



# **JETRO Global Trade and Investment Report 2022**

– Global Economy in Turmoil,  
Restructuring of business strategies required –  
Overview

Japan External Trade Organization (JETRO)  
Overseas Research Department

July 26<sup>th</sup> , 2022



# Outline

- JETRO Global Trade and Investment Report 2022 focused on disruptors in the global economy and their impacts on trade, investment, and business activities. International business is being made more uncertain than ever before by the negative loop of local restrictions on economic activities, supply constraints and difficulties with international logistics, Russia's invasion of Ukraine, and other disruptors.
- For trade, soaring prices of primary commodities such as energy and the sharp depreciation of the yen have simultaneously increased the import costs, leading to deteriorated domestic company profits and declines in consumer confidence. Additionally, supply constraints and supply chain disruptions, such as in semiconductors, have disrupted export growth and discouraged new investment in a wide range of industries. Japanese companies must review their business strategies with the assumption that these disruptions will continue.
- Alongside the hegemony struggle between the US and China, the emergence of new threats due to Russia's invasion of Ukraine has further accelerated the introduction and operational enhancement of economic security policies by major countries. The strengthening of export controls and the introduction of pre-screening of investments put new burdens on companies in terms of risk management and procedures. Close attention must also be paid to the links between policy areas such as human rights and decarbonization, and trade policy and import/export regulations.
- This report is intended to analyze the current state and outlook of the global economy in the midst of this turmoil, from the perspectives of trade, direct investment, and trade policy. It also aims to provide proposals to Japanese companies to help build business strategies for achieving sustainable growth even in times of turmoil.

# Outline

## ジェトロ 2022年版 世界貿易投資報告

混乱極める世界経済、求められるビジネス戦略の再構築



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**Source: Global and Japanese Trade and Investment Statistics**

JETRO

# **I . World and Japan's Economy and Trade**

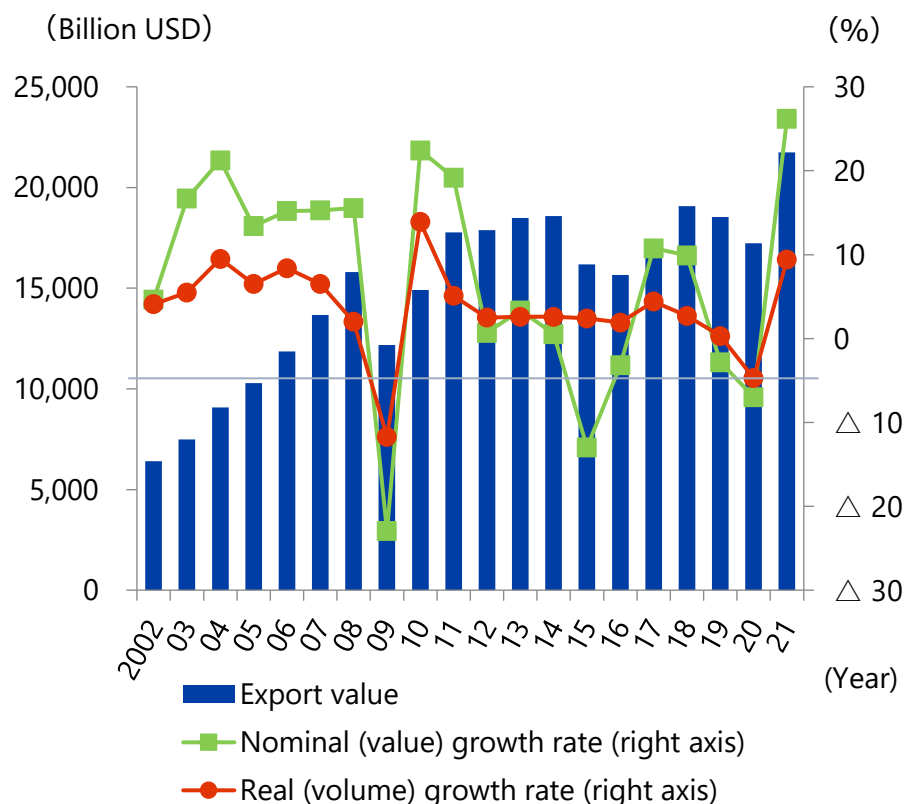
## **Disruption to Value Chains**

### **During the COVID-19 Recovery Phase**

# 1 | Current State of the World Economy

- In 2021, world trade (trade in goods, estimated by JETRO) was **\$21,753.4 billion, and increased by 26.2% from the previous year**. The value of exports exceeded \$20 trillion for the first time, marked at a **record high**.
- The growth rate of trade volume (9.4%) was lower than the growth rate of trade value (26.2%). This is likely related to high prices of mineral fuels, metals, and other resources, which pushed up the overall value of trade.

### Trends in world trade



Source: JETRO's estimates and WTO data

### Quarterly changes in trade values of 33 major countries/regions by product (YoY)

	2021				2022
	1Q	2Q	3Q	4Q	1Q
Total	17.6	42.8	21.8	19.5	14.9
Machinery and equipment	17.6	40.9	14.1	10.4	6.9
General machinery	17.4	30.7	16.3	13.0	7.0
Electrical equipment	27.1	32.4	17.6	15.1	-3.8
Transport equipment	5.8	84.6	5.1	0.1	-0.3
Precision equipment	13.2	35.1	12.9	6.8	-1.3
Chemical	15.9	35.4	26.2	23.7	18.5
Pharmaceuticals and medical products	10.6	22.4	25.0	28.1	17.5
Foodstuff	10.8	24.6	13.1	10.1	10.4
Oils and fats & other animal/vegetable products	31.8	34.6	30.3	29.9	25.3
Other raw materials and their products	17.6	55.3	35.2	38.0	27.9
Mineral ore	77.1	92.5	47.4	-7.8	-14.4
Mineral fuels, etc.	-3.0	92.5	86.8	103.0	76.9
Coal	-7.2	32.8	105.9	153.7	128.3
Natural gas, etc.	27.1	58.9	135.6	131.9	81.6
Petroleum and related products	-10.2	110.5	73.9	83.2	67.4
Base metals and related products	23.1	62.7	48.6	39.7	27.4
Iron and steel	22.5	63.3	56.2	45.9	29.3

Note: Only 33 countries/regions with quarterly data for 2022 are included.

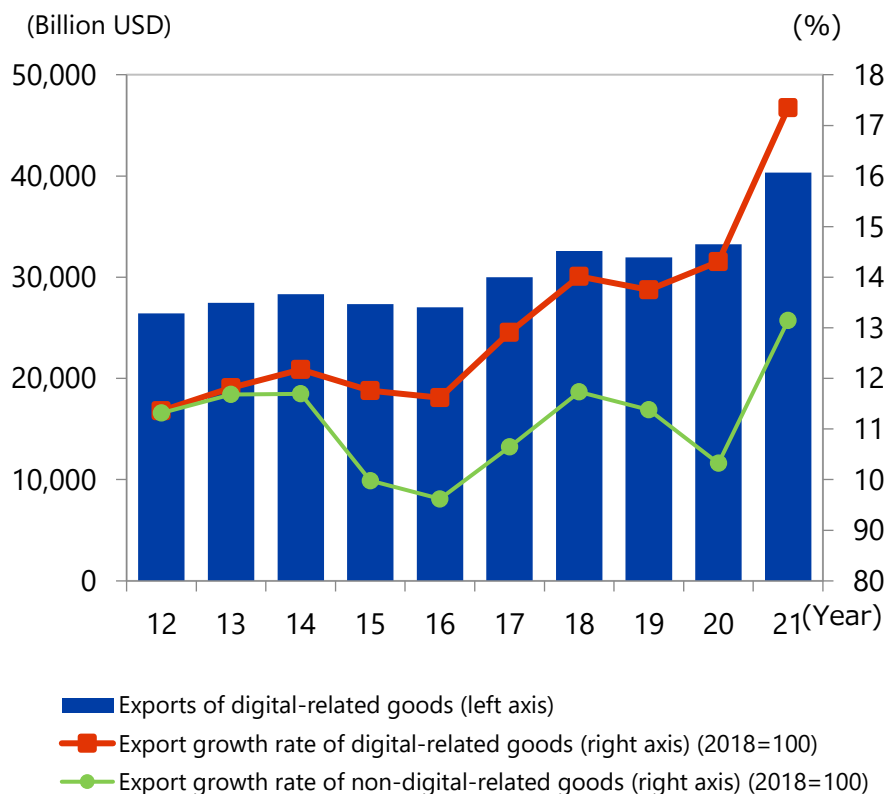
Source: Trade statistics of respective countries and regions

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## 2 | Trade in Digital Goods Reach Record Highs

- In 2021, trade in digital goods (JETRO estimate, export basis) increased 21.3% year-on-year to \$4.34 trillion, the **highest value in the last 20 years for which data are available**.
- Continuing from last year, integrated circuits and other semiconductor-related goods saw expanded trade, while computers and peripheral equipment and other electrical and electronic components also contributed to export growth.

### Trends in global trade in digital-related goods (export basis)



Source: JETRO estimates based on trade statistics of respective countries and regions.

### Export trends by main product

(Unit: 100 million USD, %)

Product	2021			
	Value	Composi tion ratio	Growth rate	Contrib ution
Computers and peripheral equipment (total)	7,052	17.5	18.1	3.2
Computers and peripheral equipment	4,619	11.5	16.7	2.0
Computer parts	1,632	4.0	24.4	1.0
Office equipment	122	0.3	26.1	0.1
Communication equipment	6,624	16.4	13.5	2.4
Cellular phones	2,881	7.1	12.2	0.9
Semiconductors and electronic components	11,693	29.0	28.6	7.8
Electron tubes/Semiconductors, etc.	1,485	3.7	23.7	0.9
Integrated circuits	10,208	25.3	29.3	7.0
Other electrical/electronic components	6,004	14.9	23.1	3.4
Imaging equipment	1,467	3.6	20.8	0.8
Audio equipment	156	0.4	5.9	0.0
Measuring equipment/instruments	3,140	7.8	16.2	1.3
Medical electronics	1,492	3.7	11.6	0.5
Semiconductor manufacturing equipment	1,232	3.1	34.6	1.0
Industrial robots	66	0.2	24.6	0.0
3D printers, etc.	76	0.2	22.1	0.0
Drones	1,208	3.0	27.6	0.8
<b>Digital-related goods (Total)</b>	<b>40,340</b>	<b>100.0</b>	<b>21.3</b>	<b>21.3</b>

Note: Estimated by JETRO. See "Appendix 1" for product classifications.

Source: Trade statistics of respective countries and regions

### 3 | China's Exports Top the List for Integrated Circuits

- China's export value for integrated circuits is the largest in the world, with a growth rate exceeding 30%, which was matched by South Korea. Quarterly exports of semiconductor-related goods have maintained positive growth, although there was a slowdown from the second half of 2021.
- World Semiconductor Trade Statistics forecasts further growth in the global semiconductor market in 2022, with a 16.3% increase year-on-year. While there were signs of market deterioration for some types of semiconductors, the forecasts reflected the strength of potential demand in the overall market.

**Exports of semiconductor related products  
by country/region**

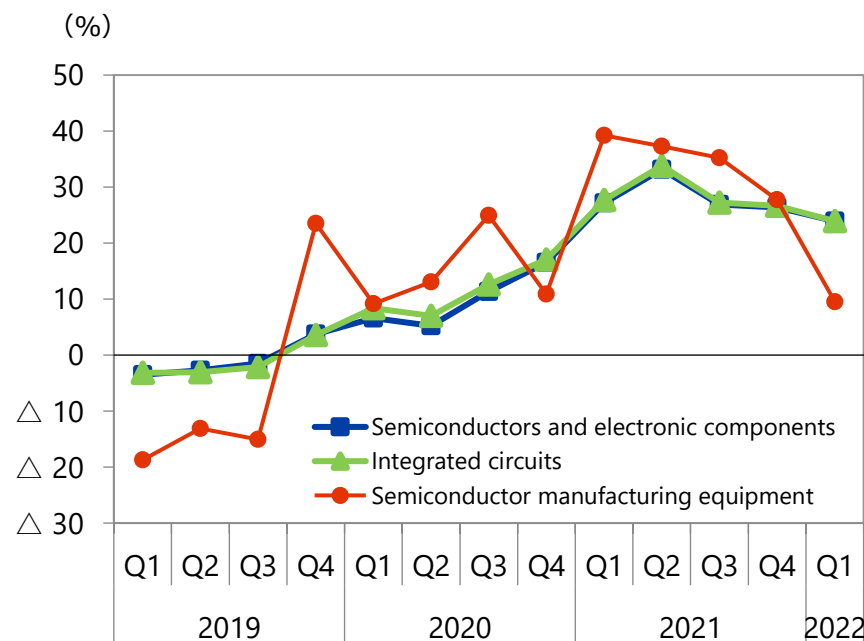
(Unit: 100 million USD, %)

Product	Rank	2021			
		Country/Region	Value	Composition ratio	Growth rate
Electron tubes/ Semiconductors, etc.	1	China	489	33.0	36.4
	2	Japan	105	7.1	14.3
	3	Malaysia	83	5.6	8.2
	4	Germany	82	5.5	22.9
	5	US	78	5.3	21.0
Integrated circuits	1	China	1,566	15.3	32.1
	2	Taiwan	1,452	14.2	26.0
	3	South Korea	1,093	10.7	31.9
	4	Malaysia	596	5.8	20.7
	5	US	528	5.2	19.6
Semiconductor manufacturing equipment	1	Japan	305	24.7	29.1
	2	US	263	21.3	34.3
	3	Netherlands	200	16.3	32.3
	4	Singapore	132	10.7	52.3
	5	South Korea	92	7.5	9.9

Note: Composition ratio is the share of each product in the global total (JETRO estimate).

Source: Trade statistics of respective countries and regions

**Trends in growth rate of export value of  
semiconductor related products**



Note: 1) Export growth rate (YoY comparison). 2) Compiled based on data from 33 countries/regions due to limitations. 3) For electronic components such as semiconductors, only exact matches were extracted at the 6-digit HS code level in 2021 due to HS code revisions in 2022.

Source: Trade statistics of respective countries and regions

## 4 | First Trade Deficit in Two Years due to higher import prices

- Concerning Japan's trade (customs-cleared basis) in 2021, exports increased 18.5% from the previous year to \$758.6 billion and imports increased 21.7% to \$773.4 billion. Both exports and imports increased for the first time in three years. There was also a deficit in trade balance for the first time in two years.
- Between January and May 2022, **both export and import volumes were negative. However, total imports increased by more than 20%.**

### Japan's trade trends

	(Million USD, %)			
	2019	2020	2021	2022 January- May
Total exports	705,682	639,950	758,578	312,453
(Rate of change)	- 4.4	- 9.3	18.5	2.3
Total imports	720,765	635,707	773,391	366,683
(Rate of change)	- 3.7	- 11.8	21.7	21.6
Balance of Trade	-15,083	4,243	-14,813	-54,230
(YoY difference)	- 4,820	19,325	-19,056	-58,103
Export volume index	103.0	91.0	102.1	98.5
(Rate of change)	-4.4	-11.7	12.2	-2.1
Import volume index	104.6	97.9	102.8	101.8
(Rate of change)	-1.1	-6.4	5.0	-0.2

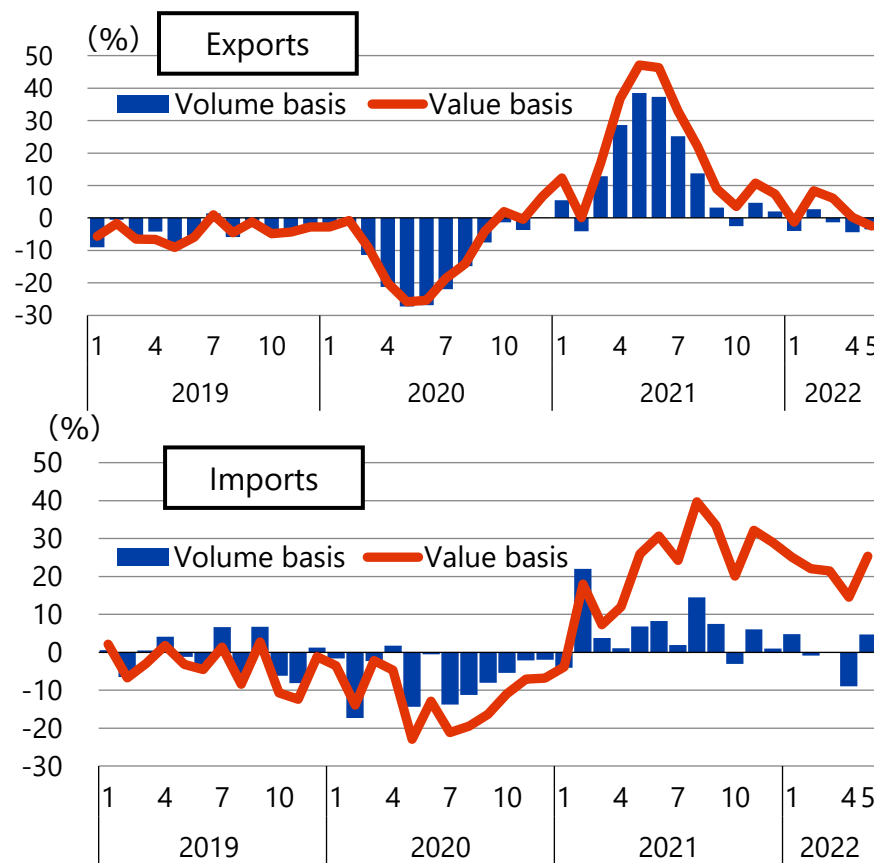
(In both of the charts)

Note: 1) JETRO converted the figures disclosed in JPY into USD.

2) The volume index is on a 2015 basis.

Source: "Trade Statistics" (Ministry of Finance), "Foreign Exchange Rate" (Bank of Japan)

### Japan's import & export growth (year-on-year change)

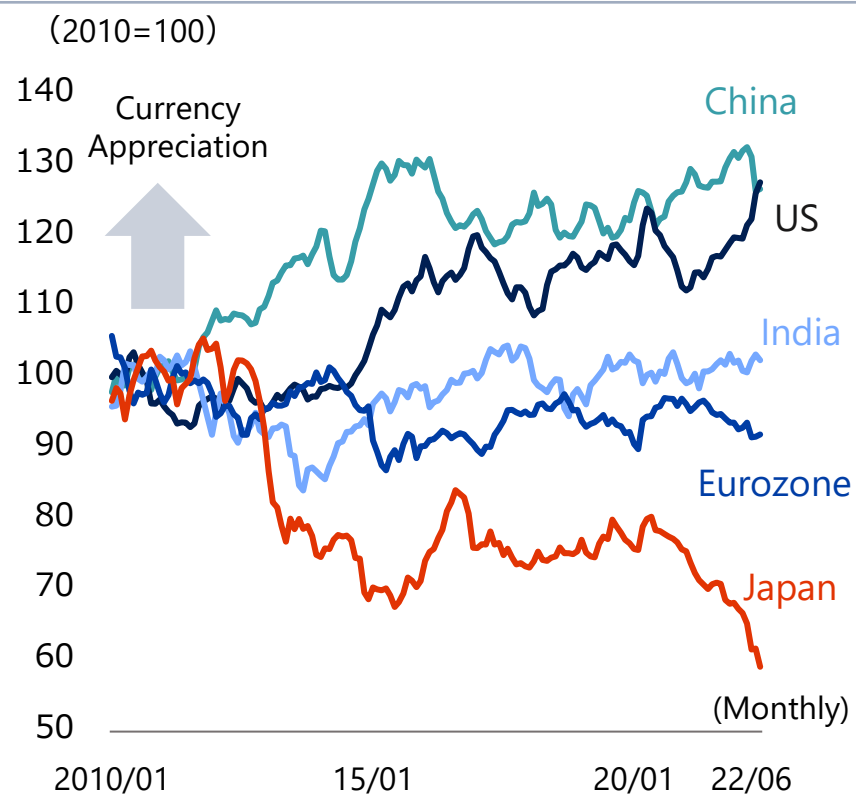




# 5 | No Increases in Export Volume Despite Yen Depreciation

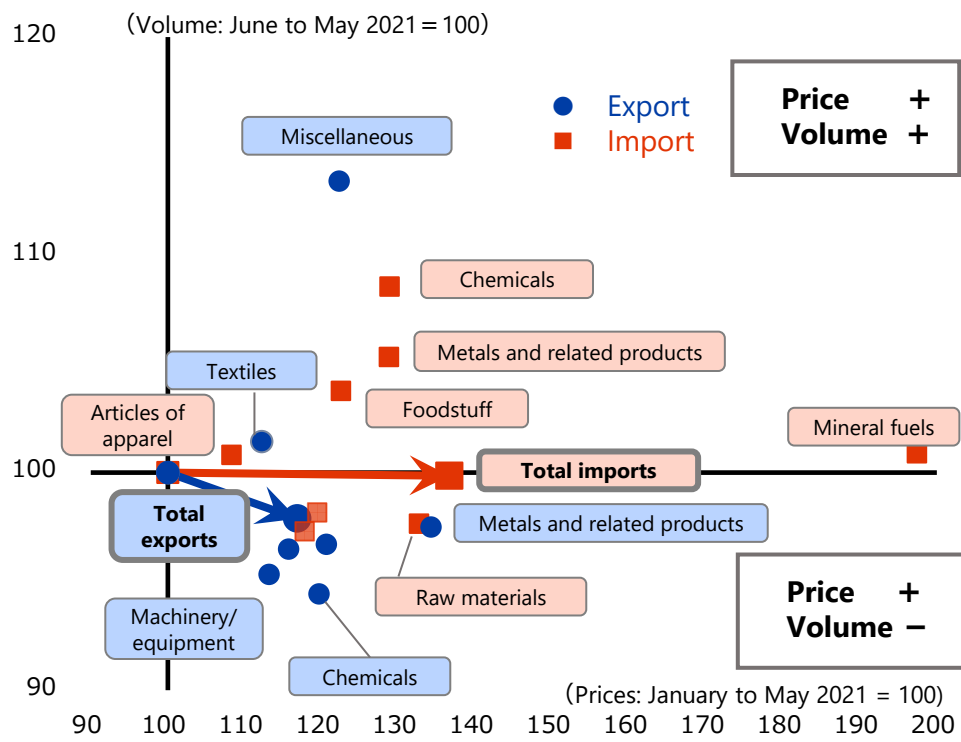
- The yen has been weakening rapidly in recent months. In June 2022, the real effective exchange rate index (2010=100) fell below 60, **marking the first weakening in the yen since August 1971**.
- Examining Japan's exports from January to May 2022, the price index (unit price) was higher year-on-year, while the volume index was lower. Due to the soaring prices of mineral fuels, which make up a large share of imports, there was a larger swing in price increases than exports.

