War in Ukraine: Global Update and Risk Impact

BCG Global Advantage and Risk & Compliance Practice Areas

Prepared: 31 March 2022
Introduction to this document

The war in Ukraine is above all a political and humanitarian crisis...

Russia's invasion of Ukraine has led to a serious humanitarian crisis. BCG condemns this attack and the violence that is killing, wounding, and displacing so many people.

The top priority in moments like these must be the safety and security of people. Corporates, governments, and non-for-profit organizations should focus on supporting the people in Ukraine, Russia, Europe, and globally affected (physically and mentally).

It is the duty of political, societal, and business leaders to navigate through this crisis. The intent of this document is to inform discussions and decisions on the global economic impact as well as the sanctions, regulatory and risk impact of the war in Ukraine.

The situation surrounding Ukraine is dynamic and rapidly evolving - this document reflects information and analysis as of 31 March 2022. It is not intended as a prediction of future events and is shared only as a resource for BCG and client conversations.
IMPACT ON RISK

The war in Ukraine marks a tectonic shift in the global business landscape, one with multiple short- and long-term strategic implications for companies.

Leaders must not only mitigate the risks to their business models caused by price shocks, supply disruptions, and sudden shifts in demand. They must also navigate the risks to their corporate reputations as they comply with sanctions and grapple with whether to suspend Russian operations or pull out entirely—as well as the potential consequences for their personnel and assets in Russia.

In addition, companies should weigh risks that could arise under several scenarios if the conflict broadens. What if sanctions are extended to third countries or business partners that decide to assist Russia, for example?

As the war unfolds, companies will need to shift their focus from managing the emergency to reassessing the risk and sanctions compliance landscape. This assessment should cover customers and connected third parties. Companies should review their global operations and businesses under a range of scenarios, as well as their preparedness for potential cyberattacks. In addition to immediate tactical moves, companies need a strategic action plan to mitigate risks and make their organizations more resilient to future disruption.
AGENDA

Sanctions and policy actions

Risks for companies

Implications for companies

Global economic impact of the war in Ukraine

Perspective on risk impact

Global Update and Risk Impact
War in Ukraine evolves along several dimensions – various scenarios possible

### Interrelated dimensions

#### Geographic scope & materiality
- **Russia & Ukraine**: Central & Eastern Europe
- **Energy, Metals, Agrifoods**: E.g., Automotive, machinery
- **Duration**: Days, Weeks, Months, Years, Decades
- **Geographic scope & materiality**: Global

#### Sectoral scope & materiality
- **Duration**: Days, Weeks, Months, Years, Decades
- **Direct & indirect impact**: Whole economy

#### Timeframes
- **03 Mar.**
- **10 Mar.**
- **17 Mar.**
- **24 Mar.**
- **31 Mar.**

**Ongoing ceasefire negotiations; sanctions expected to last beyond duration of war**

**Continuing humanitarian and economic impact with ~4M refugees**

**2\textsuperscript{nd} and 3\textsuperscript{rd} order effects extending beyond industrial to consumer sectors (e.g., fuel in US, food staples in N. Africa)**

Source: BCG analyses
Summary snapshot | Largest refugee crisis in Europe since 1945

~6.5 Million Internally Displaced Refugees within Ukraine

3.9+ Million Refugees on the move across borders

Ukrainian Refugees (M)

- Germany (240,000+ registered)
- France (26,000+ received)
- UK (1,000 of the 25,000 complete applications approved)

First group of refugees arrive in the UK

Issues such as refugee health starting to have an impact – e.g., only 34% of Ukrainians fully vaccinated against COVID vs 79% of Germans

Refugee numbers in some Polish cities reaching crisis levels - e.g., over 150,000 in Krakow equivalent to 20% of the city’s population

Proposals emerging to develop ‘humanitarian hubs’ to relocate refugees more evenly across Europe and North America

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Summary snapshot | War in Ukraine global economic impact

Global Growth Outlook

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Commodity price (actual, $)</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crude Oil ($/bbl)</td>
<td>79.0</td>
<td>+30%</td>
</tr>
<tr>
<td>Gas ($/MWh)</td>
<td>80.4</td>
<td>+29%</td>
</tr>
<tr>
<td>Coal ($/t)</td>
<td>157.5</td>
<td>+65%</td>
</tr>
<tr>
<td>Wheat ($/bu)</td>
<td>340.0</td>
<td>+38%</td>
</tr>
<tr>
<td>Rapeseed (£/t)</td>
<td>728.5</td>
<td>+7%</td>
</tr>
<tr>
<td>Nickel ($/t)</td>
<td>20,430.0</td>
<td>+65%</td>
</tr>
<tr>
<td>Palladium ($/oz)</td>
<td>1,826.0</td>
<td>+23%</td>
</tr>
</tbody>
</table>

