

U.S. Economic Outlook: Q3 2023

Higher interest rates are not the new normal.

Morningstar Equity Research

Preston Caldwell
Chief U.S. Economist

This is a summary of our 58-page report.



Important Disclosure

The conduct of Morningstar's analysts is governed by Code of Ethics/Code of Conduct Policy, Personal Security Trading Policy (or an equivalent of), and Investment Research Policy. For information regarding conflicts of interest, please visit: <http://global.morningstar.com/equitydisclosures>

Key Takeaways

Overheating Economy?

We've revised our 2023 GDP forecast up to 2.3% as data continues to show an economy running hot. Alleviating supply constraints have helped inflation to fall even as GDP growth has accelerated, but we still see a slight weakening in growth as being needed to bring inflation down to 2%. We expect the economy to achieve a "soft landing" where inflation returns to 2% and growth slows but avoids an outright recession. Consensus has moved closer to our favorable outlook on a soft landing, given recent inflation data coming in low.

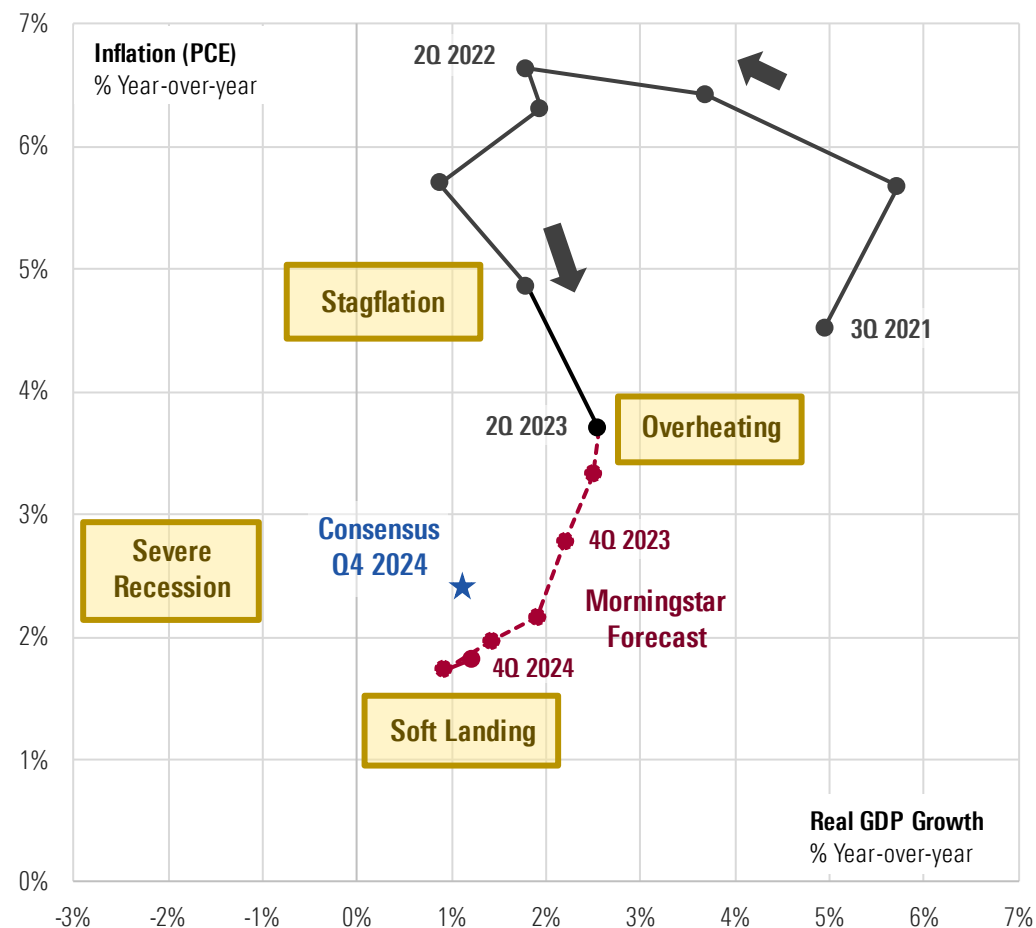
Are Higher Interest Rates the New Normal?

While the economy has seemed nearly impervious to the effects of rate hikes so far, we think a greater slowdown is coming as the strain of rate hikes continues to accumulate. We expect GDP growth to slow greatly in 2024, and we expect large federal-funds rate cuts to be needed to propel a rebound in growth in 2025 and following years. The forces that have driven real interest rates lower for decades (such as demographics) haven't abated. We don't think the economy can preserve itself for long on a diet of high rates.

