

Revisions to GDP and GNI in 2021 and 2022

This article details the revisions made to Statistics Netherlands' (CBS) national accounts for the 2021 and 2022 reporting years.

1. Introduction

The system of national accounts provides a comprehensive quantitative reflection of the economic process within the Netherlands, as well as economic relations with other countries. The national accounts are reviewed at regular intervals as more – and more complete – source material becomes available over time. These accounts use common indicators such as gross domestic product (GDP) and gross national income (GNI). This document details the revisions made to CBS' national accounts for the 2021 and 2022 reporting years.

Every year in June, following the second calculation of the first quarter, CBS publishes revised annual figures for the previous two years. This year, the revisions are more striking than usual. The balance of payments and the international investment position for these periods have also been [revised by De Nederlandsche Bank](#).

Significant revisions to GDP and GNI in 2021 and 2022

The average revision to GNI over the reporting years from 2015 to 2020 was 5.4 billion euros. This year, the upward revision to GNI is 48.2 billion euros for the 2021 reporting year and 46.4 billion euros for the 2022 reporting year. Of these amounts, 15.1 billion euros and 17.4 billion euros respectively were caused by a revision to GDP. The remaining revision – 33.1 billion euros and 29 billion euros, respectively – is due to primary income flows both to and from other countries. GDP volume growth in the 2021 reporting year has been revised from 4.9 percent to 6.2 percent. GDP growth for the 2022 reporting year has been revised from 4.5 percent to 4.3 percent.

Revisions to GNI in billions of euros

	2021	2022
Former GNI	836.3	902.8
GNI as of 23 June 2023	884.5	949.1
GNI revision as of 23 June 2023	48.2	46.4
<i>of which GDP revision</i>	15.1	17.4
<i>of which revision to the balance of primary incomes of the Netherlands with other countries</i>	33.1	29.0

2. Revisions to gross domestic product (GDP)

Most of the 17.4 billion euros upward revision to GDP for the 2022 reporting year is the result of the upward revision to the level of GDP in current prices for the 2021 reporting year. The provisional estimates use only the developments compared to the previous year taken from the source statistics, rather than using the absolute values as is the case for the final estimate. This means that a revision to the level of GDP for the final 2021 reporting year would be fully reflected in the level of the provisional GDP for the 2022 reporting year. The GDP revision for the 2021 reporting year is explained below.

2021 reporting year

In February 2022, for the first time, CBS published an annual figure for GDP for the 2021 reporting year, based on the sum of four quarterly estimates. A second calculation was published in March 2022 that incorporated additional information on the four quarters of 2021. A third estimate, published in June 2022, incorporated new annual figures for agriculture, insurance and government as compared to the second calculation. The estimate published today incorporates the results from production statistics for the 2021 reporting year, which were made available early this year.

With its production statistics, CBS collects detailed annual information on production and consumption in almost all branches of industry. Information on production, gathered using methods such as surveys of businesses and the use of VAT information, was available in the earlier estimates, but this information did not yet cover consumption of energy, materials and services. As a result, those estimates are generally based on the assumption that the ratio of production to consumption will be the same as in the last year for which production statistics are available.

However, 2021 was the second ‘coronavirus year’, and the exceptional economic conditions in that period threatened to skew some basic principles for making quarterly GDP estimates. For this reason, CBS deliberately intervened in the normal procedure in certain cases, with one key difference being that the established production-consumption ratios from the previous year were not relied upon. [New sources and methods](#) were also used.

Despite these interventions, GDP growth for the 2021 reporting year was still subject to much more significant revisions than usual. As described above, this is mainly due to the use of new information on companies that was gained from production statistics. When provisional figures were published in June 2022, GDP volume growth in 2021 was still 4.9 percent. This figure has now been revised to 6.2 percent: an upward revision of 1.3 percentage points. In real terms, this is a 10.6 billion euros revision in the volume of GDP; in current prices, the revision is 15.1 billion euros. The revision to GDP in current prices has a direct impact on GNI (see below).

