The Frontier Line

US recession probability

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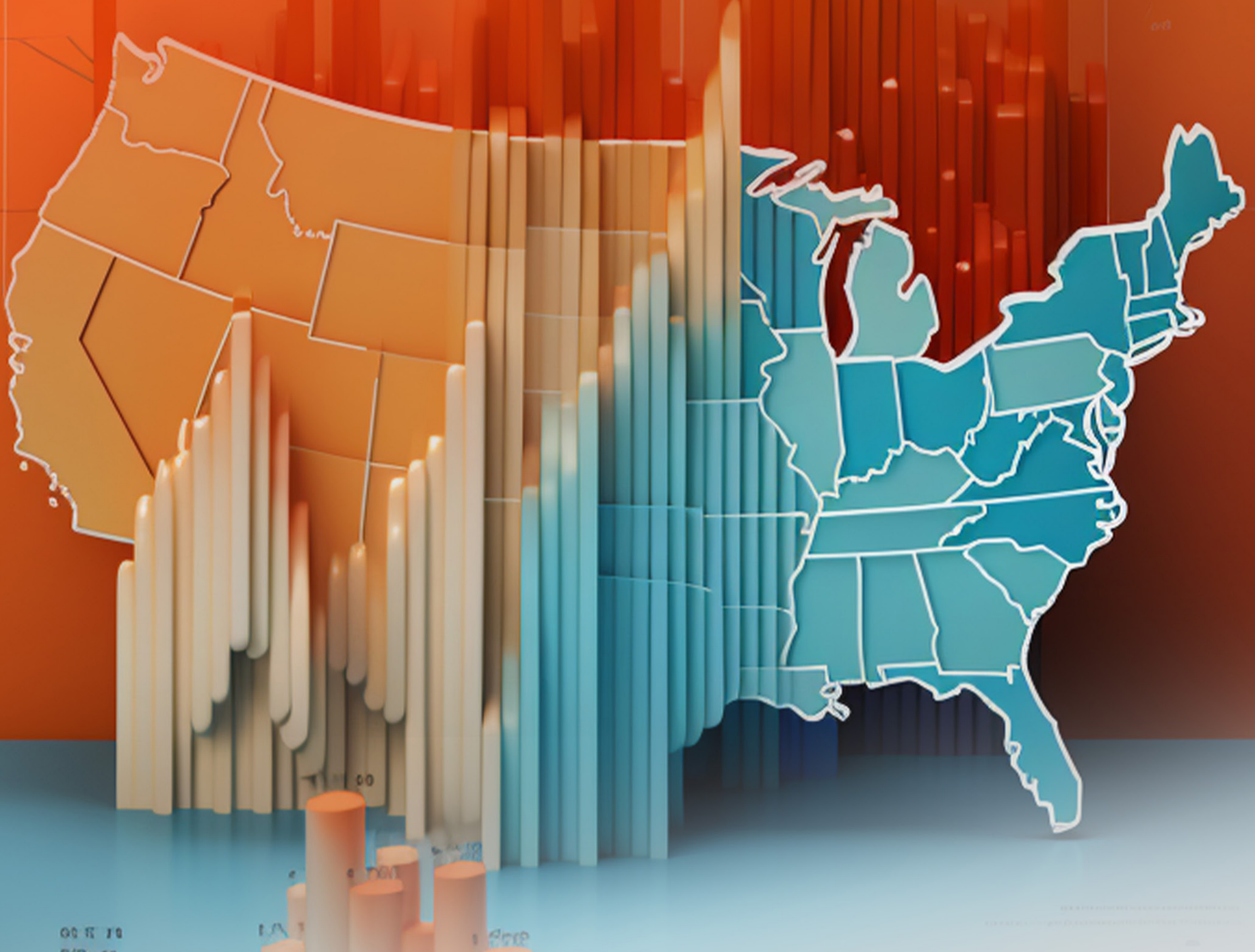

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Forefront Thinking

About us

Frontier Advisors has been at the forefront of institutional investment advice in Australia for over 25 years and provides advice on over $600 billion of assets across the superannuation, charity, public sector, insurance and university sectors.

