

## European dependence on Russia: a primary issue

The outbreak of the conflict between Ukraine and Russia, in addition to the cost in human lives, will also entail an economic cost. Russia's importance as a global exporter of oil, natural gas and other commodities will be the main channel through which the economic impact will be felt beyond the borders of the two warring countries. Indeed, Brent oil and gas prices rose by more than 20% and 50%, respectively, in the first month of the conflict.<sup>1</sup>

The increase in uncertainty and a new open front for global value chains that are already under stress will be two other significant channels for the macroeconomic

impact. This impact will be asymmetric by region, with a clearly heavier toll for European economies as a result of the closer ties that bind us with both countries.

### Europe and Russian imports

Exports of Russian goods and services to the world represent around 2% of the total (0.2% in the case of Ukraine). However, in the case of the EU-27, imports from Russia account for 7% of gross imports of goods and services.<sup>2</sup> However, while there are countries with very high import ties, such as Bulgaria (slightly above

### Gross imports from Russia

(% of total imports)

	TOTAL	AGRICULTURE	MINING	MANUFACTURING	Food	Textile & clothing	Wood & paper	Coke & ref. oil products	Chemicals & pharma.	Metals	Electronic equipment	Machinery	Transportation	Repair of machinery	UTILITIES	CONSTRUCTION	SERVICES
EU-27	7.0	2.1	21.0	5.4	2.0	0.3	7.5	41.8	4.2	11.9	0.4	0.6	1.5	1.1	10.5	10.6	4.7
Euro area	4.8	1.6	16.3	3.6	1.4	0.3	3.7	32.9	2.6	8.8	0.3	0.4	0.7	0.8	5.2	4.1	3.4
Germany	3.0	0.6	17.1	2.3	0.5	0.2	1.4	24.2	0.8	5.4	0.2	0.3	0.3	0.3	0.5	1.9	2.0
Austria	1.4	0.3	3.7	0.6	0.2	0.2	1.0	2.2	0.3	2.3	0.1	0.2	0.1	0.4	0.1	1.5	2.3
Belgium	1.6	1.2	5.6	1.7	0.6	0.3	1.0	14.2	0.8	5.0	0.1	0.1	0.3	2.5	0.1	1.4	0.8
Bulgaria	20.3	0.6	87.1	7.8	0.9	0.3	2.5	48.2	2.3	9.1	0.8	0.7	1.4	2.1	1.5	10.8	12.5
Croatia	2.1	0.1	17.4	1.0	0.2	0.2	0.5	8.7	1.8	1.0	0.1	0.1	0.4	0.3	0.0	1.7	1.6
Cyprus	12.6	3.9	12.9	4.9	1.5	1.3	2.4	2.5	0.8	3.7	1.6	0.9	8.3	4.2	8.8	32.2	18.4
Denmark	2.6	1.2	9.8	3.3	1.2	0.1	1.7	27.0	0.5	4.6	0.1	0.0	0.1	0.3	0.3	3.1	1.9
Slovakia	7.1	0.2	87.1	1.9	0.4	0.2	0.6	30.2	4.4	1.7	0.2	0.2	0.1	0.6	0.3	3.6	6.3
Slovenia	2.3	0.4	53.4	1.2	0.2	0.1	0.8	9.1	1.1	1.5	0.1	0.2	0.1	0.5	0.1	2.1	2.8
SPAIN	1.0	1.1	2.9	0.8	0.4	0.2	0.3	9.6	0.6	0.9	0.1	0.1	0.2	0.2	0.1	1.0	0.8
Estonia	8.6	4.4	69.0	8.2	2.5	2.6	17.4	33.9	18.3	15.5	1.0	1.2	3.9	3.0	9.1	6.6	8.6
Finland	9.2	9.3	57.8	7.5	1.8	0.7	10.9	39.0	11.3	18.0	0.7	0.4	1.0	1.2	30.3	5.0	5.3
France	1.9	0.2	12.8	1.3	1.0	0.1	0.7	14.9	0.8	1.3	0.1	0.2	0.5	0.3	0.4	1.3	1.5
