

Survey on International Merchandise Transport

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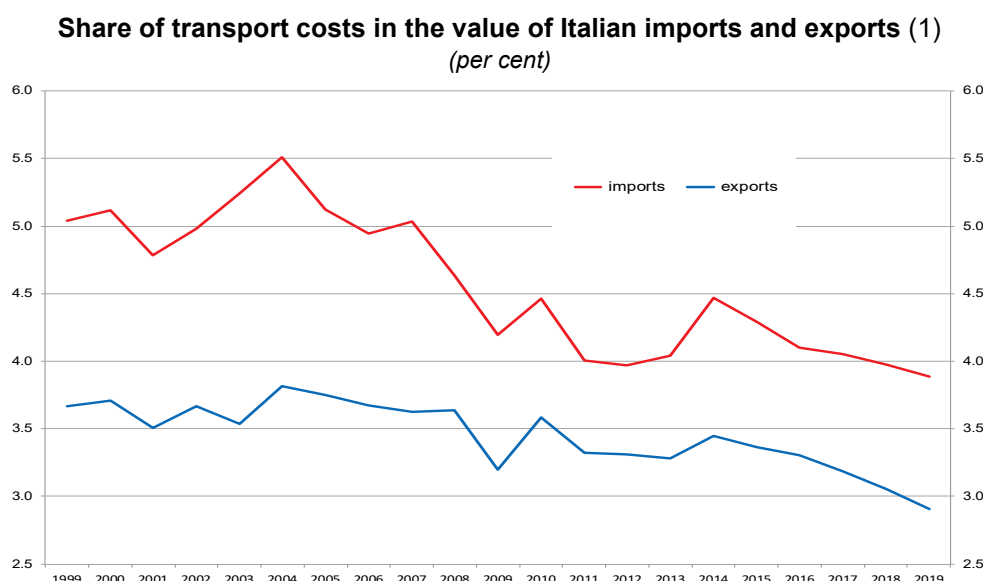
Main findings

This publication presents the main findings of the Survey on International Merchandise Transport for Italy, conducted over the course of 2019. The significant changes underway due to the current pandemic, which are affecting international trade, will be analysed in depth in the report for 2020.

In 2019, Italy's balance of payments recorded a freight transport deficit of €5.9 billion, marking a slight decrease compared with the previous year. The improvement was due to the narrowing in the sea freight deficit, connected with the resumption of Italian ship owners' foreign trade. In transport services, which include the cross-border transport of passengers and mail, the merchandise component accounted for about 60 per cent of the overall deficit in 2019.

The share of transport costs in the value of exports and imports continued to decrease and in 2019 came to 2.9 and 3.8 per cent respectively (excluding those transported by pipeline; Figure 1). The average cost per tonne of road transport held stable on average, with an increase for full loads and a decrease for partial loads (groupage). Conversely, rail freight rates declined, especially in the bulk segment. The reduction in the average costs was significant for air transport, especially for exports, in connection with the decline in transported volumes. A moderate increase of costs per tonne in euros was recorded for sea transport, also owing to the depreciation of the euro-dollar exchange rate observed over the year on average (sea freight contracts are usually denominated in dollars).

Figure 1



Sources: Based on data from Istat, Alps Crossing, Eurostat, and ENAC.

(1) Excludes goods transported via pipeline (natural gas imports). Provisional data for 2019; the costs include ancillary and logistical services linked to international freight transport, as well as any road transport cost supporting other modes of transport (container ships, bulk and container rail transport).

Introduction¹

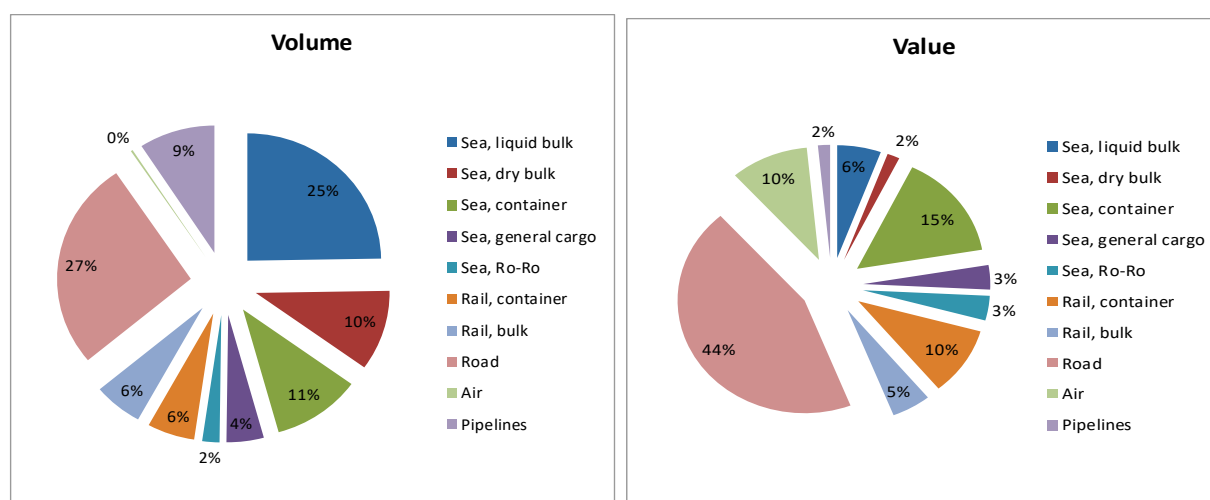
Since 1999, the Bank of Italy has conducted sample surveys of international freight transport operators to collect the data needed to compile the balance of payments. In 2019, some 160 transport firms operating in Italy took part in the survey.

The survey's main purpose is to estimate the unit cost of freight to and from Italy by mode of transport; carriers' market shares by nationality are also estimated. The tonnage of the imports and exports transported is instead based on Istat data on Italy's foreign trade. On the basis of these data, the volume of goods transported by foreign and Italian carriers is calculated. Multiplying the freight costs by the volume of goods transported produces an estimate of the transport services purchased or sold abroad. The estimate also includes some other items, such as cross-trade by Italian carriers and transport within Italy (cabotage) by non-resident ship owners. The findings of the survey are also used to adjust the breakdown by mode of transport of external trade flows, which, owing to their calculation method, tend to overestimate road haulage to the detriment of other modes of transport, especially rail freight;² in addition, the breakdown was expanded to include information not present in Istat data, to take account of the different types of load (and the corresponding differences in freight rates) existing in sea and rail transport.³

A breakdown by mode of transport of Italy's commercial trade in 2019, in terms of quantities and of value, is given in Figure 2. Considering imported and exported volumes, ships were the main form of transport (52 per cent of the total, compared with 27 per cent for road and 12 per cent for rail). In value terms, however, ships declined to 29 per cent, against 44 per cent for road haulage and 15 per cent for rail freight. Air transport was significant only for its share of the value of trade (10 per cent) while the opposite was true for pipelines (imports of natural gas), which were significant only in terms of volume (9 per cent). Compared with the beginning of the available time series (see Tables A.1 e A.2), there has been a decline in the share of rail, pipeline and sea transport; therefore, there has been a reduction in the share of commodities in external trade. Conversely, the importance of road transport has increased.

Figure 2

Breakdown by mode of transport of Italy's external trade in 2019
(percentage shares, averages of imports and exports)



¹ This report and the statistical appendix were prepared by Enrico Tosti.

² Importing and exporting firms tend to identify the mode of transport on the basis of the means of transport used as the first or last link in the chain, the road truck, which often only performs feeder service.

³ The data can be found in the Statistical Appendix to this report. The method of correction is described in a separate document: '[Methods and Sources: Methodological Notes](#)'.

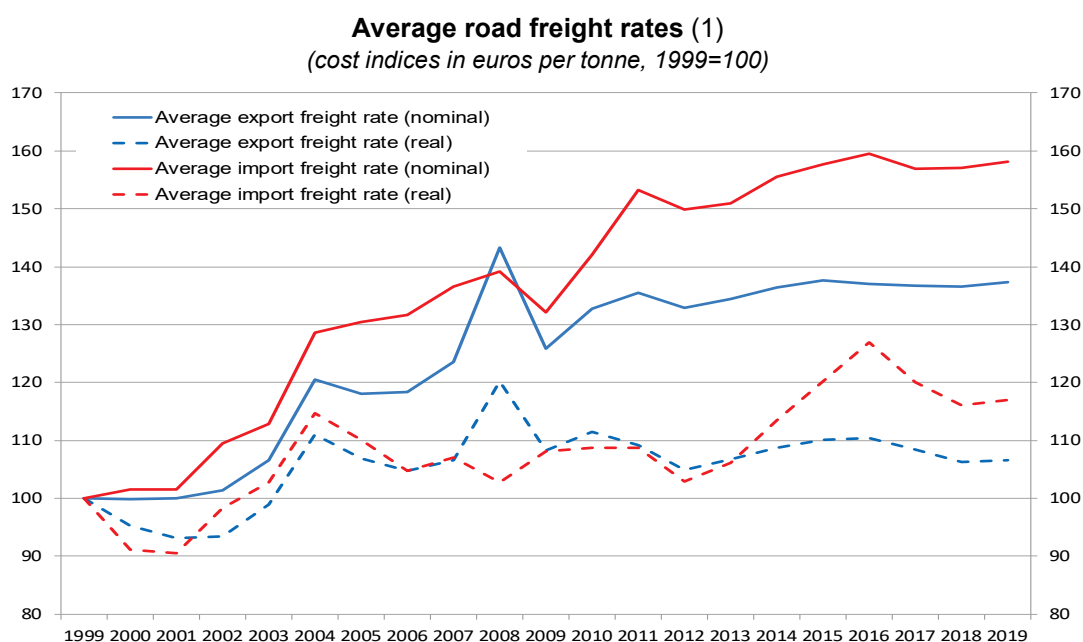
The next section illustrates the main findings of the 2019 survey by mode of transport and by area of origin/destination in relation to over 5,600 'standard consignments'.⁴ Freight rates are given at market prices in euros per tonne and include ancillary transport costs (cargo handling, motorway tolls, carrier fees etc.), for which the data are also gathered in interviews with transport operators. In specific cases, the prices are given in the trading currency (the dollar is widely used for sea transport) or net of ancillary services. The freight rates by mode of transport are calculated as the average of the tariffs by area of origin/destination, weighted by volumes transported; accordingly, the trends over time also reflect the geographical composition of the volumes transported. Finally, for some modes of transport, the market prices relate not to the weight of the cargo but rather to the unit (e.g. container) or to the overall load. In such case, the cost per tonne can vary according to the average volume transported.

