

December 2022

INDUSTRIAL AND CONSTRUCTION PRODUCER PRICES

- In December 2022, compared with the previous month, industrial producer prices increased by 2.9%. On domestic market producer prices rose by 3.8%, on non-domestic market they decreased by 0.4%.
- Over the last three months, compared to the previous three months, industrial producer prices rose by 1.8% (+2.1% on domestic market, +0.7% on non-domestic market).
- In December 2022, compared to the same month a year ago, industrial producer prices increased by 31.7% (+39.2% on domestic market, +9.6% on foreign market). In 2022, compared with 2021, prices rose by 34.4% (+42.7% on domestic market, +12.0% on foreign market).
- In December 2022, construction producer prices of Residential and non-residential buildings decreased by 0.1% on monthly basis and increased by 7.6% on annual basis; construction producer prices of Roads and railways decreased by 0.2% compared with the previous month and rose by 7.9% on annual basis.
- Over the last three months, compared to the previous three months, construction producer prices increased by 0.3% for Residential and non-residential buildings and decreased by 0.3% for Roads and railways.
- In 2022, compared with 2021, construction producer prices of Residential buildings and non-residential buildings increased by 8.2%, those of Roads and railways rose by 8.3%.

Industrial Producer Prices

CHART 1. INDUSTRIAL PRODUCER PRICES INDEX, TOTAL, DOMESTIC AND NON-DOMESTIC MARKET

January 2017 – December 2022 (index, 2015=100)

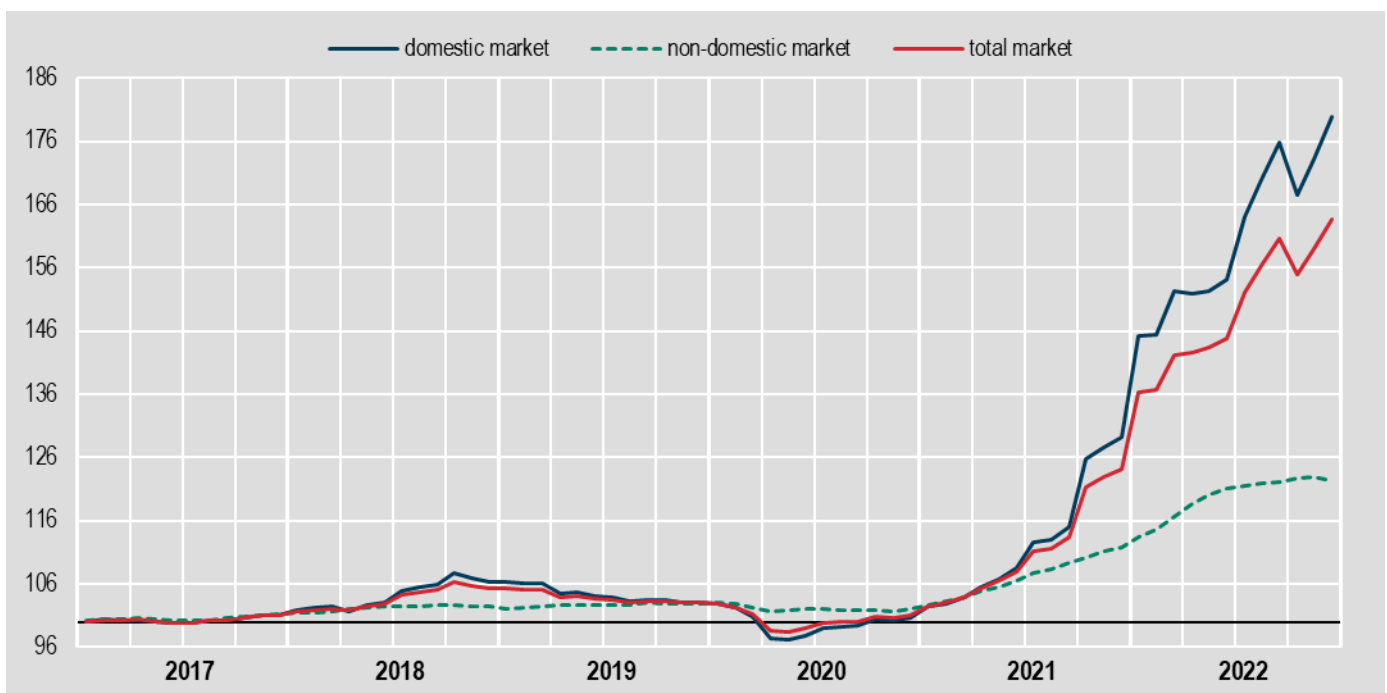


CHART 2. INDUSTRIAL PRODUCER PRICES INDEX, MONTH ON PREVIOUS MONTH PERCENT CHANGES
January 2018 – December 2022 (index, 2015=100)

