

# *Developments in the Real Economy*



# I. Developments in the Real Economy

## 1. Overview

In 2022, Taiwan's export growth was dampened by the global economic slowdown, but steady private investment and reviving private consumption provided some support. The economy expanded by 2.45% for the year as a whole, down from the 6.53% of the previous year and hitting a record low unseen since 2017. Meanwhile, Taiwan maintained a healthy balance of payments, including a continued current account surplus and a net asset increase in the financial account. Regarding inflation, as supply-side factors pushed up domestic food prices and fuel and lubricant fees, consumer price index (CPI) inflation climbed by 2.95% year on year and core CPI inflation rose by 2.61%, both at historical highs since 2009. The unemployment rate went up owing to pandemic-related disruptions but came down later as the pandemic eased off, averaging 3.67% for the year as a whole, the lowest since 2011. In terms of wage growth, non-farm monthly real earnings per worker continued to rise, setting a new record at NT\$53,741 after increasing by 0.48% year on year.

### **Robust Economic Growth**

A quarter-by-quarter review showed that, in the first quarter of 2022, a continued upturn in private investment and exports drove the economy to grow by 3.87%, the highest growth rate of the year. In the second quarter, though COVID-19 infections rose sharply, private consumption still posted mild growth thanks to a lower base in the previous year under a level-3 pandemic lockdown, and private investment extended its uptrend; however, a softening in final demand for consumer goods weighed on export growth, slowing the GDP growth rate to 2.95%. The economy regained some momentum in the third quarter and expanded by 3.64%, mainly benefiting from a marked rebound in private consumption with pandemic impacts abating and tourism stimulus schemes in motion. In the fourth quarter, though, the economy contracted by 0.14% owing to negative export growth, the first year-on-year contraction since the first quarter of 2016. For the year as a whole, the economic growth rate was 2.45%, down by 4.08 percentage points from the previous year.

Among the GDP expenditure components, domestic demand was the driving force for the 2022 economic growth. Private consumption increased, fixed capital formation rose steadily as major tech firms raised capital outlays and green investments and 5G network infrastructure projects continued; combined with a steady increase in government consumption, the contribution of domestic demand to the GDP growth was 3.17 percentage points, slightly lower than the 4.52 percentage points the previous year. With regard to external demand, import-

derived demand was driven up by exports and investments. With import growth faster than export growth, net foreign demand contributed minus 0.72 percentage points to the GDP growth, down from 2.01 percentage points the previous year.

Bolstered by a further increase in private investment in 2022, the domestic investment rate (gross domestic investment to GDP) rose from 26.96% the previous year to 27.78%, the highest since 1996. As the government continued to relax pandemic containment measures, private consumption rebounded, and the national saving rate (gross national saving to gross national income) dropped from 42.91% to 41.33%. Overall, as the increase in gross national investment exceeded that in gross national saving, the excess saving rate (the difference between saving and investment as a percentage of GDP) declined from 16.85% to 14.49%.

### **Healthy BOP Surplus**

In 2022, Taiwan continued to record a healthy balance of payments. The current account posted a surplus of US\$101,731 million, the financial account had a net asset increase of US\$98,103 million, and the Bank's reserve assets showed an increase of US\$10,883 million.

On the current account, goods imports and exports both registered historical highs in 2022, with imports increasing more than exports. As a result, the goods trade surplus shrank from US\$87,963 million to US\$68,989 million, but was still the largest contributor to the current account surplus.

The services account surplus widened to a historical high of US\$13,111 million from US\$12,428 million owing mainly to an increase in freight proceeds. The primary income surplus widened from US\$19,453 million to US\$22,735 million, reflecting increases in residents' outward direct investment and banks' interest income. The secondary income deficit rose from US\$2,694 million to US\$3,104 million. For the year of 2022, the ratio of current account surplus to nominal GDP declined from the 15.1% of the previous year to 13.3%.

On the financial account, portfolio investment recorded a net asset increase of US\$105,388 million. Among the components, residents' portfolio investment abroad rose by a net amount of US\$59,674 million, mainly because banks increased holdings of foreign securities. Nonresidents' inward portfolio investment recorded a net decrease of US\$45,714 million, mainly because foreign investors cut holdings of Taiwanese stocks. Direct investment posted a net increase of US\$166 million, of which direct investment abroad by residents and nonresidents' inward direct investment increased to US\$16,280 million and US\$10,189 million, respectively, both higher than the previous year. The account of other investment showed a net asset decrease of US\$18,032 million.

## Rising Inflation

In 2022, global supply chain bottlenecks lingered on and international raw materials such as crude oil still faced upward price pressures as the Russia-Ukraine war continued, leading to significant rises in domestic import prices. As a result, the wholesale price index (WPI) went up by 12.42% year on year, the fastest rise since 1981. Of the components, imported goods, domestic sales excluding imports, and exported goods showed price rises of 16.07%, 8.37%, and 12.06%, respectively.

The CPI annual growth rate recorded the fastest rise since 2009, climbing by 2.95% mainly because supply-side factors drove up prices of food, fuel & lubricants, and durable consumer goods, as well as hikes in housing rent. The core CPI annual growth rate was 2.61%, the highest since 2009. Compared to the US and Europe, though, Taiwan's inflation in 2022 was milder, attributable to the government's effective supply-side controls such as energy price stabilization mechanisms, the Bank's gradual monetary tightening, and the spillover effects created by major economies as their central banks adopted hawkish monetary policy stances.

## Lower Unemployment Rate; Moderate Wage Growth

The unemployment rate rose from 3.61% at the beginning of 2022 to 3.79% in August, trending up during a COVID-19 resurgence from mid-April as well as a seasonal job seeker surge during the graduation period. Thereafter, the domestic pandemic eased and economic activity picked up, helping the unemployment rate fall towards 3.52% in December and bringing the annual average to a 22-year low at 3.67%. The average labor force participation rate rose by 0.16 percentage points from the previous year to 59.18%, the highest since 1993.

