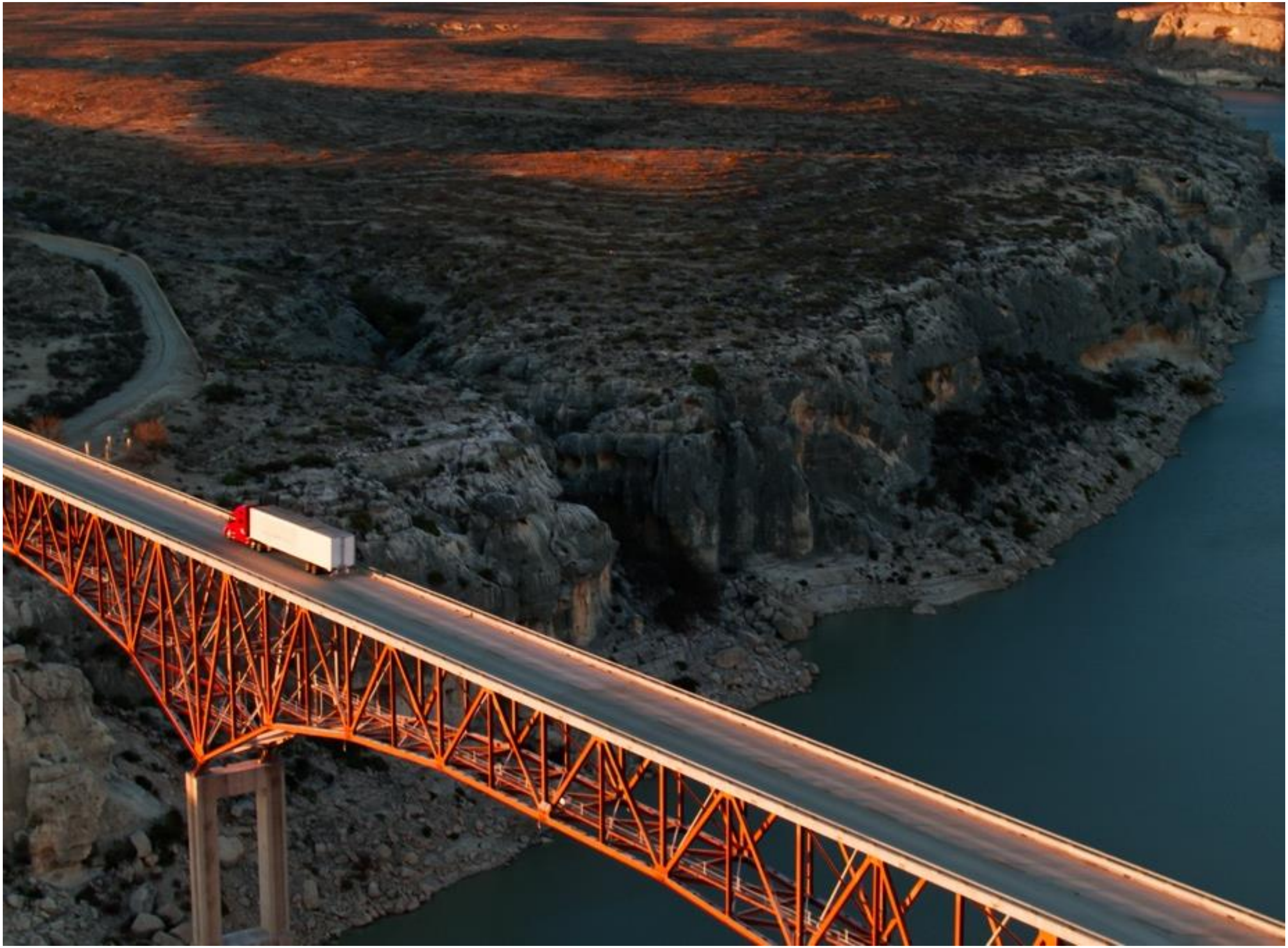
Recession Not yet Already happened



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Role

Tom Joyce is a Managing Director and Capital Markets Strategist within MUFG's global capital markets and investment banking business. Based in New York, Tom heads a team that creates customized analytical content for multi-national S&P 500 companies. His team provides in depth analysis on the impact of economic, political, public policy and regulatory dynamics on the US credit, foreign exchange, rates and commodities markets.

Experience

Tom has over 25 years of Investment Banking experience in New York, London, Hong Kong, and San Francisco. Over the last 15 years, Tom created and built the Capital Markets Strategy role, advising corporate C-Suite executives (Boards, CEOs, CFOs, and Treasurers) on the pervasive macro forces driving markets. Tom also presents at dozens of corporate events each year including Board meetings, CEO ExCo sessions, CFO and Treasury off-sites, corporate leadership events and conferences.

Education

Tom's educational background includes a year of study at Oxford University from 1991 - 1992, a Bachelor of Arts in Political Science from Holy Cross College in 1993, and a MBA from Kellogg Business School, Northwestern University in 2000.

