

# Rebasing 2005=100 producer price index

# 100

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Publication date Statistics Netherlands website: 8 January 2010



## Explanation of symbols

.	= data not available
*	= provisional figure
x	= publication prohibited (confidential figure)
–	= nil or less than half of unit concerned
–	= (between two figures) inclusive
0 (0,0)	= less than half of unit concerned
blank	= not applicable
2008–2009	= 2008 to 2009 inclusive
2008/2009	= average of 2008 up to and including 2009
2008/'09	= crop year, financial year, school year etc. beginning in 2008 and ending in 2009
2006/'07–2008/'09	= crop year, financial year, etc. 2006/'07 to 2008/'09 inclusive

Due to rounding, some totals may not correspond with the sum of the separate figures.

*Publisher*  
Statistics Netherlands  
Henri Faasdreef 312  
2492 JP The Hague

*Prepress*  
Statistics Netherlands - Grafimedia

*Cover*  
TelDesign, Rotterdam

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## Summary

- In January 2009 the statistics on producer prices in manufacturing started with its series of index figures with base year 2005. Newly calculated index figures (2005=100) are available as of reporting period January 2000 while the publication of the old series (2000=100) with index figures through December 2008 was stopped.
- The transition to the new index series included the change to the most recent classifications of goods (ProdCom 2008) and activities (SBI 2008). The publication series is updated in line with these new classifications.
- The elementary aggregate was shifted to a higher level. This means that prices are observed within a more broadly defined product group giving this product group more mass (price data). It also became possible to introduce a new sampling method and have better information available for weighting.
- Improvements in data gathering were implemented. The most important one was introducing a different sampling method. The updated sampling frame makes it possible to arrive at results of at least similar quality with fewer observations. For the import series a new sample frame was used, making the price observations more representative.
- The base shift and the improvements did not lead to major changes in the index series for the manufacturing industry as a whole. There are differences in the underlying detailed series though. These differences are mainly due to the new classifications and weighting schemes.

## Introduction

The statistics on producer prices in manufacturing (PPI) use price quotes on goods produced and sold by the Dutch manufacturing industry, as well as the imports of industrial products. The price changes of a basket of goods representative for the base year are observed. The price index figures of product groups are weighted with monetary values referring to that same base year. Rebasing takes place once every five years. The reason is that the production ratios, and thus the weighting, change over time. The PPI published so far has 2000 as its base year. The PPI is now rebased to 2005 as its base year.

A base shift provides a good opportunity to make other changes as well, such as implementing new wishes from users, better insights or improved statistical coordination. This paper outlines the changes implemented during the base shift 2005=100.

## Overview of changes in the PPI

Three changes implemented in to base shift 2005=100 are common in any base shift. These are:

### 1. *New weighting*

The aim of a base shift, as explained earlier, is to adapt the weighting schemes of the statistics to recent production ratios. During the current base shift there were adjustments in the weights of both the product groups and enterprises within a product group in such a way that they represented the situation of base year 2005. Along with the new sampling method (see point 5) the sampling panel was updated. The weights of enterprises among themselves better fit the current market conditions. Improved processes at Statistics Netherlands made it possible to improve especially the quality of weighting enterprises within a product group for imports.

### 2. *Changes in classifications*

In the PPI products for which price developments are observed are classified according to the ProdCom list, a European classification of products. Aggregates of the ProdCom list are published. Furthermore, series are published based on activities according to the standard industrial classification used at Statistics Netherlands, the SBI. Between 2000 and 2008 the NACE business classification has been changed substantially within the European context. This means that the ProdCom and SBI classifications, which are derived from NACE, have also undergone major changes.

### 3. *Adapting the publication scheme*

The changes in the classifications, the availability of the basic material for weighting and the implementation of a new sampling method (see point 5) have consequences for the publication scheme. In practice the publication scheme for product groups has been adapted somewhat because it is now based on the 2008 ProdCom list. The publication scheme for the classification of activities (SBI) has stayed virtually the same in its details.

Two other major changes were implemented with this base shift as well.

### 4. *Shifting the elementary aggregate*

A consequence of changes in the statistical processes at Statistics Netherlands has been that the usual level of detail of the PPI can no longer be provided in many cases. This is mainly because there is less detailed weighting information available. As this weighting information plays a key role in the new sampling method (see point 5) we opted to have the sample, observation, calculation and publication at the same level of detail. This led to shifting the elementary aggregate from the most detailed 8-digit ProdCom level to a higher level. Prices collected now lie within a wider product group so that the primary aggregates gain in mass (prices per product group). This made it possible to introduce a new sampling method. An additional advantage is that the observations can now be divided more easily over the publication schedule.

### 5. *Introduction PPS sampling method*

The selection of enterprises was previously based on a cut-off sample. This means that only major companies were observed to a degree where the coverage within a given product group was about 80 percent. The disadvantage of this method is that it is not very efficient.

To solve this problem and to make the sample fit in with the shifted primary aggregate (see point 4) we looked for another sampling method. We chose the PPS (probability proportional to size) sampling method where the largest companies are still observed, but now there are fewer in the sample than in the old sampling method. Furthermore, smaller enterprises can now also be included in the sample. The probability of being selected for the panel corresponds with the turnover in the sample population.

The updated sampling method makes it possible to acquire the same quality results with fewer observations. Apart from reducing the response burden we can now periodically change the panel, except for the enterprises that are fully observed.

## **Results**

The consequences of the above presented changes on the development of prices of the total sales of the manufacturing industry are depicted in figure 1. This figure shows the old and new series for the period 2000–2008. For the sake of comparison with the new series, we re-referenced the old 2000=100 to 2005=100. At the level of the manufacturing industry as a whole the new series barely differs from the old series.