The average number of employed persons was 11,418 thousand, a decrease of 29 thousand or 0.26% owing to structural headwinds such as low birth rates and an aging society. Dampened by slower export growth amid a global economic downturn, industrial sector employment declined by 17 thousand or 0.41%. Employment in the services sector decreased by one thousand persons, or 0.01%, while the agricultural sector shed 12 thousand employed persons, or 2.24%.

In terms of wages, the average non-farm (industrial and services sectors) monthly earnings per employee rose by 3.45% from the previous year to NT\$57,718. Adjusted for inflation, real monthly earnings increased by a smaller 0.48% and reached a historical high of NT\$53,741. As a result of higher production output and fewer total hours worked, labor productivity indices of the industrial sector and the manufacturing industry rose by 1.37% and 1.48% year on year, respectively. Meanwhile, unit labor costs increased by 4.20% in the industrial sector and 4.16% in the manufacturing sector, with total earnings growing faster than production.

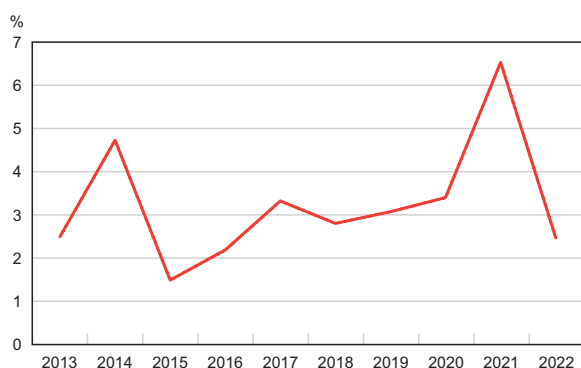
## 2. National Output and Income

In 2022, Taiwan's economy grew at an annual rate of 2.45%. Domestic demand was the main growth engine, contributing 3.17 percentage points to real GDP growth. In terms of external demand, both export- and investment-derived demand caused import growth to outweigh the growth of exports, and thus net exports contributed -0.72 percentage points to real GDP growth. In the meantime, nominal GNI (gross national income, in US dollars) fell by 1.51%, and GNI per capita declined from US\$33,756 to US\$33,565 over the year 2022.

In the first quarter, real GDP growth reached 3.87%. Private consumption experienced lower growth because of higher inflation and multiple waves of the COVID-19 pandemic. Higher capital expenditures and continuing investment in major projects, such as green energy, provided growth momentum for private investment. Meanwhile, export growth momentum remained strong owing to increasing demand for traditional manufacturing goods and business opportunities arising from emerging technology applications. In the second quarter, real GDP growth declined slightly to 2.95%. As for private consumption, a lower base effect outweighed a decline in dining out and travel spending, resulting in moderate private consumption growth. Private investment growth remained strong, benefiting from production capacity expansion in the technology industry and continued investment in green energy infrastructure, transportation equipment, and energy-efficient production equipment. On the contrary, rising global inflationary pressures discouraged demand for end-consumer products, affecting the exports of related goods in supply chains and restraining export growth momentum.

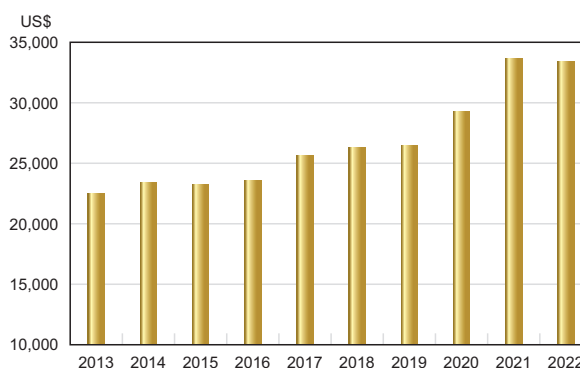
In the third quarter, growth in real GDP rose to 3.64%. Higher COVID-19 vaccine coverage and the diminishing impact of the pandemic, combined with the government's stimulus program for

**Real Growth Rate of GDP**



Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2023.

**Per Capita GNI**



Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2023.

domestic tourism, significantly boosted private consumption. Growth in private investment, on the other hand, slowed because of a higher base effect. Export growth momentum also waned in response to a slowdown in the global economy triggered by the ongoing war between Russia and Ukraine and the continued tightening of monetary policy in major economies. In the fourth quarter, real GDP contracted by 0.41%, the lowest growth since the first quarter of 2016. As the government gradually lifted COVID-19 restrictions, spending on domestic travel and outbound tourism increased remarkably and stimulated private consumption growth. In the meantime, major investment projects related to semiconductors and green energy continued to take place, resulting in another quarter of robust growth for private investment. On the other hand, exports declined owing to manufacturing inventory adjustments, China's zero-COVID policy, and weaker global demand.

### Expenditure Components of GDP

All expenditure components of GDP recorded positive growth in 2022. Among all the components, gross fixed capital formation was the primary source of economic growth and contributed 1.63 percentage points to real GDP growth for the year. Private consumption and exports of goods and services both contributed to real GDP growth by 1.60 percentage points. Government consumption, on the other hand, contributed slightly with 0.46 percentage points to real GDP growth. With respect to shares of GDP, exports of goods and services continued to account for the largest share of GDP at 71.99%, followed by private consumption at 45.52%, and gross fixed capital formation at 27.61%.