International freight rates

Road freight rates

Average road freight rates in euros per tonne have shown overall stability in nominal terms in recent years, particularly for exports (Figure 3). In real terms, i.e. relative to the producer price index for exports (PPIX) and for imports (PPIM), export freight rates have been largely stable since 2004, save for the peak recorded in 2008, while import freight rates picked up slightly after declining for two consecutive years following the peak registered in 2016.

Figure 3



(1) The real costs are obtained by dividing the nominal costs by the export price index and the import price index respectively (sourced from Istat).

Road freight rates increase for full loads and fall for partial loads

In 2019, against a backdrop of moderate growth in transported volumes (Table A.1 in the Appendix), average costs increased marginally; as in the previous year, this was due to the divergence between the cost of full loads, which rose, and that of partial loads (groupage, which accounts for about 43 per cent of shipments), which declined (Table 1).

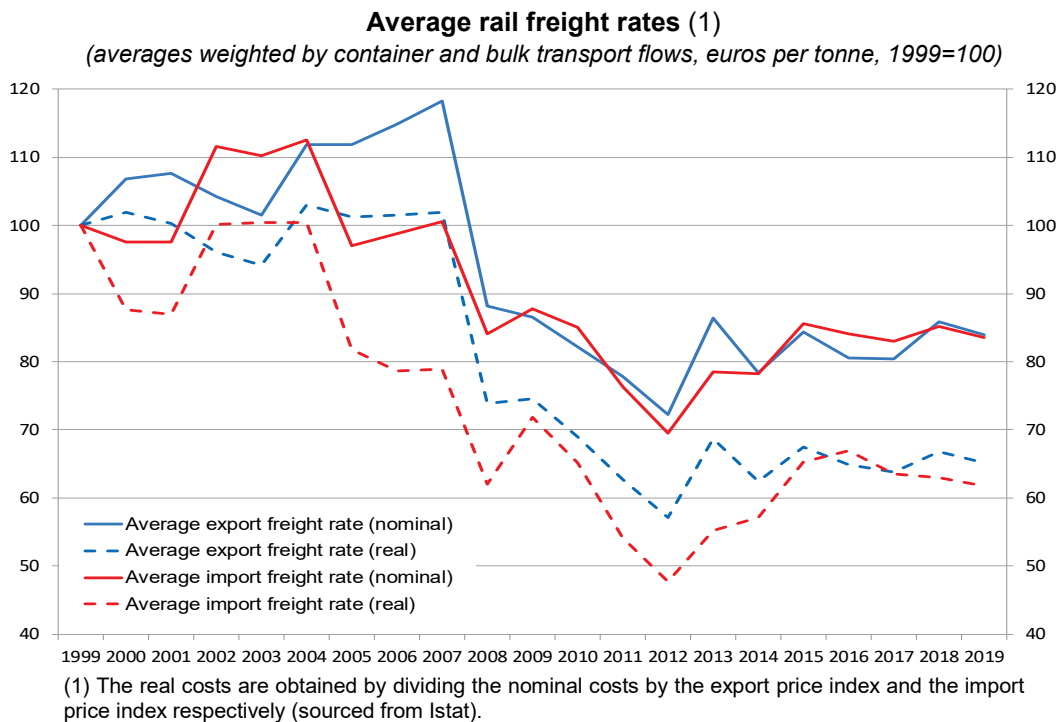
⁴ For the definition of standard consignments, see 'Methods and Sources: Methodological Notes'; freight rates are surveyed on a quarterly basis for bulk and container ships, half-yearly for air cargo, and annually for road/rail freight and any other types of sea transport. For the sake of brevity, only the annual averages are given.

Full load freight rates (net of ancillary services) recorded significant growth for the areas that account for the highest share of trade (France, Germany and Benelux) as well as for the Baltics, the Balkans, and the Aegean Sea region; Eastern Europe was practically the only area to record negative growth. Conversely, partial loads (groupage) showed significant fluctuations compared with 2018, with more pronounced increases registered for low-demand areas such as Balkans and the Baltics, while a decline was recorded for France and Germany (Table 1).

Rail freight rates

Average rail freight rates have been stable over the last five years, in both nominal and real terms, but are still far from the peaks recorded at the start of the last decade and only slightly above the low recorded in 2012 (Figure 4).

Figure 4



Average rail freight rates decline in 2019, especially in the bulk segment

Last year, the average rail freight rates declined for both exports and imports, especially in the bulk segment (Table 2). This trend, which was concentrated in the Western European markets, was likely ascribable to the decline in transported volumes but also to enhanced operational efficiency (i.e. longer trains) and the impact of measures adopted in various countries (including Italy⁵) to encourage a modal switch to rail, all of which contribute to a reduction in transport costs. Increases for both exports and imports were instead registered for Eastern European countries, in this case also owing to a reduction in the average loads, especially in the bulk segment, leading to rise in unit costs.

⁵ In particular with the 'ferrobonus' scheme providing for incentives for customers to use intermodal rail transport (see the Interministerial Decree 125/2017 issued by the Ministry of Infrastructures and Transport and the Ministry of Economy and Finance) and the 'sconto pedaggio' scheme favouring rail operators carrying out merchandise transport (see Decision of the Transport Regulation Authority No. 96 of 13 November 2015), both introduced to encourage the shift to more environmentally sustainable modes of transport.

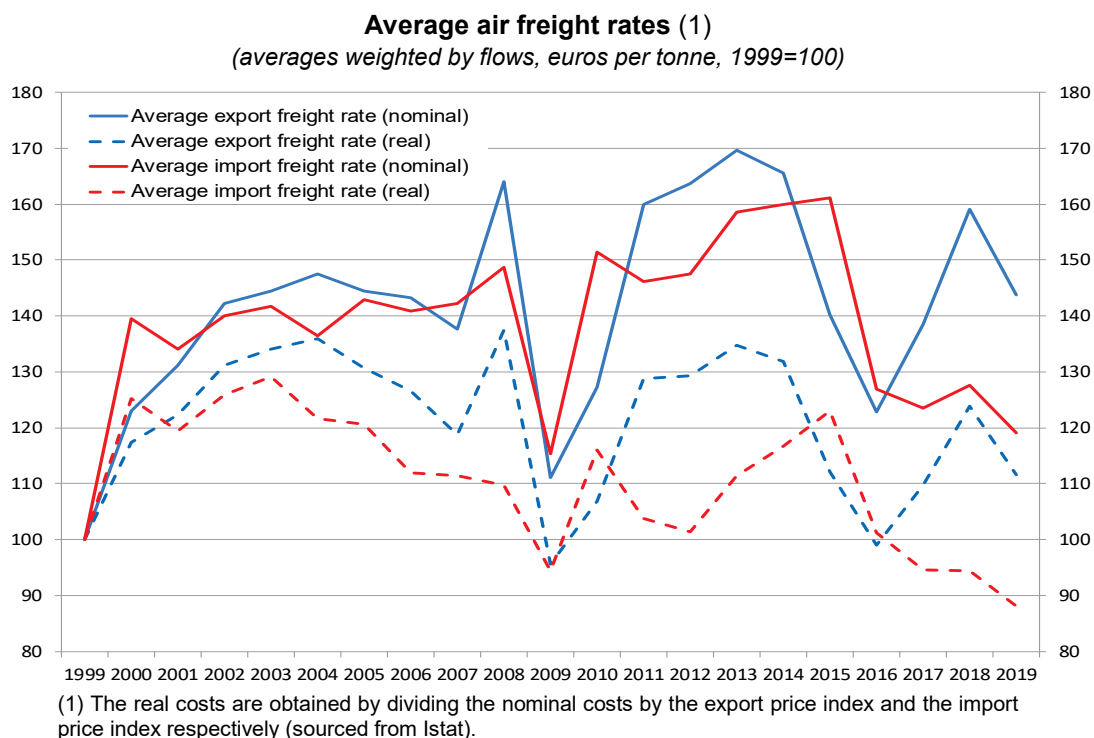
Air freight rates

Air freight rates have fluctuated somewhat over the last ten years, mainly for exports. In recent years, the rates for imports have displayed a significant downward trend, reaching the lowest level since 1999 in real terms. Real export costs instead remained above the low recorded in 2009 (Figure 5).

Air freight rates decrease, especially for exports

Against a backdrop of declining transported volumes (Table A.1), air freight rates (including ancillary services) fell significantly compared with the previous year, especially for exports; the reduction was recorded across almost all geographical areas, with the exception of Russia, and frequently exceeded 10 per cent (Table 3).

Figure 5



Sea freight rates

Sea freight rates are surveyed by load type (container, bulk cargo, general cargo and Ro-Ro; see [‘Methods and Sources: Methodological Notes’](#)) to take into account the different tariffs for the various market segments.