Production

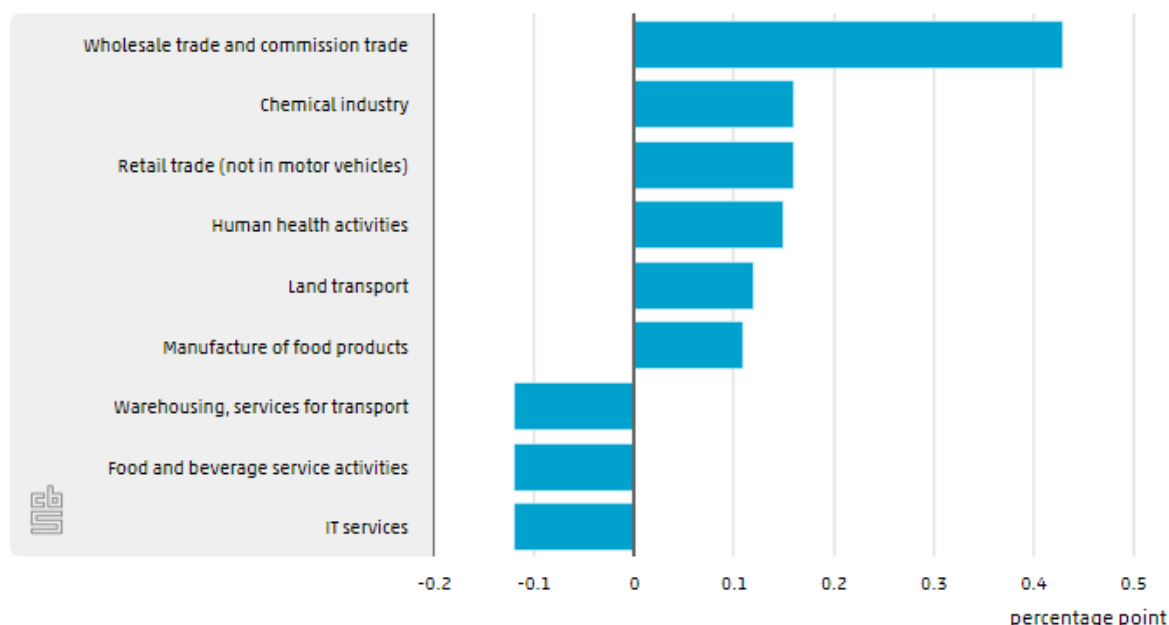
CBS calculates GDP using two approaches: the production approach and the expenditure approach. By definition, both approaches lead to the same GDP. In the production approach, GDP equals the sum of the value added in all branches of industry plus the balance of taxes and subsidies on products. The value added is calculated as the difference between the production and the consumption of energy, materials and services. Compared to the previous estimate, the volume growth of both production (0.9 percentage points) and consumption (0.5 percentage points) have been revised upwards, resulting in an upward revision of value added by 1.4 percentage points, to achieve a volume growth of 6.6 percent. Including the balance of taxes and subsidies on products, GDP volume growth comes to 6.2 percent.

This is significantly affected by a large number of industries with relatively significant revisions in value added, both upwards and downwards. Whereas the upward and downward revisions for the 2020 reporting year almost cancel each other out, the 2021 reporting year is dominated by upward revisions in branches of industry such as the chemical industry, land transport, the food industry and health care. The ratio of production to consumption in these sectors in 2021 was higher than had been assumed in the provisional figures based on the information available at the time, meaning that their consumption of energy, materials and services was lower than the estimate, as a share of production.

Specifically for the wholesale trade and retail trade, the final estimate is the first for which source data are used. In all previous estimates, value added is calculated indirectly through trade margins on goods flows. Both the wholesale trade and retail trade were significantly revised upwards from the previous estimate.

Negative revisions were made in branches of industry such as transport-related warehousing and services, accommodation and food serving and IT, which saw relatively higher actual consumption relative to production, as compared to previous assumptions.

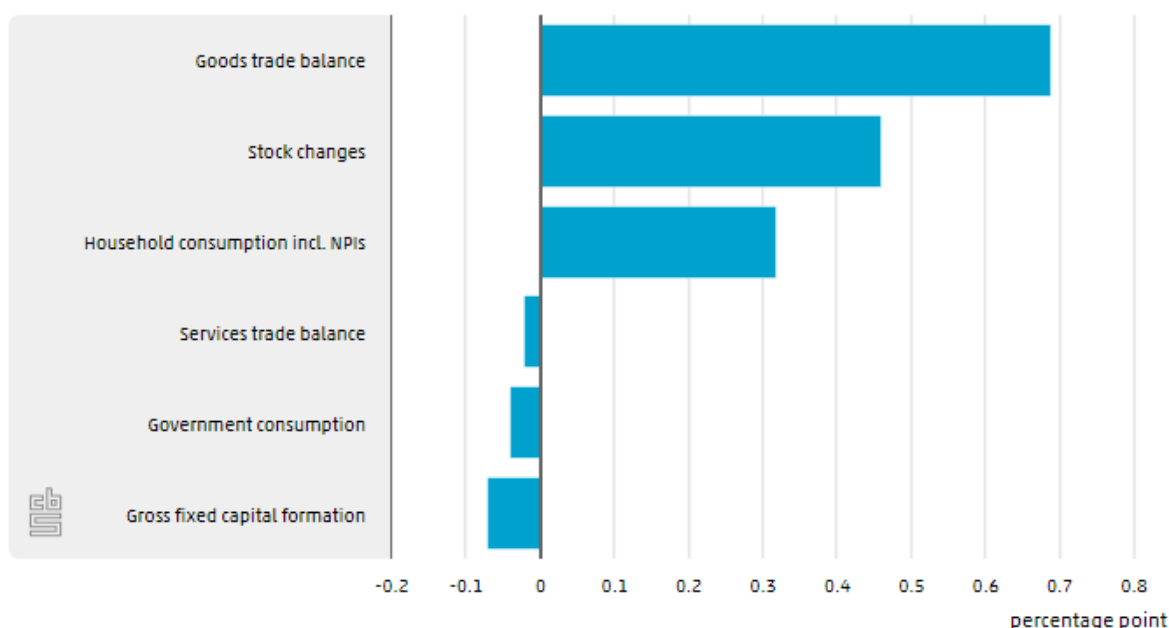
Branches of industry that contributed most to the revision to value added in 2021