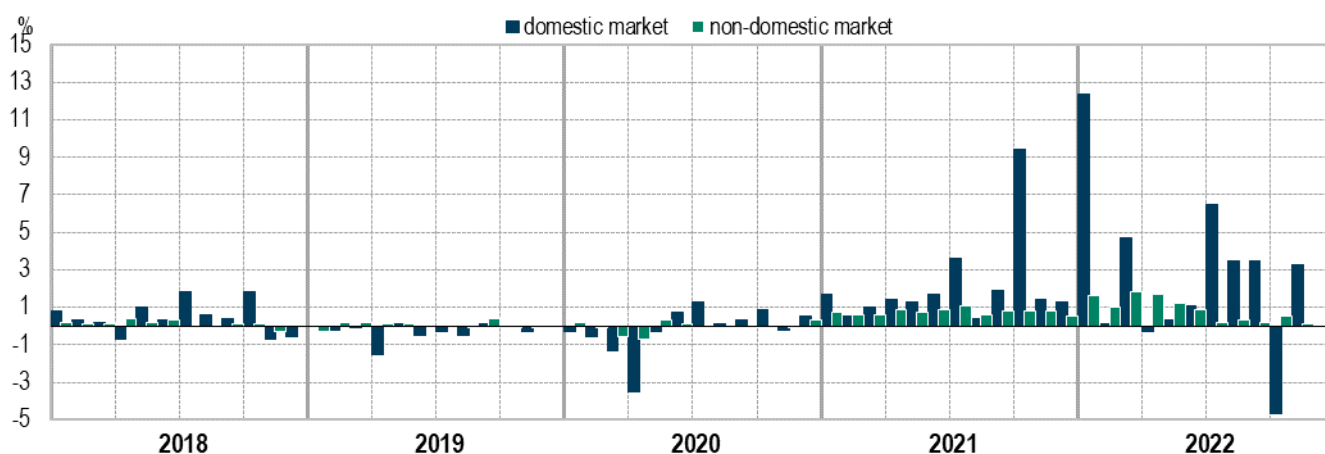


CHART 3. INDUSTRIAL PRODUCER PRICES INDEX, MONTH ON SAME MONTH A YEAR AGO PERCENT CHANGES
January 2018 – December 2022, (index, 2015=100)

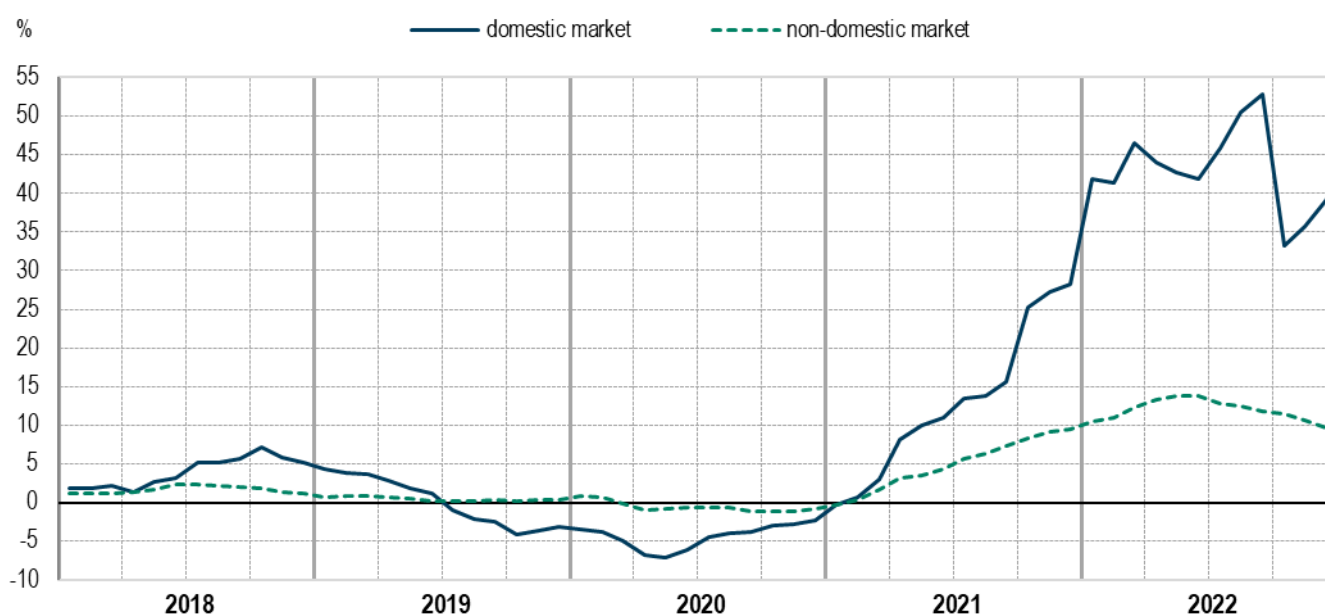


TABLE 1. INDUSTRIAL PRODUCER PRICES INDEX

December 2022 (a), months on previous months and months on same months a year ago percent changes (index, 2015=100)

	Index	Months on previous months		Months on same months a year ago	
		Dec. 22 Nov. 22	Oct. - Dec. 22 Jul. - Sep. 22	Dec. 22 Dec. 21	Jan. - Dec. 22 Jan. - Dec. 21
Total market	163.6	+2.9	+1.8	+31.7	+34.4
Domestic market	179.8	+3.8	+2.1	+39.2	+42.7
Non-domestic market	122.4	-0.4	+0.7	+9.6	+12.0
<i>Euro area</i>	123.0	-0.4	+0.3	+8.8	+12.0
<i>Non-euro area</i>	121.9	-0.6	+0.9	+10.1	+11.9

(a) Data are provisional and subject to revisions.

TABLE 2. INDUSTRIAL PRODUCER PRICES INDEX BY MAIN INDUSTRIAL GROUPINGS (MIG)

December 2022 (a), month on previous month and month on same month a year ago percent changes (index, 2015=100)

MAIN INDUSTRIAL GROUPINGS (MIG)	Total market		Domestic market		Non-domestic market Euro area		Non-domestic market Non-euro area	
	Month on previous month	Month on same month a year ago	Month on previous month	Month on same month a year ago	Month on previous month	Month on same month a year ago	Month on previous month	Month on same month a year ago
	<u>Dec. 22</u> Nov. 22	<u>Dec. 22</u> Dec. 21	<u>Dec. 22</u> Nov. 22	<u>Dec. 22</u> Dec. 21	<u>Dec. 22</u> Nov. 22	<u>Dec. 22</u> Dec. 21	<u>Dec. 22</u> Nov. 22	<u>Dec. 22</u> Dec. 21
Consumer goods	+0.3	+10.7	+0.3	+12.0	+0.1	+8.2	-0.1	+8.5
Durable consumer goods	+0.3	+7.6	+0.4	+7.1	-0.8	+7.2	+0.3	+8.5
Non-durable consumer goods	+0.2	+11.6	+0.3	+12.9	+0.4	+8.4	-0.3	+8.4
Capital goods	+0.2	+8.4	+0.2	+7.5	+0.4	+8.3	-0.1	+10.4
Intermediate goods	-0.7	+12.2	-0.6	+12.6	-1.1	+10.7	-1.2	+11.2
Energy	+7.6	+80.2	+7.8	+82.1	-3.0	-6.1	-4.9	+11.0
Total except MIG energy	-0.2	+10.7	-0.1	+11.2	-0.3	+9.2	-0.4	+10.0
Total	+2.9	+31.7	+3.8	+39.2	-0.4	+8.8	-0.6	+10.1

(a) Data are provisional and subject to revisions.