### GDP by Expenditure

Unit: %

	2022			2021		
	Share	Real Growth Rate	Contribution to Real Growth Rate of GDP*	Share	Real Growth Rate	Contribution to Real Growth Rate of GDP*
Private Consumption	45.52	3.59	1.60	44.61	-0.35	-0.17
Government Consumption	13.73	3.44	0.46	13.51	3.69	0.51
Gross Fixed Capital Formation	27.61	6.24	1.63	26.11	14.46	3.50
Change in Inventory	0.17	--	-0.52	0.85	--	0.68
Exports of Goods and Services	71.99	2.41	1.60	66.42	17.27	10.03
(Less: Imports of Goods and Services)	59.02	4.50	2.32	51.50	18.06	8.02
Expenditure on GDP	100.00	2.45	2.45	100.00	6.53	6.53

Note: \* Percentage point.

Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2023.

#### (1) Moderate Growth in Private Consumption

Despite a surge in COVID-19 cases in mid-April, the general public had grown to live with

COVID-19 while the impact of the pandemic diminished significantly. Given the change in the general public's attitude towards COVID-19 and a lower base effect, private consumption grew at an annual rate of 3.59% and contributed 1.60 percentage points to real GDP growth.

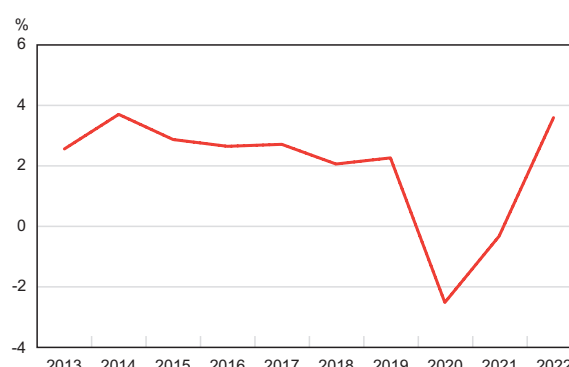
Although the government had loosened epidemic control measures and attempted to revitalize the economy with fiscal stimulus programs, consumer spending on transportation and leisure and entertainment were still affected by the recurring waves of the pandemic, resulting in weaker private consumption growth of 0.67% in the first quarter. In the second quarter, private consumption grew by 3.14%, even though local COVID-19 transmission dampened consumption expenditure for domestically-oriented services. In the third quarter, private consumption regained its growth momentum as the impact of the pandemic subsided. In the meantime, the government lifted pandemic-related restrictions and launched a stimulus program to promote domestic tourism, thereby pushing private consumption growth up to 7.52%. With the easing of border controls, consumer activities gradually returned to normal, and the demand for cross-border travel picked up. As a result, private consumption increased by 3.24% in the fourth quarter. Overall, private consumption growth in the second half of the year outperformed that of the first half of the year.

## (2) Robust Expansion in Fixed Capital Formation

Fixed capital formation grew robustly at an annual rate of 6.24% and contributed 1.63 percentage points to real GDP growth. The growth was primarily driven by the procurement of transportation equipment, higher demand for 5G infrastructure investment, continuing investment in green energy-related projects, and increased capital expenditures by leading technology firms.

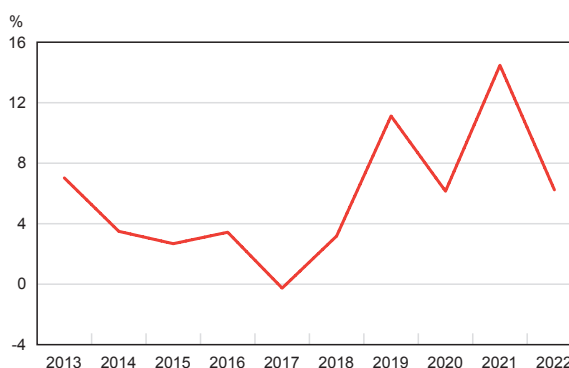
Driven by higher capital expenditures, stronger demand for transportation equipment, and continuing investments in 5G infrastructure and green energy-related projects, both machinery and equipment investment and

**Real Growth Rate  
of Private Consumption Expenditure**



Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2023.

**Real Growth Rate  
of Fixed Capital Formation**



Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2023.

transportation investment expanded at a healthy pace in the first half of the year. Gross fixed capital formation increased by 9.22% and 11.27% in the first two quarters, respectively. Nevertheless, growth in transportation investment and construction investment moderated in the second half of the year owing to a higher base effect. The fixed capital formation growth rates for the last two quarters of the year were 1.96% and 3.31%, respectively.

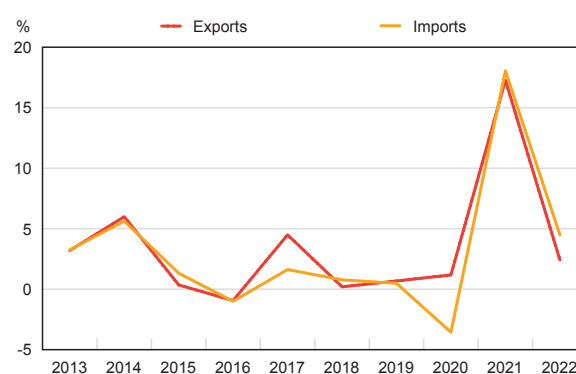
In terms of the type of fixed capital formation, machinery and equipment investment achieved a double-digit growth rate of 11.00% in 2022, while construction investment grew moderately at an annual rate of 2.24%. On the other hand, transportation investment increased by 1.23%. Lastly, investment in intellectual property remained relatively stable and expanded by 6.07% for the entire year.

### (3) Mild Growth in Real Exports

Rising global inflation and tighter monetary policy in major economies led to a slowdown in global demand. As a result, exports of goods and services grew mildly at an annual rate of 2.41% for the entire year, significantly lower than the 17.27% of the previous year. On balance, exports of goods and services contributed 1.60 percentage points to real GDP growth in 2022.

