

Ukraine Supply Wisdom[®] Report

11-April-2022



Table of Contents

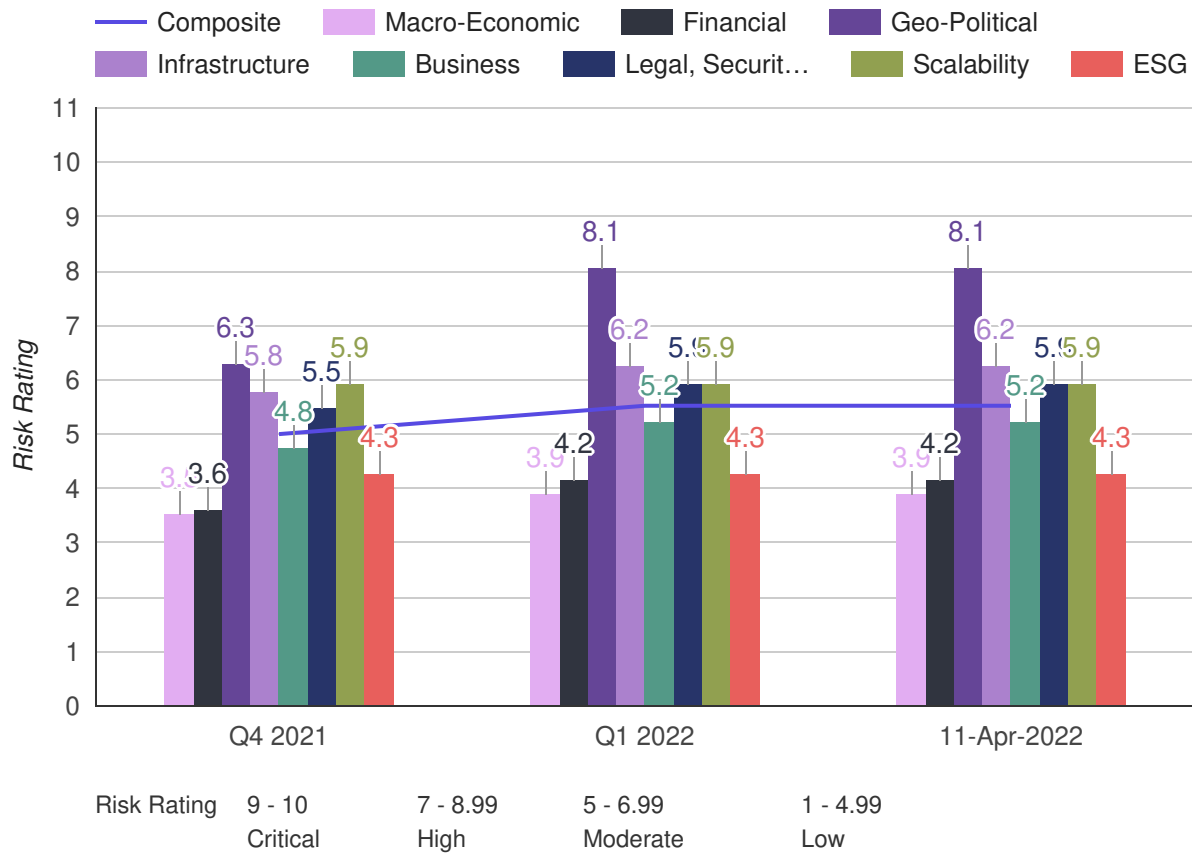
Table of Contents	2
Confidentiality and Terms of Use	3
Executive Summary	4
Macro-Economic Update	12
Financial Update	17
Geo-Political Update	24
Infrastructure Update	28
Business Update	33
Legal, Security and Compliance Update	39
Scalability Update	45
ESG Update	51
Contact Us	56
Appendix I - Abbreviations	61

Confidentiality and Terms of Use

- Supply Wisdom grants to the Subscribing Client the limited, non-exclusive, non-transferable right to use our Service under the terms of this Subscription. Authorized Users are limited to the individuals authorized to use our Service under this Subscription. Supply Wisdom and our third-parties own all components of the Service and retain all rights, including intellectual property rights, in the Service. The subscription is for internal Subscribing Client use only.
- All Supply Wisdom deliverables to include, but not limited to, reports, presentations, frameworks, metrics, charts, alerts, content and other data are confidential and intended for the exclusive internal use at the Subscribing Client only.
- The Subscribing client and/or any of their employees may not share any of the Supply Wisdom material associated with this report or service in any form, whether written or verbal, with any group or individual outside of the direct Subscribing Client or their monitored third-party without Supply Wisdom's express written permission.
- Should the Client use any portion of the material published by Supply Wisdom in this report or any other part of the Service with an internal audience including their monitored third-party, the source must be designated as "Source: Supply Wisdom®".
- The professional fees, annual subscription charges, and any other pricing and term information for this service should be treated as strictly confidential.

Executive Summary

Risk Snapshot



Target Name	Ukraine
Info Last Updated on	11-Apr-2022
Capital	Kyiv
Population	43.7 million
Cybercrime - Country Rank	12.00
Labor Force	16.03
Corporate Income Tax	18%
Travel Advisory	Avoid All Travel
CO2 emissions (metric tons per capita)	223.00
Cost of Living Index	19.43

Risk Rating	Q4 2021		Q1 2022		11-Apr-2022
Composite	5.00	↑	5.52	−	5.52
By Domain:					
Macro-Economic	3.52	↑	3.89	−	3.89
Financial	3.60	↑	4.17	−	4.17
Geo-Political	6.29	↑	8.05	−	8.05
Infrastructure	5.79	↑	6.24	−	6.24
Business	4.76	↑	5.21	−	5.21
Legal, Security and Compliance	5.48	↑	5.93	−	5.93
Scalability	5.93	−	5.93	−	5.93
ESG	4.25	−	4.25	−	4.25

Impact Level

■ Critical

■ High

■ Moderate

■ Low

Trends - Q1 2022

- Multiple cyber attacks witnessed
- Multiple instances of terror threat/attack witnessed
- Multiple instances of strikes/protests/riots witnessed
- Multiple geo-political trends witnessed
- Multiple instances of sanctions witnessed

Key Highlights

Key Highlights:

- Ukraine is located in Eastern Europe and shares its boundary with Russia, Belarus, Poland, Slovakia, Hungary, Romania, and Moldova
- The economy of the country is an emerging free-market economy
- Ukraine's economy is predominantly driven by the service sector, which contributes more than 60% of its GDP
- The country's sourcing industry has been growing at a stable rate since the early 2000s, and the IT industry has been the driving force in the country's growing economy
- The country has successfully positioned itself as an all-round provider of IT services in various service areas, particularly in blockchain, FinTech, big data management, gaming, agribusiness, and e-commerce
- Other leading industries of Ukraine include coal, electric power, ferrous and nonferrous metals, machinery and transport equipment, chemicals, and food processing
- Majority of service providers are mainly concentrated in Kyiv, Lviv, Kharkiv, Dnipro, and Odessa
- Kyiv, Kharkiv and Odessa are under attack by Russian Military
- On February 24, 2022, Russian President officially declared war against the country
- It is the poorest country in Europe alongside Moldova, suffering from a very high poverty rate as well as severe corruption

Macro-Economic

Risk Level - Low

- Ukraine's Gross domestic product (GDP) expanded 5.9% YoY in the Q4 2021, easing from a 2.7% growth in the previous period
- Ukraine recorded a trade deficit of US\$1120.10 M in December 2021
- The annual inflation rate in Ukraine edged down to 10% in December 2021 from 10.3% in the previous month, below market expectations of 10.2 %

- The National Bank of Ukraine increased its policy rate by 100bps to 10% on January 20, 2022 meeting, above market expectations of 9.5%, while announcing it expects to further increase the rate to 11% in 2022 before seeing back below 10% in 2023
- Foreign Exchange Reserves in Ukraine increased to US\$30,940 M in December 2021 from US\$30,500 M in November 2021
- Unemployment Rate in Ukraine decreased to 9.20% in Q3 2021 from 9.30% in Q2 2021
- Amid political tensions between Ukraine and Russia, economic stability of the country is at risk

Financial

Risk Level - Low

- Amid political tensions between Ukraine and Russia, the financial stability of the country is at risk
- Average Annual Labor Cost Growth Rate stood at 13.9%
- No minimum capital requirements to start a business, and the cost to start a business is 0.5%
- Fuel and Power cost stood at US\$1.11 per liter and US\$0.08 Kwh, respectively
- Corporate income tax, social security contributions tax, property tax, and VST/GST stood at 18%, 22%, 12%, and 20%, respectively

Geo-Political

Risk Level - High

- In February 2022, Geo-Political Risk increased as Russia initiated Ukraine invasion. Following are the recent developments with respect to political tensions between Ukraine and Russia:
 - Military operations were launched by Russia
 - Ukrainian President imposed Martial law for 30 days after Russia declared war
 - Russia's ground forces have crossed Ukraine border
 - Major explosions have occurred near the capital Kyiv, Kharkiv, Odessa, and other cities across Ukraine
 - Evacuation process got difficult as Ukraine shut down its airport operations
 - Approximately 137 civilians and military personnel have been killed and ~316 people wounded
 - More than 1,700 people were detained by Russian troops
 - Russian armed forces have established full control over the Ukrainian city of Melitopol, in the south of the country, and approximately 200 people were killed in the war
 - Russia declared ceasefire in the areas of Kyiv, Mariupol, Kharkiv, and Sumy to allow for evacuations from 7:00 am GMT on March 07, 2022
 - Russia announced a new ceasefire at 10 am (MST) on March 8, 2022
 - On March 11, 2022, Ukraine's President Volodymyr Zelenskyy accused Russia of kidnapping the mayor of the city of Melitopol
 - On March 13, 2022, Ukraine's government accused the Russian military of abducting another mayor in Dniprorudne

- On March 13, 2022, Russian military launched an air strike targeting a Ukrainian military base in Yavoriv killing 35 and injuring at least 134 people
- Since March 2014, Ukraine has a border dispute with Russia over the status of Crimea and of the city of Sevastopol
- Terror threat is present due to heavy militarized activities by Russia near the Ukrainian borders
- Volodymyr Zelensky sworn in as President of Ukraine on May 19, 2019
- The country follows the Hybrid Regimes as the State of Democracy
- Corruption rank remains at 122
- Travel advisory of 'Avoid All Travel' present
- On October 25, 2021, the Centers for Disease Control and Prevention (CDC) had issued a Level 4 Travel Health Notice for Ukraine due to COVID-19, indicating a high level of COVID-19 in the country
- Multiple protests witnessed over the last six months:
 - Feb 16, 2022: Several thousand Ukrainians rallied in Kyiv to show unity amid fears of a Russian invasion
 - Feb 06, 2022: Thousands rallied over possible military offensive from Russia
 - Nov 24, 2021: More than 1,000 anti-vaccine demonstrators rallied in Kyiv to denounce COVID-19 restrictions
 - Oct 14, 2021: About 5,000 Ukrainian nationalists marched across the capital Kyiv to demand the repudiation of peace agreements for eastern Ukraine that promised a broad autonomy to the separatist regions

Infrastructure

Risk Level - Moderate

- Infrastructure across the country has been damaged due to the military attacks and explosions by Russia
- Ukraine has a weak infrastructure in terms of software parks and special economic zones (SEZ)
- The privileges of SEZ in the country were withdrawn in the mid-2000s, and the zones were formally closed in 2016
- Electrification rate stood at 100%
- Air transport services and quality of roads remain poor
- Ukraine recorded fewer unscheduled trippings in Q3 2021 as compared to the previous quarter
- Average internet speed is 80.10 Mbps

Business

Risk Level - Moderate

- Businesses have been severely impacted due to the military operations by Russia
- Procedures to start a business stand at 6, and the time to start a business is 6.5 days

- New building construction permits can be obtained in 10 days
- Time to register a property is 15 days
- Procedures to register a property stand at 7
- Public bureau coverage stands at 2.4%
- Total documentation needed to import are 32

Legal, Security and Compliance

Risk Level - Moderate

- Ukraine is ranked #12 out of 218 countries on the SAINT Index for cyber security at 2020-01-27 (a higher rank equals worse security)
- In February 2022, a distributed denial-of-service (DDoS) attack was reported on Ukraine's defence ministry and two national banks
- During the same month, a cyberattack on Ukrainian government websites resulted in some websites being inaccessible
- The cyberattack hit the Foreign Ministry, the Cabinet of Ministers, and the Security and Defense Council among others
- Total number of patents issued: 2,469
- Weekly working hours stands at 40 hours

