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FEBRUARY 2022

Policy Notes and Reports 55

Possible Russian Invasion of Ukraine, Scenarios for Sanctions, and Likely Economic Impact on Russia, Ukraine and the EU

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The authors of this report gratefully acknowledge statistical assistance provided by Alexandra Bykova.

Executive summary

It remains unclear whether or not Russia will actually invade Ukraine, and if it does so, what form this invasion will take. In this note, we outline two broad scenarios: targeted strikes by Russia in Ukraine accompanied by further non-military destabilisation efforts, or a full invasion, and we analyse the implications of both. In the first scenario, we would expect a more limited sanctions response, particularly from the EU, while a full invasion would entail major sanctions from the West as a whole.

Applying a stylized VARX model on Russian quarterly time series, we find no statistically significant impact of sanctions on either Russian GDP or the FX rate. However, we find that Russia is extremely vulnerable to a reduction in the price or volume of its energy exports. This truly nuclear sanctions option—that of restricting energy trade between Russia and the EU —is unlikely given the sizeable negative impact it would have on both sides.

Aside from energy, the most painful sanctions would include cutting Russian banks off from the SWIFT system and dollar markets, and bans on exports of high-tech goods to Russia. While Russia has become increasingly insulated from the dollar-based global system, and has built up substantial buffers which it can deploy in the case of sanctions, under the adverse scenario the state would have to make large-scale interventions to maintain economic and financial stability.

Under both scenarios, the Ukrainian economy would suffer, and would require major Western support to maintain macro-financial stability. Over the medium run, the current crisis will further isolate Russia economically, leading to a continuation of its very mediocre growth performance since 2014. It will also likely accelerate EU moves towards energy diversification away from Russia. However, the economic impact of this on Russia will be likely mitigated by even closer energy ties between Russia and China.

Keywords: Ukraine, Russia, EU, US,sanctions, energy, CEE

JEL classification: F51, E31

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Possible Russian invasion of Ukraine, scenarios for sanctions, and likely economic impact on Russia, Ukraine, and the EU

1. BACKGROUND: WHY NOW?

From Russia's perspective Ukraine is becoming more hostile and getting stronger. Over the past year, Ukraine has taken important steps to develop its relative strength vis-à-vis Russia. Since the start of 2021, the Ukrainian government has imposed restrictions on its own citizens who it believes to be Russian agents and has bought the Bayraktar TB2 armed drones from Turkey that Azerbaijan used so successfully in Nagorno Karabakh in 2020. Seen from Moscow, these measures represent both a hardening of the Ukrainian position, and an increase in its armed capabilities relative to Russia.

Russia does not like Ukraine's increasing integration into euro-Atlantic institutions, and particularly NATO. This includes the installation of NATO military systems, the supply of equipment, training, and joint exercises, thereby changing the balance of military power between Russia and Ukraine. Russia wants a guarantee that NATO won't move any further East, following a doctrine that President Vladimir Putin made clear in his speech in Munich in 2007[1]. Russia has shown, especially in Georgia in 2008 and Ukraine in 2014, that it is willing to fight to enforce this doctrine.

Putting these short- and medium-term developments together, Russia is now officially declaring its concerns about both a Ukrainian offensive against separatist forces in the breakaway territories of Donetsk and Luhansk, and also that Kyiv may acquire military capabilities with which it can target Russian cities, although the assessment regarding both these two issues could be questioned given the overwhelming military superiority of Russia vis-à-vis Ukraine. Nonetheless, looking into the future, Russia's leadership fears the country's relative decline versus the West and NATO in all fields: political, military, economic, and financial. The weakness of the economy will over time reduce its ability to maintain a large military equipped with the most up-to-date technology and able to conduct offensives abroad. Russia has struggled since 2008 to find a new growth model that does not rely on ever-increasing oil prices (it is questionable indeed whether this has ever really been seriously attempted). The confluence of the Munich speech, the global financial crisis, and the invasion of Georgia are not incidental: they reinforce the political-military-economic-financial nexus from a Russian perspective.

Russia has built up a buffer zone, recently enforced by developments in Belarus and Kazakhstan, together with occupied territories in Georgia, Moldova, and Ukraine, plus close relations with Armenia and several Central Asian countries, which provides it with a relatively stabilised zone of influence. It is important that Ukraine – with its western leanings – does not project a model of economic success and political stability in the immediate neighbourhood of Russia.

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[1] http://en.kremlin.ru/events/president/transcripts/24034.

The threat of military intervention might halt the further build-up of NATO's *de facto* military presence in Ukraine (and Georgia, Moldova) and push the prospects of successful membership application further into the future. However, actual military moves into Ukraine's territory could have the exact opposite effect. It would almost certainly lead to a stronger alliance of the rest of Ukraine with the West (more economic support and build-up of Ukraine's military capacities; strengthening of anti-Russia sentiment, etc.). And this might also encourage other countries to make moves to strengthen their defensive capabilities with regard to Russia, such as possible NATO membership for Sweden or Finland, or a greater permanent NATO troop presence in the existing members of the alliance in CEE.

The Russian public broadly accepts the official line: that of having to defend against closer and closer encroachment of NATO to the Russian border. However, there is by no means strong support within Russia for a new military conflict. The population is weary of stagnating living standards and dysfunctional local services, and divided on the prospect of war[2].

An interesting aspect is that the Normandy group has been revived through interventions by France and Germany and it looks – in case no military intervention takes place – that the Minsk process might be one channel whereby the diplomatic process might be picked up, with potentially stronger concessions to Russia.

2. BASELINE SCENARIO + SANCTIONS

Some kind of escalation of the Russia-Ukraine conflict, but short of a full invasion, is the baseline scenario. Russia might wait until at least mid-February for the Omicron wave of the COVID-19 pandemic and the Beijing Winter Olympics to pass. It may be hoping - following the Georgia 2008 scenario - for a Ukrainian misstep to provide the excuse to invade. There is also a clear possibility that Russia is playing a much longer game than many in the US and EU assume: while warnings of an imminent invasion have come out of Washington, Russia may be planning its troop build-up around Ukraine's borders with a much longer time horizon in mind. Ukraine's president, Volodymyr Zelenskiy, has voiced his scepticism about US briefings that an invasion is imminent[3]. It is also likely that the Russian leadership has not yet made up its mind as to how to proceed, and it probably does not have a definite schedule in mind[4]. One could equally argue, however, that without the strong US response, an invasion would have already happened.

In a limited escalation of the conflict, Russia could seek to inflict damage on Ukrainian defence capabilities and the economy, but not outright invade the country, or mainly focus on the Donbass region. A stepping up of non-conventional warfare would also be part of this scenario, including the cyberattacks already evidenced[5]. This would increase Moscow's negotiating leverage vis-à-vis Kyiv and destabilise the government. This could be accomplished through a variety of means, such as the use of Russia's superior long-range artillery capabilities. If military intervention does occur, our expectation is that it will extend to a relatively limited territory of Ukraine (Ukraine's east or south), and the regional scope will be chosen so that the chance of longer-term counter-insurgency would be minimised.

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[2] https://www.levada.ru/en/2021/04/16/ukraine-and-donbas/.

[3] https://www.theguardian.com/world/2022/jan/30/analysis-ukraine-russia-vladimir-putin-uk-us-intelligence.

[4] https://www.ridl.io/en/too-proud-to-pull-back-russia-s-ukraine-dilemma/.

[5] https://www.theguardian.com/world/2022/jan/16/ukraine-says-evidence-points-to-russia-being-behind-cyber-attack.