Construction Producer Prices

CHART 4. CONSTRUCTION PRODUCER PRICE INDEX, BUILDINGS

January 2017 – December 2022, (index, 2015=100)

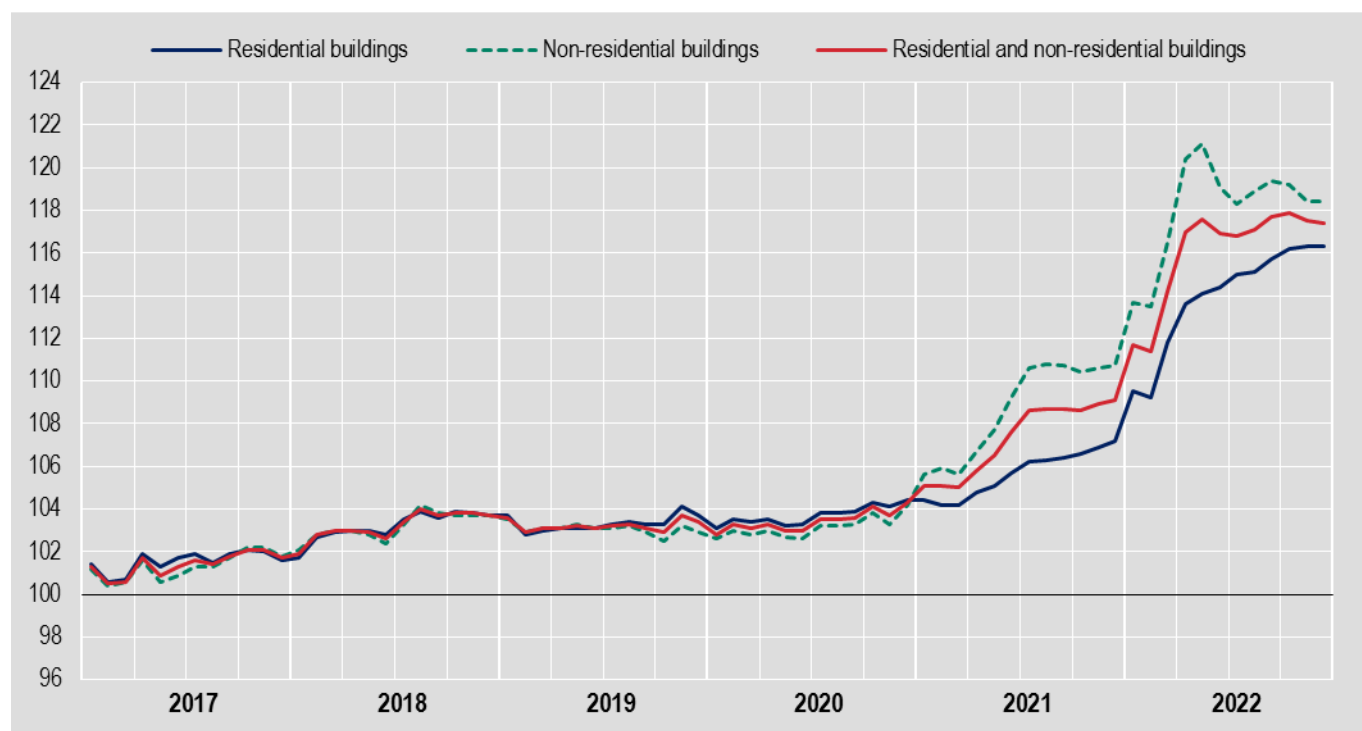


CHART 5. CONSTRUCTION PRODUCER PRICE INDEX, BUILDINGS

January 2018 – December 2022, month on previous month percent changes (index, 2015=100)

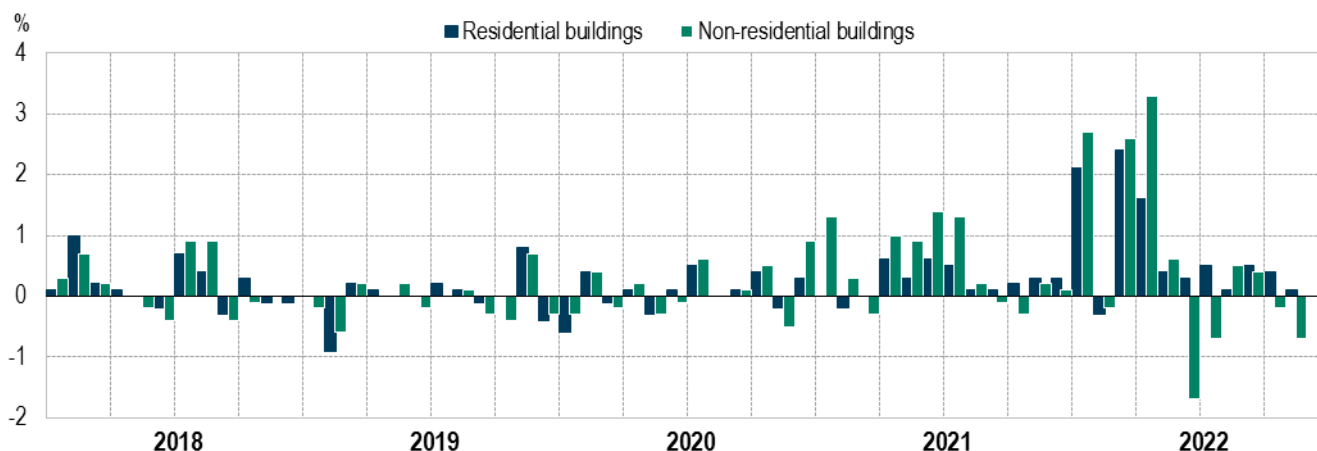


CHART 6. CONSTRUCTION PRODUCER PRICE INDEX, BUILDINGS

January 2018 – December 2022, month on same month a year ago percent changes (index, 2015=100)