Container sea freight

After picking up between 2009 and 2014, container sea freight rates, in euros per tonne and including ancillary costs, have declined overall in following years (Figure 6); in real terms, they remain slightly above the levels observed during the crisis years 2008-09, especially for imports.

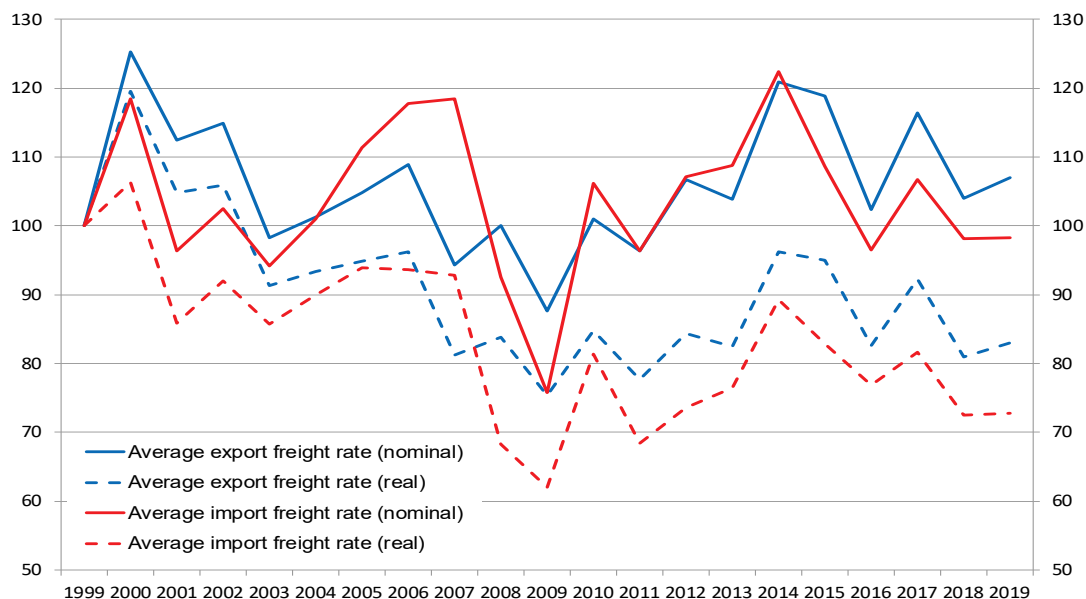
Container sea freight rates in \$/TEU decrease in connection with weak world trade

In 2019, the freight rates as collected in the survey – i.e. in dollars per container (TEU) excluding ancillary services – confirmed the fall recorded the previous year, in line with the stagnation observed in world trade. The costs in euros per tonne and including ancillary services instead rose on average for exports and held practically stable for import (Table 4). Various factors contributed to the diverging trend: the depreciation of the euro against the dollar, the reduction in average transported loads per container,

which increased the cost per tonne, and the rise in road transport costs (for feeder services from and to the ports of arrival/departure).

Figure 6

Average container sea freight rates (1)
(cost indices in euros per tonne, 1999=100)



(1) The real costs are obtained by dividing the nominal costs by the export price index and the import price index respectively (sourced from Istat).

Bulk sea freight (liquid and dry)

In recent years, the average sea freight rates (including ancillary services) applying to imports of dry bulk (mostly non-energy commodities) displayed an upward trend, thanks to more careful supply policies based on the decommissioning of the more obsolete ships in the fleet, reaching levels that are not historically high but significantly above the low recorded in 2015. In real terms, they are above the average level for 2009 (Figure 7).

Average liquid bulk freight rates (mainly petroleum and petroleum products) instead slowed somewhat in recent years, holding largely stable in real terms as well, but remain at fairly high levels in historical terms, thereby ensuring satisfactory profitability for the sector's operators.

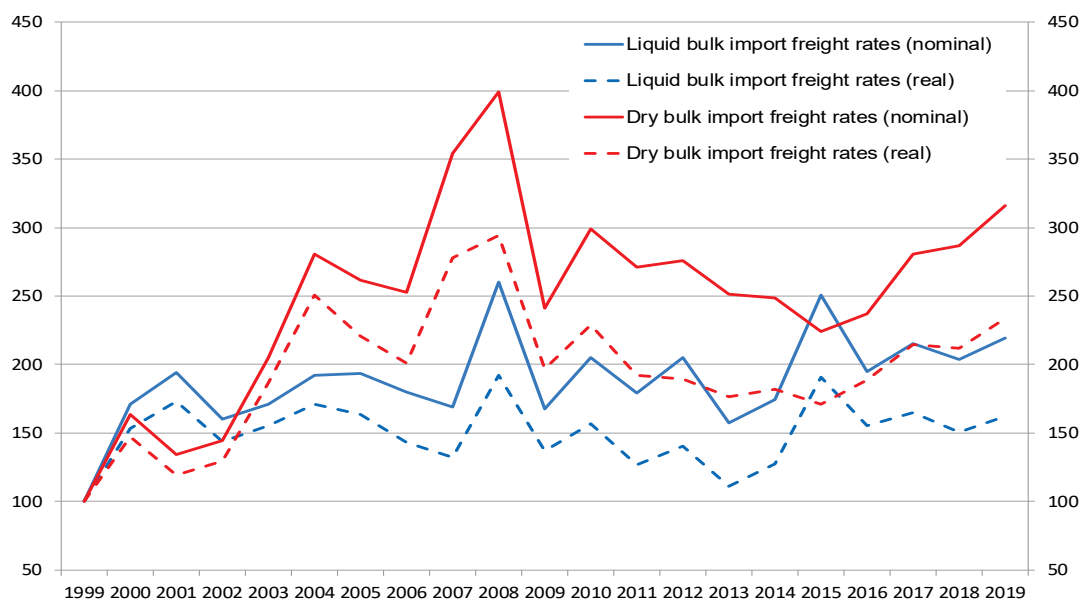
Bulk freight rates grow on average, especially those denominated in euros

In 2019, dollar-denominated freight rates (excluding ancillary services) for dry commodities grew for both the coal and mineral ores segment and the grain segment. Measured in euros and including ancillary services, the increases were more marked, of about 8 per cent (Table 5), owing to the depreciation of the euro against the dollar over the year on average.

A similar situation was observed in the liquid bulk segment, albeit with somewhat lower growth rates, both in dollars excluding ancillary services and in euros including ancillary services (Table 5), especially for the most significant segment, petroleum. For chemical products, a niche transport market, the increase in freight rates was of an order of magnitude closer to that of solid bulk.

Figure 7

Average sea freight rates: liquid and dry bulk imports (1)
(cost indices in euros per tonne, 1999=100)



(1) The real costs are obtained by dividing the nominal costs by the export price index and the import price index respectively (sourced from Istat).

General cargo and Ro-Ro sea freight rates

General cargo sea freight rates for the transport of plant and machinery remain at their lowest levels

Last year, the downward trend in general cargo sea freight rates for the transport of plant, machinery and transport equipment (including ancillary services and in euros per tonne), which had been under way since the global financial crisis of 2008-09, came to a halt. For both exports and imports, the rates remain at the lowest levels for the 20 years considered, including in real terms (Figure 8). In recent years, a rebalancing of trade towards countries that are geographically closer to Italy also played a part, resulting in a

reduction in average costs. Indeed, the rates recorded by the survey, in dollars per tonne, show a less marked downward trend.

In 2019, costs in euros per tonne rose above all in the most significant category, 'plant, machinery and transport equipment', while freight rates for both exports and imports increased in the two other segments 'chemicals, building material, forestry products' and 'tubes, pipes and metal products' (Table 6).

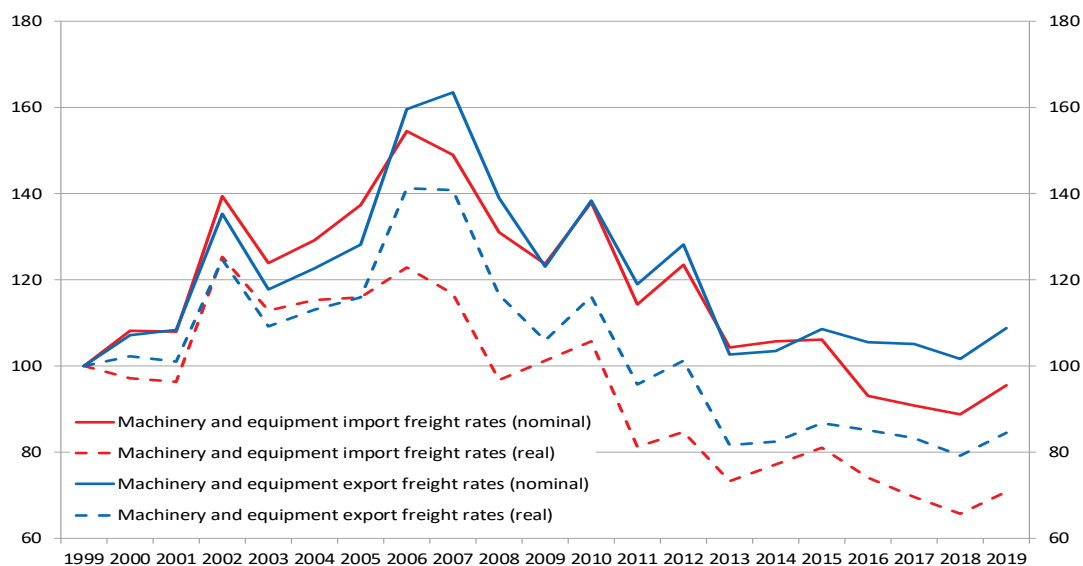
Ro-Ro sea freight rates decrease on average

In 2019, Ro-Ro (Roll-on/Roll-off) rates for the sea transport of road vehicles (mainly in the Mediterranean area and usually euro-denominated) decreased on average by almost 6 per cent (Table 7). The reduction affected certain geographical areas more than others, including the most significant route, that from and to Turkey. The route from and to Spain was one of the few to

record an increase in freight rates.