Scalability

Risk Level - Moderate

- The Ukrainian banking sector is estimated to be around US\$34.23 B
- The Ukrainian healthcare market is estimated at US\$4.9 B, US\$2.4 B of which are patients' medical expenses
- The country's attrition rate in the IT sector stood 10%
- Recorded weak labor force for STEM and technology services
- Literacy rate stands at 99.8%
- English and Spanish proficiency stands low

ESG

Risk Level - Low

- Per capita, Ukraine emitted 223 metric tons of carbon
- Climate Risk Index stands low
- Weak Pollution and Environmental Performance Index
- Possesses high score for Global Innovation Index indicating development in key dimensions of human development

- Moderate Index for Human Development and Gender Equality along with Index of Economic Freedom
- Good Cost of Living Index: 19.43
- Also, the country adopted a decree to advance the state of emergency and adaptive lockdown
- On December 18, 2021, Ukraine reported its first case of COVID-19 Variant 'Omicron'
- As of February 25, 2022, the country reported 4,809,624 confirmed COVID-19 cases with 105,505 deaths, ~2.19% of total reported cases, and 4,058,020 recoveries, ~84.37% of the total reported cases. In total, 15,221,792 people have received vaccine doses against COVID-19, ~36.3% of the total population

**Note - Supply Wisdom's analysis is based on information available from multiple sources in the public domain.*

Most Recent Alerts

Critical Apr 10, 2022 Update 119: Ukraine - Russian Shelling Continues - One Injured and Several Trapped	Critical Apr 09, 2022 Update 117: Ukraine - Russian Strikes Continue - Two Deaths Reported and Several Injured	Critical Apr 08, 2022 Update 111: Kramatorsk, Ukraine - Two Rocket Strikes Reported on Railway Station - 39 Deaths Reported	Critical Apr 07, 2022 Update 106: Mariupol, Ukraine - Civilians Death Toll Reaches ~5,000 Amid War with Russia	Critical Apr 06, 2022 Update 103: Ukraine - Russian Strikes Reported - Two Dead and Several Injured
--	--	---	--	---

Critical - Alerts

- Critical** Apr 10, 2022
Update 119: Ukraine - Russian Shelling Continues - One Injured and Several Trapped
- Critical** Apr 09, 2022
Update 117: Ukraine - Russian Strikes Continue - Two Deaths Reported and Several Injured
- Critical** Apr 08, 2022
Update 111: Kramatorsk, Ukraine - Two Rocket Strikes Reported on Railway Station - 39 Deaths Reported
- Critical** Apr 07, 2022
Update 106: Mariupol, Ukraine - Civilians Death Toll Reaches ~5,000 Amid War with Russia
- Critical** Apr 06, 2022
Update 103: Ukraine - Russian Strikes Reported - Two Dead and Several Injured

High - Alerts

- High** Apr 03, 2022
Update 95: Ukraine - Economic Contraction Predicted Due to Russian Invasion - 40% YoY
- High** Feb 19, 2022
Update 2: Eastern Ukraine - Evacuation Planned by Pro-Russian Separatists
- High** Feb 17, 2022
Update 1: Russia - Parliament Votes to Recognize Ukraine's Donetsk and Luhansk Regions as Independent
- High** Feb 04, 2022
Ukraine - Political Tensions Escalate Between Russia and Ukraine
- High** Jan 17, 2022
Disruption Risk Early Warning: Update 1: Ukraine - Cyber Attack Warning Issued by Microsoft

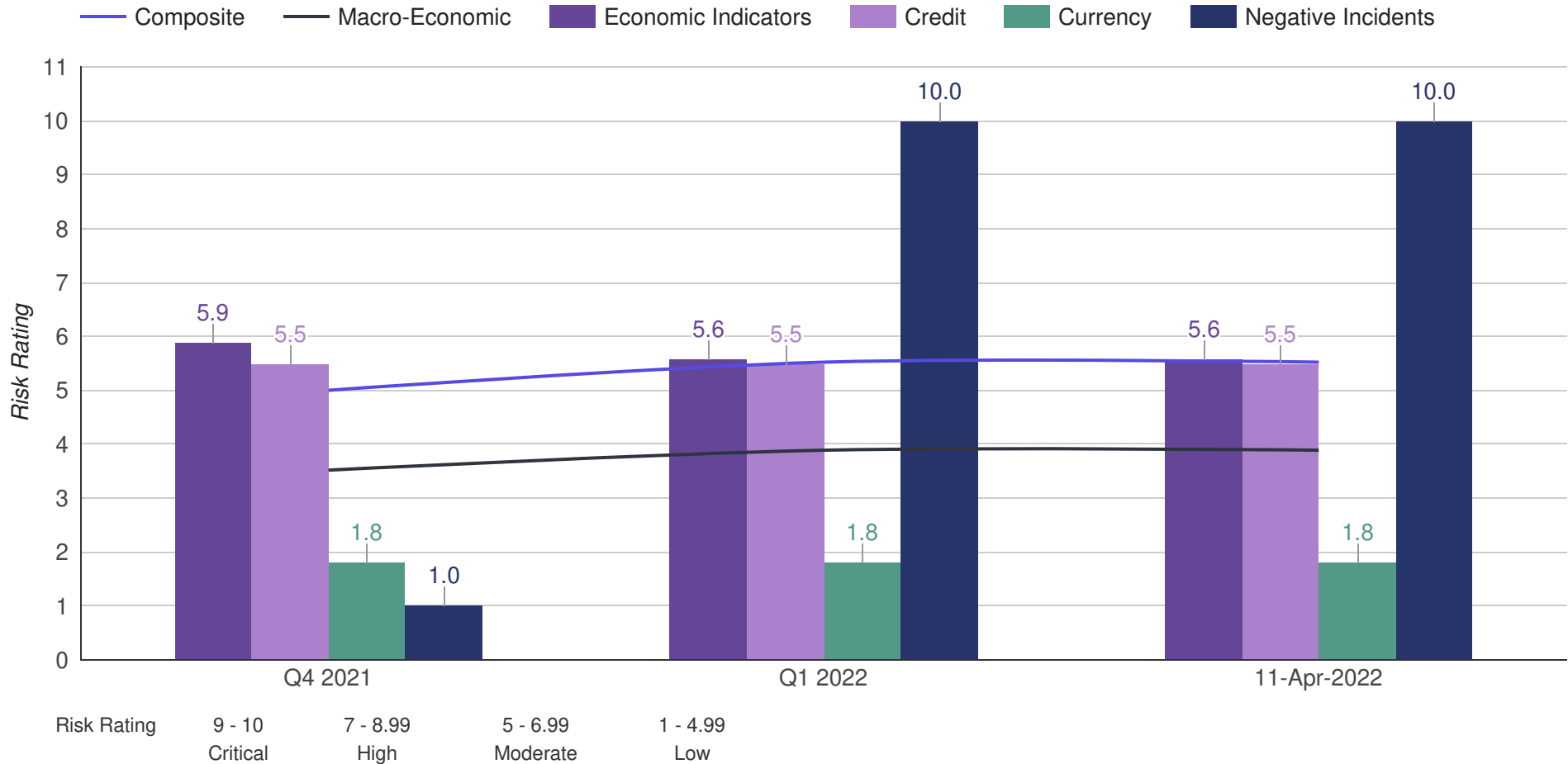
Moderate - Alerts

- Moderate** Dec 03, 2021
Update 57: Ukraine - COVID-19 Variant 'Omicron' Concern Results in Entry Restrictions for Eight African Countries
- Moderate** Nov 26, 2021
Ukraine - Polio Emergency Announced Amid Surge in COVID-19 Cases
- Moderate** Nov 10, 2021
Update 56: Ukraine - Reports Rise in Daily COVID-19 Deaths
- Moderate** Oct 23, 2021
Update 55: Ukraine - Reports 23,785 New COVID-19 Cases in Last 24 Hours, National Total Raises to 2,748,614

Low - Alerts

- Low** Feb 13, 2022
Kyiv, Ukraine - Thousands Rally over Possible Military Offensive from Russia
- Low** Feb 06, 2022
Kharkiv, Ukraine - Thousands Rally over Possible Military Offensive from Russia
- Low** Nov 26, 2021
Kyiv, Ukraine - Protest Against COVID-19 Vaccine Mandate and Restrictions
- Low** Nov 05, 2021
Ukraine - Protests Against Russian President over Violation of Ukrainian Sovereignty
- Low** Oct 15, 2021
Ukraine - Thousands Protest over Peace Deal on Separatist Areas

Macro-Economic Update



Most Recent Macro-Economic Alerts

<p>High Apr 03, 2022</p> <p>Update 95: Ukraine - Economic Contraction Predicted Due to Russian Invasion - 40% YoY</p>	<p>Critical Mar 16, 2022</p> <p>Update 44: Russia - Rating of Banks Downgraded by Fitch - Additional Sanctions Imposed by US and UK</p>	<p>Critical Mar 01, 2022</p> <p>Update 18: Ukraine - Russian Convoy Nears Kyiv - Missile Explosion Reported</p>	<p>Critical Mar 01, 2022</p> <p>Update 17: Ukraine - Cyber Attack Reported on Government Website - Blasts Continues in Kyiv</p>	<p>Critical Feb 28, 2022</p> <p>Update 16: Ukraine - Russian Forces Seized Two Cities - Rocket Strikes Reported</p>
--	--	--	--	--

Critical - Alerts

- Critical** Mar 16, 2022

Update 44: Russia - Rating of Banks Downgraded by Fitch - Additional Sanctions Imposed by US and UK
- Critical** Mar 01, 2022

Update 18: Ukraine - Russian Convoy Nears Kyiv - Missile Explosion Reported
- Critical** Mar 01, 2022

Update 17: Ukraine - Cyber Attack Reported on Government Website - Blasts Continues in Kyiv
- Critical** Feb 28, 2022

Update 16: Ukraine - Russian Forces Seized Two Cities - Rocket Strikes Reported
- Critical** Feb 28, 2022

Update 15: Ukraine - 350 Civilians Reported Dead; SWIFT Sanctions Imposed Against Russia

High - Alerts

- High** Apr 03, 2022

Update 95: Ukraine - Economic Contraction Predicted Due to Russian Invasion - 40% YoY

Moderate - Alerts

No Moderate Macro-Economic alerts issued for the time period covered by this report

Low - Alerts

No Low Macro-Economic alerts issued for the time period covered by this report

Category / Metric	Measurement	Q4 2021	Q1 2022	11-Apr-2022	Change from Q1 2022	Additional Comments
Economic Indicators	Risk Rating	5.89	5.57	5.57	0.00	
GDP Growth Rate	%	2.70%	5.90%	5.90%	0%	
GDP Contribution from the Services Sector	%	60%	60%	60%	0%	
Debt to GDP Ratio for Country	%	60.80%	60.80%	60.80%	0%	High Risk - See Macro-Economic Implications section below
Fiscal Balance (% of GDP)	%	-1.50%	-1.50%	-1.50%	0%	
Trade Balance (Per Capita)	US\$	\$-7.15	\$-25.60	\$-25.60	\$0.00	High Risk - See Macro-Economic Implications section below
Inflation Rate	%	10.30%	10%	10%	0%	
Unemployment Rate	%	9.20%	9.20%	9.20%	0%	
Interest Rates	%	9%	10%	10%	0%	
FDI In-flow (% of GDP)	%	3.80%	3.80%	3.80%	0%	
Stock Market Performance (Within the Month)	%	0.09%	0.16%	0.16%	0%	High Risk - See Macro-Economic Implications section below
Credit	Risk Rating	5.50	5.50	5.50	0.00	
Credit Exposure	Qualitative	Moderate	Moderate	Moderate	No	

Category / Metric	Measurement	Q4 2021	Q1 2022	11-Apr-2022	Change from Q1 2022	Additional Comments
OECD Rating	Rating	6.00	6.00	6.00	0.00	
Currency	Risk Rating	1.80	1.80	1.80	0.00	
Forex Rate Fluctuation	%	2.19%	2.19%	2.19%	0%	
Forex Reserves	US\$ B	\$30.50	\$30.50	\$30.50	\$0.00	Critical Risk - See Macro-Economic Implications section below
Negative Incidents	Risk Rating	1.00	10.00	10.00	0.00	
Any Other Negative Incidents	Qualitative	No	Yes	Yes	No	Critical Risk - See Macro-Economic Implications section below

*** Refer latest alerts under "Macro-Economic" category*

Analysts Comment(s)