Personal

Tom resides in New Canaan, CT with his wife and four sons, where he serves on the Board of Trustees of the New Canaan Library as well as the Holy Cross College President's Council.

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Role

Hailey Orr is a Managing Director in MUFG's Capital Markets Strategy group within the global capital markets and investment banking business. The team provides market based content for corporate clients to assist in strategic decision making. Focus areas include the impact of economic, political, public policy and regulatory dynamics on the US credit, foreign exchange, rates and commodities markets.

Experience

Hailey has a decade of Wall Street experience, including three years as a Consumer Sector Specialist in Equity Sales and seven years as a Capital Markets Strategist. Hailey is also a member of MUFG's Inclusion & Diversity Council and has devoted years to participating in and developing Wall Street recruiting programs.

Education

Hailey graduated with honors from the University of Michigan's Ross School of Business with a BBA and a minor in International Studies.

Personal

In March 2020, Crain's New York Business Magazine named Hailey one of the "Rising Stars in Banking and Finance".

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Experience

Stephanie has spent over six years as a Capital Markets Strategist. She is an active member of the University of Michigan recruiting team and is focused on the diversity recruiting effort at MUFG. Stephanie is also a part of MUFG's DEI, Culture & Philanthropy (DCP) Council.

Education

Stephanie graduated with honors from the University of Michigan's Ross School of Business with a BBA.

Personal

Stephanie is actively involved in NYC's iMentor program, mentoring high school students with their journey to college graduation. She also volunteers at Experience Camps, a free summer camp program for grieving children.

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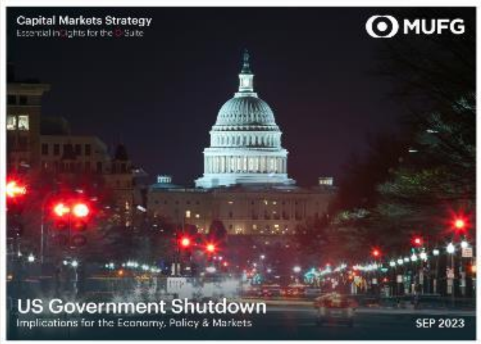
Experience

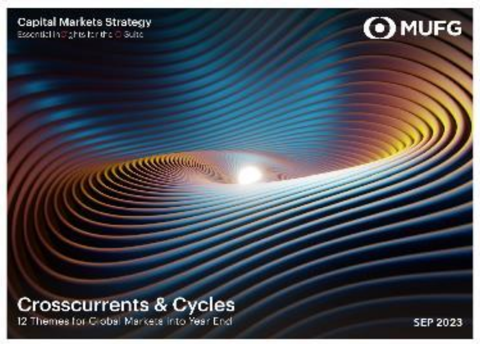
Angela previously interned at MUFG working in Capital Markets within the Equity Capital Markets and Leveraged Finance divisions. She is also an active member of the Carnegie Mellon University recruiting team.

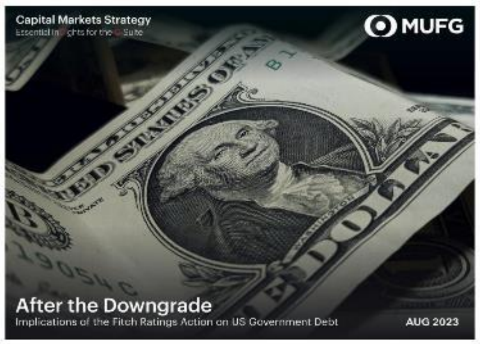
Education

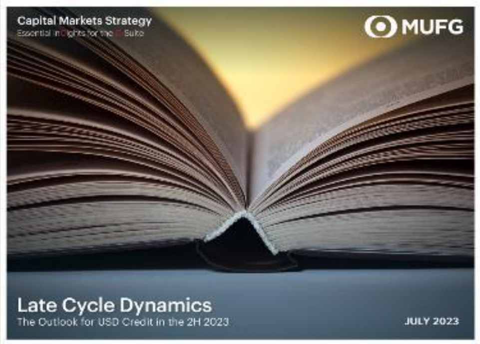
Angela graduated with honors from Carnegie Mellon University's Tepper School of Business with a BS in Business Administration with an additional major in Statistics and a minor in Media Design. She was a member of Alpha Kappa Psi business fraternity and the Undergraduate Entrepreneurship Association.

MUFG's Capital Markets Strategy Team









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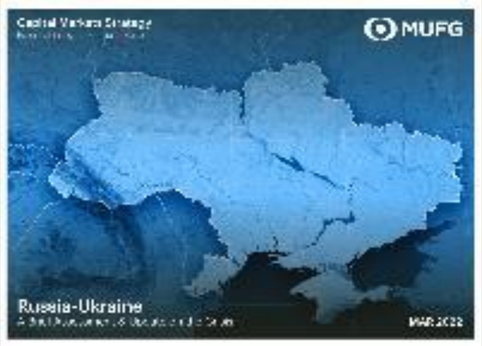

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