The response to this will be western sanctions, but it is almost impossible to predict what these will look like. This is not only because of the large number of potential options, but also the wide range of views within the 'West'.

In the US, there is bipartisan support to sanction Russia quite heavily. On January 24th four Republican and four Democratic senators met to discuss "the mother of all sanctions" legislation[6]. The discussions were based on legislation originally tabled by Democratic Senator Bob Mendez, and included the following in the event of 'hostile' Russian action against Ukraine:

- "Crippling" sanctions on the Russian banking sector and senior military and government officials;
- Prohibition of transactions on Russia's primary and secondary sovereign debt;
- Authorisation of sanctions on Russia's extractive industries as well as on providers of specialised financial messaging services (e.g. SWIFT);
- Transfer of defence articles to bolster Ukraine's defence capabilities;
- $500 million in supplemental emergency security assistance to Ukraine;
- Expansion of U.S. efforts to counter "Kremlin disinformation" and strengthening ties with key regional partners facing "Kremlin aggression"[7].

There is fierce discussion especially in Germany regarding the position it would take in the case of a serious incursion by Russia, and lately it seems that it will conform to support a common 'transatlantic position' on sanctions in such a scenario. The plans made with regard to cooperation on energy security at the EU level and the support the US can provide play an important role in this respect. The French president, furthermore, is keen to define a European position in the ongoing tense diplomatic dynamic, and the revival of the Normandy track with regard to making some progress on the stalled Minsk agreement is one of the venues in which Europeans are providing input to this dynamic.

In the baseline scenario, with Russian military interventions in Ukraine but short of a full invasion or long-term occupation, a milder form of the outlined sanctions would be imposed by the US and allies. The EU would participate, but possibly with a watered-down version designed to protect key business interests.

3. ADVERSE SCENARIO + SANCTIONS

Under a more extreme scenario, with a full-blown Russian invasion of Ukraine and mass casualties, a strong and unified EU-US sanctions response is very likely. After the Russian annexation of Crimea in 2014, the EU implemented a material package of sanctions on Russia, bypassing public opinion and business lobbying in some Russia-friendly EU countries. The role of the German Chancellor Angela Merkel in pushing decisive action was then very important; Berlin will also probably be decisive in how tough sanctions are this time. This would probably be based around a hawkish set of bipartisan measures already under discussion in the US[8]. If Russia decides to launch a full-scale invasion and occupation of Ukraine, there are 2.5 "nuclear" options for the West:

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6 https://www.politico.com/news/2022/01/24/senators-russia-sanctions-ukraine-invasion-00001587.

7 https://www.foreign.senate.gov/press/chair/release/as-threat-of-russian-invasion-of-ukraine-looms-menendez-leads-senate-democrats-in-introducing-the-defending-ukraine-sovereignty-act-of-2022.

8 https://www.politico.com/news/2022/01/24/senators-russia-sanctions-ukraine-invasion-00001587

First, the most nuclear option is to restrict or stop energy imports from Russia. This would include not putting the Nord Stream 2 gas pipeline into operation. That would severely damage the Russian economy but also lead to massive inflation and a recession in the global economy, and especially in the EU. It is the economic version of mutually assured destruction and is therefore highly unlikely.

Second, the West could target Russian banks, cutting them off from dollar funding. That would cause significant financial disruption in Russia, a reduction of lending and investment, and require large-scale state injections of capital into the banking sector.

Third, the half nuclear option is to ban exports of high-tech parts to Russian industry. There are still important industrial inputs that Russia cannot buy from others such as China. That would be “nuclear” for certain industries in Russia but not the economy or the financial system as a whole.

4. WHAT WOULD ESCALATION MEAN FOR RUSSIA?

Russia has made itself at least partly ‘sanctions proof’ in the period since the 2014 Ukraine conflict:

› Russia has very low levels of external debt and a current account surplus, limiting external exposure. As of 2020, gross external debt stood at 29% of GDP, with short-term debt[9] at less than 4% of GDP.

› Russia has a strong short- and medium-term fiscal position. Excess oil and gas revenues have accumulated in the National Welfare Fund, which accounts for 12% of GDP as of end of November 2021. This would cover three-times the fiscal deficit Russia had during the first COVID wave in 2020.

› Conservative monetary policy has allowed the build-up of substantial foreign reserves, totalling around USD 640bn, with gross foreign reserves including gold equivalent to around 40% of Russian GDP. As of December 2021, these amounts covered imports for the next two years.

› The Russian Central Bank has been continuously decreasing its exposure towards USD in international reserves, which amounts to 16.4% of the total portfolio as of 30.06.2021, which is about half the level of the EUR. Geographically, only 6.6% of reserves were stored in accounts under United States jurisdiction.

› Restrictions imposed by the West since 2014 have already severely curtailed the participation of foreigners in Russia’s bond market. Total private-sector external debt was equivalent to 11.2% of GDP in 2020 – little more than a quarter of total foreign reserves – of which 8.9 percentage points were accounted for by more stable direct investment intercompany lending.

› Russia has introduced import-substitution policies that limit its exposure in critical infrastructure (servers, payment services) and strategic industries (arms, semiconductors, chemicals and pharmaceuticals). As a result, trade and FDI relations with Asian countries have increased at the expense of the EU. The share of the EU in Russia’s foreign trade has declined from roughly half to a mere 34%. China is now the most important single trading partner for Russia.

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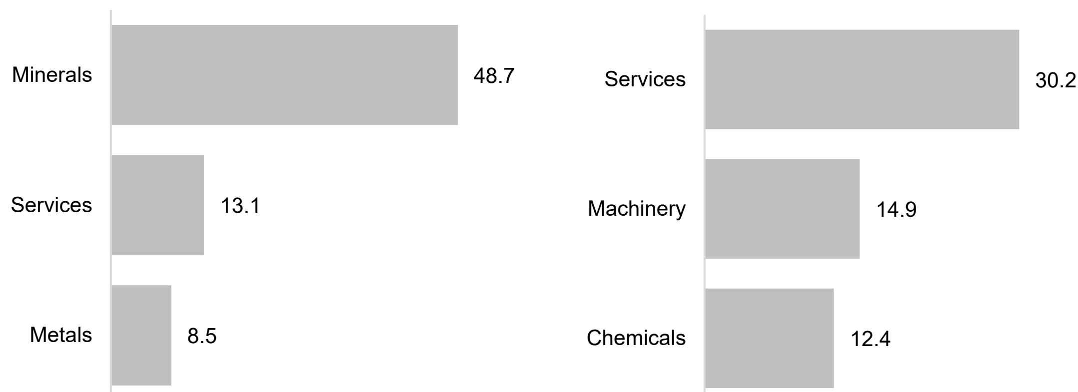
9 https://www.ft.com/content/e2e1748a-32c6-4ca9-85d8-3a384eede156

Figure 1 / Russia's top three export (left) and import (right) industries, % of total exports and imports



Source: UN Comtrade as delivered by Atlas of Economic Complexity.

Nonetheless, the Russian economy remains highly exposed in a number of dimensions, which would entail high costs with a severe sanctions regime between Russia and the EU and the United States. We identify the following short-term risks for the economy:

› Even if no Western sanctions are imposed, the rouble is going to depreciate further once escalation starts. Flight to foreign currency is a standard strategy among retail customers in the Russian banking market. Negative expectations might trigger a downgrade of country ratings, which in turn will trigger capital outflows by foreign investors - not only western ones – from Russia with an upward shift in yield curves and rates of credit default swaps.

› Currency depreciation will trigger a price increase through (directly and indirectly) imported goods. This will fuel inflation, with a negative impact on real incomes and GDP growth.