Exports performed vigorously in the first half of the year, driven by emerging technology applications, digital transformation, and stronger demand for traditional manufacturing goods, with growth rates of 8.98% and 4.78% in the first two quarters, respectively. In the second half of the year, global inflation remained elevated because of the ongoing war between Russian and Ukraine. In response, major central banks continued to tighten monetary policy, which consequently tempered global economic growth. Of note, growth in exports declined to 2.15% in the third quarter as demand for traditional manufacturing goods and electronic products fell sequentially. In the fourth quarter, widespread COVID-19 infections in China set back global economic growth further. Thus, demand for consumer electronics reduced perceptibly, leading firms to destock. Against this backdrop, exports decreased notably by 5.14%.

**Real Growth Rates of Exports and Imports**



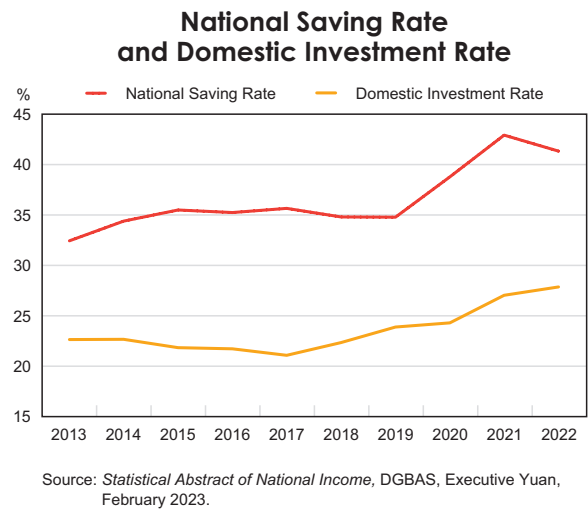
Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2023.

Turning to imports of goods and services, the combination of strong demand for capital equipment and an increase in export-derived demand caused imports to rise by 4.50% for the entire year.



Subtle Changes in National Saving Rate and Domestic Investment Rate

The national saving rate (the ratio of national savings to GNI measured at current prices) declined slightly from 42.91% in 2021 to 41.33% in 2022, reflecting a recovery in consumption expenditures as the impact of the pandemic grew weak. Meanwhile, growth momentum in private investment remained strong; therefore, the domestic investment rate (the ratio of domestic investment to GDP measured at current prices) edged up to 27.78% in 2022, slightly higher than the 26.96% of the previous year.



### 3. Balance of Payments

In 2022, Taiwan's current account registered a surplus of US\$101,731 million, which accounted for 13.3% of nominal GDP, down from 15.1% in the previous year. The financial account posted a net asset increase of US\$98,103 million. Reserve assets increased by US\$10,883 million.

#### Balance of Payments

Unit: US\$million

	(1) 2022	(2) 2021	(1)-(2)
A. Current account	101,731	117,150	-15,419
Goods: credit (exports)	465,987	453,603	12,384
Goods: debit (imports)	396,998	365,640	31,358
Balance on goods	68,989	87,963	-18,974
Services: credit (exports)	58,350	51,995	6,355
Services: debit (imports)	45,239	39,567	5,672
Balance on services	13,111	12,428	683
Primary income: credit	51,180	40,378	10,802
Primary income: debit	28,445	20,925	7,520
Balance on primary income	22,735	19,453	3,282
Secondary income: credit	9,503	8,710	793
Secondary income: debit	12,607	11,404	1,203
Balance on secondary income	-3,104	-2,694	-410
B. Capital account	-46	3	-49
C. Financial account	98,103	105,652	-7,549
Direct investment: assets	16,280	11,341	4,939
Equity and investment fund shares	14,519	10,467	4,052
Debt instruments	1,761	874	887
Direct investment: liabilities	10,189	5,416	4,773
Equity and investment fund shares	6,215	2,625	3,590
Debt instruments	3,974	2,791	1,183
Portfolio investment: assets	59,674	81,503	-21,829
Equity and investment fund shares	7,756	19,864	-12,108
Debt securities	51,918	61,639	-9,721
Portfolio investment: liabilities	-45,714	-21,155	-24,559
Equity and investment fund shares	-44,608	-22,257	-22,351
Debt securities	-1,106	1,102	-2,208
Financial derivatives: assets	-21,700	-21,822	122
Financial derivatives: liabilities	-26,356	-21,536	-4,820
Other investment: assets	-21,474	17,828	-39,302
Other investment: liabilities	-3,442	20,473	-23,915
D. Net errors and omissions	7,301	9,492	-2,191
E. Reserves and related items*	10,883	20,993	-10,110

Note: \* Excluding valuation changes in exchange rates.

Source: *Balance of Payments Quarterly, Republic of China (Taiwan)*, CBC, February 2023.

## Narrower Current Account Surplus

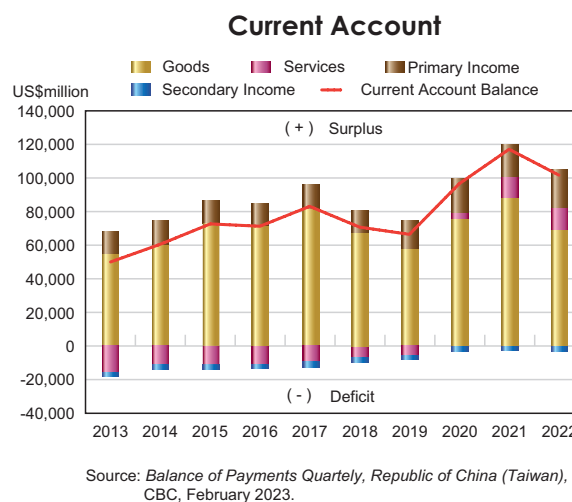
The current account consists of four major items, namely goods, services, primary income, and secondary income.