Our purpose is to empower our clients to advance prosperity for their beneficiaries through knowledge sharing, customisation, technology solutions and an alignment and focus unconstrained by product or manager conflict.

Dr Shahana Mukherjee
Consultant

Shahana Mukherjee is a Consultant and works with the Capital Markets and Asset Allocation Team at Frontier Advisors. As a member of the Macro and Quant Analytics segment within the CMAAT, she is responsible for covering macroeconomic analysis, research and forecasts for various reports and publications produced by the CMAAT team. She also works closely with other team members to develop the team's quantitative capabilities.

She holds a PhD in Economics and a Master of Financial Economics. Prior to joining Frontier, she was an Assistant Director and Economist at Moody's Analytics where she extensively covered the largest economies in the Asia-Pacific region. She has over ten years of research experience in applied macroeconomics, with a focus on trade and investment in emerging Asian economies.

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Introduction

Inflation has posed a significant policy challenge since early 2022. The US Federal Reserve and other leading central banks have responded by aggressively tightening monetary policy to control inflation.

Some measures of economic activity have moderated since rate increases began as households and businesses contended with high costs-of-living and significantly higher borrowing costs. However, the resilient jobs market and a strong savings buffer have partially offset the slowdown. Delays in the transmission of monetary policy have contributed to the uncertainty surrounding both the timing and the potential impact of higher interest rates on economic growth.

US GDP growth picked up over the June quarter, surprising on the upside, driven by an increase in private consumption, private domestic investment, and government spending.

Chart 1: US GDP growth

Source: Refinitiv Datastream

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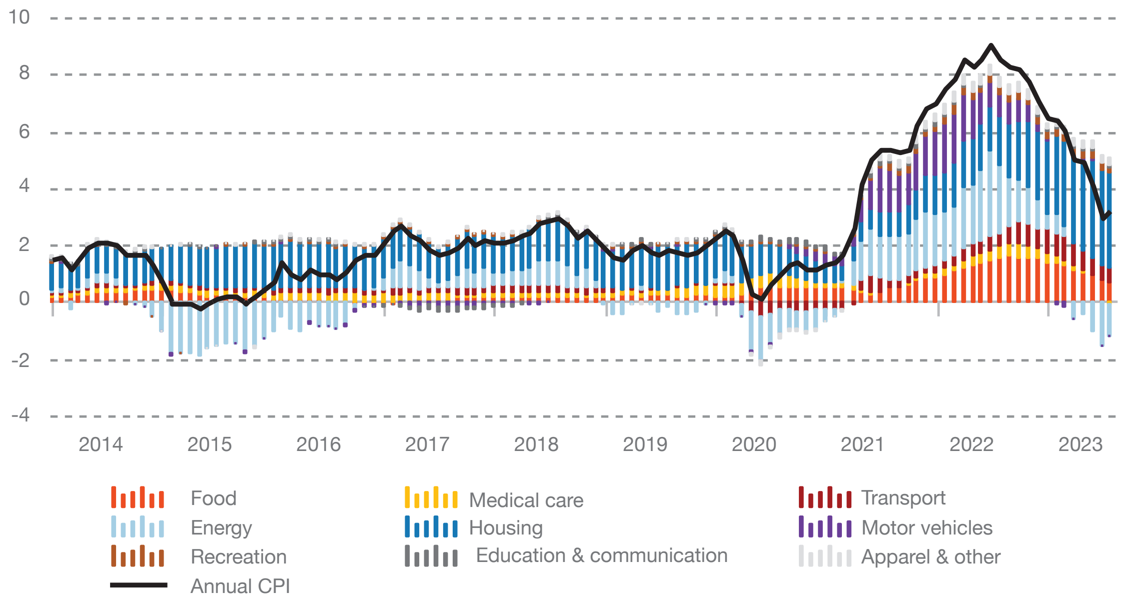
Chart 2: US Consumer Price Index (year-on-year % change)



