

Antezza, Arianna et al.

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The Ukraine Support Tracker: Which countries help Ukraine and how?

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KIEL WORKING PAPER

**The Ukraine Support
Tracker:**

**Which countries help
Ukraine and how?**



No. 2218 May 2022

Arianna Antezza, André Frank, Pascal Frank, Lukas Franz, Ekaterina Rebinskaya and Christoph Trebesch

ABSTRACT

THE UKRAINE SUPPORT TRACKER: WHICH COUNTRIES HELP UKRAINE AND HOW?

*Arianna Antezza, André Frank, Pascal Frank, Lukas Franz,
Ekaterina Rebinskaya and Christoph Trebesch¹*

NOTE: This is the second version of the paper and database. In the coming weeks, we plan to continuously expand, correct, and improve this project. We therefore very much welcome any help to improve the tracker. Please send us feedback and comments to ukrainetracker@ifw-kiel.de. We are greatly indebted to dozens of readers who have sent us helpful comments and suggestions.

This paper presents the “Ukraine Support Tracker”, which lists and quantifies military, financial and humanitarian aid to Ukraine in the context of the Russia-Ukraine war. This second version covers the period January 24 until April 23, 2022. We measure support from Western governments, namely by the G7 and European Union member countries. Private donations, help for refugees outside of Ukraine, or aid through non-governmental organizations are not included due to a lack of systematic data. To value in-kind support like military equipment or weapons, we rely on government statements as well as own calculations using market prices. We find significant differences in the scale of support across countries, both in absolute terms and as percent of donor country GDP. In billions of Euros, by far the largest bilateral supporter of Ukraine is the United States, followed by Poland, the United Kingdom, Canada and Germany. In percent of donor GDP, small Eastern European countries stand out as particularly generous.

Keywords: International aid, military aid, war, geoeconomics

JEL classification: F35, F51, H56, H63, H84, H81

Arianna Antezza

Kiel Institute and Humboldt University
arianna.antezza@ifw-kiel.de

André Frank

Kiel Institute and Kiel University
Andre.Frank@ifw-kiel.de

Pascal Frank

Kiel Institute and University of Würzburg
pascal.frank@ifw-kiel.de

Lukas Franz

Kiel Institute for the World Economy
Kiellinie 66, D-24105 Kiel; Germany
Email: lukas.franz@ifw-kiel.de;
www.ifw-kiel.de

Ekaterina Rebinskaya

Kiel Institute for the World Economy
Kiellinie 66, D-24105 Kiel; Germany
ekaterina.rebinskaya@ifw-kiel.de
www.ifw-kiel.de

Christoph Trebesch

Kiel Institute for the World Economy
Kiellinie 66, D-24105 Kiel; Germany
Email: christoph.trebesch@ifw-kiel.de
www.ifw-kiel.de

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¹Corresponding author: Christoph Trebesch (christoph.trebesch@ifw-kiel.de), but ideally contact us at ukrainetracker@ifw-kiel.de. Further contact details: arianna.antezza@ifw-kiel.de; andre.frank@ifw-kiel.de; pascal.frank@ifw-kiel.de; lukas.franz@ifw-kiel.de; ekaterina.rebinskaya@gmail.com.

1. Introduction

Russia's attack on Ukraine is causing staggering human suffering and destruction. Many Western leaders have pledged to "stand with Ukraine" and announced major military and humanitarian support. This paper asks: What do the numbers say? How large is the support for Ukraine? What are the most supportive governments? And what type of support do countries offer – military, humanitarian, and/or financial aid? To address these questions, we create a new database, the "Ukraine Support Tracker", which lists and quantifies the support of Western governments to Ukraine. In this, second, version, we start tracing aid on January 24, 2022, the day NATO put some of its troops on standby and end on April 23.

This project fills a gap in the economic discussion on the Russia-Ukraine war. Thus far, the debate has focused on sanctions and other measures to hurt Russia (e.g., Bachmann et al. 2022). Less attention has been devoted to measures to support Ukraine (one important exception being Becker et al. 2022). Indeed, most of the discussion on aid to Ukraine has been anecdotal, while systematic data and rigor has been missing.

The paper can also be seen as an extension of the 200-year panorama in Horn, Reinhart and Trebesch (2020), which traces international support via government-to-government loans and grants in major wars, financial crises and natural disasters back to 1790 and worldwide. Indeed, in future versions of this paper, we plan to add historical comparisons to place the current international support for Ukraine into a bigger picture.

The main aim of this database is to quantify the scale of aid to Ukraine and to make the support measures comparable across donor countries. We quantify the support flows by Western governments to Ukraine in millions of Euros, accounting for both financial and in-kind transfers. To do so, we set up a comprehensive database that brings together information from official government sources, existing lists of Ukraine aid, and reports by renowned news media.

An important challenge is to quantify non-financial transfers, such as in-kind shipments of military equipment, weapons, medicines, or foodstuff. In many cases, governments report the value of their in-kind donations in their national currency, which we can use as the baseline value. In other cases, however, governments do not report the value of aid but only mention the items supplied, such as specific weapons or several "tons of foodstuff". We assign a monetary value to in-kind aid using market prices and data on previous instances of international aid deliveries, thus facilitating the comparison of assistance provided across countries.

We mainly focus on bilateral (government-to-government) commitments. This means that not all types of support are covered. In particular, we cannot quantify the large-scale effort and expenses to help refugees having fled Ukraine, especially by neighboring countries like Poland or Moldova (see Section 6). Quantifying this type of support is hard, since there is no internationally comparable data on the cost of hosting refugees, most of the help is in-kind and incurred by private households rather than governments, and the available statistics on Ukrainian refugees are noisy and incomplete. We also do not count private donations, commitments by international financial organizations, or those by non-governmental

organizations (NGOs). The available evidence suggests that private donations are sizable in some countries and can surpass the scale of support by governments.²

We also cannot provide a complete picture of bilateral aid, because some governments do not share details on their support to Ukraine, especially when it comes to sending military equipment and weapons. However, we did our best to meticulously list and quantify all support measures that have become publicly known. This means that we also evaluate leaks of official documents, which list the type and value of military aid in detail, e.g. by Germany or Italy. Moreover, in many cases, weapon deliveries ultimately become public once they have been made, which allows tracking them ex-post, e.g. in the case of Poland.

According to the dataset, total *bilateral commitments*³ announced by the EU and G7 governments amounts to €23.93 billion from January 24, 2022, until April 23, 2022. The United States (US) is the largest bilateral supporter of Ukraine and accounts for more than 43% of this total, with the equivalent of €10.31 billion committed. All EU country governments combined committed a total of €7.08 billion, plus €2.22 billion from the EU Commission, and a further €2 billion from the European Investment Bank. It is remarkable that the US alone is giving almost the same as all the EU countries combined, in whose immediate neighborhood the war is raging. Moreover, the commitments by the three Anglo-Saxon countries US, UK and Canada easily exceed those of the EU countries. Not (yet) included are commitments by international organizations such as the International Monetary Fund (IMF) or the World Bank, but our preliminary data show additional commitments running through these organization worth at least €5.52 billion.⁴

The remainder of the paper is structured as follows. Section 2 gives an overview of how we construct the database, focusing on bilateral (government-to-government) support. Section 3 discusses multilateral and European-level aid. Section 4 summarizes data on aid to Ukraine before January 24, 2022. Section 5 presents the main insights from our new database, in particular the country rankings. Section 6 presents a brief overview of refugees flows from Ukraine. The last section concludes.

2. Bilateral Support for Ukraine - Data Construction, Definitions and Challenges

This section provides an overview of definitions, sources, and measurement of assistance included in our new database. First, we discuss the types of aid considered. We then describe the data collection process, the primary sources, and the value estimation procedure for in-kind aid like military equipment, medicines, or food aid.

Country sample: We focus on 31 Western countries. The largest group are the 27 EU member countries: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg,

² In Germany, for example, private donations for humanitarian aid to Ukraine exceed €631 million as of March 25 (according to DZI 2022, which gathers data on donations to 67 aid organizations and foundations). This sum is higher than the total amount of humanitarian aid promised by the government at that point in time.

³ Bilateral commitments include support delivered through the World Bank and the International Monetary Fund.

⁴ Note that we include *bilateral* loan and grant commitments that are made via the World Bank and IMF. Bilateral commitments via other organizations, such as the Red Cross and the UNHCR are not (yet) included, because they do not report systematic information or data and because the aid is mainly in-kind and, thus, much hard to quantify.

Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, and Sweden. In addition, we include the (remaining) member countries of the Group of 7 (G7), meaning that we also code support by Canada, Great Britain, Japan, and the United States. Moreover, we track and include assistance provided by the EU Commission in the core database.

What type of assistance do we track? Government-to-government support: This version of the database focuses on government commitments made to the government of Ukraine. We only consider flows going into Ukraine, but not the support to neighboring countries such as Moldova or Poland, which welcomed record refugee numbers. Accordingly, we also do not include support extended between fellow NATO members.⁵

Since we focus on flows directed to Ukraine, *this version of the database does not include other types of support, in particular not domestic spending for Ukrainian refugees that have fled the country*. Given the very large number of refugees, the costs and efforts for hosting them can be substantial and likely surpass the value of total commitments to the government of Ukraine for a number of donor countries. This is especially true for neighboring countries like Poland, which have reportedly admitted 3 million Ukrainian refugees, but also Moldova, where Ukrainian refugees now reportedly exceed 15% of the population. Section 6 presents more details on the support for Ukrainian refugees.

Similarly, we do not count donations by private individuals, companies, churches, or non-governmental organizations (NGOs). Providing a systematic overview of these types of donations remains challenging as there is no standardized reporting or data on these types of aid, and press reporting is unsystematic.⁶

We have also *not* (yet) systematically collected support from international organizations like the Red Cross or the United Nations, mainly because of the lack of data and reporting by most of them. We plan to include estimates on these flows in one of the next updates of the database. In this version of the paper, we provide a short overview on easily identifiable commitments by international organizations in Section 3. This includes information on commitments by international financial institutions like the IMF, the World Bank, and the European Bank for Reconstruction and Development (EBRD). Commitments by the European Investment Bank (EIB) are counted as EU aid, because the “EIB is the bank of the European Union”, according to their website and statutes.

Moreover, a new addition in this version and data release is that *we now include bilateral grants and loans made through the IMF or World Bank* as bilateral aid in our core dataset. Examples include grants and loans made to a multi-donor support fund for Ukraine set up by the World Bank, or a Canadian bilateral loan worth €730 million made through the IMF. The reason we count these contributions is that they are “top up” bilateral commitments that are merely channeled through these organizations and thus equivalent to a direct bilateral transfer. These

⁵ Whenever we were unable to disentangle the aid sent directly to Ukraine’s government from aid sent to neighboring countries, we assumed upper bounds and reported the total value of the aid for Ukraine. One example is the US commitment of \$647 million for an “Economic Support Fund” that allocates resources not only to Ukraine, but also to other countries affected by the Russia-Ukraine war (dataset ID: USH3). This package is counted entirely as aid for Ukraine and was reported in the [Ukraine Supplemental Appropriation Act 2022](#).