› Although Russia has a domestic payment system, it has few international clients and limited processing power. Disconnection from SWIFT alone would not be terminal for Russia[10], but in combination with cutting access to USD for Russian banks would result in severe disruptions of international payments, taking a toll on international trade over the short- to medium-term.

› USD and EUR are still the most important funding currencies for Russia. Around 50% of the external debt of banks and companies is in USD. Setting a ban on USD transactions would raise concerns about the technical default for enterprises with a currency mismatch.

The short-term impact could, however, be largely mitigated through the coordinated policy response of the Bank of Russia and the government. This would involve higher interest rates to stem capital outflows. Capital controls remain an extreme option, but one that could be imposed if the rouble collapses. On the fiscal side, the government could implement support packages using resources from the National Welfare Fund, which would help to mitigate the economic downturn.

[10] https://www.ft.com/content/e2e1748a-32c6-4ca9-85d8-3a384eede156

BOX 1 / IMPACT OF EXISTING SANCTIONS ON THE RUSSIAN ECONOMY

Studies of the impact of existing sanctions on Russia suggest limited effectiveness, including the following findings:

- Ex-post assessment revealed little impact of sanctions on the aggregate real economy. Estimations exploiting variation in time-series (Dreger et. al (2015) and Tuzova and Qayub (2016) find that the oil price shock was the main source of contraction of the Russian GDP in 2015.
- Our own estimations provide a similar perspective. By applying a stylized VARX model on Russian quarterly time series, we find no statistically significant impact of sanctions on either Russian GDP, or the FX rate. On the contrary, the oil price appears to be a much better predictor with a price decline of 50 pp resulting in a 3 pp reduction of the GDP growth rate in the baseline and a 7 pp reduction considering the lower bound (see Annex).
- These findings contrast with micro-level studies, which do suggest effectiveness of sanctions at the level of individual enterprises. Stone (2016), Ahn and Ludema (2020), and Mamonov et.al (2021) find that sanctions had a negative effect on returns and the asset composition of the companies.
- Ahn and Ludema (2020), who have the best sample coverage of all studies above find that imposing sanctions would lead to a 31% drop in revenues. They find, however, that the decline in revenues is fully offset for enterprises belonging to Russian strategic industries.

There are a number of explanations for the seemingly contradictory results:

- Ahn and Ludema (2020) suggest that Russian protection measures counteracted western sanctions. Once sanctions entered into force, the Russian government used fiscal reserves to support the revenues and capital of the largest sanctioned enterprises. This shielding effect could have been the reason why sanctions did not propagate at the level of the aggregate economy.
- The data on sanctions is noisy and imprecise. Most studies of sanctions use news-based proxies of sanctions and control for the exposure to specific types of sanctions.
- The impact of sanctions is not immediate. Decisions on sanctions frequently come into force with a provisional period and require effective control from authorities to assure compliance. Researchers frequently make simplifying assumptions about the timing but that comes at the cost of lower precision.

The key takeaway is that sanctions had an impact at the level of individuals and enterprises without much effect on the aggregate economy. Yet the available evidence suggests that the government is likely to redistribute income to the largest affected enterprises to compensate for the fallout, transmitting the costs to Russian taxpayers and securing the revenue sources of the key targeted enterprises and individuals.

Tackling long-term risks is much more uncertain and will depend on the willingness of non-western countries to engage in economic relations with a country that is being perceived as a 'rogue state' by the United States:

› Russia remains heavily dependent on high-tech inputs from 'the West' in vehicles, electronics, and chemicals. Russia imports about 50% of goods in the above-mentioned sectors from Europe. This puts Russia at risk of maintaining and expanding its digital infrastructure and production of capital goods for aerospace.
› Substitution with goods from Taiwan or South Korea is probably unrealistic, as these countries are likely to follow the US sanctions line, as the track record strongly suggests. This implies that Russia will have to substitute dependence on European final and intermediate goods with lower quality Chinese goods.
› As the experience of 2014 has shown, Asian investors were not ready to step in and replace western money. This means that long-term growth performance is likely to steadily fall behind the world average, widening the income gap between Russia and its peers.

It remains unclear what effect greater economic isolation will have on Russian domestic politics. On the one hand, the sanctions imposed by the collective West on Russia so far have had the unintended effect of consolidating the conservative part of the Russian population around the current political leadership. Any new western sanctions may have a similar effect. On the other hand, stagnant living standards, the generational shift in the population and the ageing political leadership will contribute to the population's latent dissatisfaction with Russian elites.

5. WHAT WOULD A POSSIBLE INVASION BY RUSSIA AND SANCTIONS MEAN FOR UKRAINE?

The Ukrainian economy has already been negatively affected by the threat of invasion by Russian military forces. Depreciation of the national currency and an increase in the cost of borrowing on external markets, which have been taking place due to the rising uncertainty, could become more significant if the country comes under military attack. High uncertainty is affecting both consumer and investor confidence, which is likely to manifest itself in a decline in consumer spending and delayed investment projects, including FDI.

Additional support through western public assistance is likely to soften the blow and at least partially compensate for the lost access to international financial markets. The EU has already signalled its support by announcing on January 24, 2022 a new emergency macro-financial assistance package (MFA) of EUR 1.2 billion and an additional EUR 120 million in grant assistance. The package aims to help Ukraine address additional financing needs due to the conflict. Canada offered a USD 95 million loan and USD 40 million in additional assistance. The Ukrainian government is optimistic about receiving a new tranche under the existing IMF Stand-By Arrangement of up to USD 2.2 billion and starting a new arrangement to address the emergency situation, likely with fewer conditions than past IMF packages.

Cyber attacks (on electricity grid, airports, public administration), which have already been observed, are likely to be substantially upscaled. Damage from this kind of hostilities will depend on the ability of the Ukrainian side to counteract them.

If military intervention does take place, its impact on economic activity will be regionally differentiated, with regions further away from military activity less affected. Table 1 shows the positions of the regions which are most likely to be affected by military escalation, in the total economy. Southern and eastern regions are considered to be the most likely targets of the invasion – four of them together account for about 16% of the country's industrial production, with the government-controlled part of the Donetsk region having the biggest share of about 10%.

An attack on the northern regions, which include the capital, Kyiv city, is considered less likely. If this part of the country is attacked, the economic effects are likely to be lower than indicated by the shares of the regions in GDP, as the capital city Kyiv is used as a place of registration for many companies, which in reality have their production facilities elsewhere. The region still accounts for a significant part of the country's agriculture – a sector that accounted for 49% relative to the value of merchandise exports in 2020. The most likely target in this part of the country would be the Kharkiv region, which is adjacent to the Donetsk and Luhansk regions. It accounts for about 7% of the country's industrial production.

Table 1 / Importance of selected Eastern, Southern and Northern regions for Ukraine's economy, shares in %

Region	GDP 2019	Industrial production 2020	Goods exports 2020	Agricultural production 2020	FDI stock 2020
East and South	**13.5**	**16.4**	**15.6**	**10.8**	**10.3**
Donetsk	5.2	10.3	8.0	3.3	4.7
Luhansk	1.0	0.8	0.3	2.2	0.7
Mykolayiv	2.3	2.5	4.6	3.1	1.4
Odesa	5.0	2.8	2.8	2.3	3.5
North	**39.5**	**27.2**	**36.1**	**25.7**	**52.2**
Chernihiv	2.0	1.4	1.8	6.9	1.0
Kharkiv	6.2	7.1	3.0	6.4	2.1
Kyiv	5.5	5.1	4.0	5.9	4.2
Kyiv city	23.9	11.8	25.3	-	43.8
Sumy	1.9	1.8	2.0	6.4	1.1

Source: State Statistics Service of Ukraine.