**Real effective exchange rate index for major countries/regions (monthly average)**



Source: Bank of International Settlements

**Import/export volume and price index (Jan. to May 2022)**

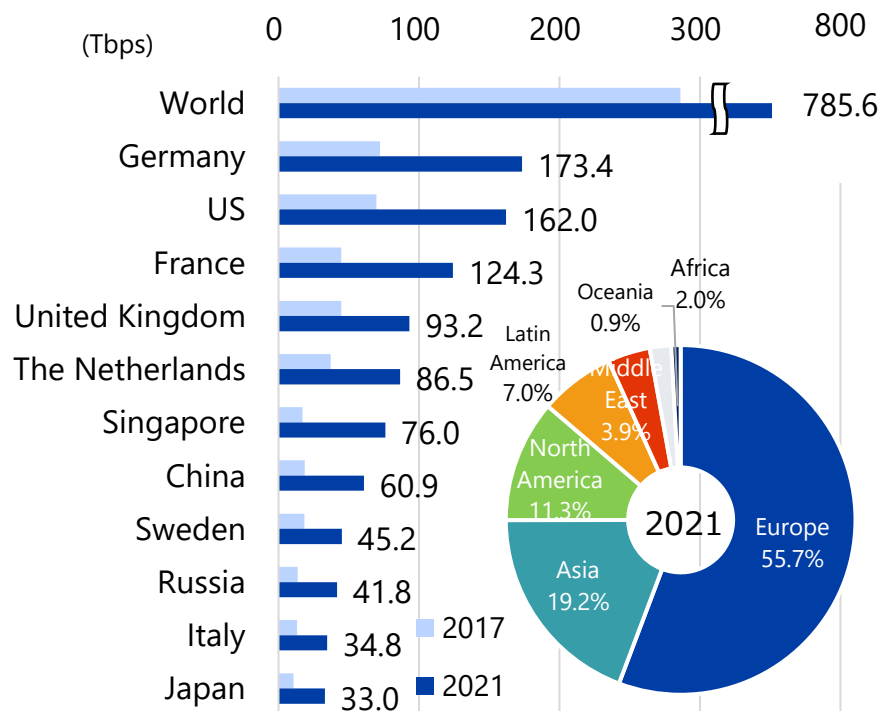


Note: Average of volume and price index (yen basis) for Jan. to May 2022. YoY = 100.  
 Source: "Trade Statistics" (Ministry of Finance), "Foreign Exchange Rate" (Bank of Japan)

# 6 | Global Cross-Border Data Flow Increases 2.7x in 4 Years

- Examining countries and regions with the largest amount of cross-border Internet bandwidth (data flows used in 2021, Germany was in first place, followed by the US. In Europe, intra-regional data flow made up a large portion of the region's data flow.
- **There is significant growth in data flow within Asia.** Singapore's favorable location in Asia has made it a hub for data flow in Asia, and it is a location for data centers for cloud services.

**Cross-border data flow: top countries/regions and share by region**



Note: Region classification is based on TeleGeography definitions.  
Source: TeleGeography

**Bilateral cross-border data flow**

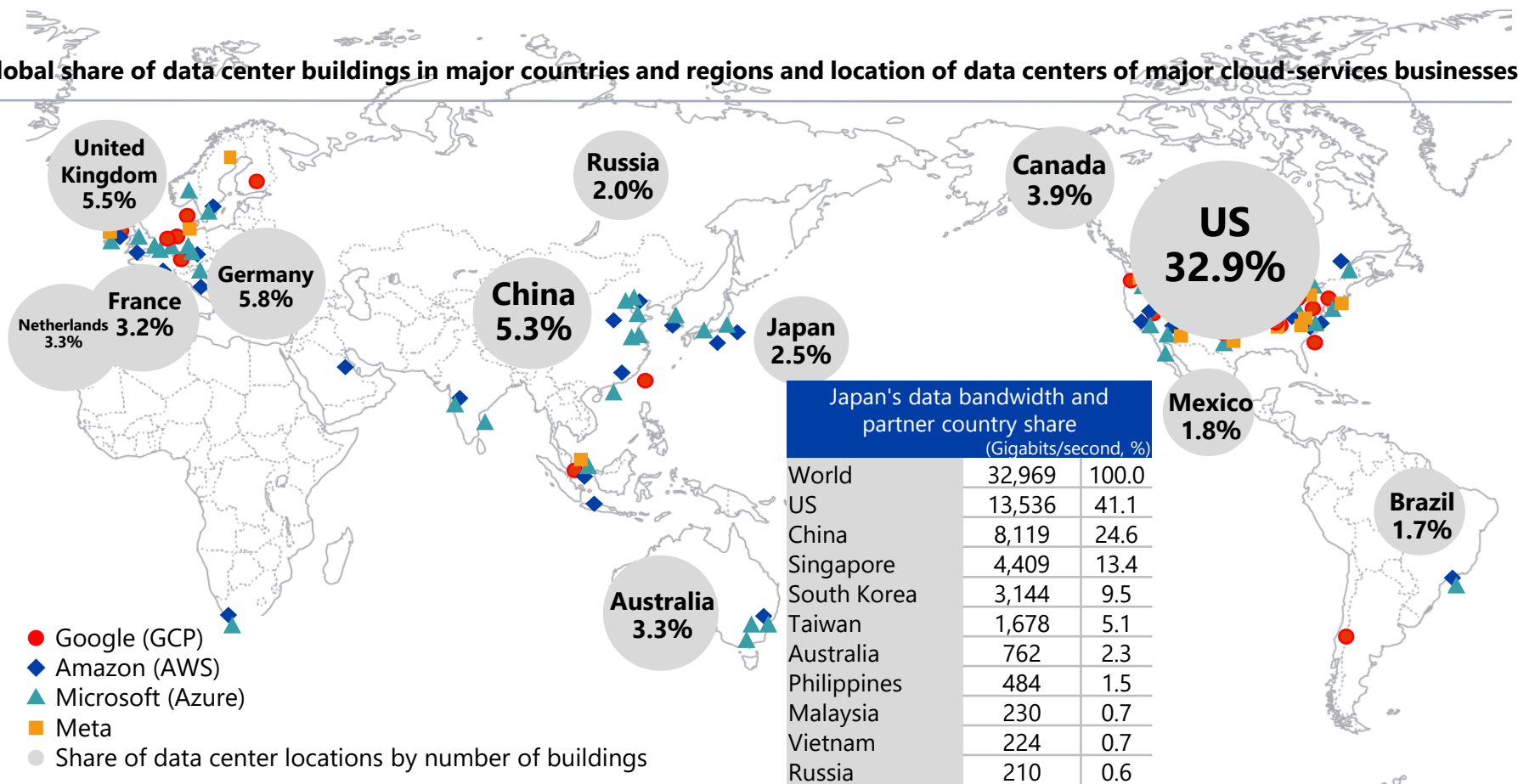
	Country/Region	Cross-border Internet bandwidth (Gbps)	Average annual growth rate 2017 to 2021	2021 share (%)
1	Germany - Netherlands	27,517	23.8	3.5
2	US - Brazil	25,234	25.2	3.2
3	United Kingdom - Netherlands	21,601	21.8	2.7
4	Germany - France	21,032	23.0	2.7
5	US - Mexico	20,383	29.8	2.6
6	Singapore - Indonesia	19,712	72.8	2.5
7	France - Spain	16,818	27.7	2.1
8	France - United Kingdom	16,586	23.2	2.1
9	US - United Kingdom	15,117	16.1	1.9
10	US - Canada	14,941	24.6	1.9
11	US - China	14,786	23.9	1.9
12	US - Japan	13,536	28.5	1.7
13	Germany - Russia	12,832	24.8	1.6
14	Germany - United Kingdom	12,794	18.0	1.6
15	Germany - Austria	12,620	34.6	1.6
16	China - Vietnam	10,983	47.8	1.4
17	France - Netherlands	10,881	30.2	1.4
18	Germany - Turkey	10,812	37.1	1.4
19	Singapore - India	10,392	31.2	1.3
20	Singapore - China	9,809	42.2	1.2

Note: Highlighted areas are within same region.  
Source: TeleGeography

# 7 | Increase in Cloud Services Leads to Expansion in Data Centers

- The demand for cloud services to support teleworking, video distribution, and network upgrades to support 5G is expanding, **leading to surges in demand for data centers in many regions.** In 2022, telecommunications and cloud-services giants such as Salesforce, Meta, and NTT have announced plans to invest in data centers.
- Japan's data bandwidth partner is the United States at 13,536 Gb/s, accounting for 40% of the total share.

Global share of data center buildings in major countries and regions and location of data centers of major cloud-services businesses



Note: The top 12 countries are listed according to share of data centers. Data centers may differ from actual locations due to space constraints.  
 Source: Company websites and Cloudscene

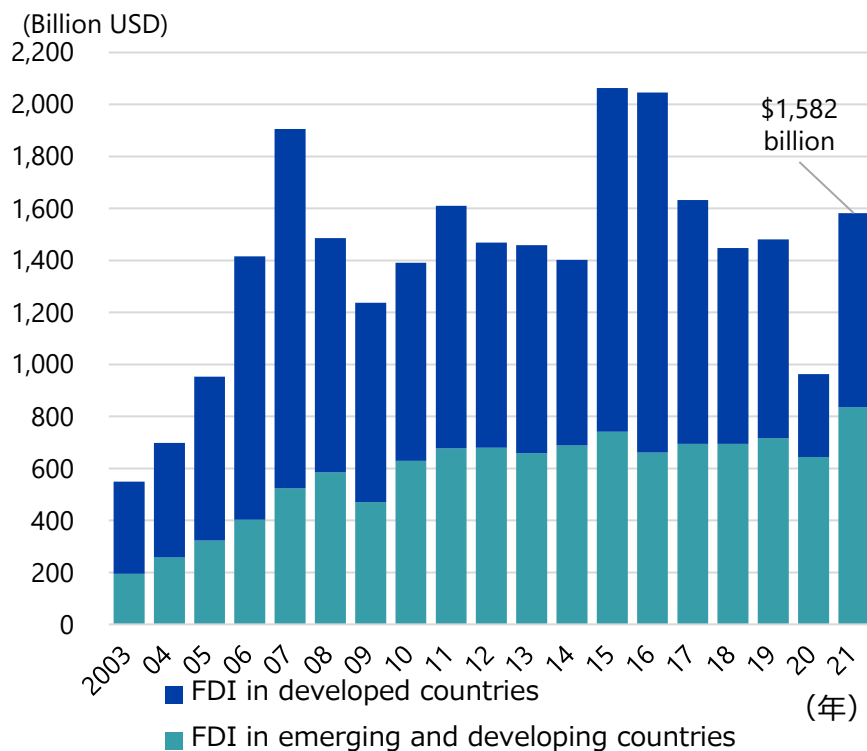
## **Ⅱ . Global FDI and Japan's FDI**

**Uncertainty Increasing in Business Environments:  
Investment Facing a Difficult Phase Once Again**

# 1 Global FDI Recovers in 2021, but Regional Disparities Broaden

- Global FDI increased **64.3% year-on-year**, exceeding levels in 2019 prior to COVID-19.
- Developed countries and regions accounted for about 70% of the investment increase. In the US, FDI expanded 2.4 times to \$367.4 billion, **driven by increases in multinational companies' retained earnings and mergers and acquisitions** in the information and communications, commerce, and logistics and warehousing sectors.

### Trends in global inward FDI (net and flow)



(In both of the charts)

Note: Definitions of developed countries/regions and emerging/developing countries/regions are based on UNCTAD classifications.

Source: UNCTAD

### Forecast of inward FDI in 2021 (net and flow) for major countries and regions

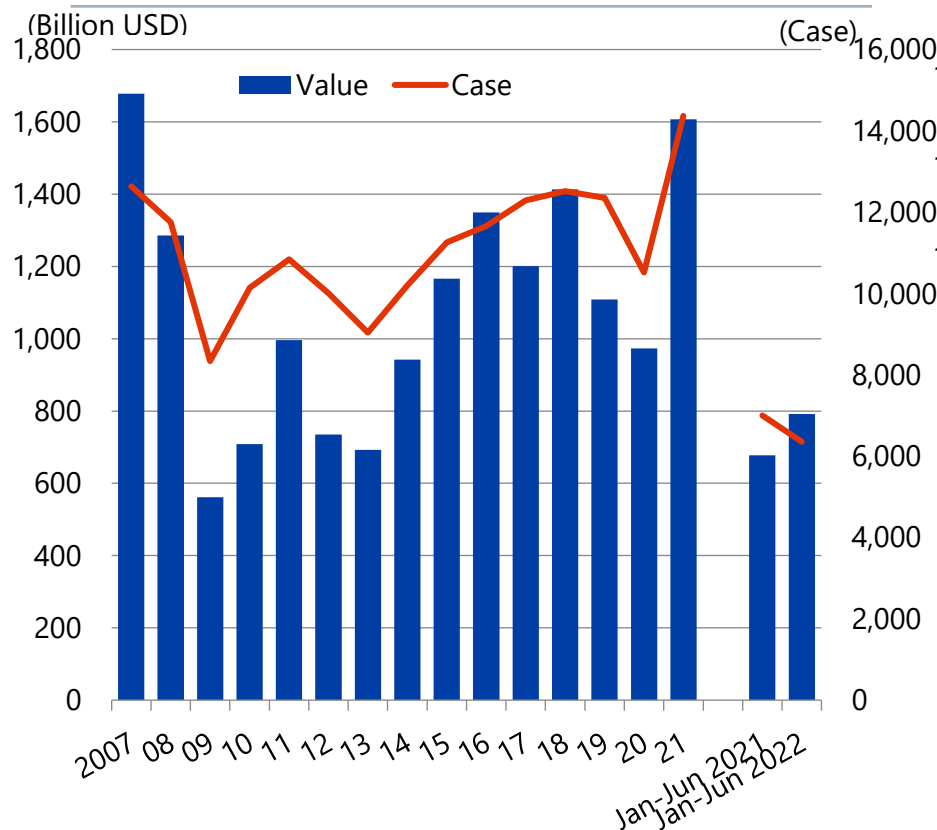
(Units: Million USD, %)

	Value	Growth rate	Composition ratio	Contribution
World	1,582,310	64.3	100.0	64.3
Developed countries	745,739	133.6	47.1	44.3
US	367,376	143.6	23.2	22.5
EU	137,541	- 34.4	8.7	- 7.5
Canada	59,676	157.5	3.8	3.8
Japan	24,652	130.3	1.6	1.4
Emerging/developing countries	836,571	29.9	52.9	20.0
China	180,957	21.2	11.4	3.3
ASEAN	175,229	43.6	11.1	5.5
Hong Kong	140,696	4.4	8.9	0.6
Latin America	134,458	56.0	8.5	5.0
Africa	82,991	113.1	5.2	4.6
Middle East	55,334	58.9	3.5	2.1

## 2 | Cross-border M&As Slowed in Q2 of 2022

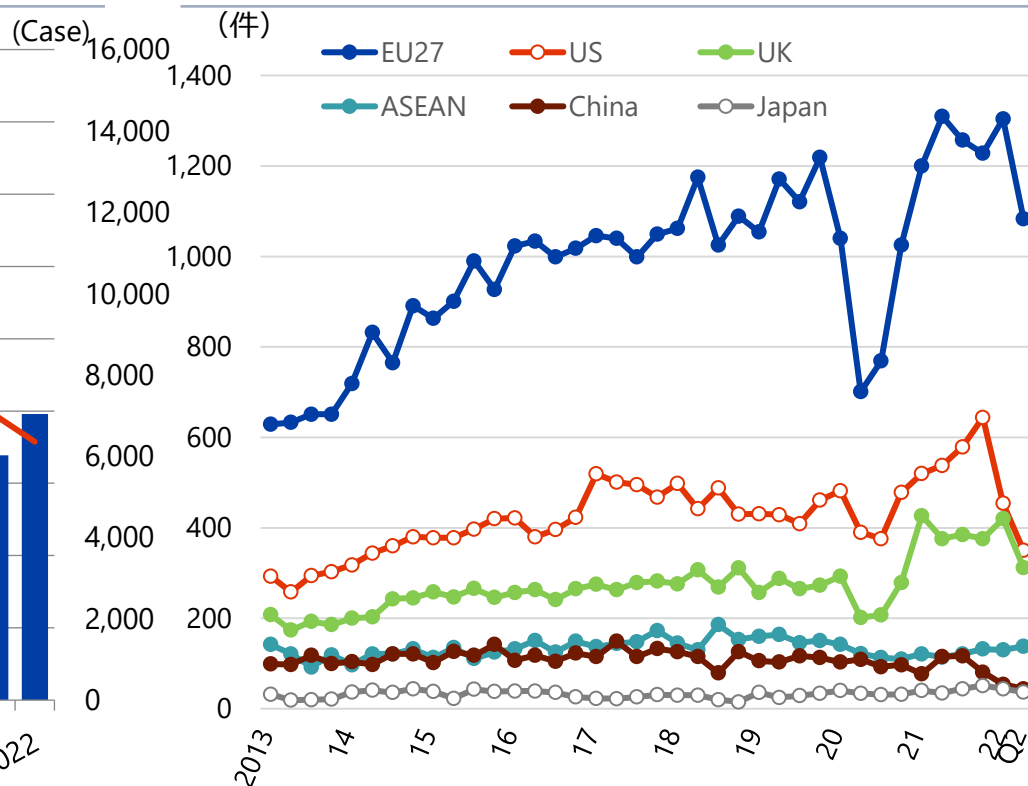
- In 2021 the number of global **cross-border mergers and acquisitions increased 36.6% to a record high of 14,364**. The total value of M&As was the second highest on record (\$1,607.2 billion) after 2007. The EU, US, and UK achieved a V-shaped recovery.
- However, China is seeing declining momentum in its economic recovery. Its M&A numbers began to decline from the end of 2021, reaching the lowest levels since 2010 in the second quarter of 2022. The US also saw low levels of M&A for the first time in eight years since 2014.