Expenditure

In the spending approach, GDP is equal to the sum of investment, consumption, trade balance and stock increases. Stock increases, the trade balance of goods and household consumption received the most significant upward revisions for the 2021 reporting year. In the case of stocks, this was related to stronger growth in branches of industry such as agricultural products, food products and petroleum products. In the international trade in goods, the balance of merchanting was revised sharply upwards. This annual estimate, published today, is the first estimate for the 2021 reporting year in which source information on merchanting is available. The balance of trade in chemical products and cars has also been revised upwards. One reason for the revision to household consumption was the availability of information from production statistics on retail trade.

Contribution to GDP revision for 2021 according to the spending approach



2022 reporting year

GDP volume growth for the 2022 reporting year has been revised from 4.5 percent to 4.3 percent (-0.2 percentage points). The downward revision is the net result of upward revisions to the trade balance of goods and household consumption, together with downward revisions to investments, the trade balance of services and stock changes. In current prices, there was an upward revision to GDP of 17.4 billion euros compared to the figures published in March 2023. This includes the 15.1 billion euros revision for the 2021 reporting year.

As with the GDP revision for the 2021 reporting year, the 2022 reporting year's revision also directly affects GNI for that year.

3. Revisions to gross national income (GNI)

GNI has been revised upwards by 48.2 billion euros for the 2021 reporting year and by 46.4 billion euros for the 2022 reporting year. The GNI revisions can be separated into the GDP revisions explained above (15.1 billion euros and 17.4 billion euros, respectively) and revisions to the balance of primary incomes of the Netherlands with the rest of the world.

The revisions to the balance of primary incomes of the Netherlands with the rest of the world are the result of a combination of the use of various additional sources and new insights, in accordance with the usual revision process for the national accounts. This year, however, the revision is much more significant than usual. The main reasons for the revision to primary incomes are set out below.

The estimate of gross national income (GNI)

Along with GDP, GNI is one of the most widely used macroeconomic variables in the national accounts system. GDP refers to earnings from the production of goods and services within the Netherlands' national borders, while GNI refers to the income of Dutch residents (companies and individuals). This can also include income that was earned outside the borders of the Netherlands, for example in the form of interest and dividends, or income from ownership of foreign parent companies or subsidiaries. Conversely, income earned in the Netherlands by foreign residents does not count towards the Netherlands' GNI. GNI is the primary basis for the determination of member states' annual contributions to the European Union.

GNI is determined based on the sector accounts. These accounts divide the various money flows within the Dutch economy into the main sectors of households, businesses, government and other countries. CBS and De Nederlandsche Bank (DNB) work closely together to compile the sector accounts. Within that collaboration, DNB is responsible for the figures on the financial institutions sector while CBS deals with the figures on non-financial institutions, government, households and non-profit organisations for households. Together, CBS and DNB estimate the Netherlands' financial relationship with other countries, which harmonises CBS' national accounts with DNB's balance of payments and international investment position.

Breakdown of revisions to the balance of primary incomes of the Netherlands with other countries in billions of euros

	2021	2022
Total revision to the balance of primary incomes of the Netherlands with other countries	33.1	29.0
<i>of which</i>		
- listed financial holding companies	22.9	29.5
- dividends paid out by financial holding companies	5.9	
- profits paid out by non-financial corporations	5.8	
- other revisions to primary incomes for other countries	-1.5	-0.5

New information leads to major revision to profits of listed multinationals

The revision is largely due to new information on the profits of a specific group of listed multinationals in the captive financial institutions sector, focusing in detail on the impact of registered office relocations on the balance of payments. The revision to this group's profits was 22.9 billion euros for the 2021 reporting year and 29.5 billion euros for the 2022 reporting year.