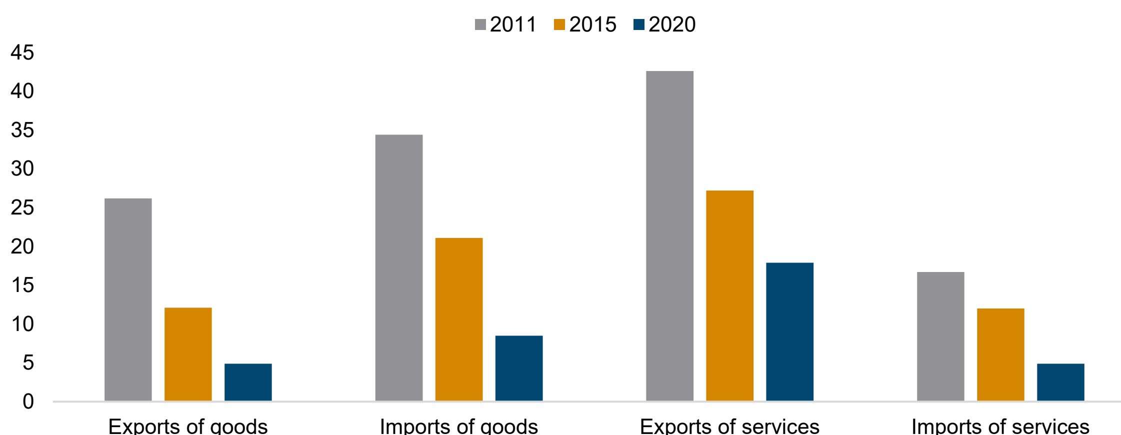
What Table 1 does not capture, are the possible effects of the destruction of key parts of the country's infrastructure located in the regions, which would have repercussions for the whole economy. Ukraine's main ports are located around Odessa on the Black Sea; as much as 70% of Ukraine's exports and imports are transported by sea and the Odessa region's ports handle three quarters of that. If a part of the transit pipeline infrastructure is damaged, it will cause interruptions of energy supplies to a large part of the country (as well as interruptions in gas exports to Europe). In case of full termination of transit, Ukraine would be able to provide gas to households and critical infrastructure for 5-7 days, depending on weather and other conditions[11]. After that the pressure in the system would begin to decrease and Ukraine would not have sufficient volumes of gas in storage to maintain pressure and supply gas to consumers.

On the bright side, the sanctions on Russia will likely have limited indirect effects on the Ukrainian economy as the economic linkages between the two countries has been drastically reduced in the

[11] https://www.reuters.com/article/ukraine-crisis-energy-idUKKBN2JV1K6.

aftermath of 2014 events. As Figure 2 shows, Russia's role changed from being a major trading partner in 2011 to accounting for less than 5% of goods exports and 8.5% of goods imports in 2020. Only in exports of services, which include oil and gas transit, does Russia account for a more significant share (18%), but this is still 25 pp lower than the share in 2011.

Figure 2 / Share of Russia in Ukraine's foreign trade, %



Source: National Bank of Ukraine.

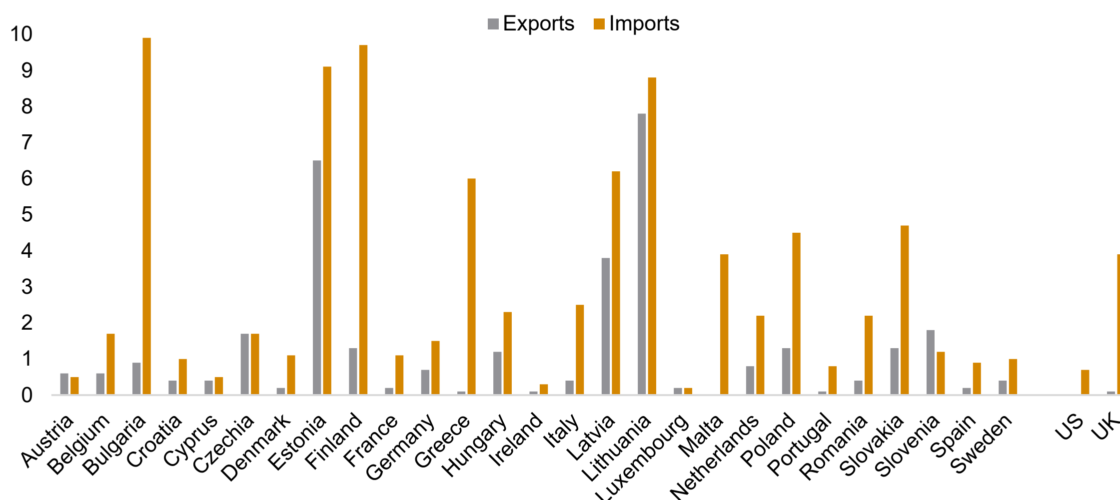
Ukraine has not imported gas directly from Russia since 2015. Instead, it buys it from western traders as part of the Russian gas supplies that pass through Ukrainian territory to Europe. Still, the country is highly exposed to the unlikely risk of a sudden cut-off of gas supplies by Russia. LNG supplies to Europe, which are planned as contingency, will not be sufficient to share with Ukraine. The factor of rising energy prices will play a more significant role in Ukraine, where energy bills account for a substantial share of household expenditures and the country has limited fiscal space to shield households from price spikes. Ukraine filled up its gas storage facilities last year before prices spiralled, but it will need additional billions of dollars to meet next winter's needs.

When it comes to gasoline, Ukraine is more exposed, with almost 50% of its imports coming from Belarus, which is likely to act according to the Kremlin's wishes. In the diesel fuel sector, important for the armed forces, in 2021 the share of Russian supplies stood at about 30% or 2 million tonnes.

6. WHAT WOULD AN EXCHANGE OF SANCTIONS MEAN FOR THE ECONOMIES OF THE EU?

There is a major gap between the US and Europe in terms of exposure, and therefore the costs of sanctions will be much higher for Europe as a whole than for the US. The most-exposed countries are Bulgaria, Estonia, Finland, Greece, Latvia, Lithuania, Malta, Poland and Slovakia (Figure 3). In almost all cases, dependence on Russia for (most energy) imports is much greater than dependence on Russia as an export market. The most economically exposed EU countries include both strong hawks (Baltic states) and strong doves (Bulgaria, Greece) in relation to Russia.

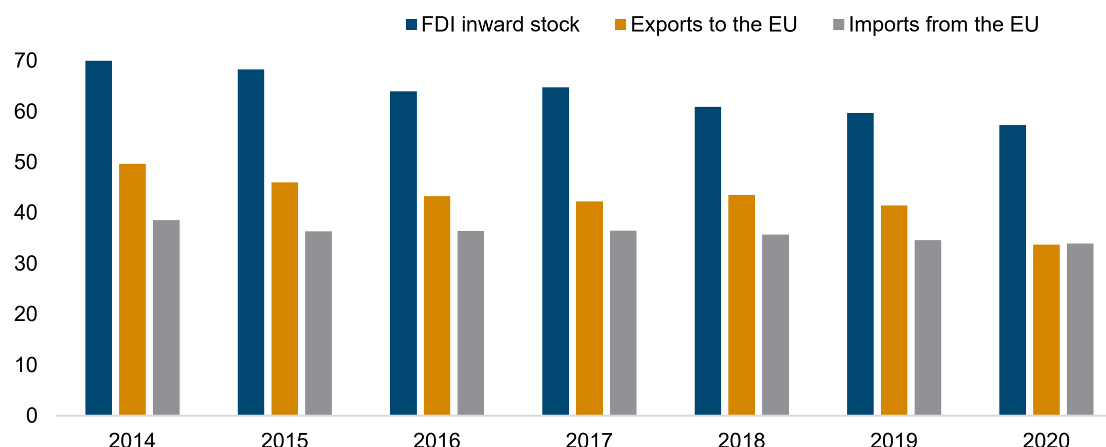
Figure 3 / Trade with Russia, % of GDP, 2020 or latest data



Source: UN COMTRADE.