### (1) Goods

Despite the global economic slowdown in the second half of the year, significant trade growth in the first half of the year strongly bolstered exports and imports of goods, both of which reached record high amounts. The value of exports, on a BOP basis, increased by 2.7% to US\$465,987 million. Among its components, net exports of goods under merchanting decreased by 27.8% to US\$14,295 million. The value of imports increased by 8.6% to US\$396,998 million. Overall, as the increase in imports exceeded that in exports, the trade surplus narrowed from US\$87,963 million to US\$68,989 million for the year. The top five trading partners of Taiwan in 2022 were Mainland China (hereafter in this chapter referred to as Mainland China), ASEAN,<sup>1</sup> the US, Europe, and Japan.

In terms of Taiwan's trade with Mainland China, the value of exports amounted to US\$185,914 million in 2022, 1.6% lower than the previous year. Among major export products, electronic parts and components maintained the leading role, which benefited from increasing use of emerging technologies; in contrast, exports of optical instruments, information and communication products, plastic and rubber products, basic metals and their products, and machinery from Taiwan to Mainland China decreased significantly, causing Mainland China's share of total exports to drop to 38.8%, the lowest point in nearly 18 years. As a manufacturing center of the world, Mainland China remained Taiwan's largest trading partner. Imports from Mainland China grew by 1.5% to US\$85,481 million in 2022. This was mainly due to international industrial specialization and cooperation, which resulted in a larger increase in imports of electronic parts and components from Mainland China, but its share of total imports continued to decline to 20.0%. In 2022, exports to Mainland China decreased while imports increased, amounting to a narrower trade surplus of US\$100,434 million, still the largest source of Taiwan's trade surplus.

Exports to the ASEAN economies increased to US\$80,616 million in 2022, up by 14.8% with a strong export performance of electronic parts and components and mineral products. Imports from the ASEAN economies increased by 14.1% to US\$53,900 million, accounting for a rising share of 12.6% of total imports as imports of mineral products and machinery increased. Overall, the trade surplus with



<sup>1</sup> Association of Southeast Asian Nations, including Brunei Darussalam, Cambodia, Indonesia, Laos, Myanmar, Malaysia, the Philippines, Singapore, Thailand, and Vietnam.

the ASEAN economies rose to US\$26,716 million. Singapore, Vietnam, and the Philippines were the third, fourth, and fifth largest sources of Taiwan's trade surplus, respectively.

In 2022, Taiwan's exports to the US grew 14.3% to US\$75,056 million, and its share of total imports rose to its highest in nearly 18 years, reaching 15.7%. The increase mainly came from information, communication and audio-video products. As for imports from the US, the amount increased by 15.8% to US\$45,456 million, with its share in total imports increasing to 10.6%. The major products contributing to the expansion were mineral products and machinery. The trade surplus with the US expanded to US\$29,600 million for the year, ranking second among Taiwan's surplus sources.

Exports to Europe increased by 6.8% to US\$41,110 million, with its share of total exports remaining at 8.6% for the second year in a row. The major products contributing to this expansion were electronic parts and components and transport equipment. Imports from Europe increased by 7.6% to US\$50,918 million and the share of total imports decreased to 11.9%, with chemical products and transport equipment being the main sources of this increase. In all, Taiwan's trade deficit with Europe expanded to US\$9,808 million in 2022.

Exports to Japan increased by 15.1% to US\$33,618 million and its share in Taiwan's total exports slightly increased to 7.0%. Imports from Japan decreased by 2.7% to US\$54,597 million and its share of total imports decreased to 12.8%. The category that saw both the greatest increase in exports and the greatest decrease in imports to Japan was electronic parts and components. The trade

### Trade in Goods by Country

Unit: %

	2022			2021		
	Amount (US\$million)	Share	Annual Change	Amount (US\$million)	Share	Annual Change
Exports						
Mainland China (including Hong Kong)	185,914	38.8	-1.6	188,875	42.3	24.8
ASEAN	80,616	16.8	14.8	70,242	15.7	32.0
US	75,056	15.7	14.3	65,686	14.7	29.9
Europe	41,110	8.6	6.8	38,484	8.6	36.7
Japan	33,618	7.0	15.1	29,206	6.5	24.8
Rest of the World	63,192	13.2	17.3	53,878	12.1	40.2
Total	479,506	100.0	7.4	446,371	100.0	29.3
Imports						
Mainland China (including Hong Kong)	85,481	20.0	1.5	84,194	22.0	29.9
Japan	54,597	12.8	-2.7	56,117	14.7	22.3
ASEAN	53,900	12.6	14.1	47,233	12.4	31.6
Europe	50,918	11.9	7.6	47,331	12.4	28.6
US	45,456	10.6	15.8	39,259	10.3	20.7
Rest of the World	137,043	32.1	27.1	107,825	28.2	53.5
Total	427,394	100.0	11.9	381,958	100.0	33.5

Source: *Monthly Statistics of Exports and Imports*, Ministry of Finance, R.O.C. (Taiwan).

deficit with Japan narrowed to US\$20,979 million. Japan remained Taiwan's second largest source of imports and the largest source of trade deficit in 2022.

## (2) Services

In 2022, services registered a record surplus of US\$13,111 million, up from US\$12,428 million in the previous year, mainly because of an increase in freight transport receipts.

Of the various components of the services account, receipts of manufacturing services on physical inputs owned by others<sup>2</sup> decreased by US\$63 million to US\$4,326 million in 2022. On the debit side, payments for manufacturing services decreased by US\$68 million to US\$1,938 million. In total, net manufacturing receipts increased from US\$2,383 million to US\$2,388 million.

