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Real GDP vs. Nominal GDP: Which Is a Better Indicator?

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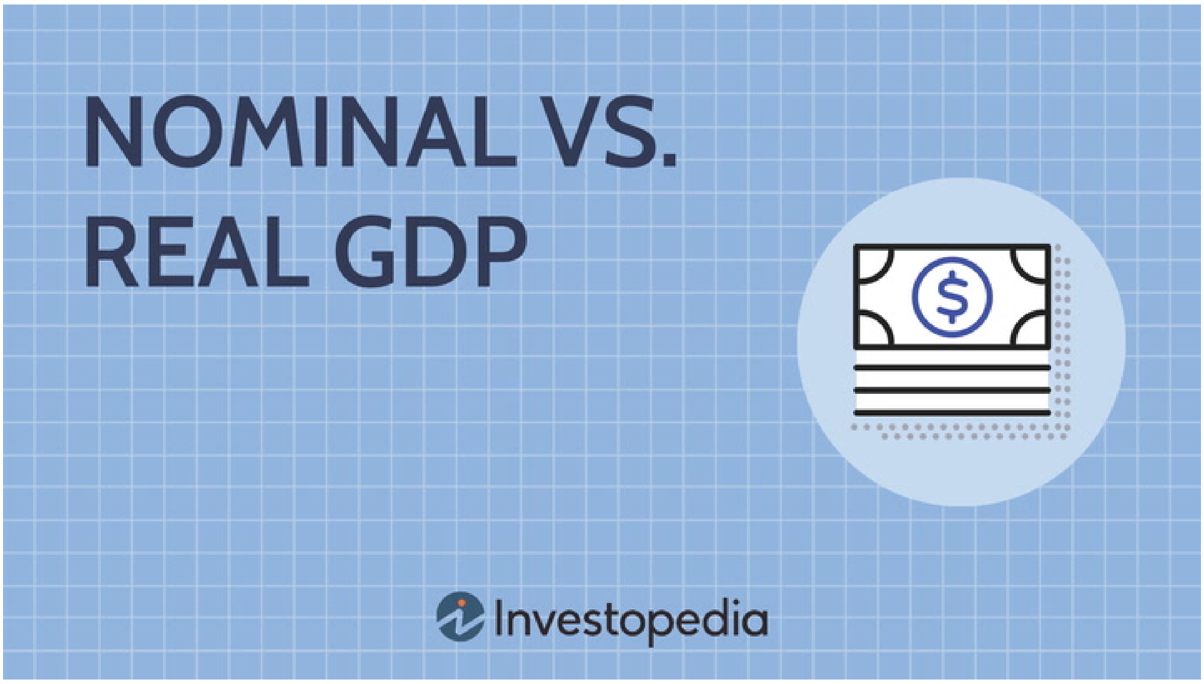

Real GDP vs. Nominal GDP: An Overview

Real gross domestic product is often a more accurate reflection of the output of an economy than nominal GDP. By eliminating the distortion caused by inflation or deflation or by fluctuations in currency rates, real GDP gives economists a clearer idea of how the total national output of a country is growing or contracting from year to year. However, there are still uses where nominal GDP is a more useful measurement to analyze.

KEY TAKEAWAYS

- A nation's GDP is the total value of all of its consumer and government spending, investments, and exports, minus the value of its imports.

- Real GDP adjusts the numbers by fixing the currency value, thus eliminating any distortion caused by inflation or deflation.
- Policy makers, businesses, and international firms may prefer to use real GDP.
- Short-term analysts, those holding specific contract agreements, and those comparing budgets may prefer nominal GDP.

Real GDP

Gross domestic product is the total value of all of the goods and services produced by a nation in a given period, usually monthly, quarterly, and yearly. The raw numbers include all consumer spending, government spending, investments, and exports. Total imports are deducted. When this number is tracked from year to year, it is seen as an important indicator of the economic health of the nation.