⁶ Some private donations are also channeled through international organizations. For example, UNHCR’s Ukraine emergency response received more than \$200 million from companies, foundations, and individuals (UNHCR 2022; reported on March 14). Furthermore, there are in-kind donations that are hard to evaluate. Private firm SpaceX reported to have sent “thousands” of Starlink satellite internet kits to Ukraine following the Russian invasion (Sheetz 2022), although these donations seem to have been financed by the US government (Lima 2022).

cases are highlighted in the main database and can be easily dropped by users of the data (“Main Database”, column S).

Defining humanitarian, financial, and military support: We distinguish between military, humanitarian, and financial assistance. Military support includes all types of weapons and military equipment alongside items explicitly donated to the Ukrainian army (such as bottled water, gasoline, or foodstuff). Humanitarian aid refers to assistance supporting the civilian population, mainly food, medicines, and other relief items.

Financial support includes grants, loans and loan guarantees made to the government of Ukraine.⁷ We also consider currency swap lines extended to the Ukrainian central bank, since these are standing credit lines allowing Ukraine to pay for imports and urgent war necessities in foreign currency (Poland extended a \$1 billion line on February 24). *Financial support that is tied to military purposes is counted as military aid.* This includes Sweden’s grant to the Ukrainian Armed Forces (of kr 500 million or €48.3 million on February 27) or Germany’s more recent €1.2 billion financial commitments for weapon purchases by Ukraine. Other important examples are the United States’ “Foreign Military Financing Program” for Ukraine, which provides loans and grants for the purchase of weapons and defence equipment, as well as the European Union’s €1.5 billion European Peace Facility (EPF) which is set up to reimburse the cost of military weapons and equipment to EU member countries who deliver military material to Ukraine.

Commitments vs. disbursements: We generally report commitments instead of actual deliveries, as information on deliveries is typically scarce. We may thus overestimate the actual amount of aid delivered in some cases.

Sources: To create our new database, we follow the approach of existing trackers such as the “United Nations COVID-19 Vaccine Market Dashboard” and combine official government sources with information from international news media and existing overviews on aid to Ukraine. Specifically, we follow three steps consulting different types of sources:

- Our starting point consists in several helpful ***cross-country overview lists on military and humanitarian aid to Ukraine***. Two such lists are assembled and regularly updated by the British House of Commons Library (Curtis and Mills 2022 and Brien and Loft 2022). We also draw on the Wikipedia page “List of foreign aid to Ukraine during the Russo-Ukrainian War”⁸, and a factsheet of EU aid by the European Civil Protection and Humanitarian Aid Operations⁹. Furthermore, there exists data collected by The Forum on Arms Trade¹⁰, Politico¹¹, and Aljazeera¹². Neither of these lists is complete, and a systematic comparison revealed errors and inconsistencies. Moreover, these lists state individual aid announcements without systematically quantifying the *value* of assistance, making comparisons across donors challenging.

⁷ These include, for example, Italy’s grant of €110 million (approved on February 27); France’s loan of €300 million with a 1.04% interest rate and maturity of 15 years (committed in early March, approved on March 28) and Japan’s loan of \$100 million (announced on March 7), which is channelled as “parallel financing” by the World Bank.

⁸ See https://en.wikipedia.org/wiki/List_of_foreign_aid_to_Ukraine_during_the_Russo-Ukrainian_War.

⁹ See https://ec.europa.eu/echo/where/europe/ukraine_en.

¹⁰ See <https://www.forumarmstrade.org/ukrainearms.html>.

¹¹ See <https://www.politico.com/news/2022/03/22/ukraine-weapons-military-aid-00019104>.

¹² See <https://www.aljazeera.com/news/2022/2/28/which-countries-are-sending-military-aid-to-ukraine>.

- The main sources for coding were *government press releases and government statements*, mainly published on websites of the central governments (prime ministers or governments) and by key ministries (foreign office, defense, economics, and finance). Besides searching through these websites, we also considered the Twitter accounts of governments, their departments, and ministers, which often contain detailed announcements.
- To supplement the government sources and gather additional details, we also conducted a *systematic media search* using Google News. For this purpose, we used the following keywords in various combinations: “[donor country name]”, “Ukraine”, “aid”, “military aid”, “humanitarian aid”, “solidarity”, “weapons”, “support”.

Coding procedure: We use official sources, when available, as the main source. At least two separate people coded each entry. In case of inconsistencies between coding entries or sources, we made an in-depth inquiry based on additional sources, which solved the issue in all but a few cases. For almost any transaction we can draw on more than one serious source to confirm the data entries. We evaluated and ranked the sources by their reliability, taking governmental press releases and government websites as the most reliable source, followed by governments’ statements on social media and news articles reported in renowned international media outlets.

Quantifying in-kind donations – how we measure the value of weapons or foodstuff: Our aim is to move beyond anecdotal evidence and instead quantify the value of support to Ukraine in millions of Euros. Whenever governments report the value of their donations in their national currency, we use these numbers as the baseline value. In many cases, however, governments do not report the value of aid, but only the items supplied like specific weapons or several “tons of foodstuff”.

Valuing these types of in-kind donations is challenging and requires some element of judgment. We plan to continuously improve our estimates and appreciate feedback on individual items to ukrainetracker@ifw-kiel.de.

To summarize, we value in-kind donations by drawing on government sources whenever possible but also resort to price information available from online marketplaces and stores when unavoidable. Moreover, as a general rule, we use upper bounds of prices to avoid underestimating the true scale of support. Furthermore, we use the same unit price for identical items across donors.

For military equipment and weapons, typical prices are often provided on Wikipedia. When possible, we use prices for the exact item (for example, when the exact weapon name or type is known). For protective or supportive military equipment like helmets, vests, or tents, we take averages of latest available retail prices.¹³ For ammunition prices, we consult online stores and use single cartridge costs. We generally ignore bulk discounts, again choosing upper bound values. When the type of ammunition is not specified, we assume that they refer to the kind of weaponry delivered with the ammunition.

To estimate the value of everyday items with no fixed prices like “pair of shoes” or “bottled water”, we approximate a reasonable value using information from online stores. When possible, we draw on prices and unit costs listed by NGOs or private firms which have donated a specific type of item in this or past crises (for example, sleeping mats).

¹³ If the exact type or model is undisclosed, we draw on the donor’s military endowments. For example, if a country’s military largely relies on one type of machine gun, we assume that ammunition of that gun is sent.

To estimate the value of medical supplies or “tons of medicines”, we use an average of prices listed by NGO sources.¹⁴ As for “tons of food” delivered, we consult the literature and government info on the value of wasted food, while accounting for luxury and perishable items which would not have been donated (Buzby et al. 2014). “Tons of necessities” are valued at the average price of medical and food deliveries.

Sensitivity checks: benchmarking our valuation of in-kind donations: To check the reliability of our quantification approach, we have made a number of sensitivity checks. Most importantly, we benchmark our valuation results for in-kind donations for those cases in which we know both the full list of donated items as well as the official value of the package. For those cases, we can use our coding approach and put a monetary value on the arms and other military equipment in the package and then benchmark our estimated total value against the official value given by the donor government itself. Below are three examples for which this type of benchmarking was possible. The comparison is overall reassuring.

- **United States:** On March 16, President Biden announced an additional security assistance package to Ukraine valued at \$800 million, including various anti-armor and infantry weapons, drones, and ammunition (The White House 2022).¹⁵ Following our assumptions, we estimate a total value of \$773.3 million¹⁶ for the package, which is close to the \$800 million reported by the US government.
- **Germany:** The German government has not shared systematic information on its weapon deliveries to Ukraine. However, on March 24, the magazine Der Spiegel published a detailed leaked list from the German Federal Ministry of Economic Affairs that values Germany’s shipments of military equipment to Ukraine at a total of €37.3 million up to March 7 (Gebauer 2022). In the list, €31.3 million refer to “major and lethal weapons”, while €5.8 million are “additional military equipment” (the remaining €200,000 are unspecified). The package includes 500 Stinger missiles and 1,000 Panzerfäuste 3 (lethal weapons), plus a number of less valuable items including 23,000 helmets, as well as protective vests, and night vision devices.¹⁷ Using our coding approach and price assumptions, we get to a combined value of €63 million for the Stingers and Panzerfäuste 3.¹⁸ This is almost twice the value of €31.3 million reported by Der Spiegel, quite likely

¹⁴ This follows the valuation approach by Doctors Without Borders during the Bosnia war, see Annex 5 B: Value Estimation here: <https://www.aerzte-ohne-grenzen.de/sites/default/files/mediathek/entity/document/1998-01-bosnia-report-donation-practices.pdf>.

¹⁵ According to the New York Times, the included 100 Tactical Unmanned Aerial Systems are of the type AeroVironment Switchblade (Barnes and Ismay 2022). These kinds of drones, also known as suicide drones, are cheaper compared to other models and are evaluated at \$6000 per piece according to our source (Rationalinsurgent 2022). Moreover, we value the 20 million rounds of ammunition at \$5 per round according to our sources. This was done to account for rounds sent for grenade launchers and mortars.

¹⁶ Specifically, we assign the following values to the contents of the package: 800 Stinger anti-aircraft systems (our per-unit price assumption: \$119,000 per unit), 2000 Javelins (\$256,000), 1000 light anti-armor weapons (\$2,000), 6,000 AT-4 anti-armor systems (\$1,500), 100 Tactical Unmanned Aerial Systems (\$6,000), 100 grenade launchers (\$2,250), 5,000 rifles (\$700), 1,000 pistols (\$800), 400 machine guns (\$5,300), 400 shotguns (\$1,100), 20,000,000 rounds of small arms ammunitions, grenade launchers and mortar rounds (\$5 per round), 25,000 sets of body armor (\$500), 25,000 helmets (\$1,400).

¹⁷ Another detailed list, by Der Tagesspiegel of March 29 reported an additional dispatch of 8 million rounds of ammunitions, 100 MG3 machine guns and 64 vehicles of which 14 are armored (Krause 2022). In addition, the German government announced the supply of 2,700 Strela missiles on March 3, of which 2,000 have eventually been delivered, while 700 missiles were reportedly unsafe and unsuitable for use (Gebauer and von Hammerstein 2022).

¹⁸ Specifically, we assume a price of \$119,000 for each of the 500 Stinger anti-aircraft systems as well as \$10,000 for each of the 1000 Panzerfäuste 3.

because we use prices for new weapons, while the ministry uses second-hand prices. In the database we use the more reliable amount of €31.3 million.

- *Czech Republic*: According to Czech media reports, the Czech government provided Kč 750 million (€30.4 million) worth of military assistance to Ukraine between end February and mid-March (Fraňková 2022). Using our valuation approach, we get to a total value of military assistance of Kč 785 million (€31.85 million) for the same time frame, which is almost identical to the sum reported in the press.¹⁹ In these calculations we do not include the aid delivered in April, since it follows the aforementioned announcement of the Czech government.

Cases of “hidden support” and missing information: Since end-February, some governments announced not to share further details on their military support for Ukraine. In our database, that is true for five countries in particular, namely Finland, France, Germany, Italy, and Spain.