1. GDP forecasts from World Bank and FIs per Bloomberg database (5-23 FIs per forecast period).
2. Deep Sea Cargo: oil tankers MR & up, bulkcarriers Panamax & up, containerships 3,000+ TEU, VLGCs, LNG carriers 60,000+ cbm & PCTCs 6,000+ceu.
3. Baltic Dry Index (BDI) is index of avg. price paid for transport of dry bulk materials across 20+ routes.
4. UPDATE: Northbound: 8.9, 4.6, 7.4 (Nov ’21) | 3/14 - 3/20 | 2021 - 2022
Southbound: 9.6, 8.0, 4.6 (Nov ’21) | 3/14 - 3/20 | 2021 - 2022

Sanctions & Policy Actions

<table>
<thead>
<tr>
<th>US sanctioned or imposed actions since 24 March</th>
</tr>
</thead>
<tbody>
<tr>
<td>• US sanctioned Russian defense companies</td>
</tr>
<tr>
<td>• UK bans Alrosa, world’s largest diamond mining company</td>
</tr>
<tr>
<td>• G7 unanimously reject payment of RU oil/gas in rubles</td>
</tr>
<tr>
<td>• Finland suspends railways services with Russia</td>
</tr>
<tr>
<td>• RU seizes shipment of Swiss luxury watches, citing Duty issues</td>
</tr>
</tbody>
</table>

Corporate Actions in Russia Market

Based on sample of +460 companies:

<table>
<thead>
<tr>
<th>Exit</th>
<th>Suspend operations</th>
<th>Halt Shipment /Supply</th>
<th>Curtail Access to Capital</th>
<th>Suspend New Investment / Partnership</th>
</tr>
</thead>
<tbody>
<tr>
<td>249</td>
<td>70</td>
<td>16</td>
<td>70</td>
<td>+3</td>
</tr>
</tbody>
</table>

Source: corrective.org 6. Yale Chief Exec Leadership Inst.. Numbers in parentheses indicate increase /decrease since last week. Where there is a decrease this is because reclassification due to definitions, and company action recategorization from one to another. Note: BCG does not provide legal or regulatory advice.
Leading Financial Institutions predicting major decline in Russia GDP vs. World Bank Jan forecast

GDP Growth (%), Selected Regions, 2021A – 2023F

**Russia**
- Actual 2021: 4.7%
- Jan 2022F: 2.4%
- 30 Mar 2022F: -16.0%
- 30 Mar 2023F: -3.2%

**Eurozone**
- Actual 2021: 5.3%
- Jan 2022F: 4.2%
- 30 Mar 2022F: 2.95%
- 30 Mar 2023F: 2.5%

**Global**
- Actual 2021: 3.9%
- Jan 2022F: 4.1%
- 30 Mar 2022F: 3.6%
- 30 Mar 2023F: 3.4%

Note: 22-25 Mar forecast of 23 FIs for Russia, 14 FIs for Eurozone, 5 FIs for Global
Sources: World Bank; Bloomberg; BCG Analysis

-3.2% median further fall in GDP growth projections in last one week

Prepared: 31 March 2022
Inflation of key commodities, with recent price correction

Source: S&P Capital IQ, 28 March 22; BCG Analysis
Key Sanctions and Policy Actions currently in place

Current Sanctions & Policy Actions (Key examples)

- **"Western" Allies**
  - Coordinated policy/sanctions programs
    - Limiting RU’s access to Financial System, e.g., SWIFT access
    - Imposing and enforcing sanctions via coordinated task force
    - De-listing RU "MFN" (WTO status) for tariff preferences
    - G7 sanctions RU gold\(^1\)
  - Export Controls on dual-use items (incl. many spares)
  - Limits purchases of Russian energy exports
  - Finland suspends railway services with RU cutting rail link to EU
  - Sanctions on RU defense and diamond mining companies

- **Russia**
  - Bans travel to Russia by US/EU/CA officials; bans Facebook and Instagram
  - Seeks alternate buyers for oil/gas in response to US/UK/EU limits
  - Attempts to require “unfriendly” countries to pay for gas in rubles
  - RU seizes shipment of Swiss luxury watches, citing customs duty issues

- **Large EMs**
  - Have asked for hostilities to cease
  - China government statements focus on peacemaking, mediation
  - China (& RU) voted against motion to condemn at ICJ\(^2\) in The Hague
  - China & India abstained at 25 Feb UN Security Council vote against invasion
  - Indonesia in difficult position, as 2022 G20 host