Following the 2014 sanctions exchange, the greatest (relative) negative impact within the EU was felt by the CEE countries plus the Nordics and Germany[12]. However, since 2014 and the exchange of sanctions, there has been clear trade diversion and reorientation of investment flows between Russia and the EU (Figure 4). Almost every EU and CEE country exports and imports less as a share of the total to/from Russia than in 2013. Meanwhile Russian FDI is generally a small share of the total in the EU and CEE, and even where it isn't, it has declined a lot since 2013.

Figure 4 / Russia's foreign direct investment from and trade with the EU, % of total



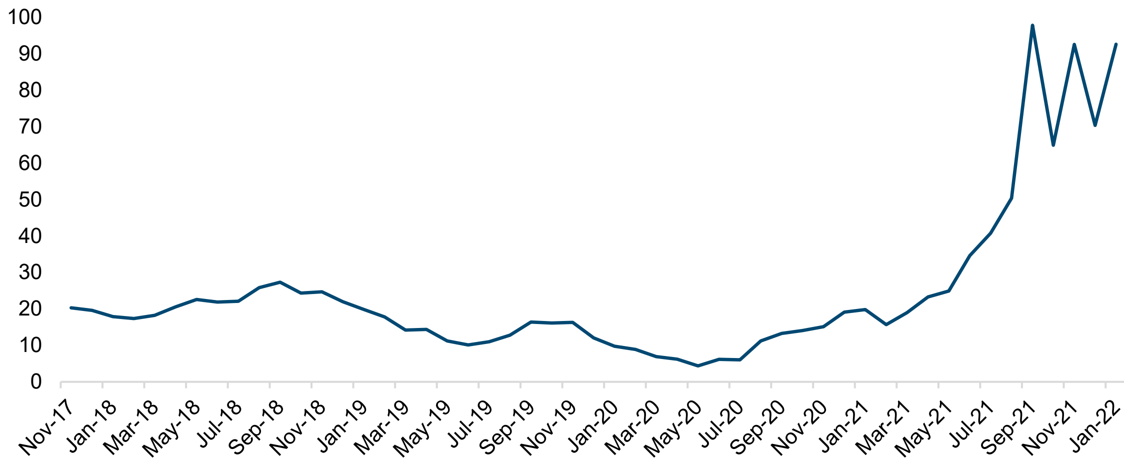
Source: Central Bank of Russia, Russian Federal State Statistics Service, wiiw.

However, there are plenty of other areas of exposure. Even the potential for sanctions and conflict causes a rise in energy and food prices, contributing to already high inflation (Figures 5 and 6), especially in CEE. Households in CEE spend a larger share of their income on energy and food, so

[12] https://www.econstor.eu/handle/10419/171242.

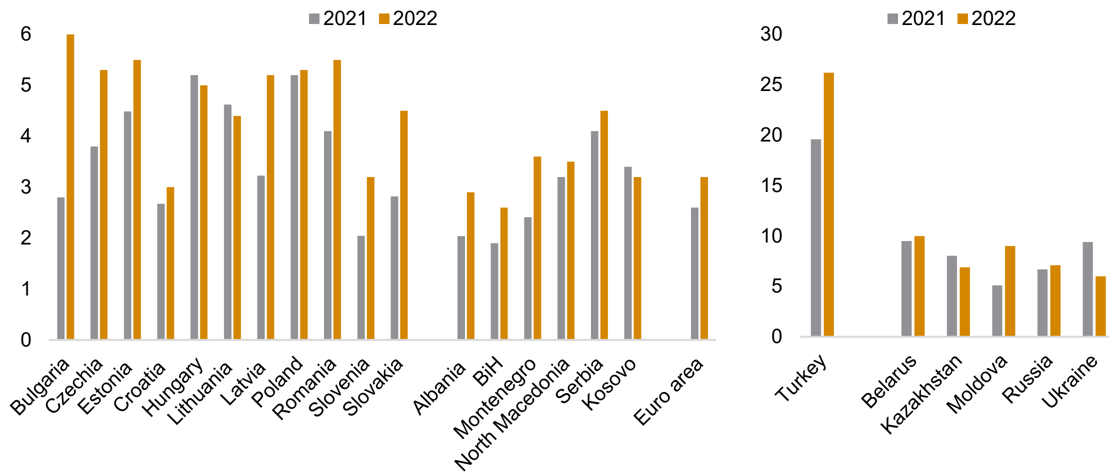
many are already in a very difficult situation, leading to the imposition of price controls in some countries. A proper conflict and stronger sanctions would make this situation much worse.

Figure 5 / Dutch TTF Natural Gas Futures, EUR



Source: Investing.com.

Figure 6 / Average consumer price inflation, % per year



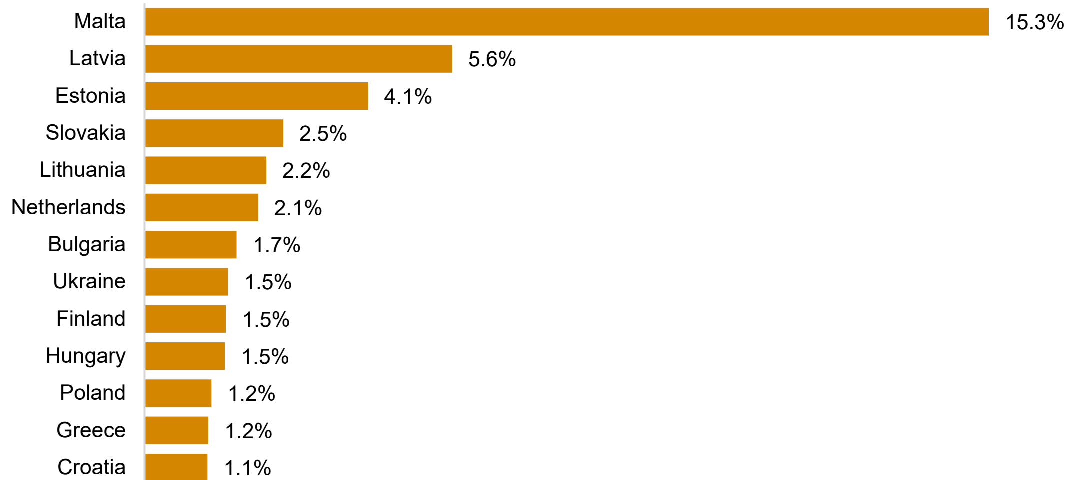
Sources: Eurostat, national sources, wiiw January 2022 projections.

Russian exports are heavily concentrated in mineral fuels, which is correspondingly the main type of exposure of the European economies towards Russia. As of 2020, the exposure was highly uneven across the countries. The ratio of imports of mineral fuels from Russia to GDP was as high as 15% in some European countries. As regards mineral imports in the aggregate, the Baltic states, the rest of Eastern Europe, and the Balkans are the most exposed regions.

