

May 2023 – Q1 2023

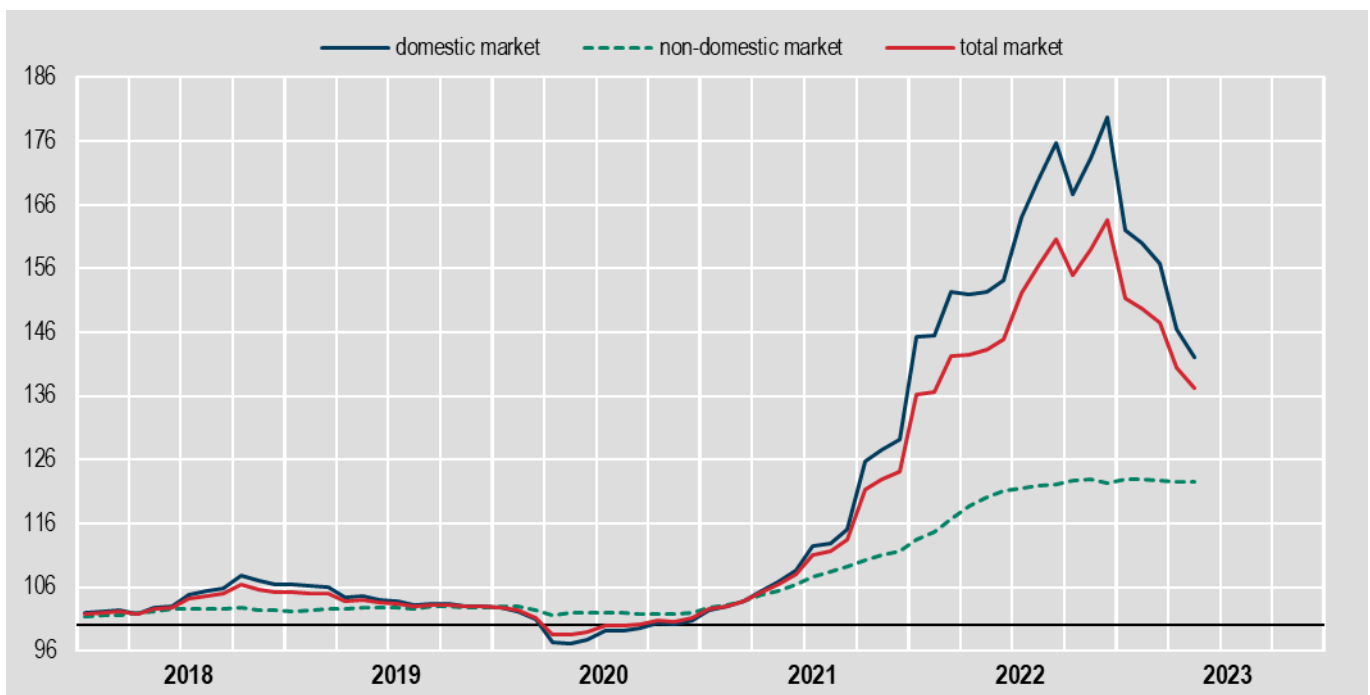
# INDUSTRIAL, CONSTRUCTION AND SERVICES PRODUCER PRICES

- In May 2023, compared with the previous month, industrial producer prices decreased by 2.3%. On domestic market, producer prices decreased by 3.1%, on non-domestic market they stayed unchanged.
- Over the last three months, compared to the previous three months, industrial producer prices decreased by 8.5% (-11.2% for the domestic market, -0.1% for the non-domestic market).
- In May 2023, compared with May 2022, industrial producer prices decreased by 4.3% (-6.8% on domestic market, +2.1% on foreign market).
- In May 2023 construction producer prices of Residential buildings and non-residential buildings increased by 0.1% on monthly basis and by 0.3% on annual basis. Construction producer prices of Roads and railways increased by 0.4% compared to the previous month and decreased by 0.4% on annual basis.
- Over the last three months, compared to the previous three months, construction producer prices increased by 0.4% for Residential buildings and non-residential buildings and decreased by 0.4% for Roads and railways.
- In the first quarter 2023 services producer prices increased by 0.6%, compared with the previous quarter, and by 3.6%, compared to the same quarter of the previous year. Air transport (+15.5%) recorded the highest increase on annual basis; the only decreases were registered in Telecommunications (-5.5%) and Sea and coastal water transport (-4.2%).

## Industrial Producer Prices

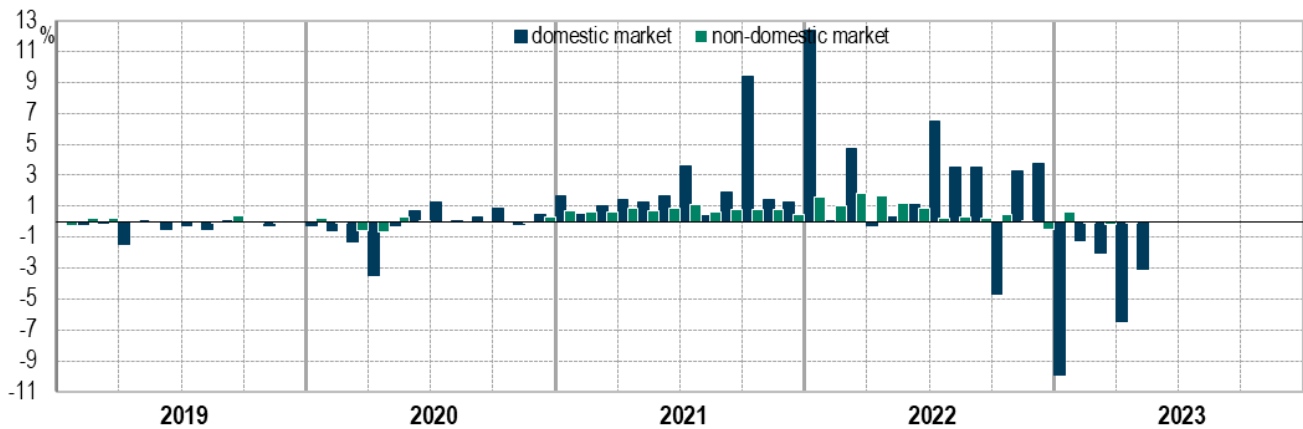
### CHART 1. INDUSTRIAL PRODUCER PRICES INDEX, TOTAL, DOMESTIC AND NON-DOMESTIC MARKET

January 2018 – May 2023 (index, 2015=100)



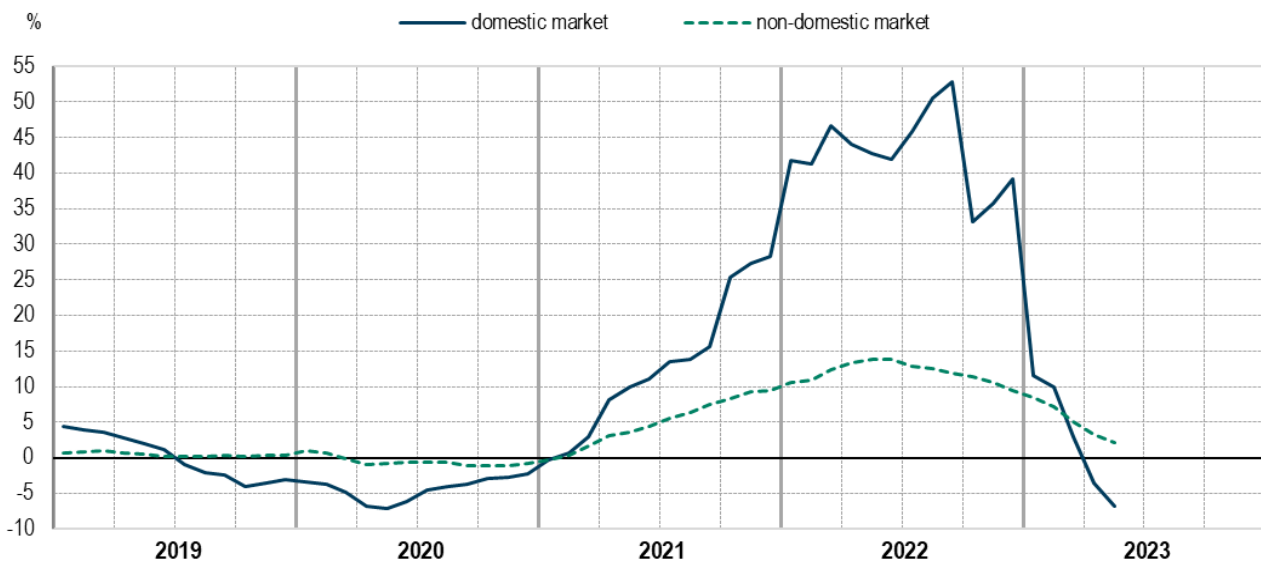
**CHART 2. INDUSTRIAL PRODUCER PRICES INDEX, MONTH ON PREVIOUS MONTH PERCENT CHANGES**

January 2019 – May 2023 (index, 2015=100)



**CHART 3. INDUSTRIAL PRODUCER PRICES INDEX, MONTH ON SAME MONTH A YEAR AGO PERCENT CHANGES**

January 2019 – May 2023 (index, 2015=100)



**TABLE 1. INDUSTRIAL PRODUCER PRICES INDEX**

May 2023 (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	
		May 23	Mar.-May 23	May 23	Jan.-May 23
		Apr. 23	Dec. 22-Feb. 23	May 22	Jan.-May 22
Total market	137.2	-2.3	-8.5	-4.3	+3.6
Domestic market	142.1	-3.1	-11.2	-6.8	+2.7
Non-domestic market	122.6	0.0	-0.1	+2.1	+5.2
Euro area	123.2	-0.2	-0.1	+1.3	+4.6
Non-euro area	122.3	+0.2	0.0	+2.7	+5.6

(a) Data are provisional and subject to revisions.