Figure 8

Average sea freight rates: general cargo, transport of plant and machinery (1) (cost indices in euros per tonne, 1999=100)



(1) The real costs are obtained by dividing the nominal costs by the export price index and the import price index respectively (sourced from Istat).

Natural gas transportation rates

The sample survey has collected data on the cost of transporting natural gas via pipelines since 2016. In previous years the data came directly from the companies belonging to the group managing the gas pipelines; when the market was liberalized, other operators were allowed to purchase and transport gas to Italy, making it necessary to broaden the survey to include this highly concentrated sector. The costs are those borne from the point of sale (and not the point of production) of the natural gas until the point of entry into Italy,⁶ and these costs tend to be the same regardless of the volumes that are actually imported (take-or-pay contracts); therefore, changes in unit costs (in euros per tonne) also depend on the actual volumes transported compared with those agreed in the contract.

Natural gas freight rates decrease in 2019

In 2019 transport costs diminished by 3.8 per cent on average compared with the previous year, reflecting the reduction in freight rates on imports from all the supplier countries except the major one, Russia, for which transport costs increased slightly (Table 8).

Carriers' market shares

Since 2002 a specific section of the survey estimates the distribution of merchandise transport to and from Italy among Italian and foreign carriers. Air transport data comes from administrative sources, while sea and road transport data are obtained from specific sample surveys that constitute an original source of information, including internationally. In fact, statistical data on the maritime sector often look at ship owners and not at the actual operators of those ships. For balance of payments purposes, it is the residence of the operator that is needed and that is why the Bank of Italy survey addresses the operators (see '[Methods and Sources: Methodological Notes](#)').

After picking up slightly for two consecutive years, the market shares of Italian carriers turned downwards again across all segments. In the sea freight segment, the share declined significantly,

⁶ As regards Russian gas, the point of supply is at the border between Austria and Slovakia; for Algerian gas it is at the border between Algeria and Tunisia; for gas originating in Norway and the Netherlands the supply point is at the border between Germany and the Netherlands; and for gas from Libya, the supply point is on the Libyan coastline.

from 11.4 to 9.1 per cent, reaching the low recorded in 2016 (Table 9). The reduction was observed across almost all sectors except Ro-Ro. Liquid bulk recorded the greatest drop in absolute terms, while the decline was marginal in solid bulk. In road transport, the share of Italian carriers decreased modestly, to 20.0 per cent, resuming a trend begun almost 15 years ago. In the air freight segment, however, the market share fell more significantly, to 15.6 per cent.

In the case of foreign sea freight carriers, in 2019 the ranking was largely unchanged compared with the previous year (Table 10): for container transport (a segment in which Italy has a marginal share), the main shipping companies were Swiss, while Greek ship owners continued to hold first place in bulk freight, with Italian ship owners in second place for liquid bulk and in fifth place for dry bulk. In general cargo transport, Turkey was the biggest player while Italy was in third place. It is only in Ro-Ro transport that Italian ship owners claim the highest share.

Balance on merchandise transport

As mentioned in the introduction, the volumes of goods transported by foreign and by Italian carriers are attributed according to market shares (as shown in Table A.1). The freight rates, multiplied by these volumes, provide an estimate of the merchandise transport services purchased and sold abroad. Other items are also included in the overall estimate, such as cross-trade by Italian carriers in the sea and road segments and transport within Italy (cabotage) by non-resident ship owners.

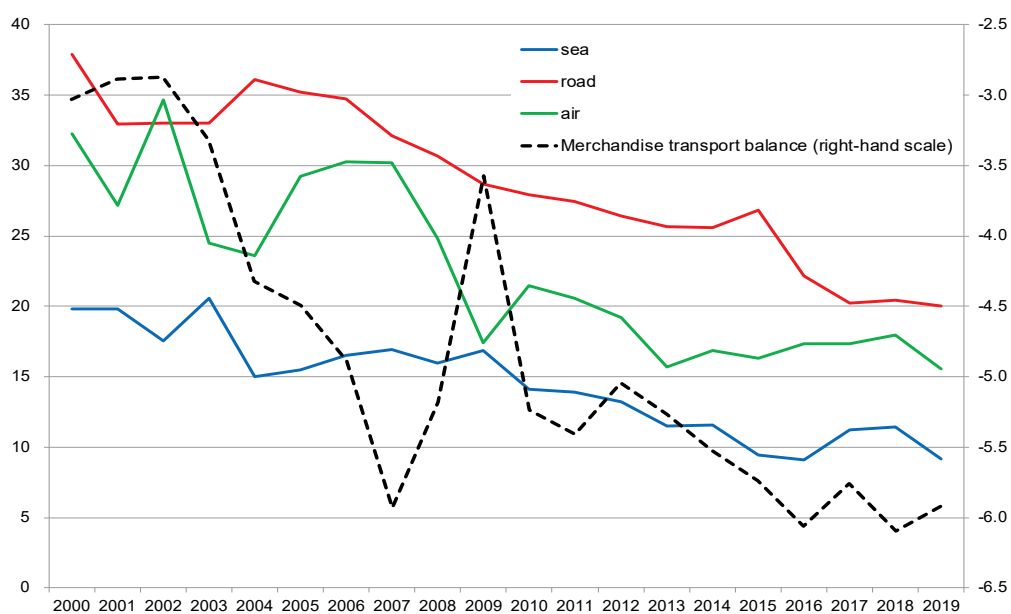
The deficit in the merchandise balance narrows slightly in 2019, especially in the sea transport sector

Given the small market share of Italian carriers, the balance on merchandise transport has a structural deficit that fluctuated between €5 billion and €6 billion between 2010 and 2019, accounting on average for almost 65 per cent of the overall deficit in transport services (Table 11). In 2019, the deficit stood at €5.9 billion, marking a slight decrease compared with 2018. The improvement was attributable to the narrowing in the sea transport deficit, in turn arising from the increase in cross-trade by Italian carriers, which offset the reduction in their market share in trade flows from and to Italy.

Figure 9 shows the positive correlation between market shares and the balance of merchandise transport services; significant fluctuations in the deficit are largely determined by the effects of the economic cycle on average costs.

Figure 9

Market shares of Italian carriers and balance on merchandise transport
(percentage market shares, left-hand scale; balance on merchandise transport in billions of euros, right-hand scale)



Tables

Unless otherwise specified, the source of the data for all the tables in this section is the Bank of Italy's Survey on International Merchandise Transport.

Table 1

Average road freight rates (FTL and groupage)* (2019)

| Geographical area | Average freight rates for all loads (including ancillary services) | | | | FTL and groupage freight rates (average exports and imports, excluding ancillary services) | | | |
|-----------------------------|---|---------------------|----------------------|---------------------|---|---------------------|-----------------------|---------------------|
| | Exports (€/tonne) | % change on 2018 | Imports (€/tonne) | % change on 2018 | FTL (€/vehicle) | % change on 2018 | Groupage (€/tonne) | % change on 2018 |
| Austria - Switzerland | 104.3 | -1.7 | 104.0 | -2.5 | 986.5 | -0.1 | 182.0 | -3.2 |
| Benelux | 131.3 | 6.1 | 131.3 | 6.0 | 1,706.0 | 4.7 | 206.0 | 6.7 |
| Eastern Europe (1) | 105.1 | -1.9 | 97.5 | -1.5 | 1,120.4 | -2.4 | 170.9 | -2.0 |
| France | 96.8 | -4.4 | 97.9 | -4.3 | 1,419.5 | 4.4 | 141.9 | -9.0 |
| Germany | 111.8 | -2.7 | 110.6 | -2.8 | 1,552.4 | 3.9 | 166.0 | -6.2 |
| Greece - Turkey | 131.0 | -0.8 | 125.8 | -2.1 | 2,267.0 | 6.3 | 166.2 | -6.5 |
| Balkans | 147.1 | 18.1 | 147.7 | 18.1 | 1,400.2 | 6.0 | 260.0 | 26.8 |
| Baltic countries | 170.7 | 31.5 | 181.3 | 33.8 | 2,718.0 | 6.2 | 223.4 | 32.6 |
| Former USSR | 234.8 | 5.3 | 180.2 | 5.4 | 3,558.4 | 0.2 | 282.3 | 3.2 |
| UK - Ireland | 194.1 | 5.0 | 170.0 | 7.9 | 2,684.0 | 0.2 | 268.7 | 8.7 |
| Scandinavia | 150.7 | -1.7 | 158.6 | -2.3 | 2,618.3 | 0.8 | 215.4 | -3.7 |
| Spain - Portugal | 117.4 | -2.6 | 109.3 | -2.6 | 1,688.4 | 0.7 | 165.0 | -4.9 |
| Weighted average (2) | 120.3 | 0.6 | 115.4 | 0.7 | 1,558.3 | 2.4 | 183.0 | -0.4 |

* FTL = Full Truck Loads, while the term 'Groupage' = a partial load.

(1) Eastern Europe includes Poland, Czech Republic, Slovakia and Hungary. – (2) Weights are based on transported volumes.