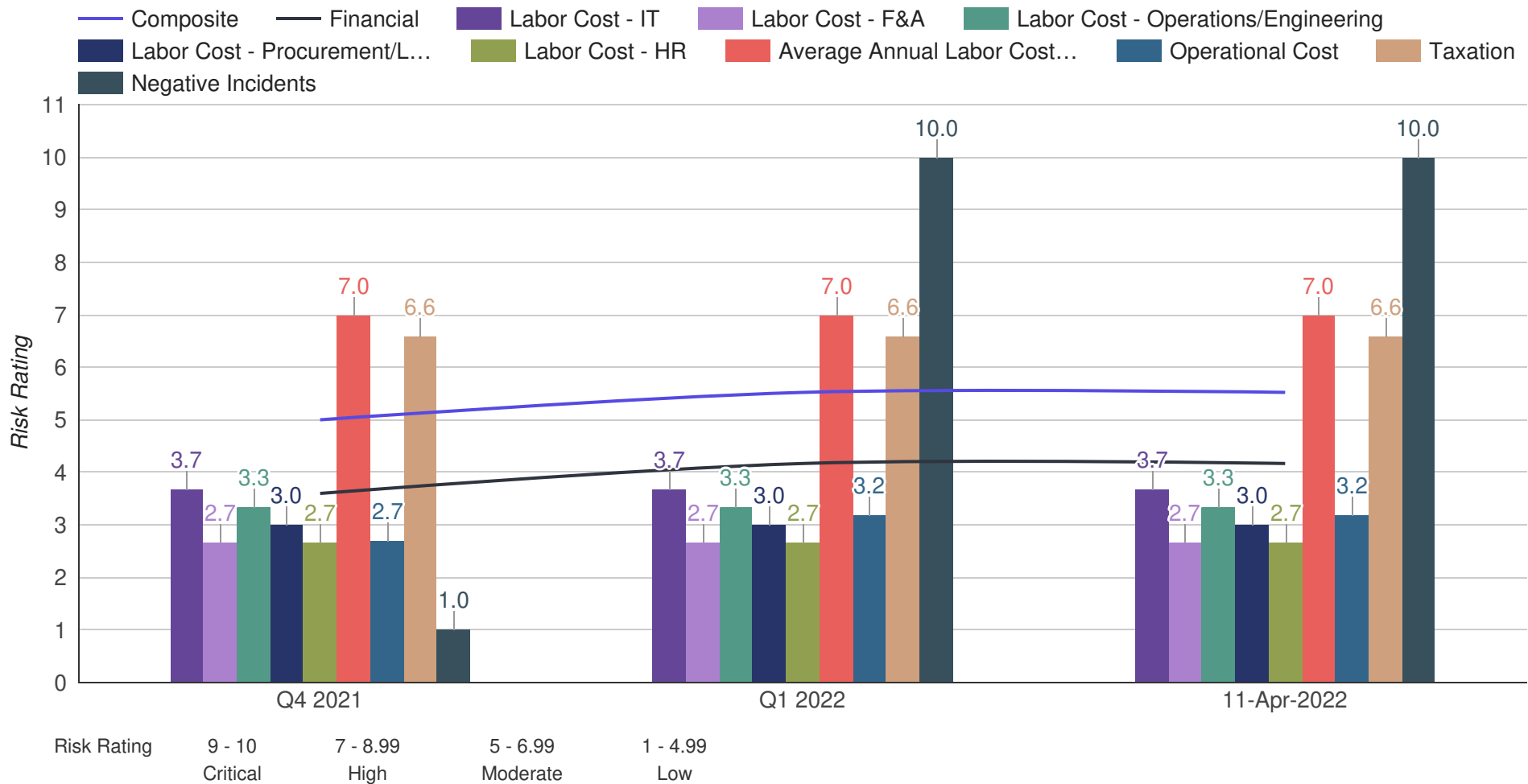
Amid political tensions between Ukraine and Russia, economic stability of the country is at risk.

Macro-Economic Implications

- **Debt to GDP Ratio for Country:** A high debt-to-GDP ratio is undesirable for a country, as a higher ratio indicates a higher risk of default. When a country has a manageable debt-to-GDP ratio, investors are more eager to invest, and it doesn't have to offer as high of yields on its bonds.
- **Trade Balance (Per Capita):** A trade deficit or low trade balance indicates that the country lacks efficient capacity to produce its products, whether due to lack of skill and resources to create that capacity or due to preference to acquire from another country (such as to specialize in its goods, for lower cost or to acquire luxuries).

- **Stock Market Performance (Within the Month):** Poor stock performance indicates that the economy is not doing as well and spending recedes. Stock market losses cause wealth erosion in both personal and retirement portfolios.
- **Forex Reserves:** Low forex indicates that the country has a problem maintaining adequate liquidity in case of an economic crisis.
- **Any Other Negative Incidents:** Any negative incident can cause some kind of business disruption to the organization from an operational perspective.

Financial Update



Most Recent Financial Alerts

Critical Apr 01, 2022

Update 86: European Countries - Russia Demands Foreign Buyers to Pay in Roubles for Russian Gas, Effective April 01, 2022

Critical - Alerts

Critical Apr 01, 2022

Update 86: European Countries - Russia Demands Foreign Buyers to Pay in Roubles for Russian Gas, Effective April 01, 2022

High - Alerts

No High Financial alerts issued for the time period covered by this report

Moderate - Alerts

No Moderate Financial alerts issued for the time period covered by this report

Low - Alerts

No Low Financial alerts issued for the time period covered by this report

Category / Metric	Measurement	Q4 2021	Q1 2022	11-Apr-2022	Change from Q1 2022	Additional Comments
Labor Cost - IT	Risk Rating	3.67	3.67	3.67	0.00	
Average Annual IT Entry Level Salary	US\$	\$11,700.00	\$11,700.00	\$11,700.00	\$0.00	
Average Annual IT Team Lead Level Salary	US\$	\$19,500.00	\$19,500.00	\$19,500.00	\$0.00	
Average Annual IT Manager Level Salary	US\$	\$26,000.00	\$26,000.00	\$26,000.00	\$0.00	
Labor Cost - F&A	Risk Rating	2.67	2.67	2.67	0.00	
Average Annual F&A Entry Level Salary	US\$	\$5,200.00	\$5,200.00	\$5,200.00	\$0.00	
Average Annual F&A Team Lead Level Salary	US\$	\$11,100.00	\$11,100.00	\$11,100.00	\$0.00	
Average Annual F&A Manager Level Salary	US\$	\$19,700.00	\$19,700.00	\$19,700.00	\$0.00	
Labor Cost - Operations/Engineering	Risk Rating	3.33	3.33	3.33	0.00	
Average Annual Operations/Engineering Entry Level Salary	US\$	\$7,300.00	\$7,300.00	\$7,300.00	\$0.00	

Category / Metric	Measurement	Q4 2021	Q1 2022	11-Apr-2022	Change from Q1 2022	Additional Comments
Average Annual Operations/Engineering Team Lead Level Salary	US\$	\$12,500.00	\$12,500.00	\$12,500.00	\$0.00	
Average Annual Operations/Engineering Manager Level Salary	US\$	\$21,800.00	\$21,800.00	\$21,800.00	\$0.00	
Labor Cost - Procurement/Logistics	Risk Rating	3.00	3.00	3.00	0.00	
Average Annual Procurement/Logistics Entry Level Salary	US\$	\$4,400.00	\$4,400.00	\$4,400.00	\$0.00	
Average Annual Procurement/Logistics Team Lead Level Salary	US\$	\$10,400.00	\$10,400.00	\$10,400.00	\$0.00	
Average Annual Procurement/Logistics Manager Level Salary	US\$	\$21,200.00	\$21,200.00	\$21,200.00	\$0.00	
Labor Cost - HR	Risk Rating	2.67	2.67	2.67	0.00	
Average Annual HR Entry Level Salary	US\$	\$4,500.00	\$4,500.00	\$4,500.00	\$0.00	

Category / Metric	Measurement	Q4 2021	Q1 2022	11-Apr-2022	Change from Q1 2022	Additional Comments
Average Annual HR Team Lead Level Salary	US\$	\$9,900.00	\$9,900.00	\$9,900.00	\$0.00	
Average Annual HR Manager Level Salary	US\$	\$19,200.00	\$19,200.00	\$19,200.00	\$0.00	
Average Annual Labor Cost Growth Rate	Risk Rating	7.00	7.00	7.00	0.00	
Average Annual Labor Cost Growth Rate	%	13.90%	13.90%	13.90%	0%	High Risk - See Financial Implications section below
Operational Cost	Risk Rating	2.69	3.19	3.19	0.00	
Rent (Grade 1 Commercial)	US\$/Sq. ft./Month	\$2.17	\$2.25	\$2.25	\$0.00	
Rental Growth	%	0%	3.69%	3.69%	0%	
Cost to Start Business	%	0.50%	0.50%	0.50%	0%	
Minimum Capital Required	%	0%	0%	0%	0%	
Cost of Registering Property	%	1.70%	1.70%	1.70%	0%	
Fuel Prices	US\$/Liter	\$1.11	\$1.11	\$1.11	\$0.00	
Power Cost	US\$/Kwh	\$0.09	\$0.08	\$0.08	\$0.00	

Category / Metric	Measurement	Q4 2021	Q1 2022	11-Apr-2022	Change from Q1 2022	Additional Comments
Taxation	Risk Rating	6.60	6.60	6.60	0.00	
Corporate Income Tax	%	18%	18%	18%	0%	
Social Security Contributions Tax	%	22%	22%	22%	0%	High Risk - See Financial Implications section below
Property Tax	%	12%	12%	12%	0%	
VAT / GST	%	20%	20%	20%	0%	Critical Risk - See Financial Implications section below
Negative Incidents	Risk Rating	1.00	10.00	10.00	0.00	
Any Other Negative Incidents	Qualitative	No	Yes	Yes	No	Critical Risk - See Financial Implications section below

** Refer latest alerts under "Financial" category

Analysts Comment(s)

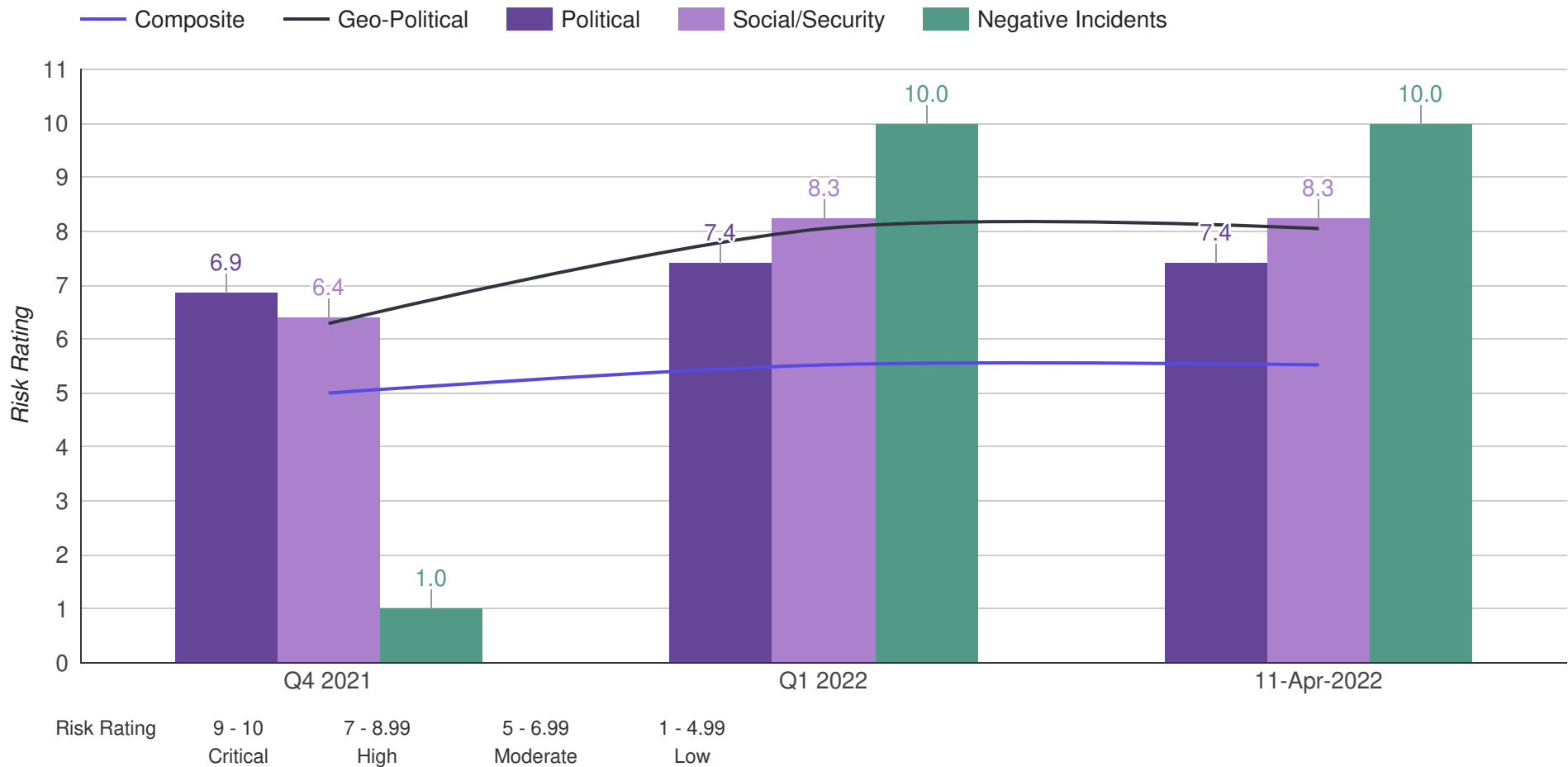
Amid political tensions between Ukraine and Russia, the financial stability of the country is at risk.