**Transition in total values of global cross-border M&A and number of deal**



Source: Workspace(Refinitiv)(as of July 4, 2022)

**Number of cross-border M&A deals in EU, US, UK, China and Japan (Quarterly)**



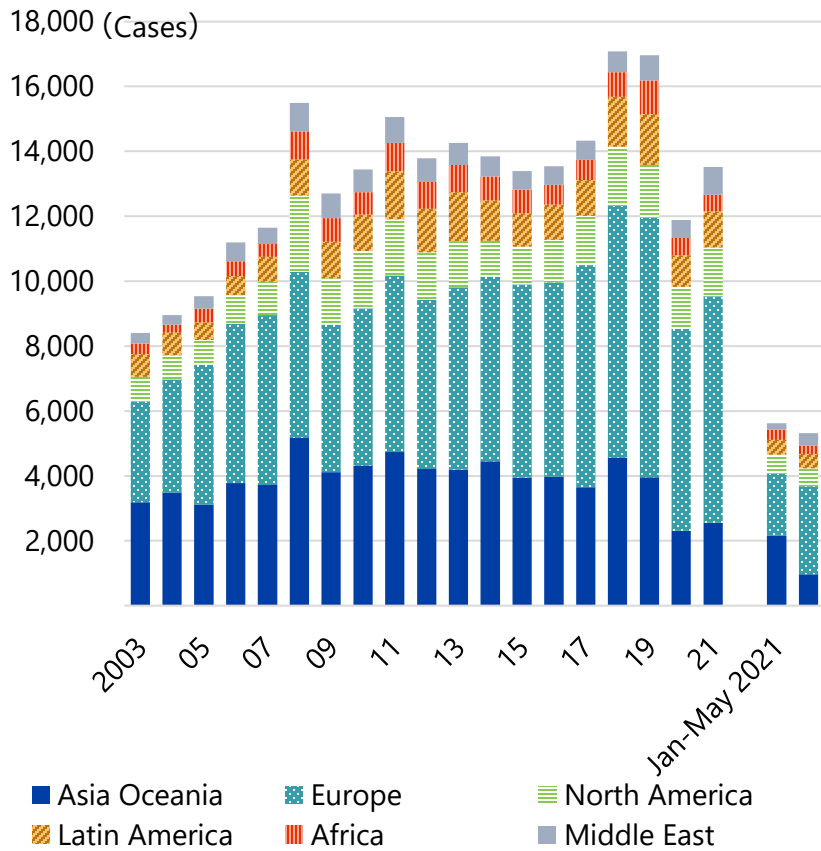
Note: Based on the nationalities of the acquired companies. 2) Data up to the second quarter of 2022.

Source: Workspace(Refinitiv)(as of July 11, 2022)

# 3 | Global Greenfield Investment Rebounding

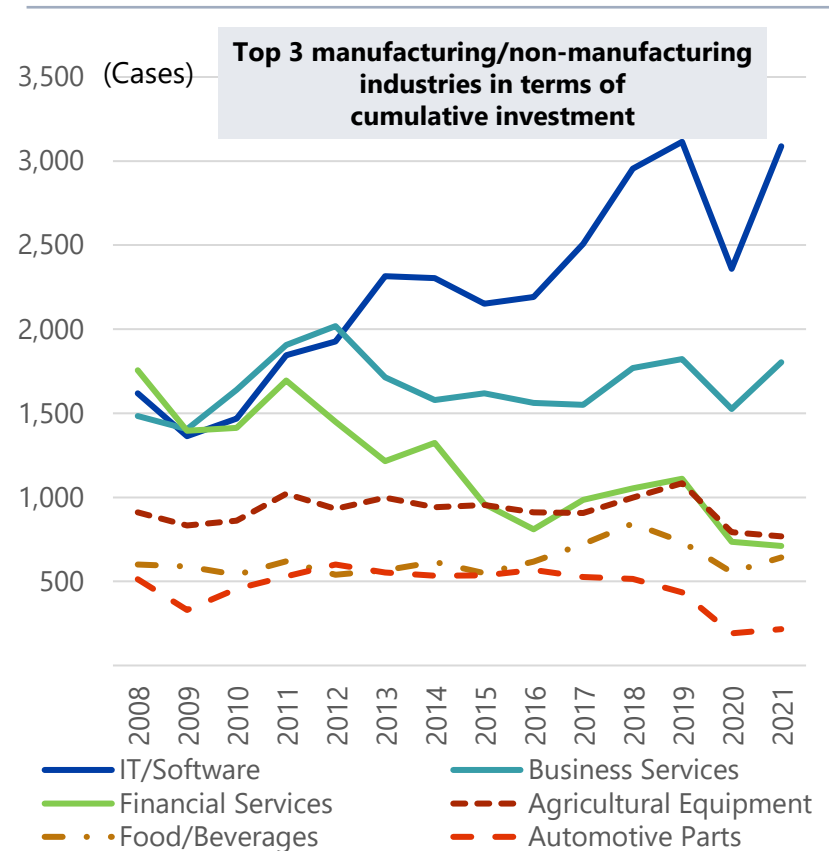
- Global greenfield investment in 2021 increased 13.7% to 13,515 investments. There was still **no V-shaped recovery** to pre-COVID 19 (2019) levels.
- Investments in IT/software and business services increased, but **investment in major manufacturing sectors stagnated**.

Number of greenfield investments worldwide (by region)



Source: fDi Markets (Financial Times)

Number of Greenfield Investments by Major Industry Sectors



## 4 | Global Large Semiconductor FDI Plans (Announced after 2021)

- While new FDI in manufacturing stagnated, **investment in semiconductor manufacturing was brisk, supported by subsidies and other support from the governments of major countries.** Major players such as Intel, Samsung, and TSMC continue to announce enormous investment plans.
- At least 12 new FDI plans with an investment value exceeding \$2 billion will be launched between 2021 and May 2022.

### Major planned outward FDIs in semiconductor manufacturing from 2021 (investment projects exceeding \$2 billion)

Investing company	Date of announcement	Investment location	Investment project overview	Amount (billion USD)
Intel (US)	March 2022	Germany Saxony-Anhalt	Will build a new large-scale semiconductor plant with production expected to begin in 2027. Plans to invest over 80 billion euros in Europe with subsidies under the European Chips Act.	19.3
Samsung Electronics (South Korea)	February 2021	US Texas	Announced construction of a manufacturing plant for contracted semiconductor production. Plans to receive US government subsidies to produce cutting-edge system semiconductors used in 5G, AI technologies, etc. Operations are scheduled to commence in the second half of 2024.	17
Intel (US)	March 2022	Ireland County Kildare	Additional investment of 12 billion euros in existing plant to double manufacturing space. Alongside manufacturing semiconductors of its own design, the company also provides contracted manufacturing. It's plan includes the manufacture of semiconductors for automotive applications.	13.4
TSMC (Taiwan)	November 2021	Japan Kumamoto Prefecture	Received 476 billion yen in government subsidies to build a logic semiconductor production plant with extra investment from Sony and Denso. The company plans to produce logic semiconductors with circuit line widths in the 10 to 20 nanometer range. Shipments are expected to begin at the end of 2024.	8.6
Micron Technology (US)	October 2021	Japan Hiroshima Prefecture	Announced a \$150 billion investment over 10 years in expanded semiconductor memory production and R&D worldwide. A new DRAM plant is reportedly being built in Hiroshima Prefecture as part of the project.	7
Intel (US)	December 2021	Malaysia Penang State	Established a new facility for semiconductor chip packaging processes and testing in Bayan Lepas, Penang through a local subsidiary. Production is expected to begin in 2024.	7
Intel (US)	December 2021	Italy	Part of a plan to invest over 80 billion euros in Europe. Plans to build a state-of-the-art back-end manufacturing facility in Italy.	5
UMC (Taiwan)	February 2022	Singapore	To meet demand for 5G and automotive-related products, the company will build a new plant to produce semiconductor chips in the 20-nanometer range. Production is expected to start in 2024.	5
GlobalFoundries (US)	June 2021	Singapore	Built a new 300mm wafer plant with investment from the Singapore government and customers. Aims to start operating by the end of 2023. Its combined production capacity with its existing plants will be increased to 1.5 million wafers/year.	4
TSMC (Taiwan)	July 2021	China Jiangsu Province	Increased production of 28-nanometer manufacturing process at its existing plant. Produces automotive semiconductors and other products to meet growing customer demand. Mass production is expected to start in the second half of 2024.	2.9
Infineon Technologies (Germany)	February 2022	Malaysia Kedah state	Constructed three new manufacturing buildings at its existing plant to increase front-end production capacity of wide bandgap power semiconductors (SiC/GaN). Shipments are expected to begin in the second half of 2024.	2.2
AT&S (Austria)	June 2021	Malaysia	As the company's first manufacturing site in Southeast Asia, this new plant will produce high-performance printed substrates and integrated circuits. Production is scheduled to begin in 2024. Also promotes local R&D.	2.1

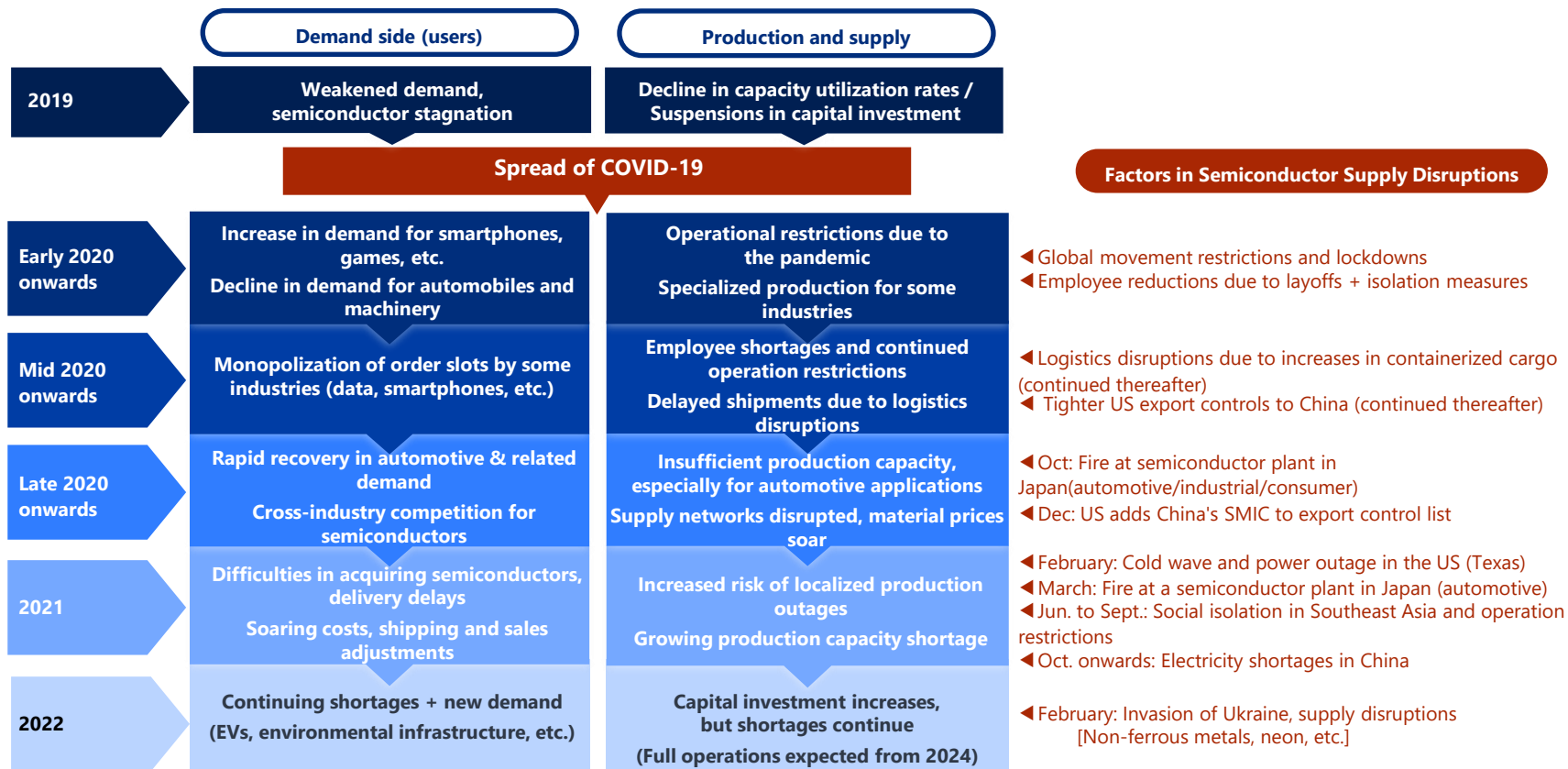
Source: FDI Markets, company press releases, information from press, etc. (some only based on press information.)



# 5 | History of the Semiconductor Supply Chain Disruption

- Capital investment was weak in 2019 due to stagnation amongst semiconductors. After the COVID-19 outbreak, demand for semiconductors for automobiles and machinery fell further. However, demand in some industries surged due to people staying at home, 5G technologies, and other developments.
- Starting in the second half of 2020, competition to acquire semiconductors rose due to the recovery of automotive and peripheral industries. **Tighter US export controls, fires at major factories, power shortages, and localized measures to halt factory operations spurred on the semiconductor shortage.**

## What happened to the semiconductor supply chain after the spread of COVID-19



Source: Company interviews, JETRO business news briefs, reports from JETRO offices, etc.)

## 6 | Successive Investments in Data Centers and Submarine Cables

- Examining worldwide digital technology investments, **data center investments particular stood out**. Google and AWS plan to build or invest in additional data centers around the world. In **addition, there has been successive investments in submarine cables**. Google announced plans for Firmina, an undersea cable that will connect North and South America at high speeds.
- Amongst M&As there were a number of cases of major companies acquiring digital-related companies with promotion of DX (digital transformation) acting as backdrop.

### Global digital-related greenfield investments (2021)

Company name	Origin	Investments	Primary projects
Google	US	24	- Investments in data centers in Canada, Israel, and others - Installation of submarine cables connecting Brazil, Uruguay, and Argentina
Amazon Web Services (AWS)	US	18	- Investment in data centers in New Zealand, UAE, etc. - R&D investments in Germany
NTT Limited	Japan	16	- Investments in data centers in Indonesia and Malaysia - Construction of submarine cable connecting Singapore, Malaysia and India
Equinix	US	15	- Investment in hyperscale data centers around the world
Huawei Technologies	China	14	- Invested in a second data center in Mexico - Invested in a training center in Angola
Microsoft	US	12	- Invested in data center in Indonesia - R&D investments in Israel
GIC Private Limited	Singapore	11	- Investments in data centers in Japan, Mexico, Ireland, etc.
Omnillion	Canada	9	- Investment in data centers in Mexico, Argentina, etc.
Tata Consultancy Services (TCS)	India	9	- Additional investments in drone research facilities in the US - R&D investments in Saudi Arabia and Netherlands
HCL Technologies	India	9	- Invested in innovation center in Canada

*Note:* Digital-related industries are the five investment source industries as defined by fDi Market (software and IT services, semiconductors, telecommunications, business machinery and equipment, and consumer electronics), while referencing the information and communication technology industries defined by the OECD and other sources. Excludes production activity projects. The ten companies are listed in descending order of number of projects.

*Source:* fDi Markets (Financial Times)

### Digital-related M&A (2021)

Company name (acquiring party)	Origin	Value (Millions of dollars)	Investments
Siemens	Germany	17,825	10
Cellnex Telecom	Spain	16,408	9
Hitachi	Japan	9,600	4
SK Hynix	South Korea	9,000	2
SoftBank Group	Japan	8,742	34
Just Eat Takeaway	Netherlands	7,456	2
Panasonic	Japan	7,127	3
Renesas Electronics	Japan	5,990	2
Sinch	Sweden	4,449	5
Iliad	France	4,363	2

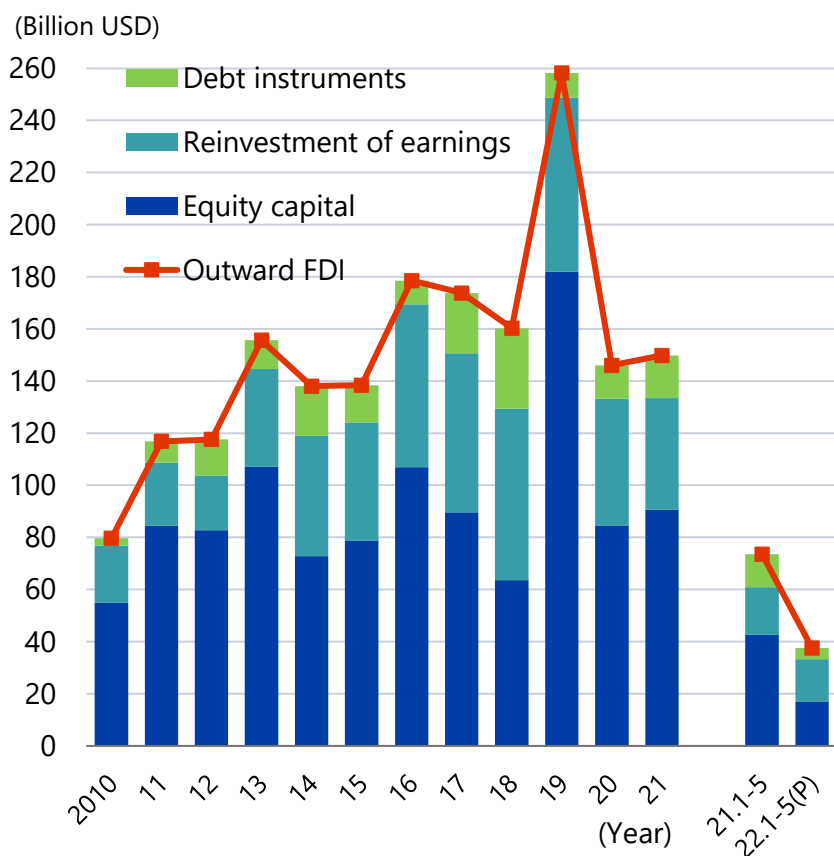
*Note:* Digital-related industries refers mainly to high-tech and telecommunication industries. The ten companies are listed in descending order of amounts.

*Source:* Workspace (Refinitiv)

# 7 | Japan's Outward FDI Sees Little YoY Change in 2021

- Japan's outward FDI in 2021 increased by 2.6% from the previous year to \$149.8 billion. While global FDI has experienced a V-shaped recovery, **outward FDI by Japanese companies remains stagnant.**
- Outward FDI halved between January and May 2022. There was decreased appetite for investment due to heightened uncertainty in the global economy.

Trends in Japan's outward FDI by type



Note: JETRO converted the figures disclosed in JPY into USD  
 Source: "Balance of Payments Statistics" (Ministry of Finance, Bank of Japan)

Japan's outward FDI by country/region

(Million USD, %)

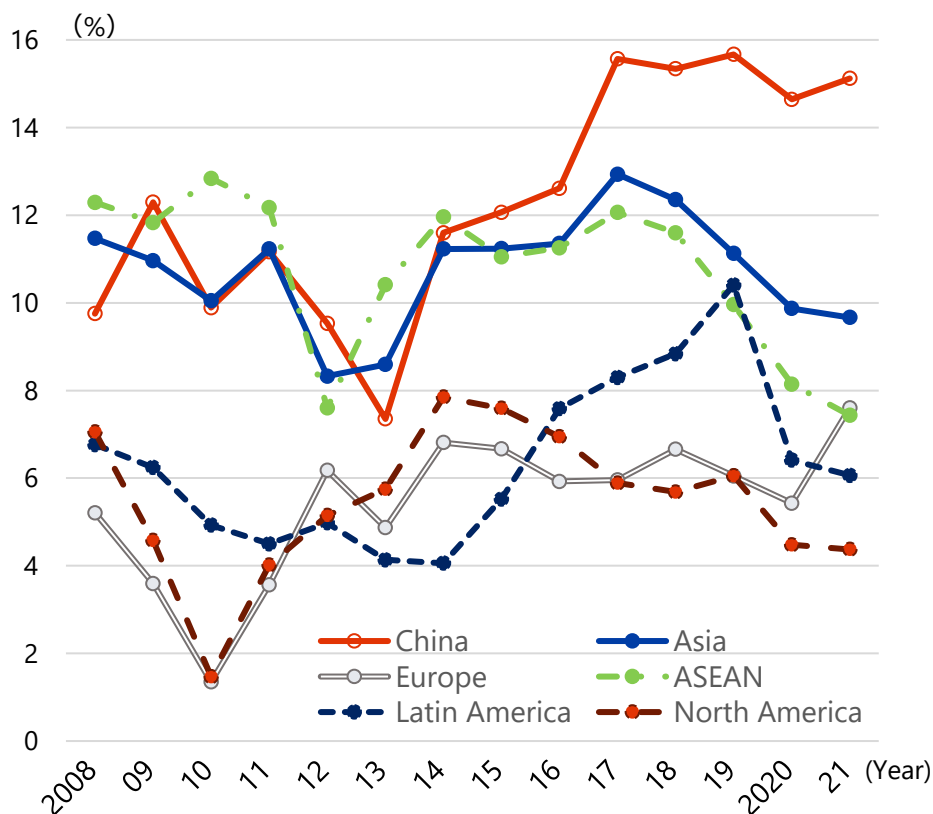
	2021	Growth rate	January-May 2022(P)	Growth rate
Asia	48,864	32.0	9,077	-63.3
China	10,020	-9.3	2,572	-33.9
ASEAN	29,238	61.4	3,523	-77.9
Singapore	18,011	134.3	-263	-
Thailand	2,951	-19.9	996	-36.6
Indonesia	3,748	58.6	1,339	44.9
North America	62,795	-7.8	13,874	-53.9
US	62,094	-6.3	13,099	-55.6
Latin America	7,444	-42.3	3,359	-42.2
Oceania	-167	-	1,581	-
Europe	30,268	59.9	9,183	-30.7
Germany	7,088	156.6	2,460	-59.9
UK	14,933	70.3	1,122	-69.9
World	149,814	2.6	37,580	-48.9

Note: JETRO converted the figures disclosed in JPY into USD  
 Source: "Balance of Payments Statistics" (Ministry of Finance, Bank of Japan)  
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# 8 | High Returns in China, Impacts of Lockdowns a Concern

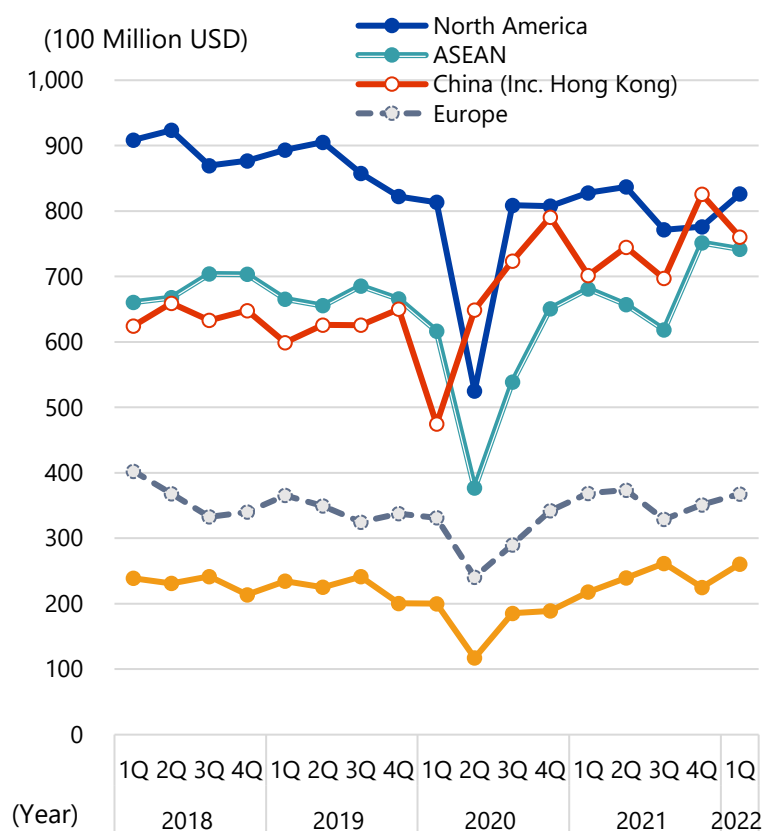
- **The ratio of return on outward FDI in China by Japan in 2021 was as high as 15.1%**, far exceeding other major investment destinations such as North America (4.4%), Europe (7.6%) and ASEAN (7.4%).
- Concerns for 2022 include the impact of the economic slowdown associated with the zero-COVID-19 policy on the earnings of Japanese companies in China.