Table 2

Average rail freight rates: total cargo and container cargo (2019)

| Geographical area | Average freight rates for all loads | | | | Container cargo rates | | | |
|-----------------------------|-------------------------------------|---------------------|----------------------|---------------------|-----------------------|---------------------|----------------------|---------------------|
| | Exports (€/tonne) | % change on 2018 | Imports (€/tonne) | % change on 2018 | Exports (€/tonne) | % change on 2018 | Imports (€/tonne) | % change on 2018 |
| Austria - Switzerland | 37.4 | -4.6 | 36.4 | -5.2 | 45.3 | 1.5 | 45.0 | 1.7 |
| Benelux | 52.5 | -4.1 | 50.0 | -2.1 | 57.1 | -5.2 | 54.7 | -4.1 |
| Eastern Europe (1) | 55.5 | 2.9 | 53.3 | 1.9 | 60.6 | 6.3 | 57.2 | 7.0 |
| France | 46.3 | -3.8 | 41.8 | -4.4 | 52.4 | -3.0 | 51.6 | -2.6 |
| Germany | 45.5 | -3.0 | 44.0 | -4.2 | 51.5 | -2.5 | 52.8 | -3.2 |
| Greece - Turkey | 70.9 | 0.9 | 70.4 | 1.4 | 72.3 | -2.8 | 77.7 | -4.7 |
| Balkans | 64.2 | 3.0 | 55.2 | 1.5 | 69.2 | 4.9 | 61.9 | 6.1 |
| Baltic countries | 86.6 | 2.5 | 85.1 | 2.1 | 93.2 | 2.6 | 102.3 | 2.0 |
| Former USSR | 100.6 | 2.0 | 91.0 | 2.7 | 107.9 | 1.7 | 102.3 | 2.0 |
| UK - Ireland | 59.5 | -3.3 | 58.1 | -2.1 | 61.9 | -7.0 | 62.7 | -7.3 |
| Scandinavia | 69.0 | -3.0 | 66.8 | 1.5 | 68.9 | -9.2 | 67.8 | -8.9 |
| Spain - Portugal | 54.0 | -4.2 | 53.4 | -0.5 | 61.3 | -6.8 | 55.5 | -4.5 |
| Weighted average (2) | 51.1 | -2.2 | 47.0 | -2.0 | 57.2 | -1.8 | 54.3 | -0.7 |

(1) Eastern Europe includes Poland, Czech Republic, Slovakia and Hungary. – (2) Weights are based on transported volumes.

Table 3

**Average air freight rates
(2019)**

| Geographical area | Exports | | Imports | |
|-------------------------------|--------------|------------------|--------------|------------------|
| | €/tonne | % change on 2018 | €/tonne | % change on 2018 |
| Europe | 1,950 | -8.9 | 1,950 | -8.9 |
| Russia | 3,596 | 16.2 | 3,596 | 16.2 |
| Mediterranean and Middle East | 1,576 | -4.1 | 1,576 | -4.1 |
| Rest of Africa | 2,063 | -15.3 | 2,063 | -15.3 |
| India | 1,187 | -18.7 | 2,098 | -3.9 |
| Indonesia - Singapore | 1,568 | -12.4 | 2,324 | -5.4 |
| China | 1,417 | -6.3 | 2,518 | -1.5 |
| Japan - Korea | 1,959 | -6.3 | 2,557 | -2.6 |
| Oceania | 3,055 | -11.3 | 3,055 | -11.3 |
| USA - Canada | 1,904 | -12.8 | 1,125 | -26.9 |
| Central and South America | 2,563 | -14.3 | 2,563 | -14.3 |
| Weighted average (1) | 1,808 | -9.6 | 2,092 | -6.8 |

(1) Weights are based on transported volumes.

Table 4

**Average container sea freight rates
(2019)**

| Geographical area | Average rates in €/tonne (including ancillary services) | | | | Rates in \$/TEU (excluding ancillary services) | | | |
|-----------------------------|--|------------------|--------------|------------------|---|------------------|--------------|------------------|
| | Exports | % change on 2018 | Imports | % change on 2018 | Exports | % change on 2018 | Imports | % change on 2018 |
| Europe-Mediterranean | 92.1 | 4.7 | 92.7 | 5.4 | 326.7 | -1.4 | 335.0 | 1.1 |
| Rest of Africa | 129.6 | -6.0 | 131.3 | -4.8 | 883.2 | -20.5 | 905.7 | -18.5 |
| Middle East | 91.9 | -1.5 | 92.7 | -0.7 | 399.7 | -17.9 | 409.8 | -15.8 |
| India | 96.2 | 3.5 | 114.4 | 4.1 | 467.8 | -4.9 | 712.0 | -3.6 |
| South-East Asia | 81.0 | -4.8 | 118.8 | 6.4 | 264.2 | -30.2 | 771.1 | 1.0 |
| China and Japan | 76.6 | 1.9 | 121.1 | 4.7 | 193.4 | -13.4 | 791.2 | -2.5 |
| Oceania | 131.3 | -7.9 | 132.9 | -6.8 | 834.4 | -24.5 | 855.6 | -22.6 |
| USA - Canada | 168.0 | 11.6 | 136.4 | -2.6 | 1,276.6 | 9.3 | 852.1 | -16.1 |
| Central America | 142.9 | 1.5 | 144.6 | 2.7 | 933.8 | -8.6 | 957.6 | -6.3 |
| South America | 86.6 | -12.4 | 87.1 | -11.9 | 271.6 | -46.7 | 278.5 | -45.3 |
| Weighted average (1) | 111.0 | 2.9 | 109.5 | 0.2 | 589.7 | -6.2 | 583.3 | -12.2 |

(1) Weights are based on transported volumes.

Table 5

**Average rates for liquid and dry bulk sea freight
(2019)**

| Type of merchandise | | Average rate for imports | | | |
|---------------------|----------------------------------|--|------------------|---|------------------|
| | | Rates in €/tonne (including ancillary services) | % change on 2018 | Rates in \$/tonne (excluding ancillary services) | % change on 2018 |
| Liquid bulk | Petroleum and petroleum products | 13.3 | 5.5 | 12.8 | 0.0 |
| | Chemicals | 92.0 | 7.9 | 95.1 | 2.4 |
| Dry bulk | Coal/mineral ores | 21.5 | 7.9 | 13.5 | 3.9 |
| | Grain | 34.7 | 8.6 | 22.9 | 4.9 |

Table 6

Average general cargo sea freight rates
(2019)

| Type of merchandise | Exports (including ancillary services) | | Imports (including ancillary services) | |
|---|---|---------------------|---|---------------------|
| | €/tonne | % change on 2018 | €/tonne | % change on 2018 |
| Plant, machinery and transport equipment (1) | 232.8 | 7.2 | 208.5 | 7.5 |
| Chemicals, building material, forestry products | 69.3 | 4.1 | 77.3 | 4.7 |
| Tubes, pipes and metal products (2) | 72.8 | 2.6 | 72.8 | 3.3 |

(1) 'Plant, machinery and transport equipment' are Categories 11 (Machinery and equipment) and 12 (Transport equipment) of the NST 2007 classification; – (2) 'Tubes, pipes and metal materials' come under Category 10 (Basic metals; manufactured metal products, excluding machinery and equipment) of the NST 2007 classification.

Table 7

Average Ro-Ro sea transport rates
(2019)

| Geographical area | Average of exports and imports (including ancillary services) | |
|----------------------------------|---|---------------------|
| | €/tonne | % change on 2018 |
| Balkans | 22.6 | 0.6 |
| France | 15.1 | -13.3 |
| Greece | 49.1 | 5.6 |
| Northern Europe | 213.7 | 0.0 |
| North Africa (excluding Tunisia) | 115.1 | -6.1 |
| Rest of Africa | 158.6 | 0.0 |
| Spain | 58.8 | 6.5 |
| Tunisia - Malta | 54.4 | -2.8 |
| Turkey | 73.9 | -17.7 |
| Other countries | 221.5 | 0.0 |
| Weighted average (1) | 131.7 | -5.6 |

(1) Weights are based on transported volumes.

Table 8

Average rates for natural gas transport via pipeline
(2019)

| Point of entry | Country of origin of natural gas | €/tonne | % change on 2018 |
|-----------------------------|----------------------------------|-------------|---------------------|
| Mazara del Vallo | ALGERIA | 30.4 | -10.3 |
| Gela | LIBYA | 26.8 | -18.6 |
| Passo Gries | NORWAY | 67.9 | -14.6 |
| Passo Gries | NETHERLANDS | 31.5 | -1.9 |
| Tarvisio | RUSSIA | 1.5 | 8.9 |
| Weighted average (1) | | 17.4 | -9.0 |

(1) Weights are based on transported volumes.

Table 9

Market shares of Italian carriers for imports and exports of goods to and from Italy
(weighted by transported volumes; percentages)

| YEARS | Sea | | | | | | Road | Air |
|-------|-------------|----------|-----------|---------------|-------|-------------|------|------|
| | Liquid bulk | Dry bulk | Container | General cargo | Ro-Ro | Average (1) | | |
| 2002 | 23.3 | 8.0 | 16.0 | 16.0 | | 17.5 | 33.0 | 34.7 |
| 2003 | 27.7 | 10.3 | 11.9 | 24.4 | | 20.6 | 33.0 | 24.5 |
| 2004 | 19.4 | 12.9 | 5.7 | 14.6 | | 15.0 | 36.1 | 23.6 |
| 2005 | 20.8 | 8.6 | 8.9 | 17.7 | | 15.5 | 35.2 | 29.3 |
| 2006 | 19.6 | 15.5 | 9.3 | 16.7 | | 16.5 | 34.7 | 30.3 |
| 2007 | 21.5 | 13.6 | 7.9 | 17.9 | | 17.0 | 32.1 | 30.2 |
| 2008 | 18.2 | 12.1 | 10.6 | 18.6 | 25.0 | 15.8 | 30.7 | 26.3 |
| 2009 | 21.2 | 12.2 | 5.5 | 16.7 | 23.8 | 16.6 | 28.6 | 17.4 |
| 2010 | 18.9 | 8.8 | 1.6 | 10.0 | 32.2 | 14.1 | 27.9 | 21.5 |
| 2011 | 18.0 | 12.7 | 2.8 | 12.9 | 27.4 | 13.9 | 27.4 | 20.6 |
| 2012 | 16.6 | 13.6 | 3.2 | 11.6 | 23.8 | 13.2 | 26.4 | 19.2 |
| 2013 | 13.8 | 12.2 | 2.7 | 10.1 | 29.7 | 11.5 | 25.7 | 15.7 |
| 2014 | 13.7 | 12.1 | 2.5 | 10.5 | 39.7 | 11.6 | 25.6 | 16.9 |
| 2015 | 10.7 | 8.9 | 2.8 | 9.7 | 34.1 | 9.4 | 26.8 | 16.3 |
| 2016 | 10.8 | 8.7 | 1.0 | 11.4 | 26.7 | 9.1 | 22.1 | 17.4 |
| 2017 | 15.5 | 8.7 | 1.8 | 6.1 | 30.7 | 11.2 | 20.2 | 17.3 |
| 2018 | 15.7 | 4.7 | 3.4 | 10.5 | 41.2 | 11.4 | 20.5 | 18.0 |
| 2019 | 11.6 | 4.7 | 1.8 | 8.1 | 42.1 | 9.1 | 20.0 | 15.6 |

(1) Weights are based on transported volumes.

