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### **Mahesh Kumar SINGH**

Doctor of Science in Economics, Professor  
Amsterdam Business School  
University of Amsterdam, The Netherlands  
**ORCID ID:** 0000-0002-5007-3721  
**Scopus Author ID:** 55469473600

### **Helga SÁRKÖZY**

PhD Student  
Hungarian University of Agriculture and Life Sciences (MATE),  
Gödöllő, Hungary

### **Suraj Kumar SINGH**

M.C.A, Chief Technological Advisor  
Stockholm, Sweden

### **Zoltán ZÉMAN**

Doctor of Science in Economics, Professor  
Hungarian University of Agriculture and Life Sciences (MATE),  
Gödöllő, Hungary

## **IMPACT OF UKRAINE-RUSSIA WAR ON GLOBAL TRADE AND DEVELOPMENT: AN EMPIRICAL STUDY**

***Анотація.** Криза в Україні породила гуманітарну кризу величезних масштабів, а також завдала серйозного удару світовій економіці. Основний тягар страждань і руйнувань відчуває на собі сам народ України, але ціни в умовах скорочення торгівлі та виробництва, ймовірно, відчують на собі люди в усьому світі через підвищення цін на продукти харчування та енергоносії, а також зменшення доступності товарів, які експортує Росія. і Україна. Бідніші країни піддаються високому ризику війни, оскільки вони, як правило, витрачають більшу частину своїх доходів на їжу порівняно з багатшими країнами, що може вплинути на величезну політичну стабільність у всьому світі. З макроекономічної точки зору, вищі ціни на продовольство та енергоносії призведуть до зменшення реальних доходів і глобального попиту на імпорт. Санкції завдають економічних збитків не лише безпосередньо Росії, а й її торговим партнерам. Окрім Росії та України, падіння ВВП, ймовірно, спостерігатиметься переважно в Європі, враховуючи географічну близькість регіону та його залежність від російських енергоносіїв. Торговельні витрати зростуть найближчим часом через надзвичайні санкції, експортні обмеження, високі витрати на енергоносії та перебої в транспорті. Як наслідок, вплив війни на світовий обмін у 2022 році може бути більшим, ніж вплив на світовий ВВП. Хоча частки Росії та України у світовій торгівлі та виробництві є відносно невеликими, вони є важливими постачальниками основних продуктів, зокрема продуктів харчування та енергії. У 2021 році на обидві країни припадало 2,5 відсотка світової торгівлі товарами та 1,9 відсотка світового ВВП. Проте у 2019 році вони постачали близько 25 відсотків пшениці, 15 відсотків ячменю та 45 відсотків експорту продуктів із соняшнику, 9,4 відсотка світової торгівлі паливом, у тому числі 20 відсотків експорту викопного палива. Багато країн дуже захоплені імпортом продуктів харчування з Росії та України, наприклад, понад 1/2 імпорту пшениці в Єгипет, Ліван і Туніс надходить з Росії та України. Інші країни більше залежні від імпорту палива з Росії, наприклад Фінляндія (63 відсотки) і Туреччина (35 відсотків). Росія та Україна також є ключовими постачальниками ресурсів для промислових ланцюжків створення вартості. Росія є одним із найбільших у світі постачальників паладію та родію, ключових*

сировинних ресурсів для виробництва каталітичних нейтралізаторів в автомобільному секторі, а отже, і для виробництва напівпровідників. Виробництво напівпровідників також значною мірою залежить від неону, що постачається Україною, який також забезпечує низку низько технологічних продуктів для автомобільного ланцюга створення вартості, наприклад джгути проводів. Тривалі перебої в постачанні цих товарів можуть зашкодити відновленню автомобілебудування. Санкції вже справляють сильний вплив на економіку Росії з можливими середньо- та довгостроковими наслідками. Відключення російських банків від розрахункової системи SWIFT і блокування використання Росією обмінних резервів спровокували різке знецінення рубля, скоротивши реальні доходи в країні. Більшість великих міжнародних фірм також покидають російський ринок. Експорт нафти та газу ще не сильно піддав під санкції, але криза може прискорити світовий перехід до більш екологічних джерел енергії. Тривалі економічні відносини порушуються війною та санкціями, запровадженими після неї. Видатні економісти змоделивали різні сценарії, вказавши в дужках канали, через які торгівля цілком може постраждати, і дослідити можливі короткострокові та довгострокові наслідки. Прогнозується, що зростання світової торгівлі сповільниться до 2,2 відсоткових пунктів у 2022 році. Довгостроковий вплив може бути навіть значним і непрямим, існує ризик того, що торгівля може стати більш фрагментованою з точки зору геополітики, що підтримується блоками. Незалежно від того, чи з'являться офіційні блоки, приватні суб'єкти можуть віддати перевагу мінімізації ризику шляхом переорієнтації ланцюгів постачання. Це може скоротити світовий ВВП у довгостроковій перспективі приблизно на 5 відсотків, зокрема через обмеження конкуренції та придушення інновацій (COT, 2022). Глобальна економіка відіграє вирішальну роль у пом'якшенні негативних наслідків кризи та у відбудові післявоєнної глобальної економіки. Збереження відкритих ринків має вирішальне значення для підтвердження того, що економічні можливості залишаються сприятливими для всіх країн. це може бути дуже вірним у післявоєнний період, коли підприємствам і родинам доведеться відновлювати свої баланси та будувати життя заново. Завдяки своїй важливості для міжнародної торгівлі та своїм функціям моніторингу, скликання та інших функцій COT відіграє центральну роль у забезпеченні того, щоб міжнародна торгівля продовжувала обслуговувати мільярди людей по всьому світу. У цій статті ми даємо емпіричний аналіз світової торгівлі та розвитку, на які вплинула нинішня російсько-українська війна.