In terms of maintenance and repair services n.i.e. (not included elsewhere), which covers maintenance and repair work by residents on goods that are owned by nonresidents (and vice versa), the receipts increased by US\$187 million to US\$1,165 million owing to increased receipts from aircraft repair. On the other hand, the payments increased by US\$338 million to US\$1,231 million. In all, the repair services account turned from a surplus to a deficit of US\$66 million.

Transport receipts increased by US\$1,847 million to US\$21,601 million, a record high reflecting increases in international freight proceeds. Transport payments increased by US\$382 million to US\$9,957 million as a result of increased freight payments of imports. Overall, the surplus of transport services hit a record high in 2022, increasing from US\$10,179 million to US\$11,644 million.

As many countries were gradually easing border controls, the number of cross-border tourists rose. Travel receipts increased by US\$2,003 million to US\$2,747 million. Meanwhile, travel payments increased by US\$1,861 million to US\$3,108 million. In all, the deficit on the travel account narrowed to US\$361 million.

In terms of other services, the receipts grew by US\$2,381 million to US\$28,511 million, mainly attributable to increases in receipts from professional and management consulting services (which is under other business services), telecom., computer and information services, and financial services. The payments grew by US\$3,159 million to US\$29,005 million, owing to increases in payments for professional and management consulting services, financial services, and construction. Overall, the other services account turned from a surplus to a deficit of US\$494 million.

## (3) Primary Income

Primary income consists of compensation of employees, investment income, and other primary

<sup>2</sup> Manufacturing services on physical inputs owned by others includes the processing, assembly, labeling, and packing undertaken by a service provider that does not own the goods; namely a resident's payments to a nonresident for providing these services for the resident who is also the owner of the goods concerned.

income. In 2022, primary income receipts increased by US\$10,802 million to US\$51,180 million, mainly because of increases in residents' direct investment income and banks' interest receipts. Meanwhile, primary income payments increased to US\$28,445 million, US\$7,520 million more than the previous year. This was mainly attributable to increases in banks' interest payments and portfolio investment income paid to nonresidents. Consequently, the surplus on the primary income account increased to US\$22,735 million.

#### (4) Secondary Income

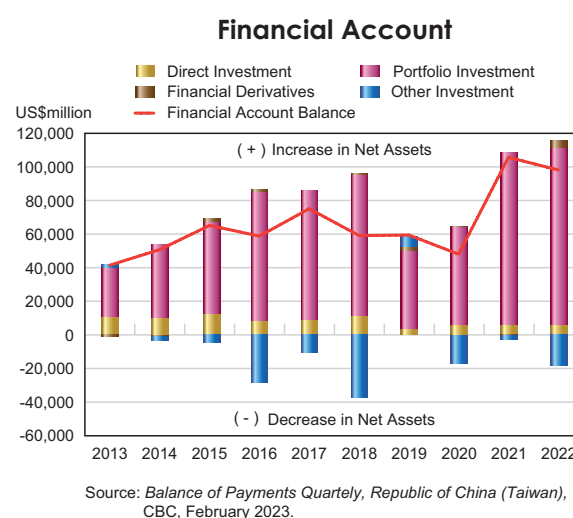
For the year of 2022, secondary income receipts amounted to US\$9,503 million, reflecting increases in gifts and samples. Secondary income payments amounted to US\$12,607 million, mainly owing to increases in outward family support allowances. As a whole, the deficit on the secondary income account widened to US\$3,104 million in 2022.

### Capital Account Deficit

The capital account includes capital transfers and the acquisition and disposal of non-produced, non-financial assets. In 2022, the balance of the capital account turned from a surplus to a deficit of US\$46 million.

### Net Asset Increase in Financial Account

In 2022, the financial account showed an increase of US\$98,103 million in net assets. In terms of sub-categories, direct investment, portfolio investment and financial derivatives exhibited increases of US\$6,091 million, US\$105,388 million and US\$4,656 million in net assets, respectively. The account of other investment exhibited a decrease of US\$18,032 million in net assets.



#### (1) Direct Investment

Direct investment abroad by residents exhibited an increase of US\$16,280 million. Direct investment in Taiwan by nonresidents showed an increase of US\$10,189 million.

#### (2) Portfolio Investment

In 2022, portfolio investment abroad by residents increased by US\$59,674 million mainly because banks increased holdings of foreign securities. Equity and investment fund shares

increased by US\$7,756 million, and debt securities rose by US\$51,918 million.

On the other hand, local portfolio investment by nonresidents decreased by US\$45,714 million as foreign investors reduced holdings of Taiwanese stocks. Equity and investment fund shares decreased by US\$44,608 million, and debt securities declined by US\$1,106 million.

### (3) Financial Derivatives

Assets in financial derivatives decreased by US\$21,700 million, principally because of gains on transactions of financial derivatives received by other financial corporations.

Liabilities in financial derivatives decreased by US\$26,356 million, mainly because of losses on transactions of financial derivatives paid by other financial corporations.

### (4) Other Investment

In 2022, other investment abroad by residents decreased by US\$21,474 million. Of the components, currency and deposits decreased by US\$20,575 million as the private sector withdrew overseas deposits; loans decreased by US\$2,215 million because of declines in overseas interbank loans; trade credit decreased by US\$2,678 million, owing to a downturn in trade credit extended by corporations; other accounts receivable increased by US\$3,829 million.