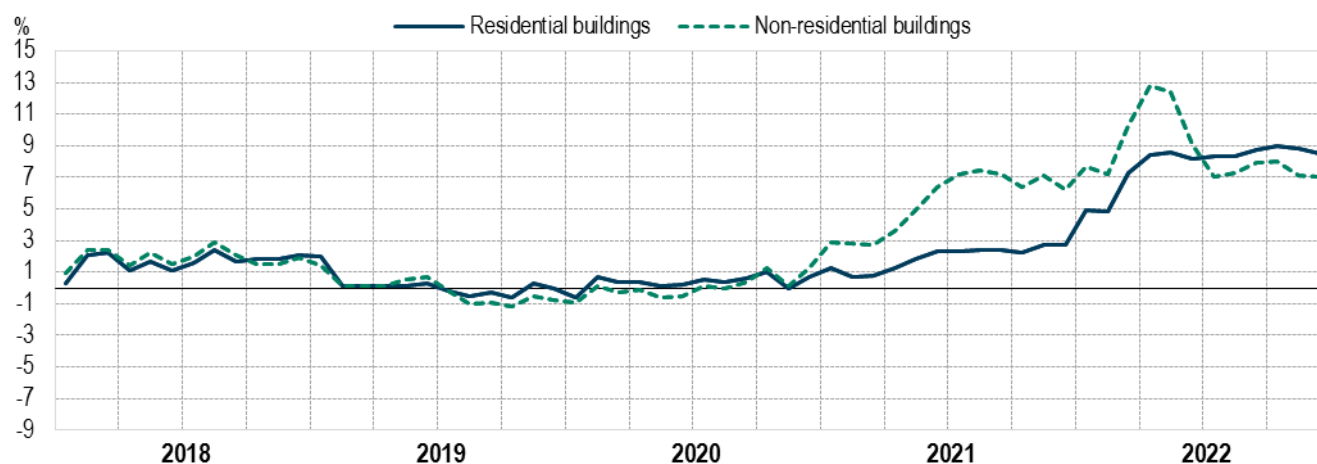


TABLE 3. CONSTRUCTION PRODUCER PRICE INDEX

December 2022 (a), months on previous months and month on same month a year ago percent changes (index, 2015=100)

	Index	Months on previous months		Month on same month a year ago	
		Dec. 22 Nov. 22	Oct.- Dec. 22 Jul.- Sep. 22	Dec. 22 Dec. 21	Jan.- Dec. 22 Jan. - Dec. 21
F.41.2 Residential buildings and non-residential buildings	117.4	-0.1	+0.3	+7.6	+8.2
<i>Residential buildings</i>	116.3	0.0	+0.9	+8.5	+7.8
<i>Non-residential buildings</i>	118.4	0.0	-0.2	+7.0	+8.6
F.42.1 Roads and railways	113.4	-0.2	-0.3	+7.9	+8.3
<i>F.42.11 Roads and motorways</i>	107.0	+0.3	+0.7	+4.7	+3.9
<i>F.42.13 Bridges and tunnels</i>	113.8	-0.3	-0.3	+8.0	+8.6

(a) Data are provisional and subject to revisions

CHART 7. CONSTRUCTION PRODUCER PRICE INDEX. ROADS AND RAILWAYS. ROADS AND MOTORWAYS. BRIDGES AND TUNNELS

January 2017 – December 2022, (index. 2015=100)