**Ключові слова:** міжнародна торгівля, світова економіка, ВВП, криза, санкції

**JEL Classification:** E60, F14, F42.

**Absztrakt.** Az ukrajnai válság óriási méretű humanitárius válságot idézett elő és súlyos csapást mért a világgazdaságra is. A szenvedés és pusztítás súlyát Ukrajna lakossága érzi, de a kereskedelem és a kibocsátás csökkenése miatti árvéltozásokat valószínűleg az emberek világszerte érezni fogják a magasabb élelmiszer- és energiaárakban, valamint az Oroszország által exportált termékek szűkült elérhetősége miatt. A szegényebb országokat nagyobb veszély fenyegeti a háború miatt, mivel jövedelmük nagyobb hányadát költik élelmiszerre, mint a gazdagabb országok, ami óriási politikai változást hozhat világszerte. Makrogazdasági szempontból a magasabb élelmiszer- és energiaárak csökkentik a reáljövedelmeket és visszafogják a globális importkeresletet. A szankciók nemcsak közvetlenül Oroszországot, hanem kereskedelmi partnereit is gazdasági költségekkel sújtják. Oroszország és Ukrajna mellett a bruttó hazai termék (GDP) visszaesése valószínűleg leginkább Európában lesz tapasztalható, tekintettel a régió földrajzi közelségére és az orosz energiától való függésére. A kereskedelmi költségek rövid távon emelkedni fognak a rendkívüli szankciók, az exportkorlátozások, a magasabb energiaköltségek és a szállítási zavarok miatt. Ennek eredményeként a háború hatása a kereskedelemre 2022-ben nagyobb lesz, mint a globális GDP-re gyakorolt hatása. Míg Oroszország és Ukrajna részesedése a világkereskedelemben és a kibocsátásban viszonylag kicsi, attól még fontos beszállítói az alapvető termékeknek, különösen az élelmiszereknek és az energiának. Mindkét ország 2021-ben a világ árukereskedelmének 2,5 százalékát, a világ GDP-jének 1,9 százalékát adta. Ennek ellenére 2019-ben a búza, az árpa 15 százalékát és a napraforgótermékek 45 százalékát adták, a világkereskedelmi üzemanyagok 9,4 százalékát, ezen belül a fosszilis tüzelőanyagok exportjának 20 százalékát. Sok ország nagy mértékben függ az Oroszországból és Ukrajnából származó élelmiszerimporttól. Például Egyiptomba, Libanonba és Tunéziába a