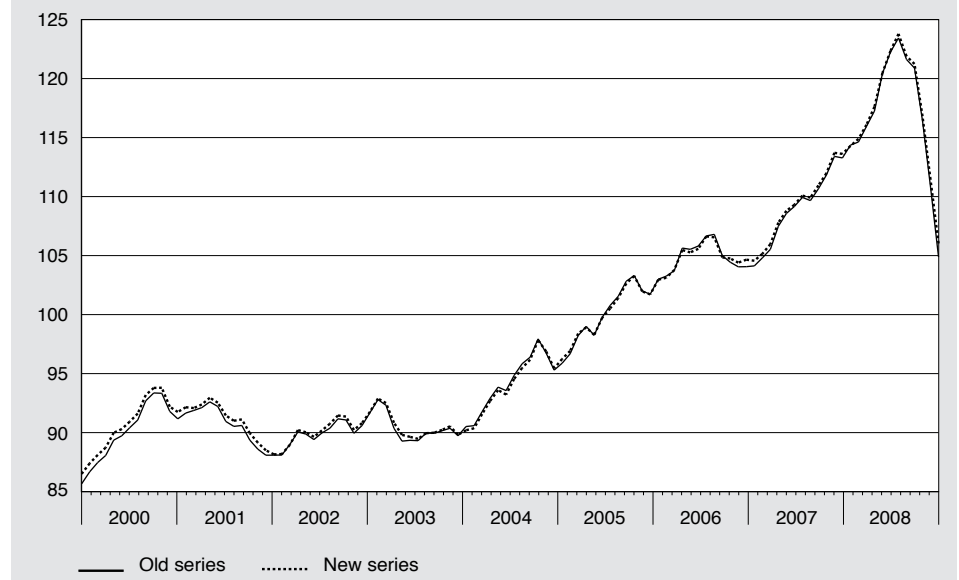
The picture for the detailed series on the other hand is more differentiated because the effects of the new ProdCom classification are greater.

Figure 2 shows the price changes of the imports of industrial products. Both series have a scale that makes for 2005=100. Analyses show that the differences are mainly caused by the adjusted weighting schedules. The adjustments for the imports are relatively greater than for sales.

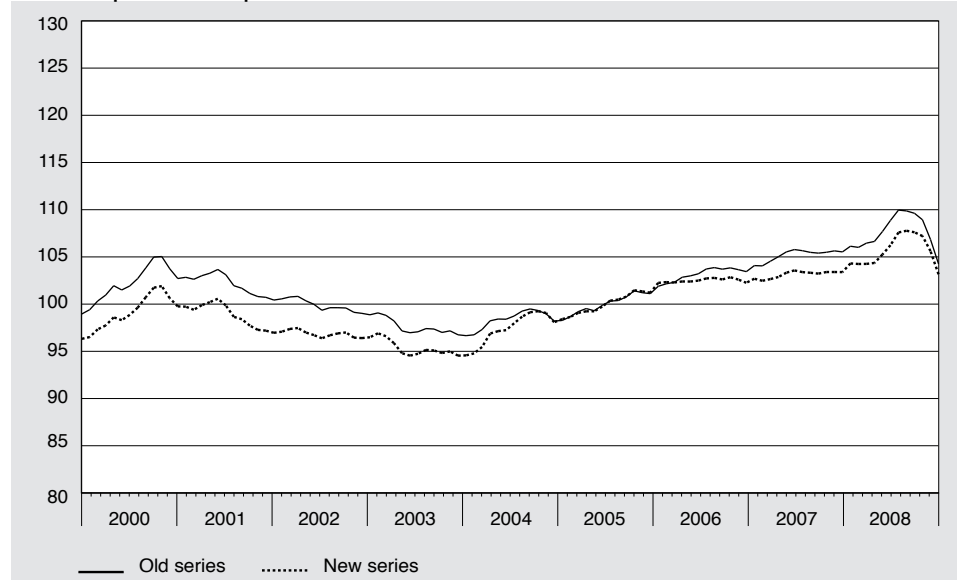
### **Change from reference year 2000=100 to 2005=100**

The results of the PPI have been calculated and published with 2000=100 through December 2008. Price developments such as year-on-year changes can be calculated through December 2008 with series 2000=100.

### 1. Index figures sales of the manufacturing industry



### 2. Index import industrial products



As of March 2009 Statistics Netherlands calculates and publishes the PPI figures starting with January 2000 based on 2005=100. As of reporting month January 2009 PPI results are no longer calculated on the basis of 2000=100.

For specific purposes, such as risk clauses in contracts, the new indices need to be linked to the new series.

This can be done using the SBI linking table (<http://www.cbs.nl/nl-NL/menu/methoden/classifications/overzicht/sbi/default.htm>) which indicates how the old enterprise groups can be linked with the new. For the PPI indices by product group (ProdCom) it is possible to use the same linking table for aggregates from the 4-digit level. At the lower ProdCom levels it is necessary to look in each case how the old ProdCom code can be linked to the new (<http://www.cbs.nl/nl-NL/menu/methoden/classifications/overzicht/ProdCom/default.htm>).

## **Definitions**

- Sales*      *The sales series includes goods manufactured and sold by the Dutch manufacturing industry, broken down by domestic and foreign sales.*
- Imports*    *The imports concern all goods imported in the Netherlands.*
- ProdCom*   *The PRODCOM list is a list of industrial products used in the European Union for statistics on manufacturing.*
- NACE*      *“Nomenclature générale des Activités économiques dans les communautés Européennes”.*
- SBI*        *The Standaard Bedrijfsindeling (SBI) is the standard industrial classification of economic activities used by Statistics Netherlands to list business units by their main activity.*