Source: Refinitive Datastream

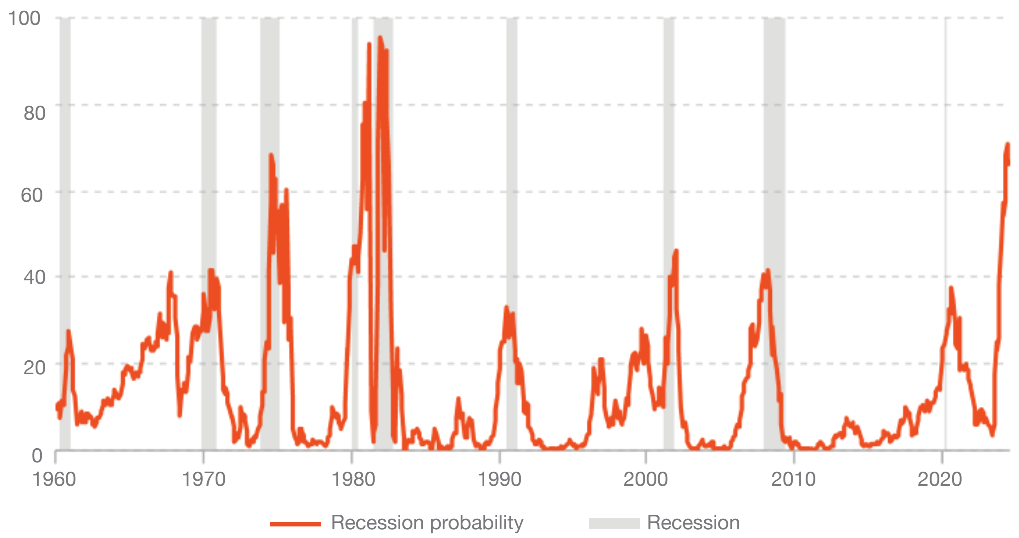
Headline inflation is moderating and eased materially to 3.2% in July. However, the Fed has maintained its restrictive stance and raised the policy rate at its July meeting, noting the uncertain economic outlook considering the monetary policy transmission lags and significantly tighter credit conditions.

How do these changes impact the probability of a recession?

Federal Reserve Bank of New York recession probability model

A frequently cited estimate of the probability of a US recession is a model reported by the Federal Reserve Bank of New York, which predicts probabilities (12-months ahead) using the spread between the ten-year and three-month treasury rates.

Chart 3: Probability of a US recession (12-months ahead, month averages)

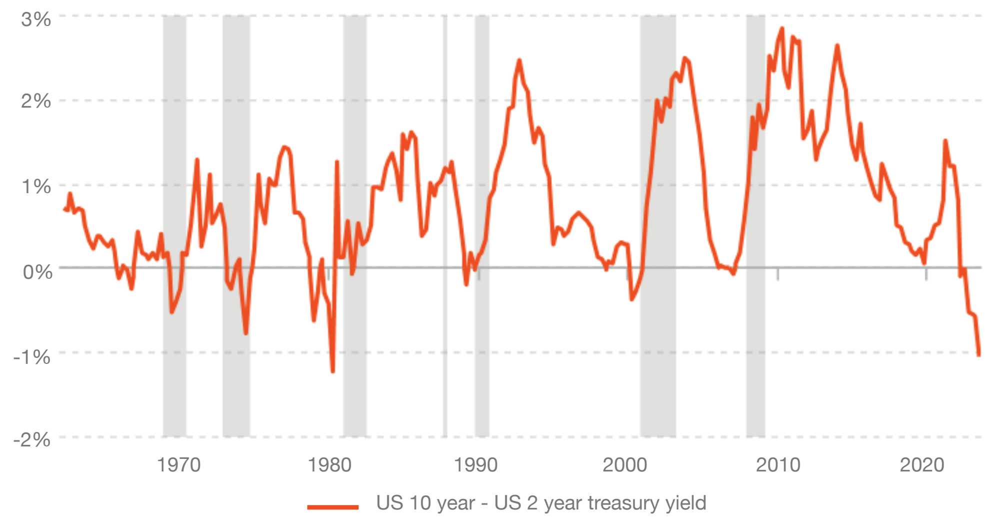


Source: Refinitive Datastream

The probability of a US recession has significantly increased since mid-last year.