búzaimport több mint fele Oroszországból és Ukrajnából származik. Más országok jobban függenek az oroszországi üzemanyagimporttól, például Finnország (63 százalék) és Törökország (35 százalék). Oroszország és Ukrajna az ipari értékláncok kulcsfontosságú résztvevői. Oroszország világszerte az egyik legnagyobb palládium és ródium beszállítója, amelyek kulcsfontosságú szerepet töltenek be az autóipari katalizátorok gyártásában, és így a félvezetők gyártásában is. A félvezető gyártás jelentős mértékben függ az Ukrajna által szállított neontól is, amely további alacsony technológiájú termékek széles skáláját kínálja az autók gyártási láncának, mint például a kábelköteg. Az ilyen áruk ellátásának hosszan tartó fennakadása ronthatja az autógyártás fellendülését. A szankciók már most is erőteljes hatást gyakorolnak Oroszország gazdaságára, aminek közép- és hosszú távú következményei is lehetnek. Az orosz bankok leválasztása a SWIFT elszámolási rendszerről és a devizatartalékok orosz felhasználásának blokkolása a rubel erőteljes leértékelődését idézte elő, csökkentve az országon belüli reáljövedelmeket. A hatalmas nemzetközi cégek többsége is elhagyja az orosz piacot. Az olaj- és gázexport még nem telített meg a szankciókkal, de a válság felgyorsíthatja a zöldebb energiaforrásokra való világméretű átállást. A régóta fennálló gazdasági kapcsolatokat megzavarta a háború és az azt követő szankciók kivetése. Nívós közgazdászok különböző forgatókönyveket szimuláltak, hogy mely csatornákon keresztül a kereskedelem befolyásolható és hogy feltárják a lehetséges rövid és hosszú távú hatásokat. A globális kereskedelem növekedése az előrejelzések szerint akár 2,2 százalékponttal is lassulhat 2022-ben. A hosszú távú hatások akár jelentősek és következményesek is lehetnek - fennáll annak a veszélye, hogy a kereskedelem széttagoltabbá válhat a blokkok által támogatott geopolitika szempontjából. Ha kialakulnak formális blokkok, ha nem, a magánszereplők inkább az ellátási láncok átirányításával minimalizálják a kockázatot. Ez hosszú távon mintegy 5 százalékkal csökkentheti a globális GDP-t, nevezetesen a verseny korlátozásával és az innováció elfojtásával együtt (WTO, 2022). A globális gazdaságnak döntő szerepe van a válság negatív hatásainak enyhítésében és a háború utáni világgazdaság újjáépítésében. A piacok nyitva tartása kritikus fontosságú annak megerősítéséhez, hogy a gazdasági lehetőségek továbbra is fogékonyak maradnak minden országban. Ez nagyon igaz lehet a háború utáni időszakban, amikor a vállalkozásoknak és a családoknak meg kell javítaniuk helyzetüket és újjá kell építeniük életüket. A WTO a nemzetközi kereskedelemben betöltött fontossága, valamint nyomon követése, összehívása és egyéb funkciói révén központi szerepet játszik annak biztosításában, hogy a nemzetközi kereskedelem továbbra is emberek milliárdjait szolgálja szerte a világon. Ebben a cikkben empirikus elemzést adunk a világkereskedelemről és a jelenlegi orosz-ukrán háború által érintett fejlődésről.

**Kulcsszavak:** nemzetközi kereskedelem, globális gazdaság, GDP, válság, szankciók.

**Abstract.** The crisis in Ukraine has created a humanitarian crisis of immense proportions and has also dealt a severe blow to the globe economy. The brunt of the suffering and destruction are being felt by the people of Ukraine themselves but the prices in terms of reduced trade and output are likely to be felt by people round the world through higher food and energy prices and reduced availability of products exported by Russia and Ukraine. Poorer countries are at high risk from the war, since they have a tendency to spend a bigger fraction of their incomes on food compared to wealthier countries, this might impact huge political stability globally. From a macroeconomic perspective, higher prices for food and energy will reduce real incomes and depress global import demand. Sanctions will impose economic costs on not only Russia directly but also on its trading partners. Besides Russia and Ukraine, depressed gross domestic product (GDP) will probably be seen mostly in Europe given the region's geographic proximity and its dependence on Russian energy. Trade costs will rise within the near term because of extraordinary sanctions, export restrictions, higher energy costs and transport disruptions furthermore. As a result, the impact of the war will wear world interchange 2022 might be greater than the impact on global GDP. While shares of Russia and Ukraine in world trade and output are relatively small, they're important suppliers of essential products, notably food and energy. Both countries accounted for 2.5 percent in world merchandise trade and 1.9 per cent in world GDP in 2021. Yet they supplied around 25 per cent of wheat, 15 per cent of barley and 45 per cent of sunflower products exports in 2019. Russia alone accounted for 9.4 percent of world trade fuels, including a 20 per cent share in fossil fuel exports. Many countries are highly obsessed on food imports from Russia and Ukraine. for instance, over 1/2 wheat imports in Egypt, the Lebanon and Tunisia come from Russia and Ukraine. Other countries are more addicted to imports of fuels from Russia, like Finland (63 percent) and Turkey (35 percent). Russia and Ukraine also are key providers





*of inputs into industrial value chains. Russia is one in all the most suppliers globally of palladium and rhodium, key inputs within the production of catalytic converters within the automotive sector and therefore the manufacture of semiconductors. Semiconductor production also depends to a considerable extent on neon supplied by Ukraine, which further provides variety of low-tech products to the ecu automobile value chain, like wire harnesses. Prolonged disruptions within the supply of those goods could harm the recovery of automobile manufacturing. Sanctions are already having a robust impact on Russia's economy, with possible medium to long-term consequences. Disconnecting Russian banks from the SWIFT settlement system and blocking Russia's use of interchange reserves have triggered a pointy depreciation of the ruble, reducing real incomes within the country. Most of the massive international firms also are abandoning the Russian market. Oil and gas exports have yet to be strongly full of the sanctions, but the crisis could accelerate the worldwide transition towards greener energy sources. Longstanding economic relationships are disrupted by the war and by the sanctions imposed in its wake. Eminent economists have simulated various scenarios parenthetically the channels through which trade may well be affected and to explore possible short-run and long-run effects. Global trade growth is projected to slow by up to 2.2 percentage points in 2022. long term impacts could even be large and consequential. there's a risk that trade could become more fragmented in terms of blocs supported geopolitics. whether or not no formal blocs emerge, private actors might prefer to minimize risk by reorienting supply chains. this might reduce global GDP within the long term by about 5 percent, notably by restricting competition and stifling innovation (WTO, 2022). The Global Economy has a crucial role to play in mitigating the negative effects of the crisis and in rebuilding a post-war global economy. Keeping markets open are critical to confirm that economic opportunities remain receptive all countries. this can be very true within the post-war period, when businesses and families will have to repair their balance sheets and rebuild their lives. Through its importance for international trade and its monitoring, convening and other functions, the WTO is central to making sure that international trade continues to serve billions of individuals across the globe. during this paper we are giving an empirical analysis of world trade and development impacted by the present Russian-Ukraine war.*

