

Fourth Quarter GDP



total product
total expenditures
consumption
investment
government spending
net exports
total
change
percentage change
total property products
change in inventories

The preliminary estimate for fourth quarter GDP was released last week. Real GDP grew at a respectable 2.9% annual rate.^[1] But, as always, the interpretation is important.

Here are the summaries. **Table is the growth rate of real GDP and each of its components.** The growth rate is annualized. The actual quarter-over-quarter growth was about $2.9\%/4 = 0.725\%$. Here are the full data releases.



Table is the **contributions to the overall percentage change in GDP.** Thus, summing the

growth contributions of C, I, G, and NX should equal 2.9%. Let's see.



Rounds to 2.9. Close enough.

So where did the growth come from? Here's a condensed version of the previous table for quick comparison.



There were two main drivers of GDP growth: Personal consumption (percentage points) and the change in business inventories (percentage points). The bad news is business fixed investment (-1.2 percentage points). Let's look at these one at a time.

Personal Consumption Expenditures

Normally I'd think the contribution from consumption spending was caused by fears of future inflation. When you think the price of, well, anything will be higher tomorrow, you have an incentive to buy today. But this only works for products with some durability: clothing, canned and frozen foods, cars, and so on. Most of this growth came in services.



Consumption spending on services contributed 1.7 percentage points to overall consumption spending growth. Goods spending was .

Business Fixed Investment

There are **three big pieces to investment**. **Nonresidential fixed investment** is buildings and machines used for business purposes. **Residential construction** is building new houses, apartments, condominiums, and so on. **Intellectual property** is the value of new innovations (patents, copyrights, and trademarks). Nonresidential investment contributed to GDP growth. **Residential contributed -**. **The third piece is the net**

change in business inventories, (and the subject of our current discussion).



Interpretation

Spending on physical products (consumption of goods plus business fixed investment) contributed $+ (-) = -$. Private sector spending on physical goods contributed negatively to GDP growth.

But only goods production and spending can affect inventories. Services, almost by definition, can't be inventoried.

Which brings us to the key point. One of the great contributions of John Maynard Keynes was the idea that spending and production could be different. Ignore foreign trade for now. Everything the U.S. consumes is produced in the U.S. If spending exceeds production, more goods are being bought than are produced. The "excess goods" are sold out of inventories. And inventories fall.

The opposite is also true. If spending is less than production, inventories rise. This is the source of one of the oldest models of business cycles, the inventory cycle. This

model starts out with the assumption that any increase in inventories is caused by businesses overestimating demand. To liquidate the excess inventories, they reduce production. Less production requires fewer workers. And, bingo! We have a recession. This is called *unplanned inventory change*.

If only it was that simple. **There is another possible reason for increasing inventories. If demand exceeded production in preceding quarters, businesses might want to rebuild inventories.** In that case, they will deliberately increase production to exceed demand. This is called *planned inventory change*. Which leads to an unfortunate fact about the data.

Take a close look at Figure 1. **The contribution of inventory change to overall growth was – in the second quarter of 2022. It was – in the third quarter.** It's almost certain some of the large contribution of inventory change to fourth quarter growth was planned inventory change.

But ? I don't believe that was caused solely by planned change. The negative demand for goods implies that some of the inventory change was unplanned. And it's unplanned inventory change that can trigger a recession.

Conclusion

On its face, 2.9% GDP growth sounds pretty good. But pulling the numbers apart reveals underlying weakness in the economy. **At this point, my estimate is a 60% chance of a recession in 2023, likely starting in the second quarter.**

Caveat: remember how much you paid for this analysis and advice. In a market system, you usually get what you pay for.

1. U.S. Bureau of Economic Analysis, "Table . Percent Change From Preceding Period in Real Gross Domestic Product" and "Table . Contributions to Percent Change in Real Gross Domestic Product." Estimate released January 26, 2023. Available at (Accessed January 31, 2023). †