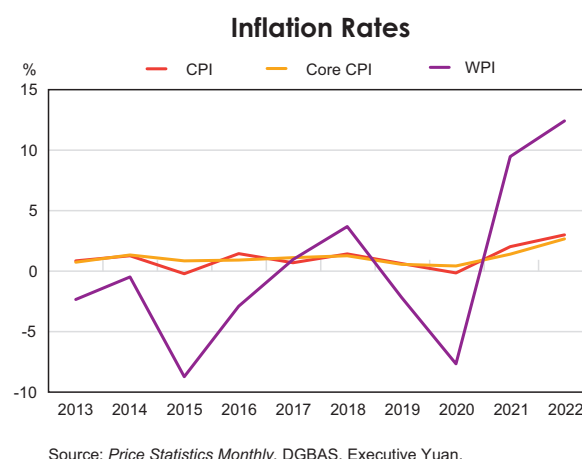
Other inward investment by nonresidents decreased by US\$3,442 million. Of the components, currency and deposits decreased by US\$8,295 million because of declining deposits from overseas branches; loans dropped by US\$1,997 million because of repayments on overseas interbank loans; trade credit grew by US\$2,980 million, owing to an increase in trade credit received by corporations; other accounts payable rose by US\$3,870 million.

## **Increase in Foreign Exchange Reserves**

The foreign exchange reserve assets held by the Bank increased by US\$10,883 million in 2022, mainly owing to returns from foreign exchange reserves management.

## 4. Prices

In 2022, Taiwan's WPI rose by 12.42%, the highest level since 1981, mainly reflecting soaring import prices owing to persistent supply chain bottlenecks and the ongoing Russia-Ukraine war pushing up international crude oil and other raw material prices. Headline inflation, measured by the CPI, increased by 2.95%, the highest increase since 2009, primarily driven by supply-side shocks such as price rises in food, fuels and lubricants, and durable goods, as well as higher prices of residential rent. The core CPI, which excludes fruit, vegetables, and energy, stood at 2.61%, also the largest increase since 2009.



### Marked Increase in Wholesale Prices

The WPI went up by 12.42% in 2022, the highest level since 1981. The marked increase reflected rising import prices of international raw materials such as crude oil and grains driven by lingering pandemic-related supply chain bottlenecks and the continued Russia-Ukraine war. In terms of monthly movements, the annual WPI inflation rate trended upwards from the beginning of the year because of higher import prices and reached an all-year high of 16.88% in May. Later, with price declines in international raw materials amid a slowing global economic expansion owing to largely synchronized monetary policy tightening by major economies, the increase in the annual WPI inflation rate abated and narrowed to 7.02% in December.

Broken down by the three major components of the WPI, the annual rates of change in prices for imports, domestic sales excluding imports, and exports picked up markedly in 2022 on account of continuously soaring prices of international raw materials.

Import prices, weighted at 34.10% of the WPI, rose by 9.12% in US dollar terms in 2022. As the NT dollar depreciated against the US dollar over 2022, the annual growth rate of import prices widened to a 16.07% increase in NT dollar terms, pushing up imported inflation pressures on domestic prices. Among the components of import prices in terms of the NT dollar, prices of raw materials went up by 20.56% and accounted for 15.27 percentage points in the import price increase, mainly boosted by



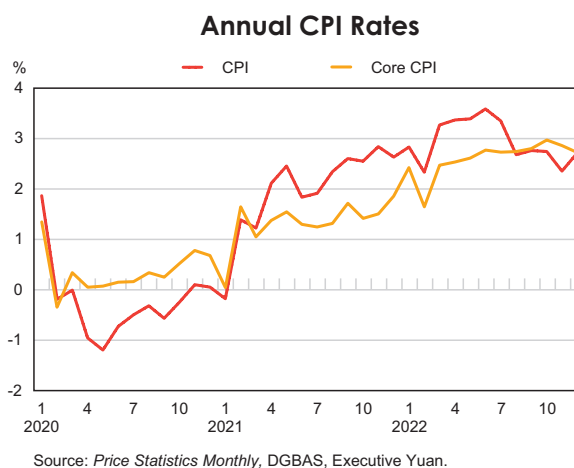
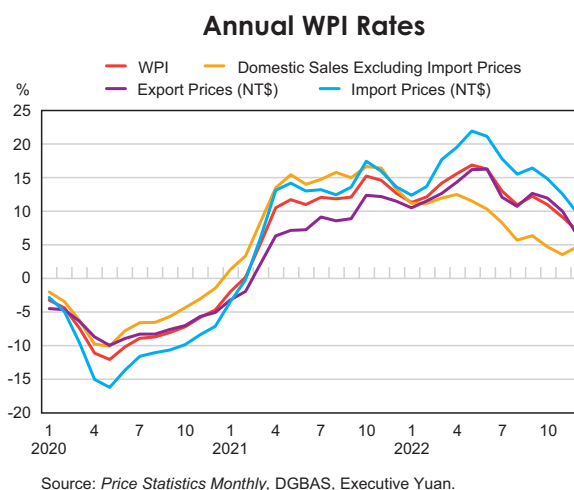
rising prices of mineral products, vegetable products, base metal products and chemical products. Prices of consumer goods and capital goods also rose by 5.46% and 1.01%, respectively.

Export prices, weighted at 40.20% of the WPI, increased by 5.37% in US dollar terms in 2022. Owing to the NT dollar depreciation against the US dollar, the annual change in export prices elevated to a 12.06% increase in terms of the NT dollar. Among the components of export prices in NT dollar terms, prices of raw materials moved up by 12.28%, contributing 10.70 percentage points to the export price increase and primarily reflecting higher prices of mineral products, chemical products, as well as base metal products. In addition, prices of consumer goods and capital goods rose by 14.21% and 7.21%, respectively.