- This estimate is driven by changes in the US yield curve.
- The higher predicted probability of a recession (relative to the global financial crisis in 2008) reflects the pace of monetary tightening, but also the atypical feature of the US yield curve which has been inverted for several months in the current monetary cycle and is the most inverted in nearly 40 years.
- An inverted yield curve is usually seen as a recession predictor because it signals expectations for the Fed to cut rates to stimulate the economy, given increased risks of an economic slowdown.
- The model's probability of a recession slightly declined to 66% in July, as the term spread slightly narrowed over this period, but the probability remains at multi-decade highs.

Chart 4: US Treasury term spread (ten-year treasury – three-month treasury bill rate)



Source: Refinitive Datastream

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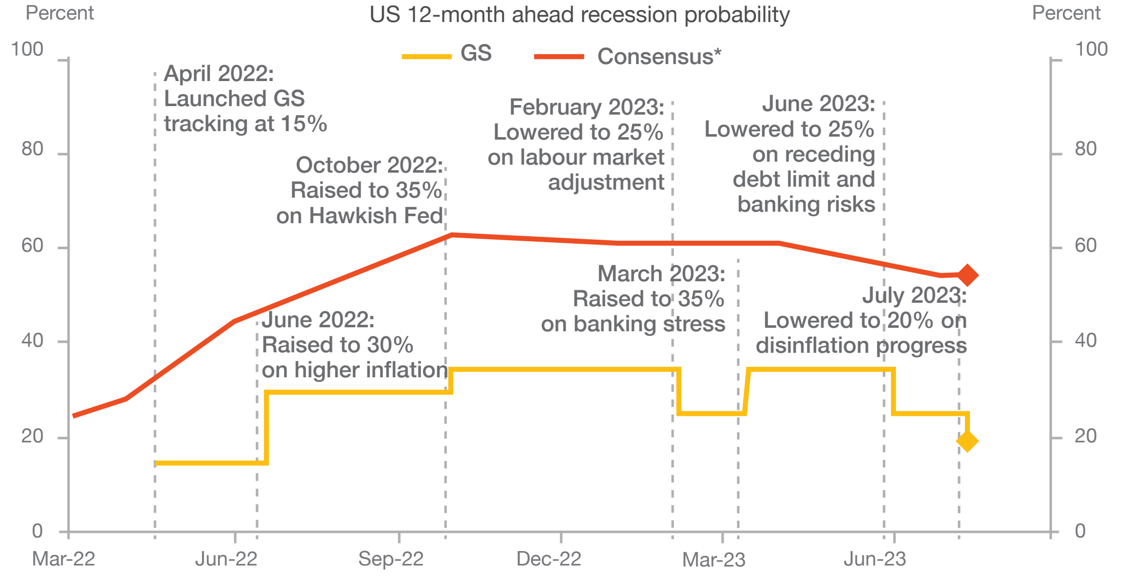
Goldman Sachs recession probability

In comparison, the Goldman Sachs' (GS) measure of US recession probability considers a combination of financial and macroeconomic variables and a qualitative overlay.

In March 2023, GS predicted the probability of a US recession (12-months ahead) had increased to 35% following the Silicon Valley Bank (SVB) failure in March.

Chart 5: Goldman Sachs US recession probability (12-months ahead)



Source: Median forecast, Wall Street Journal Economic Forecasting Survey.