Financial Implications

- **Average Annual Labor Cost Growth Rate:** If the annual labor cost growth rate is low, then it will definitely impact the employee morale working in the location. Lower morale can negatively affect productivity, especially in the short run.

- **Social Security Contributions Tax:** High taxes increase prices within the business and could lead to increase of end product/service prices and affect profits of corporations.
- **VAT / GST:** High taxes increase prices within the business and could lead to increase of end product/service prices and affect profits of corporations.
- **Any Other Negative Incidents:** Any negative incident can cause some kind of business disruption to the organization from an operational perspective.

Geo-Political Update



Most Recent Geo-Political Alerts

Critical Apr 10, 2022 Update 119: Ukraine - Russian Shelling Continues - One Injured and Several Trapped	Critical Apr 09, 2022 Update 117: Ukraine - Russian Strikes Continue - Two Deaths Reported and Several Injured	Critical Apr 08, 2022 Update 111: Kramatorsk, Ukraine - Two Rocket Strikes Reported on Railway Station - 39 Deaths Reported	Critical Apr 07, 2022 Update 106: Mariupol, Ukraine - Civilians Death Toll Reaches ~5,000 Amid War with Russia	Critical Apr 06, 2022 Update 103: Ukraine - Russian Strikes Reported - Two Dead and Several Injured
--	--	---	--	---

Critical - Alerts

- Critical** Apr 10, 2022
Update 119: Ukraine - Russian Shelling Continues - One Injured and Several Trapped
- Critical** Apr 09, 2022
Update 117: Ukraine - Russian Strikes Continue - Two Deaths Reported and Several Injured
- Critical** Apr 08, 2022
Update 111: Kramatorsk, Ukraine - Two Rocket Strikes Reported on Railway Station - 39 Deaths Reported
- Critical** Apr 07, 2022
Update 106: Mariupol, Ukraine - Civilians Death Toll Reaches ~5,000 Amid War with Russia
- Critical** Apr 06, 2022
Update 103: Ukraine - Russian Strikes Reported - Two Dead and Several Injured

High - Alerts

- High** Feb 19, 2022
Update 2: Eastern Ukraine - Evacuation Planned by Pro-Russian Separatists
- High** Feb 17, 2022
Update 1: Russia - Parliament Votes to Recognize Ukraine's Donetsk and Luhansk Regions as Independent
- High** Feb 04, 2022
Ukraine - Political Tensions Escalate Between Russia and Ukraine

Moderate - Alerts

No Moderate Geo-Political alerts issued for the time period covered by this report

Low - Alerts

- Low** Feb 13, 2022
Kyiv, Ukraine - Thousands Rally over Possible Military Offensive from Russia
- Low** Feb 06, 2022
Kharkiv, Ukraine - Thousands Rally over Possible Military Offensive from Russia
- Low** Nov 26, 2021
Kyiv, Ukraine - Protest Against COVID-19 Vaccine Mandate and Restrictions
- Low** Nov 05, 2021
Ukraine - Protests Against Russian President over Violation of Ukrainian Sovereignty
- Low** Oct 15, 2021
Ukraine - Thousands Protest over Peace Deal on Separatist Areas

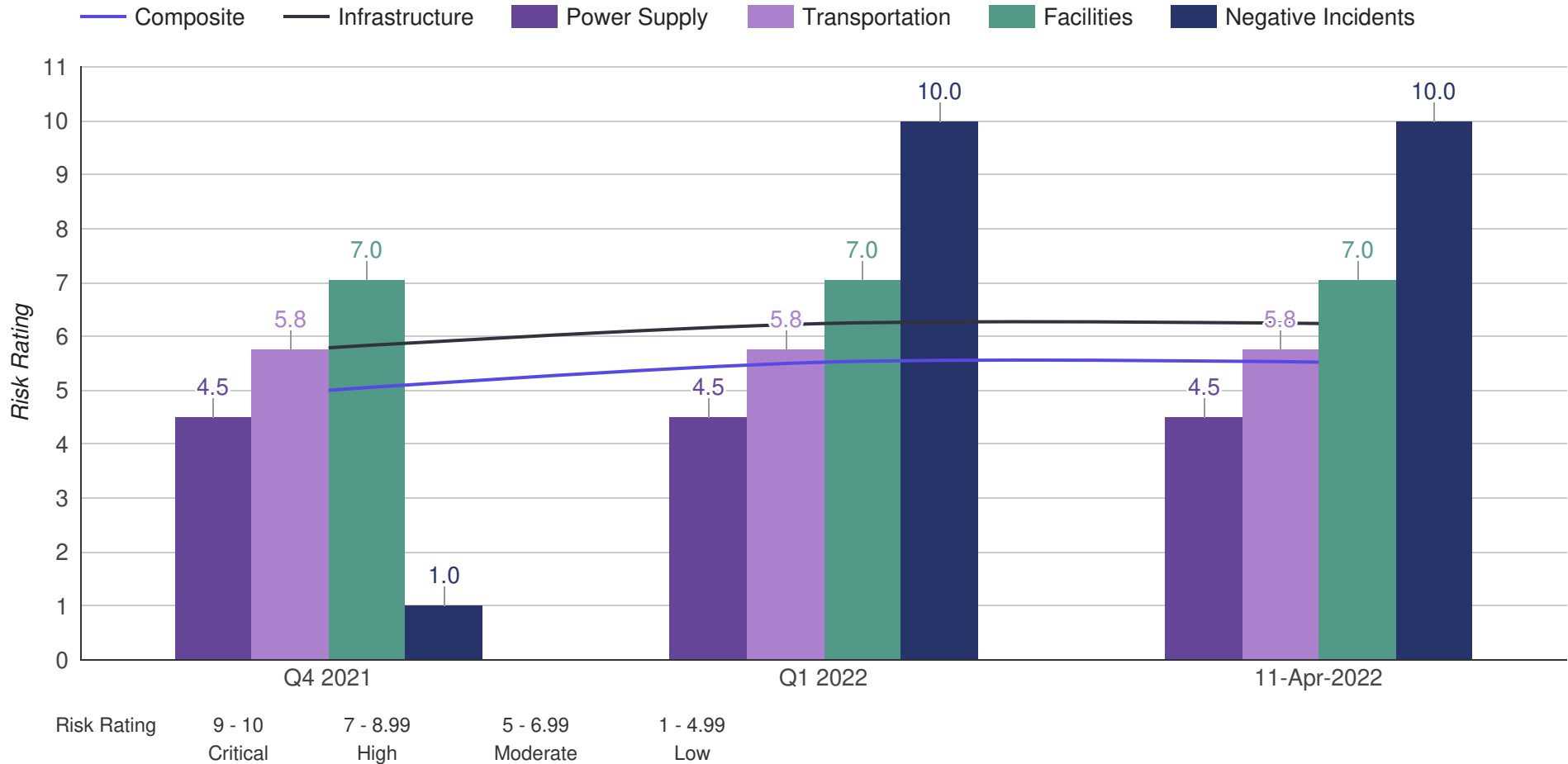
Category / Metric	Measurement	Q4 2021	Q1 2022	11-Apr-2022	Change from Q1 2022	Additional Comments
Political	Risk Rating	6.86	7.43	7.43	0.00	
State of Democracy	Qualitative	Hybrid Regimes	Hybrid Regimes	Hybrid Regimes	No	High Risk - See Geo-Political Implications section below
Corruption Level	CPI Rank	117.00	122.00	122.00	0.00	High Risk - See Geo-Political Implications section below
Social/Security	Risk Rating	6.40	8.25	8.25	0.00	
Country Crime Index	Quantitative	45.90	45.45	45.45	0.00	
Travel Advisory	Qualitative	Reconsider All Travel	Avoid All Travel	Avoid All Travel	No	Critical Risk - See Geo-Political Implications section below
Terror Attacks/Threats	Qualitative	No	Yes	Yes	No	Critical Risk - See Geo-Political Implications section below
Border Disputes	Qualitative	Yes	Yes	Yes	No	Critical Risk - See Geo-Political Implications section below
Social Unrest/Strikes	Qualitative	Yes	Yes	Yes	No	Critical Risk - See Geo-Political Implications section below
Negative Incidents	Risk Rating	1.00	10.00	10.00	0.00	
Any Other Negative Incidents	Qualitative	No	Yes	Yes	No	Critical Risk - See Geo-Political Implications section below

*** Refer latest alerts under "Geo-Political" category*

Geo-Political Implications

- **State of Democracy:** Democracy is more than a set of specific government institutions; it encompasses values, attitudes, and practices which may take different forms among cultures and societies around the world. It has taken a number of forms, both in theory and practice. Some varieties of democracy provide better representation and more freedom for their citizens than others. However, if any democracy is not structured to prohibit the government from excluding the people from the legislative process, or any branch of government from altering the separation of powers in its favour, then a branch of the system can accumulate too much power and destroy the democracy.
- **Corruption Level:** Countries that have a high level of corruption are unable to function efficiently or prosper at an economic level, causing suffering for society as a whole. It can lead to an uneven distribution of wealth as small businesses face unfair competition from large companies that have established illegal connections with government officials. In a corrupt economy, resources are inefficiently allocated and companies that otherwise would not be qualified to win government contracts are often awarded projects as a result of bribery or kickbacks. The quality of education and healthcare also deteriorates under a corrupt economy, leading to an overall lower standard of living for the country's citizens.
- **Travel Advisory:** Presence of travel advisory could indicate that there are serious risks to safety and security for travelers. Travel advisories may also note parts of the world where a government does not have the ability to respond to the problems of citizens traveling.
- **Terror Attacks/Threats:** A high degree of social and security risks would lead to political instability in economic development. In such environments of latent ethnic violence, social unrest, or terror threats, business as usual is impossible as all levels of economic activity are impacted.
- **Border Disputes:** Border disputes often result from vague and unclear language in a treaty that set up the original boundary. These disputes are a major cause of wars and terrorism, as countries often try to assert their sovereignty over a territory through invasion, and non-country entities try to influence the actions of politicians through terrorism. International law does not support the use of force by one country to annex the territory of another country. Therefore, the breach of a country's borders or territorial disputes pose a threat to a country's very sovereignty and the right as a person of international law.
- **Social Unrest/Strikes:** A high degree of social and security risks would lead to political instability in economic development. In such environments of latent ethnic violence, social unrest, or terror threats, business as usual is impossible as all levels of economic activity are impacted.
- **Any Other Negative Incidents:** Any negative incident can cause some kind of business disruption to the organization from an operational perspective.