Our Inflation Optimism Is Playing Out

The supply constraints that drove high inflation are being resolved, causing an unwinding of the runup in prices in energy, food, durables, and other areas. Aggressive capacity expansion across many areas could turn widespread shortages into gluts within a few years. Combining these factors with monetary policy tightening, we expect inflation to drop to 3.6% in 2023 and average just 1.8% over 2024-27.

Inflation Versus GDP Growth Scenarios



Source: Bureau of Economic Analysis, Survey of Professional Forecasters, Morningstar.

We Still Expect Inflation To Plummet, Allowing the Fed To Cut Rates and Jump-Start GDP Growth

Long-Term GDP

We remain bullish on long-term GDP growth. We expect a cumulative 300 basis points more real GDP growth through 2027 than consensus does. Consensus remains overly pessimistic on a recovery in the labor supply and has generally overreacted to near-term headwinds.

Interest Rates

We expect the Fed to start cutting in February 2024, with the federal-funds rate falling by over 300 basis points by the end of 2025 (hitting about 2%), which is below market expectations. Our long-run expectation for the 10-year Treasury yield is 2.75%, well below the current yield of 4.2%.

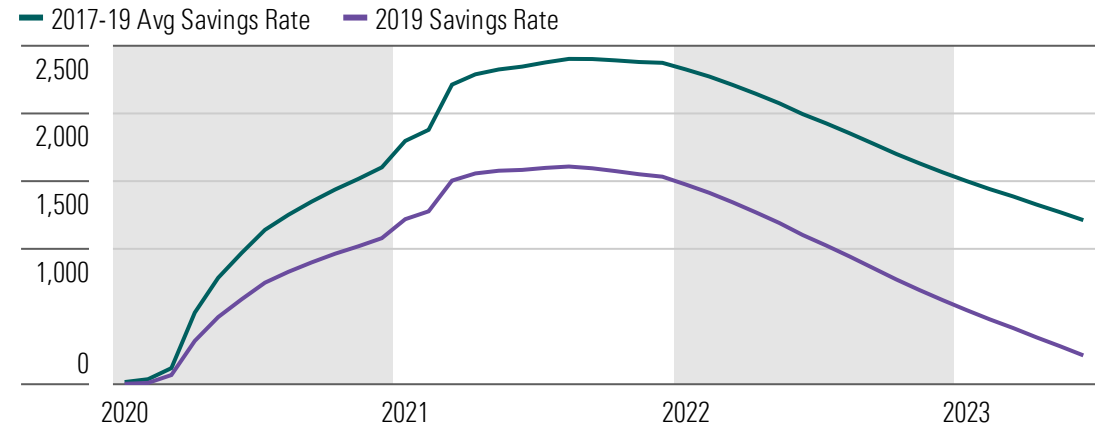
Consumer Spending

Household savings rates remain very low as consumers have spent down excess savings accumulated during the pandemic. As these excess savings near depletion, we expect consumer spending to slow.

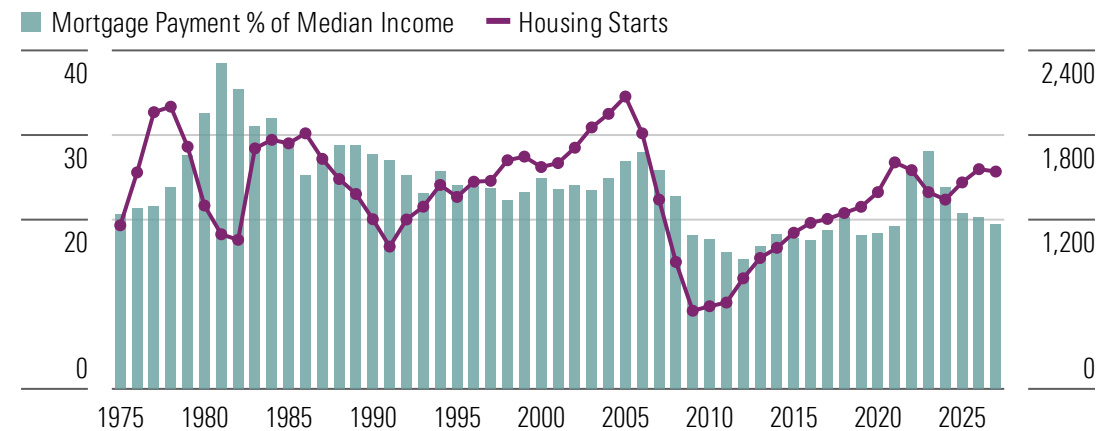
Housing

We expect a 10% drop in housing starts in 2023, along with a 2% decline in housing prices. Higher mortgage rates combined with the earlier surge in housing prices mean that home affordability is at its worst since 2007. Lower mortgage rates will be needed to avert a deeper and prolonged downturn in the housing market.