**Keywords:** *international trade, global economy, GDP, crisis, sanctions.*

**Introduction.** The global economy was already preparing for a new era before the outbreak of the COVID-19 pandemic in 2020. The ongoing transformation was mainly driven by the evolution of digital technologies and the emerging imperative of sustainability. The COVID-19 crisis has accelerated this transformation by increasing the dependency on ultra modern IT based solutions in doing business, as well as reinforcing the need for a more sustainable and crisis-proof energy sector and supply chains. It has become evident that those economies will emerge stronger from the current crisis that speed up the adoption of digital technologies and reshape their operations along sustainability at the same time. In February 2022, Russia's sudden and illegal invasion of Ukraine not only started a geopolitical and humanitarian crisis, it also generated the largest risk to the economic recovery worldwide, particularly so in Europe. The armed conflict and the Western sanctions against Russia have extended the supply chain disruptions that had been prevailing since the COVID-19 outbreak and have put global logistics to the test again. In addition, the war has had some implications that are in close connection with the ongoing transformation of the global economy along digitalisation and sustainability.

The effects of the Russian-Ukrainian war worldwide restrain economic growth and further increase inflationary pressure. In addition, climate change or even positive changes and processes that seem to be difficult to start in the field of public health are

pushed into the background, and the most serious consequences can befall the poorest regions all around the Globe.

This review study draws attention to the fact that although Russia and Ukraine together represent a relatively small part of the world economy, both countries are important players in some critical markets. These include hydrocarbons, many metals, agricultural raw materials and basic foodstuffs. For example, Russia and Ukraine together account for almost a third of the world's wheat exports. This further increases the risks of conflict management and has global spillover effects, even in the short term.

The countries were able to protect themselves against the coronavirus epidemic and the recession that followed it by increasing their central expenditures. Thus, the level of public debt increased worldwide. Now that central banks are raising interest rates again, the cost of managing public debt will also increase, which is particularly challenging for emerging countries whose debt is denominated in the strengthening US dollar.

Since political decision-makers and many players in the private sector have barely recovered from the impact of the epidemic, they are hardly ready to deal with another major economic shock. The conflict between Russia and Ukraine is fueling inflation. According to current analysis, global inflation may average between 4.5 and 7.7 percent this year and between 2.9 and 4.3 percent in 2023, depending on how the crisis develops. On the other hand, a change in the position of central banks, especially the Fed, regarding the management of rising inflationary pressure may cause volatility in the financial markets.

This empirical study brief explores how the armed conflict in Ukraine forcefully imposed by Russia and its consequences will possibly affect complete financial and Global trade crisis.

**Literature review.** According to Global Financial Stability Report of IMF [1] global financial conditions getting worse and downside risks to the economic outlook have increased as a result of the war in Ukraine. The tightening has been mainly pronounced in eastern Europe and Middle East countries with close ties to Russia, reflecting lower equity valuations and higher funding costs (IMF, 2022a [4]). This has occurred just as most of the world was slowly bringing the pandemic under control and the global economy was recovering from COVID-19 (Amann and Carey, 2022 [3]). The financial stability risks have risen on several fronts, although to date, no global systemic event affecting financial institutions or markets has materialized. A sudden repricing of risk resulting from an intensification of the war and associated escalation of sanctions may expose, and interact with, a number of the vulnerabilities built up during the pandemic, resulting in a pointy decline in asset prices [1,4,5].

With the sharp rise in commodity prices anticipated to feature to pre-existing inflation pressure, central banks are faced with a challenging trade-off between fighting record-high inflation and safeguarding the post-pandemic recovery at a time of heightened uncertainty about prospects for the world economy (Nuttall, 2022 [6] and IMF, 2022 [4]).

Bringing inflation backtrack to focus on and preventing an unmooring of inflation expectations require a fragile act in removing accommodation while preventing a disorderly tightening of monetary conditions that would interact with financial vulnerabilities and sadden growth. Incoming inflation data suggest that more decisive



tightening of monetary policy is important in many countries (Bloomberg, IMF, 2022 [1, 4], WFP, 2022 [17]).

After rising early within the year on concerns about the inflation outlook, advanced economy nominal bond yields have increased further since the invasion, amid heightened volatility of rates. Inflation break-evens (a market-implied proxy for future inflation) have risen significantly on the rear of sharply higher commodity prices (FAO, 2022) [7].

