

War in Ukraine

Situational Awareness Briefing

13 June 2023



The information contained in this briefing is prepared by PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, Frankfurt am Main. It is for general guidance on matters of interest, and intended for the personal use of the reader only and in connection to the PwC Webcast series "War in Ukraine" or based on individual consent in the context of an existing client relationship. This informational material shall not be deemed to establish a contractual relationship between PwC and the reader. Further distribution requires explicit consent of PwC.



Situational Awareness – Briefing as of 13 June 2023 (Summary)

Ukraine Crisis

The current geopolitical developments in Eastern Europe and the unprecedented attack on Ukraine are also an attack on our way of living and doing business together.

At the moment, no one can foresee all the consequences of this aggression. This is why urgent questions are now being asked in all areas of our social life. Also for companies this means far-reaching cuts and changes.

This Situation Awareness Briefing is provided for information purposes only by PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft and will be updated regularly.

The overview to the right represents a summary of points along the following five dimensions:

- Overall Geopolitical Assessment
- Industry/Topic/Country Special
- Forecast
- People
- Operations
- Finance



Overall Geopolitical Assessment

The Ukrainian counteroffensive has commenced. Heavy battles are waged at Bakhmut and at several areas along the entire Zaporizhzhia front. Preceding the offensive, Ukrainian Russian Legion forces penetrated once more into Russia towards Belgorod from the southeast. The dam at Nova Kachovka was blown up, flooding a large area of the lower Dnipro.



Forecast

Russia strengthens strategic cooperation with North Korea and Iran // Microsoft is to move some of its artificial intelligence researchers from China to Canada due to the tensions with the US



Operations (Focus: Cyber)

The US wants to provide Ukraine with an additional USD 37mn for cybersecurity // In Russia, the plant which manufactures components for Russian armored vehicles, has undergone a large-scale cyber attack // Killnet, the pro-Russian hacktivist group turned military corporation, said it had “completely disbanded”.



Inside-out view on reconstruction efforts in Ukraine

The OECD Program for Ukraine was signed // Ukraine joined the European Union program “Mechanism Connecting Europe” // Ukraine and Slovakia signed a Memorandum of Understanding and Cooperation // The Parliament of Ukraine is considering a draft law on the investments insurance against war risks // The Ministry of Digital Transformation of Ukraine, with the support of Nokia, is launching a pilot project to modernize internet networks in Ukraine.



People

Russian troops blew up the structures of the Kakhovka hydroelectric power station near Kherson - 46 settlements remain flooded // German drone manufacturer Quantum Systems has opened service training, support and logistics centres in Ukraine // 8 international companies left the Russian market in May, including Volkswagen and Continental.



Finance (Focus: Sanctions)

Armenian, Kazakh and Hong Kong banks have started blocking payments for electronics and communications equipment from Russian companies // The UK has announced the extension of sanctions against Belarus // EU fails to agree on new package of sanctions against Russia.

For questions, comments or details, please contact Joint Crisis Center team: de_ukraine-crisis@pwc.com



Key takeaways

- The long-awaited Ukrainian counterattack commenced along the Zaporizhzhia front. Fighting around Bakhmut also intensified.
- Pro-Ukrainian Russian Legion forces penetrated the Russian border in Belgorod Oblast.