Infrastructure Update



Most Recent Infrastructure Alerts

<p>Critical Apr 10, 2022</p> <p>Update 119: Ukraine - Russian Shelling Continues - One Injured and Several Trapped</p>	<p>Critical Apr 09, 2022</p> <p>Update 117: Ukraine - Russian Strikes Continue - Two Deaths Reported and Several Injured</p>	<p>Critical Apr 08, 2022</p> <p>Update 111: Kramatorsk, Ukraine - Two Rocket Strikes Reported on Railway Station - 39 Deaths Reported</p>	<p>Critical Apr 03, 2022</p> <p>Update 94: Ukraine - Multiple Rocket Strikes Reported</p>	<p>Critical Apr 02, 2022</p> <p>Update 90: Odessa, Ukraine - Missile Strike in Residential Areas - Casualties Reported</p>
---	---	--	--	---

Critical - Alerts

Critical Apr 10, 2022

Update 119: Ukraine - Russian Shelling Continues - One Injured and Several Trapped

Critical Apr 09, 2022

Update 117: Ukraine - Russian Strikes Continue - Two Deaths Reported and Several Injured

Critical Apr 08, 2022

Update 111: Kramatorsk, Ukraine - Two Rocket Strikes Reported on Railway Station - 39 Deaths Reported

Critical Apr 03, 2022

Update 94: Ukraine - Multiple Rocket Strikes Reported

Critical Apr 02, 2022

Update 90: Odessa, Ukraine - Missile Strike in Residential Areas - Casualties Reported

High - Alerts

No High Infrastructure alerts issued for the time period covered by this report

Moderate - Alerts

No Moderate Infrastructure alerts issued for the time period covered by this report

Low - Alerts

No Low Infrastructure alerts issued for the time period covered by this report

Category / Metric	Measurement	Q4 2021	Q1 2022	11-Apr-2022	Change from Q1 2022	Additional Comments
Power Supply	Risk Rating	4.50	4.50	4.50	0.00	
Surplus/Deficit	Qualitative	Balanced	Balanced	Balanced	No	
Power Cuts	Qualitative	Intermittent Power Cuts	Intermittent Power Cuts	Intermittent Power Cuts	No	High Risk - See Infrastructure Implications section below
Electrification Rate	%	100%	100%	100%	0%	
Transportation	Risk Rating	5.75	5.75	5.75	0.00	
Road Connectivity Index	Quantitative	78.20	78.20	78.20	0.00	
Quality of Roads	Quantitative	3.00	3.00	3.00	0.00	High Risk - See Infrastructure Implications section below
Airport Connectivity Index	Quantitative	56.60	56.60	56.60	0.00	
Efficiency of Air Transport Services	Quantitative	4.00	4.00	4.00	0.00	High Risk - See Infrastructure Implications section below
Facilities	Risk Rating	7.05	7.05	7.05	0.00	
ICT Adoption	Quantitative	51.90	51.90	51.90	0.00	
Average Internet Speed	Mbps	80.10	80.10	80.10	0.00	

Category / Metric	Measurement	Q4 2021	Q1 2022	11-Apr-2022	Change from Q1 2022	Additional Comments
Number of Software Parks	Quantitative	8.00	8.00	8.00	0.00	Critical Risk - See Infrastructure Implications section below
Number of Special Economic Zones / Free Trade Zones (Current)	Quantitative	0.00	0.00	0.00	0.00	Critical Risk - See Infrastructure Implications section below
Office Space Surplus/Deficit	Qualitative	Balanced	Balanced	Balanced	No	
Negative Incidents	Risk Rating	1.00	10.00	10.00	0.00	
Any Other Negative Incidents	Qualitative	No	Yes	Yes	No	Critical Risk - See Infrastructure Implications section below

** Refer latest alerts under "Infrastructure" category

Analysts Comment(s)

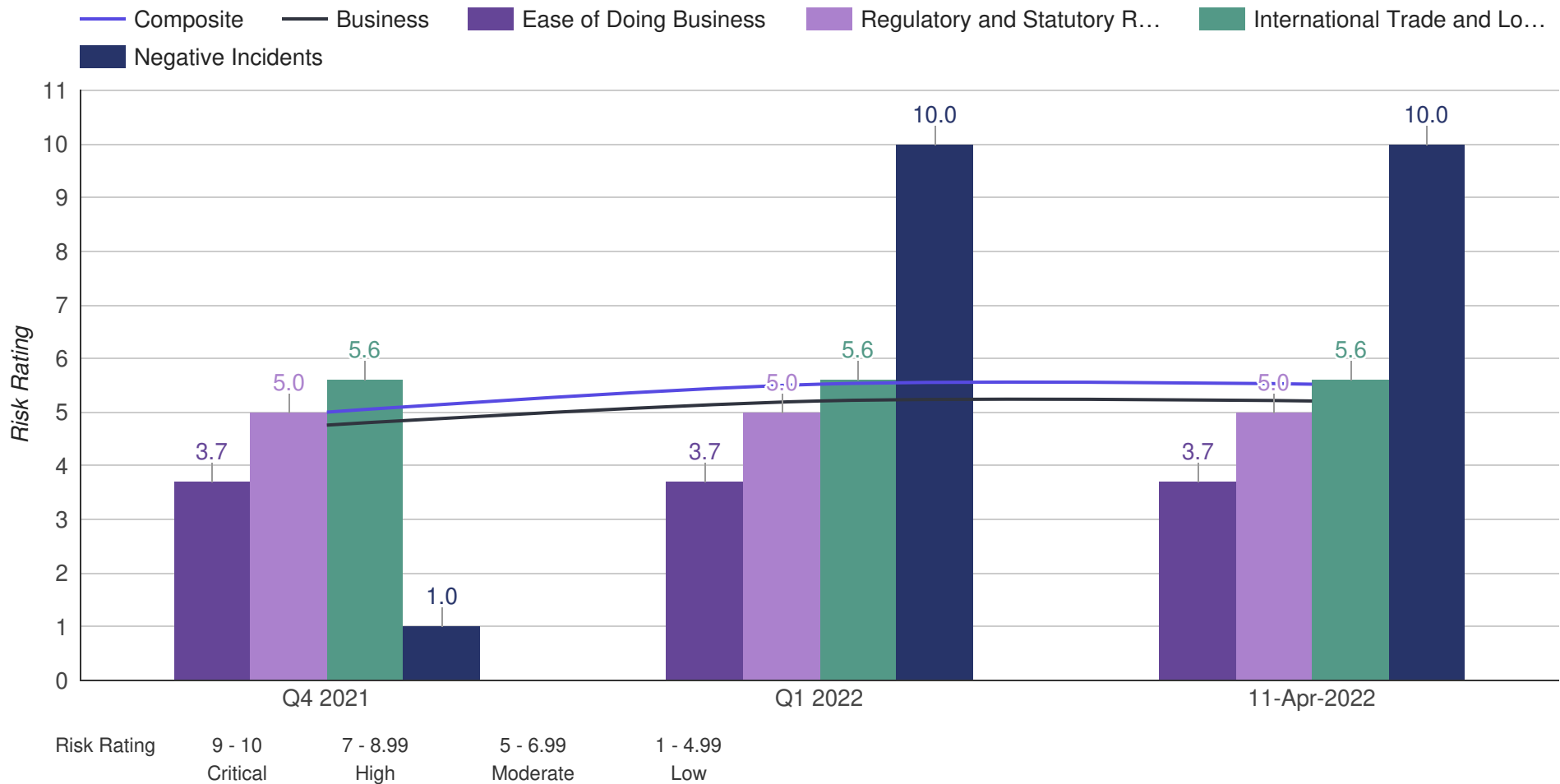
Infrastructure across the country has been damaged due to the military attacks and explosions by Russia

Infrastructure Implications

- **Power Cuts:** Frequent power cuts have repercussions such as loss in employee productivity due to downtime, damaged equipment and inventory and added financial burden on power back-up. Power outages impact business operations at large as all businesses rely on electrical power for every aspect of their operations.
- **Quality of Roads:** If quality of the intra-country road system/network is inadequate, it cannot meet the needs of the efficient and fast-moving transportation of labour, goods and services, thereby causing hindrance to industrial and economic development of the country.

- **Efficiency of Air Transport Services:** Low connectivity of airports within and outside of the location can hinder investment and business development, thereby impacting economic development.
- **Number of Software Parks:** Less number of software parks indicates that there is limited presence of providers of technology services in the country.
- **Number of Special Economic Zones / Free Trade Zones (Current):** Through Special Economic Zones and Free Trade Zones, a company gains a number of benefits, facilities and incentives such as low or no tax trade, producing goods at a lower price etc. Low number of SEZs and FTZs will not encourage or attract foreign investment by traders and third parties, thereby hindering business and economic development in the country.
- **Any Other Negative Incidents:** Any negative incident can cause some kind of business disruption to the organization from an operational perspective.

Business Update



Most Recent Business Alerts

Critical Apr 05, 2022

Several Countries - Visa Restrictions Imposed by Russia Effective April 04, 2022

Critical Apr 01, 2022

Update 86: European Countries - Russia Demands Foreign Buyers to Pay in Roubles for Russian Gas, Effective April 01, 2022

Critical - Alerts

Critical Apr 05, 2022

Several Countries - Visa Restrictions Imposed by Russia Effective April 04, 2022

Critical Apr 01, 2022

Update 86: European Countries - Russia Demands Foreign Buyers to Pay in Roubles for Russian Gas, Effective April 01, 2022

High - Alerts

No High Business alerts issued for the time period covered by this report

Moderate - Alerts

No Moderate Business alerts issued for the time period covered by this report

Low - Alerts

No Low Business alerts issued for the time period covered by this report

Category / Metric	Measurement	Q4 2021	Q1 2022	11-Apr-2022	Change from Q1 2022	Additional Comments
Ease of Doing Business	Risk Rating	3.70	3.70	3.70	0.00	
Procedures to Start a Business	Quantitative	6.00	6.00	6.00	0.00	
Time to Start a Business	Days	6.50	6.50	6.50	0.00	
Procedures for New Building Construction Permits	Quantitative	10.00	10.00	10.00	0.00	
Time for New Building Construction Permits	Days	72.50	72.50	72.50	0.00	
Procedures to Register a Property	Quantitative	7.00	7.00	7.00	0.00	High Risk - See Business Implications section below
Time to Register a Property	Days	15.00	15.00	15.00	0.00	
Business Dynamism	Quantitative	57.20	57.20	57.20	0.00	
Burden of Government Regulation	Quantitative	3.60	3.60	3.60	0.00	High Risk - See Business Implications section below
Regulatory and Statutory Requirements	Risk Rating	5.00	5.00	5.00	0.00	
Strength of Legal Rights Index	Quantitative	8.00	8.00	8.00	0.00	
Depth of Credit Information Index	Quantitative	7.00	7.00	7.00	0.00	

Category / Metric	Measurement	Q4 2021	Q1 2022	11-Apr-2022	Change from Q1 2022	Additional Comments
Public Registry Coverage	%	2.40%	2.40%	2.40%	0%	Critical Risk - See Business Implications section below
Private Bureau Coverage	%	56.90%	56.90%	56.90%	0%	
Extent of Disclosure Index	Quantitative	9.00	9.00	9.00	0.00	
Extent of Director Liability Index	Quantitative	2.00	2.00	2.00	0.00	Critical Risk - See Business Implications section below
Ease of Shareholder Suits Index	Quantitative	6.00	6.00	6.00	0.00	
Strength of Minority Protection Index	Quantitative	68.00	68.00	68.00	0.00	
Taxation Payments	Numbers/Year	5.00	5.00	5.00	0.00	
Taxation Time	Hours/Year	328.00	328.00	328.00	0.00	High Risk - See Business Implications section below
International Trade and Logistics	Risk Rating	5.60	5.60	5.60	0.00	
Documentation Needed to Export	Quantitative	8.00	8.00	8.00	0.00	High Risk - See Business Implications section below
Time to Export (Border Compliance)	Hours	6.00	6.00	6.00	0.00	

Category / Metric	Measurement	Q4 2021	Q1 2022	11-Apr-2022	Change from Q1 2022	Additional Comments
Documentation Needed to Import	Quantitative	8.00	8.00	8.00	0.00	High Risk - See Business Implications section below
Time to Import (Border Compliance)	Hours	32.00	32.00	32.00	0.00	
Complexity of Tariffs	Rating	5.90	5.90	5.90	0.00	
Negative Incidents	Risk Rating	1.00	10.00	10.00	0.00	
Any Other Negative Incidents	Qualitative	No	Yes	Yes	No	Critical Risk - See Business Implications section below

*** Refer latest alerts under "Business" category*

Analysts Comment(s)