Our literature overview regarding the unconditional invasion by Russian armed forces to the Republic of Ukraine and its major impact on Global Trade and Development also based on our current scientific analysis which indicate major global crisis in every sector and affecting all humankind across the globe. Many countries are suffering serious economic consequences as a result of the Russian invasion of Ukraine because Ukraine and Russia are major exporters of agricultural commodities and fossil fuels, and disruptions to supplies of these commodities and associated price spikes are already being felt across the globe (Becker et al. 2022) [19]. As the Black Sea region is a large exporter of fertilizers, the resulting shortages and price increases could translate into lower crop yields in many regions. This in turn could lead to food prices reaching new highs (Brenton, 2022 [22] and Winkler et al. 2022). The Russian invasion has prompted an unprecedented reaction by the United States, the European Union, and other high-income economies, in the form of sanctions. These range from sanctions targeting Russian individuals and enterprises, to bans on Russian energy imports and restrictions on exports of select electronics to Russia, such as semiconductors. Countries that have a high dependence on tourists from Russia and Ukraine, such as Georgia, Moldova, Maldives India, China etc., will see significant declines in exports of tourism and accommodation services (Arvis et al. 2022 [21]). The negative impact of the conflict will also be visible in other areas of the global economy through increases in transportation costs, or the loss of remittances in countries that are heavily dependent on inflows from Russia, such as Tajikistan and the Kyrgyz Republic. Russia itself has imposed several restrictions, including bans on exports of wheat and other food products outside of Eurasian Economic Union, and a ban on exports of electronics, motor vehicle parts and transport equipment (Liu, 2022 [23]). The likely duration of the sanctions is hard to assess. Stylized simulations are applied to analyze the effects of the war on trade flows of developing countries. The state-of-the-art economic model is applied to take into account longer-term supply constraints on agricultural and energy commodities in the Black Sea region, as well as rising fertilizer costs and select trade restrictions (IMF, 2022 [4] and World Bank, 2022 [18]).

Several developing countries rely heavily on imports of wheat from Russia and Ukraine. Such imports constitute a large share of domestic consumption in countries across all regions. Nicaragua imports 86 percent of the wheat it consumes from the Black Sea Region, in SubSaharan Africa, the most heavily dependent on imports from the region are the Republic of Congo (67 percent) and Niger (60 percent), in MENA - Lebanon (86 percent); and in South Asia - Bangladesh with 41 percent. Dependence on other cereal grains is also relatively high in many countries, but lower than in the case of wheat. Libya imports 81 percent of other grains from the region, followed by Mauritania, (78 percent), Mongolia (74 percent), and several high-income countries. Among countries from ECA region, the Netherlands imports 30 percent of its

consumption from the Black Sea region and Portugal 24 percent. The dependence on imports of oil seeds is much less significant, with the highest share in consumption in ECA countries such as Georgia (63 percent), Armenia (39 percent), and Mongolia (35 percent). Several countries in the ECA region are highly dependent on energy imports from Russia as a share of consumption. In terms of coal, the reliance on imports from Russia is relatively high in Latvia (100 percent) and Moldova (96 percent), as well as in some developing countries like Belize (99 percent) and Algeria (94 percent). Many high-income countries in the ECA region are also deeply connected with Russia in terms of crude oil, namely Slovakia (97 percent), Finland (82 percent), and Poland (71 percent). For natural gas, Kyrgyzstan's ratio of imports to total domestic consumption reaches 94 percent; it is followed by Czech Republic and Lithuania (both 90 percent). Some economies outside the ECA region, such as Taiwan, China (29 percent) and Togo (24 percent), also show a high dependence on Russia. Several developing countries in the ECA region rely on Russia for more than 60 percent of their consumption of petroleum and coal products. These include Uzbekistan (71 percent) and Tajikistan (62 percent) (FAO, 2022 [7] and Ruta et al. 2022 [24]).

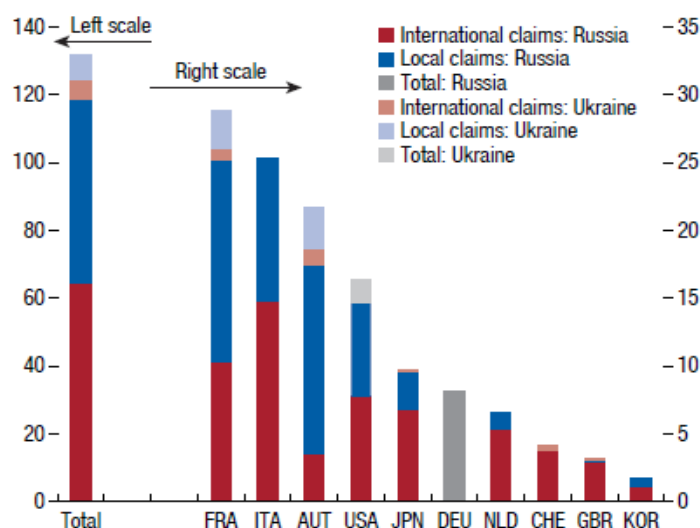
**Results and discussion.** Repercussions of the Russian invasion of Ukraine and ensuing sanctions still reverberate globally and can test the resilience of the economic system through various potential amplification channels, including direct and indirect exposures of banks and nonbanks; market disruptions in commodity markets and increased counterparty risk; poor market liquidity and funding strains; acceleration of cryptoization in emerging markets; and possible cyber-related events (Bloomberg [12], IMF, 2022 [4]).