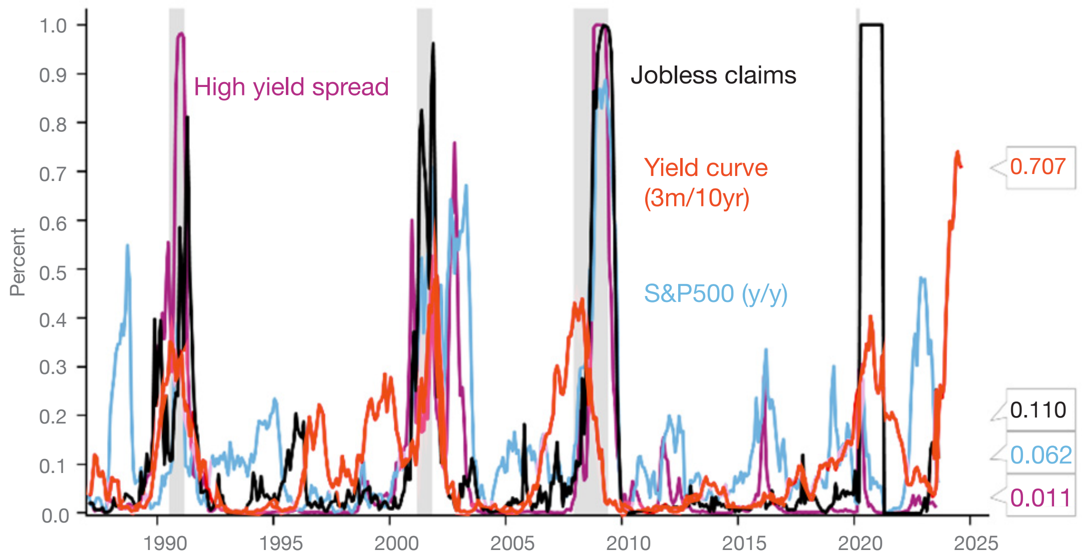
However, its expected probability has declined since then to 20% in July due to changes in macroeconomic conditions which included:

- The resolution of the US debt ceiling standoff which is expected to leave the fiscal impulse broadly neutral over next two years.
- Higher confidence the banking stress will bear a limited impact on GDP growth (based on stabilising bank stock prices and deposit outflows).
- Decelerating inflation, improving real disposable income and housing market stabilisation.

National Australia Bank (NAB) US recession probabilities

NAB's analysis on US recession probabilities shows the probability estimated using market-based measures such as S&P year-on-year growth or high yield spread (which have a shorter lead window of around two to three months) has been declining in recent months, whereas the recession probability associated with jobless claims (a high frequency, forward-looking indicator of employment) is increasing.

Chart 6: NAB US recession probabilities and real variables



Source: NAB.

Factoring in a range of economic and financial variables into its calculation, NAB predicts a low probability of a US recession in the very short-term, but the probability is seen to rise to 40% by end-2023 and to 50% by end-2024. This is primarily driven by the inverted yield curve, but also the rising unemployment claims.

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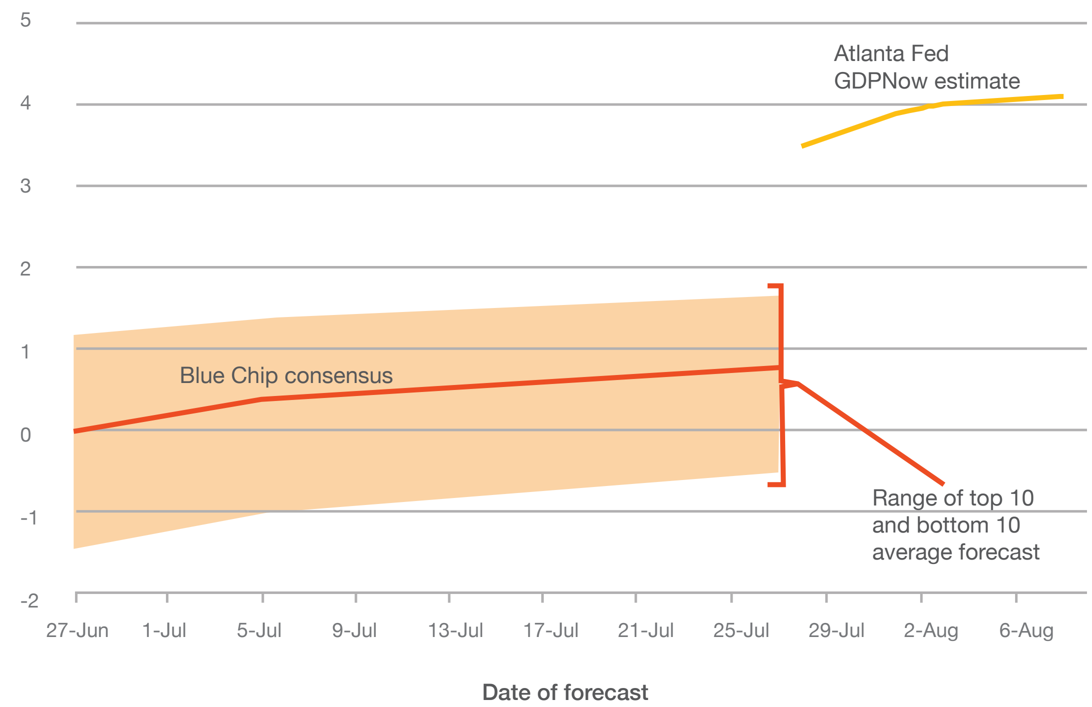
Federal Reserve Bank of Atlanta GDPNow estimate