Estimates of Excess Savings, \$ Billion



Housing Affordability Versus Housing Starts



Sources: Bureau of Economic Analysis, Federal Reserve (bottom), Morningstar.

Forecast Update

We Remain Optimistic on GDP and Inflation Compared With Consensus

We Still Expect Inflation To Plummet, Allowing the Fed To Cut Rates and Jump-Start GDP Growth

We Expect Growth To Trough Over Next Year, but Rebound by 2025

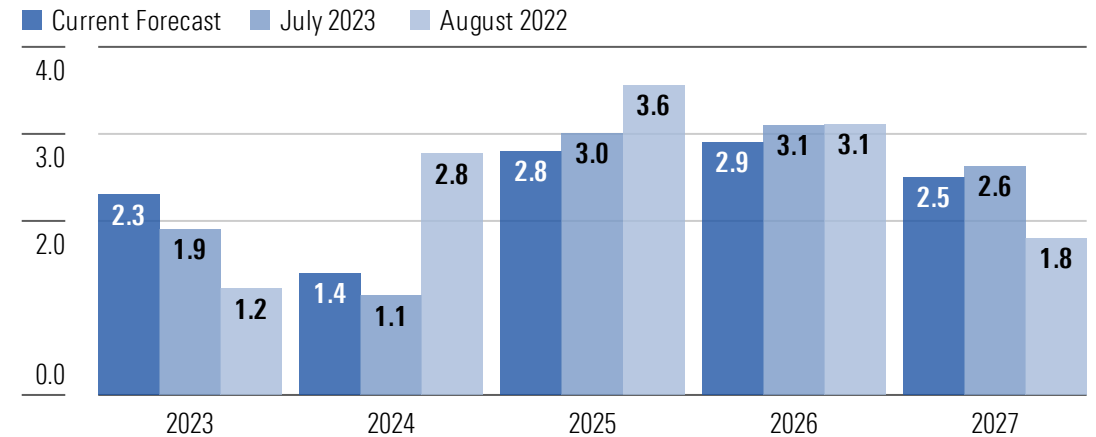
Our 2023 GDP growth forecast has increased again owing to strong data on consumption, housing, jobs, and elsewhere. However, we still think the Fed's rate hikes will eventually hit the economy hard, with GDP growth troughing in 2024. We think aggressive rate cuts in 2024 will trigger a GDP growth rebound in 2025 and following years.

Inflation Should Return to Normal in 2023

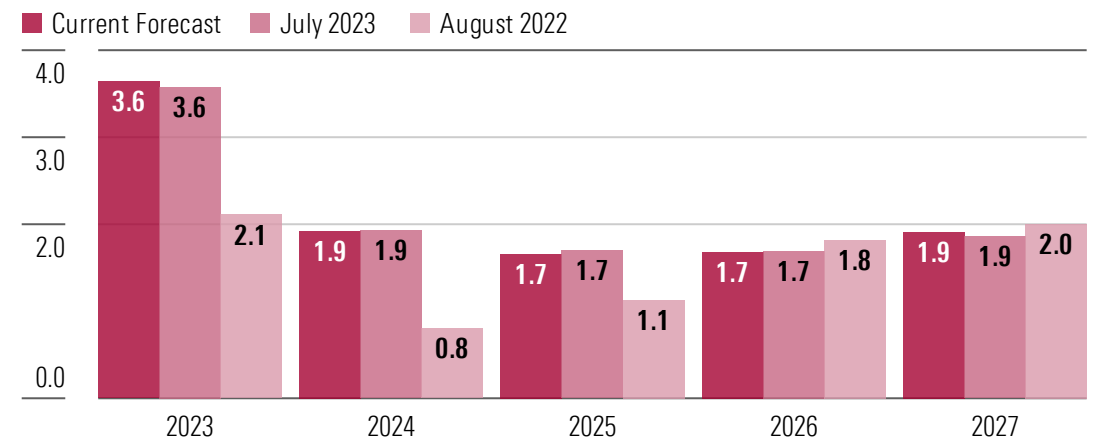
Our inflation forecast hasn't changed much compared with a month ago. While economic growth is running strongly, inflation data is nevertheless heading down in line with our expectations. We expect an aggressive drop in inflation through the end of 2023. In 2024 and following years, we expect the Fed to undershoot its 2% target. A combination of easing supply constraints and Fed tightening is winning the battle against inflation.

Exhibit Sources: Morningstar.