The war has already had a sway on financial intermediaries, nonfinancial firms, and markets directly or indirectly exposed to Russia and Ukraine. Europe bears a better risk than other regions because of its proximity, reliance on Russia for energy needs, and therefore the non-negligible exposure of some banks and other financial institutions to Russian financial assets and markets. Banks' direct exposures to Russia are relatively small aside from some non-systemic European banks (Figure 1).

Banks' indirect exposures are harder to spot and assess because they're less well-known (especially the extent of interconnectedness) because it is difficult to quantify them within the absence of detailed and consistent disclosures by country or by specific activity types. The danger is that indirect exposures might be meaningful and surprise investors once revealed, resulting in a pointy rise in counterparty risk and risk premia. Foreign non-bank financial intermediaries (NBFIs) have sizable investments in Russian assets, with US and European investment accounting for many of the exposures. As a share of total assets, however, their exposure to Russia is tiny (OECD, 2022 [8] and BIS, 2022 [13]).

Dedicated emerging market funds have maintained a cautious stance on their exposures to Russian debt since the Crimea occupation in 2014, reducing their share of Russian debt from quite 10 percent before 2014 to simply over 4 percent in 2022. Funds benchmarked to global indices have had a far smaller exposure to Russia, with a mean 0.2 percent of their assets invested in Russian debt in 2022 (BIS, 2022 [13] and IMF, 2022 [1,4]).





**Figure 1. Foreign Banks' Gross Claims on Russia and Ukraine**  
 (Billions of US dollars) [1, p. XII]

Sources: Bank for International Settlements Consolidated Banking Statistics; and IMF (2022a).  
 Note: Data labels use International Organization for Standardization (ISO) country codes.

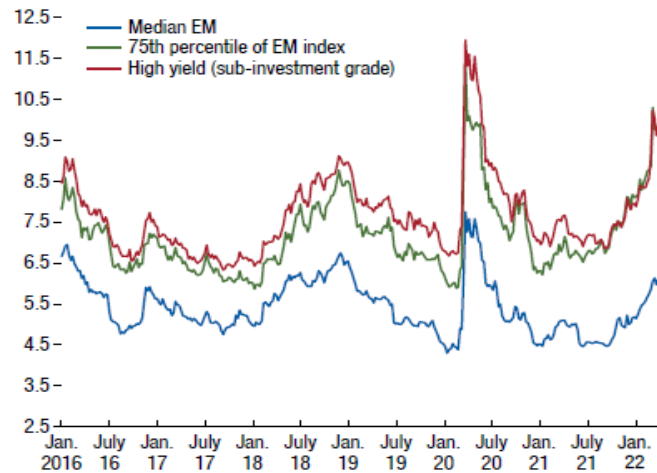
Severe disruptions in commodity markets and provide chains across the world have caused extreme volatility in commodity prices, amplified by pressures in commodity trade finance and derivatives markets. Dealer banks play a vital role and have significant exposures in these markets, including by providing liquidity and credit to a tiny low group of huge energy trading firms that operate globally, are largely unregulated, and are mostly privately owned. Pressures in commodity markets, often magnified by poor liquidity, have led to lower risk appetite and rising counterparty risk concerns, with implications for funding conditions (Góes and Bekkers, 2022 [9]).

Emerging and frontier markets face tighter financial conditions and better risks of capital outflows. Since the war in Ukraine began, emerging market (EM) cash yields have increased at a rapid pace, adore earlier episodes of emerging market stress, before retracing some in mid-March (Figure 2) (Bloomberg, IMF, 2022 [1, 4, 12]).

The number of issuers trading at distressed levels has surged to nearly 25 percent of issuers (Figure 3), surpassing pandemic-peak levels (JP Morgan Chase, 2022 [15], IMF, 2022 [1,4]).

The deterioration in spreads, combined with the rise in US yields, has pushed financing costs well above their pre-pandemic levels for several borrowers. Markets remain open for issuance at those higher levels of funding costs. Flows in local currency bonds and equities have come struggling, experiencing the biggest weekly redemptions since March 2020. Tighter external financial conditions on the back of US monetary policy normalization and heightened geopolitical uncertainty are likely to increase the downside risks for portfolio flows (Figure 4) [1].