The ration of return on outward FDI in major FDI destinations



Note: The ratio of return on outward FDI = FDI return (by region) for each period / Average of outward FDI stock at the beginning and end of the period x 100 (%)  
 Source: Balance of Payments Related Statistics (Ministry of Finance, Bank of Japan)

Sales of overseas subsidiaries



Source: "Quarterly Survey of Overseas Subsidiaries" (Jan. to Mar. 2022)

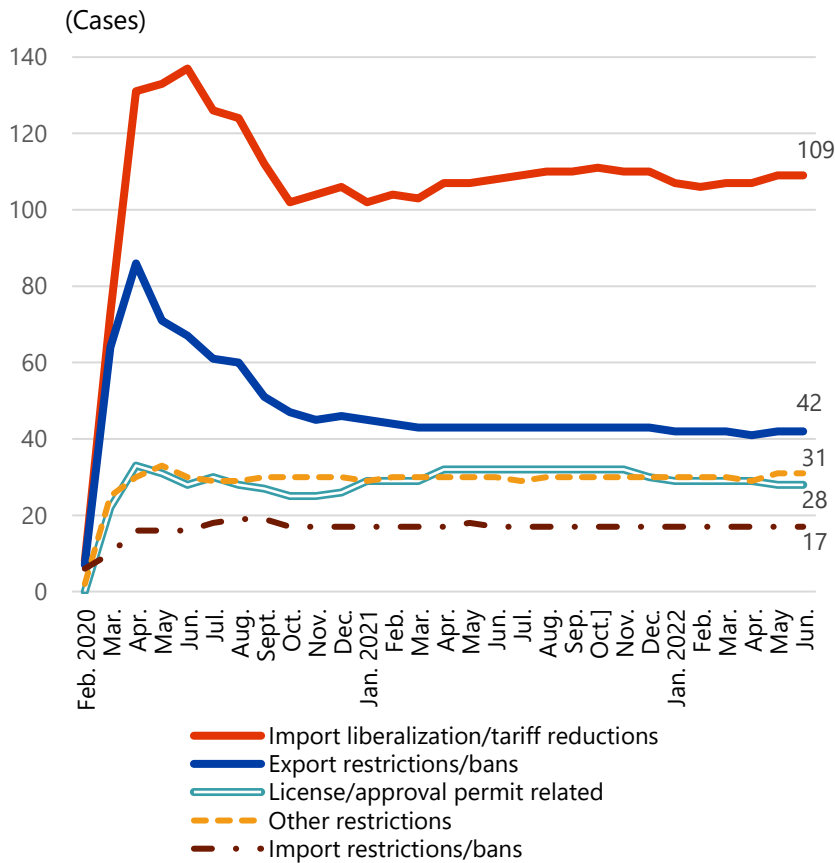
## **III. Trends in Trade Rule Formation**

**Increased Risk of Fragmentation, Progress with Economic Security Policies**

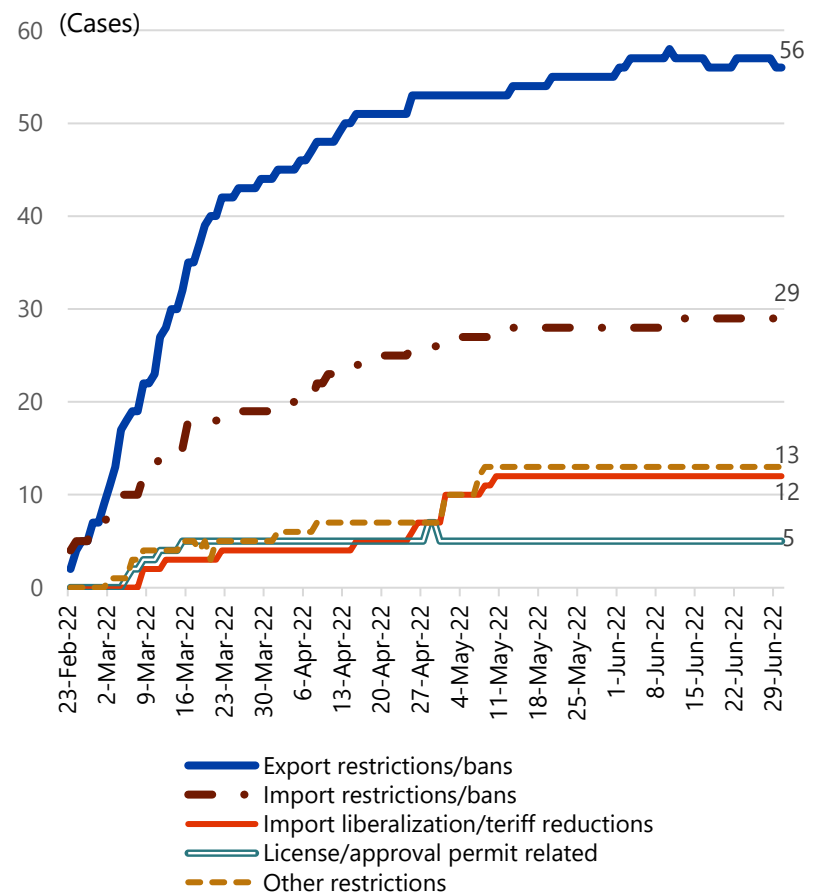
# 1 | Trade Policies in Response to International Affairs

- Of the trade-related measures that countries and regions tentatively introduced in response to COVID-19, 109 measures to liberalize imports or reduce tariffs and 42 measures to restrict or ban exports were still in effect as of the end of June 2022.
- Restrictions and bans on imports and exports to Russia expanded immediately after its invasion of Ukraine.

**Trade measures related to COVID-19**



**Trade measures related to Russia's invasion of Ukraine**

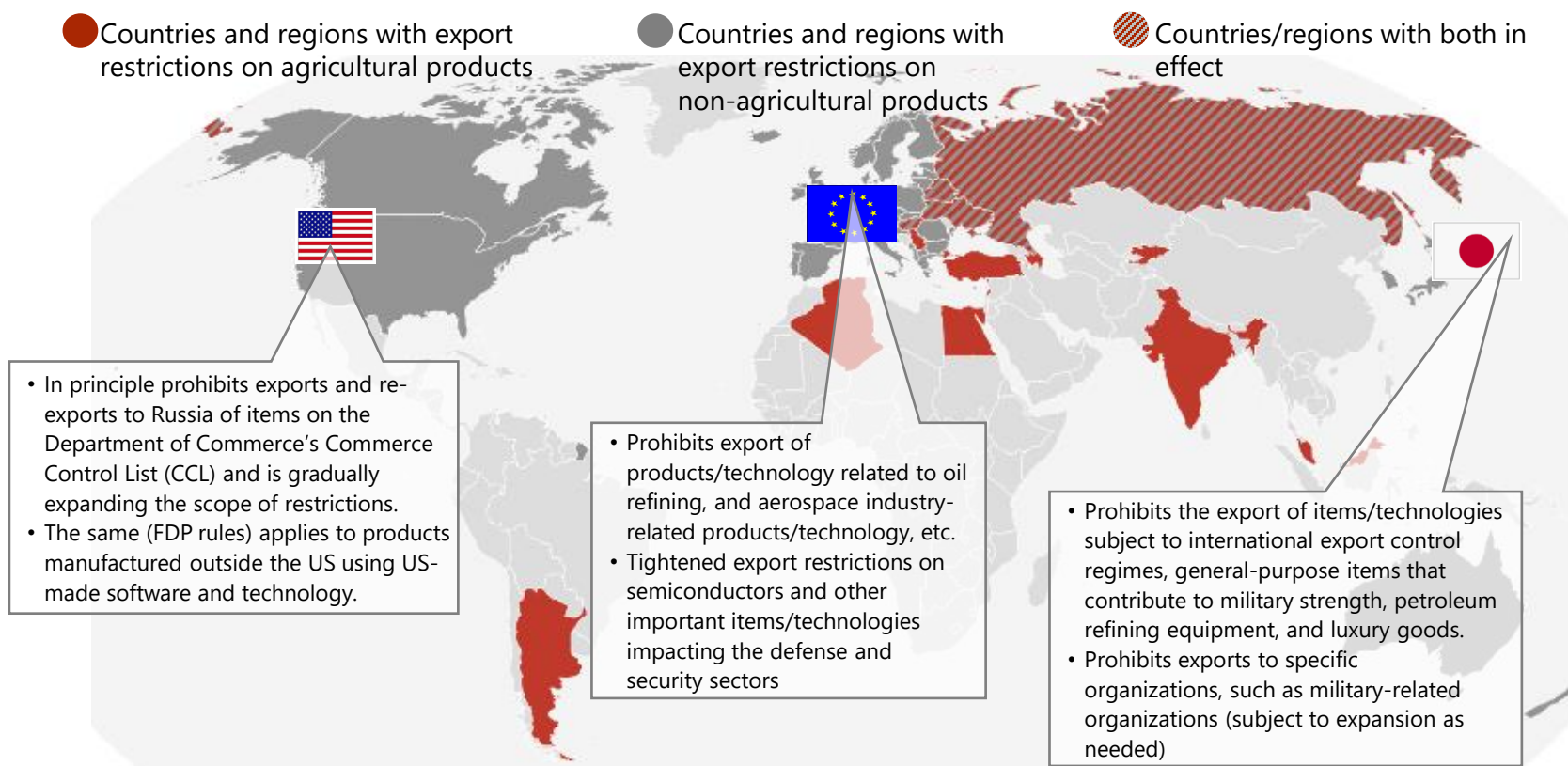


Source: WTO and ITC, Temporary Trade Measures

## 2 | Restrictive Measures against Russia led by the US and the EU

- The export bans and restrictive measures following Russia's invasion of Ukraine spread amongst countries and regions, particularly Europe, the US, and Japan, in an extremely short period of time. The US announced sanctions, including an export ban, on the day of the invasion. EU sanctions followed on the next day.
- As of the end of June, **57 countries had implemented export bans or restrictions**. In contrast, **182 countries and regions did not invoke any punitive measures**.

Export restrictions and bans related to invasion of Ukraine (as of June 30, 2022)

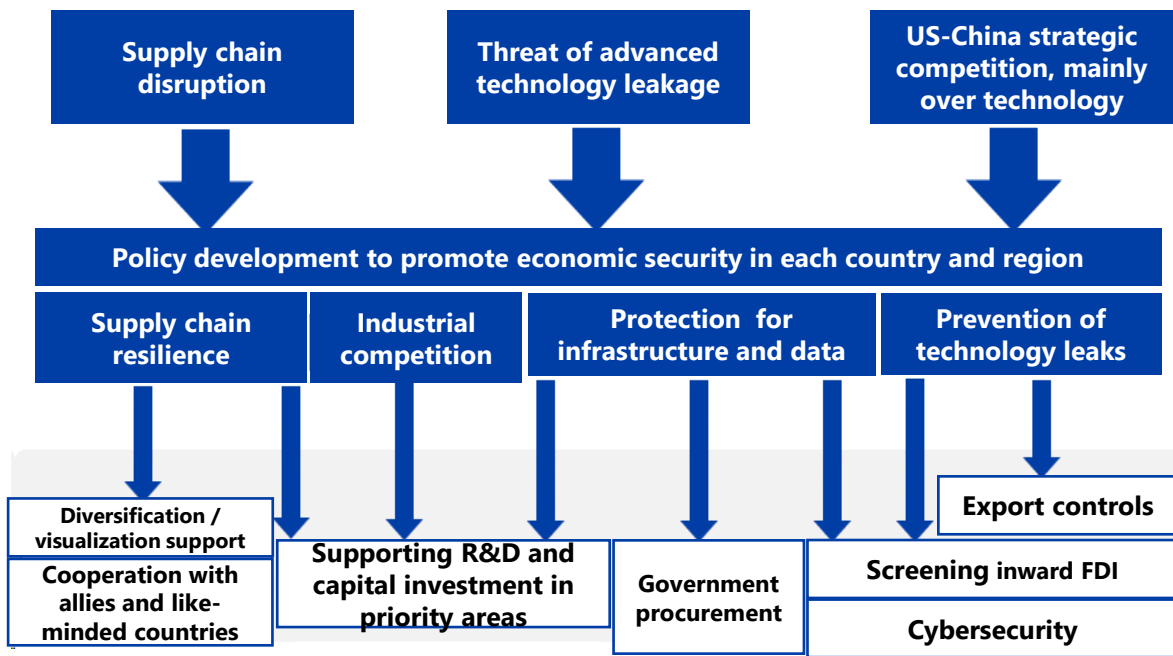


Source: ITC (accessed June 30, 2022)

# 3 | Growing Importance of Economic Security Amidst the Global Environment

- Russia's invasion of Ukraine is further increasing interest in economic security and heightening momentum for the introduction of related policies in major countries. Development has been made in formulating policies aimed at strengthening supply chains, enhancing industrial competitiveness, and preventing key technology leakage.
- Japan's Diet passed the bill to promote Economic Security in May 2022. In addition, export controls under the Foreign Exchange and Foreign Trade Acts were strengthened.

## Examples of major policies motivated by economic security



Source: METI, Cabinet Office

## Summary of Japan's economic security related bill

### Framework and primary initiatives

- 1. Securing critical supplies**  
Support for certified businesses that have submitted supply plans for goods designated by cabinet ordinance
- 2. Ensuring provision of core infrastructure roles**  
Prior reviews of outsourcing plans for installation, maintenance, management, etc. for facilities of security concern in 14 specified fields.
- 3. Supporting the development of advanced technologies**  
Providing information and financial support for R&D, etc. Establishing public-private councils and think tanks
- 4. Non-disclosure of Patent applications**  
Preservation of patents designated during examinations (JPO to Cabinet Office). Foreign filings are prohibited and compensation is provided for losses that would normally be incurred

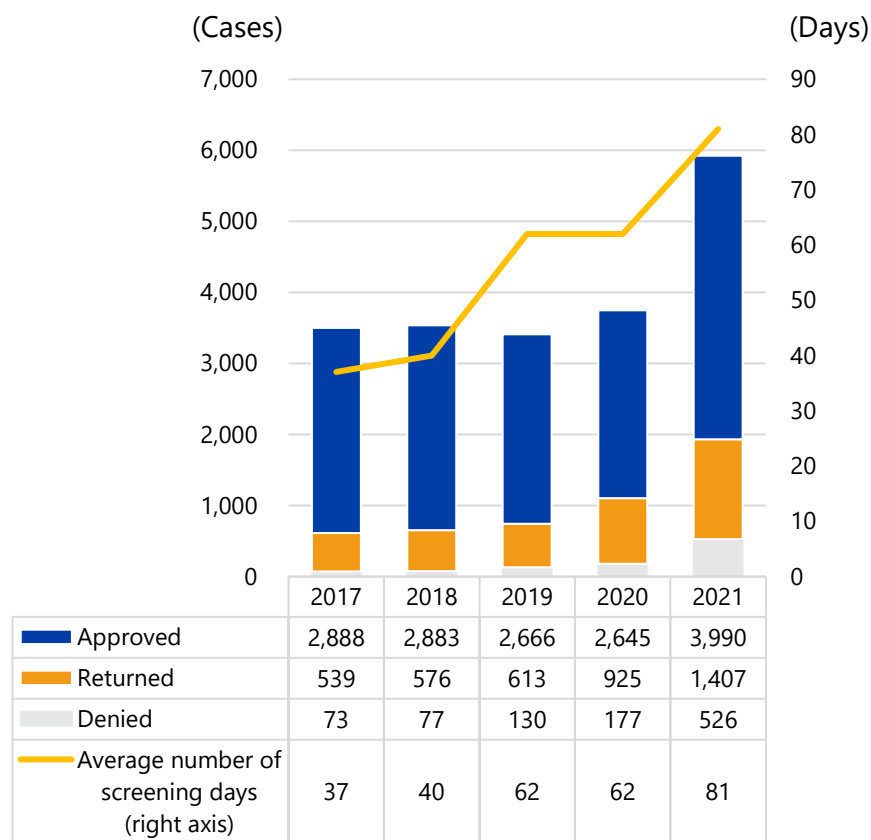
Source: Cabinet Office



# 4 | U.S. Export Controls on China : Applications are Approved

- The number of applications in the US has been increasing yearly as exports controls on China have been tightened. The number of days for screening per case has also been becoming longer.
- In 2021, 67% of applications for export licenses to China were approved. For applications regarding Huawei and SMIC (between April to November 2020), 70% and 90% were approved, respectively.

