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Has a US recession begun?

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With GDP contracting for two consecutive quarters in 2022, the US has entered recession territory by conventional definition. Other recession indicators, however, point to a stronger US economy. An expanding labor market and elevated consumption do not indicate that the US has entered a recession in the first half of 2022. Combined with the possibility of an upward revision, the US may not have reached the peak of the business cycle, yet.

Inventory changes are driving recession talks

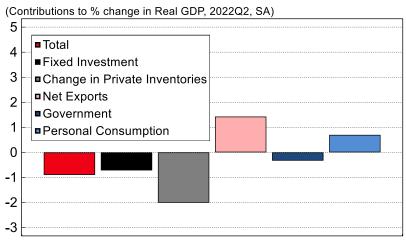
Real Gross Domestic Product (GDP) contracted at an annual rate of 0.9 percent in the second quarter of 2022, following a 1.6 percent contraction in the first quarter. Changes in private inventories had the largest input, contributing negative 2.01 percentage points at an annual rate to second quarter GDP.

Falling inventories reflect broader challenges facing large US retailers in 2022. Shortages, like those experienced during the pandemic, are often followed by gluts, making oversupply a major issue for retail warehouses. High prices and shifts in consumer spending habits risk a significant downturn in these industries.

Shifts in consumer spending habits are apparent in the Q2 GDP figures, where goods consumption fell 4.4 percent at an annual rate, but services consumption grew 4.1 percent, contributing negative 1.08 and positive 1.78 percentage points to GDP, respectively. Overall, real personal consumption grew 1.0 percent at an annual rate.

Though having grown in the first half of 2022 and not indicative of a recession yet, elevated price growth poses threats to consumption. Spending on services remains strong but may not be able to prop up overall consumption once the summer months are over.

INVENTORIES CONTRIBUTED LARGELY TO THE DROP IN Q2 GDP



Source: Bureau of Economic Analysis, MUFG Bank Economic Research Office



Residential fixed investments fell 14 percent, reflecting the poor outlook for the US housing market. Record high prices and rising mortgage rates have reduced the demand for housing significantly in 2022, discouraging new home building and renovations.

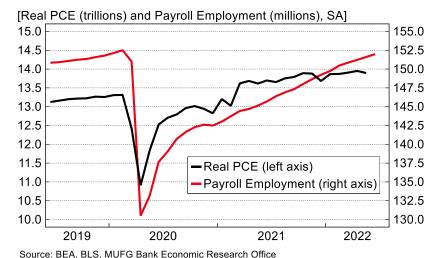
Other indicators are not showing a recession

There exists no single official definition of a recession in the US. The National Bureau of Economic Research (NBER) uses a range of indicators, with no set weighting, to retroactively determine if a recession has occurred. Two consecutive quarters of GDP contraction has historically been a reliable "real-time" guide, with GDP contractions in Q2 and Q3 of 1947 being the last time this rule-of-thumb didn't hold. Back then, the US economy was transitioning from the war. Today, the economy is transitioning from the pandemic.

Several other macroeconomic indicators tracked by the NBER are not consistent with an overall contraction in the US economy. It remains unlikely that the US is currently in a recession. Payroll employment expanded in the first half of 2022, with steady growth throughout the second quarter and real personal consumption grew throughout most of the first half of 2022.

Conflicting data points suggest that the economy has not reached a recession in the first half of 2022, but there are signs of a broad economic slowdown. Goods consumption is being hampered by high prices, impacting the retail industry, and services will likely slow down once the summer months end. The housing market has already experienced significant drops in demand and price pressures will likely remain given widespread housing shortages.

EMPLOYMENT AND CONSUMPTION HAVE BOTH GROWN IN 2022



Gross Domestic Income (GDI) may be a better indicator

Official declarations of a recession are not done in real time. Establishing when the US economy reached the peak of the business cycle often entails dealing with revised data, which can occur months after first releases. The disconnect between Gross Domestic Income (GDI) and GDP suggests that an upward revision could occur for the second quarter GDP data.

GDP measures spending in the US economy whereas GDI measures the income earned to produce GDP, including wages, profits, interest, and taxes. Fundamental to

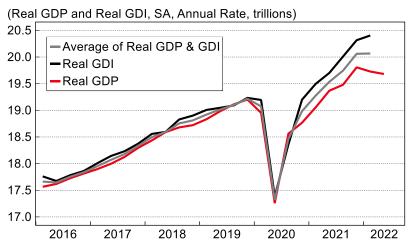


national income accounting is that income equals spending (i.e. spending from one person equals income for another), but discrepancies can exist between GDP and GDI due to different underlying data sources from the Bureau of Economic Analysis. Historically, the two series are closely aligned but the disconnect has recently grown.

In the first quarter of 2022, Real GDP contracted 1.6 percent at an annual rate while real GDI grew 1.8 percent at an annual rate. The statistical discrepancy as a percentage of GDP is 3.4 percentage points, a historically large difference.

Averaging GDP and GDI shows that the economy grew in the first quarter of 2022 and that the US has yet to enter a recession. First estimates of second quarter GDI are expected to show a quarterly increase and are set to be released in late August 2022, along with second estimates of second quarter GDP. If discrepancies between the two series' return to historical norms, GDP could experience an upward revision with a positive quarterly change that more closely aligns GDI.

GDI GREW IN 2022 WHILE GDP CONTRACTED



Source: BEA, MUFG Bank Economic Research Office

Risks of a recession in the future remain

The Federal Reserve has raised interest rates another 75 basis points in July and has signalled potential for additional hikes in the future to combat inflation. Monetary policy often has lagged effects and an aggressive Fed could push the US economy into a recession

Overall demand is falling, and inflationary pressures remain from supply constraints and the war in Ukraine. While the US is likely not in a recession yet, the latest GDP figures indicate that the risks will likely increase in 2023.



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