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

May 2023 (a), month on previous month and month on same month a year ago percent changes (index, 2015=100)

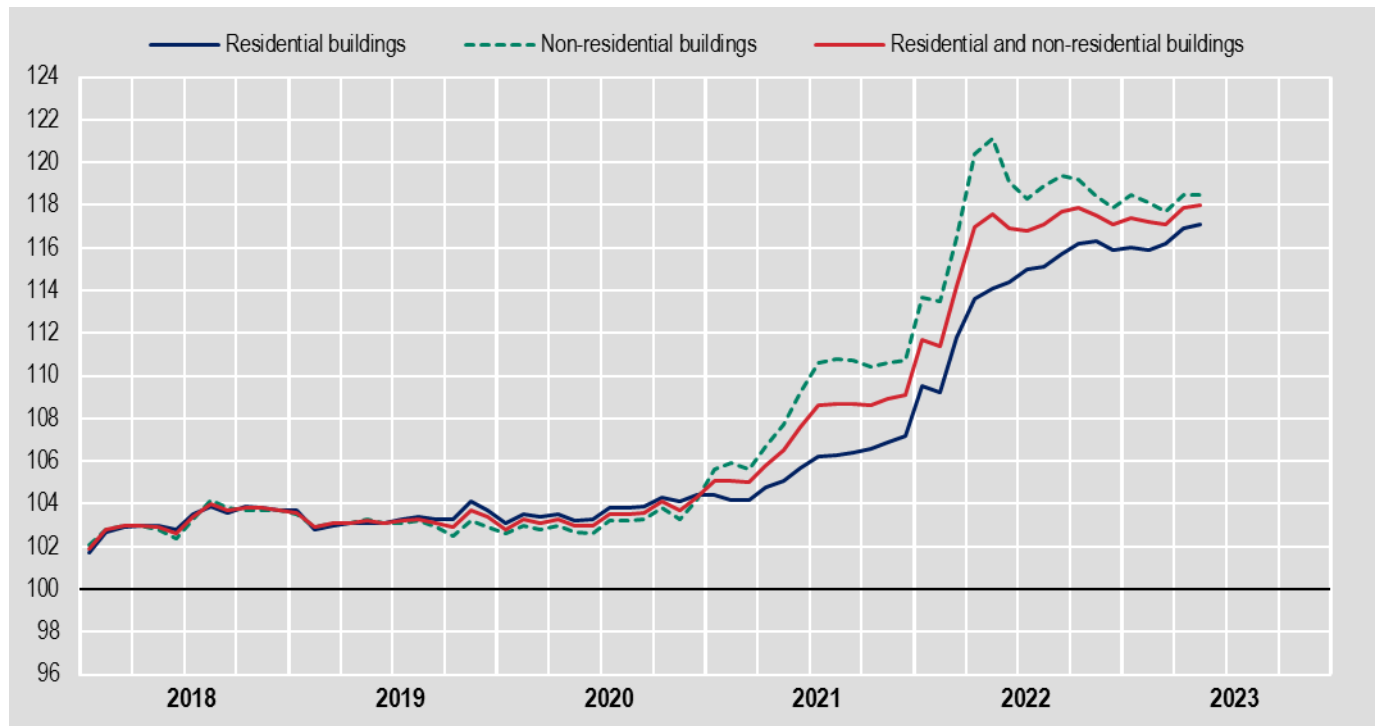
MAIN INDUSTRIAL GROUPINGS (MIG)	Total market		Domestic market		Non-domestic market Euro area		Non-domestic market Non-euro area	
	Month on previous month	Month on same month a year ago	Month on previous month	Month on same month a year ago	Month on previous month	Month on same month a year ago	Month on previous month	Month on same month a year ago
	May 23 Apr. 23	May 23 May 22	May 23 Apr. 23	May 23 May 22	May 23 Apr. 23	May 23 May 22	May 23 Apr. 23	May 23 May 22
Consumer goods	0.0	+7.2	-0.1	+7.8	-0.1	+6.2	+0.6	+5.7
Durable consumer goods	+0.7	+6.3	+0.6	+5.5	+0.7	+5.9	+0.7	+8.0
Non-durable consumer goods	-0.2	+7.4	-0.2	+8.3	-0.3	+6.3	+0.5	+4.7
Capital goods	+0.1	+4.7	-0.1	+4.0	+0.4	+4.9	0.0	+5.8
Intermediate goods	-0.7	-1.7	-1.0	-1.3	-0.7	-3.9	+0.3	-0.9
Energy	-7.7	-24.2	-7.8	-24.3	+1.0	-2.8	-3.9	-17.7
Total except MIG energy	-0.2	+2.8	-0.5	+2.8	-0.2	+1.5	+0.3	+3.6
<b>Total</b>	<b>-2.3</b>	<b>-4.3</b>	<b>-3.1</b>	<b>-6.8</b>	<b>-0.2</b>	<b>+1.3</b>	<b>+0.2</b>	<b>+2.7</b>

(a) Data are provisional and subject to revisions.

## Construction Producer Prices

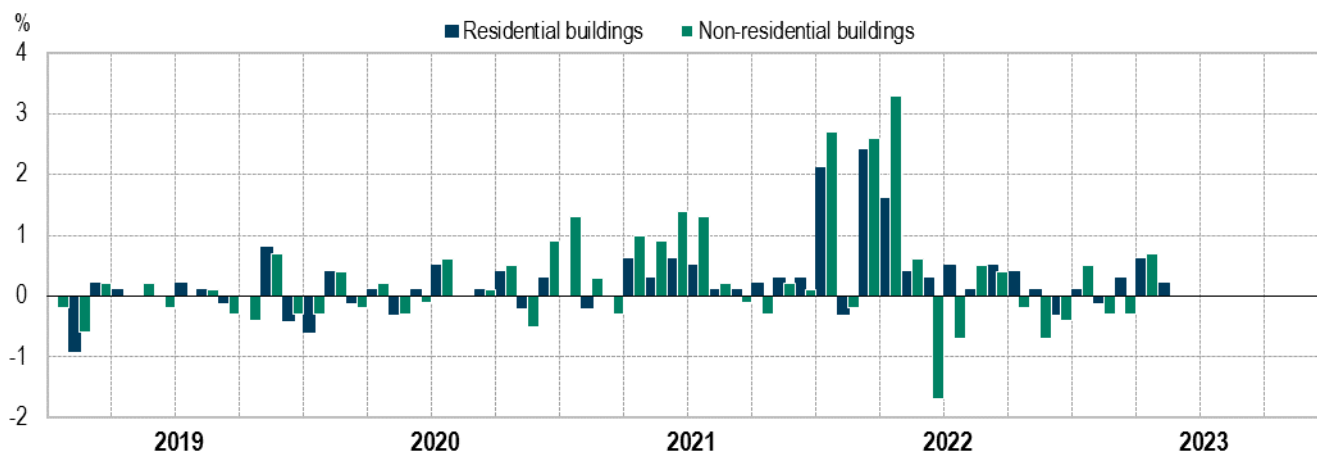
**CHART 4. CONSTRUCTION PRODUCER PRICE INDEX, BUILDINGS**

January 2018 – May 2023, (index, 2015=100)