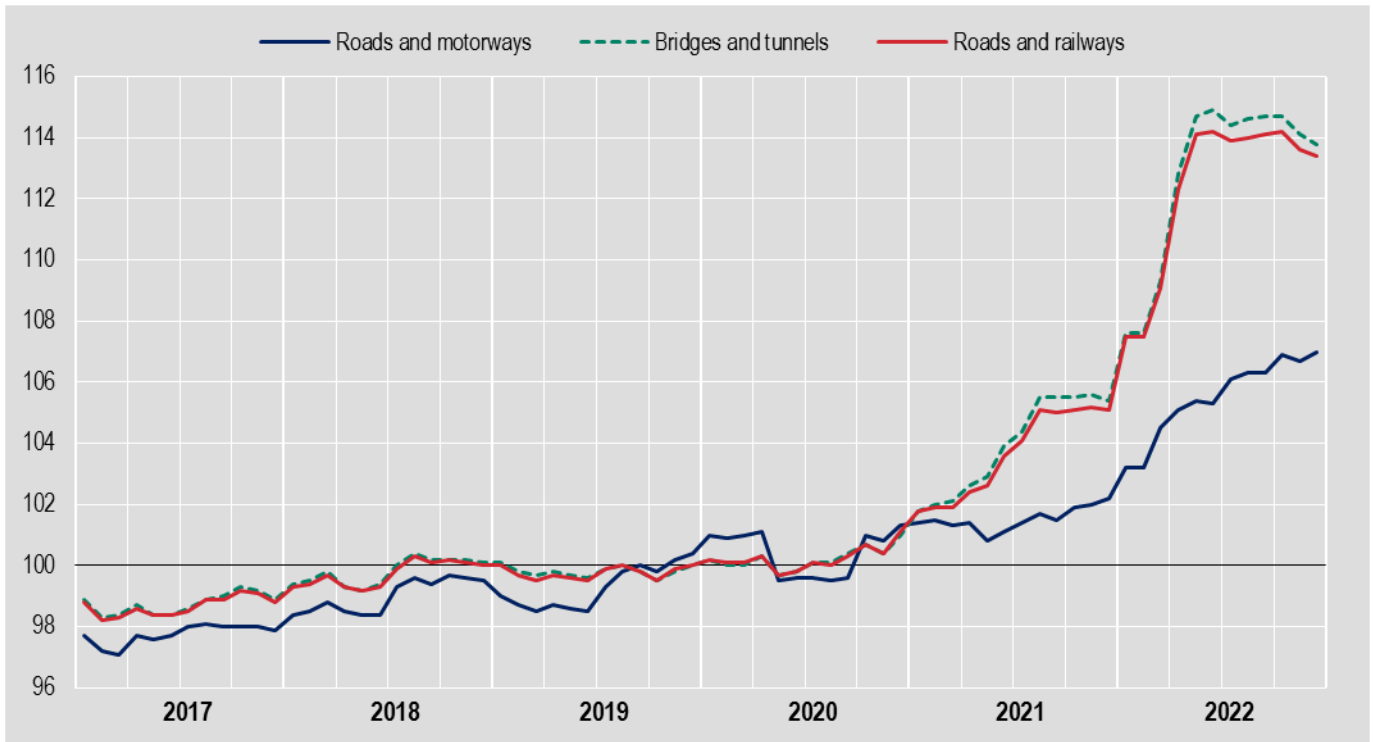


CHART 8. CONSTRUCTION PRODUCER PRICE INDEX. ROADS AND RAILWAYS

January 2018 – December 2022, month on previous month and month on same month a year ago percent changes (index. 2015=100)

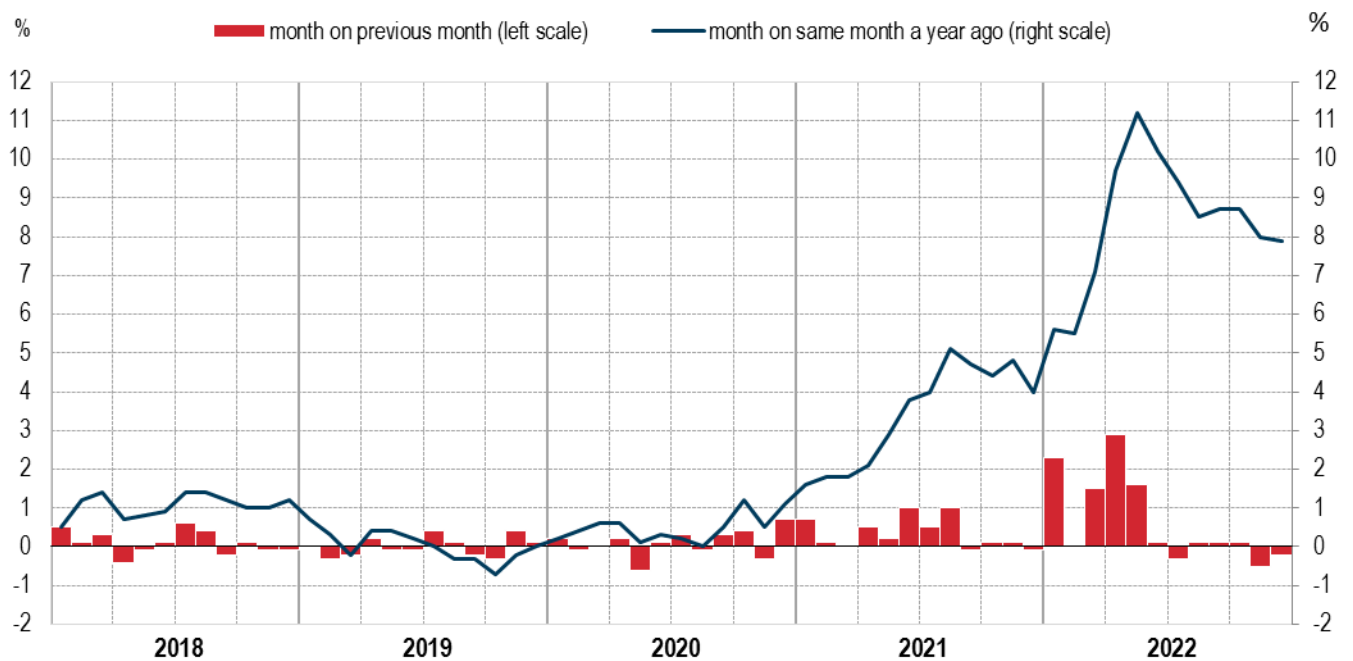


CHART 9. CONSTRUCTION PRODUCER PRICE INDEX. ROADS AND MOTORWAYS. BRIDGES AND TUNNELS
January 2018 – December 2022, month on previous month percent changes (index. 2015=100)