For *Germany and Italy*, the press reported many details, so that the picture seems rather complete overall.²⁰ Indeed, despite a lack of official data, leading government politicians in Germany have repeatedly confirmed details on individual deliveries in interviews or Twitter statements over the past weeks (see the section on “Sensitivity checks” above). Nonetheless, some parts of the military contributions of both countries remain unclear and hard to quantify, including some recent German commitments made through a so called “circle exchange” scheme (or “Ringtausch”), as discussed below.

In *France*, Thierry Burkhard, chief of staff of the French army, explained that France will provide no details on the kind of weapons it intends to send to Ukraine to avoid provoking a military conflict with Russia (Dalton 2022). Accordingly, in the first release of the paper, the only available information on military aid was a vague press statement by the Élysée on February 26. On April 13, however, a tweet by Florence Parley, the French Minister of Defence, revealed that, until that date, France had sent weapons and military equipment worth €100 million since the invasion on February 24. Moreover, we now include the delivery of 10 Caesar artillery howitzers, a commitment that became public on April 23 and valued at \$55 million.

Spain’s government initially shared information on military shipments, but stopped doing so. Specifically, on March 2, it announced that it will be sending 1,370 anti-tank grenade launchers as well as 700,000 rifles, plus light machine guns and ammunition. On March 11, the government then announced an additional shipment of weapons for which the Spanish Foreign

¹⁹ Specifically, we get to a total value of Kč 224.7 million (€9.1 million) for the first two military shipments and an additional supply of weapons and equipment worth Kč 400 million (€16.2 million) approved on February 27. Adding Kč 17 million (€690,000) in weapons donated by private arm manufacturers, Kč 31.5 (€1.3 million) in additional military aid, Kč 24 million (€1 million) in additional material and Kč 53.26 million (€2.2 million) in equipment, Kč 30 million (€1.2 million) in fuel and petrol for the Ukrainian Armed Forces, Kč 4.5 million (€182,593) in fire engines, we arrive to a total of Kč 785 million (€31.85 million).

²⁰ Total Italian military aid is valued at €150 million in our database. According to the newspaper La Repubblica, the Italian Minister of Defense Lorenzo Guerini stated on February 28 that the total value of weapons and equipment deployed to Ukraine lies between €100 and €150 million (Mattera and Vitale 2022). Apart from this aggregate information, we know little regarding the total number of items and equipment of Italian military assistance to Ukraine. According to Il Fatto Quotidiano, Italy sent dozens of Stinger launchers to Ukraine, together with millions of rounds of ammunition caliber 12.7, thousands of mortar bombs, browning machine guns, thousands of helmets, Milan launchers and thousands of food rations (Pacelli 2022). On April 17, the Prime Minister announced the decision of sending military equipment, however no further information about the content of the shipment is available. As Termometro Politico reports, equipment material accounts for €50 million out of the €150 million in total military aid (Sano 2022).

Minister Jose Manuel Albares refused to specify any detail. In our second release, we could track an additional package of military aid, committed on March 29 and including ammunition, further military supplies and vehicles. The lack of publicly available details yet prevents us from putting a monetary value on this package. As a result, we can only quantify the first commitment, which we value at €3.3 million and the additional delivery of ambulances to the Ukrainian Armed Forces, worth €644,000.

Finland is another country that stopped sharing information on military government aid. In late February, the government announced a detailed list of weapons and military equipment that we value at €9.2 million in total. On March 24 and on April 19, the Finnish President approved the delivery of additional defense material, but the government refused to provide further details. As a result, we can only include the commitments of late February but not those of March 24 or April 19, so that the true scope of Finnish military aid is not included.

Replacement or “circle exchange” arrangements for weapons: In recent weeks, several governments have announced weapon replacement and reimbursement arrangements. In the German public debate, these have become known as “Ringtausch” or “circle exchange”. In essence, these schemes envisage countries delivering weapons to Ukraine to receive replacement weapons for their shipments from either another Western country or through a designated reimbursement fund like the European Peace Facility (EPF). In the context of the Russia-Ukraine war, this typically means that old, Soviet-era weapons shipped to Ukraine are replaced with new, Western weapons systems worth much more than the old weapons. This raises the incentives to deliver military aid to Ukraine, while providing the Ukrainian army with Soviet weapon systems they are experienced with.

The usage and financing of these schemes remain largely opaque. Weapon replacements and monetary flows are not made transparent by governments and some of the “circle exchanges” may never become public. As a result, it is impossible for us to quantify these flows systematically. The EPF, for example, is an off-budget funding mechanism not bound to transparency or control by the European Parliament. As a result, we do not know which countries received funds from the EPF, for what type and number of replacement weapons this occurred, and when financial reimbursements via the EPF are made. Adding EPF commitments will thus lead to bias and the danger of double counting, which is one reason we do not show EU aid in our main graphs and focus on bilateral commitments instead.

From public sources, we could so far identify three cases of weapon replacement schemes:

- *US-Slovakia exchange (S-300 air defense system):* In early April, Slovakia announced to send its S-300 air weapon defense system to Ukraine (a Soviet/Russian system worth \$160 million, ID: SKM5). In parallel, the United States announced to replace it with one of their Patriot systems, which is worth a multiple of the S-300 system.²¹ If we were to attribute the delivery of the air defense system to the United States rather than Slovakia, this would importantly affect Slovakia’s position in the donor rankings of Section 5. Specifically, Slovakia would move from 13th to 21st place in absolute terms, and from 5th to 15th when counting aid in percent of donor country GDP.

²¹ A few weeks earlier, NATO allies Germany and Netherlands had already agreed to temporarily station three batteries of their Patriot systems in Slovakia.

- *Germany-Slovenia exchange (T-72 tanks)*: On April 21 the Slovenian government announced that it intends to send “30 to 40 T-72 tanks” to Ukraine.²² If we were to attribute the delivery of the tanks to Germany instead of Slovenia (worth an estimated €18 million), Germany’s position in the ranking would not change but Slovenia would drop from 22nd to 29th place in absolute terms, and from 12th to 28th when considering commitments to donor GDP.
- *British-Polish exchange (T-72 tanks)*: On April 22, it was reported that the British government intends to send Challenger 2 tanks to Poland in exchange for T-72 tanks sent from Poland to Ukraine (Grylls and Swinford 2022). However, no further details were given, neither on the number of tanks nor on their value, so that we cannot quantify the scope of this replacement scheme.

Next to the three cases mentioned above, the US provides significant assistance to the Baltic states within the US Security Assistance framework, which, however, are not to be confused with direct reimbursement.²³

Background on US military aid commitments: The United States is a large and transparent donor, but the timing and size of US commitments can be confusing, resulting in sometimes contradictory press coverage. According to the available data, the US committed \$4.88 billion in humanitarian aid, \$4.35 billion in military assistance and \$2 billion in financial assistance in the period covered here.

To provide major amounts of military aid, the US President needs an act from US Congress, which in the case of Ukraine took the form of the *Ukrainian Supplemental Act* that passed on March 10, 2022. The act enabled the president to transfer military equipment and weapons to Ukraine up to a total value of \$3.5 billion. Specifically, it expanded the scope of the so-called presidential drawdown authority, which allows military items to be sent directly from U.S. stocks at the direction of the President (Congressional Research Service 2022, see also US Foreign Assistance Act of 1961).

US military aid to Ukraine therefore mostly takes the form of successive drawdowns, as documented in Table 1 of the report by the Congressional Research Service (2022) as well as by the US Department of Defense (2022). During February and March 2022, the Biden Administration announced three such drawdowns: \$350 million on February 25, \$200 million on March 12 and \$800 million on March 16. More recently, it announced drawdowns of \$100 million on April 5, \$800 million on April 13, and another \$800 million on April 21. A drawdown of \$200 million was already announced in December 2021. Because we consider commitments throughout this paper, we added the entire sum of all drawdowns available after January 24 (\$3.3 bn) to the database, and already did so in the previous version. This means that the drawdowns of April do not increase the aggregate support for the US in this revised data release.

In addition, the United States committed \$650 million to Ukraine through the Foreign Military Financing Program (Congressional Research Service 2022), \$100 million as a provision to the Civil Security Assistance (US Department of State 2022b) and up to \$300 million provided by

²² However, details regarding this exchange deal seem unclear. For example, Lohse (2022) reports that Slovenia besides demands tanks of the type Leopard 2, Boxer, and Puma.

²³ Specifically, the US intends to provide \$180 million to Estonia, Latvia, and Lithuania through the Baltic Security Initiative in 2022, which represents an increase of \$10 million compared to 2021 (Ministry of Defense of Estonia 2022).

the Ukraine Security Assistance Initiative (US Department of Defense 2022), a mechanism that differs from the presidential drawdown authority (Congressional Research Service 2022). Taken together, we arrive at a total of \$4.35 billion of US military aid committed to Ukraine between January 24, 2022, until April 23, 2022.

3. Multilateral and European-Level Support

As explained, we focus on government-to-government assistance (including *bilateral* grants and loans made through the World Bank and the International Monetary Fund). For completeness, this section provides an overview on EU-level support (including the recent “Stand Up for Ukraine” event) as well as commitments by multilateral organizations.

3.1 Mechanisms of European Union Support

Our main dataset tracks *bilateral commitments* worth €24 billion of EU and G7 member countries to Ukraine since January 24, 2022 until April 23, 2022. To adequately capture European support for Ukraine, we also account for aid provided through the European Union (Commission and Council) and its various foreign assistance mechanism.

- The **European Peace Facility (EPF)**: In late February 2022, the Council of the European Union approved the creation of a new fund to finance arms and equipment for the Ukrainian army, initially worth €500 million, then doubled to €1 billion on March 23 (European Council 2022a) and further increased to €1.5 billion on April 13 (European Council 2022b). The funds will not flow directly to the Ukrainian government, but will instead be used over a longer time period to reimburse EU member countries for the expenses of sending military aid to Ukraine. The exact workings of this fund remain vague and little official details have been published. A recent analysis by Fotidiadis and Schmidt (2022) provides the most detailed analysis, suggesting that there is little agreement on details between EU governments, no systematic data collection, and that “decisions on reimbursement are made unanimously by member states” on a case-by-case basis. In line with this, we found little evidence of how and when this fund has been used in practice, with only two countries officially drawing on it for the minor amount of €43 million.²⁴ To avoid double counting we did not include the European Peace Facility in the baseline numbers, since the funds will be used to reimburse European countries for their shipments made to Ukraine (which are included in the main dataset). However, we do include these commitments in the “Non-Bilateral Aid” sheet in our dataset as well as in supplemental figures in which we assign EU support proportionally to the contributing member countries. Importantly, in April the German government announced to top up the EPF volume by an additional €400 million.²⁵ Again, to avoid double counting, we do not record this amount as a bilateral commitment from Germany to Ukraine. However, we do consider this amount when computing Germany’s contributions to the EU in Figures 4 and A1.
- The European Union’s **Macro-Financial Assistance (MFA)** program is a vehicle to support non-EU countries that face a balance of payment crisis via loans and grants. On February 1, before the start of the war, the European Commission agreed to a new

²⁴ Portugal, Latvia and Ireland seem to have received €9 million, €1.2 million and €33 million, respectively, for their military donations to Ukraine, having been reimbursed through the Facility (database identifiers PTM1, LVM2 and IEM1).