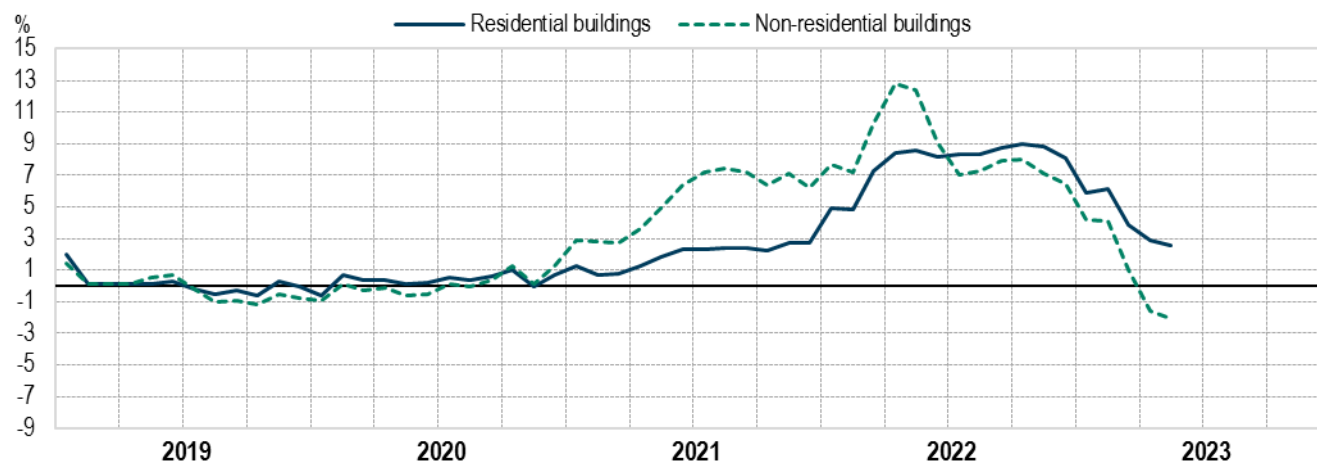
**CHART 5. CONSTRUCTION PRODUCER PRICE INDEX, BUILDINGS**

January 2019 – May 2023, month on previous month percent changes (index, 2015=100)



**CHART 6. CONSTRUCTION PRODUCER PRICE INDEX, BUILDINGS**

January 2019 – May 2023, month on same month a year ago percent changes (index, 2015=100)



**TABLE 3. CONSTRUCTION PRODUCER PRICE INDEX**

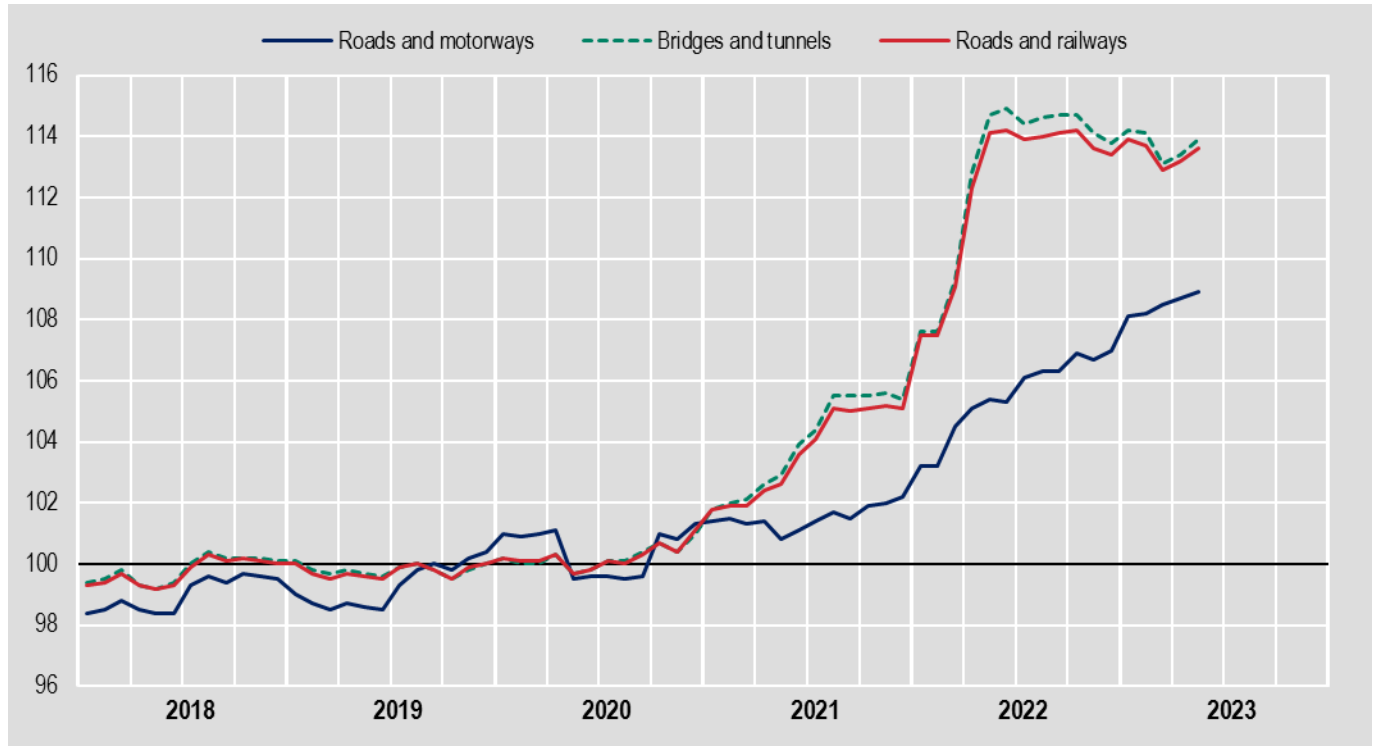
May 2023 (a), months on previous months and month on same month a year ago percent changes (index, 2015=100)

	Index	Months on previous months		Month on same month a year ago	
		May 23 Apr. 23	Mar.-May 23 Dec. 22-Feb. 23	May 23 May 22	Jan.-May 23 Jan.-May 22
<b>F.41.2 Residential buildings and non-residential buildings</b>	118.0	+0.1	+0.4	+0.3	+2.7
<i>Residential buildings</i>	117.1	+0.2	+0.7	+2.6	+4.3
<i>Non-residential buildings</i>	118.5	0.0	0.0	-2.1	+1.1
<b>F.42.1 Roads and railways</b>	113.6	+0.4	-0.4	-0.4	+3.1
<i>F.42.11 Roads and motorways</i>	108.9	+0.2	+0.8	+3.3	+4.0
<i>F.42.13 Bridges and tunnels</i>	113.9	+0.4	-0.4	-0.7	+3.0

(a) Data are provisional and subject to revisions

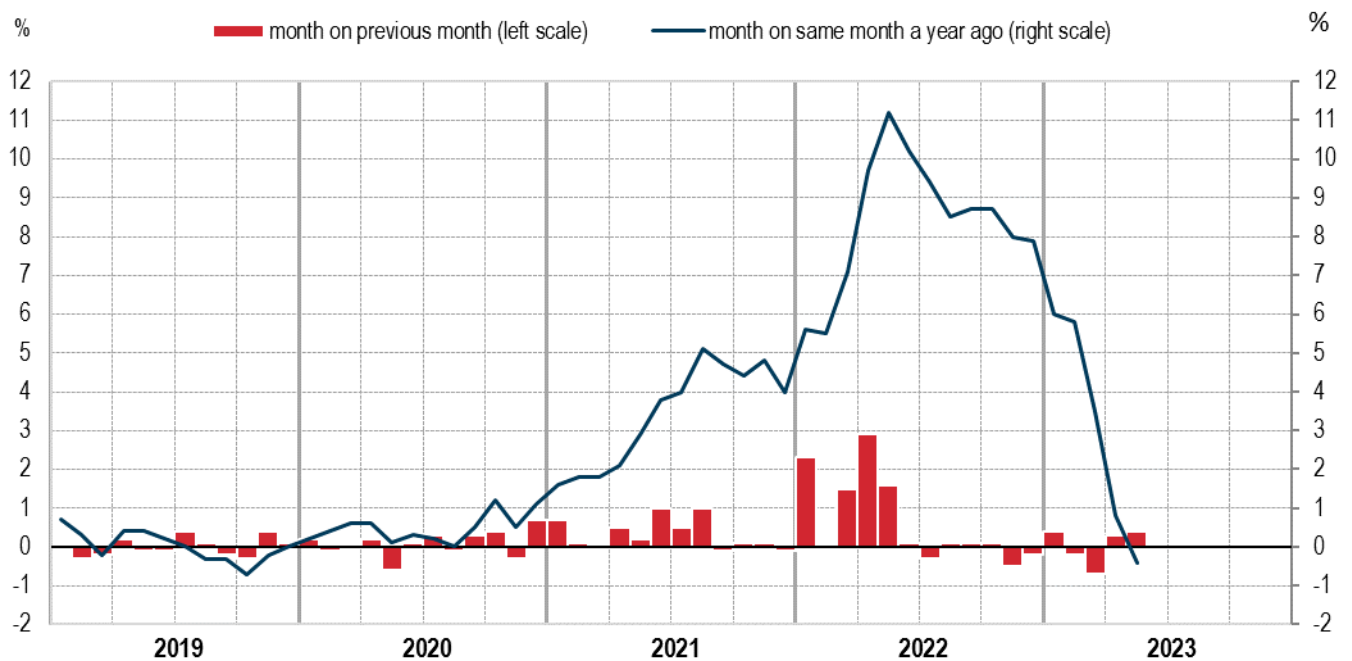
**CHART 7. CONSTRUCTION PRODUCER PRICE INDEX. ROADS AND RAILWAYS. ROADS AND MOTORWAYS. BRIDGES AND TUNNELS**