Current Sanction Actions by country and target

**Sanction Actions\(^3\) in-place**

- EU: 673
- US: 812
- UK: 779
- Other: 0

**Sanction Targets\(^3\) / \(Δ\) since last week**

- Individuals: + 428
- Companies: + 59
- Other entities: + 99

3. Total sanction actions, includes duplication.
Source: www.correctiv.org

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1. Intended to prevent selling gold reserves to finance war
2. International Court of Justice
3. Source: Government websites; Media reports; BCG analysis. Note: BCG does not provide legal or regulatory advice.
Corporate Actions

Company Announcements re: Russia Market per Yale School of Management tracking (29 March 2022)

<table>
<thead>
<tr>
<th>Number of Companies</th>
<th>Exit</th>
<th>Suspend Operations</th>
<th>Halt shipments/supply</th>
<th>Curtail access to capital</th>
<th>Suspend new investment or partnership</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>57</td>
<td>249</td>
<td>70</td>
<td>16</td>
<td>70</td>
</tr>
</tbody>
</table>

- Exit: Cease operations, divestment, discontinue, leave and withdraw business from Russia.
- Suspend Operations: Suspend activities, JV, sale points, manufacture in Russia.
- Halt Shipments/Supply: Temporarily stop / freeze sales and transportation of goods/services in, to and from Russia.
- Curtail Access to Capital: Financial Institutions (FIs) restrict, reduce, cut, suspend, Russian access to capital provided by FIs.
- Suspend New Investment or Partnership: Stop any new investments in Russia and suspend current sponsorships for Russian Athletes.

As of 28 March 2022, ~465 companies have announced a complete or partial withdrawal from Russia, based on news & press search. Source: Yale School of Management; Press search; BCG analysis.

### Company Examples

- **Deutsche Telekom, FICO, OBI**
- **Bose, Emirates Airlines, Boehringer Ingelheim**
- **Jaguar/Land Rover, Twin Disc, Trane Technologies**
- **Bank of China, Deutsche Bank, DM Market**
- **Dominos Pizza, Bayer, Pfizer**

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1. Incl. Banks, Insurance & Investment companies; 2. Incl. IG, Infrastructure, Manufacturing Definitions: Exit (Cease operations, divestment, discontinue, leave and withdraw business from Russia). Suspend Operations (Suspend activities, JV, sale points, manufacture in Russia). Halt Shipments/Supply (Temporarily stop / freeze sales and transportation of goods/services in, to and from Russia). Curtail access to capital (Financial Institutions(FI) restrict, reduce, cut, suspend, Russian access to capital provided by FIs). Suspend New Investments or Partnerships (Stop any new investments in Russia and suspend current sponsorships for Russian Athletes). As of 28 March 2022, ~465 companies have announced a complete or partial withdrawal from Russia, based on news & press search. Source: Yale School of Management; Press search; BCG analysis.
Humanitarian relief is converging on Ukraine, depleting other recipients of global social impact funding. E.g., Germany cannot formulate other funding proposals until a decision on Ukraine is made; EU cut funding to Africa, up to 70% for some regions.

The China-Europe rail network is a fundamental transport modality for intercontinental trade. Avoidance of the China-Europe Rail network has increased rail transit times from 35 to 45 days or longer; rates have surged by 40% since Feb 2022.

Soaring raw materials and energy prices are impacting renewable energy projects. This adds additional pressure to an already constrained project pipeline (e.g., 13% of pre-war US projects had already been delayed by a year or canceled).

80k+ international students in Ukraine disrupted, half of them medical students. The highest number of impacted students come from India (~23%) and Africa (~20%).

Source: Factiva Media Reports; Press clippings; BCG Analysis

Prepared: 31 March 2022
Key immediate impacts of the war on companies

Focus of this document

Supply chain disruption
Russia and Ukraine are key exporters for agriculture, metals, energy
EU more exposed than US, and has more leverage in trade sanctions
Crisis creates key choke points across supply chain

Commodity price volatility
Clear price spike in gas and agricultural commodities
Crisis exacerbates already high energy prices and volatility

Sanctions and policy actions
US, UK, EU, Canada take strong stance
Large Emerging Markets take more nuanced approach
Sanctions will also have 2nd/3rd order impacts
Russia is also applying counter measures (e.g., restriction on liquidations)

Other direct and indirect risks
Short-term profits and long-term strategy affected by geo-political tensions and reputational risk
Operational continuity and cybersecurity potentially compromised
Resulting in financial vulnerabilities and stress propagation