GDP Forecast Revisions



Inflation Forecast Revisions



We Remain More Optimistic Than Consensus on Strong GDP Growth and Mild Inflation

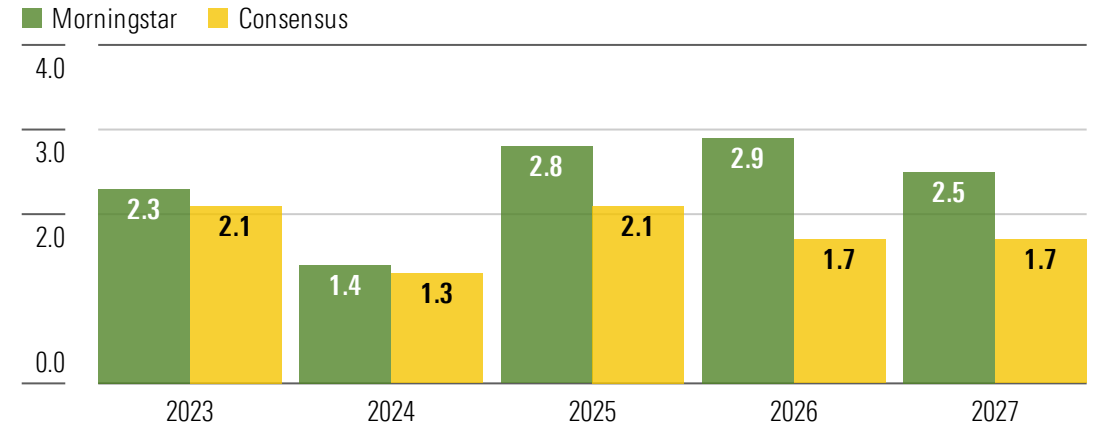
GDP Rebounds Strongly in Third Quarter as Headwinds Reversed

We're upbeat on U.S. economic growth, as we expect a cumulative 3% more real GDP growth through 2027 than consensus does. In the near term, the divergence is driven by our view that falling inflation will allow the Fed to cut rates and jump-start the economy. In the longer run, we're more optimistic on supply-side expansion, both in terms of labor supply and productivity.

We Expect Inflation To Fall Much Faster Than Consensus

On inflation, our views diverge significantly from consensus. While consensus has partially given up on the "transitory" story for inflation, we still think most of the sources of recent high inflation will unwind over the next few years, providing prolonged deflationary pressure. This includes energy, autos, and other durables.

Real GDP Forecast Comparison



Inflation (PCE) Forecast Comparison

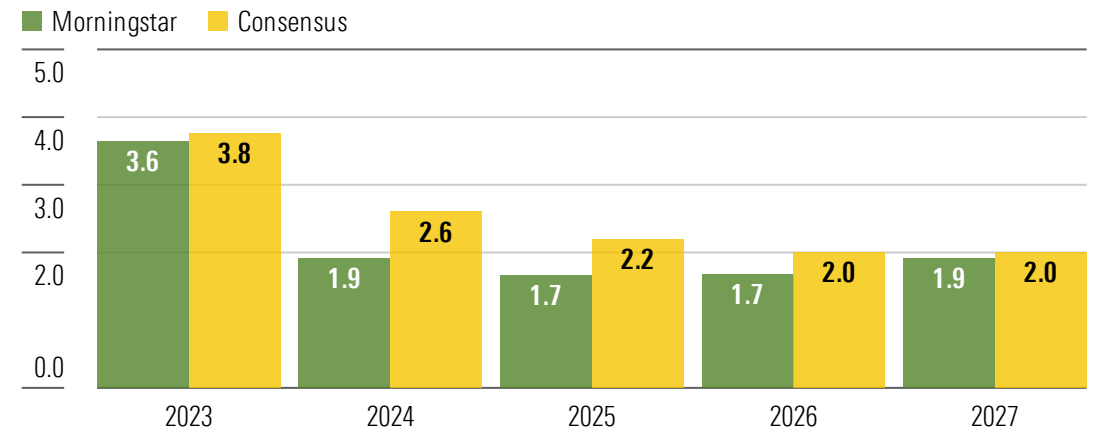


Exhibit Sources: Survey of Professional Forecasters, Morningstar.