The exposure varies, however, according to the type of commodity, with natural and liquid gas being the most important one. As of the end of 2020, Russia accounted for 32% of European consumption on the

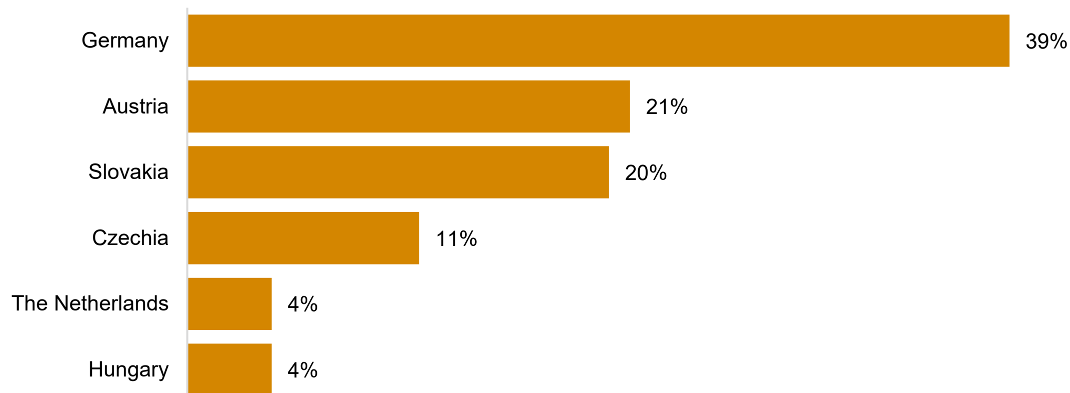
gas market as reported by Gazprom with Germany and Austria accounting for 60% of total Gazprom sales destinations in Europe.[13]

Figure 7 / Ratio of Mineral Fuel Import from Russia to GDP (2020)



Source: UN COMTRADE. Note: only European countries with a ratio above 1%.

Figure 8 / Share of Gas sales on Electronic Sales Platform, by country



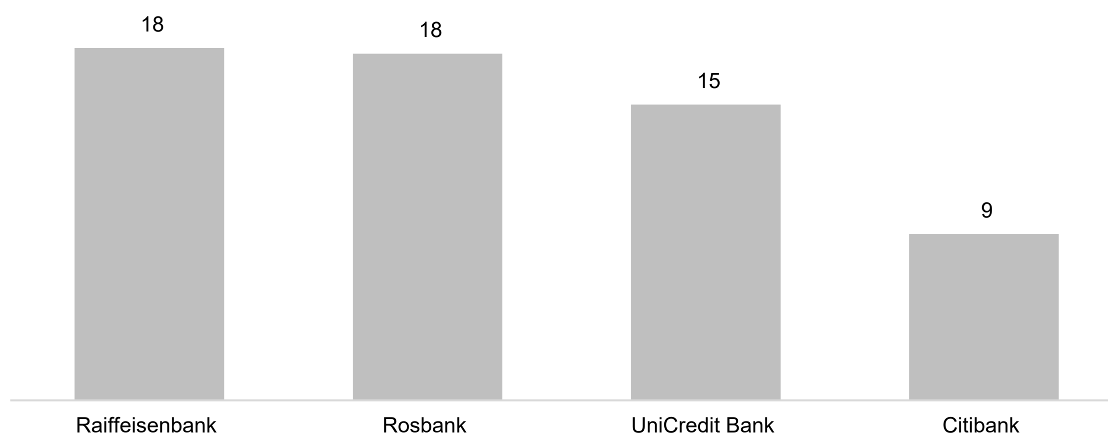
Source: Gazprom. URL: https://www.gazprom.com/f/posts/23/378358/invest-day-2021-presentation.pdf

Any restriction on Gazprom sales in Europe is going to cause an immediate upward shift in the global gas price. As of the end of 2020, Gazprom controlled around 12% of global gas production and 17% of global gas reserves, exerting considerable power on the global gas market. This effect could be partly mitigated should European countries purchase gas using long-term forward contracts. This is, however, not the case. In 2020, Gazprom delivered 56% of gas to Europe either based on spot contracts or short-term forwards maturing within one month. This means that any gas price increase would reach the majority of the European consumers within one month latest should they be rolled over.

[13] https://www.gazprom.com/f/posts/23/378358/invest-day-2021-presentation.pdf

EU financial institutions could be potentially exposed to financial sanctions due to collateral damage. At the moment, foreign-owned financial institutions control EUR 60 bn assets in the Russian banking market with an overall share of 4% of the total. Raiffeisen, Société Generale, UniCredit, and Citi are the key institutions, which could be affected by sector-wide sanctions should they be imposed on the whole banking sector. Yet even if not imposed directly, they could become affected by negative network effects in case foreign-owned banks possess assets or liabilities towards the sanctioned-entities, leading to a sudden drop in liquid assets or higher capital charges.

Figure 9 / Net book value of assets of the largest foreign-owned banks in Russia, EUR bn



Note: only the top 20 largest banks are considered in the sample
Source: banki.ru, own calculations

In a general risk-off environment, there will be a weakening of currencies and higher borrowing costs in CESEE. Typically, there is a range of impacts: Czechia (the Switzerland of CEE) will be least affected, but Hungary or Romania could suffer big declines in the value of their currencies and an increase in borrowing rates.

7. CONCLUSION

The Russia-West dispute over Ukraine has brought Europe to the brink of a dangerous military confrontation. Many commentators see the escalating tensions as a significant break in post-war, and especially the post-1991 era. Russia's decision to increase its troop presence along Ukraine's borders seems to be a reaction to what it sees as a hardening anti-Russian position within Ukraine, and concerns about what Moscow views as a gradual increase in Ukraine's offensive capabilities and creeping integration into euro-Atlantic institutions. Particularly problematic from the Russian perspective is any increased Ukrainian cooperation with NATO. This culminated in the demands set out by Russian President Vladimir Putin in December, including asking for a written commitment that Ukraine would never join the alliance. However, Russia's strategy remains uncertain, with an invasion of Ukraine only one of several possible ways that the current crisis could play out.

The base scenario is that of at most a limited military incursion into Ukraine, or at least a stepping up of non-military pressure on Ukraine outside of separatist-controlled areas in the Donbass. This would have the aim to strengthen Russia's existing position in Donetsk and Lugansk, and possibly take control of

more of the Donbass, while degrading some of Ukraine's military capacities, and impact infrastructure and port facilities. More generally, this scenario would again demonstrate Russia's considerable capacity to destabilise Ukraine politically, economically and financially.

A full military incursion into Ukraine's territory cannot be ruled out, but is much less likely than the baseline scenario, given the near-certainty that this would result in major sanctions on Russia. Russian banks would be largely cut-off from international transactions and certain industries would suffer from export bans on important higher-tech components and goods that are difficult to substitute from domestic production or imports from China. Further depreciation of the rouble would raise inflationary pressures, reduce household real incomes and detrimentally impact the terms-of-trade. The central bank would react with higher interest rates to protect the rouble, but this would further weigh on economic growth. In this scenario, Russia would have to deploy a large share of the fiscal and external buffers it has built up in order to maintain macro-financial stability.

Nonetheless, the Russian government appears ready to make economic development subservient to security considerations. Particularly since President Vladimir Putin's Munich speech in 2007 and the invasion of Georgia the following year, Russia has been willing to incur significant economic and financial costs in order to prevent the integration of former Soviet countries into euro-Atlantic institutions. It aims to strengthen or re-establish a sphere of influence in most of the former Soviet Union via the propping up of autocratic regimes in Belarus and Central Asia, and maintaining frozen conflicts in parts of Georgia, Moldova and Ukraine. The timing of Russia's presentation of its demands that Ukraine should never join NATO, and the build-up of its forces around Ukraine's borders, may not have been entirely random. Russia has significant leverage in the Winter months due to Europe's large reliance on Russian gas.