Note: BCG does not provide legal advice; Source: BCG experience and analysis
Global economic impact of the war in Ukraine

Perspective on risk impact

- Sanctions and policy actions
- Risks for companies
- Implications for companies

Prepared: 31 March 2022
Risks rooted in global tectonic shift arising from the war

War in Ukraine has elicited unprecedented international response, including sanctions and policy actions that generate uncertainty for the global economy. Drivers of company risk arise from this context

**Sanctions & policy actions**

- **Measures targeting Russia** | Increasing number of trade controls on strategic imports/exports (e.g., dual-use military-civilian items), ~3,650 sanctions targeting Russian individuals, corporations, and financial system. Further policy actions disrupting business, diplomatic and cultural ties
- **Retaliation by Russia** | Russia restricting exports of agriculture, industrial equipment, social media (e.g., Facebook). Companies with Russian operations have limited options to protect assets and operations
- **Uncertainty** | Risk of further escalation (e.g., secondary measures, asset seizures), accelerated long-term decoupling (e.g., parallel financial, energy & tech systems) and potential actions taken by other countries (e.g., Eurasian Economic Bloc)

**Risks for companies**

- **Strategic** | Risks to business models and reputational concerns, with significant impact on portfolio decisions (e.g., localization) and short to medium-term priorities (e.g., company decarbonization targets and initiatives)
- **Business & Operational** | Potential top-line disruptions from price and demand shocks, supply shortages and cyber attacks
- **Financial** | Increasing financial distress, but remains below COVID levels given the lower direct systemic impact – yet uncertainty from 2nd order risk implications

**Implications for companies**

- **Regulatory compliance** | Map exposures to new and escalating trade compliance requirements, sanctions and policy actions across footprint, financial transactions, and supply chain. Identify and implement proactive controls against potential liabilities
- **Scenario-based planning** | Shift to continuous stress testing and trigger-based actions to rapidly adapt to new contexts, ensuring comprehensive coverage of direct and indirect risk exposure
- **Build resilience** | Build buffer to secure critical services (e.g., dual sourcing)

Note: BCG does not provide legal or regulatory advice; Source: BCG analyses and experience

Prepared: 31 March 2022
Global economic impact of the war in Ukraine

Perspective on risk impact

- Sanctions and policy actions
- Risks for companies
- Implications for companies
### 4 types of sanctions and policy actions applied on Russia, increasing risk across industries

<table>
<thead>
<tr>
<th>Sanctions/policy actions</th>
<th>Types of measures</th>
<th>Selected applied measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Trade Policies</strong></td>
<td>Impose export and import controls with severe penalties/prosecution</td>
<td>Halted sale of dual-use components</td>
</tr>
<tr>
<td></td>
<td>Limit investment and public or private sector business relations</td>
<td>Banned imports of Russian energy</td>
</tr>
<tr>
<td></td>
<td>Bar or limit companies’ operations</td>
<td>Cancelled certification of Nord Stream II</td>
</tr>
<tr>
<td><strong>Individual/Corporate</strong></td>
<td>Bar individuals from travel, and access to funds/assets</td>
<td>Seized assets (e.g., yachts, houses) from sanctioned oligarchs and lawmakers</td>
</tr>
<tr>
<td></td>
<td>Bar or limit companies’ operations</td>
<td>Froze bank accounts linked to sanctioned oligarchs &amp; lawmakers</td>
</tr>
<tr>
<td><strong>Financial Institutions</strong></td>
<td>Freeze bank accounts and funds</td>
<td>Removed selected Russian banks from SWIFT</td>
</tr>
<tr>
<td></td>
<td>Ban transactions in foreign currency</td>
<td>Froze assets of Russia’s Central Bank</td>
</tr>
<tr>
<td></td>
<td>Block FIs from financial system infrastructure</td>
<td>For details, see V4.0 of Ukraine Perspectives: FI Impact</td>
</tr>
<tr>
<td><strong>Diplomatic/Other</strong></td>
<td>Reduce/cut diplomatic relations</td>
<td>Closed access to airspace for Russian flyovers</td>
</tr>
<tr>
<td></td>
<td>Block participation in sporting and cultural events</td>
<td>Barred Russia from most sporting competitions, incl. Paralympics, FIFA, UEFA, etc. (global)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Russia expelled from Council of Europe</td>
</tr>
</tbody>
</table>