The low probability of US recession in the very short-term is consistent with some of the published real-time GDP growth estimates (or 'Nowcast' estimates) of the US economy. The Federal Reserve Bank of Atlanta's Nowcast of real GDP growth can be seen as a running estimate of current quarter growth based on a variety of high-frequency monthly economic inputs.

The model estimate for real GDP growth (seasonally adjusted annual rate) is 4.1% for the third quarter as of 8 August. The estimate has improved over the quarter as more incoming data on construction spending, employment and international trade (wholesale) has lifted the projected annual increase in private domestic investment and net exports and trimmed the projected growth in private consumption and government expenditure over this period.

Chart 7: Evolution of the US real GDP estimate for Q3 2023 (quarterly percent change, SAAR)



Source: Federal Reserve Bank of Atlanta. Note: The top (bottom) average forecast is an average of the highest (lowest) ten forecasts in the Blue Chip survey.

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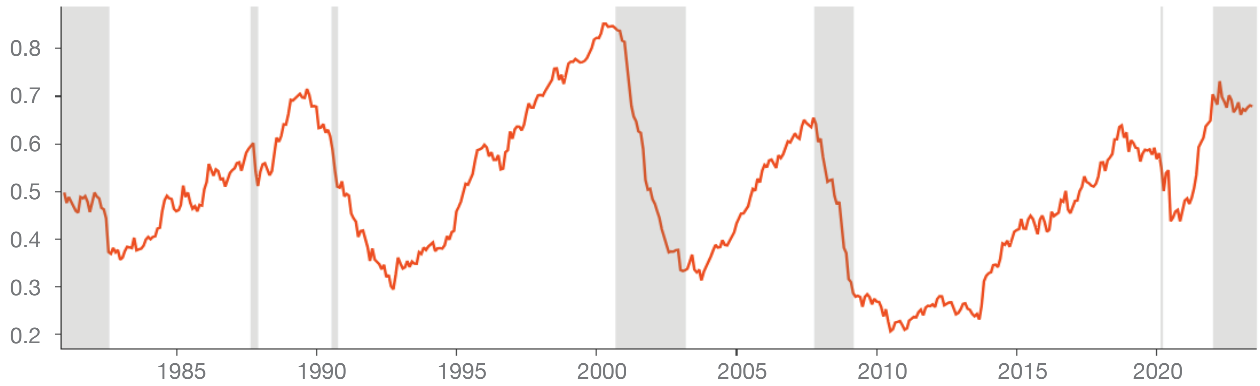
Frontier market crisis indicator

Frontier has maintained a market crisis indicator for several years. It has been developed as a combination of a range of prospective indicators that can be useful signals for a future market correction. The indicator aims to incorporate fundamental, sentiment, market and technical components. Specifically, it includes economic factors such as core inflation; wage growth and unemployment gap; equity market metrics; interest rate factors; credit market metrics; and capital flows in the indicator.