**Results of application screening for export licenses to China (2017 to 2021)**



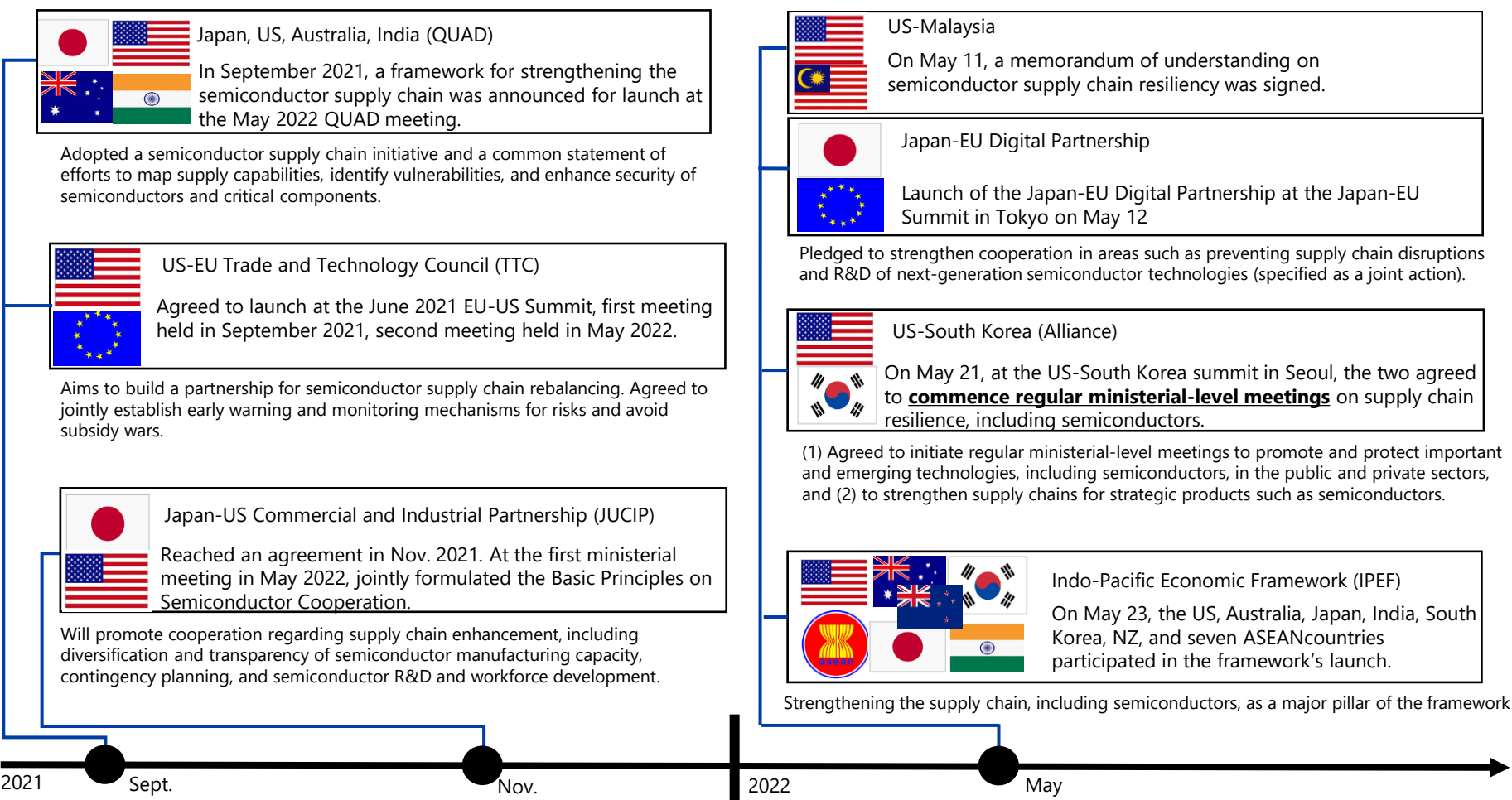
**Approval status of export license applications by the US Department of Commerce (Apr. 20 to Nov. 9 2020)**

Company	Cases (% of total)	Amount (Billion USD)	Example items (subject to controls)	
Huawei Technologies	Approved	113 (69.3%)	614.3	Semiconductors below 5G Cryptographic information security
	Returned	48 (28.4%)	297.8	Sensor/laser technologies, etc.
	Denied	2 (1.2%)	0.6	Unknown
Semiconductor Manufacturing International Corporation (SMIC)	Approved	188 (91.3%)	418.9	Semiconductor manufacturing equipment and materials, materials processing technologies, information security, etc.
	Returned	17 (8.3%)	11.6	Materials processing Technologies, information security, etc.
	Denied	1 (0.5%)	0.6	Unknown

Note: 1) Both companies are currently on the US Export Eligibility List (EL). Permission is required even for ordinary exports which do not typically require an export license.  
 2) Number of cases and amount are based on examinations. May differ from actual export results.  
 Source: US House of Representatives Foreign Affairs Committee

# 5 | Coordination for Supply Chain Resilience

- Since 2021, **coordination between like minded countries to increase supply chain resilience has progressed**. The goal is to strengthen unity by mapping supply capacities for semiconductors and critical components, identifying vulnerabilities, and ensuring security against risks.
- Japan is also strengthening its cooperation with the US and the EU. Supply chain resilience is also included as a major pillar in the IPEF framework.



Source: Various materials

# 6 | Economic and Trade Frameworks in the Indo-Pacific Region

- The CPTPP (entered into force in December 2018) and RCEP (entered into force in January 2022) are leading the way as mega FTAs.
- Fourteen countries have pledged to participate in the IPEF, including the QUAD (Japan, the US, Australia, and India) plus seven ASEAN countries, South Korea, NZ, and Fiji.
- The participants launch discussion on the four pillars, including **digital economies and supply chain cooperation**.

IPEF Participating Countries and Other Existing Frameworks



Overview of the IPEF Pillars (as discussed)

Pillar	Primary content (joint statement)	US-side considerations
Trade	<ul style="list-style-type: none"> <li>• Creative approaches in trade and technology policies</li> <li>• Cooperation in digital economies</li> </ul>	<ul style="list-style-type: none"> <li>• Digital economies: standards related to data free flow and data localization, addressing privacy and unethical use of artificial intelligence (AI)</li> <li>• Labor, environment and responsibility of companies to provide explanations.</li> </ul>
Supply Chains	<ul style="list-style-type: none"> <li>• Coordination of crisis response measures, expanded cooperation for impact mitigation</li> <li>• Securing access to semiconductors, vital minerals, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Coordination of early warning systems, supply chain visibility for vital mineral resources, improved traceability of critical sectors, and diversification efforts</li> </ul>
Clean Energy/Decarbonization Infrastructure	<ul style="list-style-type: none"> <li>• Development and deployment of clean energy technologies</li> <li>• Supporting infrastructure development and providing technical cooperation, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• New measures for renewable energy, carbon removal, energy efficiency standards, and methane emissions</li> </ul>
Tax Anti-corruption	<ul style="list-style-type: none"> <li>• Preventions for money laundering and bribery enacted and enforced</li> </ul>	<ul style="list-style-type: none"> <li>• Sharing of tax-related information and penalizing bribery pathways in line with UN standards</li> </ul>

Source: Joint Statement (February 2022) and US government documents.

# 7 | Protectionist Measures Surfacing in the Digital Sector

- As digitization advances, countries has **introduced its own regulations for data management**. In **many cases**, domestic laws **impose protectionist measures**, such as restrictions on the cross-border transfer of data and requirements that data be stored or processed within a specified jurisdiction.
- 18 of 74 countries surveyed in an OECD survey have cross-border data movement restrictions and 24 have data localization requirements.

**Digital protectionism measures in major countries (by region)**

Regions surveyed (74 countries total)	Restrictions on cross-border data transfer		Requirement for data localization	
	Regulating country (18)	Specific example	Regulating country (24)	Specific example
Asia-Pacific (region) (16)	9 countries (56%)	- Thailand: Act on personal information protection - China: Data Security Act, etc.	8 countries (50%)	- Indonesia: Government regulations on electronic systems and transaction operations - China: Cyber security laws, etc. - Vietnam: Cyber security laws (*)
Europe (34)	3 countries (9%)	- Kazakhstan: Personal data protection laws - Russia: Federal laws on personal data	10 countries (29%)	- Greece: Electronic communications data act - Russia: Federal laws on personal data
North America/Latin America (14)	3 countries (21%)	- Brazil: Personal data protection laws (*) - Bolivia: Communications and information technology laws, etc.	2 countries (14%)	- Brazil: Government regulations related to information and communications - Mexico: Federal communications laws
Middle East/Africa (10)	3 countries (30%)	- Saudi Arabia: Framework for cloud computer regulations	4 countries (40%)	- Saudi Arabia: Cyber security system - Turkey: Rules on (electronic) payments, etc.

*Note:* Countries and regulations marked with a \* are not counted as surveyed regions or regulating countries in the OECD survey.

*Source:* Compiled from OECD Digital STRI (Services Trade Restrictiveness Index), (published in February 2022) and other sources.

## 8 | Twelfth WTO Ministerial Conference (MC12) Agrees on Multinational Rules

- At MC12 it was decided to **maintain the current practice of not imposing custom duties on electronic transmissions**.
- In addition to the above, attendees discussed responses to emergency situations such as food insecurity and COVID-19. They also agreed on the direction in which multinational efforts should be made, including on negotiations for fisheries subsidies.

### Primary results from the 12th WTO Ministerial Conference (MC12)

Sector/Points of Discussion	Primary Areas of Agreement
No custom duties on electronic transmission	<ul style="list-style-type: none"> <li>Current practice of not imposing customs tariffs on electronic transmissions to be <b>maintained until the 13th Ministerial Conference (MC13) scheduled for 2023</b>. However, if MC13 is held after March 31, 2024, the Ministers or the General Council will decide by that date whether or not to extend it.</li> <li>Periodic reviews will also be conducted, including scope, definition, and impact.</li> </ul>
Emergency responses to food insecurity	<ul style="list-style-type: none"> <li>Attendees expressed concern that disruptions, record prices, and excessive volatility in the trade of food and agricultural products could undermine member food security.</li> <li>They determined that emergency measures introduced to address food security concerns <b>minimize trade distortion to the greatest extent possible, and be temporary, targeted, transparent, and reported and implemented in accordance with WTO rules</b>.</li> </ul>
Use of patents required for production of COVID-19 vaccine	<ul style="list-style-type: none"> <li><b>Determined that patents used for the manufacture and supply COVID-19 vaccines could be used without the right holder's consent</b> to the extent necessary to deal with the pandemic.</li> <li>Attendees determined this would apply to all developing country members and encouraged developing country members with the capacity to produce COVID-19 vaccines to make a binding commitment not to use this decision.</li> </ul>
Fisheries subsidies	<ul style="list-style-type: none"> <li>Member countries as a whole agreed to prohibit subsidies for IUU fishing (illegal, unreported, and unregulated fishing) <b>along with subsidies for overfished stocks provided without requiring efforts to restore the stocks</b>.</li> <li>Agreed to continue negotiations based on the issues presented prior to the MC12 meeting to propose additional provisions for MC13 towards achieving a comprehensive agreement.</li> </ul>
WTO reforms	<ul style="list-style-type: none"> <li>Members committed to working toward necessary reforms in the WTO.</li> <li>While reaffirming the basic principles of the WTO, attendees envisioned reforms to improve all of the WTO's functions.</li> <li>The General Council and subsidiary bodies will carry out their work, assess progress and, if appropriate, consider decisions to be submitted to the next Ministerial meeting.</li> </ul>

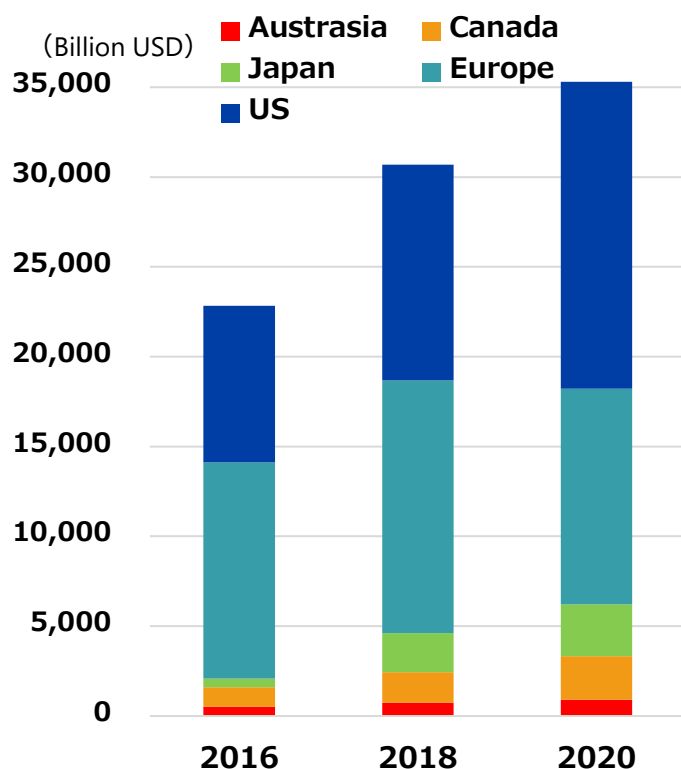
# **IV. Policies and Business for Sustainable Societies**

## **A Wave of Stricter Laws and Compliance Requirements Arriving for Companies**

# 1 | Disclosure Standards Aiming for Expanded ESG Investment and Convergence

- ESG investment, a form of investment that incorporates environmental, social, and governance factors, is expanding every year. The **concept of considering sustainability and risk management in company management**, including human rights and climate change countermeasures, is spreading.
- There are several international ESG disclosure standards for companies that investors refer to. The IFRS Foundation announced the creation of a new standard -setting board- the International Sustainability Standards Board (ISSB) in November 2021. The ISSB is in the process of formulating the IFRS sustainability disclosure standard as a new standard.

## Sustainable investment assets in major countries



Source: GSIA, Global Sustainable Investment Review

## Comparison of major global ESG disclosure frameworks

Name of current disclosure standard	Establishment date of disclosure framework	Applicable sectors	Main purpose/characteristics
<b>GRI Standard</b>	2000	Overall ESG	Identifies companies' economic, environmental, and social impacts and discloses them in a sustainability report. In 2016, GRI transitioned from providing guidelines to setting the standards for sustainability reporting.
<b>CDP</b>	2000	Climate change, water and forest	Sends questionnaires on climate change, water and forest to companies with high market capitalization, companies are rated at their information disclosure and environmental activities based on the responses, and the results are announced to the public.
<b>CDSB Framework</b>	2007	Environment and climate change	A framework that defines an approach for disclosing environmental and climate change information in companies' primary reports that is useful to investors
<b>IIRC</b>	2010	Finance, overall ESG	Created a disclosure format called integrated reporting, which links financial and non-financial information and explains how the company creates long-term value.
<b>SASB Standard</b>	2011	Overall ESG	Provides standards for companies to disclose financially relevant sustainability information to investors. Provides disclosure standards for 11 sectors and 77 industries.
<b>TCFD Recommendations</b>	2015	Climate change	Provides a consistent framework for companies to disclose climate change-related risk and opportunity information to investors and others

Source: Websites of respective standards organizations

## 2 | Legislation Makes Due Diligence Mandatory

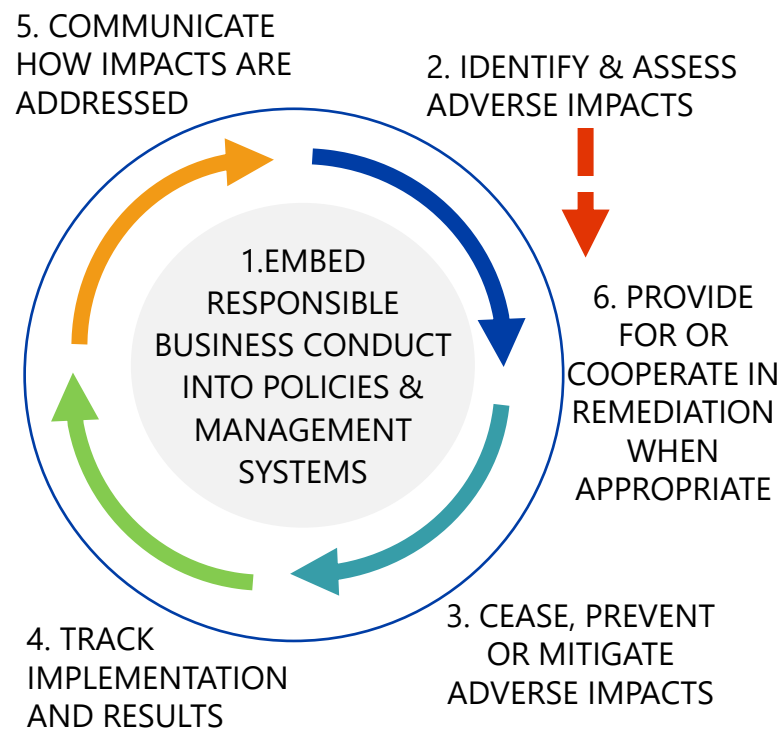
- **The number of countries, especially in Europe, that mandate human rights due diligence through legislation is gradually increasing**, as voluntary efforts are deemed insufficient. In February 2022 the EU (European Commission) published a draft directive on due diligence that encompassed human rights and the environment.
- According to OECD guidance, human rights due diligence processes and measures can be broadly classified into six categories. Over the course of a series of continuous cycles, leading European, US, and Oceania companies are deepening their efforts year by year.

### Mandatory human rights due diligence in Europe, US and Australia

Country / Region	Laws / Regulations	Implementation Date
U.S. California	California Transparency in Supply Chains Act	Jan 2012
U.K.	Modern Slavery Act 2015	Jul 2015
France	Duty of Vigilance Act	Mar 2017
Australia	Modern Slavery Act 2018*	Jan 2019
EU	Supply chain due diligence obligations for Union importers of tin, tantalum and tungsten, their ores, and gold originating from conflict-affected and high-risk areas	Due diligence obligations applied from Jan 2021
Norway	Act relating to enterprises' transparency and work on fundamental human rights and decent working conditions	Jul 2022
Germany	Supply chain due diligence Act	Jan 2023
Netherland	Child Labor Due Diligence Act	Not determined
Canada	An Act to enact the Fighting Against Forced Labor and Child Labor in Supply Chains Act and to amend the Customs Tariff	Not implemented (The bill introduced on Nov 2021)
EU	Directive on corporate sustainability due diligence	Not implemented (The bill introduced on Feb 2022)

Note: NSW put the Modern Slavery Bill 2018 into force in NSW in January 2022 separately from the Australian Commonwealth.  
Source: Compiled from company websites and news reports.

### Due Diligence process and Supporting measures



Source: OECD Due Diligence Guidance for Responsible Business Conduct



### 3 | Avoiding Human Rights Risks by Utilizing Outside Resources Like Experts

- Examining examples of efforts by European, US, and Oceanian companies in each of the human rights due diligence processes, there is an **increased trend towards responding to these risks by effectively utilizing external resources** such as various experts and non-profit organizations.
- More companies are becoming involved in human rights risk management, with examples being reported not only from large companies but also from small and medium-sized companies.

**Examples of human rights due diligence practices**

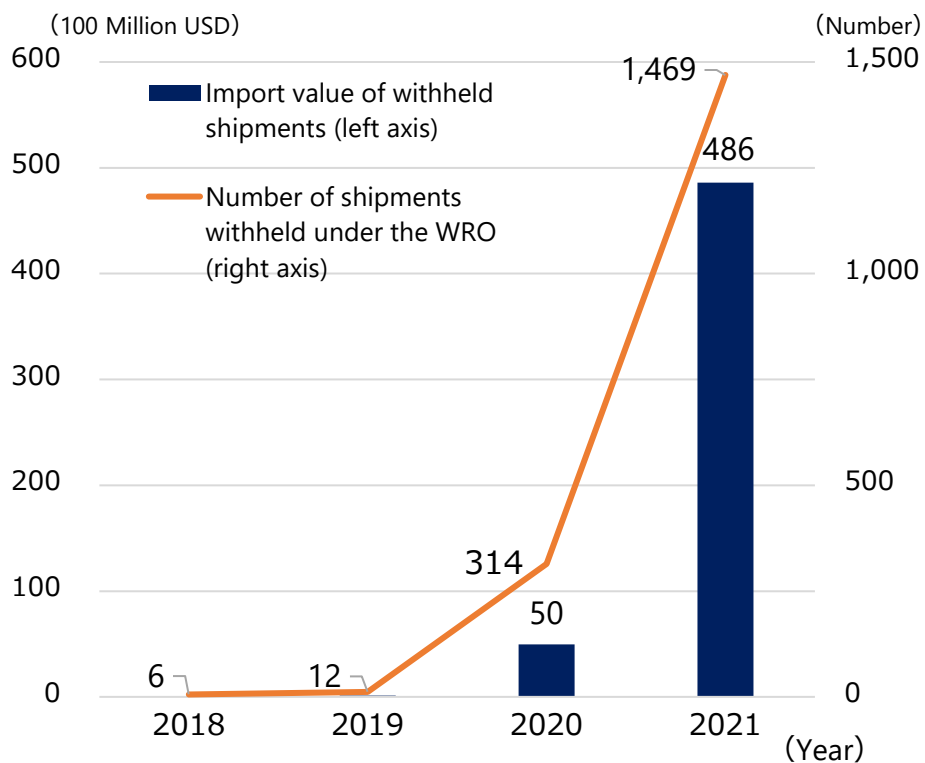
	Company name (industry)	Nationality	Overview
(1) Incorporation into management systems	L'Oreal (Cosmetics)	France	Established an advisory committee for diversity, equity, and inclusion with 12 outside experts in 2021. Monitors for major risk exposures.
(2) Risk identification and assessment	Bel & Bo (Apparel, small/medium)	Belgium	Analyzed the high risks related to fire and building safety at work sites in Bangladesh, where it outsources production. Signed and monitors the country's fire and building safety agreements.
(3) Stopping, preventing, and reducing negative impacts	Thales (Electronics)	France	Asks suppliers and subcontractors around the world to sign a corporate responsibility charter respecting its commitment to human rights, social responsibility, etc.
(4) Follow-up surveys	Tony's Chocolonely (Chocolate)	Netherlands	Produces and sells chocolate made from slavery-free cocoa beans. 1% of its net income is donated to a foundation established by the company to help eradicate child labor on cacao plantations.
(5) Information disclosure	Umicore (Materials)	Belgium	Developed its own framework for sustainably sourcing cobalt and regularly evaluates its suppliers for compliance with human rights and environmental standards.
(6) Corrective measures	PepsiCo (Foods)	US	Set up a consultation desk for complaints from consumers and business partners about violations of laws and regulations.
	Legrand (Equipment)	France	Suppliers identified as having environmental and human rights risks were encouraged to implement improvement plans. All suppliers showed improvements by 2020.