**Note:** BCG does not provide legal or regulatory advice; information is non-exhaustive. 1. US extends sanctions on companies that are ≥50% owned by sanctioned individuals/entities. 2. Sanctions laws are complex; not all countries’ legal regimes follow the above categories strictly e.g., US comprehensive sanctions on the Ukrainian regions of Crimea, Donetsk, and Luhansk essentially preventing all business dealings. Source: Tony Blair Institute for Global Change (As of March 22, non-comprehensive); Government reports; Press clippings; BCG analysis
# Measures applied on Russia expected to have far-reaching risk impact

**First-order impact**

- **Trade Policies**
  - Inability to import strategic products (e.g., repair parts)
  - Inability to export key products (e.g., oil & gas, agricultural output)
  - Difficulty to circumvent measures (e.g., shipping via 3rd countries)

- **Individual/Corporate**
  - Sanctioned individuals and corporates unable to access capital, foreign assets or travel to certain destinations

- **Financial Institutions**
  - Financial Institutions based in Russia unable to access foreign currency, assets and capital markets

- **Diplomatic/Other**
  - Diplomatic and cultural isolation
  - Strategic government-to-government relations halted

**Second-order ramifications**

- **Supply chain shortages** at global scale (e.g., palladium, nickel)
- Long-term risk of losing competitiveness for critical sectors deploying imported tech (e.g., O&G exploration, Auto)
- "No business" long-term stance by risk-averse companies
- Foreign currency reserves drainage (mainly USD)
- Sanctions affecting companies owned by targeted individuals (e.g., Chelsea FC)
- Effects on entities supporting transactions related to sanctioned individuals (e.g., international banks)
- Cryptocurrencies under closer scrutiny
- Pivoting of Russian financial system to alternative currencies (e.g., RMB)
- Western banks operating in Russia closing operations and risking assets seizure
- Ceasing cultural and intellectual exchanges (e.g., sports, R&D, academics)
- Inability to align on long-term global challenges (e.g., Climate Change, space exploration)

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**Note:** BCG does not provide legal or regulatory advice; information is non-exhaustive. Source: Government reports; Press clippings; BCG analysis
Retaliation is under way; limited choice for companies operating in Russia

Three options for foreign companies, all of which raise reputational risk

1. **Continue 'business-as-usual'** operation

2. **Cease operations**
   - Potentially, face risk of expropriation and/or criminal charges

3. **Transfer assets** to a local 'business partner' shareholder
   - Challenge to attain a fair market value for transferred assets
   - e.g., Major O&G players faced potential significant write-offs from the sale of Russian assets

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**Focus | Selected Russian actions**

**Banned exports** of machinery, equipment and agricultural products to certain countries
- Pressuring Western consumers and companies

**Re-registered foreign-leased planes** from Bermuda to Russian registry
- Exposing Western lessors to $ billions of write-offs

Proposed legislation allowing **seizure or expropriation of foreign-owned assets** in Russia
- Exposing owners to write-offs

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Note: BCG does not provide legal or regulatory advice; information is non-exhaustive. Source: Government reports; Press clippings; BCG analysis
## Outlook | Key uncertainties for sanctions, policy actions, and global decoupling

### Non-exhaustive, Key Questions to Consider Regarding Measures

<table>
<thead>
<tr>
<th><strong>Allied measures over Russia &amp; others</strong></th>
<th><strong>Retaliatory measures by Russia &amp; others</strong></th>
</tr>
</thead>
</table>
| How effectively will US/EU/Allies **enforce the sanctions, policy actions and anti-circumvention measures**? (e.g., transshipment via 3rd countries to Russia) | Will Russia **escalate its retaliatory measures**? E.g.,
| | • Seize assets of foreign firms that leave the country
| | • Restrict foreign ships from entering Russian ports
| | • Cut gas supplies to the EU
| Will secondary sanctions/policy actions be imposed upon countries aligned with Russia? | Will other countries retaliate? (e.g., Eurasian Economic Union bloc, incl. Kazakhstan, Belarus, Armenia)
| Will the **scope of measures** intensify with escalation (e.g., EU ban on O&G imports)? | Will Russian sourcing be re-localized and parallel value chains be created with aligned trading partners?
| Will allies attempt to regulate **cryptocurrency** to prevent black market and evasion by sanctioned individuals/companies? | • Re-sourcing of critical materials, parts and equipment
| Would sanctions and policy actions **remain in place** after a diplomatic resolution to the conflict? If so, for how long? | • Alternative technology platform
| | • Parallel payments infrastructure and financial system

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Note: BCG does not provide legal or regulatory advice; information is non-exhaustive. Source: Government reports; Press clippings; BCG analysis
Hypothetical scenario | If China provided 'material support' to Russia, it could face implications that would significantly impact the global economy