The captive financial institutions sector is part of the financial institutions sector, which includes Netherlands-based financial holding companies associated with large foreign

multinationals. Many of these holding companies conduct no productive activities in the Netherlands on their own account; these activities are located in foreign components of the multinational.

If these financial holding companies have a foreign parent with a significant interest (more than 10 percent), the earnings are imputed to the foreign country. However, several financial holding companies in the Netherlands are listed on a stock exchange and therefore have few, if any, foreign owners with a share in the holding company of more than 10 percent. In line with European directives, profits in these holdings must be imputed to the Netherlands. The revision to GNI primarily relates to the latter category.

Retained profits on foreign direct investment

The ‘retained profits on foreign direct investment’ of foreign subsidiaries must be imputed to the Dutch holding company in accordance with European directives for compiling national accounts. Retained profits are profits made by foreign subsidiaries that are not paid out (in the form of dividends) but are instead used for purposes such as strengthening equity capital or financing investments.

When Dutch holding companies have a foreign parent, retained profits also flow back to the holding company’s foreign parent company. However, in the case of a listed holding company, there is no foreign parent; the shares are distributed between many different shareholders. Retained profits do not flow to a foreign parent, because there is no foreign parent to receive those profits. In that case, there is only an incoming flow of foreign profits; insofar as they are not paid out as dividends, these profits are included in the Netherlands’ GNI.

In a few cases, certain shareholders own more than 10 percent of the listed shares. However, outgoing retained profits are recorded for these specific shareholders.

The statistical concept of ‘retained profits on foreign direct investment’ (see inset) that CBS must register according to European directives does not fit well with the accounts the Dutch holding company must prepare. This means that enterprises find it difficult to correctly report the retained profits of foreign subsidiaries to DNB and CBS. This is especially the case for multinationals where the multinational is legally domiciled in the Netherlands but otherwise has limited activities in the Netherlands, and where the company is even headquartered abroad.

For this reason, additional public information on the annual report for the entire multinational around the world is used for the annual estimates to determine retained profits for the financial holdings of the largest multinationals, in line with European rules. Analysis of that annual report information showed that some listed multinationals made much higher profits in 2021 and 2022 than had previously been estimated. As a result, the GNI for both reporting years has been substantially revised upwards. As an indication, fewer than 10 financial holding companies accounted for 95 percent of the profits caused by the revision.

In the future, where this information is available in good time, CBS and DNB will use the annual report information in earlier estimates, allowing potential revisions to be incorporated

into the figures at an earlier stage. The information from the available annual reports has already been incorporated into the figures for the provisional estimate for 2022, so we expect there to be far fewer revisions on this point in the next estimate. We will continue to use this method in the future. Quarterly statistics, however, are usually published before this information becomes available. In the near future, we will also explore whether this information could be better identified at the earlier stage of companies' own reports to DNB (and CBS).

Further analysis of dividends

Another cause of the revision to the balance of primary incomes for the 2021 reporting year is further analysis of dividends paid out abroad by financial holding companies. The analysis showed that dividends paid to other countries were 5.9 billion euros lower than previously estimated. As a result, the GNI for the 2021 reporting year has been revised upwards by 5.9 billion euros. There are no revisions for dividends for the 2022 reporting year.

Further analysis of non-financial companies' profits paid

The remainder of the revisions to primary incomes is largely the result of a new comprehensive analysis of the profits paid out in [subsectors within non-financial companies](#). This analysis showed that the share of non-financial companies' income that is earned by foreign-owned companies is lower than previously estimated. As these profits flow to the foreign parent as primary income, this outflow has been revised downwards by 5.8 billion euros for the 2021 reporting year. This has caused the GNI to be revised upwards by 5.8 billion euros.

Revisions to other macroeconomic indicators

The above reasons for the GNI revisions also lead to upward revisions of the same order of magnitude in disposable national income, national savings, the national balance of receivables and the current account balance. DNB is also publishing its revisions to the [balance of payments and international investment position](#) today.

Revisions to other macroeconomic indicators in billions of euros

As of 23 June 2023	2021	2022
Gross national income	884.5	949.1
Gross national disposable income	877.8	943.2
National savings (gross)	292.9	291.9
National balance of receivables	106.1	194.5
Current account balance	105.5	88.3
Previous		
Gross national income	836.3	902.8

Gross national disposable income	829.6	893.2
National savings (gross)	245.9	242.7
National balance of receivables	62.7	140.3
Current account balance	62.2	41.0
Revision as of 23 June 2023		
Gross national income	48.2	46.4
Gross national disposable income	48.2	50.0
National savings (gross)	47.0	49.2
National balance of receivables	43.4	54.2
Current account balance	43.3	47.4