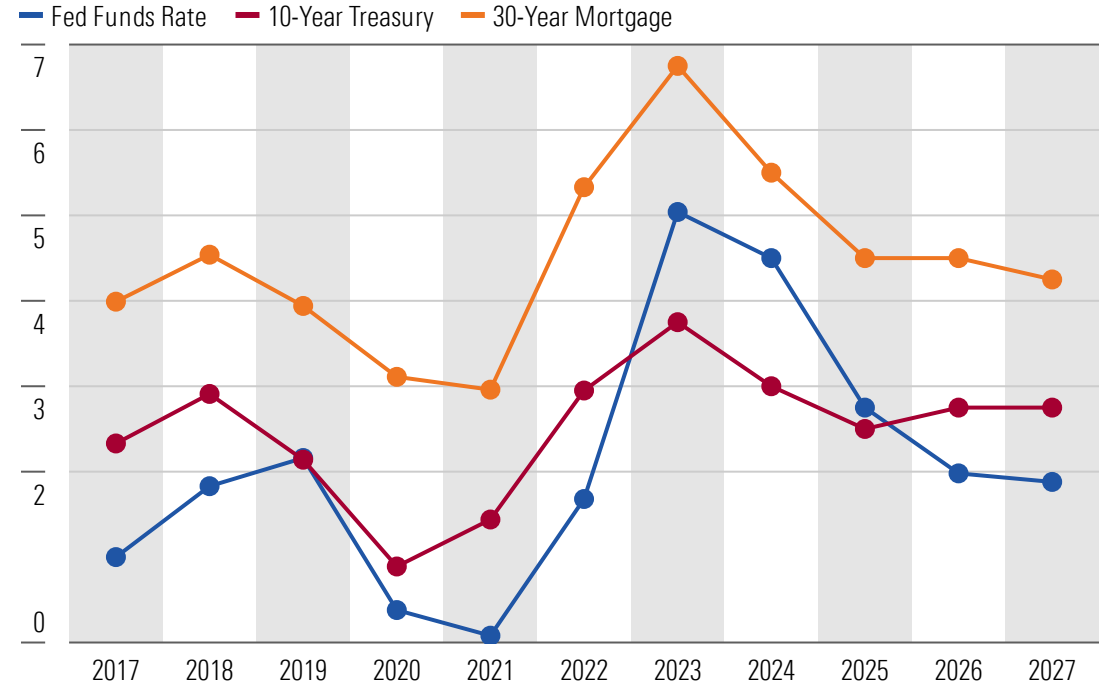
Interest Rates Will Soon Be Headed Back Down

We Expect the Fed To Shift Back to Easing in 2023

Interest rates have soared over the past year as expectations of monetary policy tightening have built up and begun to play out. However, we think the Fed will receive the green light from falling inflation to pivot back to easing in early 2024. The Fed will need to lower interest rates to avert a greater fall in housing activity and eventually generate a rebound. This should allow GDP growth to reaccelerate in 2025. By 2027, we expect monetary policy with a neutral stance, with the federal-funds rate and the 10-year Treasury yield in line with our assessment of their long-run natural levels.

While we've upped our yield forecasts recently in response to rising rates, the jump in bond yields in recent months means that there's still a significant divergence between our views and the market. The five-year Treasury yield is 4.4% as of August, implying an average federal-funds rate of around 4% over the next five years. By contrast, we expect an average effective federal-funds rate of about 3% over the next five years. Likewise, the 10-year Treasury yield is 4.2%, well above our long-run projection of 2.75%. The emerging narrative that the U.S. economy is permanently moving to a higher-interest-rate regime is incorrect, in our view.

Interest-Rate Forecasts (Annual Average)



	2022	2023	2024	2025	2026	2027
Fed Funds Rate	1.68%	5.04%	4.50%	2.75%	1.98%	1.88%
10-Year Treasury	2.95%	3.75%	3.00%	2.50%	2.75%	2.75%
30-Year Mortgage	5.33%	6.75%	5.50%	4.50%	4.50%	4.25%

Source: Federal Reserve, Morningstar.