Current topics

Current situation in the Russo-Ukrainian War

The long-awaited Ukrainian strategic counteroffensive began this week at two sections of the Zaporizhzhia front. After months of preparation, Ukrainian forces advanced south Orichiv. The second point of effort is in the vicinity of Zelene Pole. The Ukrainian intention seems to cut the Russian land bridge to the Crimea with attacks towards the Tokmak and Mariupol directions. These areas are among the most heavily fortified sections of the Russian defense line. Progress so far has been slow as vanguards became stuck in minefields and came under cross-fire. Videos emerged showing several US-delivered Bradley IFVs as well as Leopard 2A6 tanks being destroyed in failed attempts to force a breakthrough. The upcoming week is crucial for the Ukrainian efforts to unhinge the Russians from their multi-layered defensive positions and force a breakthrough into open country. At the Kherson front the Nova Kachovka dam was destroyed by Russian forces. As a result, large areas along the lower Dnipro are currently flooded. The military implications favor the Russian side as the flooded area prohibits Ukrainian operations along the Kherson front and thus allows Russian forces to be shifted elsewhere. In addition, Ukrainian special forces that used to operate in the area to harass Russian strong points had to withdraw. Thousands of civilians are affected by the flood, while forces from both sides evacuated the area as well, often abandoning equipment and their defensive positions. The flood will likely uproot minefields that will pose a threat in the foreseeable future. Battles also continued at other sections of the front. At Vuhledar and Marinka the stalemate continued. At Avdiivka, Ukrainian attacks improved their position, while the city remains semi-encircled. Here, Russian forces also built extensive defense works to retain their grip around the city. At Bakhmut several Ukrainian advances have thrown Russian forces back. Since the rotation of Wagner and Russian army forces Ukrainian penetrations have reduced parts of the extended bulges and advanced towards Berchivka north of the city. Further north at Belohorivka as well as in the Kupiansk direction minor Russian attacks occurred. The pro-Ukrainian Russian Legion also attacked Russian territory towards Belgorod once more, this time from the southeast. This diversionary attack preceded the large Ukrainian push at the Zaporizhzhia front and has to be understood as an effort to distract and absorb Russian reserves.