January 2018 – May 2023 (index, 2015=100)



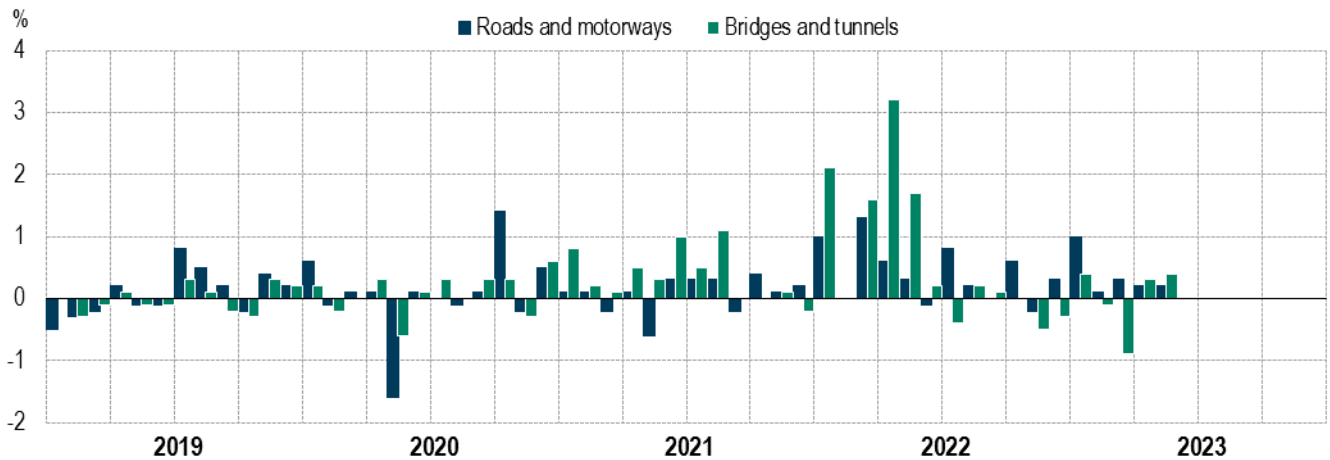
**CHART 8. CONSTRUCTION PRODUCER PRICE INDEX. ROADS AND RAILWAYS**

January 2019 – May 2023, month on previous month and month on same month a year ago percent changes (index, 2015=100)



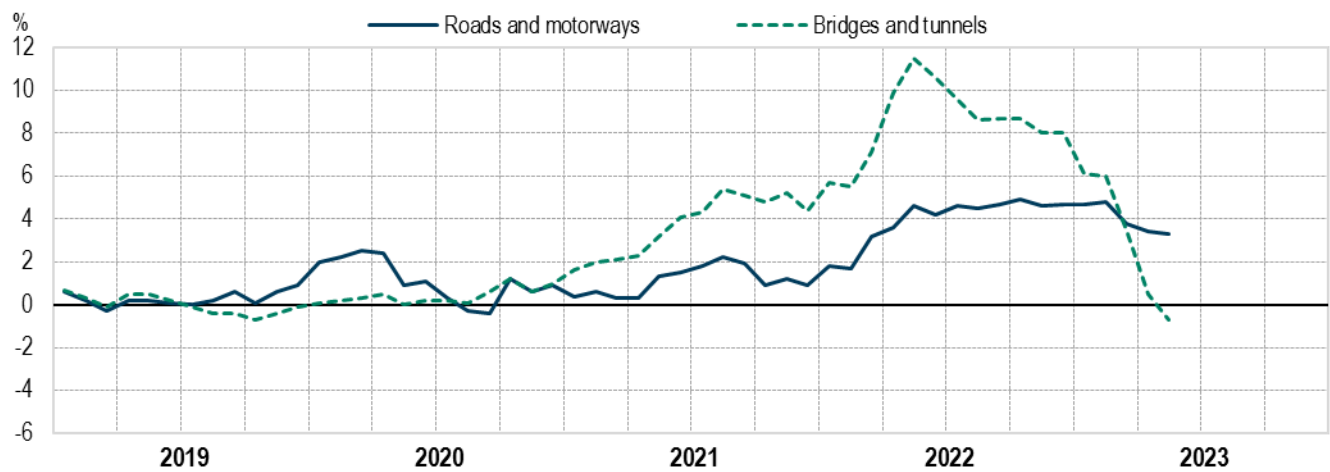
**CHART 9. CONSTRUCTION PRODUCER PRICE INDEX. ROADS AND MOTORWAYS. BRIDGES AND TUNNELS**

January 2019 – May 2023, month on previous month percent changes (index, 2015=100)



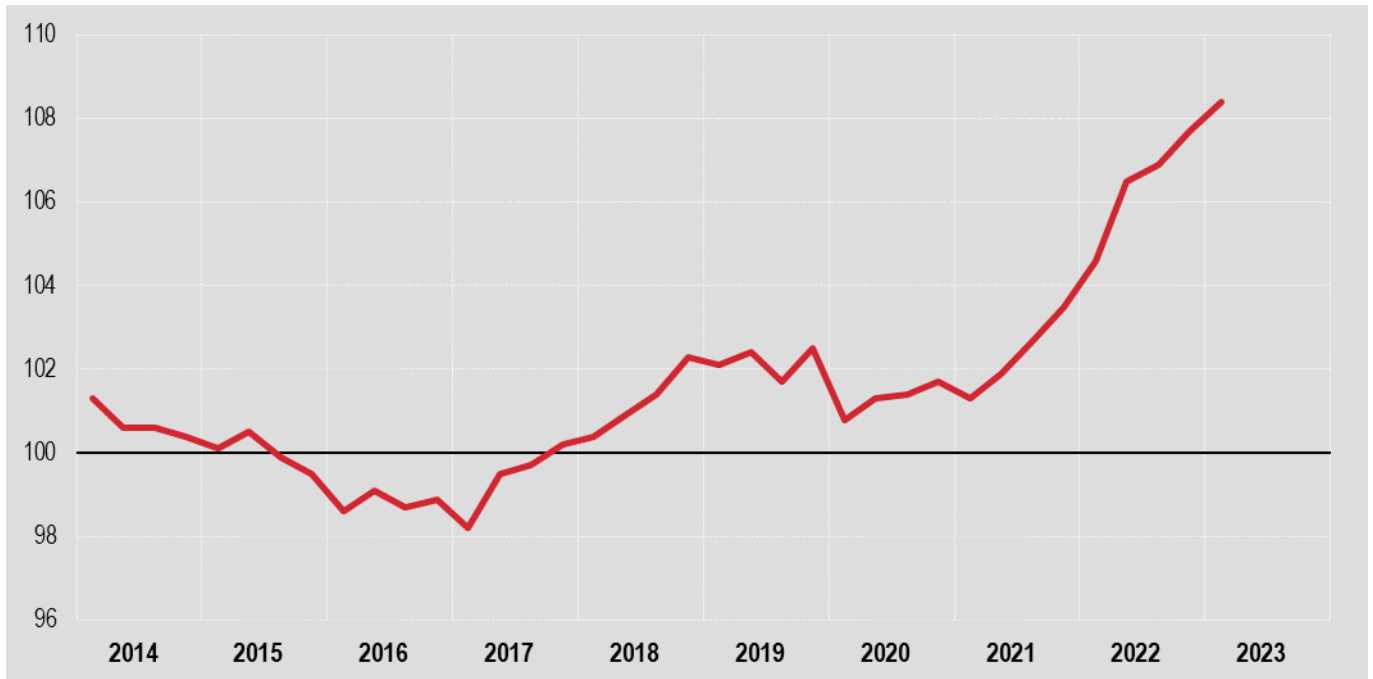
**CHART 10. CONSTRUCTION PRODUCER PRICE INDEX. ROADS AND MOTORWAYS. BRIDGES AND TUNNELS**

January 2019 – May 2023, month on same month a year ago percent changes (index, 2015=100)