²⁵ See <https://www.tagesschau.de/inland/scholz-ukraine-militaerhilfe-101.html>

emergency MFA program for Ukraine of up to €1.2 billion in concessional loans (the sixth MFA operation in Ukraine since 2014). In response to the war, payouts were fast-tracked, with the first loan instalment of €600 million disbursed in two tranches on March 11 and 18 (European Commission 2022a). The remaining €600 million of low-interest rate loans will be disbursed “later in the year”. We report the MFA position as part of the *EU (Commission and Council)* commitments in the main dataset.

- The **EU Civil Protection Mechanism** is an instrument aimed to improve the prevention, preparedness, and response to disasters. For Ukraine, our data show that about €118 million have been committed through this vehicle since the start of the war. Since this is a coordinating mechanism rather than a fund of its own, we attribute the aid through this instrument to the country providing aid and not to the European Commission.
- The **European Investment Bank (EIB)** is a separate entity from the European Commission, with its own funding and decision-making process. In March 2022, the EIB announced an emergency solidarity loan for Ukraine of €2 billion plus a small humanitarian package worth €2.5 million. The €2 billion commitment includes the immediate provision of €668 million as liquidity assistance to the Ukrainian authorities, plus €1.3 billion EUR of commitments made for infrastructure projects and reconstruction to be paid out “as soon as conditions allow”. Part of the emergency funding seems to have been committed already before the war (“originally granted to support SMEs and the agricultural sector in Ukraine”), but details are hard to find (European Union 2022). We do not include EIB commitments in our main dataset because the latter focuses only on the EU member countries and the European Commission. However, we do include these commitments in the “Non-Bilateral Aid” sheet in our dataset as well as in the figures below, assigning EU support to the contributing member countries.

3.2 Support by International Organizations

This section offers a brief overview of support to Ukraine by major international organizations. Support by other multilaterals such as the United Nations or the Red Cross will be added in future versions (details on aid amounts by these organizations are not easy to find or not published at all).

- **IMF programs:** On March 9, the International Monetary Fund announced and disbursed an emergency assistance loan of \$1.4 billion to Ukraine under the umbrella of its Rapid Financing Instrument. The purpose is “to help meeting urgent financing needs including to mitigate the economic impact of the war” (IMF 2022b). Moreover, Canada provided on April 8 around €726 million through the Administration Account (IMF 2022a). This account enables countries to provide financial assistance to Ukraine (IMF 2022a). We report assistance provided by the International Monetary Fund in both the “Main Dataset” and in the “Non-Bilateral Aid”. In the former, we include it by dividing the IMF packages into country level data. In the latter, we include packages with their total sums, focusing on the IMF as a donor and not on the countries using it as a tool for financial assistance.
- The **World Bank** mobilized a \$723 million emergency package for Ukraine in early March (World Bank 2022a). The package consists of a \$350 concessional loan by the World Bank, grant financing of \$134 million (\$100 million by Great Britain, the rest from Denmark, Latvia, Lithuania, and Iceland), as well as loan guarantees by the Netherlands (\$89 million)

and Sweden (\$50 million) and \$100 million of “parallel financing” in form of a loan by Japan. On March 14, the World Bank provided an additional amount of \$200 million to bolster social services in Ukraine for vulnerable people (World Bank 2022a). Finally, on April 12 the World Bank announced additional assistance amounting to \$1.5 billion (Reuters 2022). Just like in the aforementioned case of the International Monetary Fund, we include the assistance provided by the World Bank in both the “Main Dataset” and the “Non-Bilateral Aid”. In the former, we focus on the countries and their assistance through the World Bank. In the latter, we focus on the assistance provided by the World Bank as a donor entity and not as a vehicle.

- On March 9, the **European Bank for Reconstruction and Development (EBRD)** announced a support package for Ukraine and neighboring countries totaling \$2 billion. The package includes deferred loans, liquidity support, and trade finance (Porter 2022), but there are few further details available.

3.3 “Stand up for Ukraine” Event

On April 9, Ursula von der Leyen, President of the European Commission, and Justin Trudeau, Prime Minister of Canada, convened the “Stand up for Ukraine” event in Warsaw. Its aim was to raise money for refugees fleeing Ukraine and internally displaced people. The organizers state that €10.1 billion in donations was raised for Ukraine. Some of the funds, however, had already been pledged in earlier announcements and by far the biggest chunk will not flow to Ukraine proper, but is intended to support European countries welcoming Ukrainian refugees. In line with our approach explained above, we count those commitments that are intended to go directly to Ukraine, mainly to support internally displaced people. These Ukraine-directed commitments account for €806 million of the €10.1 billion total (less than 10%). Specifically, we count €600 million by the European Commission, €83 million by Belgium, €70 million by Germany, and €53 million by Ireland.

The remaining €9.3 billion are not part of our main database, since they are going to European countries receiving refugees having fled Ukraine, but not to Ukraine itself (European Commission 2022d). For example, the EIB’s loan of €4 billion is intended for European countries to “finance the development of key social infrastructure for the provision of public services to refugees, including housing, schools, hospitals and kindergartens.” Another loan of €1 billion was pledged by the EBRD to countries welcoming Ukrainian refugees. However, this loan had already been announced as part of the EBRD’s “resilience package” on March 9 (see ID: EBF1) and is therefore neither a new commitment nor going to Ukraine. Also, the €1 billion grant by the Council of Europe Development Bank (CEB) is not included, since it appears to be aimed exclusively to support refugees outside Ukraine. The EU Commission pledged €1 billion but of these €400 million are intended to support other countries, so that only €600 million enter our dataset. Finally, there are 13 pledges by individual countries to support Ukrainian refugees at home or in other European countries, but not in Ukraine itself (€3 billion total). These are again excluded. Appendix Figure A1 shows an overview of the pledges made in this event.

4. Aid to Ukraine prior to January 24, 2022

This section offers a brief overview of international assistance to Ukraine prior to time frame covered by our dataset, which starts on January 24, 2022, the day several NATO members put their troops on alert and the US started to evacuate its embassy staff. We start by summarizing the aggregate support between 2014 and 2021 and then highlight individual commitments made in early January 2022.

4.1 Support to Ukraine between 2014 and 2021

Since independence in 1991, Ukraine has been a regular recipient of bilateral and multilateral support. Russia's occupation of Crimea in 2014 and its subsequent invasion of the Donbass motivated a new wave of commitments by Western governments, with the United States, the IMF, and EU institutions standing out (Mills 2022).

The EU institutions have been by far the largest financial supporters of Ukraine in the years 2014-2021. EU aid took the form of grants and loans for financial and humanitarian support, but little to no military aid. The EU's scope of support was increased drastically after March 2014, following Russia's occupation of Crimea. Specifically, the EU announced a major new financial aid package of up to €11 billion to Ukraine, which was partly motivated to counter Russia's \$15 billion financial aid offer to President Yanukovich in December of 2013. That package contained €1.6 billion in MFA loans, €1.4 billion of grants, up to €8 billion in loans from the EBRD and the EIB, and potentially another €3.5 billion through the "Neighborhood Investment Facility" (European Commission 2022b). Since then, total aid was further increased to a volume of €17 billion, mostly in the form of loans and including several more MFA programs (European Parliament 2022; European Commission 2022c).

With a view to international financial institutions, the IMF approved several major support packages, starting with a March 2014 announcement of up to \$18 billion in new financial aid (Giucci and Zachmann 2014) and a renewed IMF program in 2015 (the disbursements were ultimately much smaller, however). Also, the World Bank and the EBRD offered major packages.

Turning to individual countries, the US has been by far the largest bilateral supporter, including large amounts of military aid (see King 2019 for country comparison until 2019). According to the United States' Congressional Research Service (2021), the US government has provided more than \$2.5 billion in security assistance to Ukraine between 2014 and 2021, mainly through the Ukraine Security Assistance Initiative and Foreign Military Financing. In addition, the US Department of State and USAID provided more than \$3 billion in bilateral, non-military aid since 2014.

The next most important bilateral supporters are Germany followed by Canada. Since 2014, Germany provided more than €1.8 billion in financial support to Ukraine. This support included €750 million in development assistance (mostly GIZ, KfW and PTB projects), €150 million in humanitarian aid ("for clearance and the disposal of explosive remnants of war") and a loan guarantee facility of €500 million (Federal Foreign Office 2022). Moreover, Canada has provided more than €650 million (890 million Canadian dollars) in aid to Ukraine since January 2014 (Government of Canada 2022a).

4.2 Commitments in January 2022

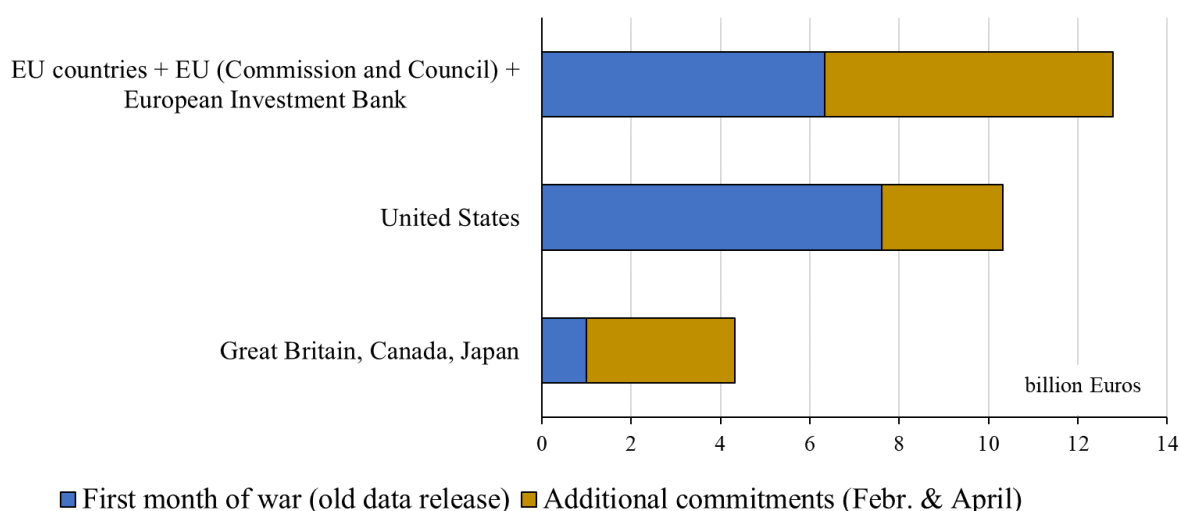
This section lists a few noteworthy commitments made just prior to January 24, the day our data tracking starts. The largest such commitment was made on January 17, when the US government announced a new sovereign loan guarantee of up to \$1 billion to stabilize Ukraine's economy (Biden 2022). On the same day, the British government announced its intention to supply military equipment and weapon systems to the Ukrainian Armed Forces, including 2,000 new light anti-tank weapons (Allison 2022). Moreover, on January 21, Canada announced a loan of up to 120 million Canadian dollars and a technical assistance grant of up to 6 million Canadian dollars (Government of Canada 2022b).