Real GDP is the value of a country's total output of goods and services adjusted for inflation or deflation. It allows economists, policymakers, and analysts to assess the underlying growth of an economy without the distortion caused by changes in prices.

Real GDP is calculated by gathering data on the quantities of various goods and services produced in the economy (quantities are often called "real" quantities). Then, base-year prices are assigned to these quantities. The quantities produced are multiplied by their base-year prices, and the products are summed for all goods and services to get the real GDP for each year.

By comparing real GDP across different years, economists can determine whether the economy has grown or contracted in terms of actual output, abstracted from the effects of inflation. This information is crucial for making informed policy decisions, analyzing economic trends, and understanding the overall health of an economy.

U.S. Real GDP

The St. Louis Fed charts the Real GDP of the U.S. in "chained" 2012 dollars, meaning that the value of the dollar in 2012 is used for subsequent years. Its chart shows the economy growing fairly steadily from about $15.7 trillion in 2011 to about $19 trillion through 2019, then falling off a cliff at the start of 2020 due to the global COVID-19 pandemic. Between Q2 2020 and Q2 2023, real GDP has only contracted once. [1]

A more dramatic example can be seen in U.S. Real GDP for the same period. However, Statista notes that the methodology of adjusting the numbers makes the 2021 decline in GDP look more extreme than it actually was. The numbers for each quarter are annualized, meaning that they are adjusted to indicate what the number would be if it occurred over an entire year. [2]

> **Important:** Real GDP in the United States was $20.4 trillion, up about $100 billion from the prior quarter.

Nominal GDP

Nominal GDP is also called "current dollar" GDP. It is the total in dollars (or any other currency) of goods and services consumed, plus government expenditures, investments, and exports, minus total imports. The effects of inflation or deflation and the fluctuations of currency can convey a false picture of whether and how much an economy is growing or contracting over any given period of time.

To calculate nominal GDP, much of the same information is gathered as real GDP. Quantities of various goods and services produced in the economy are collected. Each of these quantities is multiplied by the corresponding current market prices, which is a different approach than that of calculating real GDP. Like real GDP, nominal GDP aggregates these products.

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Nominal GDP is used when comparing GDP to any other economic indicator that is not adjusted for inflation.

U.S. Nominal GDP

The United States nominal GDP has been fascinating to observe since the start of the millennium. As part of the 2008 Global Financial Crisis, nominal GDP decreased from a calculated value of 3.7 million to 3.5 million. However, nominal GDP eventually grew to a calculated value of 5.5 million prior to the COVID-19 pandemic. [3]

A considerable note regarding U.S. GDP is the associated implications of higher prices and inflation. In respond to COVID-19, the government issued unprecedented monetary and fiscal stimulus to encourage economic activity. As a result, inflation hit 9.1% in June 2022. [4] As a result, nominal GDP has grown at a much faster clip post-COVID than before.

Situations Where Real GDP Is Better

There are many factors that contribute to deciding which measurement is a "better indicator". In reality, there are some situations where real GDP is better, and there are some situations where nominal GDP is better. Some cases where real GDP is the better indicator include:

- **Comparing Economic Growth Over Time.** When comparing economic performance across different time periods, real GDP is preferred because it accounts for changes in the general price level. This allows for a more accurate assessment of whether an economy is actually growing or contracting in terms of the quantity of goods and services produced as different periods may have experienced different pricing growth (or contraction).
- **Evaluating Long-Term Trends.** Real GDP is valuable for analyzing long-term economic trends and identifying patterns in an economy's output over the years. It provides insights into the underlying growth trajectory of an economy, and, like the bullet above, it is most useful when standardizing the measurement across each period or year.

experience varying inflation rates, and using nominal GDP for comparisons could lead to misleading conclusions due to varying degrees of economic policy.
- **Formulating Government Policies.** Real GDP is used by policymakers to assess the actual impact of economic policies over time. It helps them make informed decisions regarding fiscal and monetary policies by focusing on the real changes in economic output.
- **Analyzing Investments.** When evaluating investment opportunities, real GDP is crucial for understanding the potential returns on investments after accounting for inflation. It provides a clearer picture of the investment's real growth potential not misaligned by inflated prices. Note that investments may only be interested in particular subsets of data related to GDP as opposed to an entire country's economic output including that of products unrelated to the investment.