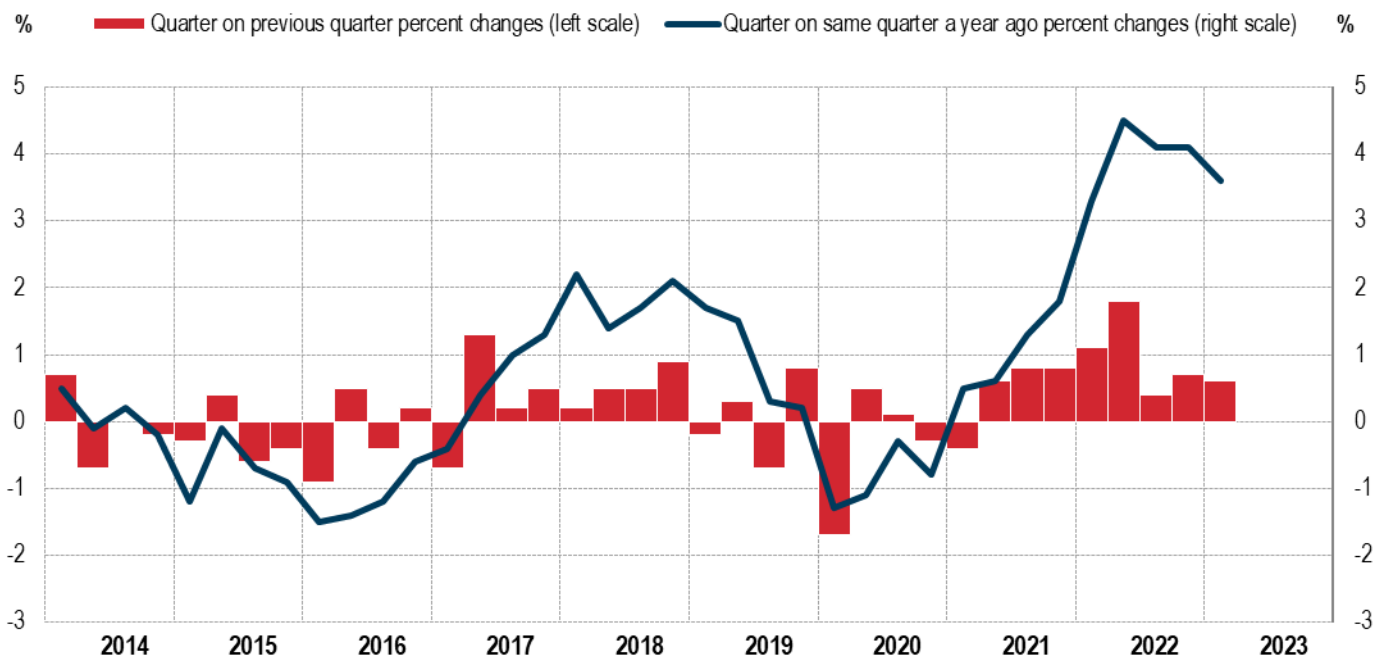


## Services producer prices

**CHART 11. SERVICES PRODUCER PRICES. TOTAL INDEX**  
Q1 2014 – Q1 2023 (index, 2015=100)

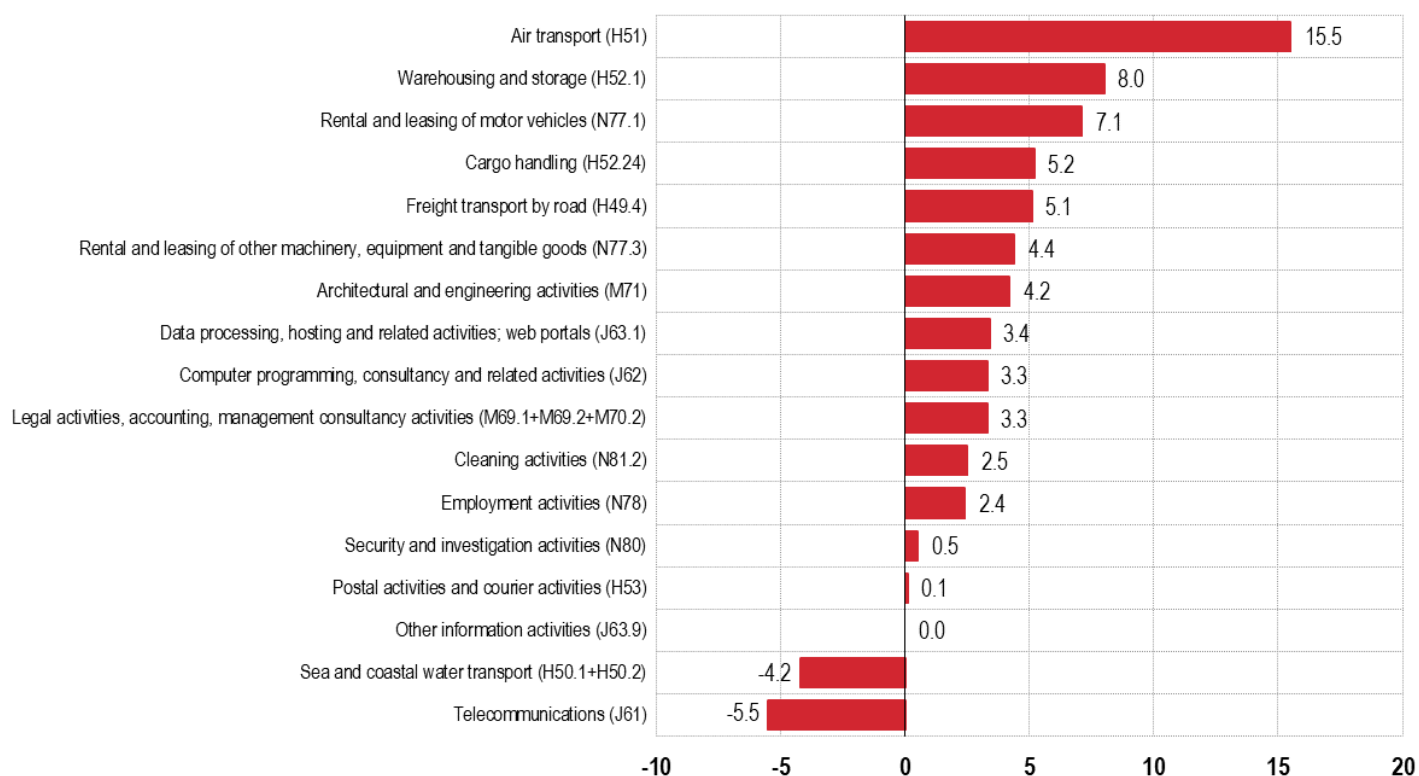


**CHART 12. SERVICES PRODUCER PRICES. QUARTER ON PREVIOUS QUARTER AND ON SAME QUARTER A YEAR AGO PERCENT CHANGES**  
Q1 2014 – Q1 2023 (index, 2015=100)



**CHART 13. SERVICES PRODUCER PRICES. YEAR-ON-YEAR GROWTH RATE BY ECONOMIC ACTIVITY**

Q1 2023, quarter on same quarter a year ago percent changes (index, 2015=100)



**TABLE 4. SERVICES PRODUCER PRICES. TOTAL INDEX**

Q1 2023, index, quarter on previous quarter and on same quarter a year ago percent changes (index, 2015=100)

Index	Quarter on previous quarter	Quarter on same quarter a year ago
	Q1 2023 Q4 2022	Q1 2023 Q1 2022
<b>Total index</b>	<b>108.4</b>	<b>+0.6</b>



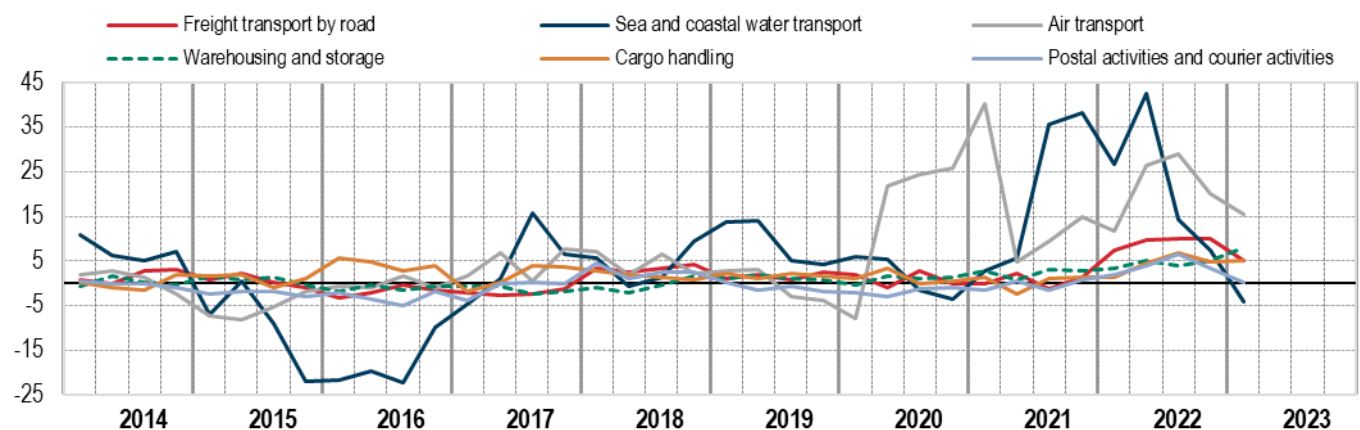
**TABLE 5. TRANSPORTATION AND RELATED SUPPORT SERVICES PRODUCER PRICES**

Q1 2023, index, quarter on previous quarter and on same quarter a year ago percent changes (index, 2015=100)