Our Supply-Side View Drives Our Bullish View on GDP

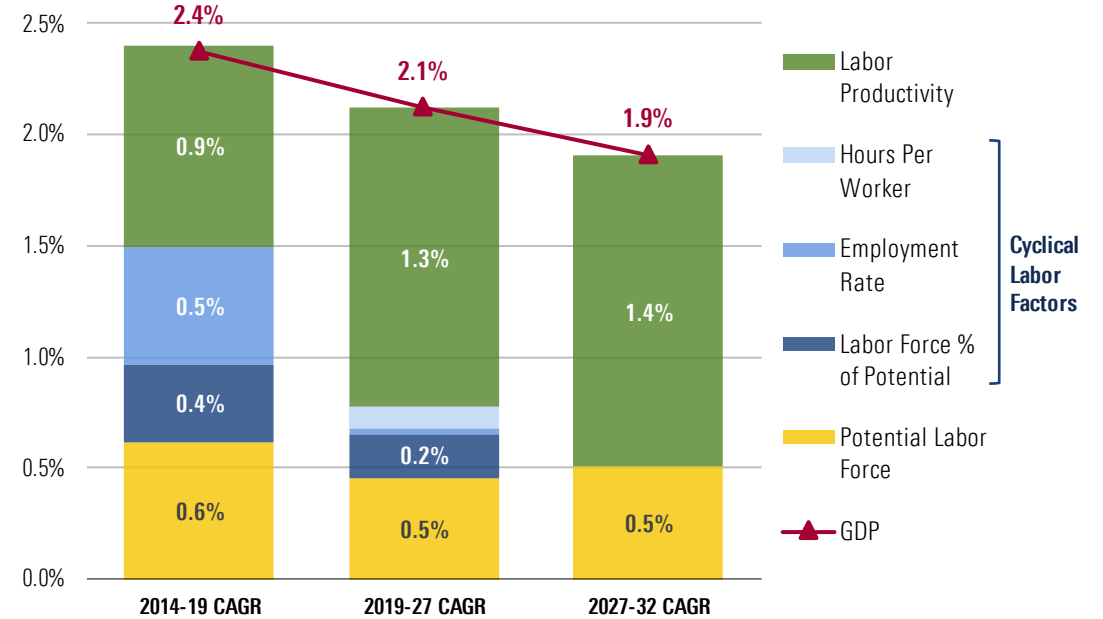
We Expect More Labor Force Expansion Than Consensus

Our longer-run GDP forecast is determined solely by our projections for the supply side of the economy, as we expect the Fed to calibrate aggregate demand, so the economy is operating at full capacity. GDP growth in the prepandemic years was fueled heavily by cyclical labor market expansion (the long recovery from the Great Recession). So, we can't take for granted that prepandemic growth rates represent a good benchmark for long-term growth.

Our bullish view on GDP through 2027 compared with consensus is driven greatly by our expectations for labor supply. We expect labor force participation (adjusted for demographics) to recover ahead of prepandemic rates as widespread job availability pulls in formerly discouraged workers. Consensus expects labor force participation to struggle to reach prepandemic rates.

We also expect productivity to perform a bit stronger than consensus expects. Productivity weakened in 2022, but we think this was a temporary slowdown that reflects the disjointed nature of the postpandemic economic recovery. Productivity growth has averaged about 1.3% since the start of the pandemic, and we expect about 1.5% growth over 2023-27.

U.S. Real GDP Growth: Supply Side Decomposition



Labor Productivity: real GDP/total hours worked

Hours Per Worker: total hours worked/total employment

Employment Rate: total employment/labor force ... also equal to 1 minus the unemployment rate

Labor Force % of Potential: labor force/"potential" labor force

Potential Labor Force: derived from our estimates of cyclically neutral labor force participation rates for each age group in the population

Exhibit Sources: Bureau of Economic Analysis, Morningstar.

General Disclosure

Unless otherwise provided in a separate agreement, recipients accessing this report may only use it in the country in which the Morningstar distributor is based. Unless stated otherwise, the original distributor of the report is Morningstar Research Services LLC, a U.S.A. domiciled financial institution.

This report is for informational purposes only and has no regard to the specific investment objectives, financial situation, or particular needs of any specific recipient. This publication is intended to provide information to assist investors in making their own investment decisions, not to provide investment advice to any specific investor. Therefore, investments discussed and recommendations made herein may not be suitable for all investors; recipients must exercise their own independent judgment as to the suitability of such investments and recommendations in the light of their own investment objectives, experience, taxation status, and financial position.

The information, data, analyses, and opinions presented herein are not warranted to be accurate, correct, complete, or timely. Unless otherwise provided in a separate agreement, neither Morningstar, Inc. nor the Equity Research Group represents that the report contents meet all of the presentation and/or disclosure standards applicable in the jurisdiction the recipient is located.

Except as otherwise required by law or provided for in a separate agreement, the analyst, Morningstar, Inc. and the Equity Research Group and their officers, directors and employees shall not be responsible or liable for any trading decisions, damages or other losses resulting from, or related to, the information, data, analyses or opinions within the report. The Equity Research Group encourages recipients of this report to read all relevant issue documents for example, prospectus) pertaining to the security concerned, including without limitation, information relevant to its investment objectives, risks, and costs before making an investment decision and when deemed necessary, to seek the advice of a legal, tax, and/or accounting professional.

The Report and its contents are not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country, or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation or which would subject Morningstar, Inc. or its affiliates to any registration or licensing requirements in such jurisdiction.