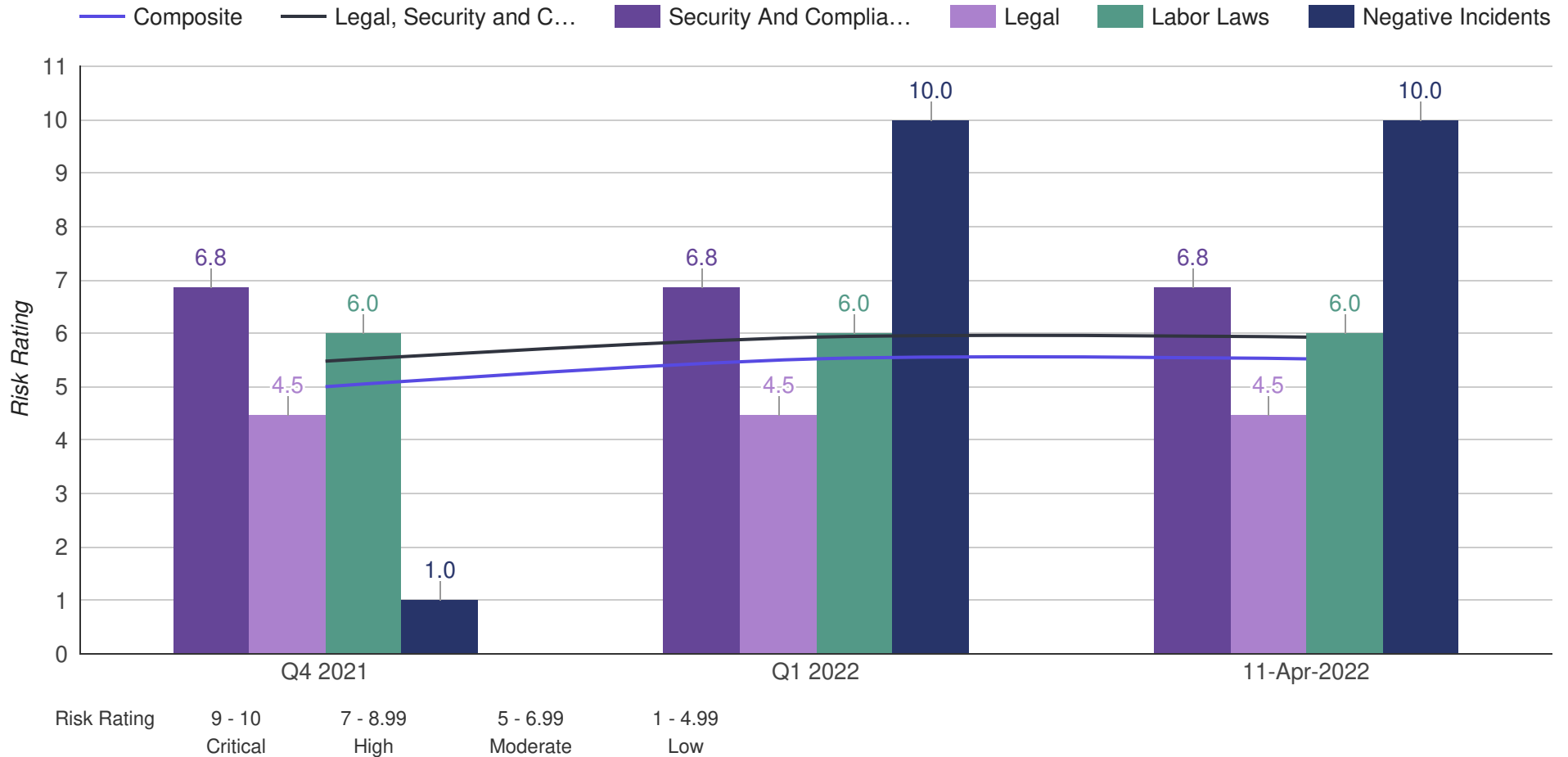
Amid political tensions between Ukraine and Russia, businesses across the country have been severely impacted.

Business Implications

- **Procedures to Register a Property:** High numbers indicate that there are more steps, time, and cost involved in registering a property, assuming a standardized case of an entrepreneur who wants to purchase land and a building that is already registered and free of title dispute. This would cause a delay in registering the property concerned for the purpose of business.
- **Burden of Government Regulation:** Governments create the rules and frameworks in which businesses are able to compete against each other. From time to time the government changes these rules and frameworks forcing businesses to change the way they operate. Hence, businesses can keenly be affected by changes in government policies.

- **Public Registry Coverage:** Low value indicates low creditworthiness of borrowers (individuals or firms) in the financial system, which may not facilitate the exchange of credit information among banks and other regulated financial institutions.
- **Extent of Director Liability Index:** Low score indicates that there is less ability of board members being held liable for harm caused by related-party transactions.
- **Taxation Time:** High numbers indicate that there is more time taken to prepare, file and pay three major types of taxes and contributions: the corporate income tax, value added or sales tax, and labor taxes, including payroll taxes and social contributions. This will ultimately constrain the government's ability to ignite the economy and hamper development in the nation.
- **Documentation Needed to Export:** High number indicates that there are more documents required per shipment to export goods and required for clearance by government ministries, customs authorities, port and container terminal authorities, health and technical control agencies and banks taken into account. This would cause a delay in the export of goods.
- **Documentation Needed to Import:** High number indicates that there are more documents required per shipment to import goods and required for clearance by government ministries, customs authorities, port and container terminal authorities, health and technical control agencies and banks taken into account. This would cause a delay in the import of goods.
- **Any Other Negative Incidents:** Any negative incident can cause some kind of business disruption to the organization from an operational perspective.

Legal, Security and Compliance Update



Most Recent Legal, Security and Compliance Alerts

<p>Critical Apr 05, 2022</p> <p>Several Countries - Visa Restrictions Imposed by Russia Effective April 04, 2022</p>	<p>Critical Apr 04, 2022</p> <p>Update 99: Ukraine - Probe Announced Against Russian War Crimes</p>	<p>Critical Apr 02, 2022</p> <p>Update 90: Odessa, Ukraine - Missile Strike in Residential Areas - Casualties Reported</p>	<p>Critical Apr 01, 2022</p> <p>Update 85: Ukraine - Russian Forces Withdraws from Chernobyl Nuclear Power Station as Fighting Raged in Kyiv and Other Ukrainian Outskirts</p>	<p>Critical Apr 01, 2022</p> <p>Update 84: Mariupol, Ukraine - Launches Fresh Efforts to Rescue Civilians After Red Cross Warning</p>
---	--	---	---	--

Critical - Alerts

- Critical** Apr 05, 2022

Several Countries - Visa Restrictions Imposed by Russia Effective April 04, 2022
- Critical** Apr 04, 2022

Update 99: Ukraine - Probe Announced Against Russian War Crimes
- Critical** Apr 02, 2022

Update 90: Odessa, Ukraine - Missile Strike in Residential Areas - Casualties Reported
- Critical** Apr 01, 2022

Update 85: Ukraine - Russian Forces Withdraws from Chernobyl Nuclear Power Station as Fighting Raged in Kyiv and Other Ukrainian Outskirts
- Critical** Apr 01, 2022

Update 84: Mariupol, Ukraine - Launches Fresh Efforts to Rescue Civilians After Red Cross Warning

High - Alerts

- High** Jan 17, 2022

Disruption Risk Early Warning: Update 1: Ukraine - Cyber Attack Warning Issued by Microsoft

Moderate - Alerts

No Moderate Legal, Security and Compliance alerts issued for the time period covered by this report

Low - Alerts

No Low Legal, Security and Compliance alerts issued for the time period covered by this report

Category / Metric	Measurement	Q4 2021	Q1 2022	11-Apr-2022	Change from Q1 2022	Additional Comments
Security And Compliance	Risk Rating	6.85	6.85	6.85	0.00	
Data Protection Laws	Qualitative	Moderate Laws	Moderate Laws	Moderate Laws	No	
IP Protection Laws	Quantitative	3.40	3.40	3.40	0.00	High Risk - See Legal, Security and Compliance Implications section below
Cybercrime	Rank	12.00	12.00	12.00	0.00	Critical Risk - See Legal, Security and Compliance Implications section below
Cyber Attacks	Qualitative	Yes	Yes	Yes	No	Critical Risk - See Legal, Security and Compliance Implications section below
Software Piracy Rate	%	80%	80%	80%	0%	High Risk - See Legal, Security and Compliance Implications section below
Strength of Auditing and Reporting Standards	Rating	3.90	3.90	3.90	0.00	High Risk - See Legal, Security and Compliance Implications section below
Sanctions Imposed	Qualitative	No	No	No	No	

Category / Metric	Measurement	Q4 2021	Q1 2022	11-Apr-2022	Change from Q1 2022	Additional Comments
Financial Action Task Force (FATF)	Qualitative	No	No	No	No	Critical Risk - See Legal, Security and Compliance Implications section below
Legal	Risk Rating	4.47	4.47	4.47	0.00	
Quality of Judicial Processes Index	Quantitative	11.50	11.50	11.50	0.00	
Time to Enforce a Contract	Days	378.00	378.00	378.00	0.00	
Anti-Bribery Laws	Qualitative	Yes	Yes	Yes	No	
Anti-Money Laundering Laws	Qualitative	Yes	Yes	Yes	No	
Patents Issued in the Last One Year	Quantitative	2,469.00	2,469.00	2,469.00	0.00	
Presence of Labor Union	Qualitative	Yes	Yes	Yes	No	Critical Risk - See Legal, Security and Compliance Implications section below
Labor Laws	Risk Rating	6.00	6.00	6.00	0.00	
Working Hours for Day Shift	Hours	8.00	8.00	8.00	0.00	
Working Hours for Night Shift	Hours	8.00	8.00	8.00	0.00	

Category / Metric	Measurement	Q4 2021	Q1 2022	11-Apr-2022	Change from Q1 2022	Additional Comments
Weekly Working Hours	Hours	40.00	40.00	40.00	0.00	High Risk - See Legal, Security and Compliance Implications section below
Overtime Pay (% of Hourly Pay)	%	100%	100%	100%	0%	
Public Holidays per Year	Days	11.00	11.00	11.00	0.00	
Negative Incidents	Risk Rating	1.00	10.00	10.00	0.00	
Any Other Negative Incidents	Qualitative	No	Yes	Yes	No	Critical Risk - See Legal, Security and Compliance Implications section below

** Refer latest alerts under "Legal, Security and Compliance" category

Analysts Comment(s)

Multiple cyber attacks has been reported on government websites and banks during ongoing tensions between Ukraine and Russia.

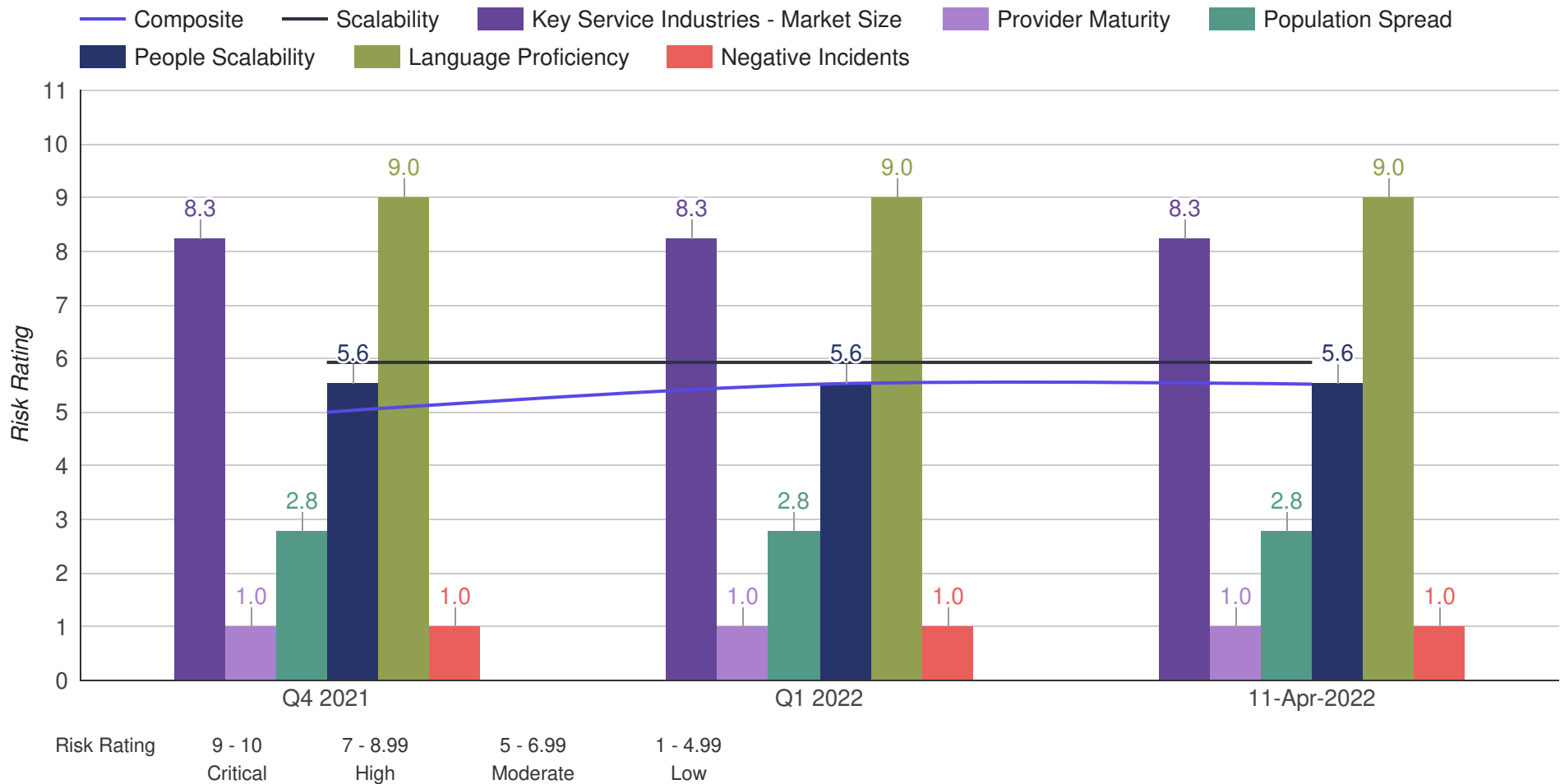
Legal, Security and Compliance Implications

- **IP Protection Laws:** Poor IP Protection Laws indicate that the country does not facilitate or encourage innovation and adequate protection to intellectual property is not provided.
- **Cybercrime:** Lower cybercrime rank indicates location is highly susceptible to attacks such as malware, spam, exploits, botnet activities, phishing, and cyber-attacks. Adequate monitoring and cyber protection policies are not provided by the government.
- **Cyber Attacks:** Higher score indicates that the asset of a country is exposed to unauthorized access which can often result in substantial financial loss

arising from theft of corporate and information, money, disruption to trading, loss of business or contract, reputational damage, legal consequences of cyber breach. Government organizations and companies could also witness disruption to cellular and computer networks or paralysis of multiple systems.