ECONOMIC ACTIVITIES	Q1 2023	Quarter on previous quarter	Quarter on same quarter a year ago
		Q1 2023	Q1 2023
		Q4 2022	Q1 2022
H49.4 Freight transport by road	113.4	-1.0	+5.1
H50.1 + H50.2 Sea and coastal water transport	128.9	-8.3	-4.2
H51 Air transport	184.6	+0.1	+15.5
- H51.1 Air passenger transport	131.2	+1.1	+19.2
- H51.2 Freight air transport	235.9	-6.5	-4.6
H52.1 Warehousing and storage	111.7	+3.4	+8.0
H52.24 Cargo handling	119.1	+1.2	+5.2
H53 Postal activities and courier activities	97.7	-2.0	+0.1

**CHART 14. TRANSPORTATION AND RELATED SUPPORT SERVICES PRODUCER PRICES. QUARTER ON SAME QUARTER A YEAR AGO PERCENT CHANGES**

Q1 2014 – Q1 2023 (index, 2015=100)



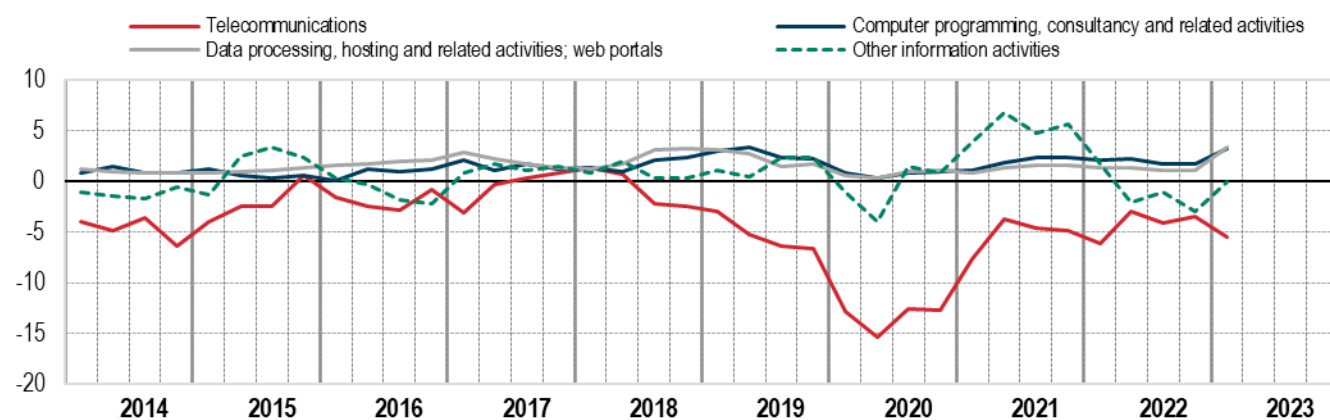
**TABLE 6. INFORMATION AND COMMUNICATIONS SERVICES PRODUCER PRICES**

Q1 2023, index, quarter on previous quarter and on same quarter a year ago percent changes (index, 2015=100)

ECONOMIC ACTIVITIES	Q1 2023	Quarter on previous quarter	Quarter on same quarter a year ago
		Q1 2023	Q1 2023
		Q4 2022	Q1 2022
J61 Telecommunications	66.9	-8.1	-5.5
- J61.1 Wired telecommunications	79.9	-9.9	-7.0
- J61.2 Wireless telecommunications	52.6	-3.0	-0.6
J62 Computer programming, consultancy and related activities	114.7	+1.7	+3.3
J63.1 Data processing, hosting and related activities; web portals	115.3	+1.9	+3.4
J63.9 Other information activities	105.7	-0.2	0.0

**CHART 15. INFORMATION AND COMMUNICATIONS SERVICES PRODUCER PRICES. QUARTER ON SAME QUARTER A YEAR AGO PERCENT CHANGES**

Q1 2014 – Q1 2023 (index, 2015=100)



**TABLE 7. PROFESSIONAL SCIENTIFIC AND TECHNICAL SERVICES PRODUCER PRICES**

Q1 2023, index, quarter on previous quarter and on same quarter a year ago percent changes (index, 2015=100)

ECONOMIC ACTIVITIES	Q1 2023	Quarter on previous quarter	Quarter on same quarter a year ago
		Q1 2023 Q4 2022	Q1 2023 Q1 2022
M69.1+M69.2+M70.2 Legal activities, accounting, management consultancy activities	107.1	+2.1	+3.3
M71 Architectural and engineering activities	110.9	+2.3	+4.2

**CHART 16. PROFESSIONAL, SCIENTIFIC AND TECHNICAL SERVICES PRODUCER PRICES. QUARTER ON SAME QUARTER A YEAR AGO PERCENT CHANGES**

Q1 2014 – Q1 2023 (index, 2015=100)



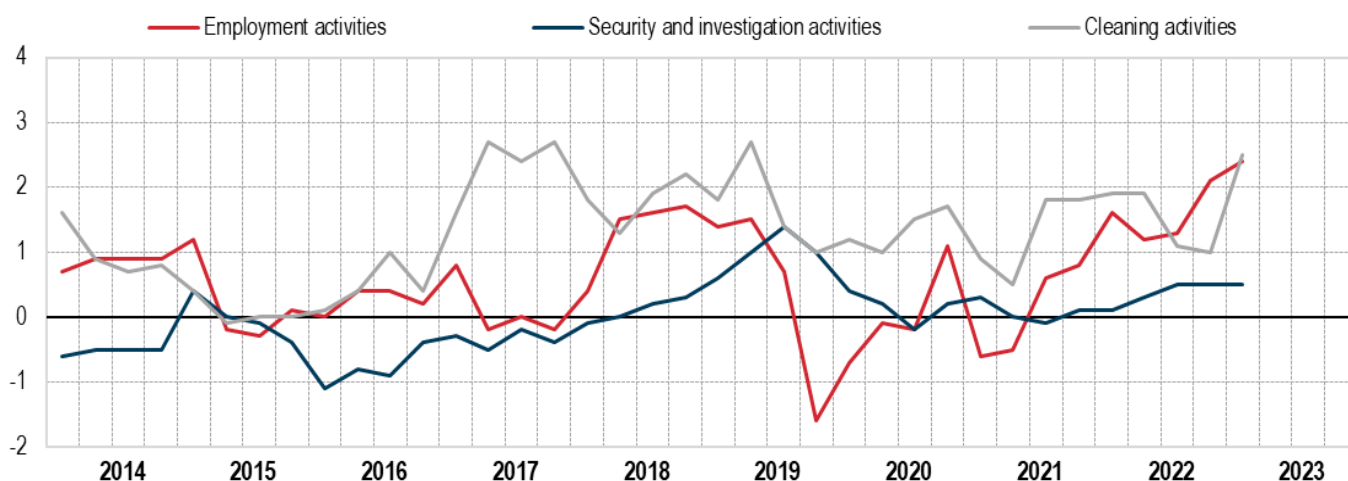
**TABLE 8. SUPPORT SERVICES TO ENTERPRISES PRODUCER PRICES**

Q1 2023, index, quarter on previous quarter and on same quarter a year ago percent changes (index, 2015=100)

ECONOMIC ACTIVITIES		Q1 2023	Quarter on previous quarter	Quarter on same quarter a year ago
			Q1 2023 Q4 2022	Q1 2023 Q1 2022
N77.1	Rental and leasing of motor vehicles	117.5	+3.7	+7.1
N77.3	Rental and leasing of other machinery, equipment and tangible goods	108.6	-0.7	+4.4
N78	Employment activities	105.5	+0.9	+2.4
N80	Security and investigation activities	100.8	0.0	+0.5
N81.2	Cleaning activities	112.6	+0.8	+2.5

**CHART 17. SUPPORT SERVICES TO ENTERPRISES PRODUCER PRICES. QUARTER ON SAME QUARTER A YEAR AGO PERCENT CHANGES**

Q1 2014 – Q1 2023 (index, 2015=100)



**TABLE 9. INDUSTRIAL PRODUCER PRICES INDEX**

April 2023, 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	0.0

**TABLE 10. CONSTRUCTION PRODUCER PRICE INDEX**

April 2023, 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
+0.5	+0.5	+0.6	+0.6	+0.4	+0.3	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1

**TABLE 11. SERVICES PRODUCER PRICE INDEX**

Q4 2022, revisions of percentage changes, differences in percentage points (index, 2015=100)

Total	
Quarter-on-quarter change	Year-on-year change
0.0	+0.5

## 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. Just over 1.790 products are surveyed from a sample of about 6.600 industrial enterprises providing about 21.700 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 for 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 for 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 making a rotation plan for reducing the statistical burden on enterprises without damaging the need and the collection of statistical information.

Table A summarizes the composition enterprises/products/prices of the index base period December 2022.