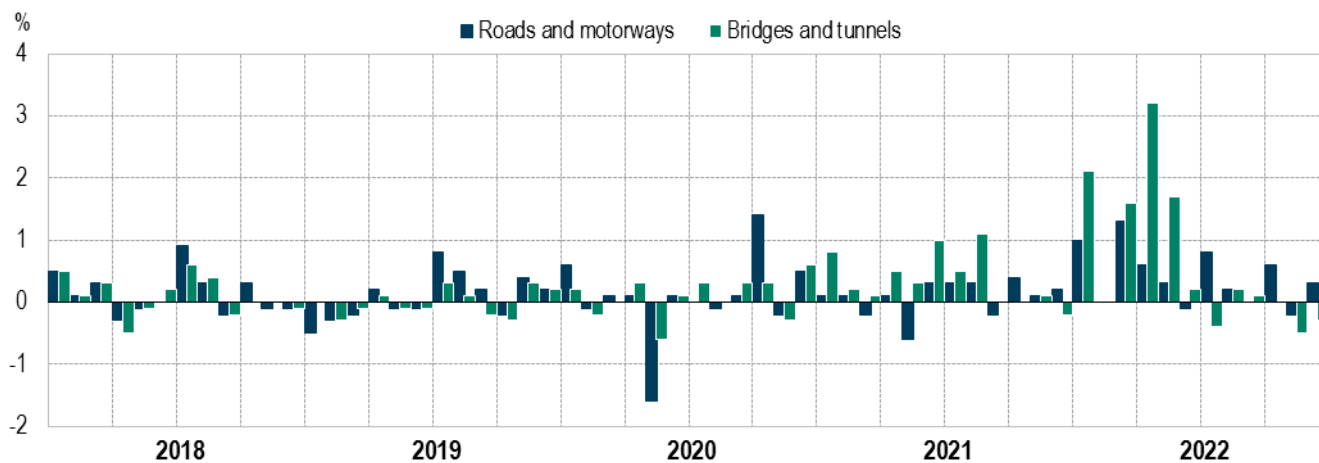


CHART 10. CONSTRUCTION PRODUCER PRICE INDEX. ROADS AND MOTORWAYS. BRIDGES AND TUNNELS
January 2018 – December 2022, month on same month a year ago percent changes (index. 2015=100)

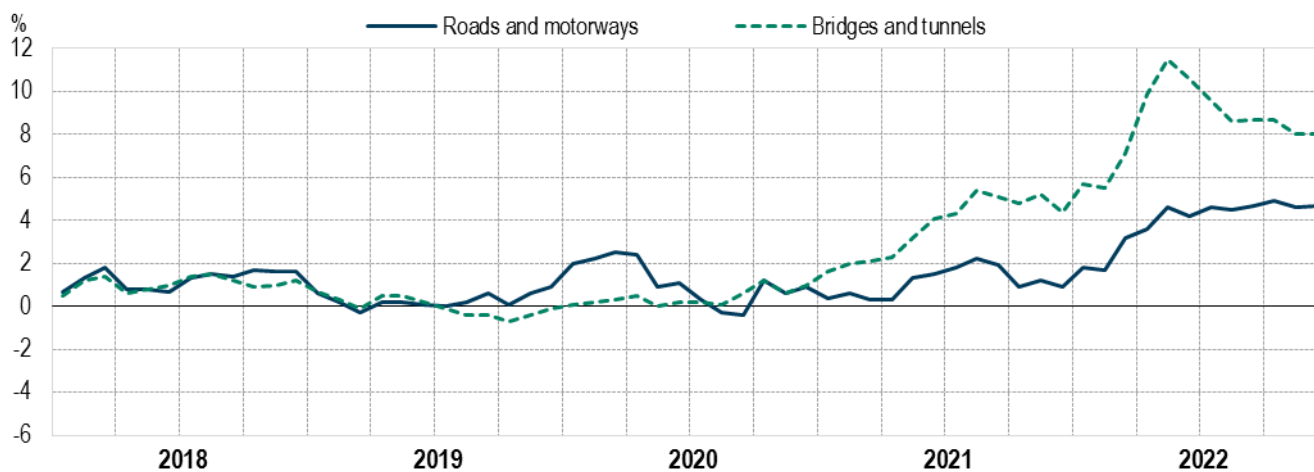


TABLE 4. INDUSTRIAL PRODUCER PRICES INDEX

November 2022, revisions of percentage changes. Differences in percentage points (index. 2015=100)

Total		Domestic Market		Non Domestic Market		Non Domestic Market Euro area		Non Domestic Market No Euro area	
Month-on-month change	Year-on-year change	Month-on-month change	Year-on-year change	Month-on-month change	Year-on-year change	Month-on-month change	Year-on-year change	Month-on-month change	Year-on-year change
0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	+0,1

TABLE 5. CONSTRUCTION PRODUCER PRICE INDEX

November 2022, revisions of percentage changes. Differences in percentage points (index 2015=100)

Residential buildings and non-residential buildings		Residential buildings		Non-residential buildings		Roads and railways		Roads and motorways		Bridges and tunnels	
Month-on-month change	Year-on-year change	Month-on-month change	Year-on-year change	Month-on-month change	Year-on-year change	Month-on-month change	Year-on-year change	Month-on-month change	Year-on-year change	Month-on-month change	Year-on-year change
-0.2	-0.3	0.0	0.0	-0.5	-0.5	-0.1	-0.2	-0.1	-0.1	-0.2	-0.2

Industrial producer prices

Introduction and legal framework

Industrial producer prices statistics derive from the monthly survey of industrial producer prices. This survey is included in the National Statistical Programme.

Industrial producer prices indices measure the monthly prices dynamics of goods sold by enterprises – resident in Italy – to other enterprises or public administrations.

Indices *base period* is the month of December of the preceding year. Indices are disseminated through the Laspeyres chain-linking formula.

The monthly survey is based on non-random sample whose units (products, prices and enterprises) are annually updated. Approximately 1,750 products are surveyed from a sample of about 6,300 industrial enterprises providing about 21,200 monthly price quotations.

The legal basis for the STS indicators are the Regulation (EU) 2019/2152 of the European Parliament and of the Council on European business statistics, repealing 10 legal acts in the field of business statistics (EBS-Regulation) and the Commission Implementing Regulation 2020/1197 laying down technical specifications and arrangements pursuant to Regulation (EU) 2019/2152 (General Implementing Act).

Main index purposes are:

- ✓ the short-term measure of the inflationary dynamics in the first stage of commercialisation of the industrial products;
- ✓ the study and identification of inflationary factors;
- ✓ the comparative analyses between different countries;
- ✓ the deflation of the industrial monetary indicators of national accounts;
- ✓ the indexing of long term contracts that explicitly set out usage of this index.

The producer price index also contributes to the calculation of the producer price indices for the total of countries of the EMU and the EU, through the summaries with the analogous indicators produced by the other member countries.