Where this report is made available in a language other than English and in the case of inconsistencies between the English and translated versions of the report, the English version will control and supersede any ambiguities associated with any part or section of a report that has been issued in a foreign language. Neither the analyst, Morningstar, Inc., nor the Equity Research Group guarantees the accuracy of the translations.

This report may be distributed in certain localities, countries and/or jurisdictions ("Territories") by independent third parties or independent intermediaries and/or distributors ("Distributors"). Such Distributors are not acting as agents or representatives of the analyst, Morningstar, Inc. or the Equity Research Group. In Territories where a Distributor distributes our report, the Distributor is solely responsible for complying with all applicable regulations, laws, rules, circulars, codes, and guidelines established by local and/or regional regulatory bodies, including laws in connection with the distribution third-party research reports.

Risk Warning

Please note that investments in securities are subject to market and other risks and there is no assurance or guarantee that the intended investment objectives will be achieved. Past performance of a security may or may not be sustained in future and is no indication of future performance. A security investment return and an investor's principal value will fluctuate so that, when redeemed, an investor's shares may be worth more or less than their original cost.

A security's current investment performance may be lower or higher than the investment performance noted within the report. Morningstar's Uncertainty Rating serves as a useful data point with respect to sensitivity analysis of the assumptions used in our determining a fair value price.

Conflicts of Interest

- ▶ No interests are held by the analyst with respect to the security subject of this investment research report.
- ▶ Morningstar, Inc. may hold a long position in the security subject of this investment research report that exceeds 0.5% of the total issued share capital of the security.
- ▶ To determine if such is the case, please click <http://msi.morningstar.com> and <http://mdi.morningstar.com>.
- ▶ Analysts' compensation is derived from Morningstar, Inc.'s overall earnings and consists of salary, bonus and in some cases restricted stock.
- ▶ Neither Morningstar, Inc. nor the Equity Research Group receives commissions for providing research nor do they charge companies to be rated.
- ▶ Neither Morningstar, Inc. nor the Equity Research Group is a market maker or a liquidity provider of the security noted within this report.
- ▶ Neither Morningstar, Inc. nor the Equity Research Group has been a lead manager or co-lead manager over the previous 12 months of any publicly disclosed offer of financial instruments of the issuer.
- ▶ Morningstar, Inc.'s investment management group does have arrangements with financial institutions to provide portfolio management/investment advice some of which an analyst may issue investment research reports on. However, analysts do not have authority over Morningstar's investment management group's business arrangements nor allow employees from the investment management group to participate or influence the analysis or opinion prepared by them.
- ▶ Morningstar, Inc. is a publicly traded company (Ticker Symbol: MORN) and thus a financial institution the security of which is the subject of this report may own more than 5% of Morningstar, Inc.'s total outstanding shares. Please access Morningstar, Inc.'s proxy statement, "Security Ownership of Certain Beneficial Owners and Management" section <http://investorrelations.morningstar.com/sec.cfm?doctype=Proxy&year=#x=12>

Morningstar, Inc. may provide the product issuer or its related entities with services or products for a fee and on an arms' length basis including software products and licenses, research and consulting services, data services, licenses to republish our ratings and research in their promotional material, event sponsorship and website advertising.

Further information on Morningstar, Inc.'s conflict of interest policies is available from <http://global.morningstar.com/equitydisclosures>. Also, please note analysts are subject to the CFA Institute's Code of Ethics and Standards of Professional Conduct.

For a list of securities which the Equity Research Group currently covers and provides written analysis on please contact your local Morningstar office. In addition, for historical analysis of securities covered, including their fair value estimate, please contact your local office.

For Recipients in Australia: This Report has been issued and distributed in Australia by Morningstar Australasia Pty. Ltd. (ABN: 95 090 665 544; ASFL: 240892). Morningstar Australasia Pty. Ltd. is the provider of the general advice ("the Service") and takes responsibility for the production of this report. The Service is provided through the research of investment products. To the extent the Report contains general advice it has been prepared without reference to an investor's objectives, financial situation or needs. Investors should consider the advice in light of these matters and, if applicable, the relevant Product Disclosure Statement before making any

decision to invest. Refer to our Financial Services Guide, or FSG, for more information at <http://www.morningstar.com.au/fsg.pdf>.

For Recipients in New Zealand: This report has been issued and distributed by Morningstar Australasia Pty Ltd and/or Morningstar Research Ltd (together 'Morningstar'). This report has been prepared and is intended for distribution in New Zealand to wholesale clients only and has not been prepared for use by New Zealand retail clients (as those terms are defined in the Financial Markets Conduct Act 2013). The information, views and any recommendations in this material are provided for general information purposes only, and solely relate to the companies and investment opportunities specified within. Our reports do not take into account any particular investor's financial situation, objectives or appetite for risk, meaning no representation may be implied as to the suitability of any financial product mentioned for any particular investor. We recommend seeking financial advice before making any investment decision.