Source: Compiled from company websites and news reports.

## 4 | Links Between Import Regulations and Crackdown Measures

- US Customs has become more aggressive in its use of WROs (Withhold Release Orders). It withheld **nearly \$500 million in cargo in the past year**.
- If shipments are withheld under the US Uyghur Forced Labor Prevention Act, which went into effect in June 2022, importers will be **subject to a strict burden of proof**, including proof of proper due diligence practices and supply chain tracking information.

### US Customs imports withheld (fiscal years 2018 - 2021)



Note: The US fiscal year runs from October 1 to September 30.

Source: U.S. Customs and Border Protection

### Examples of responses required by companies

#### Documents required for the release of withheld cargo under the Uyghur Forced Labor Prevention Act (examples)

##### A Information on due diligence systems

- Engagement with suppliers and stakeholders
- Whether due diligence is conducted and verified

##### B Supply chain tracking information

- Order forms, invoices, certificates of origin, etc.
- Production records (instructions, site visit reports, etc.)

##### C Information on supply chain management measures

- Internal controls for risk prevention and mitigation

##### D Evidence that the goods are not mined, produced, or manufactured in whole or in part in Xinjiang Uyghur Autonomous Region

- Documentation to track the goods' supply chain

##### E Evidence that the goods of Chinese origin were not mined, produced, or manufactured in whole or in part by forced labor

- Information on workers (e.g., wages, output, internal controls to ensure they are working voluntarily)

Source: U.S. Customs and Border Protection

# 5 | World Moves Towards Specific Targets for Decarbonization

- The 26th Conference of the Parties (COP26) to the United Nations Framework Convention on Climate Change (UNFCCC) was held in Glasgow, the UK, to discuss CO<sub>2</sub> emission reductions and the elimination of coal-fired power generation to achieve the 1.5°C target agreed in the Paris Agreement.
- Major countries are accelerating and strengthening their decarbonization efforts, **setting ambitious (proposed) targets for 2030 and 2035 years for reducing greenhouse gas (GHG) emissions**. Aims include increased use of renewable energy and tighter vehicle emission controls.

## International movements related to COP26

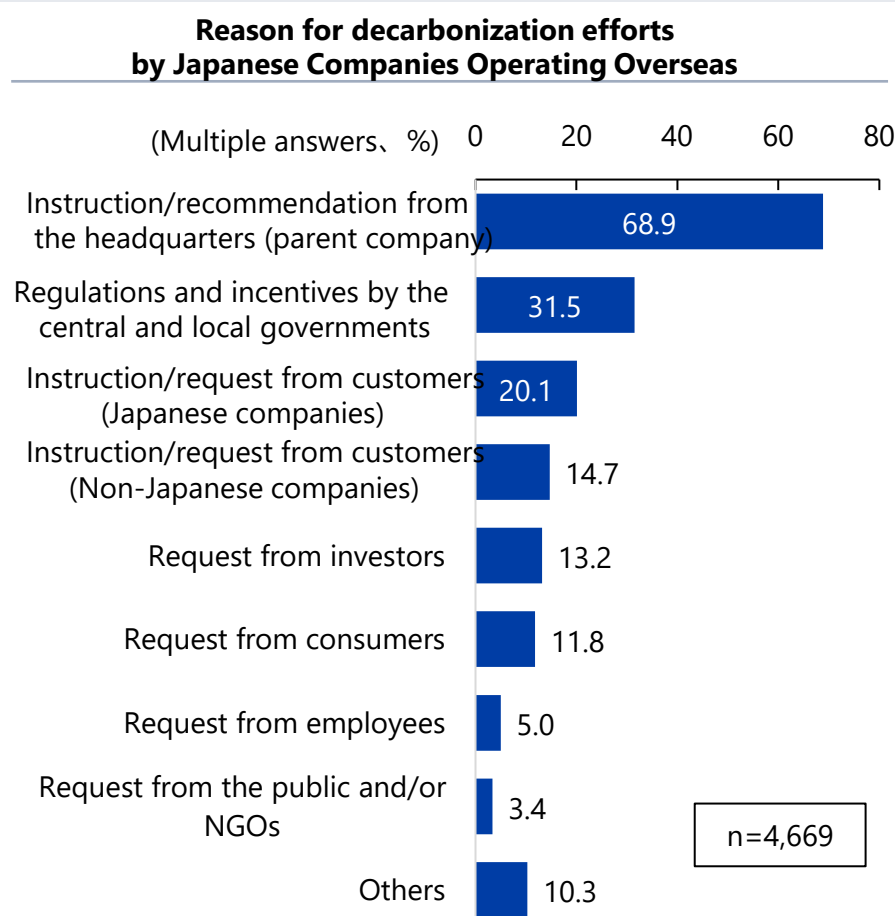
## Main policies/aims of major countries and regions

	Description	Country/Region	Major goals announced after 2021
<b>Agreement at COP26</b>	<ul style="list-style-type: none"> <li>- COP26 was held in the UK from October 31 to November 13, 2021. Agreed to the <a href="#">Glasgow Climate Pact</a>.</li> <li>- The agreement includes the following four points:               <ol style="list-style-type: none"> <li>(1) To continue efforts to limit temperature rise to within 1.5°C of pre-industrial levels</li> <li>(2) To continue efforts to achieve financial assistance targets provided by developed countries to developing countries</li> <li>(3) To complete the Paris Rulebook</li> <li>(4) To continue discussions on creation of a fund for natural disasters, etc.</li> </ol> </li> </ul>	US	<ul style="list-style-type: none"> <li>- Transition the <a href="#">electric power sector to produce zero CO<sub>2</sub> emissions</a> by 2035 (January 2021)</li> <li>- Expand offshore wind power generation to 30 GW by 2030 (March 2021)</li> <li>- Issued a presidential decree that at least 50% of <a href="#">new vehicles</a> (passenger cars and light trucks) <a href="#">must be zero-emission</a> by 2030 (August 2021)</li> <li>- Reduce <a href="#">methane gas emissions by 30%</a> compared to 2020 levels by 2030 (September 2021)</li> <li>- Produce and supply 3 billion gallons of aviation fuel derived from sustainable aviation fuel (SAF) annually by 2030 (September 2021)</li> </ul>
<b>International frameworks in which Japan participated</b>	<ul style="list-style-type: none"> <li>- <a href="#">Global Methane Pledge</a></li> <li>- Aims to reduce global methane emissions by 30% from 2020 levels by 2030.</li> </ul>	EU	<ul style="list-style-type: none"> <li>- Proposed <a href="#">61% reduction of GHG emissions</a> in the <a href="#">EU-ETS sector</a> by 2030 compared to 2005 levels (July 2021)</li> <li>- Proposal to create a new EU-ETS for road transport and buildings (July 2021)</li> <li>- Proposed <a href="#">100% reduction of CO<sub>2</sub> emissions from new</a> passenger cars and light commercial vehicles by 2035 compared to 2021 levels (July 2021)</li> <li>- Proposed production of 10 million tons of renewable hydrogen by 2030 (December 2021)</li> <li>- Proposed import of 10 million tons of renewable hydrogen by 2030 (May 2022)</li> <li>- Proposed raising proportion of renewable energy to 45% by 2030 (May 2022)</li> </ul>
<b>International automotive frameworks</b>	<ul style="list-style-type: none"> <li>- <a href="#">Glasgow Breakthrough</a></li> <li>- Aims to accelerate development and deployment of clean technologies and reduce costs by 2030.</li> </ul>	China	<ul style="list-style-type: none"> <li>- Will reduce <a href="#">ratio of non-fossil in energy consumption to about 25%</a> by 2030</li> <li>- Will reduce <a href="#">CO<sub>2</sub> emissions per unit of GDP to 65%</a> of 2005 levels by 2030</li> <li>- Will <a href="#">increase installed capacity of wind and solar power generation to at least 1,200GW</a> by 2030 (All of the above are from October 2021)</li> </ul>
	<ul style="list-style-type: none"> <li>- <a href="#">Declaration on accelerating the transition to zero emission vehicles</a></li> <li>- Aims to ensure all new vehicles sold worldwide are zero-emission by 2040. Japanese and Japanese-affiliated manufacturers did not participate in this declaration.</li> </ul>	Japan	<ul style="list-style-type: none"> <li>- <a href="#">100% of new cars sold to be electrified</a> by 2035 (January 2021)</li> <li>- Will create at least <a href="#">100 leading decarbonized regions</a> that will achieve decarbonization by 2030 (June 2021)</li> </ul>

Source: Government websites and business briefs from various countries

# 6 | Not Addressing Decarbonization Risks Loss of Business

- Following instructions from head offices and stricter regulations in destination countries and directives or requests from suppliers, the most **influential** reason for decarbonization efforts is **policies by stakeholders in the supply chain surrounding a company**.
- The **entire supply chain**, including not only the company itself but also its customers and suppliers, **must work toward decarbonization and disclose information on these efforts**. Failure to comply with customer requests and related regulations can create a risk of losing business



Source: 2021 JETRO Survey on Business Conditions of Japanese Companies Operating Overseas

**Decarbonization initiatives demanded of companies**

**Policies for addressing decarbonization for key stakeholders**

**[Government-facing] Addressing various CO2 reduction regulations**

- Automobile emission regulations
- Emissions trading systems

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**[Shareholder, Investors-facing] Disclosure of information on decarbonization efforts**

- Disseminating information on the company's decarbonization efforts

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**[Customer-facing] Compliance with procurement standards, including customer decarbonization policies**

- Reporting own emissions and responding to customer requests for emission reductions
- Proposing and providing green products and services (new business)

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**[Supplier-facing] Compliance with procurement standards, including own company's decarbonization policies**

- Identify supplier emissions and request reductions.

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**[Other-company facing (same or other industry)] Collaborating on decarbonization**

- Cooperating in emission reductions and participating in various initiatives
- Proposing and providing green products and services (new business)

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**[Internal-facing] Implement decarbonization initiatives**

- Calculate own company's emissions and set emission reduction targets
- Promote understanding of decarbonization initiatives and human resource development

Source: Various sources

# Supplementary and Reference Materials

# 1 | World Economic Outlook, Real GDP Levels of Major Countries and Regions

- Considering the impact of Ukraine conflict and other factors, international organizations have lowered their world economic outlook for 2022.
- Real GDP of the world in 2021 was higher than its level in 2019 (before COVID-19 pandemic). However, the degree of recovery varies between countries.

## World economic outlook (real GDP growth) by international organizations

(Unit: %, % points)

Organization	2021	2022 (Difference from previous projections)	2023 (Difference from previous projections)	Date of announcement (previous projections)
World Bank	5.7	2.9 (-1.2)	3.0 (-0.2)	Jun. 2022 (Jan. 2022)
OECD	5.8	3.0 (-1.4)	2.8 (-0.5)	Jun. 2022 (Dec. 2021)
IMF	6.1	3.6 (-0.8)	3.6 (-0.2)	Apr. 2022 (Jan. 2022)
United Nations	5.8	3.1 (-0.9)	3.1 (-0.4)	May 2022 (Jan. 2022)

Note: Growth rates for 2022 and 2023 are estimates.

Source: World Bank, OECD, IMF, and UN announcements

## Real GDP levels of major countries and regions

Country/region	Ratio to Global GDP (%)	Real GDP level		
		2019 = 100		
	2021	2020	2021	2022 (Forecast)
World	100.0	97	103	107
China	18.6	102	111	115
US	15.7	97	102	106
India	7.0	93	102	110
Japan	3.8	96	97	99
Germany	3.3	95	98	100
Russia	3.1	97	102	93
Indonesia	2.4	98	102	107
United Kingdom	2.3	91	97	101
Mexico	1.8	92	96	98
South Korea	1.7	99	103	106
Taiwan	1.0	103	110	113
Thailand	0.9	94	95	98

Note: 1) "Ratio to global GDP" is based on PPP (purchasing power parity). 2) India uses fiscal years. 3) Highlighted areas exceed 100 (the 2019 standard).

Source: "WEO, April 2022" (IMF)

## 2 | Rising Consumer Prices and Monetary Tightening Measures

- The Consumer Price Index (CPI) has risen since 2021. It involved a combination of factors, including the resumption of economic activity, supply-side constraints such as shortages of labor and semiconductors, etc., as well as rising primary commodity prices due to the situation in Ukraine.
- There has been a noticeable move towards raising policy interest rates to quell inflation, and there are concerns about impacts on consumption and investment.

**G20 Consumer Price Index change rates**



Source: OECD.Stat

**Policy interest rates in G20 countries and regions**

Country/region	December 2020	June 2022
Argentina	38	52
Australia	0.1	0.85
Brazil	2	13.25
Canada	0.25	1.5
China	3.85	3.7
Eurozone	0	0
India	4.0	4.4
Indonesia	3.75	3.5
Japan	- 0.1	- 0.1
South Korea	0.5	1.75
Mexico	4.25	7.75
Russia	4.25	9.5
Saudi Arabia	1.0	2.25
Republic of South Africa	3.5	4.75
Turkey	17	14
United Kingdom	0.1	1.25
US	0~0.25	1.5~1.75

Note: 1) Policy interest rate is applied at the end of each month. 2) Highlighted areas are countries/regions with higher policy interest rates as of June 2022 compared to December 2020.

Source: "Central bank policy rate statistics" (BIS) and websites of national and regional central banks.  
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# 3 | Inflation and Minimum Wages in Major Countries (2022)

- Inflation in 2022 will exceed 7% worldwide. It is particularly high in emerging European countries including Russia, Latin America, Middle East and Central Asia, and Sub-Saharan Africa.
- Minimum wages continue to rise in various countries and regions. Malaysia and Germany have implemented increases of 25% during the year.

## Inflation forecasts for major countries and regions

(Unit: %, % points)

	2021	2022	
	Y-o-Y	Y-o-Y	Difference from previous forecasts
<b>World</b>	4.7	<b>7.4</b>	+3.6
<b>Developed countries</b>	3.1	<b>5.7</b>	+3.4
<b>US</b>	4.7	<b>7.7</b>	+4.2
<b>Eurozone</b>	2.6	<b>5.3</b>	+3.6
<b>Japan</b>	-0.3	<b>1.0</b>	+0.4
<b>Emerging Asian countries</b>	2.2	<b>3.5</b>	+0.7
<b>China</b>	0.9	<b>2.1</b>	+0.3
<b>India</b>	5.5	<b>6.1</b>	+1.2
<b>ASEAN-5</b>	2.0	<b>3.5</b>	+1.1
<b>Emerging European countries</b>	9.5	<b>27.1</b>	+20.0
<b>Russia</b>	6.7	<b>21.3</b>	+16.5
<b>Latin America</b>	9.8	<b>11.2</b>	+3.5
<b>Middle East/Central Asia</b>	13.2	<b>12.8</b>	+4.3
<b>Sub-Saharan Africa</b>	11.0	<b>12.2</b>	+3.6

Note: Forecasts for April 2022. The difference from previous forecasts is the difference from October 2021.  
Source: "WEO, October 2021" and "WEO, April 2022" (all from the IMF)

## Minimum wage increases in major countries (2022)

Region/Country		Increase Rate (%)	Wage revision	Revision month
<b>Asia Oceania</b>	Sichuan, China	<b>18</b>	2,100 yuan/month	April
	Shenzhen, China	<b>7.3</b>	2,360 yuan/month	January
	South Korea	<b>5.1</b>	9,160 won/hour	January
	Malaysia	<b>25</b>	1,500 ringgit/month	May
	Vietnam	<b>5.9</b>	4.68 million dong/month	July
	Philippines	<b>6.1</b>	570 pesos/day	June
	Australia	<b>5.2</b>	21.38 AUD/hour	July
<b>Europe</b>	Germany	<b>25</b>	12 euro/hour	January, July, October
	France	<b>5.6</b>	11.07 euro/hour	January, May, August
	United Kingdom	<b>6.6</b>	9.5 GBP/hour	April
<b>Latin America</b>	Mexico	<b>22</b>	172.87 pesos/day	January
	Brazil	<b>10.2</b>	1,212 real/month	January
	Argentina	<b>49.5</b>	47,850 pesos/month	June, August

Note: Includes planned increases. France is provisional data from before official announcement. Sichuan Province is Category 1. Vietnam is Region 1 (Hanoi, Ho Chi Minh City, etc.) Philippines is the Manila metropolitan area and non-agricultural sector.

Source: Prepared based on government announcements and JETRO business briefs.



## 4 | Trade among Major Countries and Regions (2021)

- As in the previous year, China ranked first in exports and second in imports, while the US ranked second in exports and first in imports.
- China's exports to the US grew 27.5% year-on-year. This was its second consecutive year of growth and the largest in the past decade.

**World Trade Matrix, Exports (2021)**

(Units: Million USD, %)

Imports	World									
	World	USMCA		EU	Japan	East Asia	RCEP	APEC		APEC
US		US	China					ASEAN		
World	22,131,428	3,840,621	2,879,817	6,531,415	710,319	4,934,739	5,582,004	2,330,050	1,665,633	10,839,921
USMCA	2,755,087	1,382,488	779,000	317,145	90,553	401,829	486,476	183,322	101,924	1,981,844
US	1,758,586	583,941	-	272,305	74,970	347,880	416,065	151,065	94,099	1,100,261
EU	6,628,429	561,018	472,376	4,039,765	73,759	453,474	539,271	264,478	94,168	1,281,390
Japan	756,166	154,980	135,775	69,869	-	383,950	347,648	163,599	113,388	602,026
East Asia	6,135,553	1,164,571	995,275	765,358	334,102	1,986,930	2,307,857	559,606	1,035,699	4,259,350
RCEP	6,862,334	1,268,414	1,083,995	818,071	358,448	2,400,789	2,698,319	751,741	1,121,893	4,824,509
China	3,368,217	696,665	577,636	519,182	165,902	712,574	875,142	-	483,636	2,086,316
ASEAN	1,709,839	283,545	257,857	152,700	113,586	778,654	889,973	282,910	376,128	1,314,119
APEC	11,311,643	2,813,558	2,001,409	1,407,290	508,417	3,627,108	4,055,133	1,565,118	1,339,407	7,933,777

Note: 1) Prepared on an export basis. 2) East Asia is China, South Korea, Taiwan, and ASEAN. 3) Export figures of Taiwan are not recorded in DOTS, so trade statistics of Taiwan were used. 4) The global and national/regional export figures in this table differ from the data used in "I. World and Japan's economy and trade".

Source: "Direction of Trade Statistics (June 2022 edition) (IMF) and trade statistics of Taiwan.

# 5 | Quarterly Trade Growth for Major Countries and Regions

- The quarterly export value of the 33 major countries and regions have maintained positive year-on-year growth since the fourth quarter of 2020. Quarter 1 2022 was up 14.9% year-on-year.
- However, there are concerns about the impact of the Ukrainian conflict and China's management city-wide lockdowns on the value of exports in the second quarter and beyond.

**Quarterly trade growth for major countries and regions (From quarter 1 2021 to 2022)**

(Unit: %)

	Exports					Imports				
	2021				2022	2021				2022
	1Q	2Q	3Q	4Q	1Q	1Q	2Q	3Q	4Q	1Q
Total of 33 major countries/regions	17.6	42.8	21.8	19.5	14.9	14.1	42.9	23.9	23.5	21.2
China	48.6	30.4	23.9	22.7	15.6	27.6	43.7	26.5	24.4	10.9
US	2.8	50.7	23.4	22.7	18.4	11.7	37.6	19.3	18.7	22.6
Germany	12.3	47.6	11.9	7.7	3.1	12.0	43.3	16.6	16.9	16.0
ASEAN5	12.6	40.1	21.6	26.8	19.6	9.9	43.8	30.3	32.4	22.7
Japan	8.8	42.5	20.4	6.4	4.4	5.4	22.0	32.3	26.8	22.8

*Note:* 1) The 33 countries and regions are Argentina, Australia, Austria, Belgium, Brazil, Canada, China, Denmark, Finland, France, Germany, Greece, Hong Kong, India, Indonesia, Ireland, Italy, Japan, Luxembourg, Malaysia, Netherlands, the Philippines, Portugal, Singapore, Republic of South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, Thailand, United Kingdom, and United States. 2) Growth rate of imports/exports to the world. 3) ASEAN5 is the total of Indonesia, Malaysia, the Philippines, Singapore, and Thailand.