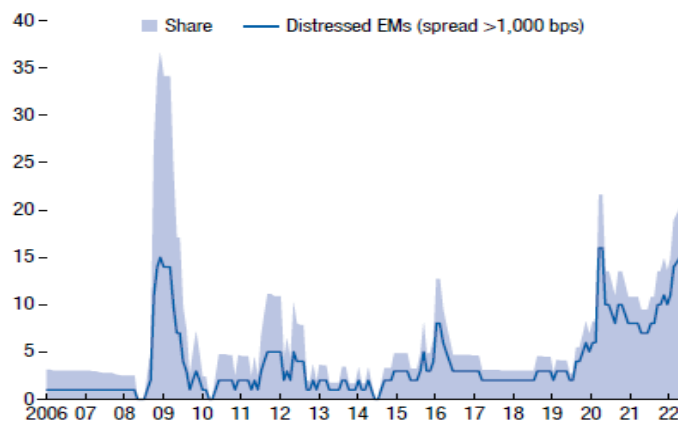




**Figure 2. Emerging Market Hard Currency Yields (Percent) [1, p. XII]**

Sources: Bloomberg Finance L.P.; and IMF (2022a).

Note: EM = emerging market; HY = high-yield. Yields based on JPMorgan Emerging Market Bond Index.



**Figure 3. Distressed Sovereign Hard Currency Issuers**

(Number of sovereigns with spreads above 1,000 basis points; share of total)

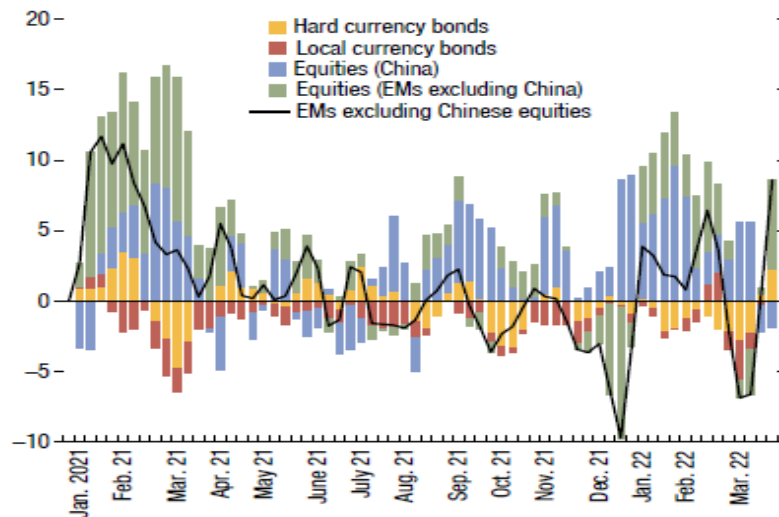
Sources: JPMorgan Chase & Co.; and IMF (2022).

Note: bps = basis points; EMs = emerging markets.

Retrieved from: [1, p. XIII]

As a result of the war in Ukraine, there will be supply and commodity price shocks with wide-ranging long-term consequences. Production, consumption, and trade in commodities will change as countries move towards greater self-sufficiency, creating opportunities for new suppliers. The war is leading to costlier trading patterns and a major diversion in energy trade, and the outlook for commodity markets is highly dependent on the length of the war and the disruption it causes in supply chains. A war in Ukraine will trigger a massive negative supply shock in the global economy. The price shocks will have global consequences. In addition, the war in Ukraine will exacerbate the structural problems of post-pandemic Europe. According to IMF experts notes that the sanctions on Russia will have dramatic long-term effects on prices, starting with energy but then spreading to the entire economy. In their opinion, Lithuania, Latvia, and Estonia remain more vulnerable than many other European

countries and may be among the first whose economies will feel the blow. Vulnerability can be explained by the share in and structure of EU countries' international trade with Russia. For example, in 2021, Latvian exports to Russia accounted for 7.3% of total exports, while imports accounted for 9.1%. This is significantly higher than the EU average of 4.1% and 7.5%, respectively (IMF, 2022b [26]).



**Figure 4. Fund Flows to Emerging Markets [1, p. XIII]**  
(Billions of US dollars, two-week moving sum)

Sources: EPFR; and IMF (2022).

Note: EMs = emerging markets.

As a result of the war in Ukraine, there will be supply and commodity price shocks with wide-ranging long-term consequences. Production, consumption, and trade in commodities will change as countries move towards greater self-sufficiency, creating opportunities for new suppliers. The war is leading to costlier trading patterns and a major diversion in energy trade, and the outlook for commodity markets is highly dependent on the length of the war and the disruption it causes in supply chains. A war in Ukraine will trigger a massive negative supply shock in the global economy. The price shocks will have global consequences. In addition, the war in Ukraine will exacerbate the structural problems of post-pandemic Europe. According to IMF experts notes that the sanctions on Russia will have dramatic long-term effects on prices, starting with energy but then spreading to the entire economy. In their opinion, Lithuania, Latvia, and Estonia remain more vulnerable than many other European countries and may be among the first whose economies will feel the blow. Vulnerability can be explained by the share in and structure of EU countries' international trade with Russia. For example, in 2021, Latvian exports to Russia accounted for 7.3% of total exports, while imports accounted for 9.1%. This is significantly higher than the EU average of 4.1% and 7.5%, respectively (IMF, 2022b [26]).