The effects of any significant Western sanctions on Russia would be felt long into the future, via increased isolation from the global economy. A move towards more autarkic economic development would not favour modernisation of the Russian economy, or a much-needed push towards diversification and improved competitiveness. Russia could partially compensate for this via stronger economic links with China, especially in the energy sphere, but ever more reduced access to Western capital and technology would reinforce the economy's already weak growth outlook, widening the real income gap with more successful middle-income economies. Politically, a Russian invasion could lead to the further integration of the rest of Ukraine into euro-Atlantic institutions, and probably an increased NATO presence on its eastern flank.

Ukraine will suffer economically from the current conflict, and its impact is already being felt: pressure on its currency and on inflation, capital inflows by private investors being deterred, more reliance on international financial assistance, and a further slow-down in the move towards domestic institutional reforms. Over the longer-term, the conflict with Russia could establish a clear demarcation line, with the rest of Ukraine becoming more firmly entrenched in the Western alliance and receiving significant economic and military support. However, it is also possible that the outcome of the current crisis will mean a further destabilisation of the country as a whole, economically, politically and socially. Moreover, without playing down the role of Russia, it is clear that many of the difficulties Ukraine faces in achieving sustainable economic, institutional and governance development also stem from other, domestic sources.

The outcome for the EU is likely to remain quite negative in the next few months. Even without a full-blown conflict, energy prices are likely to remain high and could well rise further. This will add to already high inflation and thereby further squeeze real incomes, with negative knock-on effects for economic growth. Beyond that, the impact will be mostly felt by particular industries and business interests that have a stake in continued interaction with the Russian economy. This includes the (carbon-based) energy sector, some Western banks (Société General, Raiffeisen, Unicredit, Citibank), and suppliers of high-tech and high-quality consumer goods to the Russian market. However, excluding energy, the period since the annexation of Crimea in 2014 has seen a trend of reduced EU-Russia trade and investment links. The longer-term impact is a further push towards energy supply diversification and reduced EU energy dependence on Russia. In security terms, the crisis has demonstrated the EU's continued strong reliance on the US, although this is something that most of the bloc can more than live with.

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ANNEX

Model specification

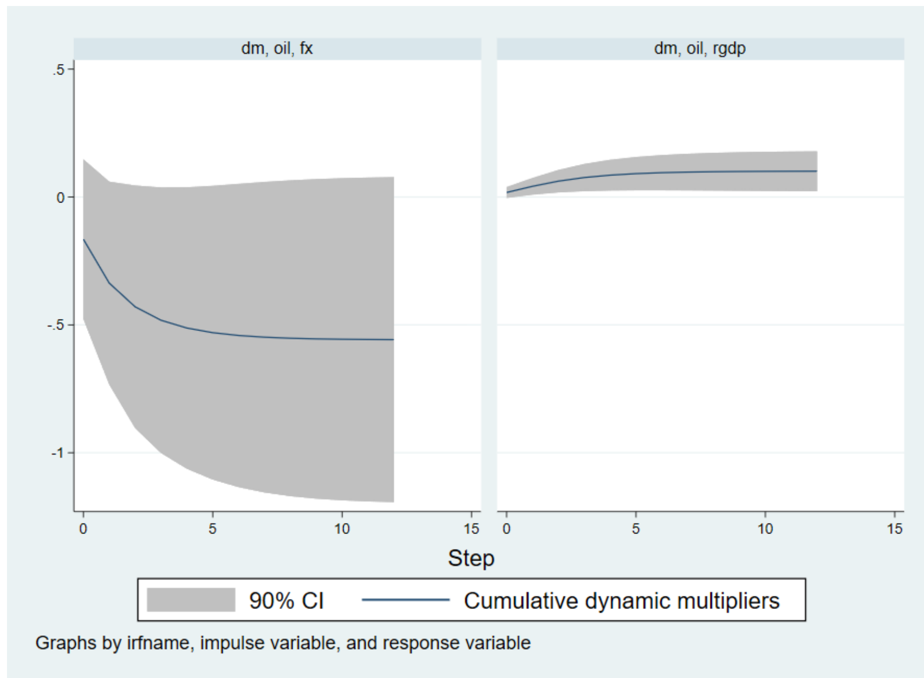
$$\begin{cases} \text{GDP} = \text{L.GDP} + \text{L.FX} + \text{Oil} + \text{L.Oil} + \text{Sanctions pre-2016} + \text{L.Sanctions pre-2016} + \text{Sanctions post-2016} \\ \qquad + \text{L.Sanctions post-2016} + \text{Key rate} + \text{L.Key rate} \\ \text{FX} = \text{L.GDP} + \text{L.FX} + \text{Oil} + \text{L.Oil} + \text{Sanctions pre-2016} + \text{L.Sanctions pre-2016} + \text{Sanctions post-2016} \\ \qquad + \text{L.Sanctions post-2016} + \text{Key rate} + \text{L.Key rate} \end{cases}$$

Table A1 / Dataset descriptive statistics

Variable	N	Mean	S.d.
Key rate	32.00	(0.13)	3.07
FX	32.00	0.09	0.15
Real GDP	32.00	0.01	0.02
Oil	32.00	(0.01)	0.15
Sanction pre 2016	32.00	4.00	13.14
Sanction post 2016	32.00	1.94	5.96

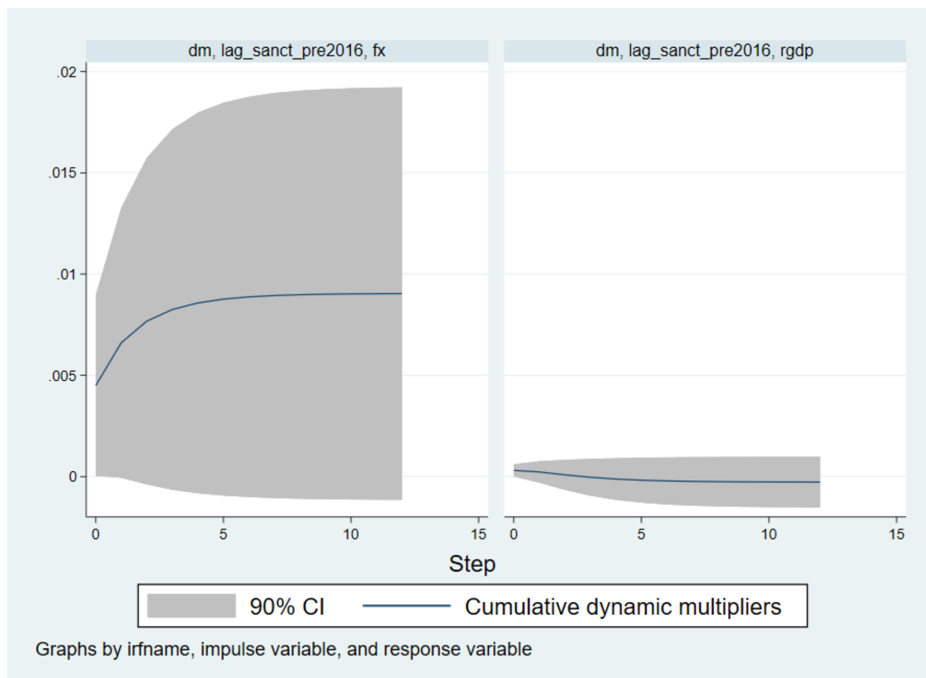
Note: All variables in first differences, time covered: Q1 2012 – Q4 2019
Source: IMF IFS, Google trends, ECB.