Frontier's market crisis indicator highlights important differences in prevailing market conditions. Equity market exuberance measures, such as M&A activity, remain muted and growth in debt is not excessive relative to historical periods. The strain on some economic measures, such as core inflation and wage growth, remains high but has moderated slightly in recent months. Other measures such as consumer sentiment, term spread, and employment remain at very elevated readings relative to history, while equity market risk metrics have also increased following the recent stock market rally.

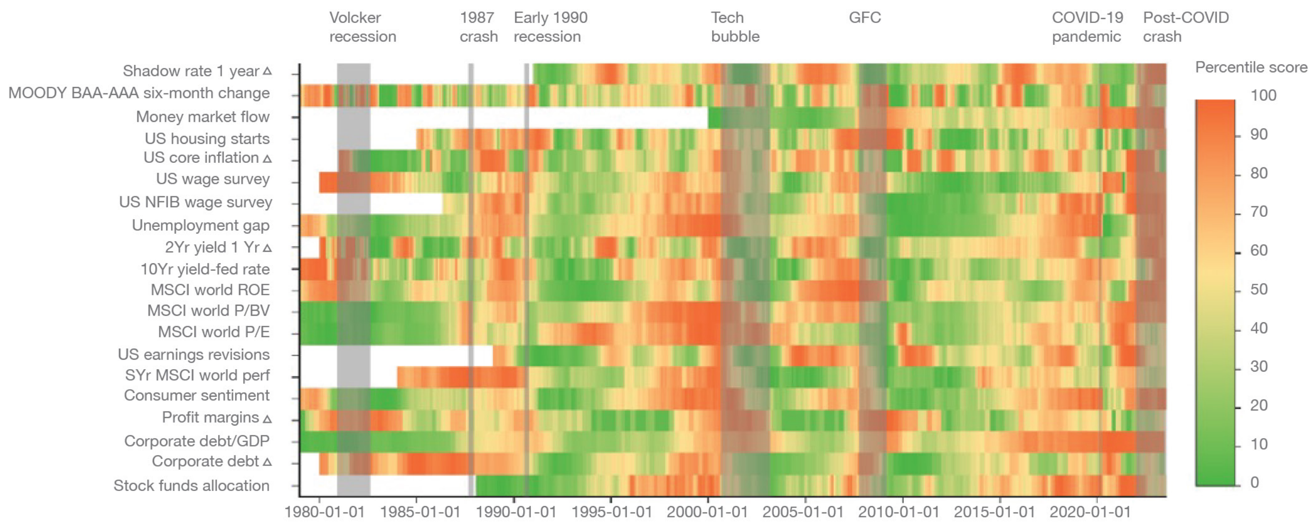
The overall 'risk' score continues to be high, reflecting elevated risk levels across various economic and market-based factors. The risk score has fallen slightly from the 2022-peak but is still comparable to previous recessions including the global financial crisis in 2008.

Chart 8: Frontier risk index



Source: Frontier Advisors.

Chart 9: Frontier risk index components



Source: Frontier Advisors.