Greece	7.2	6.0	12.2	8.0	1.2	0.2	1.7	44.2	0.7	11.9	0.1	0.2	0.1	0.4	0.3	2.8	4.0
Hungary	4.8	0.3	64.7	2.1	0.3	0.1	0.8	29.6	4.0	0.9	0.2	0.2	0.1	0.6	0.2	1.9	3.3
Ireland	0.7	0.2	3.7	0.7	0.5	0.1	0.4	8.3	0.9	0.6	0.2	0.1	0.0	0.4	0.6	1.4	0.7
Italy	3.3	0.8	19.8	1.8	0.6	0.3	1.6	22.0	0.4	4.1	0.2	0.1	0.1	0.4	0.3	1.9	2.2
Latvia	9.6	17.0	81.6	6.2	2.3	1.9	10.0	14.4	7.6	21.2	1.6	1.1	1.5	3.0	60.1	4.5	8.6
Lithuania	16.9	5.8	57.0	7.3	4.0	1.4	7.7	41.0	6.6	12.0	0.8	1.0	2.6	2.9	36.4	9.1	14.2
Luxembourg	0.3	0.1	2.6	0.3	0.6	0.1	0.4	0.1	0.4	1.2	0.0	0.1	0.0	0.1	0.0	0.7	0.3
Malta	1.9	1.0	8.4	0.8	0.4	0.2	0.5	4.6	0.1	0.2	0.5	0.2	0.3	0.6	0.6	1.7	2.2
Netherlands	3.1	0.3	20.6	1.6	0.3	0.1	1.1	15.7	0.9	3.8	0.4	0.1	0.4	0.4	0.6	2.3	1.8
Poland	6.7	1.2	50.4	3.9	1.2	0.4	2.7	42.2	4.0	5.4	0.3	0.3	1.8	0.7	10.2	4.2	4.8
Portugal	1.7	0.4	9.5	1.1	0.8	0.1	0.8	13.3	0.7	1.0	0.1	0.0	0.0	0.2	0.2	0.6	1.1
Czech Rep.	4.4	0.4	53.2	1.7	0.7	0.2	1.6	13.3	3.5	2.8	0.2	0.2	0.7	0.6	0.2	2.7	4.2
Romania	3.9	0.3	42.5	2.0	0.6	0.1	3.7	31.3	2.0	1.6	0.5	0.3	0.6	0.3	0.4	2.0	3.0
Sweden	3.1	1.6	22.5	2.1	0.4	0.2	1.5	19.3	3.6	1.2	0.2	0.1	0.2	0.3	0.2	1.7	2.0
US	0.9	1.0	1.6	0.9	0.4	0.0	0.5	10.6	0.7	3.5	0.1	0.1	0.2	0.2	0.4	1.6	0.9
China	3.2	2.9	9.0	1.7	2.7	0.3	10.5	12.8	0.8	3.0	0.1	0.1	0.3	1.1	1.9	4.5	2.7

Note: Data referring to 2018, the most recent year in the OECD TiVA data (November 2021).

Source: CaixaBank Research, based on OECD TiVA data (November 2021).

1. The prices of some food (e.g. cereals) and fertilisers have also risen since the beginning of the conflict. However, their economic impact is not comparable to that of rising energy prices for developed economies.

2. We use the latest update (November 2021) of the OECD TiVA (Trade in Value Added) data for imports, where the most recent year is 2018. The advantage of using these data is that they allow for a more refined analysis of the true origin of the goods and services that are received, consumed and exported in a given country. At this point in the article, we use gross imports according to where they come from (a more classic analysis). However, later we will exploit the complexity of the TiVA data to determine the initial origin of the products that are used in all production processes and consumed in a given country.

20% of total imports), Finland (around 10%) or the Baltic states (between 8% and 17%), there are others where the trade ties are very weak, such as Ireland (0.7%) or Spain (1.0%).<sup>3</sup> In the case of Germany, France and Italy, the three biggest economies of the EU-27, they would lie in the mid-low range if we were to restrict ourselves to looking at Russian imports as a proportion of total imports (between 2% and 3.5%, see the aggregate figures in the first table).