For Recipients in Hong Kong: The Report is distributed by Morningstar Investment Management Asia Limited, which is regulated by the Hong Kong Securities and Futures Commission to provide services to professional investors only. Neither Morningstar Investment Management Asia Limited, nor its representatives, are acting or will be deemed to be acting as an investment advisor to any recipients of this information unless expressly agreed to by Morningstar Investment Management Asia Limited. For enquiries regarding this research, please contact a Morningstar Investment Management Asia Limited Licensed Representative at <http://global.morningstar.com/equitydisclosures>.

For Recipients in India: This investment research is issued by Morningstar Investment Adviser India Private Limited. Morningstar Investment Adviser India Private Limited is registered with SEBI as a Portfolio Manager (registration number INP000006156) and as a Research Entity (registration number INH000008686). Morningstar Investment Adviser India Private Limited has not been the subject of any disciplinary action by SEBI or any other legal/regulatory body. Morningstar Investment Adviser India Private Limited is a wholly owned subsidiary of Morningstar Investment Management LLC. In India, Morningstar Investment Adviser India Private Limited has one associate, Morningstar India Private Limited, which provides data-related services, financial data analysis, and software development. The research analyst has not served as an officer, director, or employee of the fund company within the last 12 months, nor have they or their associates engaged in market-making activity for the fund company.

For recipients in Japan: The Report is distributed by Ibbotson Associates Japan, Inc., which is regulated by Financial Services Agency, for informational purposes only. Neither Ibbotson Associates Japan, Inc., nor its representatives, are acting or will be deemed to be acting as an investment advisor to any recipients of this information.

For recipients in Korea: The Report is distributed by Morningstar Korea Limited, which is regulated by Financial Supervisory Service, for informational purposes only. Neither Morningstar Korea Limited, nor its representatives, are acting or will be deemed to be acting as an investment advisor to any recipients of this information.

For recipients in Singapore: For Institutional Investor audiences only. Recipients of this report should contact their financial adviser in Singapore in relation to this report. Morningstar, Inc., and its affiliates, relies on certain exemptions (Financial Advisers Regulations, Section 32B and 32C) to provide its investment research to recipients in Singapore.



22 West Washington Street
Chicago, IL 60602 USA

About Morningstar® Equity Research™

Morningstar Equity Research provides independent, fundamental equity research differentiated by a consistent focus on sustainable competitive advantages, or Economic Moats.

©2023 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses, and opinions presented herein do not constitute investment advice; are provided solely for informational purposes and therefore are not an offer to buy or sell a security; and are not warranted to be correct, complete, or accurate. The opinions expressed are as of the date written and are subject to change without notice. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages, or other losses resulting from, or related to, the information, data, analyses, or opinions or their use. References to "DBRS Morningstar credit ratings" refer to credit ratings issued by one of the DBRS group of companies or Morningstar Credit Ratings, LLC. The DBRS group of companies consists of DBRS, Inc. (Delaware, U.S.) (NRSRO, DRO affiliate); DBRS Limited (Ontario, Canada)(DRO, NRSRO affiliate); DBRS Ratings GmbH (Frankfurt, Germany)(CRA, NRSRO affiliate, DRO affiliate); and DBRS Ratings Limited (England and Wales)(CRA, NRSRO affiliate, DRO affiliate). Morningstar Credit Ratings, LLC is a NRSRO affiliate of DBRS, Inc. For more information on regulatory registrations, recognitions and approvals of DBRS group of companies and Morningstar Credit Ratings, LLC, please see: <http://www.dbrsmorningstar.com/research/highlights.pdf>.

The DBRS group and Morningstar Credit Ratings, LLC are wholly-owned subsidiaries of Morningstar, Inc.

All DBRS Morningstar credit ratings and other types of credit opinions are subject to disclaimers and certain limitations. Please read these disclaimers and limitations at <http://www.dbrsmorningstar.com/about/disclaimer> and <https://ratingagency.morningstar.com/mcr>. Additional information regarding DBRS Morningstar ratings and other types of credit opinions, including definitions, policies and methodologies, are available on <http://www.dbrsmorningstar.com> and <https://ratingagency.morningstar.com/mcr>.

Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. The information contained herein is the proprietary property of Morningstar and may not be reproduced, in whole or in part, or used in any manner, without the prior written consent of Morningstar. To license the research, call +1 312 696-6869.

Information on Morningstar's Equity Research methodology is available from <https://www.morningstar.com/research/signature>.