- **Software Piracy Rate:** Higher software piracy rate could lead to hefty fines by IT regulatory bodies due to copyright infringement issues. Piracy not only causes financial loss but also negatively impacts publicity and private embarrassment.
- **Strength of Auditing and Reporting Standards:** Poor auditing and reporting standards indicates credibility issues, thereby, widening the gap between entrepreneurs who need capital and investors who can provide capital. This could impact long-term capital investment in the country. Poor audit standard impacts trust, and weakens accountability and confidence in financial reporting.
- **Financial Action Task Force (FATF):** Non-member country represents a higher risk of money laundering and terrorism financing. It indicates poor global response to prevent organized crime, corruption and terrorism.
- **Presence of Labor Union:** Strong presence of labor unions could lead to macro-economic problems such as wage inflation and lost productivity due to strikes. Unions focus significantly on the seniority of the workers which can translate into the lack of advancement for new and high performing employees to advance.
- **Weekly Working Hours:** Working hours which are lesser than 35 hours per week render the employees under-utilized and increase the cost to company.
- **Any Other Negative Incidents:** Any negative incident can cause some kind of business disruption to the organization from an operational perspective.

Scalability Update



Most Recent Scalability Alerts

Most Recent - Alerts

No Scalability alerts issued for the time period covered by this report

Critical - Alerts

No Critical Scalability alerts issued for the time period covered by this report

High - Alerts

No High Scalability alerts issued for the time period covered by this report

Moderate - Alerts

No Moderate Scalability alerts issued for the time period covered by this report

Low - Alerts

No Low Scalability alerts issued for the time period covered by this report

Category / Metric	Measurement	Q4 2021	Q1 2022	11-Apr-2022	Change from Q1 2022	Additional Comments
Key Service Industries - Market Size	Risk Rating	8.25	8.25	8.25	0.00	
Banking and Financial Services	US\$ B	\$34.23	\$34.23	\$34.23	\$0.00	
Healthcare	US\$ B	\$4.90	\$4.90	\$4.90	\$0.00	Critical Risk - See Scalability Implications section below
Insurance	US\$ B	\$0.89	\$0.89	\$0.89	\$0.00	Critical Risk - See Scalability Implications section below
Information and Communications Technology	US\$ B	\$5.40	\$5.40	\$5.40	\$0.00	Critical Risk - See Scalability Implications section below
Provider Maturity	Risk Rating	1.00	1.00	1.00	0.00	
Presence of Tier 1 Companies (With Operations Over a Billion Dollars)	Qualitative	Yes	Yes	Yes	No	
Presence of Tier 2 Companies (With Operations Between 500 Million and a Billion)	Qualitative	Yes	Yes	Yes	No	
Population Spread	Risk Rating	2.80	2.80	2.80	0.00	
0-14 Years	%	16.10%	16.10%	16.10%	0%	High Risk - See Scalability Implications section below

Category / Metric	Measurement	Q4 2021	Q1 2022	11-Apr-2022	Change from Q1 2022	Additional Comments
15-64 Years	%	66.50%	66.50%	66.50%	0%	
65 Years and Above	%	17.40%	17.40%	17.40%	0%	
People Scalability	Risk Rating	5.56	5.56	5.56	0.00	
Labor Force	M	16.03	16.03	16.03	0.00	Critical Risk - See Scalability Implications section below
Literacy Rate	%	99.80%	99.80%	99.80%	0%	
Skillset of Graduates	Quantitative	4.30	4.30	4.30	0.00	
Ease of Finding Skilled Employees	Quantitative	4.40	4.40	4.40	0.00	
Ease of Hiring Foreign Labor	Quantitative	4.20	4.20	4.20	0.00	
Quality of Research Institutions	Quantitative	11.40	11.40	11.40	0.00	Critical Risk - See Scalability Implications section below
Innovation Capability	Quantitative	40.10	40.10	40.10	0.00	
Annual Non-STEM Graduate Pool	Quantitative	512,400.00	512,400.00	512,400.00	0.00	
Annual STEM Graduate Pool	Quantitative	130,000.00	130,000.00	130,000.00	0.00	

Category / Metric	Measurement	Q4 2021	Q1 2022	11-Apr-2022	Change from Q1 2022	Additional Comments
Labor Pool for Technology Services	Quantitative	185,000.00	185,000.00	185,000.00	0.00	Critical Risk - See Scalability Implications section below
Attrition Rate in Technology Services	%	10%	10%	10%	0%	
Language Proficiency	Risk Rating	9.00	9.00	9.00	0.00	
English Proficiency	Qualitative	Low	Low	Low	No	Critical Risk - See Scalability Implications section below
Spanish Proficiency	Qualitative	Low	Low	Low	No	Critical Risk - See Scalability Implications section below
Multilingual Proficiency	Qualitative	Moderate	Moderate	Moderate	No	
Negative Incidents	Risk Rating	1.00	1.00	1.00	0.00	
Any Other Negative Incidents	Qualitative	No	No	No	No	

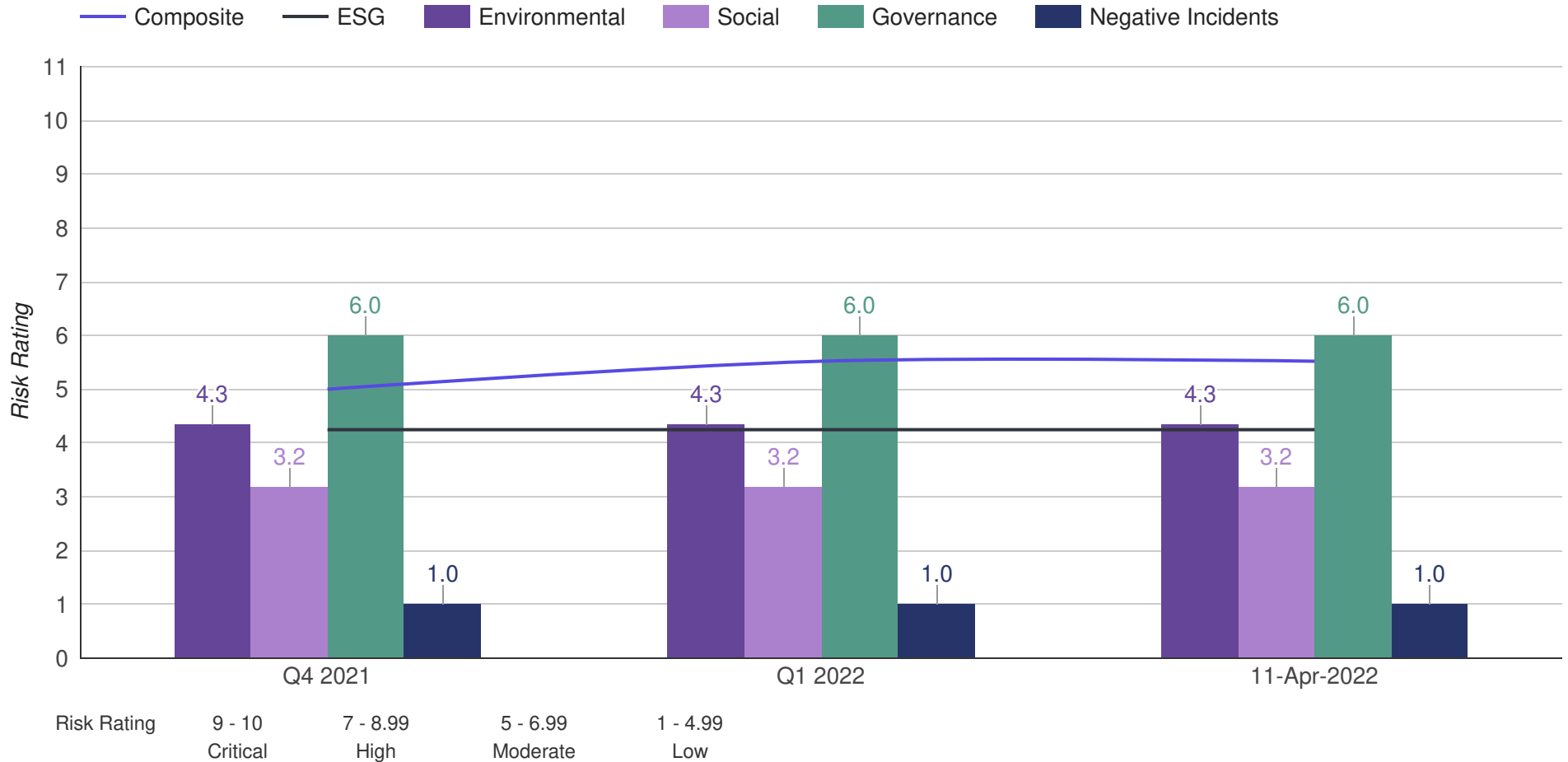
** Refer latest alerts under "Scalability" category

Scalability Implications

- **Healthcare:** Higher risk score indicates poor healthcare infrastructure in the country which impacts GDP, exports status, employment opportunities, capital investment, among others. Poor quality health services are holding back progress on improving health at all income levels across the country.
- **Insurance:** Higher risk score indicates poor insurance services in the country. This means limited employment, declining GDP, unstable financial system, and weaker balance of payments.

- **Information and Communications Technology:** Higher risk score indicates poor information and communication technology (ICT) services in the country. Limited ICT services impacts the efficiency of a business's output rate, restricting larger quantities of products to be moved or of services to be rendered. This increases the operational cost and slows down innovation.
- **0-14 Years:** Lower percentage of young population poses high risk as it would adversely impact the available workforce.
- **Labor Force:** Lower number of available workforces poses high risk for scaling up of operations.
- **Quality of Research Institutions:** Low rating indicates poor standard of private and public research institutions in the country. This can impact research and indicates slower rate of innovation.
- **Labor Pool for Technology Services:** Lower labor pool indicates shortage of scientists, engineers, and other resources in the country to build a competitive environment, lead innovation, and incentivize excellence in the field of technology.
- **English Proficiency:** A 'Poor' or 'Very Poor' data indicates that hiring local people with adequate english language skills is a major challenge.
- **Spanish Proficiency:** A 'Poor' or 'Very Poor' data indicates that hiring local people with adequate Spanish language skills is a major challenge. This could limit expansion of global client base and impact exports.