Observation field, analysis and survey unit

The observation field of the survey concerns:

- a) products included in Sections from B to E36 of the CPA classification (derived from NACE Rev. 2). Products of the sectors relating to marine, aerospace and railway construction and arms are excluded.
- b) Enterprises with main economic activity in the sectors of mining and manufacturing including supply of electricity, gas, steam and air conditioning - collection, treatment and supply of water (sections B, C, D, E36 of the Ateco 2007 classification derived from NACE Rev. 2).

The product defined by the Prodcom code is the analysis unit. Enterprises provide price quotations corresponding to a list of their own products consistent with the Prodcom definition. The analysis unit can be a raw material, a semi-finished product or a finished one. It is manufactured and destined for sale both on domestic and non-domestic market. The product consists in the elementary unit to which survey prices are referred to. Custom products are excluded from the survey as well as the goods manufactured in a local unit and sold another unit of the same enterprise of industrial group.

The survey unit is the industrial enterprises whose factories are located in Italy.

Sampling design

Both for the domestic market and the Euro and non-Euro area, the monthly survey of producer prices is based on a sample annually updated. Once a year, the products basket and the list of enterprises are updated. Consequently, price series are updated too. The basket of product is a non-random selection of representative goods manufactured in Italy by industrial enterprises and sold on the domestic market or directly exported. Enterprises are linked to product by using the information available in the Business register. Concerning the domestic market, products are singled out using the annual industrial statistics (Prodcom). Referring to the non-domestic market,

products are selected by the international trade of goods statistics. Respectively for the domestic and non-domestic market, variables used to select products are those of the value of production sold and annual value of exports.

Each enterprise involved in the sample survey is requested to provide the monthly price of the most representative sold.

The annual sample updating allows a better representativeness of the information provided to users. Both for products and enterprises in fact, no longer economically relevant units are ruled out from the survey and substituted by new ones. On the other hand, the annual updating of respondents allows also to make a rotation plan for reducing the statistical burden on enterprises without damaging the need and the collection of statistical information.

Table A summarises the composition enterprises/products/prices of the index base period December 2021.

Table A. INDUSTRIAL PRODUCER PRICES. Sample size of products, enterprises and prices December 2021 calculation base

UNIT	Total market	Domestic market	Non domestic market	Non domestic market euro area	Non domestic market non-euro area
Products	1,775	1,309	1,116	870	818
Enterprises	6,312	4,300	3,050	1,968	1,823
Prices	21,193	12,383	8,810	4,564	4,246

Data collection and quality control

Data are collected by a web questionnaire available in the Istat Statistics Portal. The electronic questionnaire allows respondents to send data pre-checked improving timeliness too. The respondents in fact are directly notified about errors in filling in the questionnaire due to incompatible responses or breaks in continuity or inconsistencies and omissions.

Data must be transmitted by respondents within a time window whose lower and upper times are respectively the first and approximately the fourteenth day after the end of the reference month. This time interval allows to be compliance with the Short-Terms Statistical Regulation deadline. Reminders and follow up operations are planned for reducing non-responses. In particular, these activities are undertaken both before and after releasing provisional data firstly and successively before publishing final data.

The questionnaire is pre-filled: each enterprises fills in its own questionnaire by detailing prices consistently with the definition of product contained in the same questionnaire. Prices concern the most representative items the respondent produces and sell on the domestic and the non-domestic market. These items are the ones the enterprise regularly and monthly sells. Prices are actually producer prices because they refer to sale between two enterprises. Both the producer (seller) and the purchaser are enterprises. The price must be surveyed in Euros, net of the VAT, and must be a real transaction price (list prices and transfer prices are therefore excluded).

Data collected are checked and corrected. Missing data are estimated. Data are released as anonymous and aggregate index numbers.

Index compilation

The industrial producer prices indices are compiled according to the methodology of the annual chain-linking on a monthly basis. Since March 2022, backward to January, the producer price indices on industry are released in the reference base 2015=100 and the base period is the month of December 2021. The system of producer price indices on industry is made up of three surveyed variables – referring to domestic market, Euro area market, non-Euro area market – and by two summary variables – foreign market (Euro and non-Euro areas), and total market (domestic and foreign markets).

The surveyed variables are calculated as base period indices and successively released as reference base indices. The compilation process is made up of three steps. The first step deals with the definition of price relatives (quotients of current prices – numerator – and base prices, denominator, December 2021). In the second step, prices relatives associated with each product are aggregated by simple geometric average to provide product indices. In the third step, the product indices are aggregated by weighted arithmetic averages (chain-linked Laspeyres type formula) to provide the whole set of sub-aggregate indices and the overall one.

Weights

For the three variables surveyed (domestic market, Euro area foreign market and non-Euro area foreign market), the weighting systems are determined using different sources.

At the upper level the aggregation mechanism (from the fourth digit of the Ateco 2007 classification up to the total of industry), weights are derived from the value of total turnover in industry – the information comes from the *Frame-SBS*¹ register and from the survey “Economic results of businesses” - and from the value of total exports - distinct by Euro and non-Euro areas - derived from the foreign trade surveys. Data refer the year 2019, the most recently available.

At the lower level, product weights for the three markets (domestic, non-domestic Euro area and non-domestic Non-euro area) are setting up using the annual value data of industrial sold production sold, available from Prodcom Survey and the annual value data of exports, measured by the foreign trade statistics surveys, referring to the year 2020.

Timeliness and revisions

Producer price indices of industry are monthly revised. Provisional data are released about 30 days after the end of the reference period. A second release concerns final data, after about 60 days from the end of the reference period. No other revisions are carried out.

The release calendar is annually defined and published on the Institute website <https://www.istat.it/en/information-and-services/journalists/release-calendar>.

Dissemination

Data are published simultaneously to all the interested parties through monthly press release published on the Istat website www.istat.it.

The series of the updated indices are published, simultaneously to the press release, on the Institute data warehouse (I.stat) within the Prices theme- [Industrial producer prices](#) and on [Rivaluta](#).

Data are transmitted to Eurostat and published on <http://ec.europa.eu/eurostat/data/database> (Theme *Industry, trade and services*, subject *Short-term business statistics (sts)/Industry (sts_ind)*).