Table 10

Market shares by nationality of maritime carriers in 2019
(per cent, imports and exports of goods to and from Italy by ship)

| Container | | Dry bulk | | Liquid bulk | | General Cargo | | Ro-Ro | |
|-----------------|--------------|-----------------|--------------|-----------------|--------------|------------------|--------------|-----------------|--------------|
| Switzerland | 30.0 | Greece | 24.3 | Greece | 33.7 | Turkey | 26.8 | Italy | 42.1 |
| Denmark | 13.6 | Turkey | 16.5 | Italy | 11.6 | Germany | 21.5 | Greece | 24.5 |
| Germany | 10.6 | Germany | 4.9 | Sweden | 9.4 | Italy | 7.9 | Turkey | 14.6 |
| France | 8.1 | China | 4.9 | UAE | 5.9 | Romania | 4.3 | Japan | 4.6 |
| China | 8.0 | Italy | 4.7 | Denmark | 5.2 | Lebanon | 4.3 | Norway | 4.3 |
| Taiwan | 7.4 | Switzerland | 3.8 | Netherlands | 4.6 | Switzerland | 4.0 | Switzerland | 3.5 |
| Singapore | 7.2 | Japan | 3.7 | United Kingdom | 4.1 | Russia | 3.9 | Tunisia | 1.6 |
| Israel | 3.7 | India | 2.7 | Turkey | 3.4 | Netherlands | 3.3 | Croatia | 1.2 |
| United States | 3.0 | United States | 2.6 | United States | 3.3 | Albania | 2.7 | Sweden | 0.7 |
| Hong Kong | 2.6 | Canada | 2.6 | Singapore | 2.7 | Azerbaijan | 2.3 | Poland | 0.6 |
| Italy | 1.8 | United Kingdom | 2.4 | Switzerland | 2.0 | Ukraine | 2.0 | Germany | 0.5 |
| Turkey | 1.2 | Chile | 2.3 | Canada | 1.8 | Norway | 1.9 | Netherlands | 0.4 |
| United Kingdom | 0.9 | Singapore | 2.2 | Malaysia | 1.5 | Marshall Islands | 1.7 | United States | 0.3 |
| Lebanon | 0.8 | Monaco | 2.2 | Germany | 1.4 | Greece | 1.6 | South Korea | 0.3 |
| Greece | 0.5 | Hong Kong | 2.0 | Croatia | 1.4 | Egypt | 1.5 | Albania | 0.2 |
| Cuba | 0.4 | Netherlands | 1.7 | Monaco | 1.0 | Singapore | 1.4 | Spain | 0.2 |
| Spain | 0.1 | South Korea | 1.4 | Norway | 0.9 | United States | 1.4 | France | 0.1 |
| Sub-total | 99.7 | Sub-total | 84.8 | Sub-total | 94.0 | Sub-total | 92.6 | Sub-total | 99.6 |
| Other countries | 0.3 | Other countries | 15.2 | Other countries | 6.0 | Other countries | 7.4 | Other countries | 0.4 |
| Total | 100.0 | Total | 100.0 | Total | 100.0 | Total | 100.0 | Total | 100.0 |

Table 11

Balance on merchandise transport

(millions of euros and per cent)

| Flows | Mode of transport | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|--|--------------------------|----------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Credit | Sea | 4,622 | 3,948 | 4,006 | 3,886 | 3,598 | 4,055 | 3,912 | 4,510 | 4,241 | 4,525 |
| | <i>o.w.: cross-trade</i> | 3,217 | 2,587 | 2,468 | 2,518 | 2,132 | 2,346 | 2,030 | 2,705 | 2,502 | 2,802 |
| | Air | 340 | 296 | 281 | 289 | 299 | 286 | 287 | 352 | 376 | 319 |
| | Road | 2,775 | 2,733 | 2,502 | 2,761 | 2,889 | 3,034 | 3,051 | 2,974 | 3,092 | 3,089 |
| | Rail | 32 | 29 | 29 | 26 | 28 | 30 | 30 | 30 | 30 | 30 |
| | Pipeline | 5 | 6 | 6 | 6 | 10 | 11 | 12 | 12 | 15 | 15 |
| | Total | 7,774 | 7,011 | 6,823 | 6,967 | 6,825 | 7,417 | 7,293 | 7,878 | 7,754 | 7,977 |
| Debit | Sea | 6,675 | 5,836 | 5,626 | 5,310 | 5,274 | 5,956 | 5,600 | 5,568 | 5,878 | 5,884 |
| | Air | 767 | 645 | 646 | 808 | 864 | 817 | 753 | 906 | 960 | 884 |
| | Road | 4,775 | 5,062 | 4,775 | 5,131 | 5,262 | 5,423 | 6,061 | 6,215 | 6,305 | 6,300 |
| | Rail | 370 | 334 | 289 | 342 | 378 | 372 | 380 | 404 | 399 | 384 |
| | Pipeline | 422 | 542 | 533 | 639 | 574 | 587 | 563 | 543 | 308 | 443 |
| | Total | 13,009 | 12,420 | 11,868 | 12,229 | 12,351 | 13,154 | 13,356 | 13,637 | 13,850 | 13,895 |
| Balances | Sea | -2,053 | -1,889 | -1,620 | -1,424 | -1,676 | -1,901 | -1,688 | -1,058 | -1,637 | -1,359 |
| | Air | -428 | -350 | -365 | -519 | -565 | -531 | -466 | -554 | -584 | -565 |
| | Road | -2,000 | -2,329 | -2,273 | -2,371 | -2,373 | -2,388 | -3,010 | -3,241 | -3,213 | -3,211 |
| | Rail | -338 | -305 | -260 | -316 | -350 | -342 | -349 | -374 | -369 | -354 |
| | Pipeline | -416 | -537 | -527 | -633 | -563 | -576 | -550 | -531 | -293 | -428 |
| | Total (A) | -5,235 | -5,409 | -5,044 | -5,262 | -5,526 | -5,737 | -6,064 | -5,758 | -6,096 | -5,917 |
| <i>Memorandum item:</i> | | | | | | | | | | | |
| Overall balance of transport services¹ (B) | | -8,517 | -8,677 | -8,223 | -7,934 | -8,286 | -8,363 | -8,418 | -9,228 | -9,518 | -9,817 |
| <i>A as a percentage of B</i> | | 61.0 | 62.3 | 61.3 | 66.3 | 66.7 | 68.6 | 72.0 | 62.4 | 64.0 | 60.3 |
| Current account balance | | -53,090 | -46,576 | -3,746 | 17,879 | 30,904 | 23,529 | 43,997 | 44,712 | 44,021 | 52,890 |

(1) In addition to international merchandise transport, includes passenger transport and postal services.