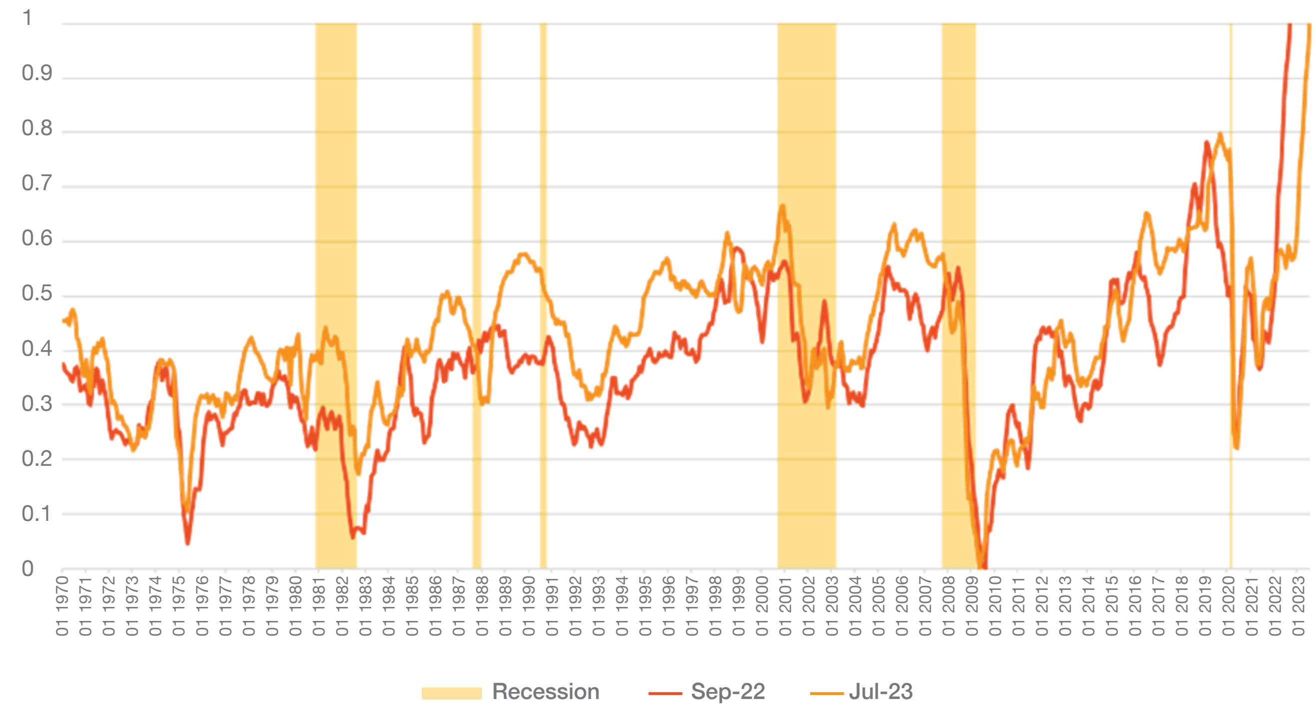
Frontier economic distance model

Frontier also produces an economic distance model to track changes in market conditions relative to history. This model uses a range of macroeconomic factors to derive a 'distance' score which measures the similarity of past time periods (based on economic and market conditions) relative to current prevailing conditions. A higher score corresponding to a given time period in history indicates greater similarity with current conditions. Movements in the distance score can be used to monitor changes in the macroeconomic environment.

A comparison of the economic distance scores obtained since September 2022 highlights some changes as shown in Chart 10.

- The scores in aggregate (as measured by this metric) are not that high relative to history suggesting that current economic conditions are relatively different to past periods.
- However, there was some increase in scores between September 2022 and July 2023, which partially reflects the moderating inflation profile.
- The current scores show higher peaks (most similar to past periods) occurring around past market corrections: 1980-81 Volcker recession; 1987 market crash; early 1990s recession; 2001 tech bubble; 2008 GFC; and just before COVID-19 (although the model was clearly not forecasting that event).

Chart 10: The economic distance model (September 2022 versus July 2023)



Source: Frontier Advisors.

The final word

A US recession may be avoided in the very short-term, with private consumption (the driver of US GDP growth) being supported by strong employment conditions, moderate wage growth and some ongoing support from accumulated savings.

Various estimates of US recession probabilities are not always directly comparable. This is because they differ in their econometric methodology and are modelled using a unique set of explanatory factors which correspond to different lead windows and may incorporate qualitative overlays.

However, in general there is a high predicted probability of a US recession within the next year, especially when estimated using financial factors linked to the yield curve and its inversion. Some economic indicators like inflation are high but moderating and others such as jobless claims are starting to deteriorate. It is primarily only market-based measures, such as equities returns, that support lower recession probability.

Frontier monitors a wide number of different metrics and has built models such as the market crisis indicator and economic distance model to gauge risk factors. The outputs from the crisis indicator and economic distance model raise the point that the current situation (impacted by the pandemic) is quite different to past cycles, but also warn that current market and macroeconomic conditions are at an elevated aggregate risk level and comparable to past market correction events.

Want to learn more?

Please reach out to our Capital Markets and Asset Allocation Team if you would like to discuss this paper in more detail.

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