*Source:* Trade statistics of respective countries and regions

## 6 | Global Services Exports

- In 2021, the world trade in services (export basis) increased by 16.8% year-on-year. However, trade value was lower than in 2019 before the pandemic. The growth in transport was attributed to a significant increase in international logistics costs.

### World services exports per-item and major country (2019 to 2021)

(Unit: 100 million USD, %)

		2019	2020	2021			
		Value	Value	Value	Composition ratio	Growth rate	Contribution
Total service-related exports (worldwide)		62,017	50,863	59,421	100.0	16.8	16.8
By sector	Goods-related services	2,307	1,963	2,193	3.7	11.7	0.5
	Transport	10,398	8,565	11,502	19.4	34.3	5.8
	Travel	14,742	5,526	5,937	10.0	7.4	0.8
	Other services	34,571	34,810	39,789	67.0	14.3	9.8
By country	US	8,538	6,840	7,479	12.6	9.3	1.3
	United Kingdom	4,135	3,830	4,149	7.0	8.3	0.6
	China	2,821	2,781	3,927	6.6	41.2	2.3
	Germany	3,506	3,134	3,808	6.4	21.5	1.3
	Ireland	2,571	2,793	3,367	5.7	20.6	1.1
	France	2,956	2,545	3,026	5.1	18.9	0.9
	Netherlands	2,737	2,232	2,463	4.1	10.3	0.5
	India	2,141	2,027	2,363	4.0	16.5	0.7
	Singapore	2,152	2,095	2,295	3.9	9.5	0.4
	Japan	2,049	1,580	1,639	2.8	3.7	0.1

Source: WTO data

# 7 | Global Trade in Digital-Related Goods (2021)

- In terms of trade in digital-related materials, China ranked first in both imports and exports, with the US in second place. This ranking has not changed since 2010. China's exports account for more than a quarter of the world's total, nearly four times that of the second largest country, the US

## Global and top 10 countries (exports and imports) for trade in digital-related goods (2021)

(Unit: 100 million USD, %)

Rank	Exports				Imports			
	Country/region	Value	Composition ratio	Growth rate	Country/region	Value	Composition ratio	Growth rate
	World	40,340	100.0	21.3	World	42,474	100.0	19.8
1	China	10,613	26.3	23.1	China	8,075	19.0	22.1
2	US	2,789	6.9	14.4	US	5,568	13.1	18.7
3	Taiwan	2,293	5.7	25.9	Germany	1,908	4.5	14.8
4	South Korea	2,174	5.4	24.8	Netherlands	1,759	4.1	15.4
5	Germany	1,950	4.8	13.7	Singapore	1,678	4.0	24.6
6	Netherlands	1,927	4.8	16.6	Taiwan	1,633	3.8	30.2
7	Vietnam	1,733	4.3	49.6	South Korea	1,502	3.5	22.6
8	Japan	1,650	4.1	17.5	Japan	1,394	3.3	11.5
9	Malaysia	1,197	3.0	19.2	Vietnam	1,104	2.6	18.2
10	Mexico	1,141	2.8	12.9	Mexico	882	2.1	15.1

Note: 1) World, Vietnamese and Mexican amounts are estimates.

2) Hong Kong, which has a high volume of re-exports, was not included. Singapore's exports were valued by excluding re-exports.

Source: Trade statistics of respective countries and regions

# 8 | World Trade Matrix for Semiconductor Integrated Circuits

- Asia accounts for nearly 90% of trade in semiconductor integrated circuits, including exports and imports. China's share is extremely high when imports and exports via Hong Kong are included, and in recent years its imports and exports with South Korea, Taiwan, and ASEAN have expanded in particular.

Trade in semiconductor integrated circuits (2021, percentage of world)

(Unit: %)

Imports Exports	World	Asia							US	EU	Other areas
			Japan	China	Hong Kong	South Korea	Taiwan	ASEAN			
<b>World</b>	100.0	87.8	2.2	35.4	21.1	5.0	7.2	16.0	2.6	6.1	1.2
<b>Asia</b>	86.9	81.4	2.1	32.5	20.2	4.5	6.5	14.6	1.9	2.4	0.6
<b>Japan</b>	3.3	3.1		0.8	0.3	0.3	0.9	0.8	0.1	0.1	0.0
<b>China</b>	15.3	14.7	0.2		6.9	2.1	2.1	3.1	0.1	0.3	0.1
<b>Hong Kong (China)</b>	20.7	20.0	0.1	17.8		0.3	0.7	0.8	0.2	0.2	0.1
<b>Korea</b>	10.7	10.3	0.1	4.6	2.4		1.0	2.2	0.1	0.1	0.1
<b>Taiwan</b>	14.2	13.7	1.0	4.4	4.1	1.1		3.0	0.2	0.3	0.1
<b>ASEAN</b>	22.6	19.5	0.7	4.9	6.5	0.8	1.8	4.7	1.1	1.4	0.3
<b>Malaysia</b>	5.8	5.1	0.2	1.0	1.1	0.2	0.5	2.0	0.3	0.3	0.1
<b>Singapore</b>	11.0	9.8	0.4	1.9	3.9	0.4	1.1	2.0	0.4	0.6	0.1
<b>Vietnam</b>	3.2	2.6	0.0	1.7	0.6	0.0	0.1	0.1	0.3	0.2	0.1
<b>US</b>	5.2	3.2	0.1	1.2	0.4	0.3	0.4	0.8		0.4	0.3
<b>EU</b>	6.0	2.1	0.0	1.1	0.1	0.1	0.2	0.5	0.4	2.9	0.2
<b>Other areas</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: 1) Prepared on an export basis. 2) ASEAN includes 10 countries. Hong Kong and Singapore amounts include re-exports. EU includes intra-regional trade.

3) Other regions include Oceania, Latin America, the Middle East, and Africa.

Source: Trade statistics of respective countries and regions

# 9 | Japan's Trade in Digital Goods (2021)

- In Japan's digital-related trade (exports), semiconductor manufacturing equipment (18.5% of total exports) grew nearly 30%, driving overall growth. Industrial robots, which grew by nearly 40%, accounted for a 35.8% share of total world exports.

## Japan's trade in digital goods (2021) per-major product

(Units: Million USD, %)

Product	Exports (2021)				World trade share	Imports (2021)				World trade share
	Value	Composition ratio	Growth rate	Contribution		Value	Composition ratio	Growth rate	Contribution	
Computer peripherals	11,941	7.2	10.3	0.8	1.7	25,013	17.9	△ 2.3	△ 0.5	3.4
Office equipment	199	0.1	28.0	0.0	1.6	407	0.3	△ 6.3	△ 0.0	3.5
Communication equipment	3,640	2.2	7.8	0.2	0.5	30,157	21.6	13.1	2.8	4.4
Cellular phones	152	0.1	5.7	0.0	0.1	17,990	12.9	20.2	2.4	5.7
Semiconductors and electronic components	44,437	26.9	16.7	4.5	3.8	30,333	21.8	29.9	5.6	2.3
Electron tubes/ Semiconductors, etc.	10,506	6.4	14.3	0.9	7.1	5,029	3.6	9.5	0.3	3.3
Integrated circuits	33,931	20.6	17.5	3.6	3.3	25,304	18.2	34.9	5.2	2.1
Other electrical/ electronic components	30,474	18.5	16.1	3.0	5.1	16,939	12.1	11.6	1.4	2.8
Imaging equipment	4,131	2.5	6.1	0.2	2.8	6,825	4.9	9.7	0.5	4.7
Audio equipment	64	0.0	△ 42.7	△ 0.0	0.4	548	0.4	△ 9.2	△ 0.0	3.8
Measuring equipment/instruments	27,765	16.8	17.1	2.9	8.8	12,902	9.3	9.9	0.9	4.1
Medical electronics	5,908	3.6	9.3	0.4	4.0	6,460	4.6	10.6	0.5	3.1
Semiconductor manufacturing equipment	30,490	18.5	29.1	4.9	24.7	4,652	3.3	△ 3.4	△ 0.1	0.0
Industrial robots	2,373	1.4	37.7	0.5	35.8	73	0.1	△ 12.0	△ 0.0	1.2
3D printers, etc.	423	0.3	10.7	0.0	5.5	76	0.1	△ 9.4	△ 0.0	1.2
Drones	3,136	1.9	11.0	0.2	2.6	5,017	3.6	12.8	0.5	4.5
<b>Digital-related goods (Total)</b>	<b>165,027</b>	<b>100.0</b>	<b>17.5</b>	<b>17.5</b>	<b>4.1</b>	<b>139,416</b>	<b>100.0</b>	<b>11.5</b>	<b>11.5</b>	<b>3.3</b>

Note: 1) See "Appendix 1" for product classifications. 2) Drones were defined by JETRO, as the exact HS code is not defined. May include products other than drones. 3) World trade share is the share of each item in world trade (JETRO estimate).

Source: "Trade Statistics" (Ministry of Finance)

# 10 | Global Cross-Border M&A (Top)

## Top 10 Global Cross-Border M&A Deals by Value (2021 and H1 2022)

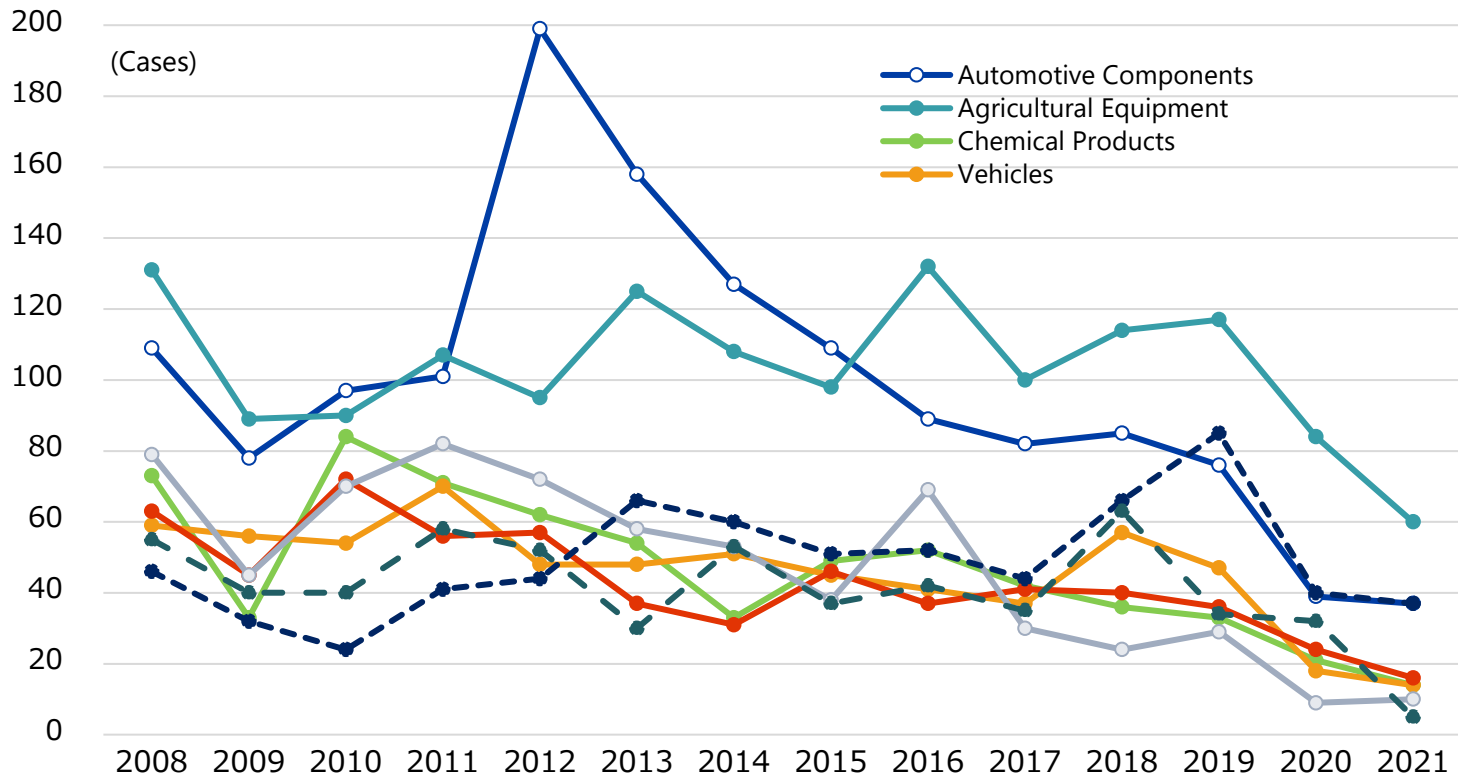
(Million USD, %)

Date (completed)	Acquiring company	Nationality	Industry	Target company	Nationality	Industry	Value	Post-deal Stake		
2021	Jan.	Next Alt SARL	Luxembourg	Investments, securities, trusts	Altice Europe NV	France	Broadcasting	44,898	100.0	
	Jul.	AstraZeneca PLC	United Kingdom	Medical supplies	Alexion Pharmaceuticals Inc	US	Medical supplies	39,602	100.0	
	Sept.	Shareholders	France	Investments, securities, trusts	Universal Music Group NV	US	Publishing/printing	32,018	60.0	
	Nov.	AerCap Holdings NV	Ireland	Business services	GE Capital Aviation Services Inc	US	Credit	31,244	100.0	
	Dec.	Altimeter Growth Corp	US	Investments, securities, trusts	Grab Holdings Inc	Singapore	Software	31,104	100.0	
	Dec.	Canadian Pacific Railway Ltd	Canada	Transport, logistics	Kansas City Southern	US	Transport, logistics	30,846	100.0	
	May	Seven & i Holdings Co Ltd	Japan	Retail	Speedway LLC	US	Other retail	21,000	100.0	
	Jan.	Peugeot SA	France	Transport equipment	Fiat Chrysler Automobiles NV	United Kingdom	Transport equipment	20,572	100.0	
	Jan.	LVMH Moët Hennessy LV SE	France	Other retail	Tiffany & Co	US	Other retail	16,443	100.0	
	Apr.	Siemens AG	Germany	Communication equipment	Varian Medical Systems Inc	US	Precision equipment	16,365	100.0	
2022	Jan.	BHP Group Ltd	Australia	Mining	BHP Group PLC	United Kingdom	Mining	86,204	100.0	
	Feb.	S&P Global Inc	US	Business services	IHS Markit Ltd	United Kingdom	Business services	43,460	100.0	
	Jan.	Square Inc	US	Software	Afterpay Ltd	Australia	Other finance	27,670	100.0	
	Mar.	Redefine Properties Ltd	South Africa	Investments, securities, trusts	EPP NV	Netherlands	Investments, securities, trusts	26,262	100.0	
	Apr.	Investor Group	US	Investments, securities, trusts	Mileway BV	Netherlands	Real estate leasing, brokerage	23,741	-	
	Jan. to Jun.	June	Gores Guggenheim Inc	US	Investments, securities, trusts	Polestar Performance AB	Sweden	Transport equipment	19,745	100.0
	Feb.	Investor Group	US	Investments, securities, trusts	Aramco Gas Pipelines	Saudi Arabia	Petroleum/natural gas (petroleum refining)	15,500	49.0	
	Feb.	Investor Group	Canada	Investments, securities, trusts	AusNet Services Ltd	Australia	Electricity, gas, water	13,314	100.0	
	Jun.	Aker BP ASA	Norway	Petroleum/natural gas (petroleum refining)	Lundin Energy AB-oil & gas busines	Sweden	Petroleum/natural gas (petroleum refining)	10,990	100.0	
	Jun.	DoorDash Inc	US	Software	Wolt Enterprises Oy	Finland	Logistics	8,110	100.0	

# 11 | Number of Outward Greenfield Investments by Japan

- In 2021, Japan performed 476 outward greenfield investments. This number fell below 500 for the first time since 2003, the first year available for comparison, and was the smallest number for two consecutive years. Investment slowdowns are evident in Japan's mainstay auto parts and industrial equipment industries.

**Number of outward greenfield investments by Japan (2008 to 2021, 8 major industries)**



Note: Major industries are based on the cumulative number of investments from 2003 to 2021, with the top 8 industries selected.

Source: fDi Markets (downloaded on June 27, 2022)



# 12 | SDG-Related Investments Using Japanese Technology

- The spread of COVID-19 has re-awoken a global awareness of the importance of achieving economic development and sustainability at the same time, leading to increased interest in the Sustainable Development Goals (SDGs).
- As SDG initiatives spread worldwide, some Japanese companies are collaborating to realize the SDGs overseas as well.

## Digital x SDGs: Examples of overseas collaboration by Japanese companies

Japanese Company/Organization	Local Company/Organization	Date	Content	Applicable SDG
Yokogawa Electric Corporation	Vergennes Waterworks District, Los Angeles County, California, USA	2021 March	<ul style="list-style-type: none"> <li>- Commenced a demonstration experiment to improve the efficiency of treating reclaimed water for drinking by proposing digitalized practical technologies for optimizing equipment operation and water quality management.</li> <li>- Semi-automation of advanced membrane filtration technology using AI, realizing energy savings and operational support.</li> </ul>	
SUCRECUBE Japon Inc.	Senegal Ministry of Health TUMIQUI JAPON SASU	2021 February	<ul style="list-style-type: none"> <li>- Trial installation of TUMIQUI Smart Kit, which enables anyone to easily use electricity and communication without requiring installation, at 10 unelectrified village clinics in Senegal.</li> <li>- Providing electricity and communications in these villages has greatly improved the medical environment.</li> </ul>	
ListenField (Partnership with University of Tokyo)	Indian Institute of Technology Hyderabad, Jayashankar Telangana State Agricultural University, International Institute of Information Technology Hyderabad	2021 January	<ul style="list-style-type: none"> <li>- Developed an agricultural support platform to streamline data analysis techniques such as genome selection and genome-related research or accelerating plant reproductive processes.</li> <li>- Now performing research regarding sustainable crop production amid climate change.</li> </ul>	

Source: Each company's website

# 13 | Outward Cross-Border M&As by Japanese Companies

- In 2021, outward M&As by Japanese companies increased 40% year-on-year to \$85.9 billion. The number of deals remained unchanged. Hitachi and Panasonic are accelerating digital transformation through acquisitions of US software companies.