Figure A1 / Cumulative dynamic multiplier. Shock type: oil price



Note: 1 step = 1 quarter.
Source: own calculations.

Figure A2 / Cumulative dynamic multiplier. Shock type: sanctions before 2016



Note: 1 step = 1 quarter, sanctions are calculated as the google trend index for “sanctions on Russia” for the English-speaking area.
Source: own calculations.

Table A2 / Scenario calculations based on cumulative dynamic multiplier functions

CUMULATIVE DYNAMIC MULTIPLIER: OIL > GDP

STEP (Q)	EXPECTED	LOWER 95%	UPPER 95%	SCENARIO: 50% DECLINE	EXPECTED	UPPER BOUND	1 YEAR EXPECTED DECLINE	1 YEAR UPPER BOUND DECLINE
0	2%	-1%	4%	-50%	-1%	-2%	-4%	-7%
1	4%	0%	8%	-50%	-2%	-4%	-4%	-7%
2	6%	1%	11%	-50%	-3%	-6%	-4%	-7%
3	8%	1%	14%	-50%	-4%	-7%	-4%	-7%
4	9%	1%	16%	-50%	-4%	-8%	-4%	-7%
5	9%	1%	17%	-50%	-5%	-8%	-4%	-7%
6	10%	1%	18%	-50%	-5%	-9%	-4%	-7%
7	10%	1%	18%	-50%	-5%	-9%	-4%	-7%
8	10%	1%	19%	-50%	-5%	-9%	-4%	-7%
9	10%	1%	19%	-50%	-5%	-9%	-4%	-7%
10	10%	1%	19%	-50%	-5%	-10%	-4%	-7%
11	10%	1%	19%	-50%	-5%	-10%	-4%	-7%
12	10%	1%	19%	-50%	-5%	-10%	-4%	-7%

CUMULATIVE DYNAMIC MULTIPLIER: OIL > FX

STEP (Q)	EXPECTED	LOWER 95%	UPPER 95%	SCENARIO: 50% DECLINE	EXPECTED	UPPER BOUND	1 YEAR EXPECTED DEPRECIATION	1 YEAR UPPER BOUND DEPRECIATION
0	-16%	-54%	21%	-50%	8%	-10%	24%	-7%
1	-34%	-81%	14%	-50%	17%	-7%	24%	-7%
2	-43%	-99%	14%	-50%	21%	-7%	24%	-7%
3	-48%	-110%	14%	-50%	24%	-7%	24%	-7%
4	-51%	-117%	14%	-50%	26%	-7%	24%	-7%
5	-53%	-121%	15%	-50%	27%	-8%	24%	-7%
6	-54%	-125%	17%	-50%	27%	-8%	24%	-7%
7	-55%	-127%	18%	-50%	27%	-9%	24%	-7%
8	-55%	-129%	18%	-50%	28%	-9%	24%	-7%
9	-55%	-130%	19%	-50%	28%	-9%	24%	-7%
10	-56%	-131%	19%	-50%	28%	-10%	24%	-7%
11	-56%	-131%	20%	-50%	28%	-10%	24%	-7%
12	-56%	-131%	20%	-50%	28%	-10%	24%	-7%

contd.

Table A2 / Contd. Scenario calculations based on cumulative dynamic multiplier functions

CUMULATIVE DYNAMIC MULTIPLIER: SANCTIONS PRE 2016 > GDP								
STEP (Q)	**EXPECTED**	**LOWER 95%**	**UPPER 95%**	**SCENARIO: INCREASE AS IN Q3 2014**	**EXPECTED**	**UPPER BOUND**	**1 YEAR EXPECTED DECLINE**	**1 YEAR UPPER BOUND DECLINE**
0	0%	0%	0%	62	2%	0%	0%	-7%
1	0%	0%	0%	62	1%	-2%	0%	-7%
2	0%	0%	0%	62	1%	-5%	0%	-7%
3	0%	0%	0%	62	0%	-7%	0%	-7%
4	0%	0%	0%	62	-1%	-8%	0%	-7%
5	0%	0%	0%	62	-1%	-9%	0%	-7%
6	0%	0%	0%	62	-1%	-10%	0%	-7%
7	0%	0%	0%	62	-1%	-10%	0%	-7%
8	0%	0%	0%	62	-2%	-11%	0%	-7%
9	0%	0%	0%	62	-2%	-11%	0%	-7%
10	0%	0%	0%	62	-2%	-11%	0%	-7%
11	0%	0%	0%	62	-2%	-11%	0%	-7%
12	0%	0%	0%	62	-2%	-11%	0%	-7%

SANCTIONS PRE 2016 > FX								
STEP (Q)	**EXPECTED**	**LOWER 95%**	**UPPER 95%**	**SCENARIO: INCREASE AS IN Q3 2014**	**EXPECTED**	**UPPER BOUND**	**1 YEAR EXPECTED DEPRECIATION**	**1 YEAR UPPER BOUND DEPRECIATION**
0	0.4%	-0.1%	1.0%	62	28%	61%	51%	117%
1	0.7%	-0.1%	1.5%	62	41%	90%	51%	117%
2	0.8%	-0.2%	1.7%	62	48%	107%	51%	117%
3	0.8%	-0.2%	1.9%	62	51%	117%	51%	117%
4	0.9%	-0.3%	2.0%	62	53%	123%	51%	117%
5	0.9%	-0.3%	2.0%	62	54%	126%	51%	117%
6	0.9%	-0.3%	2.1%	62	55%	128%	51%	117%
7	0.9%	-0.3%	2.1%	62	55%	129%	51%	117%
8	0.9%	-0.3%	2.1%	62	56%	130%	51%	117%
9	0.9%	-0.3%	2.1%	62	56%	131%	51%	117%
10	0.9%	-0.3%	2.1%	62	56%	131%	51%	117%
11	0.9%	-0.3%	2.1%	62	56%	131%	51%	117%
12	0.9%	-0.3%	2.1%	62	56%	131%	51%	117%

IMPRESSUM

Herausgeber, Verleger, Eigentümer und Hersteller:
Verein „Wiener Institut für Internationale Wirtschaftsvergleiche“ (wiiw),
Wien 6, Rahlgasse 3

ZVR-Zahl: 329995655

Postanschrift: A 1060 Wien, Rahlgasse 3, Tel: [+431] 533 66 10, Telefax: [+431] 533 66 10 50
Internet Homepage: www.wiiw.ac.at

Nachdruck nur auszugsweise und mit genauer Quellenangabe gestattet.

Offenlegung nach § 25 Mediengesetz: Medieninhaber (Verleger): Verein "Wiener Institut für Internationale Wirtschaftsvergleiche", A 1060 Wien, Rahlgasse 3. Vereinszweck: Analyse der wirtschaftlichen Entwicklung der zentral- und osteuropäischen Länder sowie anderer Transformationswirtschaften sowohl mittels empirischer als auch theoretischer Studien und ihre Veröffentlichung; Erbringung von Beratungsleistungen für Regierungs- und Verwaltungsstellen, Firmen und Institutionen.

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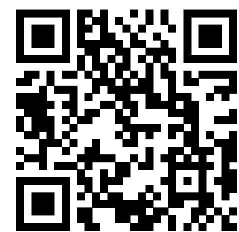

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