Although these aggregate figures may, at first glance, seem relatively reassuring for the large European economies, it is clear that further examination is needed. After all, Russia is the world's second largest exporter of oil (accounting for 11% of the total) and the leading exporter of natural gas (25%), with Europe being its main market. Looking at the breakdown of European imports

by sector, Russia stands out as a trading partner in the mining sector and in the manufacture of coke and refined oil products, accounting for 21% and 42%, respectively, of the total imports of the EU-27 in these sectors (see sectoral breakdown in the first table). This high dependence on certain Russian imports is also seen in the large countries of the Union, such as Germany, France and Italy, with percentages of between 13% and 20% in the mining sector and between 15% and 24% in the case of refined oil products. Russia also appears to play a significant role as a European supplier of metals, as well as utilities in those countries with which it shares a border (e.g. in Latvia, 60% of utility imports come from Russia).

### Russian value added in final demand by country (% of final demand)

	TOTAL	AGRICULTURE	MINING	MANUFACTURING	Food	Textile & clothing	Wood & paper	Coke & ref. oil products	Chemicals & pharma.	Metals	Electronic equipment	Machinery	Transportation	Repair of machinery	UTILITIES	CONSTRUCTION	SERVICES
EU-27	1.0	1.3	16.1	2.2	1.1	0.8	1.6	16.8	1.7	2.2	1.0	1.1	1.1	1.0	2.9	0.9	0.7
Euro area	0.9	1.1	15.8	2.0	1.0	0.8	1.4	15.2	1.5	2.0	1.0	1.0	1.0	1.0	2.5	0.8	0.6
Germany	1.0	1.2	17.4	1.9	1.0	0.8	1.5	18.9	1.4	2.0	0.9	1.0	1.0	1.0	2.1	0.8	0.6
Austria	0.9	0.9	4.2	1.5	0.9	0.9	1.4	10.1	1.4	2.3	0.9	1.1	1.0	1.2	1.4	0.7	0.9
Belgium	0.9	1.4	5.7	1.7	1.1	0.9	1.3	8.7	1.1	2.2	0.9	1.0	1.1	2.5	1.6	1.2	0.6
Bulgaria	5.7	4.7	44.7	7.6	6.6	1.9	5.6	45.8	5.4	9.3	2.6	2.3	2.5	3.5	26.0	9.0	3.5
Croatia	1.2	0.9	6.8	2.1	1.2	1.0	1.0	11.6	2.2	1.5	1.1	1.1	1.4	1.0	2.3	1.2	0.8
Cyprus	4.4	3.1	8.6	5.1	2.7	1.9	3.1	14.8	2.6	5.2	3.0	1.9	6.6	3.0	4.2	2.0	6.2
Denmark	0.9	1.5	12.8	2.4	1.3	0.8	1.7	23.9	1.1	2.4	0.8	1.1	0.9	1.1	0.8	1.0	0.9
Slovakia	3.1	1.9	52.1	4.4	1.6	1.1	2.1	39.6	5.9	3.5	1.2	1.4	1.6	1.5	16.0	1.7	1.8
Slovenia	1.3	1.1	14.1	2.2	1.2	0.8	2.3	16.3	2.3	2.4	1.2	1.3	1.2	1.2	2.5	1.1	1.0
SPAIN	0.4	0.6	11.1	1.2	0.6	0.6	0.7	5.8	1.0	1.1	0.8	0.8	0.9	0.6	1.1	0.4	0.3
Estonia	3.8	4.7	37.7	5.7	3.5	3.6	7.1	36.0	12.0	8.6	1.9	2.3	4.1	4.4	4.8	4.0	3.9
Finland	2.2	2.8	42.5	5.2	2.0	1.4	3.6	37.8	4.9	5.5	1.4	1.7	1.9	1.8	5.8	2.3	1.5