AI and autonomy in drones in future warfare

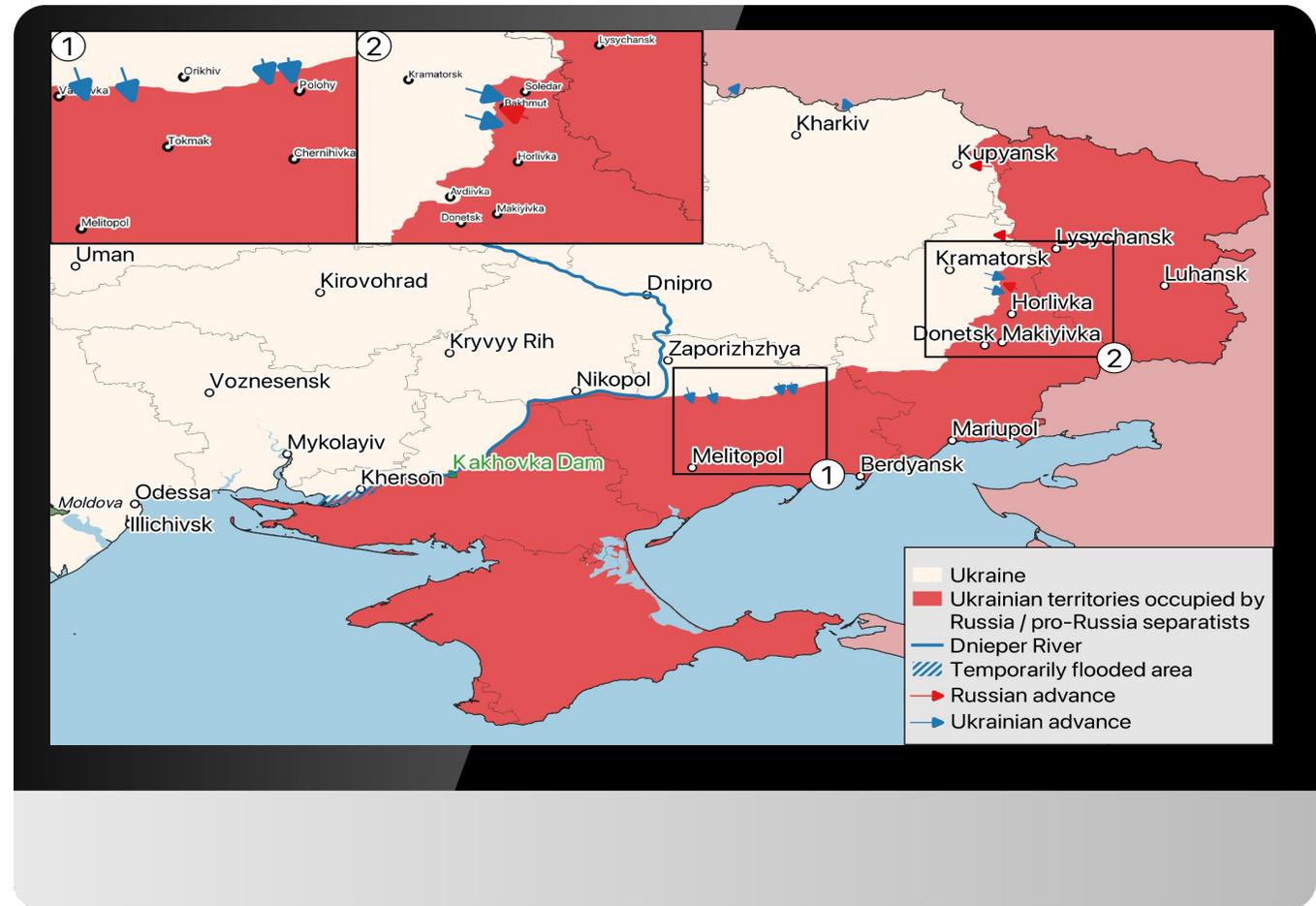
AI will have a significant impact on tomorrow's battlefields. To date, AI has been used predominantly in data processing. Data sources are analyzed and used for mission support, enemy detection or target acquisition. The conventional wisdom is that whoever can process more data, faster, wins. Russia's war of aggression on Ukraine highlights the importance of unmanned aerial vehicles (UAV), ground vehicles (UGV), and surface systems (USV) to warfare in the 21st century. Ukraine in particular relies on commercial micro-drones to target armored Russian vehicles and soldiers in trenches with mortar and hand grenades. In addition, loitering munitions, drones that are initially launched without a specific target, circle over the target area for extended periods, and then engage a target. Ukrainian UGV systems recently attacked the Russian naval base at Sevastopol. Most of these systems are not autonomous; operators still control them and must decide whether and when to engage a target based on the imagery and video information transmitted in real time. However, the functional scope of AI has increased enormously in recent years, so that fully autonomous systems would also be possible. Autonomy in weapon systems refers to automatic target detection and target engagement functions that operate without human control. A distinction is made between semi-autonomous weapon systems (human in the loop), human-supervised autonomous weapon systems (human on the loop), and fully autonomous weapon systems (human out of the loop). An example of semi-autonomous weapon systems are fire-and-forget missiles that independently attack a previously defined target after being fired by a human. Human-supervised autonomous weapons systems are generally defensive systems, deployed wherever human reaction time cannot keep up with the speed of combat. Fully autonomous weapon systems include platforms that conduct operations, acquire and destroy targets without human intervention. To date, no military in the world officially operates fully autonomous weapon systems. Thus, fully autonomous war is (still) only a dystopia of the AI-assisted warfare already making its appearance. Tomorrow's AI war between the U.S. (and the West) against China is underway foreshadowing a greater future impact of AI-guided weapons.



Current military situation in Ukraine (blue arrows indicate current Ukrainian counterattack, red arrows indicate potential future Russian operations in the coming weeks)

Selected upcoming events

- 21-22 June 2023 - Ukraine Recovery Conference (URC 2023) in London.



Inside-out view on Ukraine reconstruction efforts



Donor activity - update

The Belgian government allocated EUR 1.5mn for the purchase of emergency generators through the Belgian ambulance team b-fast for the regions flooded and affected due to the destruction of the Kakhovska HPP dam.

The Ministry of Development of Communities, Territories and Infrastructure, Ukrainian Railways “Ukrzaliznytsia” and the European Bank for Reconstruction and Development are starting the Emergency Support for Ukrainian Railways Project with a budget of EUR 200mn. The project will finance the purchase of materials and locomotives to ensure the stable functioning of railway corridors between Ukraine and the EU, and other financial support of Ukrzaliznytsia.

The state budget of Ukraine received grant funds from the United States through the Multi-Donor Trust Fund of the World Bank in the amount of USD 1.25bn. In 2023, Ukraine has already received USD 6bn in direct budget support from the United States.

Economic cooperation

On June 7, 2023, the OECD Program for Ukraine was signed as part of the dialogue on joining the OECD. The program will support reforms, reconstruction and restoration of Ukraine, and its implementation will pave the way for the Roadmap for membership in the Organization.