Statistical Appendix

Table A.1

| Import and export volumes by mode of transport (1) <i>(millions of tonnes)</i> | | | | | | | | | | |
|--|-------------|----------|-----------|---------------|-------|-----------|------|------|-----|----------|
| Imports | Sea | | | | | Rail | | Road | Air | Pipeline |
| | Liquid bulk | Dry bulk | Container | General cargo | Ro-Ro | Container | Bulk | | | |
| 1999 | 127.3 | 55.7 | 16.7 | 19.5 | | 9.1 | 16.8 | 35.0 | 0.4 | 42.9 |
| 2000 | 129.7 | 60.1 | 17.8 | 20.7 | | 9.8 | 17.6 | 38.4 | 0.5 | 38.6 |
| 2001 | 124.3 | 61.1 | 17.1 | 21.6 | | 9.9 | 17.6 | 40.2 | 0.4 | 38.0 |
| 2002 | 121.4 | 59.9 | 17.0 | 21.7 | | 9.8 | 17.0 | 42.3 | 0.3 | 41.5 |
| 2003 | 117.7 | 62.7 | 18.2 | 22.5 | | 10.1 | 17.2 | 44.4 | 0.4 | 42.4 |
| 2004 | 114.3 | 69.8 | 17.8 | 23.6 | | 10.7 | 17.9 | 47.9 | 0.4 | 47.4 |
| 2005 | 113.7 | 66.5 | 17.3 | 23.1 | | 10.8 | 17.9 | 50.0 | 0.4 | 50.7 |
| 2006 | 111.0 | 65.8 | 20.0 | 23.8 | 5.1 | 11.6 | 19.1 | 53.9 | 0.4 | 54.6 |
| 2007 | 114.0 | 70.3 | 21.8 | 25.0 | 4.9 | 11.9 | 19.9 | 58.4 | 0.4 | 51.5 |
| 2008 | 106.7 | 68.1 | 20.8 | 22.7 | 4.6 | 11.0 | 18.6 | 54.3 | 0.3 | 56.3 |
| 2009 | 99.1 | 48.9 | 16.9 | 14.9 | 4.2 | 9.3 | 15.9 | 47.9 | 0.3 | 50.2 |
| 2010 | 106.0 | 51.0 | 21.0 | 20.3 | 4.2 | 10.7 | 19.1 | 55.7 | 0.3 | 48.0 |
| 2011 | 97.8 | 55.2 | 20.2 | 21.3 | 4.4 | 10.7 | 18.9 | 55.8 | 0.3 | 43.7 |
| 2012 | 78.9 | 51.4 | 16.6 | 17.7 | 3.9 | 10.1 | 17.3 | 52.7 | 0.3 | 41.3 |
| 2013 | 81.9 | 47.3 | 17.4 | 18.4 | 3.3 | 11.2 | 18.0 | 53.5 | 0.3 | 40.7 |
| 2014 | 73.9 | 44.7 | 18.2 | 19.4 | 3.3 | 11.8 | 19.0 | 55.9 | 0.3 | 37.1 |
| 2015 | 83.9 | 50.1 | 21.1 | 11.4 | 4.5 | 13.7 | 17.4 | 56.8 | 0.3 | 39.7 |
| 2016 | 86.4 | 50.1 | 22.2 | 11.9 | 4.5 | 13.8 | 18.1 | 57.8 | 0.4 | 39.0 |
| 2017 | 90.3 | 47.8 | 22.6 | 12.0 | 4.8 | 14.4 | 19.0 | 60.0 | 0.4 | 40.4 |
| 2018 | 88.3 | 47.6 | 23.2 | 12.7 | 5.0 | 14.9 | 19.3 | 61.7 | 0.5 | 39.5 |
| 2019 | 91.5 | 42.6 | 23.4 | 12.6 | 4.7 | 14.4 | 18.8 | 60.0 | 0.5 | 41.2 |
| Exports | Sea | | | | | Rail | | Road | Air | Pipeline |
| | Liquid bulk | Dry bulk | Container | General cargo | Ro-Ro | Container | Bulk | | | |
| 1999 | 18.7 | 4.5 | 19.2 | 8.6 | | 7.9 | 5.0 | 36.9 | 0.4 | |
| 2000 | 18.1 | 4.4 | 20.9 | 9.7 | | 8.7 | 5.2 | 39.5 | 0.4 | |
| 2001 | 18.2 | 3.9 | 20.8 | 9.6 | | 9.2 | 5.4 | 40.3 | 0.4 | |
| 2002 | 18.0 | 3.3 | 21.8 | 9.7 | | 9.3 | 5.5 | 40.7 | 0.5 | |
| 2003 | 21.0 | 2.6 | 20.8 | 9.1 | | 9.5 | 5.6 | 40.8 | 0.4 | |
| 2004 | 21.3 | 2.4 | 22.3 | 9.8 | | 10.3 | 5.8 | 43.5 | 0.5 | |
| 2005 | 24.7 | 2.1 | 23.0 | 10.3 | | 11.1 | 6.2 | 45.9 | 0.5 | |
| 2006 | 23.0 | 1.7 | 24.0 | 9.4 | 5.3 | 12.0 | 6.9 | 48.1 | 0.5 | |
| 2007 | 27.2 | 2.7 | 25.3 | 9.5 | 5.5 | 12.7 | 7.4 | 54.5 | 0.7 | |
| 2008 | 25.8 | 2.9 | 25.5 | 9.9 | 5.4 | 12.1 | 7.3 | 52.6 | 0.5 | |
| 2009 | 24.2 | 2.4 | 21.6 | 7.0 | 4.2 | 9.8 | 6.1 | 42.2 | 0.4 | |
| 2010 | 27.7 | 2.8 | 24.7 | 7.7 | 4.4 | 12.4 | 7.9 | 52.7 | 0.5 | |
| 2011 | 23.7 | 2.5 | 25.8 | 7.6 | 4.1 | 12.6 | 7.9 | 53.6 | 0.5 | |
| 2012 | 25.8 | 2.4 | 27.3 | 8.5 | 4.1 | 12.5 | 7.8 | 53.3 | 0.5 | |
| 2013 | 19.1 | 4.1 | 25.1 | 9.9 | 3.9 | 10.2 | 8.6 | 55.5 | 0.5 | |
| 2014 | 18.5 | 4.2 | 25.4 | 10.1 | 3.8 | 9.3 | 8.5 | 52.2 | 0.5 | |
| 2015 | 23.2 | 4.8 | 26.5 | 9.0 | 5.1 | 10.9 | 7.2 | 56.3 | 0.5 | |
| 2016 | 22.8 | 4.1 | 25.7 | 8.6 | 5.0 | 12.2 | 8.0 | 62.2 | 0.5 | |
| 2017 | 24.9 | 3.6 | 26.6 | 8.1 | 4.8 | 11.6 | 8.1 | 60.4 | 0.6 | |
| 2018 | 22.4 | 3.3 | 26.5 | 7.7 | 4.7 | 11.5 | 8.2 | 60.5 | 0.6 | |
| 2019 | 19.9 | 3.4 | 25.0 | 7.7 | 4.7 | 11.4 | 8.0 | 59.9 | 0.6 | |

Source: Based on data from Istat, Alps Crossing, Eurostat, and ENAC.

(1) In 2015 there were some breaks in the time series (for general cargo imports and Ro-Ro) because of an update to the methodology for estimating the modal distribution of the external trade data. Provisional data for 2019.

Table A.2

Import and export values by mode of transport (1)
(billions of euros)

| Imports | Sea | | | | | Rail | | Road | Air | Pipeline |
|---------|-------------|----------|-----------|---------------|-------|-----------|------|-------|------|----------|
| | Liquid bulk | Dry bulk | Container | General cargo | Ro-Ro | Container | Bulk | | | |
| 1999 | 18.0 | 6.6 | 41.5 | 19.1 | | 14.6 | 18.0 | 67.9 | 15.8 | |
| 2000 | 31.3 | 7.4 | 47.2 | 23.0 | | 17.3 | 20.7 | 82.5 | 20.1 | |
| 2001 | 28.2 | 7.6 | 44.2 | 22.3 | | 18.5 | 21.6 | 91.2 | 20.0 | |
| 2002 | 25.3 | 7.0 | 40.2 | 20.2 | | 18.5 | 21.2 | 94.8 | 19.8 | |
| 2003 | 24.5 | 6.6 | 37.3 | 19.4 | | 19.1 | 21.5 | 100.2 | 18.6 | |
| 2004 | 25.6 | 7.6 | 37.3 | 21.4 | | 20.9 | 23.1 | 111.7 | 19.7 | |
| 2005 | 33.6 | 7.7 | 36.8 | 21.3 | | 22.1 | 23.8 | 120.3 | 21.2 | |
| 2006 | 39.9 | 8.0 | 38.5 | 22.0 | 5.9 | 24.6 | 26.6 | 136.3 | 22.3 | |
| 2007 | 41.6 | 9.3 | 44.0 | 25.4 | 6.4 | 26.3 | 28.7 | 153.2 | 20.5 | |
| 2008 | 49.8 | 11.2 | 45.2 | 24.2 | 6.3 | 25.1 | 27.8 | 147.8 | 20.3 | |
| 2009 | 31.2 | 7.9 | 36.7 | 14.6 | 4.9 | 20.4 | 22.5 | 121.8 | 18.3 | |
| 2010 | 45.7 | 9.3 | 49.7 | 20.0 | 6.0 | 24.0 | 26.6 | 144.1 | 20.9 | |
| 2011 | 54.9 | 11.8 | 52.6 | 22.5 | 6.7 | 25.1 | 27.9 | 152.9 | 22.8 | |
| 2012 | 53.8 | 10.7 | 44.8 | 18.9 | 6.1 | 22.8 | 25.4 | 142.3 | 23.5 | |
| 2013 | 49.3 | 7.8 | 43.5 | 17.7 | 5.9 | 29.2 | 23.8 | 138.4 | 22.5 | |
| 2014 | 40.9 | 7.5 | 46.5 | 18.4 | 6.3 | 29.5 | 24.9 | 140.4 | 23.4 | |
| 2015 | 30.7 | 12.5 | 50.9 | 11.9 | 12.6 | 33.8 | 22.6 | 150.3 | 27.9 | 15.5 |
| 2016 | 25.5 | 11.5 | 51.0 | 11.3 | 13.8 | 34.7 | 23.9 | 156.0 | 26.5 | 11.7 |
| 2017 | 33.4 | 13.1 | 54.1 | 12.7 | 14.8 | 37.2 | 26.3 | 167.8 | 26.7 | 13.5 |
| 2018 | 40.1 | 13.7 | 56.2 | 13.8 | 14.9 | 38.2 | 27.2 | 172.8 | 29.0 | 16.0 |
| 2019 | 38.4 | 12.8 | 57.1 | 13.3 | 14.8 | 38.4 | 27.3 | 173.1 | 33.0 | 13.4 |
| Exports | Sea | | | | | Rail | | Road | Air | Pipeline |
| | Liquid bulk | Dry bulk | Container | General cargo | Ro-Ro | Container | Bulk | | | |
| 1999 | 2.9 | 1.3 | 43.7 | 22.0 | | 19.8 | 10.5 | 98.7 | 17.9 | |
| 2000 | 4.9 | 1.3 | 52.5 | 25.6 | | 23.5 | 11.9 | 112.4 | 22.8 | |
| 2001 | 4.5 | 1.2 | 54.1 | 24.9 | | 25.9 | 12.6 | 119.1 | 24.3 | |
| 2002 | 4.2 | 1.0 | 53.0 | 22.7 | | 26.0 | 12.4 | 116.7 | 24.4 | |
| 2003 | 4.9 | 0.8 | 48.6 | 20.1 | | 27.2 | 12.6 | 118.4 | 23.0 | |
| 2004 | 5.6 | 0.6 | 50.8 | 20.3 | | 30.1 | 13.7 | 129.0 | 24.4 | |
| 2005 | 8.7 | 0.4 | 52.6 | 19.3 | | 32.2 | 14.5 | 135.3 | 26.1 | |
| 2006 | 9.5 | 0.3 | 57.4 | 15.3 | 11.8 | 36.6 | 16.2 | 145.0 | 28.6 | |
| 2007 | 11.4 | 0.5 | 62.2 | 18.0 | 13.2 | 39.8 | 17.8 | 169.6 | 31.7 | |
| 2008 | 13.8 | 0.7 | 65.1 | 19.7 | 13.6 | 38.5 | 17.9 | 168.7 | 30.7 | |
| 2009 | 8.4 | 0.5 | 54.7 | 15.3 | 10.4 | 30.0 | 14.1 | 131.1 | 25.9 | |
| 2010 | 13.1 | 0.6 | 60.9 | 16.5 | 11.5 | 34.2 | 16.0 | 151.0 | 30.8 | |
| 2011 | 14.5 | 0.7 | 66.6 | 17.4 | 11.9 | 37.2 | 17.6 | 169.0 | 35.4 | |
| 2012 | 17.9 | 0.7 | 72.2 | 18.9 | 11.7 | 37.0 | 17.4 | 171.0 | 38.0 | |
| 2013 | 13.9 | 1.4 | 69.8 | 18.0 | 10.3 | 35.1 | 21.3 | 176.3 | 38.9 | |
| 2014 | 12.2 | 1.4 | 72.9 | 18.4 | 10.4 | 36.2 | 21.7 | 181.3 | 39.2 | |
| 2015 | 11.2 | 1.3 | 70.1 | 18.1 | 18.4 | 42.6 | 14.7 | 193.0 | 44.3 | |
| 2016 | 9.0 | 1.2 | 68.4 | 17.0 | 17.2 | 43.1 | 15.1 | 195.9 | 44.1 | |
| 2017 | 11.9 | 1.3 | 73.1 | 17.8 | 18.1 | 46.1 | 16.1 | 209.2 | 49.0 | |
| 2018 | 12.7 | 1.2 | 76.1 | 18.0 | 17.7 | 47.4 | 17.1 | 216.3 | 51.0 | |
| 2019 | 11.4 | 1.3 | 77.8 | 17.9 | 16.8 | 48.8 | 17.3 | 222.6 | 55.9 | |