France	0.6	0.7	20.1	1.7	0.8	0.7	1.0	12.2	1.3	1.3	0.9	1.0	1.0	0.7	2.2	0.5	0.4
Greece	1.9	2.9	31.7	5.1	2.1	0.9	2.0	25.6	1.7	4.1	1.7	1.4	1.0	1.4	3.8	1.7	1.1
Hungary	2.5	2.3	27.8	4.6	2.4	1.1	2.0	34.1	3.6	3.1	1.1	1.2	1.2	1.4	6.5	2.8	1.6
Ireland	0.6	0.9	15.3	1.1	0.9	0.6	1.1	8.4	0.7	2.2	0.7	0.8	0.8	0.5	0.4	0.8	0.5
Italy	0.9	0.9	13.5	1.9	1.0	0.6	1.2	14.5	1.5	1.7	1.0	1.0	0.9	0.9	2.3	0.6	0.5
Latvia	4.1	7.2	49.8	6.3	4.1	3.3	5.0	40.2	7.2	11.1	2.5	2.7	2.7	4.1	17.9	3.2	3.3
Lithuania	6.2	4.7	46.7	9.6	3.8	2.7	5.9	41.5	5.5	6.9	2.0	2.4	3.3	3.7	19.0	5.3	5.1
Luxembourg	0.6	0.7	6.6	1.4	1.3	0.7	1.2	6.9	1.0	1.9	0.8	0.9	0.9	0.9	0.8	0.5	0.6
Malta	1.4	1.4	7.5	1.6	1.2	0.8	1.3	13.2	1.4	2.1	1.3	1.4	0.9	1.2	3.1	1.2	1.7
Netherlands	0.9	1.0	18.5	2.1	0.9	0.8	1.4	16.9	1.7	2.2	0.9	0.9	1.1	0.8	2.7	0.8	0.6
Poland	2.3	2.4	14.0	3.9	1.7	1.0	2.4	31.4	3.9	4.0	1.4	1.4	2.5	1.7	4.9	2.2	1.6
Portugal	0.6	0.7	9.3	1.5	0.8	0.5	0.8	10.4	1.3	1.2	0.8	0.9	0.8	0.7	2.1	0.6	0.4
Czech Rep.	2.0	1.7	19.6	2.7	1.7	1.2	2.2	24.7	6.4	3.0	1.2	1.6	1.7	1.5	9.8	1.4	1.4
Romania	1.6	1.3	25.9	2.7	1.0	0.8	2.2	15.4	2.3	2.6	1.2	1.5	1.5	1.2	4.8	1.6	1.1
Sweden	1.0	1.6	19.1	2.2	1.1	0.9	1.8	24.4	2.4	1.8	1.1	1.0	1.0	1.3	1.2	1.0	0.8
US	0.2	0.3	0.4	0.5	0.3	0.5	0.4	1.9	0.4	0.9	0.4	0.5	0.5	0.5	0.2	0.2	0.1
China	0.5	0.5	2.7	0.7	0.5	0.5	0.9	5.0	0.6	0.8	0.6	0.6	0.6	0.8	1.3	0.6	0.3

Note: Data referring to 2018, the most recent year in the OECD TIVA data (November 2021).

Source: CaixaBank Research, based on OECD TIVA data (November 2021).

3. This is the share of Russian imports of goods and services in the total imports of goods and services. This figure can vary significantly with changes in the price of energy goods. In the case of Spain, the figure has increased significantly in 2021, according to data from Datacomex.

**The Russian origin of European final demand**

In a second, more detailed examination, we exploit the wealth of the OECD Trade in Value Added (TiVA) dataset, based on international input-output tables, which allow us to properly assess the origin of goods and services consumed in a given country (whether for domestic production or consumption, or for export), since they trace the «ins and outs» of intermediate inputs throughout the entire production process. As an example, if we import a particular good from a given country, but most of that good has been produced in a third country, the imports in gross terms do not reflect the importance of that third country, whereas the TiVA tables do.