On June 6, 2023, Ukraine joined the European Union program “Mechanism Connecting Europe”. The main emphasis of the joint venture will be on the development of export logistics to increase the capacity of road and railway checkpoints. Funding of projects submitted assumes that half of the cost is compensated by the applicant country and 50% of the funding is provided within the framework of the program. The program opens the possibility to attract EU funding to support the development of highly productive, sustainable and effectively interconnected trans-European networks in the fields of transport, energy and digital services.

On May 31, Ukraine and Slovakia signed a Memorandum of Understanding and Cooperation in the Preparation of Joint Projects for European Union Programs. The memorandum provides for the creation of a joint Ukrainian-Slovak working group to identify, prepare and develop joint projects within the framework of the EU programs for a multi-year financial perspective in the period 2021-2027.

Insurance against war risks

The Parliament of Ukraine is considering a draft law on the investments insurance against war risks, which should remove existing restrictions on the insurance of investments of Ukrainian companies in the domestic market by the Export Credit Agency in the war conditions and post-war reconstruction.

Nokia and the Ministry of Digital Transformation are to launch a project

The Ministry of Digital Transformation of Ukraine, with the support of Nokia, is launching a pilot project to modernize internet networks in Ukraine. As part of the project, telecom equipment will be updated and transition to energy-independent Internet networks will be ensured. At the first stage, an assessment of the network's destruction will be carried out. Next comes the design of modernized networks, the construction and upgrading of equipment. Six settlements in Kherson, Kharkiv, Kyiv, Sumy and Chernihiv regions are considered as the project's pilot participants.

Preliminary Assessment

- On June 11, 2023, within the framework of the United Arab Emirates and Ukraine Governments meeting, a memorandum of cooperation was signed to attract assistance from one of the world's largest sovereign wealth funds - ADQ (Abu Dhabi-based investment and holding company) and their consultants from Contango. The objective is to support the creation of the Sovereign Fund of Ukraine that will manage the largest state-owned enterprises and confiscated Russian assets.
- Strengthening the capabilities of non-governmental demining operators in Ukraine remains a top priority for Ukraine. The Ministry of Economy of Ukraine announced its readiness to create favorable conditions for developing the potential of non-state operators to speed up the humanitarian demining processes in Ukraine.
- According to the Ministry of Health of Ukraine, Russian attacks destroyed or damaged at least 1,500 medical facilities, i.e. more than 5% of all medical facilities in Ukraine are now unable to provide medical services. According to the results of a rapid assessment of damages and losses carried out by the Government of Ukraine, the World Bank Group and the European Commission, the material losses of the healthcare system amount to at least USD 1.4 bn.
- According to the Ministry of Digital Transformation of Ukraine, since the beginning of the war in Ukraine, about 3,000 telecom base stations have been damaged, of which 1,800 have already been restored. 20% of the territory of Ukraine was under occupation and needed a complete restoration of the destroyed digital infrastructure.



General context

Considerations on implications for businesses along the PESTEL framework

P Political	Russia strengthens strategic cooperation with North Korea and Iran.
E Economic	Microsoft relocates its AI team from China. China is to deepen ties with the UK financial sector.
S Social	Social related implications: e.g. refugee streams, labour market developments
T Techno-logical	Technology related implications: e.g. cyber threats and disinformation, IT infrastructure disruptions
E Environ-mental	Environment related implications: e.g. Resource scarcity, energy embargo
L Legal	Legal implications: Compliance with changing regulations, contractual obligations, etc.

Current topics

Russia strengthens cooperation with North Korea and Iran

North Korean leader Kim Jong-un has promised to "hold hands" with Russian President Vladimir Putin and strengthen strategic cooperation for the sake of a common goal - building a powerful country. Kim Jong-un made the promise in a message to Putin on the occasion of Russia Day, defending his decision to invade Ukraine and showing "full support and solidarity". He called for "closer strategic cooperation" with Moscow.