[President Biden] described the implications and consequences if China provides 'material support' to Russia

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White House press release
March 18, 2022

'Material support' could translate in the application of secondary sanctions and policy actions, impacting a larger, more globally-interlinked economy (e.g., China), which would put much more pressure on the global economy

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Macro fundamentals

<table>
<thead>
<tr>
<th></th>
<th>Russia</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imports(^1) ($T)</td>
<td>0.25</td>
<td>2.07</td>
</tr>
<tr>
<td>Exports(^2) ($T)</td>
<td>0.43</td>
<td>2.50</td>
</tr>
<tr>
<td># of top 100 banks(^3)</td>
<td>1</td>
<td>19</td>
</tr>
<tr>
<td>Share of global banking revenue(^4)</td>
<td>~1%</td>
<td>25%</td>
</tr>
<tr>
<td>% of cross-border transaction value(^5)</td>
<td>~1.4%</td>
<td>~12.0%</td>
</tr>
</tbody>
</table>

Financial flows

<table>
<thead>
<tr>
<th></th>
<th>Russia</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of fortune Global 500 revenue(^6)</td>
<td>~1%</td>
<td>~28%</td>
</tr>
<tr>
<td># top 100 tech companies(^7)</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>R&amp;D spend ($T)(^8)</td>
<td>.04</td>
<td>.51</td>
</tr>
</tbody>
</table>

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Note: BCG does not provide legal or regulatory advice; information is non-exhaustive. 1. Total value of 2019 imports (CIF), WITS 2. Total value of 2019 exports (FOB), WITS 3. Top 100 global banks based on '20 assets, S&P Global Based on '21 revenue per Fortune 4. In country (domestic) revenue (Retail + corporate + other banking) S. 2019 data for Russia - based on outbound global payments only, excl. credit cards; value of Russia x-border payments/ value of x-border global payments BCG Trade Finance Model. 6. Fortune 2019 7. Thomason Reuters "Top 100 Global Tech Leaders" 8. Gross domestic spending on R&D, OECD Source: BCG Trade Finance Model; WITS; OECD S&P Global; Fortune; China State Administration of Foreign Exchange; BCG analysis
Global economic impact of the war in Ukraine

Perspective on risk impact

- Sanctions and policy actions
- Risks for companies
- Implications for companies
Three broad types of risks for companies with potential widespread impact

**NON-EXHAUSTIVE – MOST RELEVANT RISKS**

**Strategic & Reputational**
- Risk to achieve business objectives over the long-term
  - Business model viability threats from long-term changes in demand patterns
- Strategy adjustments imposed by reputational concerns over conflict
- Change of strategic priorities with long-term impact (e.g., CO2 targets)

**Business & Operational**
- Risk to company’s operations, including supply chain and delivery of products/service
  - Top line risk driven by shocks to price and demand
  - Risk of critical commodities supply shortages causing business continuity issues/disruptions and cost increases
  - Threat to cybersecurity driven by conflict tensions or boycott attempts

**Financial**
- Risk of investment losses, business & financial deterioration (e.g., solvency)
  - Liquidity risks driven by cash shortages rooted in business/operational disruptions
  - Risk of financial disruption due to stress propagation along own business network
  - Uncertain financial markets outlook (e.g., commodities, currency risk, etc.)

Risks are interconnected, reinforcing each other in a highly uncertain context

*High uncertainty for companies – Details in next pages*
Russian operations not only a financial concern, but also a reputational one

BCG Investor Survey¹
United States - March 2022
Investor perspectives on companies that continue operations in Russia

- 73% Unwilling to invest in companies with operations in Russia
- 20% Would invest only if exposure to Russia is marginal (e.g., <3% of revenues)
- +460 Companies suspending or scaling down business ties with Russia²

Direct risks and indirect reputational ramifications for companies

**First-order risks**

- **Western consumers & business partners boycotting** companies with Russian presence
  - e.g., Renault decided to suspend activities in Russia after public opinion reacted to its presence³
- **Investors** potentially halting investment or divesting from companies with Russian operations
  - e.g., Norway’s Sovereign Wealth Fund, with c. $3B invested in Russian stocks, to exit Russian holdings⁴
- **Ties with sanctioned entities/individuals** forcing divestments or business strategy shifts
  - e.g., Manchester United F.C. cancel their sponsorship deal with Russian state-owned airline Aeroflot⁵

**Second- & third-order ramifications**

- Companies adopting a "no business" policy with Russia and/or aligned countries to prevent future reputational issues
- **Insecurity of assets and personnel** in Russian territory following suspension of operations
- Players from non-sanctioning countries may seize opportunity to gain market share in Russia, strengthening competitive position
- **Disruption** to international supply chains given loss of production capacity