## Top 5 Outward Cross-Border M&As by Japanese Companies(2020 to first half of 2022)

(Million USD, %)

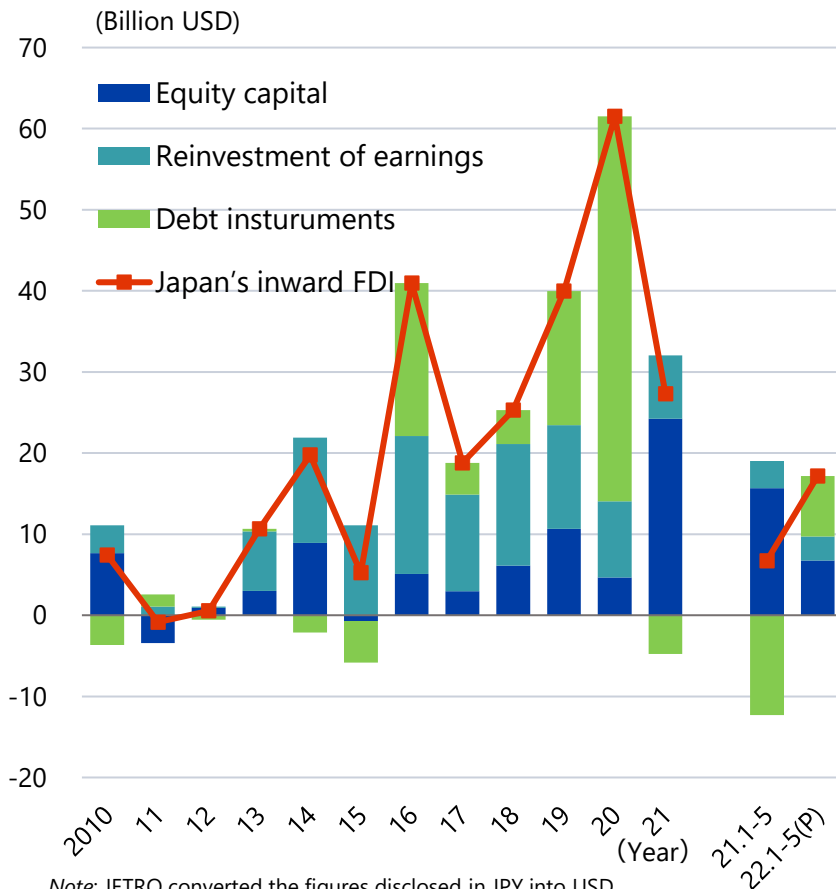
Date (completed)	Acquiring company	Target company	Target company		Value	Post-deal stake	
			Nationality	Industry			
2020	Jun.	Asahi Group Holdings, Ltd.	Carlton & United Breweries	Australia	Beverages	11,320	100.0
	Jul.	Hitachi, Ltd.	ABB Power Transmission and Distribution Division	Switzerland	Electronic/electrical equipment	9,400	80.1
	Mar.	Mitsubishi Corporation, Chubu Electric Power Co.,Inc.	Eneco	Netherlands	Electric power	4,519	100.0
	Feb.	Tokio Marine Holdings, Inc.	Privilege Underwriters, Inc.	US	Insurance	3,100	100.0
	Jan.	Astellas Pharma Inc.	Audentes Therapeutics, Inc.	US	Drugs	2,654	100.0
2021	May	Seven & i Holdings Co., Ltd.	Speedway LLC	US	Retail Trade (convenience store)	21,000	100.0
	Jan.	Nippon Paint Holdings Co., Ltd.	Nipsea International Limited	Singapore	Chemical	9,922	100.0
	Jul.	Hitachi, Ltd.	GlobalLogic, Inc.	US	Software	9,600	100.0
	Sept.	Panasonic Corporation	Blue Yonder Group, Inc.	US	Software	7,100	100.0
	Aug.	Renesas Electronics Corporation	Dialog Semiconductor Plc	United Kingdom	Semiconductor	5,675	100.0
2022 Jan. to Jun.	Apr.	KUBOTA Corporation	Escorts Limited	India	General machinery	1,010	36.9
	Jun.	Sony Group Corporation	Epic Games, Inc.	US	Software	1,000	-
	Apr.	MITSUI & CO., LTD.	Mainstream Renewable Power Limited	Ireland	Electricity (renewable energy)	633	27.5
	Jan.	Iida Group Holdings Co., Ltd.	Russia Forest Products Limited	Russia	Lumber and related products	525	75.0
	Feb.	Nippon Steel Corporation	G Steel, GJ Steel	Thailand	Iron and steel	419	100.0

Source: Workspace (Refinitiv) (data as of July 04, 2022)

# 14 | Japan's Inward FDI Flows and Stock

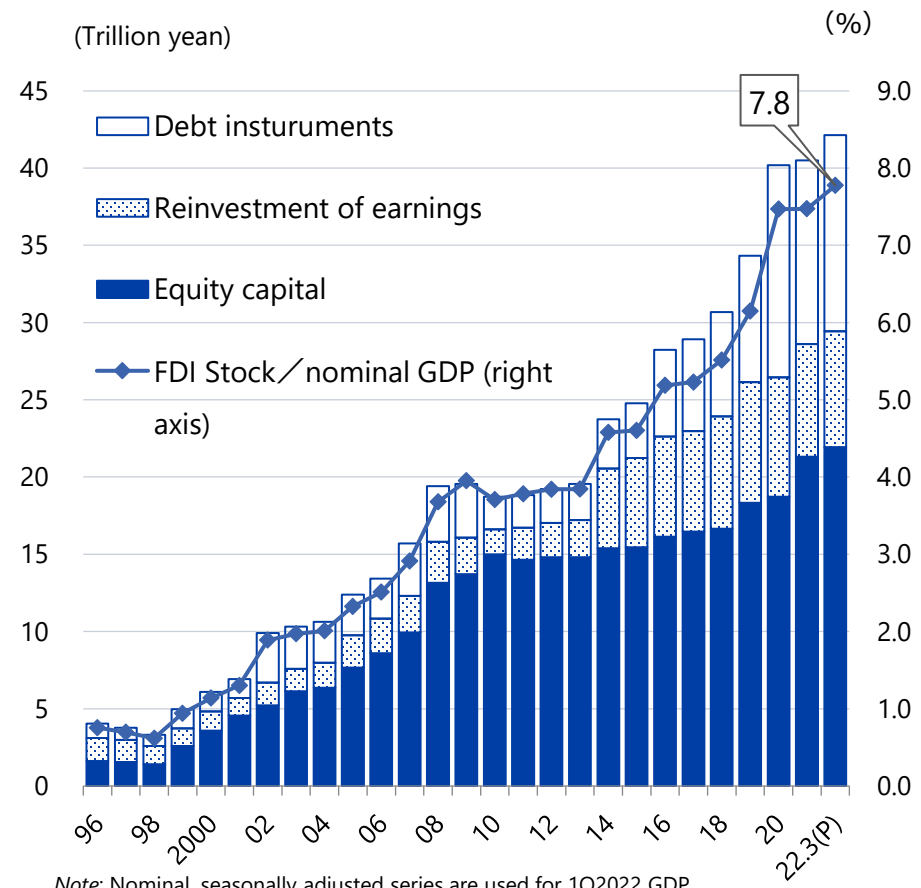
- Japan's inward FDI in 2021 decreased by 55.6% to \$27.3 billion from the previous year. Although a significant decrease from the previous year, equity capital was at a record high level, approximately five times that of the previous year, helping support FDI in Japan.
- As of the end of March 2022, the stock of FDI in Japan exceeded 42 trillion yen, or 7.8% of GDP.

Japan's inward FDI by type



Note: JETRO converted the figures disclosed in JPY into USD  
 Source: "Balance of Payments Statistics" (Ministry of Finance, Bank of Japan)

FDI stock in Japan



Note: Nominal, seasonally adjusted series are used for 1Q2022 GDP.  
 Source: "International Investment Position of Japan" (Ministry of Finance, Bank of Japan), "National Accounts of Japan" (Japan Cabinet Office), JETRO. All rights reserved.

# 15 | Inward Cross-Border M&As to Japanese Companies

- In 2021, inward M&As to Japanese companies increased 34.1% year-on-year to \$13.9 billion. They totalled 167 deals, the highest in the past 10 years. The largest deal was by PayPal in the US to acquire payment services startup Paidy for \$2.7 billion.

## Top 5 Inward Cross-Border M&As to Japanese Companies (2020 to first half of 2022)

(Million USD, %)

Date (completed)	Acquired company	Industry	Target company		Value	Post-deal Stake
			Nationality	Industry		
2020	Jun. UNIZO Holdings Company, Limited	Real estate	Lone Star (US) and others		4,375	100.0
	Apr. Showa Aircraft	Transport equipment	Bain Capital, LP		848	100.0
	Jan. Aspen's Japanese operations (South Africa)	Drugs	Sandoz (under Novartis)		441	100.0
	Aug. Logistics facilities owned by Redwood Group	Real estate	ESR., AXA Investment Managers		369	100.0
	Mar. Two complexes owned by Mapletree Investments	Real estate	Mapletree		349	98.5
2021	Oct. Paidy Inc.	Other finance	PayPal Holdings, Inc.		2,731	100.0
	Mar. Takeda Consumer Healthcare Company Limited	Drugs	Blackstone Group Inc.		2,288	100.0
	Jul. Shiseido Company, Limited (Personal Care business)	Chemicals (cosmetics)	CVC Capital Partners		1,524	100.0
	Nov. Trygroup Inc.	Educational services	CVC Capital Partners		980	100.0
	Mar. Rakuten Group, Inc.	Business services	Tencent Holdings Ltd.		606	4.1
2022 Jan. to Jun.	Apr. Mitsubishi Corporation/UBS Realty Inc.	Real estate management	KKR		1,937	100.0
	Mar. NIPPO	Construction	Goldman Sachs Group, Inc.		1,865	100.0
	Feb. SNK Corporation	Software (Games)	Electronic Gaming Development		415	96.2
	Mar. Real estate held by Blackstone Group Inc.	Real estate management	M&G		415	100.0
	Mar. Senqcia Corporation	General machinery	Lone Star Funds		411	100.0

Source: Workspace (Refinitiv) (data as of July 04, 2022)

# 16 | Russia-Related Business (Primary Questionnaires, etc.)

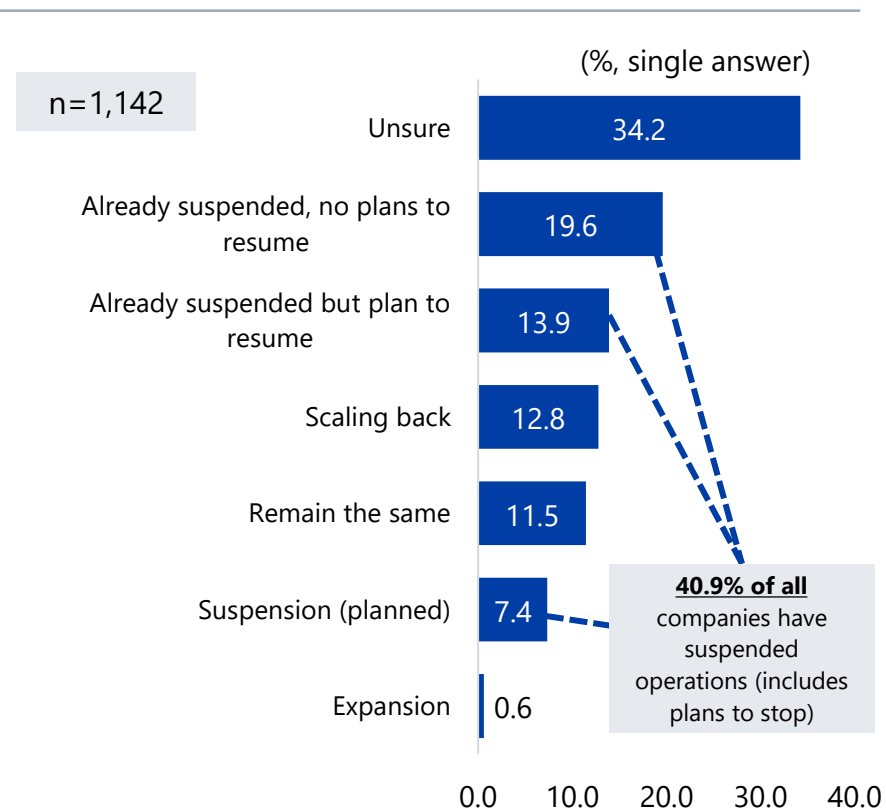
- According to Yale University, the number of companies withdrawing from business in Russia as a result of the invasion of Ukraine had exceeded 300 by the end of June 2022. More than 40% of Japanese companies had suspended business in Russia as of the end of April (or had plans to do so).

**Business in Russia by companies from major countries (as of June 30, 2022)**

Classification	(Company)	Company				
		Netherlands	UK	US	China	Japan
Withdraw	305	10	43	109	0	3
Suspension	497	13	40	161	5	32
Scaling back	168	9	3	66	1	5
Buying time	160	6	7	40	4	7
Digging in	243	4	1	29	41	13

Source: "Yale CELI List of Companies," Jeffrey Sonnenfeld and Sonnenfeld and Yale Research Team)

**Japanese companies' business in Russia: Prospects for the next 1-2 years (Only those companies that responded that they have Russia-related business)**



Source: Participants of JETRO's "Ukraine Webinar" on April 25. Questionnaire results

**Percentage of Russia's inward FDI balance by country/region (2020)**

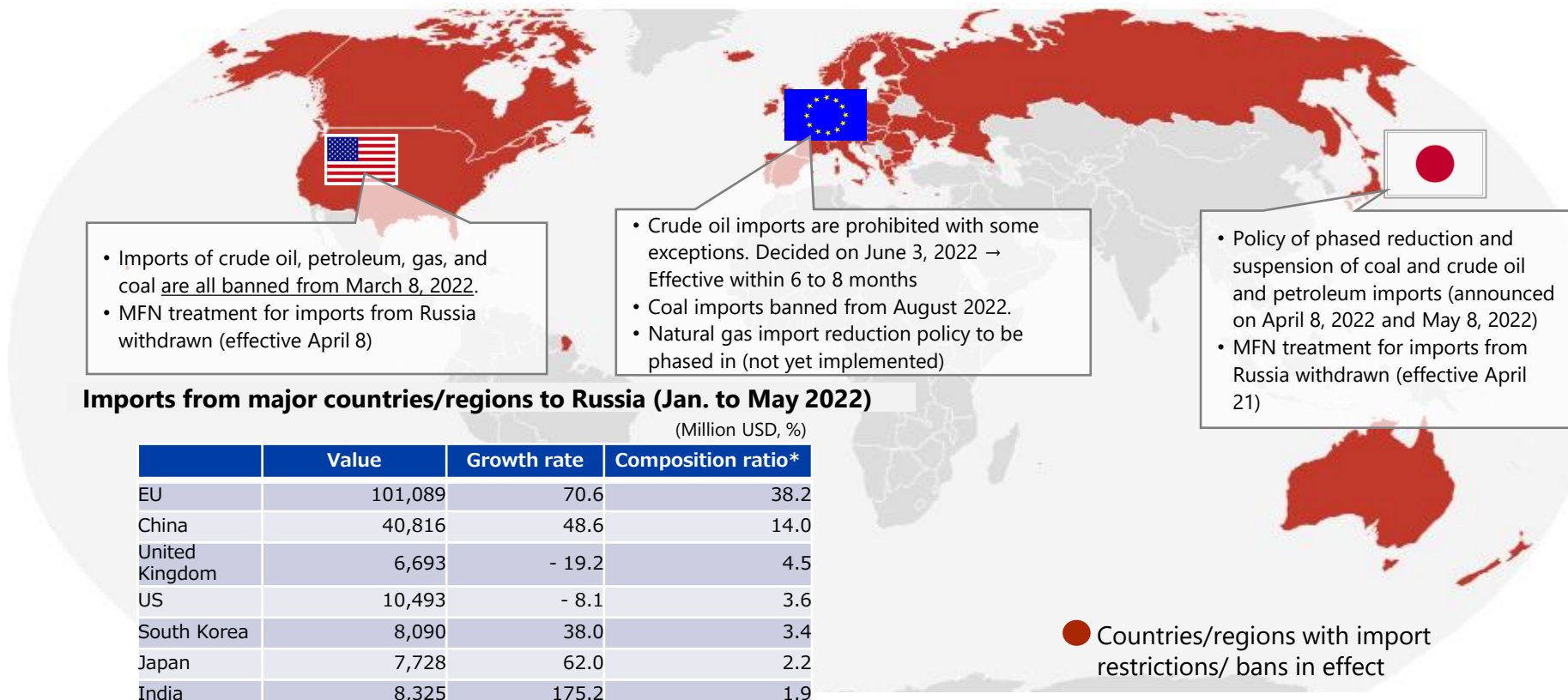
Rank	Investment origin	Composition ratio (%)
1	Cyprus	32.3
2	Bermuda	10.7
3	Netherlands	8.6
4	United Kingdom	7.2
5	Bahama	5.3
Reference	US	0.9
	Japan	0.5
	China	0.5

Source: "Coordinated Direct Investment Survey" (IMF)

# 17 | Restrictive Import Measures Against Russia (energy, etc.)

- As of the end of June 2022, 43 countries had introduced import restriction measures against Russia. In addition, more than 40 countries had introduced tariff reductions and other import liberalization measures to ensure resource and food supply stability. 187 countries have not yet invoked import-related measures.
- Even among the countries invoking measures, measures to restrict energy imports are unaligned due to per-country differences regarding energy.

## Policies on energy-related imports related to Russia's invasion of Ukraine (as of June 30, 2022)



- Imports of crude oil, petroleum, gas, and coal are all banned from March 8, 2022.
- MFN treatment for imports from Russia withdrawn (effective April 8)

- Crude oil imports are prohibited with some exceptions. Decided on June 3, 2022 → Effective within 6 to 8 months
- Coal imports banned from August 2022.
- Natural gas import reduction policy to be phased in (not yet implemented)

- Policy of phased reduction and suspension of coal and crude oil and petroleum imports (announced on April 8, 2022 and May 8, 2022)
- MFN treatment for imports from Russia withdrawn (effective April 21)

Note: Share of each country/region in Russia's total exports (2021)  
Source: Trade statistics of respective countries and regions

Source: ITC (accessed June 30, 2022)

# 18 | Example of Introducing Policies Incorporating Economic Security (Trade Policies)

- Externally, Japan, the US, and Europe are working together to prevent the outflow of key technologies.
- The US is ahead for export controls. Meanwhile, China is preparing countermeasures against extra-terrestrial application of export controls, including those from the US. There is a concern that companies will find themselves stuck between the US and China.

## Examples of economic security-related policies in the US, Europe, Japan, and China

Country/region	Trade policy
US	<ul style="list-style-type: none"> <li>Passed the Export Control Reform Act (ECRA) in 2018. <b>There is no comprehensive listing of emerging and basic technologies</b> but these are being added gradually. The executive branch also expanded the Entity List (EL) to include China and other countries. In principle, US technology exports are treated as impermissible.</li> <li>Legislation (FIRRMA) to strengthen the screening of investments in the US was enacted in 2018. Non-controlling investments in critical technology and infrastructure are also subject to screening.</li> <li>Additional tariffs of up to 25% have been imposed based on Chinese IP theft. Expanded import restrictions on products that rely on forced labor.</li> <li>Domestic procurement ratios changed in government procurement regulations (60% in 2022 → 65% in 2024 → 75% in 2029). More local preferential treatment for critical products.</li> </ul>
Europe	<ul style="list-style-type: none"> <li>A draft regulation on <b>anti-intimidation measures</b> was proposed as a countermeasure against extra-terrestrial countries in December 2021. A wide range of measures can be taken at the discretion of the Commission against economic intimidation (e.g., Chinese customs embargoes triggered by the Taiwan issue).</li> <li>Inward investment will be monitored as a potential threat. <b>It is encouraging all members to adopt screening systems.</b></li> <li><b>Identified 137 items that are highly import-dependent.</b> 34 of them were analyzed to be vulnerable due to low substitutability and include energy, pharmaceuticals, etc.</li> </ul>
China	<ul style="list-style-type: none"> <li>Promulgated the "Unreliable Entities List" regulation in September 2020. There is concern that trade and investment restrictions may be imposed if placed on the list.</li> <li>In January 2021, the "Regulation to Prevent Extra-Territorial Application of Foreign Measures" was promulgated to enable claims for damages laws of other countries being applied extra-territorially. <b>Risk of companies becoming trapped.</b></li> </ul>
Japan	<ul style="list-style-type: none"> <li>The Foreign Exchange Law was revised in May 2022. Export controls were enhanced, including restrictions on foreign residents under the influence of foreign governments.</li> <li>It is collaborating with allies on critical and emerging technologies.</li> </ul>

Source: Materials published by each company and JETRO business briefs

# 19 | Example of Introducing Policies Incorporating Economic Security (Industry Policies)

- Major countries have begun to strengthen their industrial capacity in critical technologies and infrastructure. Amongst this, there are noticeably large investments in semiconductors.
- Efforts are underway to identify necessary materials and required support to strengthen the supply chain.

## Examples of economic security-related policies in the US, Europe, Japan, and China

Country/region	Industrial policy
US	<ul style="list-style-type: none"> <li>◆ The Infrastructure Investment and Jobs Act was passed in November 2021. Plans are underway to <b>use 550 billion dollars for logistics and power.</b></li> <li>◆ A major investment bill (budget to support basic research and <b>semiconductor manufacturing</b>) is under heavy deliberation. Budget adjustments, including 5G and manufacturing relocation subsidies, are underway.</li> <li>◆ Measures were also proposed to strengthen the supply chain in February 2022. They <b>includes support for key mineral resource technologies (processing, refining, etc.),</b> revitalizing circuit boards, etc. (including intellectual property measures), and <b>for the manufacturing industry, export support by the US Export-Import Bank</b> and financial support for small-scale players</li> </ul>
Europe	<ul style="list-style-type: none"> <li>◆ In February 2022, the European Commission established a <b>roadmap</b> for increasing strategic independence for key technologies and value chains. This includes public-private cooperation to <b>eliminate external dependence on batteries, scarce resources, hydrogen, etc.,</b> and flexible infrastructure subsidy approvals.</li> <li>◆ The <b>European Chips Act</b> was proposed by the European Commission in February 2022. It aims for a global market share of over 20% for next-generation technologies. <b>At least 43 billion euros will be invested through</b> public support and private investment</li> </ul>
China	<ul style="list-style-type: none"> <li>◆ "Made in China 2025" <b>targets 70% domestic production in key areas,</b> including AI, quantum information, robotics, etc., <b>with R&amp;D investment to increase by 7%/year.</b></li> <li>◆ Under the "China Integrated Circuit Industry Investment Fund," China will invest more than <b>5 trillion yen in semiconductors.</b></li> </ul>
Japan	<ul style="list-style-type: none"> <li>◆ The <b>bill to promote economic security</b> was passed in May 2022, providing:               <ol style="list-style-type: none"> <li>(1) Support for certification of companies to ensure supplies of necessary materials</li> <li>(2) Advanced screening of critical equipment in 14 key infrastructure fields</li> <li>(3) Financial support for technological developments and establishment of think tanks</li> <li>(4) A patent nondisclosure system (JPO→Cabinet Office)</li> </ol> </li> </ul>

Source: Materials published by each company and JETRO business briefs



## JETRO Global Trade and Investment Report 2022

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