Following, Washington stated that Russia appears to be deepening its defence cooperation with Iran and has received hundreds of attack drones to use in strikes in Ukraine. White House spokesman John Kirby said that the US has information that Russia is receiving materials from Iran to build a drone manufacturing plant that could be fully operational early next year. According to Kirby, support between Iran and Russia goes in both directions: Iran is seeking billions of dollars worth of military equipment from Russia, including helicopters and radars.

Microsoft is to relocate its research team from China

Microsoft is to move some of its artificial intelligence researchers from China to Canada, in a move that could disrupt an important training centre for tech talent in China, the Financial Times reports. A person close to Microsoft said that fewer Chinese employees will move to Canada this year, where the US tech giant is setting up a new lab that will employ specialists from around the world.

The decision is a response to the growing political tensions between the US and China, as well as a defensive manoeuvre to prevent Chinese tech groups from luring away top talent.

Meanwhile, China's Vice President Han Zheng said that the country is willing to deepen cooperation with the British financial sector and promote sound development of bilateral economic and trade relations, state media reported.

Preliminary Assessment

- Pyongyang has been accused of providing weapons to Russia, while it continues to develop its own arsenal of ballistic missiles and nuclear weapons despite years of sanctions imposed by the UN security council, of which Russia is a permanent member.



Key Considerations

Response measures may include the following:

- Scenario planning sessions to explore how the escalating situation could impact the organization and identify the risks and mitigating actions.
- “Table-top exercising” can be used to validate response structures if they are not already in operation.
- Ensuring that playbooks are in place for extreme but plausible scenarios such as loss of IT for an extended period and disruption to critical suppliers.
- Ensuring the ability to locate all personnel based in, or travelling to, regions of conflict and ensure appropriate steps are taken for their protection.

Current topics

Destruction of the hydroelectric power station in Kherson

On the night of 6 June, the structures of the Kakhovka hydroelectric power station near Kherson were blown up. As of June 11, 2023, 32 settlements and thousands of houses on the right bank of the Dnipro River and 14 settlements on the left bank (temporarily occupied) remain flooded. The plant's engine room is beyond repair, flooding threatens about 80 settlements, and evacuations are underway. Ukraine's Prosecutor General Andriy Kostin said that more than 40,000 people need to be evacuated. This includes flooding of surrounding villages and even Kherson down the Dnipro, problems with cooling the Zaporizhzhia NPP and water supply in southern Ukraine. So far, 19 people have reportedly died from the floods, and hundreds of families are waiting to be evacuated. Ukraine's Foreign Minister Dmytro Kuleba blamed Russia for the explosion of the Kakhovka hydroelectric power station and called it a horrific war crime and probably “the largest man-made disaster in Europe in recent decades”. The Kherson, Mykolaiv, Zaporizhzhya, Dnipro, and Odessa regions suffer the most significant consequences. 94% of irrigation systems in the Kherson region, 74% in the Zaporizhzhia region were left without a source of water. At the moment, the main priority is to provide the population with drinking and technical water.

German drone manufacturer opens representative offices in Ukraine

German drone manufacturer Quantum Systems has opened service training, support and logistics centres in Ukraine. These centres will also specialise in the purchase of spare parts and repair services. The company already cooperates with the Ukrainian Ministry of Defence. Ukraine recently ordered 300 Vector drones for the army.

International companies continue to leave the Russian market

In May, 8 international companies completely left the Russian market, according to the monitoring of the KSE Institute. Among them are the German car manufacturer Volkswagen, the German tyre and automotive electronics manufacturer Continental, the American Authentic Brands Group, which owns the Reebok sportswear chain, and others. "In total, as of today, 241 (7.4% of the total) international companies have completely ceased operations in Russia. In addition, 1,194 (36.5% of the total) foreign businesses have curtailed operations and announced their intention to leave the country," the monitoring report says. At the same time, 1,336 (40.9% of the total) of the companies monitored by KSE Institute are not going to leave the Russian market and are continuing to operate without any changes. Another 498 (15.2% of the total) foreign businesses have suspended new investments in Russia and continue to wait.