Source: Based on data from Istat, Alps Crossing, Eurostat, and ENAC.

(1) In 2015 there were some breaks in the time series (for general cargo imports and Ro-Ro) because of an update to the methodology for estimating the modal distribution of the external trade data. Provisional data for 2019.

Table A.3

Import and export unit values by mode of transport (1)
(euros/tonne)

| Imports | Sea | | | | | Rail | | Road | Air | Pipeline |
|---------|-------------|----------|-----------|---------------|-------|-----------|-------|-------|--------|----------|
| | Liquid bulk | Dry bulk | Container | General cargo | Ro-Ro | Container | Bulk | | | |
| 1999 | 142 | 119 | 2,488 | 980 | | 1,609 | 1,072 | 1,939 | 36,929 | |
| 2000 | 241 | 123 | 2,649 | 1,112 | | 1,770 | 1,175 | 2,148 | 42,367 | |
| 2001 | 227 | 124 | 2,588 | 1,035 | | 1,862 | 1,226 | 2,269 | 54,425 | |
| 2002 | 209 | 116 | 2,361 | 933 | | 1,896 | 1,249 | 2,242 | 57,581 | |
| 2003 | 209 | 105 | 2,047 | 864 | | 1,884 | 1,251 | 2,255 | 48,422 | |
| 2004 | 224 | 109 | 2,103 | 909 | | 1,945 | 1,289 | 2,335 | 53,762 | |
| 2005 | 295 | 116 | 2,121 | 922 | | 2,042 | 1,330 | 2,404 | 59,066 | |
| 2006 | 360 | 122 | 1,928 | 924 | 1,158 | 2,116 | 1,388 | 2,528 | 59,252 | |
| 2007 | 365 | 133 | 2,014 | 1,016 | 1,302 | 2,217 | 1,440 | 2,621 | 53,885 | |
| 2008 | 466 | 164 | 2,168 | 1,064 | 1,384 | 2,271 | 1,492 | 2,723 | 60,377 | |
| 2009 | 314 | 161 | 2,171 | 984 | 1,172 | 2,196 | 1,414 | 2,543 | 52,471 | |
| 2010 | 431 | 183 | 2,364 | 988 | 1,430 | 2,233 | 1,398 | 2,588 | 64,753 | |
| 2011 | 561 | 214 | 2,608 | 1,058 | 1,514 | 2,338 | 1,475 | 2,740 | 71,558 | |
| 2012 | 681 | 208 | 2,696 | 1,070 | 1,565 | 2,268 | 1,466 | 2,702 | 76,457 | |
| 2013 | 601 | 165 | 2,495 | 960 | 1,800 | 2,594 | 1,321 | 2,585 | 82,822 | |
| 2014 | 553 | 167 | 2,553 | 948 | 1,925 | 2,498 | 1,311 | 2,512 | 76,832 | |
| 2015 | 366 | 249 | 2,412 | 1,042 | 2,797 | 2,474 | 1,299 | 2,646 | 81,779 | 391 |
| 2016 | 296 | 230 | 2,294 | 950 | 3,074 | 2,510 | 1,320 | 2,698 | 70,227 | 300 |
| 2017 | 370 | 273 | 2,396 | 1,065 | 3,097 | 2,578 | 1,383 | 2,798 | 64,263 | 334 |
| 2018 | 454 | 287 | 2,420 | 1,084 | 2,995 | 2,560 | 1,410 | 2,803 | 54,684 | 406 |
| 2019 | 420 | 302 | 2,438 | 1,059 | 3,129 | 2,667 | 1,448 | 2,886 | 69,304 | 325 |
| Exports | Sea | | | | | Rail | | Road | Air | Pipeline |
| | Liquid bulk | Dry bulk | Container | General cargo | Ro-Ro | Container | Bulk | | | |
| 1999 | 157 | 277 | 2,279 | 2,545 | | 2,511 | 2,116 | 2,677 | 40,282 | |
| 2000 | 271 | 287 | 2,515 | 2,637 | | 2,717 | 2,278 | 2,845 | 51,982 | |
| 2001 | 249 | 300 | 2,594 | 2,610 | | 2,808 | 2,340 | 2,951 | 54,715 | |
| 2002 | 233 | 299 | 2,436 | 2,336 | | 2,800 | 2,251 | 2,868 | 53,508 | |
| 2003 | 235 | 291 | 2,337 | 2,213 | | 2,863 | 2,267 | 2,902 | 51,256 | |
| 2004 | 263 | 261 | 2,275 | 2,060 | | 2,920 | 2,339 | 2,963 | 51,160 | |
| 2005 | 352 | 211 | 2,288 | 1,868 | | 2,913 | 2,334 | 2,950 | 55,925 | |
| 2006 | 413 | 157 | 2,398 | 1,629 | 2,237 | 3,047 | 2,334 | 3,015 | 59,448 | |
| 2007 | 418 | 186 | 2,460 | 1,889 | 2,393 | 3,127 | 2,386 | 3,114 | 46,395 | |
| 2008 | 534 | 221 | 2,551 | 1,997 | 2,519 | 3,179 | 2,460 | 3,209 | 61,747 | |
| 2009 | 345 | 217 | 2,529 | 2,172 | 2,455 | 3,067 | 2,314 | 3,105 | 63,753 | |
| 2010 | 473 | 212 | 2,464 | 2,145 | 2,606 | 2,750 | 2,029 | 2,865 | 67,666 | |
| 2011 | 611 | 270 | 2,578 | 2,299 | 2,907 | 2,944 | 2,218 | 3,155 | 71,263 | |
| 2012 | 692 | 300 | 2,641 | 2,224 | 2,854 | 2,951 | 2,230 | 3,209 | 78,245 | |
| 2013 | 727 | 349 | 2,775 | 1,819 | 2,617 | 3,440 | 2,465 | 3,175 | 82,338 | |
| 2014 | 662 | 343 | 2,866 | 1,822 | 2,767 | 3,897 | 2,568 | 3,472 | 82,010 | |
| 2015 | 481 | 281 | 2,648 | 2,009 | 3,612 | 3,894 | 2,027 | 3,426 | 85,621 | |
| 2016 | 396 | 304 | 2,663 | 1,971 | 3,433 | 3,528 | 1,882 | 3,151 | 81,710 | |
| 2017 | 476 | 358 | 2,746 | 2,198 | 3,760 | 3,979 | 1,985 | 3,466 | 80,345 | |
| 2018 | 569 | 378 | 2,876 | 2,331 | 3,780 | 4,111 | 2,079 | 3,576 | 79,486 | |
| 2019 | 572 | 378 | 3,107 | 2,319 | 3,604 | 4,287 | 2,176 | 3,719 | 91,105 | |

Source: Based on data from Istat, Alps Crossing, Eurostat, and ENAC.

(1) In 2015 there were some breaks in the time series (for general cargo imports and Ro-Ro) because of an update to the methodology for estimating the modal distribution of the external trade data. Provisional data for 2019.

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