5. Country Rankings

In this section, we summarize the main results from our dataset. Taken together, our main database tracks €24 billion of *bilateral* humanitarian, military, and financial support of EU and G7 governments made between January 24 and April 23, 2022.

In Figure 1, we compare the size of total commitments to Ukraine across the US, the EU countries and the three remaining G7 countries (in billion Euros). The total EU commitments of €12.77 billion include bilateral commitments by all 27 EU member country governments (a total of €7.08 billion), plus commitments of €3.7 billion from the EU Commission and Council (including €1.2 billion of Macro-Financial Assistance (MFA) and the European Peace Facility (EPF) worth €1.5 billion) and €2 billion by the European Investment Bank (EIB). Canada, Great Britain, and Japan committed a combined total of €4.32 billion.

Figure 1. Overview: Government support to Ukraine, € billion,
Commitments Jan 24 - April 23, 2022

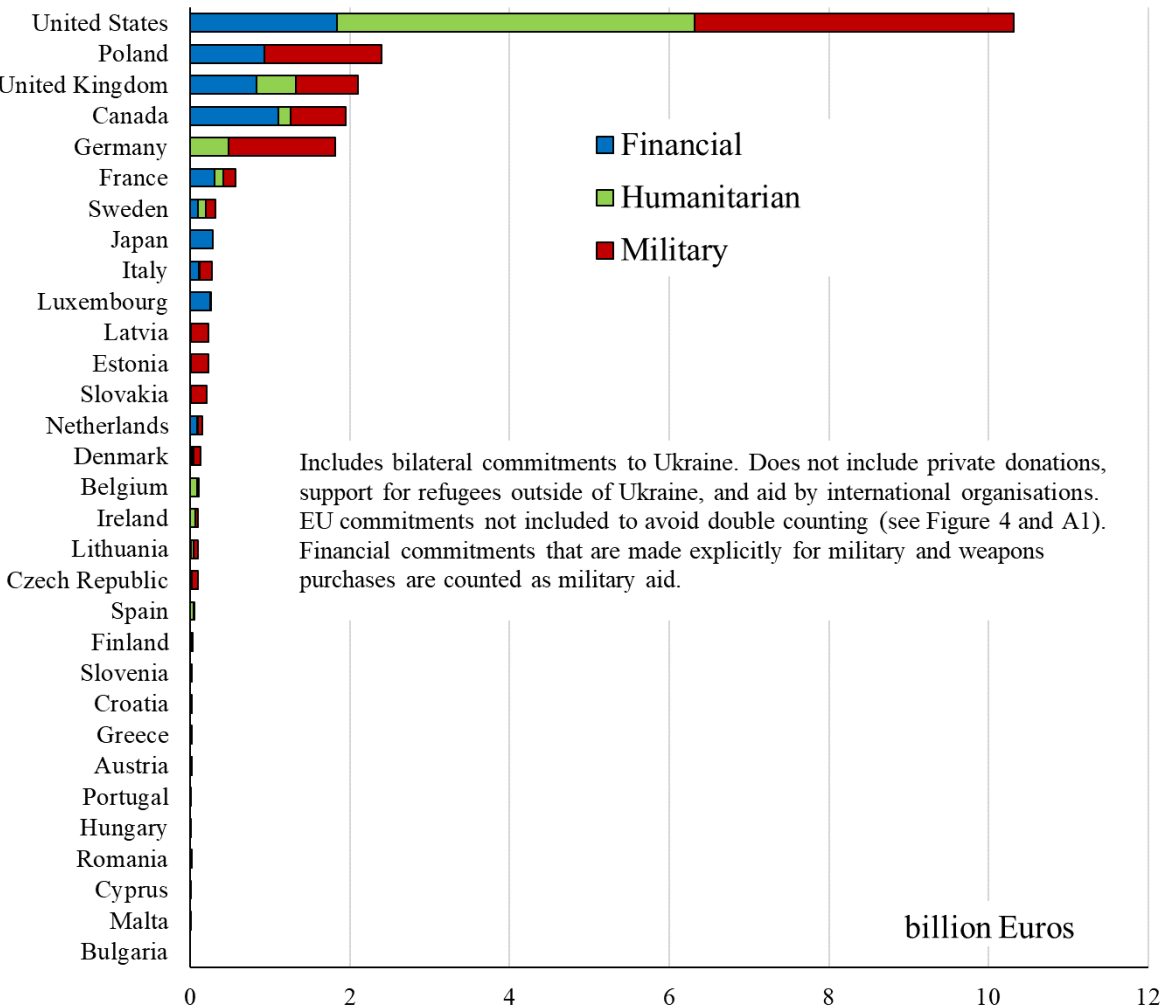


Note: This figure summarizes the sum of new support commitments to Ukraine in billion Euros between January 24 and April 23, 2022. EU commitments include bilateral commitments of all 27 EU member countries (a total of €7.07 billion), plus commitments of €4.91 billion from the EU Commission and Council (including €1.2 billion Macro-Financial Assistance and the €1.5 billion EPF), and €2 billion by the EIB.

A main insight is that the United States alone (€10.31 billion) provides nearly as much assistance to Ukraine as all the EU countries plus the EU institutions combined (€12.77 billion). Moreover, the three main Anglo-Saxon countries in the dataset (Canada, the UK and the US) together clearly exceed total EU contributions.

In Figure 2, we rank countries by their total *bilateral* commitments since January 24 and differentiate by type of aid. The US clearly tops the list and accounts for nearly 48% of total bilateral aid. Poland is the largest European donor (€2.4 billion) owing in large part to its large military aid and its financial commitment in form of the Polish central bank currency swap line (if we could add the costs of supporting 3 million refugees, the numbers would be much higher still). Next comes the United Kingdom (€2.096 billion), Canada (€1.948 billion), Germany (€1.815 billion) and France (€567 million).

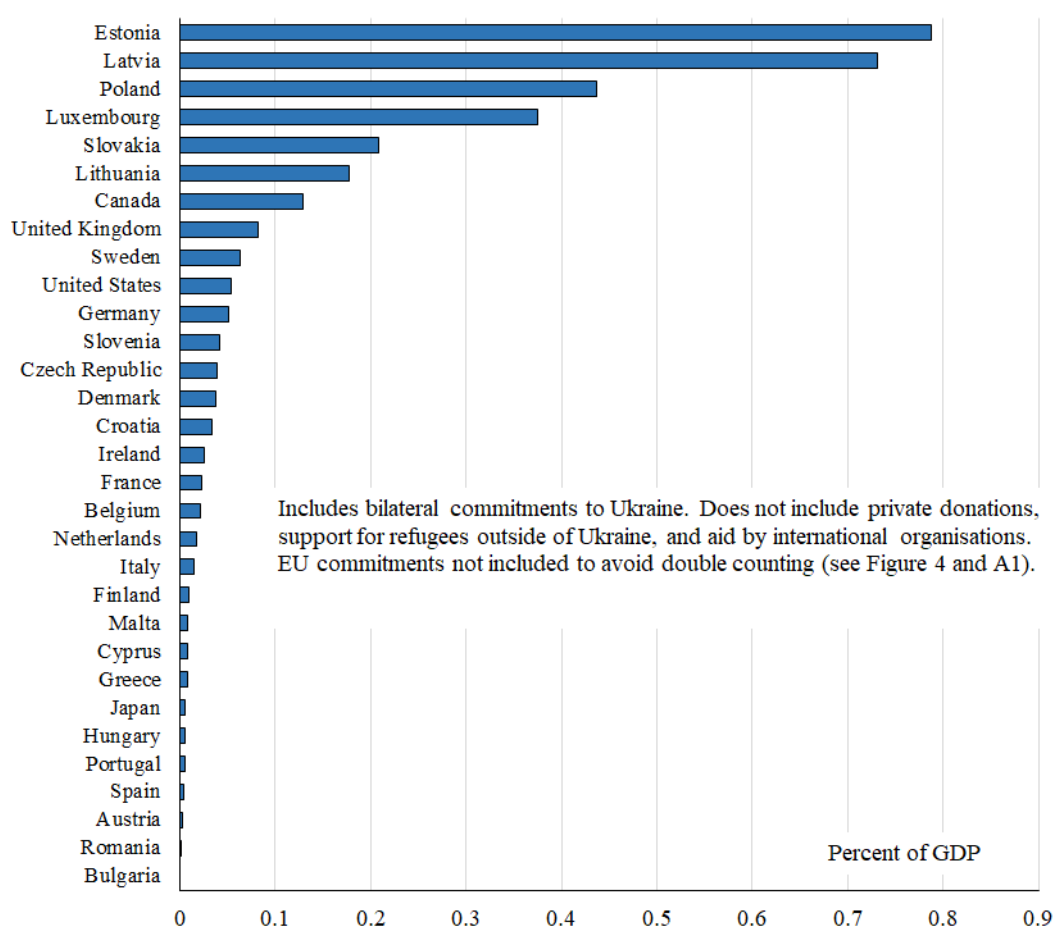
Figure 2. Government support to Ukraine – By type of assistance, € billion,
Bilateral commitments January 24 to April 23, 2022



Note: This figure shows total bilateral aid commitments to Ukraine across donor governments in billion Euros and considering the first month of the Russia-Ukraine war (January 24 to April 23, 2022). Each bar besides illustrates the type of assistance, meaning financial assistance (loans, grants, and swap lines), humanitarian aid (assistance directed to the civilian population including food and medical items), and military assistance (arms, equipment, and utilities provided to the Ukrainian military). Military aid includes direct financial assistance that is tied to military purposes. Please refer to the main text and our dataset for details on data collection and sources.

As a next step, we scale bilateral aid commitments by each donor country's GDP (in percent). Figure 3 shows that Eastern European countries stand out as particularly generous when considering the size of their economy, with Estonia, Latvia, Poland, and Slovakia ranging among the top five donors. Luxembourg ranks in 4th place, while the United States (being the largest donor in absolute terms) comes in 10th, with assistance worth around 0.05% of its GDP.