**Table A. INDUSTRIAL PRODUCER PRICES.** Sample size of products, enterprises and prices December 2022 calculation base

UNIT	Total market	Domestic market	Non domestic market	Non domestic market	
				euro area	non-euro area
Products	1,793	1,323	1,127	877	825
Enterprises	6,583	4,482	3,126	2,035	1,842
Prices	21,662	12,682	8,940	4,704	4,236

## 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 being 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 2023, 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 2022. 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 2022).

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*<sup>1</sup> 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 to the year 2020, 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 2021.

## 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](http://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](#). The series are also published on [IstatData](#), the new Istat's data dissemination platform that will gradually replace the I.Stat data access system. Until the data transfer is completed, the two systems will coexist.

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 2022 calculation base: [Nota informativa 30 marzo 2023](#)

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](#)

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<sup>1</sup> 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 construction cost index measures the relationships between costs at a constant technology and input mix, producer price measures movements in prices charged to client of construction work. Producer price index, in fact, includes changes in contractor's margins.

The purpose of a producer price index in construction is to show the evolution of prices received by the contractor (construction enterprise) in the sale of construction work to the customer 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 identifying 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.

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](http://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](#). The series are also published on [IstatData](#), the new Istat's data dissemination platform that will gradually replace the I.Stat data access system. Until the data transfer is completed, the two systems will coexist.

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

## Services producer prices

### Introduction and legal framework

Services producer prices statistics derive from the quarterly survey of services producer prices. Services producer price indices measure the quarterly changes of prices of services sold by enterprises to other enterprises and/or Government. They are *business-to-business* (BtoB) prices. The methodology, the breakdown and the release frequency are defined by the Regulation No. 1158/05 of the European Parliament and of the Council.

Starting from January 1, 2021, 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). In accordance with the transitional arrangements provided for by the Regulation (EU) 2020/1197, services producer price indices continue to be calculated with reference to the domain of *business-to-business* transactions.

The survey is included in the Italian National Statistical Programme. It is a sample survey; the survey unit is the enterprise, having its residence in Italy. The list of the economic units belonging to the reference population, used for selecting the sample, is the Business Register. The variables of interest are the *business-to-business* prices and the annual turnover achieved with the sale of services, object of the survey. The definition adopted for the price follows the Commission Regulation (EC) No 1503/2006.

Table B shows the list of the economic activities and the corresponding services producer price indices compiled.

**Table B.** Producer prices indices for services

<b>NACE Code</b>	<b>Economic activity</b>	<b>Notes</b>
H49.4	Freight transport by road and removal services	
H50.1 + H50.2	Sea and coastal water transport	<i>Contains:</i> H50.1 Sea and coastal passenger water transport; H50.2 Sea and coastal freight water transport
H51	Air transport	<i>Contains:</i> H51.1 - Passenger air transport; H51.2 - Freight air transport
H52.1	Warehousing and storage	
H52.24	Cargo handling	
H53	Postal and courier activities	<i>Contains:</i> H53.1 Postal activities under universal service obligation; H53.2 Other postal and courier activities
J61	Telecommunications	<i>Contains:</i> J61.1 Wired telecommunications; J61.2 Wireless telecommunications
J62	Computer programming, consultancy and related activities	
J63.1	Data processing, hosting and related activities; web portals	
J63.9	Other information activities	
M69.1+M69.2+M70.2	Management consultancy activities	
M71	Architectural and engineering activities; technical testing and analysis	
M73	Advertising and market research <sup>2</sup>	
N77.1	Rental and leasing of motor vehicles <sup>3</sup>	<i>Contains:</i> N77.11 Rental and leasing of cars and light motor vehicles; N77.12 Rental and leasing of trucks
N77.3	Rental and leasing of other machinery, equipment and tangible goods <sup>4</sup>	<i>Contains:</i> N77.32 Rental and leasing of construction and civil engineering machinery and equipment; N77.33 Rental and leasing of office machinery and equipment (including computers)
N78	Employment activities	
N80	Security and investigation activities	
N81.2	Cleaning activities	

<sup>2</sup> Advertising producer price index does not contribute to the calculation of the total index. It is not released because, with the change in the data collection methodology, its seasonal adjustment will have to be verified.

<sup>3</sup> This index contributes to the calculation of the total index from the first quarter of 2021.

<sup>4</sup> This index contributes to the calculation of the total index from the first quarter of 2022.

In addition, a total SPPI is calculated too. It is aimed to analyse the whole dynamic of services producer prices. Technically, the total index is a weighted arithmetic mean of all the SPPIs individually compiled.

SPPIs are produced according to the methodology of the annual chain-linking on a quarterly base. Therefore, the quarterly index of the current year is calculated using the fourth quarter of the previous year as index base. Since the first quarter of 2018, producer price indices for services are released in the reference period 2015=100.

Producer prices indices for services:

- ✓ measure the short term producer price inflation;
- ✓ are important for analysing the process of fixing costs and prices in the whole economy;
- ✓ are essential for cleaning the service turnover indicators from price evolution component;
- ✓ are used for deflation of some national monetary aggregates;
- ✓ are used for comparative analysis among different countries.

## Methodology: common and specific features

A general methodological framework is common to all SPPIs. Nevertheless, each service industry is characterized by its own methodology tailored on the typical services aspects.

### 1. Common features

- ▶ The definition of the service producer price: it is the basic price that excludes VAT and similar deductible taxes directly linked to turnover as well as all duties and taxes on the goods and services invoiced by the unit, whereas subsidies on products received by the producer, if there are any, should be added.
- ▶ The survey unit is the enterprise resident in Italy. It provides its services to other enterprises and/or to Government, both within and outside the national territory<sup>5</sup>. The survey units are identified by the Business register where enterprises are classified according to their main economic activity<sup>6</sup>.
- ▶ Data collection occurs quarterly through electronic questionnaires filled in by each respondent and available on the Istat website.
- ▶ Data checks are carried out by an ad hoc software. Follow up contacts are undertaken too, both to prevent missing responses and to validate data.
- ▶ Producer prices indices for services are chain-linked Laspeyres-type indices. Their base period is the fourth quarter of the previous year. All indices are calculated and released at national level. Sector indices are produced by aggregating sub-sector indices, which are grouped by weighted arithmetic means. Weights, the lists of respondents and the basket of services are annually updated.

### 2. Specific features

#### H49.4 – Freight transport by road producer prices

- ▶ observation field: the basket refers to four classes of services
  - (i) full truckloads; (ii) less than truckloads/*groupages*<sup>7</sup>; (iii) part truckloads/*groupages*; (iv) general cargo services and courier services<sup>8</sup>. Each of the four classes of services is split into national and international destinations. Respondents are asked to identify the main representative services of their activities within these classes;

<sup>5</sup> A unit has its centre of economic interest in one specific country if it is engaged, or intend to be, in activities and transactions on a large scale, in the country considered, for at least one year.

<sup>6</sup> For example, the following are excluded: (i) for the maritime transport sector, the shippers that provide non-relevant services, such as transport on cruise ships, off-shore, tugboats; (ii) for air transport, the air carriers providing charter services, air taxis, helicopters, companies without routes that interest the Italian territory; (iii) for warehousing, the units that perform the service for themselves and those who exclusively perform outsourcing (warehousing for others); (iv) for cargo handling, the companies that exclusively perform portage and those specialised in administrative-documentary activity; (v) for freight transport by road: moving services, transport of logs within forests as part of tree-cutting activity, the distribution of water via lorries, waste collection and transport, terminal management for transportation of goods, packing services for transport, postal and courier activities (limited to goods up to 20 kg and up to 31.5 kg for transnational shipments); (vi) for rental of motor vehicles, financial leasing; (vii) for rental of construction and civil engineering machinery and equipment, operated equipment rental services.

<sup>7</sup> *Groupage* means a transport of goods in which packages of different senders are mixed in a single shipment, addressed to different receivers located in the same geographic area, usually region or country.

<sup>8</sup> Relative to shipments of more than 20 kg and 31.5 kg for transnational shipments. Shipments of less than 20 kg and transnational ones of less

- ▶ price: each enterprise gives the average unit value<sup>9</sup> of every service;
- ▶ sample of enterprises: a stratified sample with PPS (Probability Proportional to Size) selection of units from each stratum is used.

### **H50 - Sea and coastal water transport producer prices**

- ▶ observation field: two baskets of services
  - (i) the basket for shipping companies (ship owners) includes scheduled transport services (liner shipping). Prices and weights (turnover) are collected for both goods and passengers<sup>10</sup>;
  - (ii) the basket for shipbrokers (intermediaries) concerns ship rental services for freight transport in the tramp shipping market, divided into time charter and spot market. The index field includes, both for time charter and spot market, the container ship rental services which is added to ship rental services for transport of liquid and solid bulk goods;
- ▶ price: average unit values<sup>11</sup> are collected for liner shipping; actual transaction prices are collected for ship rental services;
- ▶ sample of enterprises: units are selected by a *cut-off* method.