Preliminary Assessment

- The Government of Ukraine has agreed with the World Bank to conduct a Rapid Disaster Damage Assessment which will be similar to the Rapid Damage and Recovery Needs Assessment. According to the Governmental preliminary estimates, the amount of damage to the environment is at over UAH 55bn or USD 1.46bn, 10,000 hectares of agricultural land on the right bank of the Dnipro River were flooded, soils and more than 30 irrigation systems need to be restored, the Kakhovka HPP restoration will cost around EUR 1bn and other related works will cost the same amount. A full assessment is possible after the water recedes.
- Quantum Systems produces UAVs, one of which is the Vector, which can take off and land vertically, has a low-noise engine and encrypted IP communication that transmits video. Other models offered by the company are: Scorpion, Trinity Tactical. Its drones work with artificial intelligence systems that facilitate object recognition during aerial reconnaissance.
- In addition, according to the KSE Institute, international businesses that are still operating in Russia were able to generate significantly higher (+12.9%) revenue in 2022 (45.6% of the total) than in 2021 (32.7% of the total). In particular, the tobacco manufacturer Japan Tobacco International increased its revenues by more than USD 1.5bn.



Key considerations

Detecting a cyber attack:

- Ensure centralized log collection and monitoring capability to boost the ability to promptly detect the threats and investigate incidents
- Implement monitoring for behavioral evidence or network and host-based artifacts from known state-sponsored actors in Russia

Responding to an incident:

- Immediately isolate breached systems
- Secure backups
- Collect and review relevant logs, data, and artifacts
- Consider soliciting support from qualified specialists to provide subject matter expertise
- Report incidents to authorities (if applicable)

Mitigating risk of incident occurrence:

- Ensure proper training for staff regarding incident detection, reporting and response
- Ensure appropriate number of IT security personnel
- Prepare a Cyber Incident Response and Resilience Plan, as well as a Continuity of Operations Plan

Current topics

The US wants to provide Ukraine with an additional USD 37mn for cybersecurity

The United States authorities are working with Congress to provide Ukraine with an additional USD 37mn in cybersecurity assistance. This was discussed during the annual meeting of the Ukraine-US Cyber Dialogue in Tallinn on June 1. During the dialogue, the US delegation reaffirmed its continued readiness to support Ukraine's cyber defense against the backdrop of a full-scale Russian invasion.

Russian defense plant subjected to a cyber attack

In Russia, the Izhevsk plant Donvard - Hydraulic Systems, which manufactures components for Russian armored vehicles, has undergone a large-scale cyber attack. This was reported by RBC-Ukraine on Tuesday, May 30, citing sources close to Ukrainian intelligence.

During the attack, the client database was destroyed, the domain network (computers and server equipment) was encrypted for more than 200 devices, and all existing copies of the data were deleted. The regular functioning of numerous programs was also disrupted. In addition, the so-called "deface" of the company's official website was carried out - the removal of web pages and replacing them with others.

Meanwhile, the TWELVE hacker group took responsibility for the attack. In April of this year the group "put down" the servers of the Federal Customs Service of the Russian Federation. "However, actions of such a scale, as a rule, take place in cooperation with the Ukrainian special services. According to sources, cyber forces of the Main Intelligence Directorate of the Ministry of Defense of Ukraine are behind the attack on Donward," the report says.

Killnet disbanded

Killnet, the pro-Russian hacktivist group said it had "completely disbanded." The announcement on Telegram came after one of the supposed group members said he was resigning from activities associated with Killnet. The followers asked Killnet's leader Killmilk if they could unsubscribe from the channel, with the answer coming as "Yes."

Preliminary Assessment

- If provided, an additional USD 37mn would bring the total amount of US cyber assistance to USD 82mn from February 2022 and more than USD 120mn from 2016.
- The State Department says the support helped strengthen Ukraine's ability to detect, deter and respond to cyber incidents and threats, and provided support to protect critical networks and digital infrastructure.
- Earlier it was reported that the United States sent specialists to Ukraine to combat Russian hackers. In total, 43 specialists arrived in Ukraine.
- KillNet first made headlines after Russia's full-scale invasion of Ukraine. The hacktivist group outwardly supported the Kremlin's political agenda, especially when it came to the war in Ukraine.
- In late April, the group said it would offer its services to private and state sponsors and, therefore, should be called a "private military hacker company."
- Even if Killnet disbanded, plenty of similar pro-Russian groups still perform Telegram-coordinated DDoS attacks, such as NoName, Xaknet, Legion, and others.