Figure 3. Government support to Ukraine - as percent of donor country GDP
Bilateral commitments January 24 to April 23, 2022



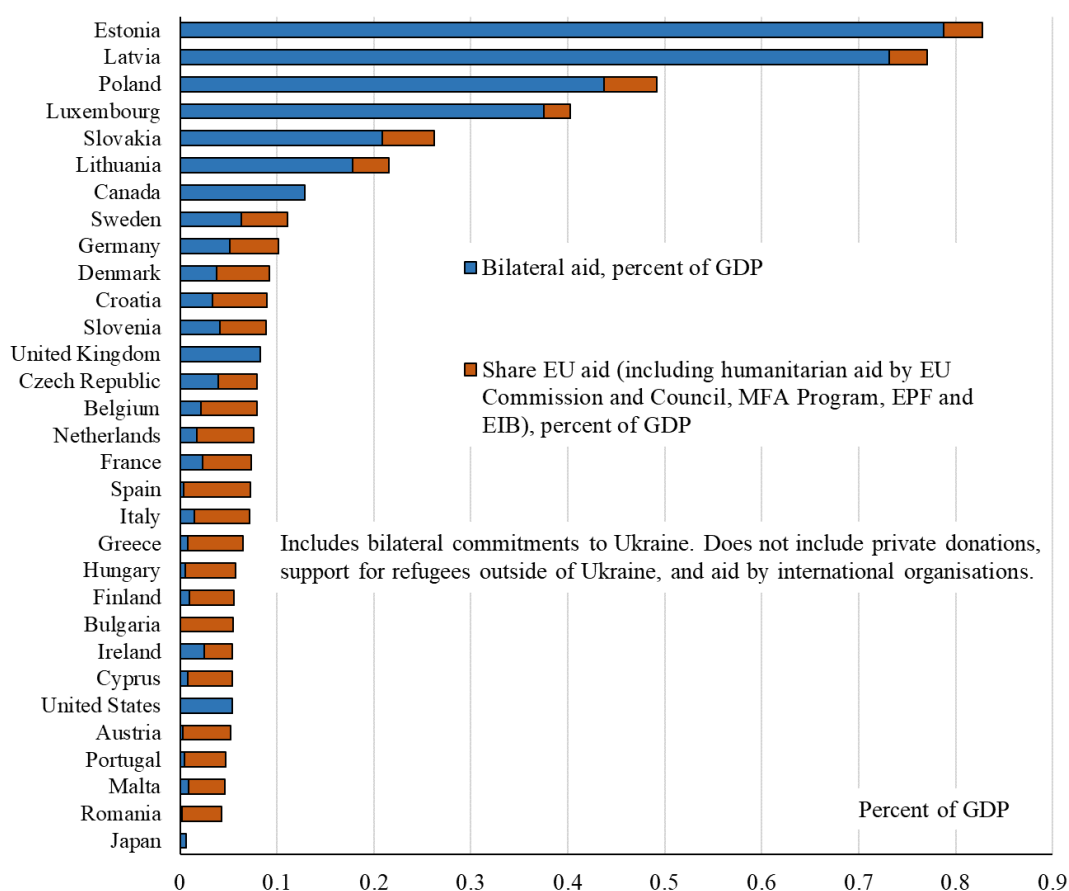
Note: This figure ranks countries by the scale of bilateral aid as percentage share of each donor's GDP. We consider total commitments to Ukraine between January 24 and April 23, 2022. The data on GDP (current US\$) is for 2020 and taken from the World Bank. See the main text for details on data collection and sources.

Figure 4 adds commitments made through the EU's institutions and financing vehicles since January 24 (see Section 3), again shown in relation to donor country GDP (the corresponding graph in billions of Euros is shown in Appendix I).²⁶ The blue bar segments indicate bilateral

²⁶ We map commitments by the EU (European Commission and European Peace Facility) into (additional) bilateral commitments in line with each donor's contribution to the EU's budget in 2020 (Clark 2022). Commitments by the European Investment Bank (EIB) equivalently translate into bilateral assistance following each EU member's relative capital subscription in 2012 (European Union 2012; Protocol (No 5), Article 4). The amount of EIB subscribed capital is based on the economic power of a member country when joining the EU. All commitments are taken as percent of the country's GDP.

aid (those of Figure 2), while the brown segments represent each country's share in commitments through the various European institutions and mechanisms, which include the European Commission and Council, the Macro-Financial Assistance programs, the European Peace Facility and the European Investment Bank. More specifically, we assign EU-level commitments as follows. EU commitments, Macro-Financial Assistance and the European Peace Facility are allotted based on each member country's relative contribution to the EU budget. Similarly, we assign EIB commitments using each country weight in the EIB's capital subscription shares. The contribution share is transformed from euros into percentage of the donor country's GDP, represented by the orange segments.

Figure 4. Government support to Ukraine including EU share - percent of donor GDP
Bilateral and EU commitments January 24 to April 23, 2022

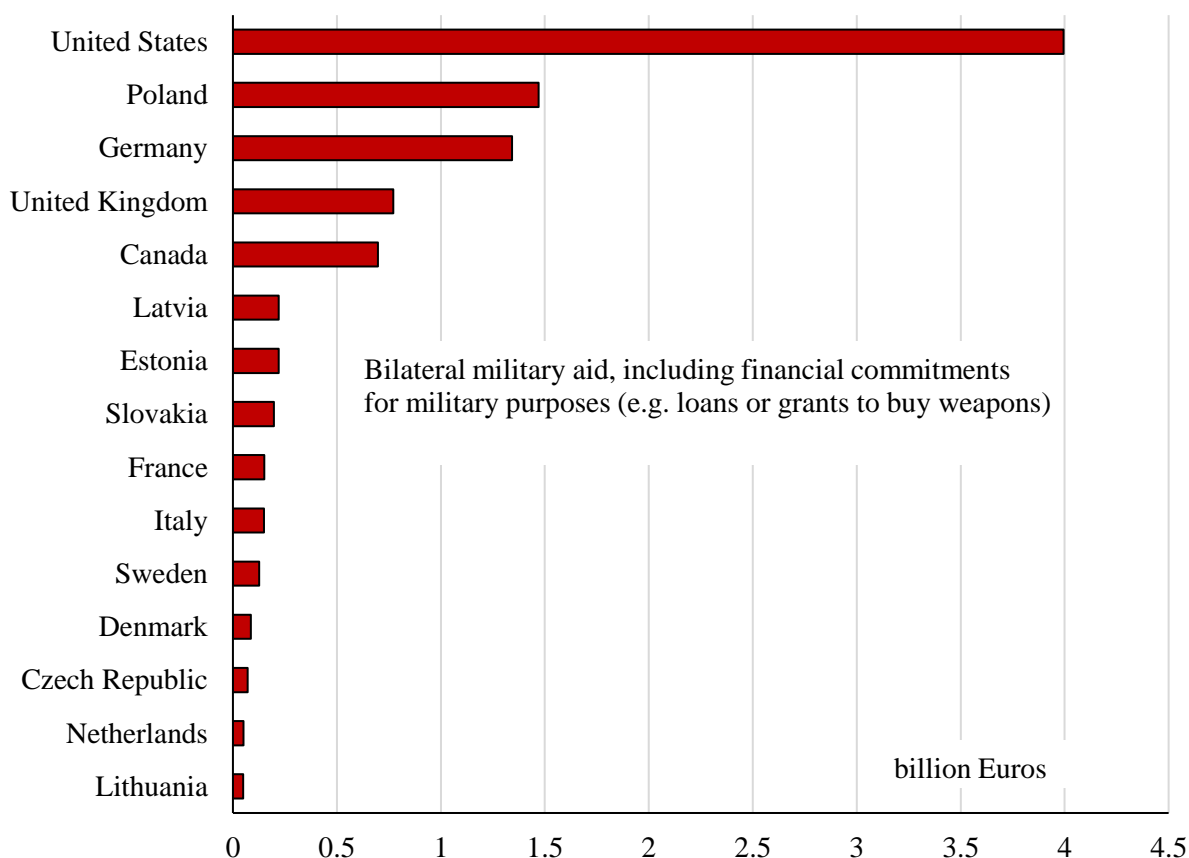


Note: This figure shows a ranking of bilateral commitments after accounting for EU-level aid and financing vehicles. We assign EU-level commitments as follows: EU commitments (Macro-Financial Assistance, EPF, humanitarian aid) are allotted based on each member country's relative contribution to the EU budget. Similarly, we assign EIB commitments using each country weight in the EIB's capital subscription shares. See the main text for details on data collection and sources.

As can be seen, the overall picture does not change much when adding EU support. Estonia remains the largest donor (0.83% of GDP), Latvia remains in second place (0.77%), and Poland is third (0.49%). Overall, the ranking remains very similar to the one presented in Figure 3 (only bilateral assistance).

Turning to the type of aid, we find that the ranking of military aid differs from the overall ranking of Figure 2. In Figure 3 we consider all types of military aid, including financial commitments for military purposes that have not been disbursed or used for actual weapon shipments. In this ranking, the US clearly tops the list (€3.99 billion), and is then followed by Poland (€1.46 billion), Germany (€1.34 billion), the United Kingdom (€770 million), Canada (€697 million), and Latvia (€220 million).

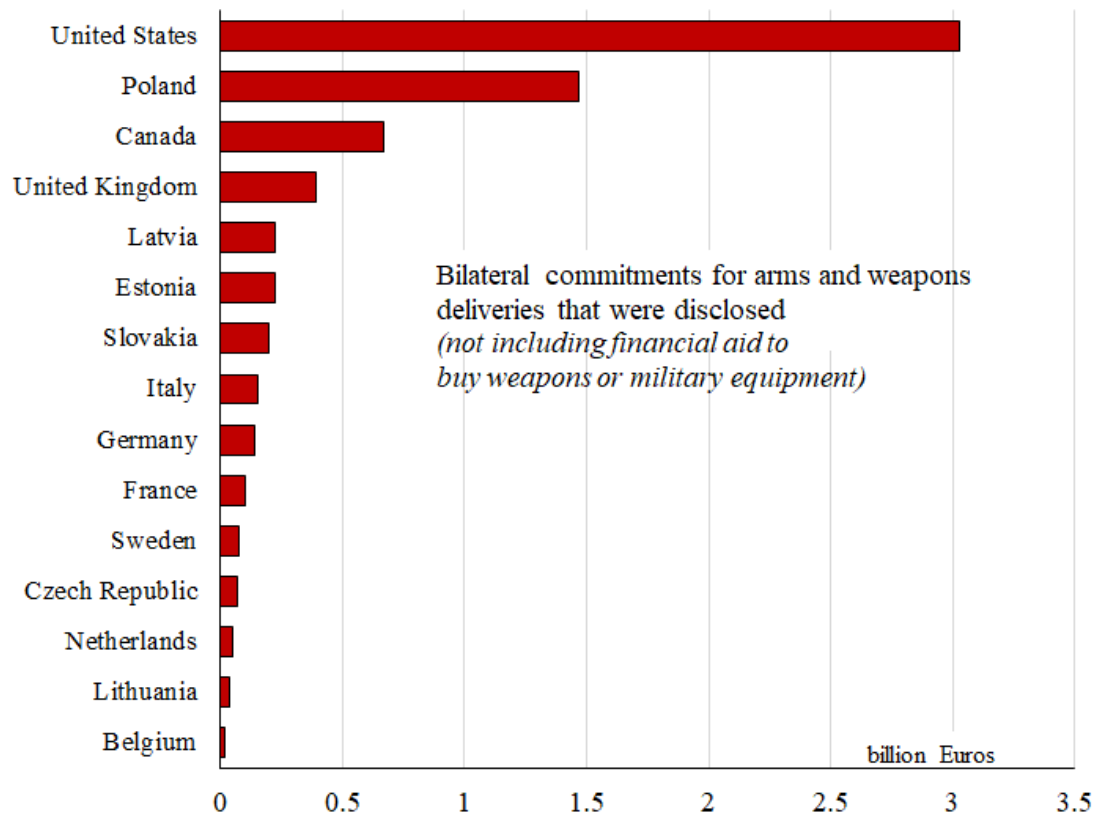
Figure 5. Military aid (including financial) in € billion (top 15 of 31 donor countries),
Bilateral commitments January 24 to April 23, 2022



Note: This figure shows a ranking of the top 15 Western governments (out of 31) that have offered military aid to Ukraine between January 24 and April 23, 2022 (bilateral disclosed military commitments only). To avoid double counting, we do not include EU (Commission and Council) contributions. Financial commitments that are made explicitly for military purposes and weapons purchases are counted as military aid.