ESG Update



Most Recent ESG Alerts

<p>High Dec 19, 2021</p> <p>Update 58: Ukraine - COVID-19 Variant 'Omicron' - First Case Reported</p>	<p>Moderate Dec 03, 2021</p> <p>Update 57: Ukraine - COVID-19 Variant 'Omicron' Concern Results in Entry Restrictions for Eight African Countries</p>	<p>Critical Nov 27, 2021</p> <p>Multiple Countries - Travel Restrictions Imposed on South Africa Amid New COVID-19 Variant 'Omicron'</p>	<p>Moderate Nov 26, 2021</p> <p>Ukraine - Polio Emergency Announced Amid Surge in COVID-19 Cases</p>	<p>Moderate Nov 10, 2021</p> <p>Update 56: Ukraine - Reports Rise in Daily COVID-19 Deaths</p>
--	--	---	---	---

Critical - Alerts

Critical Nov 27, 2021
 Multiple Countries - Travel Restrictions Imposed on South Africa Amid New COVID-19 Variant 'Omicron'

High - Alerts

High Dec 19, 2021
 Update 58: Ukraine - COVID-19 Variant 'Omicron' - First Case Reported

Moderate - Alerts

Moderate Dec 03, 2021
 Update 57: Ukraine - COVID-19 Variant 'Omicron' Concern Results in Entry Restrictions for Eight African Countries

Moderate Nov 26, 2021
 Ukraine - Polio Emergency Announced Amid Surge in COVID-19 Cases

Moderate Nov 10, 2021
 Update 56: Ukraine - Reports Rise in Daily COVID-19 Deaths

Moderate Oct 23, 2021
 Update 55: Ukraine - Reports 23,785 New COVID-19 Cases in Last 24 Hours, National Total Raises to 2,748,614

Low - Alerts

No Low ESG alerts issued for the time period covered by this report

Category / Metric	Measurement	Q4 2021	Q1 2022	11-Apr-2022	Change from Q1 2022	Additional Comments
Environmental	Risk Rating	4.35	4.35	4.35	0.00	
CO2 emissions (metric tons per capita)	Metric Tons	223.00	223.00	223.00	0.00	
Climate Risk Index	Quantitative	105.33	105.33	105.33	0.00	
World Risk Index	Quantitative	2.90	2.90	2.90	0.00	
Pollution Index	Quantitative	63.04	62.98	62.98	0.00	
Environmental Performance Index	Quantitative	49.50	49.50	49.50	0.00	
Seismic Zone	Quantitative	1.00	1.00	1.00	0.00	
Earthquake	Quantitative	No Major Earthquake Reported	No Major Earthquake Reported	No Major Earthquake Reported	No	
Presence of Nuclear Power Plants in the Seismic Zone	Qualitative	Yes	Yes	Yes	No	Critical Risk - See ESG Implications section below
Volcanic Eruptions	Qualitative	No	No	No	No	
Floods	Qualitative	No	No	No	No	
Epidemics	Qualitative	Yes	Yes	Yes	No	Critical Risk - See ESG Implications section below

Category / Metric	Measurement	Q4 2021	Q1 2022	11-Apr-2022	Change from Q1 2022	Additional Comments
Social	Risk Rating	3.20	3.20	3.20	0.00	
Human Development Index	Quantitative	0.78	0.78	0.78	0.00	
Hospital beds (per 10,000 people)	Quantitative	75.00	75.00	75.00	0.00	
Health Care System Index	Quantitative	53.70	53.70	53.70	0.00	
Cost of Living Index	Quantitative	19.43	19.43	19.43	0.00	
Gender Inequality Index	Quantitative	0.23	0.23	0.23	0.00	
Gini Coefficient	Quantitative	26.10	26.10	26.10	0.00	
Governance	Risk Rating	6.00	6.00	6.00	0.00	
Index of Economic Freedom	Quantitative	56.20	56.20	56.20	0.00	
Global Innovation Index	Quantitative	36.32	36.32	36.32	0.00	High Risk - See ESG Implications section below
Regulatory Quality: Estimate	Quantitative	-0.3000	-0.3000	-0.3000	0.00	
Negative Incidents	Risk Rating	1.00	1.00	1.00	0.00	
Any Other Negative Incidents	Qualitative	No	No	No	No	

** Refer latest alerts under "ESG" category

ESG Implications

- **Presence of Nuclear Power Plants in the Seismic Zone:** Nuclear reactors that are operating in areas of significant seismic activity (earthquake danger zones) could be prone to major accident sequence.
- **Epidemics:** Epidemics can cause significant, widespread increases in morbidity and mortality and have disproportionately higher mortality impacts on low- and middle-income countries. It can also cause economic damage through multiple channels, including short-term fiscal shocks and longer-term negative shocks to economic growth. In countries with weak institutions and legacies of political instability, epidemics can increase political stresses and tensions.
- **Global Innovation Index:** Higher risk indicates poor innovation across political environment, education, infrastructure and business sectors.

Contact Us

Global Headquarters

350, 5th Avenue, 59th flr,
NY NY 10118
USA
Tel. +1.212.547.9481
Fax +1.415.462.5401

General Information & Suggestions

info@supplywisdom.com

For Sales

sales@supplywisdom.com

For any queries related to report reach out to us via Ask an Analyst feature in Supply Wisdom application

Follow us

[Twitter](#) [Linked In](#)

Asia-Pacific Headquarters

14/2, Rajesh Chambers, Brunton Road,
Craig Park Layout, Ashok Nagar.
Bangalore - 560 025
Karnataka
India
Tel. +91.70.1994.8450

About Supply Wisdom®

Supply Wisdom is the leader in full-stack continuous risk intelligence on third parties and locations. Our solutions automate risk management for enterprises and deliver continuous third-party and location risk intelligence, risk monitoring and risk actions across the widest risk aperture to minimize the risks of disruption facing their business, supply chains and third parties.

Leading enterprises partner with Supply Wisdom because our patented, unique solution:

- Provides the broadest risk domain coverage available in the market
- Continuously monitors third parties and locations to provide near real-time risk intelligence
- Validates and prioritizes risk findings
- Eliminates noise to enable focus on the most critical risks mitigation efforts
- Leverages technology to automate risk management from identification to risk action
- Seamlessly integrates into any platform maximizing value of investment

Supply Wisdom enables enterprises to move faster, do more with less, prioritize, and act proactively and confidently.

Supply Wisdom's Full-Stack Continuous Risk Coverage



Risk Reports & Event Alerts

- Our Risk Reports provide a detailed assessment of risks and Supply Wisdom’s analysis of the risk scenario
- Each report offers risk profiling, risk ratings and risk mitigation recommendations
- Quarterly updates continuously highlight the changes to risk scenarios and update the risk rating and recommendations
- Event Alerts provide quick summaries of real-time events that impact risk scenarios,

Methodology

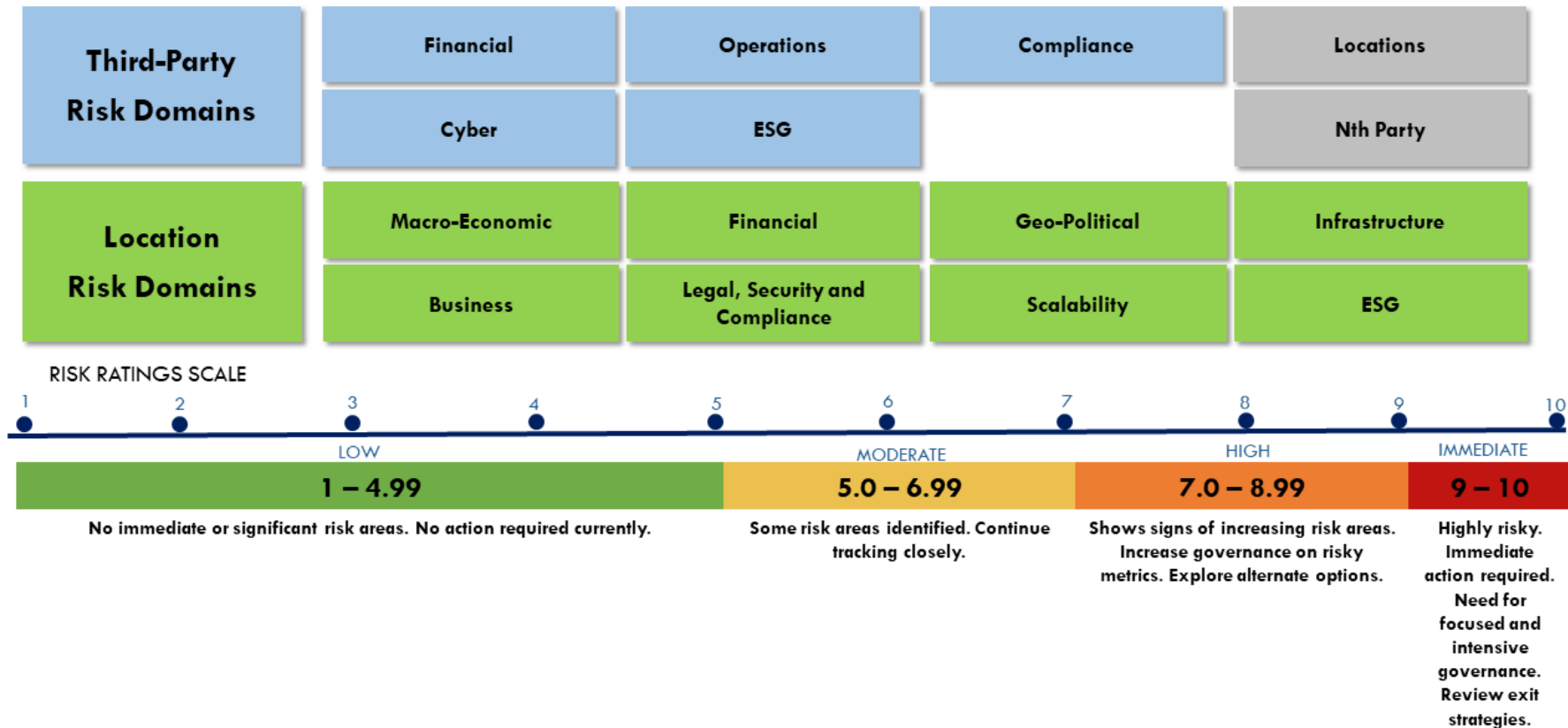
- Risk algorithms are driven by risk thresholds and weightings assigned to individual risk metrics, associated risk domains and their risk categories. Risk thresholds and weightages are based on current market/industry dynamics and trends and are expert reviewed twice a year to ensure they remain topical and relevant. All risk metrics are rolled up first into category ratings, then risk domain ratings and finally comprehensive risk rating for the entity being monitored.
- Each of the individual metrics is quantified into a risk score using pre-defined algorithms. The risk score ranges on a scale of 1 to 10 with 1 being low risk to 10 being critical risk. Scores are color coded for ease of visualization.



Methodology

Over 350 data metrics factor into our **Standard Risk Rating** computations, the percentage (%) weighting of each **Category** may vary.

Supply Wisdom® Automating Risk Intelligence
 TPRM Continuous Risk Framework



Domain Definitions

Location Domain	Description and Tracked Metrics
Macro-Economic	The Macro-Economic health of a location via metrics covering the risk categories of Economic Indicators, Credit Rating Risk, and Currency Risk.
Financial	The Financial health of a location via metrics covering the risk categories of Labor Cost, Operational Cost, and Taxation.
Geo-Political	The Geo-Political health of a location via metrics covering the risk categories of Political and Social/Social Security.
Infrastructure	The Infrastructure health of a location via metrics covering the risk categories of Power Supply, Transportation, and Facilities.
Business	The Business health of a location via metrics covering the risk categories of Ease of Doing Business, Regulatory & Statutory Requirements, International Trade and Logistics.
Legal, Security and Compliance	The Legal, Security and Compliance health of a location via metrics covering the risk categories of Security & Compliance, Legal, and Labor Laws.
Scalability	The Scalability health of a location via metrics covering the risk categories of Key Service Industries – Market Size, Provider Maturity, Population Spread, People Scalability, and Language Proficiency.
ESG	The ESG health of a location via metrics covering the risk categories of Environmental, Social and Governance.

Appendix I - Abbreviations

Abbreviation	Stands For
B	Billion
BPO	Business Process Outsourcing
BPS	Basis Points
CAD	Current Account Deficit
CBD	Central Business District
CPI	Consumer Price Index
EIU	The Economist Intelligence Unit
FDI	Foreign Direct Investment
FTA	Free Trade Agreement
FTZ	Free Trade Zone
Gbps	Giga bits per second
GDP	Gross Domestic Product
Kwh	Kilo Watt Per Hour
Ltr	Liter
M	Million

Abbreviation	Stands For
Mbps	Mega bits per second
MW	Mega Watt
PBD	Peripheral Business District
PLR	Prime Lending Rate
QoQ	Quarter on Quarter
Qtr	Quarter
SBD	Secondary Business District
SEZ	Special Economic Zone
Sq ft	Square Foot
Sq M	Square Meter
VAT	Value Added Tax
WPI	Wholesale Price Index
YoY	Year on Year
YTD	Year to Date