A war between Russia and Ukraine will exacerbate the supply chain problems and drive up commodity prices further. The sectors with long global production–supply chains and high reliance on energy and metal supplies will face the strongest hurdles.

The energy-dependent sectors, especially oil refining and power generation, transportation services, metallurgy, and chemicals, will be the first to suffer, as Europe uses Russia as a resource supplier. An embargo on Russian energy resources could lead not only to higher prices, but also to the rationing of energy consumption.

According to the world's leading oil and gas analytics agency, Rystad Energy, global LNG demand in 2022 is expected to be 436 million tons and supply is expected to be 410 million tons. This means that the demand will exceed supply by 6.3%, meaning there is not enough LNG to meet demand. For a specific example, consider how supply shocks can affect prices (Caldara and Lacoviello, 2022 [20]).

Austria receives about 80% of its gas supplies from Russia and has warned that a shutdown from its largest supplier will lead to a recession in the country; it has begun holding tenders to replenish its storage facilities. In the first tender, Austria paid a 45% premium on European base prices to create a strategic gas reserve before the start of the heating season. Due to the heavy dependence on raw material imports from Russia and Ukraine, Europe is more vulnerable than the other major economies in the world.

The war is already severely disrupting the narrow food, energy, and financial markets. Persistent disruptions and elongations in the global supply chains and burgeoning transport costs further complicate the situation.

To summarize fund flows to the emerging market (Figure 4), economies and companies will experience price shocks and supply constraints on key commodities, with wide-ranging long-term effects. There will be an increase in the cost of supply chains, and it will also be necessary to reconfigure supply chains to be shorter and more reliable.

**Conclusions and recommendations.** In current war situation, all Central banks should act decisively to stop inflation pressure from becoming entrenched and avoid an unmooring of inflation expectations. To neglect unnecessary volatility in financial markets, it's crucial that central banks, in developed economies provide clear guidance about the normalization process while remaining data dependent (UNHCR data Portal, 2022 [16]).

Emerging markets remain liable to a disorderly tightening of worldwide financial conditions. Many central banks have already significantly tightened their policy. Further rate increases, or policy normalization with reference to other measures taken during the pandemic (such as asset purchases), should continue as warranted in line with the country-specific inflation and economic outlook to anchor inflation expectations and preserve policy credibility (Saul, 2022 [10]).

Policymakers should tighten selected macroprudential tools to tackle pockets of elevated vulnerabilities while avoiding a disorderly tightening of economic conditions. Striking a balance between containing the buildup of vulnerabilities and avoiding procyclicality appears important given uncertainties about the economic outlook, the continued monetary policy normalization process, and limits on fiscal space within the aftermath of the pandemic.

While taking steps to handle energy security concerns, policymakers should intensify their efforts to implement the 2021 international organization temperature change Conference (COP26) road map to realize net-zero targets. they must take measures to extend the provision and lower the value of fuel alternatives and renewables while improving energy efficiency; proportion private finance within the

transition to a greener economy; and continue to strengthen the climate finance information architecture.

Policymakers should also develop comprehensive global standards for crypto assets along the activity and risk spectrum. A more robust oversight of fintech firms and decentralized finance (DeFi) platforms is required to require advantage of their benefits while mitigating their risks (Gronholt-Pedersen and Shabong, 2022 [11]). To preserve the effectiveness of capital flow management measures in an environment of growing usage of crypto assets, policymakers must pursue a multifaceted policy strategy. Recent measures taken in markets and exchanges in response to elevated volatility in commodity prices highlight the requirement for regulators to look at the broader implications, including exchange governance mechanisms, resiliency of trading systems, concentration of risk, margin setting, and trading transparency in exchange and over-the-counter markets.

The long term impact of war in Ukraine on globalization will depend on how government policies and firms' trade and investment decisions adjust in a world of higher geopolitical risks. As discussed above analysis, the war has direct effects on the firms operating in Russia and Ukraine and on firms relying on suppliers from those markets. But the shock caused by the war goes well beyond these two countries, as geopolitical risks have increased globally. The global Geopolitical Risk Index more than doubled since the beginning of the year, reaching levels not seen since the outset of the war in Iraq in March 2003. The past experience shows substantial changes in geopolitical risks in several economies that are more integrated than Russia and Ukraine in world trade and global value chains including China, Finland, Sweden, Taiwan China, among others, pointing to changing perceptions on the risks of future conflicts and sanctions. How governments' policies and firms' trade and investment decisions will adjust to these broader geopolitical risks will ultimately determine the longer-term impact of the war on globalization. Future work should aim to expand the analysis to cover other channels through which the war is affecting other countries, such as financial sanctions, changes in tourism, remittances, and inflows of refugees.

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