Situations Where Nominal GDP Is Better

All that said, there are some cases where having inflation factored in may be better. Here's a list of situations where nominal GDP may be a better indicator:

- **Performing Short-Term Analysis.** For short-term assessments of economic performance, nominal GDP provides a snapshot of the current value of economic activity without the need for adjusting for inflation. This is especially relevant when looking at recent economic trends as inflation may matter in these cases.
- **Forecasting or Calculating Revenue.** Governments use nominal GDP to calculate tax revenues, as many tax systems are based on a percentage of economic output. Since taxes are collected in current prices, nominal GDP is directly relevant to revenue calculations.
- **Analyzing Budgets.** Organizations, governments, and businesses often set budgets based on expected revenues and expenditures in current prices. Though governments may be the primary user of GDP information, other entities may rely on this data to project and plan for future operations.
- **Boosting Market Sentiment.** In some contexts, economic sentiment and market confidence can be influenced by the raw value of economic activity as presented by nominal GDP, especially in media and public discourse.

should this better fit their agenda.

- **Calculating Contractual Agreements.** Some contracts like debt agreements might use nominal GDP to determine payment terms or clauses related to economic performance. In this case, the holder or issuer may be contractually obligated to make calculations using nominal figures.

Example of Real GDP vs. Nominal GDP

The reason why real GDP is a superior method of expressing national economic performance can be easily illustrated.

Consider, for example, a hypothetical country that in the year 2010 had a nominal GDP of $100 billion, while by 2020 its nominal GDP was measured at $150 billion. Over the same period of time, inflation reduced the relative value of the local currency by 50%. Looking only at nominal GDP, the economy appears to have grown by 50% over the 10 years. But the real GDP expressed in 2010 dollars would be $75 billion, a substantial decline.

As a real example, let's compare the real GDP to nominal GDP of the United States from Q1 2023 to Q2 2023. [1] [3] The growth rate in each was:

Real GDP vs. Nominal GDP, United States

	Real GDP	Nominal GDP
Q2 2022	$20.182	$6.655
Q1 2023	$20.282	$6.481
Difference	$100	-$174
Growth Rate	0.5%	-2.6%

Select Periods, Dollars Are Rounded

Even though the economy may boast of growth in real GDP terms, a considerable amount of this growth was due to inflation and higher prices. By removing the effects of inflation, one can note that nominal GDP is negative,

What Figures Go Into GDP?

GDP measures the economic output of a county in a given year. It can be calculated by adding up all spending by consumers, businesses, and the government. It can alternatively be arrived at by adding up all of the income received by all the participants in the economy. In theory, either approach should yield the same result.

How Do Nominal and Real GDP Values Differ?

In periods of positive inflation, real GDP will always be less than nominal GDP. The opposite would occur if there were deflation (negative inflation).

Why Do Economists Favor Real GDP?

Real GDP is often favored over nominal GDP as it accounts for the effects of inflation. Thus, if nominal GDP grew at 4% in a given year, but the inflation rate was 5%, it actually shrunk by 1% in real (constant-dollar) terms.

How Do You Compute Real GDP from Nominal GDP?

To arrive at real GDP, take the nominal GDP and divide it by the inflation rate, as measured by the GDP deflator. The U.S. Bureau of Economic Analysis (BEA) publishes the GDP deflator on a quarterly basis, currently using a base year of 2017 dollars. [5]

The Bottom Line

Real GDP adjusts economic output for inflation, revealing actual growth or contraction. It's vital for long-term trends, policy-making, and accurate comparisons. Nominal GDP measures output at current market prices, valuable for short-term analysis, revenue calculation, and budget alignment. When deciding which is better, think through the context, users, and situation as either may be suitable for a given situation.

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