Next, in Figure 6, we only count publicly known arms and weapon commitments (disclosed in-kind donations). In contrast to Figure 5, we thus exclude defensive gear and financial commitments for military purposes. The US again tops the ranking, having sent mostly anti-tank and anti-aircraft weaponry as well as artillery, weapon carriers and unmanned aerial systems including drones. Second comes Poland, which committed a range of high-cost items such as artillery and weapon carriers as well as tanks. Third and fourth are Canada and the UK, followed by the Baltic countries. All of the larger EU countries (except Poland) revealed only comparatively small amounts of direct weapons commitments to Ukraine.

Figure 6. Arms and weapons commitments in € billion (top 15 of 31 donor countries),
Bilateral commitments January 24 to April 23, 2022



Note: This figure shows a ranking of the top 15 Western governments that have offered arms and weapons to Ukraine between January 24 and April 23, 2022 (bilateral and disclosed commitments only). We exclude financial aid to buy weapons or military equipment as well as humanitarian and financial aid and do not consider EU (Commission and Council) contributions.

6. Support for Ukrainian refugees abroad

With over five million people fleeing Ukraine until the end of April (UNHCR 2022), the Russia-Ukraine war has caused the largest European refugee crisis since WWII (Harding 2022). The support of neighboring to welcome and host Ukrainian refugees is enormous, but quantifying and comparing the value of this support is hard.

A first challenge is the data on refugee numbers. The United Nations provides country-level estimates on the number of refugees fleeing from Ukraine, but only to its direct neighbor countries, including Poland, Romania, Hungary, and Slovakia (UNHCR 2022). Beyond that we can only rely on the data assembled on Wikipedia (2022) which is largely based on government reported figures from various points in time. These numbers are unreliable, also because refugees can move freely within the Schengen area and because some refugees have returned to Ukraine.

An even greater challenge is to calculate the actual costs incurred by governments. To our knowledge, there is no internationally comparable data on the cost of hosting refugees, e.g., for

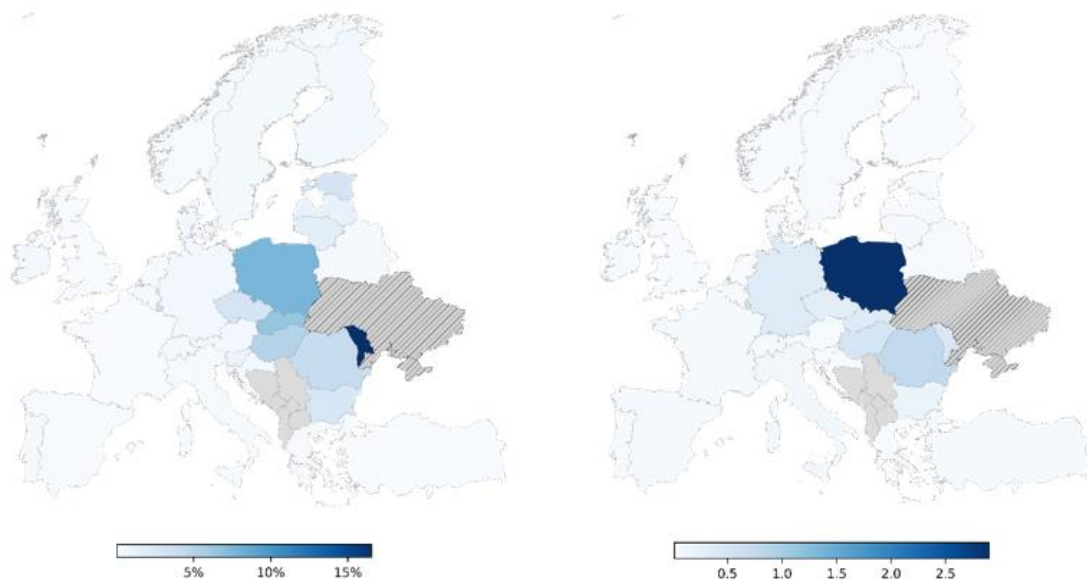
schooling, medical expenses or social transfers. Besides, much of the help for refugees is in-kind and incurred by private households rather than governments.

To nevertheless get a sense of the scale of support, we show the available data on refugees in Figure 7 in the form of maps. The left panel shows the number of incoming Ukrainian refugees as a share of total population, while the right panel shows the number of refugees in millions. In absolute numbers, Poland clearly ranks first among European countries, with nearly three million refugees arriving in Poland until April 23. Romania follows in 2nd place, with an estimated 770,000 refugees, and Hungary (490,000) and Moldova (430,000) are 3rd and 4th, respectively. When taking into account the population size in each welcoming country, Moldova tops the list (with a share of 17%), Poland comes 2nd (8%), followed by Slovakia (6.5%). Taken together, Eastern European countries again stand out as particularly generous to the people of Ukraine following Russia’s invasion.

Figure 7. Incoming Ukrainian refugees until April 23, 2022

Panel A: as % of country population

Panel B: in millions



Note: This figure shows the number of incoming Ukrainian refugees by country between February 24 and April 23, 2022. The data for countries neighboring Ukraine comes from UNHCR (2022), while data for the remaining countries are taken from Wikipedia (2022). This latter data is likely subject to double counting given the right to move freely within the Schengen area and few border checks (see UNHCR 2022 for details).

7. Concluding Remarks

This paper introduces and updates the “Ukraine Support Tracker”, which provides a comprehensive picture of the assistance offered by Western donors to Ukraine since the escalation of the conflict between Russia and Ukraine on January 24 2022, and up until April 23, 2022. Our dataset tracks more than €24 billion of financial, humanitarian, and military aid committed to Ukraine since January 24, 2022. In the coming weeks, we plan to continuously improve and expand the database and this working paper. For this purpose, we very much welcome comments and suggestions to ukrainetracker@ifw-kiel.de.

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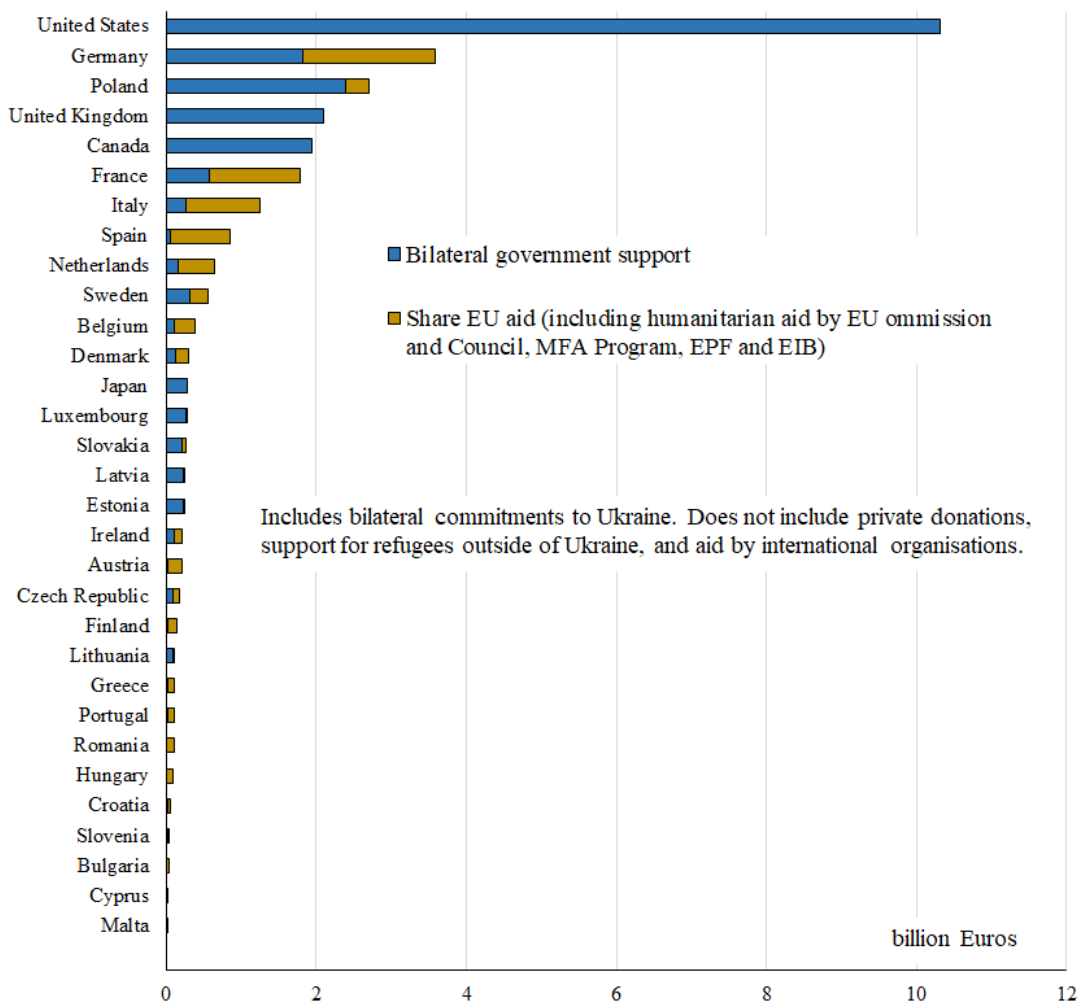
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Appendix I: Additional Figures

Bilateral aid to Ukraine including EU shares (in billion euros)

In Figure A1, we take into account assistance provided through the EU's institutions and financing vehicles since January 24, 2022, *in billions of euros*. EU aid include that by the European Commission and Council, the Macro-Financial Assistance program, the European Peace Facility and the European Investment Bank. The figure complements Figure 4, which shows total (bilateral + EU) commitments as share of donor country GDP. As above, the blue bar segments illustrate bilateral aid (as in Figure 3), followed by each country's share in EU-level commitments. The amount of Germany includes the €400 million it committed single handedly to the EPF in April.²⁷ There is a risk of double counting reimbursements via the EPF.

Figure A1. Government support to Ukraine including EU shares, in billion €, *Commitments January 24 to April 23, 2022*



Note: This figure shows a ranking of bilateral commitments after accounting for EU-level aid and financing vehicles (in million euros). We assign EU-level commitments as follows: EU commitments (Macro-Financial Assistance, humanitarian aid) are allotted based on each member country's relative contribution to the EU budget. Similarly, we assign EIB commitments using each country's weight in the EIB's capital subscription shares. See Figure 4 in the main text for a ranking of total (bilateral + EU) assistance in terms of country GDP. Please refer to the main text for details on data collection and sources.