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Operational – Supply Chain | War in Ukraine to create further impacts in an already stressed supply chain post-COVID context

Companies highly concerned with supply chains

Companies’ sentiment on supply chain risk: proportion of references to supply chain risk per earning call transcript. Values indexed for Jan 2017

Ukraine conflict on top of an ongoing global supply chain crisis, exacerbating companies’ concerns

4 key supply chain risks boosted by the war

<table>
<thead>
<tr>
<th>Commodity shortages &amp; price volatility</th>
<th>Difficulty sourcing and higher key commodities prices</th>
<th>Increase in key commodities(^3) prices since Jan/22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product sourcing</td>
<td>Inability to source manufactured goods and inputs</td>
<td>Potential fewer vehicles produced in the world in 2022(^4)</td>
</tr>
<tr>
<td>Demand 2(^{nd}) order effects</td>
<td>Slowdown in manufacturing / inability to import</td>
<td>Russia, Ukraine and Belarus share of EU imports(^5)</td>
</tr>
<tr>
<td>Logistics</td>
<td>Higher logistics costs due to capacity and fuel impact</td>
<td>Increase in jet fuel prices(^6) month by month</td>
</tr>
</tbody>
</table>

1. BCG investor and company sentiment measurement proprietary tool, NL Analytics and BCG Center for Growth and Innovation Analytics. Measured as % of referents to supply chain in context of risk per earning call transcript. 2. Estimated – official data of pandemic start could differ among countries. 3. Nickel, Wheat, Crude Oil data Mar/2001 – Mar 7, 2022. 4. IHS Market global vehicles forecast. 5. IHS for Jan-Dec 2021. 6. IATA: Europe-Asia, Asia-North America most heavily hit by airspace closure, Based on CTKs (cargo ton kilometers) over the past 12 months.

Source: BCG analysis and experience.
Russia possesses leading cyber capabilities, and evidence of increasing attacks on Ukraine

Russia has outsized cyber capabilities…

Russia has **longest-established and strongest cyber-offensive capabilities, outsized for nation size**

Top 5 countries out of 50 with highest Cyber Capability Index - offensive capability (Harvard Belfer Center).

<table>
<thead>
<tr>
<th>Country</th>
<th>GDP ($T)</th>
<th>Est. official cyber dept</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russia</td>
<td>1.5</td>
<td>1990s</td>
</tr>
<tr>
<td>US</td>
<td>20.9</td>
<td>2010</td>
</tr>
<tr>
<td>China</td>
<td>14.7</td>
<td>2015</td>
</tr>
<tr>
<td>Germany</td>
<td>3.8</td>
<td>2017</td>
</tr>
<tr>
<td>UK</td>
<td>2.7</td>
<td>2020</td>
</tr>
</tbody>
</table>

...and has been alleged to have been behind destructive[^4] NotPetya cyber attack in 2017

- UK, US, and AUS attributed attack to Russia[^5]
- Targeted Ukraine, spreading across EU & globe, impacting multinationals (e.g., Merck, DHL, etc.)

<table>
<thead>
<tr>
<th>Total damage estimated</th>
<th>Countries impacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>$10B</td>
<td>65+</td>
</tr>
</tbody>
</table>

Evidence of increasing cyberattacks on Ukraine

  
  ~10x Increase in cyber attacks on Ukraine[^6]

Leaders should consider four key cyber threats, and potential for contagion from original target

<table>
<thead>
<tr>
<th>Geopolitical</th>
<th>Direct attacks on Ukraine (e.g., defense ministry, banking system) prior to invasion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retaliatory</td>
<td>Multinationals &amp; Governments anticipate retaliation for sanctions &amp; aid provisions</td>
</tr>
<tr>
<td>Reconnaissance</td>
<td>Allegations of reconnaissance performed against countries' critical infrastructure</td>
</tr>
<tr>
<td>Activism</td>
<td>Attacks from non-state backed groups motivated by ethical/ moral views</td>
</tr>
</tbody>
</table>

[^1]: Cyber Offense Capability Score 2020 (Harvard Belfer Center).
Increasing financial stress, but below COVID levels

**Elevated global financial stress**

Global FSI index, Mar 2019 – Mar 2022

>0 indicates stress levels above average

**Deteriorating credit for Russia & Russian entities**

- Fitch downgraded Russian Sovereign Debt to "C" and Ukrainian to "CCC"
- Moody credit agency downgraded at least 95 Russian & 3 Ukrainian corporates