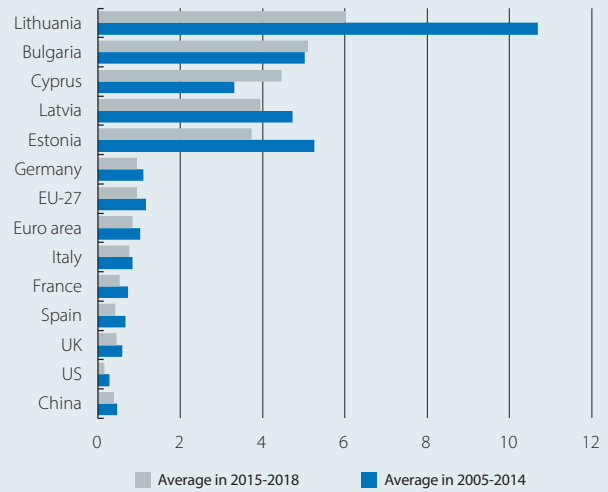
Thus, in this section we focus on the final demand of the different European countries and, using the TiVA tables, we account for the importance of the value added by Russia in that final demand. In aggregate terms, and despite following the trace of all Russian goods and services, they do not represent a particularly significant portion of final demand in the EU-27 countries, at only 1% (see second table). This is a much lower figure than when looking at gross imports, since final demand contains many more services, most of which are not tradable (i.e. they are produced and consumed domestically).

In the breakdown by country, we see how in the Baltic states and Bulgaria these Russian goods and services (or the Russian value added) account for a higher percentage of total final demand, albeit only a discrete difference, while in the large European economies they represent much less. However, when we look at the disaggregation by sector, the importance of Russian energy products in a large number of European countries once again becomes apparent. For instance, in Germany, 17% of the final demand for mining products comes from Russia and 19% of refined oil products are Russian. In Spain, the EU country where imports from Russia represent the lowest proportion of final demand, 11% of final demand in the mining sector is provided by Russia.

This similarity between the figures for gross imports and the analysis using the TiVA data at the sectoral level is precisely due to Russia’s specialisation in the export of commodities, and of energy in particular. Much of what European countries import directly from Russia is consumed in the country itself, since some of the main uses of oil and natural gas are transportation (e.g. private cars), electricity generation and residential use to heat our homes. On the other hand, Russia’s importance in the energy sector entails a significant «footprint» in many products, mainly in some manufacturing sectors, with integrated production chains that cross borders before reaching the final consumer.

**Russian value added in final demand by country**

(% of final demand)



Source: CaixaBank Research, based on OECD TiVA data (November 2021).

**Decoupling from Russia in the short and medium term**

In short, Russia’s importance in the global energy market, and in the EU’s energy consumption in particular, makes a rapid decoupling with the country difficult. To address this situation, the European Commission has proposed a new energy plan (REPowerEU) to reduce the region’s dependence on Russian fossil fuels, starting with natural gas. Indeed, one of the first objectives is to replace two-thirds of the gas imported from Russia within the next 12 months. This is a highly ambitious aspiration. For instance, a recent report by the International Energy Agency considered a possible reduction of one third possible in the short term, by employing measures such as increasing imports via gas pipelines from Norway or Azerbaijan and imports of liquefied natural gas, accelerating renewable energy projects (solar and wind) and reactivating some nuclear reactors that have been shut down in recent years.<sup>4</sup> In this regard, a few days ago the EU and the US agreed to increase the supply of US gas.

However, beyond the difficulties of finding substitutes for Russian products in the very short term, in the medium term an economic decoupling with the country is more viable. The European Green Deal already includes massive planned investments aimed at reducing the EU’s use of fossil fuels for energy. Moreover, since the annexation of Crimea in 2014 there has been a decline in European countries’ ties with Russia (see chart), partly as a result of the sanctions imposed since then.

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4. See IEA (March 2022). «A 10-point Plan to Reduce the European Union’s Reliance on Russian Natural Gas».