### **H51 - Air transport producer prices**

- ▶ observation field: two baskets of services
  - (i) transport of goods: the basket contains three types of goods by classes of weight and three destinations (national, international, intercontinental);
  - (ii) transport of passengers: the basket consists of three destination areas (national, international, intercontinental);
- ▶ price: freight transports prices are measured as average unit values of the most important flight routes. Passenger transports prices are measured as average prices according to the most important contracts drawn up with other enterprises and/or Government;
- ▶ sample of enterprises: units are selected by a *cut-off* method.

### **H52.1 - Warehousing and storage services producer prices**

- ▶ observation field: services for various product sectors (automotive; clothing, footwear and accessories; publishing; technical consumer goods; pharmaceutical; mass market goods; furniture and furnishings; industrial products; bulk liquids or gases; cereals; other goods), identified by the enterprises according to their main contracts in terms of turnover. Warehousing of goods, handling of goods as well as value added services are collected;
- ▶ price: the average unit value<sup>12</sup> of each service is collected;
- ▶ sample of enterprises: units are selected by a *cut-off* method.

### **H52.24 – Cargo handling services producer prices**

- ▶ observation field: three baskets of services corresponding to three distinct sub-sectors
  - (i) air cargo handling: includes both the handling warehousing services and the ramp-handling services;
  - (ii) sea cargo handling: includes four types of cargos in import/export/transshipment;
  - (iii) railway cargo handling: includes two types of cargos by type of carrier;

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than 31.5 kg are collected by the 'Courier producer prices survey' aimed at the production of the corresponding price index.

<sup>9</sup> Ratio between quarterly turnover and the volume of goods transported.

<sup>10</sup> The transport of passengers, within the meaning of business-to-business transport, is defined as transport of the drivers who accompany, during the voyage on a ship, their own trucks.

<sup>11</sup> Ratio between the value of the freights effectively collected and the relative transported volume.

<sup>12</sup> Ratio between quarterly turnover earned and the total volume of service offered.

- ▶ price: average unit values<sup>13</sup> are collected;
- ▶ sample of enterprises: air and sea cargo handling are based on a two stage sampling; railway cargo handling is based on a judgmental sampling.

#### **H53.1 - Postal activities under service obligation producer prices**

- ▶ observation field: the most representative business postal services under universal service obligation;
- ▶ price: the average unit value<sup>14</sup> is collected for each service and enterprise;
- ▶ sample of enterprises: units are selected by a *cut-off* method.

#### **H53.2 - Courier activities producer prices**

- ▶ observation field: shipments weighting less than 20 kg and 31.5 kg for transnational ones<sup>15</sup> by weight class and delivery area;
- ▶ price: average unit price of each class of shipment and each enterprise;
- ▶ sample of enterprises: units are selected by a *cut-off* method.

#### **J61 - Telecommunications services producer prices**

- ▶ observation field: two baskets of services, respectively for wired and wireless telecommunications. Services are organized in homogeneous classes that cover the whole telecommunication BtoB market;
- ▶ price: average unit value for each service class and each enterprise are collected;
- ▶ sample of enterprises: units are selected by a *cut-off* method.

#### **M71 - Architectural and engineering activities producer prices**

- ▶ observation field: the representative projects of each company's market. They refer to design/execution; legal advice; advisory services; collaborations with other professional firms; topographic surveys and other activities<sup>16</sup>;
- ▶ price: model pricing<sup>17</sup>;
- ▶ sample of enterprises: a stratified sample with PPS (Probability Proportional to Size) selection of units from each stratum is used.

#### **M73 - Advertising and marketing research producer prices**

- ▶ observation field: services of intermediation and sales of advertising spaces on the media (television, radio, press, web);
- ▶ price: actual transaction prices for each services are collected;
- ▶ sample of enterprises: a stratified sample with PPS (Probability Proportional to Size) selection of units from each stratum is used.

#### **N77.11 - Rental and leasing of cars and light motor vehicles producer prices**

- ▶ observation field: services rental and operational leasing of passenger cars and other light motor vehicles (with a weight less than 3.5 tons) without driver, broken down by rent or leasing duration (short, medium and long term);

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<sup>13</sup> Ratio between the quarterly turnover earned and the total volume of the service offered.

<sup>14</sup> Ratio between turnover earned for the provision of each service and the corresponding sales volumes.

<sup>15</sup> Shipments weighting more than 20 kg and 31.5 kg for transnational ones are monitored by the 'Freight transport by road producer prices survey' for the purpose of production of the corresponding price index.

<sup>16</sup> Computer engineering and telecommunications services are excluded.

<sup>17</sup> *Model pricing*: price estimate of a standardised service whose specifications remain constant over time.

- ▶ price: prices derived from model contract (individual or fleet) are collected;
- ▶ sample of enterprises: units are selected by a *cut-off* method.

#### **N77.12 - Rental and leasing of trucks producer prices**

- ▶ observation field: services rental and operational leasing of trucks (with a weight not less than 3.5 tons) without driver, broken down by rent or leasing duration (short and long term);
- ▶ price: prices derived from model contract (individual or fleet) are collected;
- ▶ sample of enterprises: units are selected by a *cut-off* method.

#### **N77.32 - Rental and leasing of construction and civil engineering machinery and equipment producer prices**

- ▶ observation field: services rental and operational leasing, without operator, of the following types of machines and equipment are covered: earthmoving; compaction and cutting; lifting; aerial platforms; scaffolding, without assembly and dismantling operations; machines and equipment for energy generation, lighting, temperature control; prefabricated/barracks, without assembly and dismantling operations (base camps); equipment for demolition and renovation; other construction machinery and equipment;
- ▶ price: actual transaction prices;
- ▶ sample of enterprises: units are selected by a *cut-off* method.

#### **N77.33 - Rental and leasing of office machinery and equipment (including computers) producer prices**

- ▶ observation field: services rental and operational leasing of office machinery and equipment, divided into the two main categories of rental of machinery and equipment (printers, copiers, desktop PCs, notebooks, servers, projectors, etc.) and rental of furniture (seats, desks, storage units, etc.);
- ▶ price: actual transaction prices;
- ▶ sample of enterprises: units are selected by a *cut-off* method.

#### **N78 – Employment activities producer prices**

- ▶ observation field: activities of temporary and permanent work supply by activity sector (agriculture, food, industrial production, construction, trade, transport etc.) and type of employee (senior executive, employee, etc.);
- ▶ price: average prices per hour worked for each class and enterprise;
- ▶ sample of enterprises: units are selected by a *cut-off* method.

#### **N80 – Security and investigation activities producer price**

- ▶ observation field: different types of security and investigation activities are covered: transport and stockpile of valuables; safety deposit and counting of money; permanent armed surveillance; robbery and shoplifting supervision; surveillance and street patrolling of sites; unarmed surveillance; security and control in public transport; tele-monitoring and remote control; business investigation, etc. Services are grouped by three types of users (public administration agencies; banks and big enterprises; medium and small enterprises);
- ▶ price: average unit values<sup>18</sup>;
- ▶ sample of enterprises: units are selected by a stratified sampling with PPS (*Probability Proportional to Size*) selection of units from each stratum.

<sup>18</sup> Ratio between quarterly turnover earned and the total volume of service provided.

**J62 – Computer programming, consultancy and related activities**

**J63.1 – Data processing, hosting and related activities; web portals**

**J63.9 – Other information activities**

**M69.1+M69.2+M70.2 – Management consultancy activities**

**N81.2 – Cleaning activities**

These SPPIs do not come from direct surveys on services producer prices but are calculated using other data sources:

- ▶ **observation field:** totality of the services identified by the payments, done by enterprises, of social security contributions that guarantee security protections to employees;
- ▶ **price:** quarterly hourly labour cost coming from Istat statistical process Oros;
- ▶ **sample of enterprises:** units are selected by linking both administrative data from the Italian Revenue Agency Register (Modelli ISA) and from the National Social Security Agency INPS (Social Security Working Positions).

### Timeliness

The indices are released at national level about 60 days from the end of the reference quarter and are sent to Eurostat nearly 55 days after it.

### Dissemination

Services producer prices indices are released quarterly at national level. The indices reference period is 2015=100. Time series indices are available since 2010 (first quarter), except for Telecommunication and Postal services available since 2006 (first quarter). SPPIs are released through quarterly flash press release available on the [Istat website](#).

The series of the updated indices are published, simultaneously to the press release, on the Institute data warehouse [I.Stat](#) and on [IstatData](#), the new Istat's data dissemination platform that will gradually replace the I.Stat data access system. Until the data transfer is completed, the two systems will coexist.

Starting from the first quarter of 2022, Rental and leasing of motor vehicle producer price index is released (the series is available since the first quarter 2021).

Starting from the first quarter of 2023, Rental and leasing of other machinery, equipment and tangible goods producer price index is released (the series is available since the first quarter 2022).

## For technical and methodological information

### Industrial producer prices

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