Key Considerations

Sanctions Screening Activities

- Screening solutions generate increasing number of alerts (especially banks must deal with the increased workload)
- Appropriateness and effectiveness of sanctions screening measures in identifying sanctioned parties and activities must be ensured. Complex ownership structures complicate the proper identification of involved parties (OFAC 50% rule)
- Trade transactions with Russia and Belarus must be reviewed

Sanctions Compliance Governance

- Sanctions Compliance Governance as a key requirement increasingly in the focus of regulatory authorities
- Robustness of Sanctions Compliance Management System and sanctions controls to counter the current and new sanctions regulations
- Adequateness of internal safeguards to prevent sanctions circumvention activities

Current topics

Banks block payments from Russia due to the risk of sanctions

Several Armenian, Kazakh and Hong Kong banks have started blocking payments for electronics and communications equipment from Russian companies due to the risk of sanctions, according to the Russian newspaper Kommersant. The restrictions threaten banks that cooperate with the Russian Federation and relate, in particular, to any provision of funds, goods or services in favour of or from a blocked person.

UK extends sanctions against Belarus

The UK has announced the extension of sanctions against Belarus for the support provided by Belarusian president Lukashenko to Russia. Britain imposes a ban on imports of gold, cement, timber and rubber from Belarus. It also bans the supply of dual-use goods, industrial equipment and banknotes to Belarus. In addition, Britain wants to prevent the spread of propaganda by Belarusian media companies. Social networks and internet providers will restrict access to the websites of Belarusian media outlets that have been sanctioned. The British government will also take measures to combat those who circumvent the sanctions, including by limiting the funds that Belarus can raise and further restricting Belarus' access to the UK financial markets.

EU fails to agree on new package of sanctions against Russia

The European Commission presented another version of the 11th package proposal ahead of its meeting, but it did not lead to an agreement. The main reason for the failure is that Greece and Hungary disagree with Ukraine's listing of some of their companies as "war sponsors". Athens and Budapest want their companies to be removed from this list before they are subject to a package of sanctions.

At the same time, several EU countries, such as Germany and France, are concerned about the ban on sanctions circumvention, as they fear it could damage diplomatic relations. According to media reports, the European Union is also proposing to officially cut off Russian oil supplies to Germany and Poland.

Preliminary Assessment

- "It is impossible to buy components, spare parts, computers, etc. directly from the country of manufacture, and it is becoming more and more difficult to buy through third countries, so in six months to a year we may face a shortage of sanctioned products," said Georgiy Vlastopulo, CEO of the logistics company Optimalog.
- In May, European Commission President Ursula von der Leyen said in Kyiv that the new sanctions would be aimed at combating the circumvention of trade restrictions already in place.

General remarks



- The information contained in this briefing is prepared by PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, Frankfurt am Main. It is for general guidance on matters of interest, and intended for the personal use of the reader only and in connection to the PwC Webcast series “War in Ukraine” or based on individual consent in the context of an existing client relationship. This informational material shall not be deemed to establish a contractual relationship between PwC and the reader. Further distribution requires the explicit consent of PwC.
- The information contained in the briefing is selected with due care. We have made every attempt to ensure that the information contained in this briefing has been obtained and arranged with due care. No representation or warranty of any kind (whether expressed or implied) is given by PwC as to the accuracy or completeness of the information contained within this briefing.
- PwC accepts no liability for any actions taken as response hereto. The information is provided on the understanding that the authors are not herein engaged in rendering legal, accounting, tax or other professional advice or services. As such, it should not be used as a substitute for consultation.
- PwC reserves the right to change or update at any time the briefing without prior notice.
- This briefing may contain references to public sources (e.g. media outlets) maintained by third parties. PwC has no control or influence over the content of such sources. The information from such sources have neither been checked nor approved by PwC in any way. References do not mean that PwC adopts the content behind the reference or link as its own. Therefore, PwC does not assume, for whatever legal reason, any responsibility for the content of the websites of third parties.