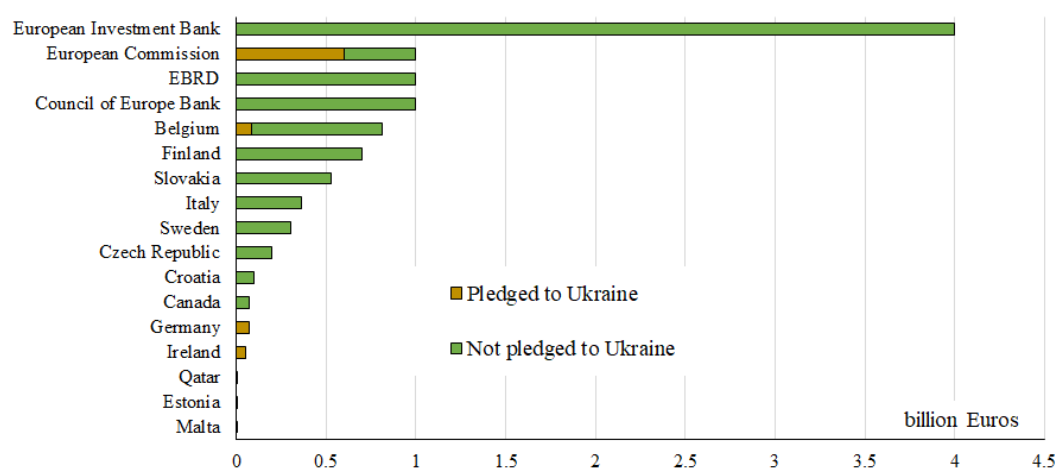
²⁷ See Section 5 for details on how we assign EU commitments to individual countries.

Overall, the US remains the largest individual donor (€10.31 billion), but European countries see a significant increase in contributions, partly because we now double count entries in case of weapon deliveries that are reimbursed through non-transparent schemes like the EPF. This is why this graph should be taken with care and is only shown in the Appendix. Germany is now on 2nd place (€3.58 billion), ahead of Poland (€2.69 billion), the United Kingdom (€2.1 billion), and Canada (€1.95 billion). Moreover, Spain considerably moves up the ranking when taking into account its EU contributions, from 20th to 8th place.

“Stand Up for Ukraine” event

Figure A2 shows the pledged during the “Stand Up for Ukraine” event across countries (see Section 3.3 in the main text). The figure distinguishes between donations *to Ukraine* and assistance to countries other than Ukraine, including self-pledges by governments to their own budget (primarily aimed at supporting Ukrainian refugee inflows). Of the 13 countries shown in the figure, only Belgium, Germany, and Ireland committed direct assistance to Ukraine during this event. Moreover, the European Commission offered assistance to Ukraine (€600 million) as well as to other countries (€400 million), while the European Investment Bank (EIB) tops the list with a total commitment of €4 billion to countries other than Ukraine.

Figure A2. Country pledges during the “Stand up for Ukraine” event



Note: This figure shows the country pledges during the “Stand up for Ukraine” event that took place on April 9, 2022, in Warsaw. The pledges are separated into assistance to Ukraine (for internally displaced civilians; brown) and to other countries (for refugees outside Ukraine; green).

Appendix II: Main sources by country

This section provides a list of particularly relevant sources by country. Whenever possible, we rank official (government) sources higher than media reports and other types of sources.

- Austria:
 - o Thelocal.at
<https://www.thelocal.at/20220228/austria-to-send-protective-equipment-and-fuel-to-ukraine/>
- Belgium:
 - o Press release by the Ministry of Foreign Affairs
https://diplomatie.belgium.be/en/newsroom/news/2022/belgium_sends_emergency_shepherd_material_ukraine_b_fast
 - o Tweets by Alexander De Croo
<https://twitter.com/alexanderdecroo/status/1497542000228417537>
<https://twitter.com/alexanderdecroo/status/1497914776063594502>
- Bulgaria:
 - o Sofiaglobe.com
<https://sofiaglobe.com/2022/02/27/bulgaria-to-provide-humanitarian-military-logistical-aid-to-ukraine/?msclkid=2fb3d8c7b05511ec86aca56bb6424b21>
- Canada:
 - o Press release on the governmental website
<https://www.canada.ca/en/global-affairs/news/2022/03/canada-announces-100-million-humanitarian-assistance-to-ukraine.html>
<https://www.canada.ca/en/departement-national-defence/news/2022/03/defence-minister-anand-announces-additional-military-support-to-ukraine.html?msclkid=50865665ab9011ecbb2d77d3ecd6e3a6>
<https://www.canada.ca/en/global-affairs/news/2022/02/canada-sending-additional-25m-military-aid-to-support-ukraine.html>
 - o Ctvnews.com
<https://www.ctvnews.ca/politics/ukraine-can-t-negotiate-with-gun-to-head-says-joly-as-trudeau-presses-allies-1.5811832>
- Croatia:
 - o Press release on the governmental website
<https://vlada.gov.hr/news/croatia-sending-emergency-aid-to-ukraine/33960>
<https://vlada.gov.hr/news/croatia-had-sided-with-freedom-and-democracy-and-with-the-ukrainian-people-which-is-the-only-right-way/34979>
- Cyprus:
 - o Press release by the Ministry of Foreign Affairs
<https://mfa.gov.cy/press-releases/2022/03/09/cyprus-humanitarian-aid-to-ukraine/>
- Czech Republic:
 - o Czdefence.com
<https://www.czdefence.com/article/czech-republic-donates-artillery-ammunition-worth-czk-366-million-to-ukraine>
 - o CNN.com
https://edition.cnn.com/europe/live-news/ukraine-russia-putin-news-03-13-22/h_025dcb1758c374a11f208c39d687f1b0
 - o Press release on the governmental website
<https://www.vlada.cz/cz/media-centrum/aktualne/vlada-schvalila-dalsi-dar-v-podobe-vojenskeho-materialu-ukrajine-194585/>
<https://www.vlada.cz/cz/media-centrum/aktualne/vlada-petra-fialy-schvalila-dalsi-vojenskou-pomoc-bojujici-ukrajine-194603/>

- <https://www.vlada.cz/cz/media-centrum/aktualne/vlada-schvalila-dalsi-materialni-pomoc-pro-ukrajinu-a-opatreni-na-pomoc-se-zvladnutim-migracni-krize-194727/>
<https://www.vlada.cz/cz/media-centrum/aktualne/informace-v-souvislosti-s-invazi-ruska-na-ukrajinu-194507/>
<https://www.vlada.cz/cz/media-centrum/aktualne/vlada-kvuli-migracni-krizi-vyhlasila-od-patku-nouzovy-stav--schvalila-i-dalsi-pomoc-pro-ukrajinu-a-navrh-na-zvyseni-vydaju-na-obranu-194695/>
- English.radio.cz
<https://english.radio.cz/czech-republic-send-more-arms-ukraine-8745032>
 - Denmark:
 - Press release by the Ministry of Foreign Affairs
<https://um.dk/danida/lande-og-regioner/ukraine>
 - Press release by the Ministry of Health
<https://sum.dk/nyheder/2022/marts/danmark-donerer-medicin-og-medicinsk-udstyr-til-ukraine>
 - Norwaytoday.info
<https://norwaytoday.info/news/denmark-is-sending-2700-norwegian-anti-tank-missiles-to-ukraine/?msclkid=73ecd53aaf3011ecb79c85a936eebfaa>
 - Estonia:
 - Press release by the Ministry of Defense
<https://kaitseministeerium.ee/en/news/estonia-donated-missiles-anti-tank-weapon-system-javelin-ukraine>
 - Finland:
 - Press release on the governmental website
<https://valtioneuvosto.fi/en/-/10616/finland-sends-additional-aid-to-ukraine>
<https://valtioneuvosto.fi/en/-/finland-to-send-arms-assistance-to-ukraine#:~:text=On%20the%20proposal%20of%20the%20Government%2C%20the%20President,combat%20ration%20packages%20to%20Ukraine%20as%20material%20aid.?msclkid=43fcac85ab7811ecb0558f7b82e56a26>
 - Press release by the Ministry of Defense
https://www.defmin.fi/en/topical/press_releases_and_news/finland_sends_additional_aid_to_ukraine.12482.news#05c93ea1
https://www.defmin.fi/en/topical/press_releases_and_news/finland_delivers_more_defence_materiel_to_ukraine.12553.news#05c93ea1
 - France:
 - Press release by the Ministry of Foreign Affairs
<https://www.diplomatie.gouv.fr/en/country-files/ukraine/news/article/ukraine-france-mobilizes-to-deliver-emergency-medical-aid-to-victims-of-the>
<https://www.diplomatie.gouv.fr/en/country-files/ukraine/news/article/ukraine-france-steps-up-humanitarian-relief-efforts-for-ukraine-10-mar-2022>
<https://www.diplomatie.gouv.fr/en/country-files/ukraine/news/article/ukraine-conversation-between-jean-yves-le-drian-and-his-ukrainian-counterpart>
 - Press release by the Presidency of France
<https://www.elysee.fr/emmanuel-macron/2022/02/27/entretien-telephonique-avec-volodymyr-zelensky-president-de-la-republique-ukraine>
 - Press release on the website of the European Commission
https://ec.europa.eu/echo/news-stories/news/ukraine-eu-delivers-additional-assistance-rescue-vehicles-and-emergency-equipment-2022-03-25_de
 - Germany:
 - Press release on the governmental website

- <https://www.bundesregierung.de/breg-de/aktuelles/rede-von-bundeskanzler-scholz-anlaesslich-des-global-solutions-summit-2022-am-28-maerz-2022-in-berlin-2021184>
- Spiegel.de
 - <https://www.spiegel.de/ausland/russland-ukraine-news-am-sonntag-russische-ingenieure-inspizieren-beschossenes-kernkraftwerk-saporischschja-a-cfc0e7da-82f2-4dd5-8261-41dd9de3511e>
 - <https://www.spiegel.de/politik/deutschland/ukrainekrieg-deutschland-liefert-2000-panzerfaeuste-a-fe240e80-7c7a-4227-a692-3874bd607593>
 - <https://www.spiegel.de/politik/deutschland/ukraine-krieg-deutschland-lieferte-waffen-fuer-37-millionen-euro-a-460a7b35-70aa-40bb-8ec7-80f5606f0d5a>
 - Rnd.de
 - <https://www.rnd.de/politik/scholz-nach-g7-gipfel-deutschland-stockt-humanitaere-hilfe-fuer-ukraine-auf-ueber-370-millionen-euro-O7ELJICOGFEUVNINTJ2JW4U6JE.html>
 - Greece:
 - Press release by the Ministry of Defense
 - <https://www.mod.mil.gr/en/deputy-defence-minister-nikolaos-chardalias-accompanies-a-humanitarian-aid-cargo/#:~:text=humanitarian%20aid%20with-.medical%2C%20pharmaceutical%20and%20first%20aid%20material,-.%20The%20humanitarian%20aid>
 - <https://www.mod.mil.gr/en/defence-material-sent-to-poland-on-a-haf-c-130/>
 - Thenationalherald.com
 - <https://www.thenationalherald.com/russias-ukraine-invasion-sees-greece-taking-bigger-nato-role/#:~:text=Greece%20sent%20Ukraine%20military%20equipment%20compatible%20with%20that,rocket%20launchers%2C%20aligning%20itself%20with%20NATO's%20indirect%20assistance.?msclkid=6dac7726ab8911ec980d9386f90d3180>
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