**Impact varies based on exposure**

**First-order risks**

- Threat to liquidity buffers from hefty margin calls on derivatives and difficult receivables collection

**Second- & third-order ramifications**

- Solvency issues/default following sustained liquidity drains from margin calls and/or unpaid receivables
- Increased default risk on Russian/Ukrainian loans
- Potential for Russia/ Ukraine sovereign debt default
- Rising interest rates affecting banks’ balance sheet and top line, as well as companies refinancing terms

- Lower money supply to the economy, with potential effects on production, consumption and unemployment

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1. Global OFR FSI index is a daily market-based snapshot constructed from 33 financial variables incorporating five categories of indicators: credit, equity valuation, funding, safe assets and volatility, FSI shows stress across US, other advanced economies & emerging markets
2. Fitch Ratings Agency
3. Moody’s as of Mar 10
Source: Reuters, Bloomberg, BCG analysis and experience
Global economic impact of the war in Ukraine

Perspective on risk impact

- Sanctions and policy actions
- Risks for companies

Implications for companies
Companies should re-assess their operational and risk environment to build resilience via scenario-based planning

**Short-term**

A. **Shift focus** from managing the emergency to **re-assessing the risk and sanctions landscape** (e.g., new/escalating trade requirements)

B. **Include customers and connected 3rd parties** in compliance screening and risk assessment

**Example in Banking**

Payment network analysis to map cash flow interactions within company network/supply chain and identify indirect exposure to Russian/Ukrainian entities

**Example in Manufacturing**

Idiosyncratic scenarios to stress **supply chain vulnerability** – e.g., loss of suppliers due to conflict spillovers, risk of sanction evasion via transshipment, logistics costs disruption

**Mid-to-long-term**

C. **Assess stress scenarios**, incorporating direct and indirect risks along company vulnerabilities (e.g., risk of **sanction evasion** via 3rd parties)

D. **Adopt an agile approach in reviewing decisions and implementing controls** against potential liabilities

**Example in Banking**

Payment network analysis to map cash flow interactions within company network/supply chain and identify indirect exposure to Russian/Ukrainian entities

**Example in Manufacturing**

Idiosyncratic scenarios to stress **supply chain vulnerability** – e.g., loss of suppliers due to conflict spillovers, risk of sanction evasion via transshipment, logistics costs disruption

E. **Review and assess scenarios on an ongoing basis** to address uncertainty and ensure trade and sanctions compliance

F. **Build a resilience buffer** by identifying and securing delivery of critical business services (e.g., dual sourcing)

Source: BCG experience & analysis
Mitigation actions can range from tactical to structural based on urgency or complexity

<table>
<thead>
<tr>
<th>Sanctions</th>
<th>Current &amp; potential</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tactical actions</td>
</tr>
<tr>
<td></td>
<td>✓ Develop action plan to mitigate immediate impact on business network (e.g., suppliers)</td>
</tr>
<tr>
<td></td>
<td>✓ Verify denied-party screening and CDD(^1) data collection/storage processes</td>
</tr>
<tr>
<td></td>
<td>✓ Verify/Remediate denied-party screening and CDD(^1) data quality</td>
</tr>
<tr>
<td></td>
<td>✓ Strengthen sanction clauses on existing commercial agreements, and consider certification of higher-risk 3(^{rd})-parties</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sanctions</th>
<th>Structural actions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>✓ Pressure test denied-party screening and CDD(^1) process (e.g., larger screening scope, new screening logics)</td>
</tr>
<tr>
<td></td>
<td>✓ Conduct ongoing connected parties screening</td>
</tr>
<tr>
<td></td>
<td>✓ Consider method to detect/prevent circumvention via trade finance</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other risks</th>
<th>Strategic &amp; reputational</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>✓ Include/Develop geo-political dimension in risk management framework (e.g., indicators, escalation mechanism)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other risks</th>
<th>Business &amp; operational</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>✓ Increase inventory of critical inputs/parts</td>
</tr>
<tr>
<td></td>
<td>✓ Raise cyber awareness at all org. levels and increase monitoring frequency</td>
</tr>
<tr>
<td></td>
<td>✓ Engage routinely in tabletop exercises/war-gaming against cyber attacks</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other risks</th>
<th>Financial</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>✓ Increase liquidity/cash conversion cycle</td>
</tr>
<tr>
<td></td>
<td>✓ Re-assess hedging strategy</td>
</tr>
</tbody>
</table>

1. Customer Due Diligence. Source: BCG experience & analysis

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Prepared: 31 March 2022

NON-EXHAUSTIVE
Teams across BCG are monitoring impact

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