Further information in the following documents: (only Italian version available)

December 2021 calculation base: [Nota Informativa 30 marzo 2022](#)

December 2020 calculation base: [Nota Informativa 30 marzo 2021](#)

December 2019 calculation base: [Nota Informativa 31 marzo 2020](#)

December 2018 calculation base: [Nota Informativa 29 marzo 2019](#)

The new base 2015=100: [Nota Informativa 29 marzo 2018](#)

December 2016 calculation base: [Nota Informativa 31 marzo 2017](#)

The new base 2010=100: [Nota Informativa 7 marzo 2013](#)

Fixed base chain-linking changeover: [Nota Informativa 3 marzo 2011](#)

¹ Frame-SBS is a statistical register of annual economic variables of all active enterprises included in the ASIA-Enterprises business register.

Construction producer prices

Introduction and legal framework

Istat compiles and disseminates Construction Producer prices as a system of secondary statistics. Within NACE Division F 41 and F 42, indices concern Groups 41.2 (Construction of residential and non-residential buildings) and 42.1 (Construction of roads and railways). The former Group is detailed through two sub-aggregates: Construction of residential building and Construction of non-residential buildings. The latter Group has a breakdown in two Classes: 42.11 (Construction of roads and motorways) and 42.13 (Construction of bridges and tunnels).

Construction producer price indices are a measure of the monthly prices dynamics of i) new residential and non-residential building and ii) roads. Price indices refer to buildings/road constructions sold by the contractor to the client. The contractor is the enterprise that took the initiative for the construction work; the client is the enterprise for whom the new building/road has been constructed.

The legal basis for the STS indicators are the Regulation (EU) 2019/2152 of the European Parliament and of the Council on European business statistics, repealing 10 legal acts in the field of business statistics (EBS-Regulation) and the Commission Implementing Regulation 2020/1197 laying down technical specifications and arrangements pursuant to Regulation (EU) 2019/2152 (General Implementing Act).

Main index of producer price in construction purposes are:

- ✓ providing short-term measure of the inflationary dynamics in new building/road construction;
- ✓ comparative analyses among different countries in construction output price indices;
- ✓ deflating production in construction;
- ✓ construction contracts updating.

Observation field, object and index purposes

Producer price index in construction focuses the attention on the evolution of prices in the construction activity as this one is defined in the Division F41 and F42 of NACE Rev.2. For this reason, these output price indices consider the point of view of the contractor.

While a construction cost index measures the relationships between costs at a constant technology and input mix, a producer price measures movements in prices charged to client of construction work. Producer price index, in fact, includes changes in contractor's margins.

It is the object of a producer price index in construction to show the evolution of prices received by the contractor (construction enterprise) to sell the construction work to the client i.e. the enterprise who gave the building/road commitment. Therefore, the producer price is the output price paid by the client: VAT, land, architect's fees and the client's profit margins are excluded because the client is not the final owner of the new building/road.

Index compilation

Technically, producer price index in constructions is made up of three components: direct costs (construction costs), overheads and contractors' mark-up. This frame is the weightings system of producer prices in constructions. Direct costs and overheads are lists of items to whom a set of appropriate price indices are referred to.

Direct costs dynamic is provided by a set of industrial producer price indices. Overheads dynamic derives from a set of producer price indices in services. A price measure of contractor's profit margin is defined as a deflator. This one is the ratio between a value index (supply and use gross operating margin) and a quantity index (production in construction index).

Monthly, average arithmetic means of items' prices and items' weights provide a set of sub-aggregates and aggregates producer price indices in building/road construction.

Indices base period is the month of December of the preceding year. Indices are disseminated through the Laspeyres chain-linking formula.

As producer price indices in construction are built up by processing a set of indices derived by monthly and quarterly price indicators, no statistical burden on respondents occurs (and, therefore, no data collection operations are carried out).

These indices are compiled and released at national level, since 2010.

Weights

Construction producer price index weightings are derived from a set of coherent data sources. National accounts, structural business statistics, building permits and, at detailed level, direct cost items are listed according to construction projects for residential building, non-residential building and roads. These technical projects are provided by the Universities of Cassino and Rome Civil engineering department and from the national agency for roads.

National accounts provide gross value of production as it derives from the Supply and use table, branches F41 and F42. This value is detailing into 260 items: 177 refer to intermediate consumptions of goods, 79 intermediate consumptions of services. Further, labour cost, consumption of fixed capital and net operating margin, each one concerning just an item. The (national accounts) gross value of production is processed in order to get a producer price frame according to the scheme provided in the manual *Methodology of short-term business statistics, interpretation and guidelines* (Eurostat, 2002). Direct costs sub aggregate weight (value) is given by the sum of all 177 items above mentioned plus values of labour costs and other taxes and subsidies on production. On its turn, overheads weight is defined by summing the 79 item values of services intermediate consumptions. At last, mark-up weight is given by the sum of consumption of fixed capital value and net operating margin value.

The Supply and use table of F41 value is processed through the SBS one (total production value of all enterprises whose main economic activity concerns NACE F41.2) to get the Group F41.2 weight. Analogously, by processing Supply and use table of F42 value by the SBS one (this time, the production value of all enterprises whose main economic activity concerns NACE F41.2) the Group F42.1 weight is defined. The next step is aimed to detail sub-aggregates weights in each of the above NACE Groups. To distinguish between Construction of residential building and Construction of non-residential building, the variable used is the total square meters' surface as it derives from the monthly Building permits survey. Finally, in the NACE Group F42.1 the distinction between Classes F42.11 and F42.13 is obtained by using the weightings structure as it is contained in the road construction project. This last allows to identify weights distinguishing between outdoor sections of road, F42.11, and the one of bridges and tunnels, F42.13.

Timeliness and revisions

Producer price indices in construction are monthly revised. Provisional data are released about 30 days after the end of the reference period. A second release concerns final data, after about 60 days from the end of the reference period. No other revisions are carried out.

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