With import costs of primary commodities surging, prices of domestic sales excluding imports, weighted at 25.70% of the WPI, advanced by 8.37% in 2022. In terms of the basic groups, prices of manufacturing products rose by 7.07%, mainly attributable to higher prices of petroleum and coal products, electronic parts and components, chemical materials, and base metal products. Prices of water, electricity, and gas supply, and prices of agriculture, forestry, fishing, and animal husbandry products went up by 20.20% and 6.28%, respectively. Prices of quarrying and mining products registered an increase of 3.16%.

### Upside Pressures for Consumer Prices

The CPI rose by 2.95% in 2022, the highest increase since 2009. From the beginning of the year, the CPI inflation rate trended up and reached 3.59% in June. The uptrend in CPI inflation was associated with an increase in domestic prices of food and oil related products boosted by the rise in imported raw material prices. Subsequently, as international prices of raw materials such as crude oil and grains softened and domestic prices of food such as vegetables and fruit posted smaller

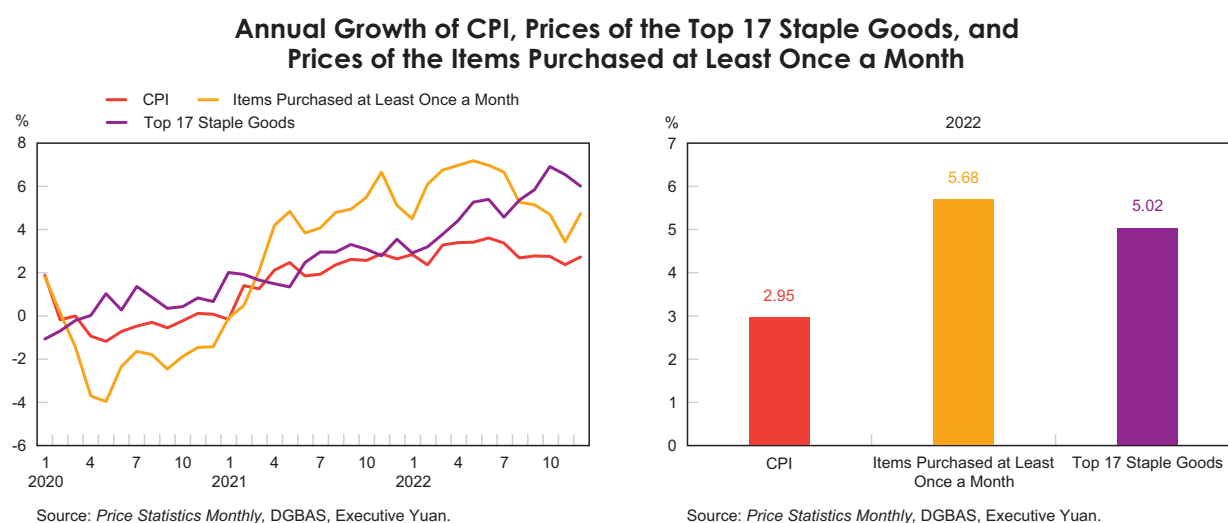


gains, the CPI inflation rate trended downwards and registered 2.35% in November. The CPI inflation rate moved up to 2.71% in December, mainly owing to rising prices of vegetables and fuels.

The core CPI inflation rate grew at an average pace of 2.61% year on year in 2022, the highest level since 2009. In terms of monthly movements, the core CPI annual growth rate displayed an uptrend and reached an all-year high of 2.97% in October. Later, the core inflation rate went down and recorded 2.72% in December, as prices of food away from home and durable goods rose at a softer pace.

Compared to major economies, Taiwan's inflation rate in 2022 was mild, reflecting the government's robust supply-side measures of price stabilization, the Bank's policy rate hikes, and spillover effects from the drastic tightening of monetary policy in major economies.

As prices of the items purchased at least once a month and of the top 17 staple goods rose by 5.68% and 5.02% in 2022, respectively, with both significantly outpacing the overall CPI inflation of 2.95%, consumers tended to be more conscious of the price uptrends.



In 2022, the uptick in Taiwan's CPI was mainly attributable to rising prices of food, fuels and lubricants, and durable goods, which were induced by supply-side factors such as rises in import prices of raw materials including crude oil and grains, coupled with higher prices of residential rent. These four items accounted for 2.09 percentage points in the CPI inflation rate, contributing 71% to CPI inflation.

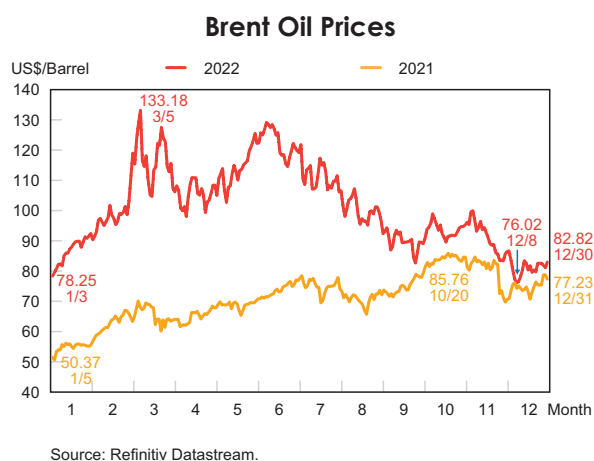
The main factors contributing to the rise of CPI inflation in 2022 were as follows:

- (1) Prices of food went up by 5.66% and accounted for 1.39 percentage points in the CPI inflation rate, mainly because of global supply chain bottlenecks and the Russia-Ukraine war pushing up import

costs of grains and meats. Among the components of the food group, the rise in wages and higher raw food costs brought up prices of food away from home by 5.77%, contributing 0.56 percentage points to CPI inflation. With supply restrained by unfavorable weather conditions, prices of fruit moved up by 10.40%, contributing 0.22 percentage points to CPI inflation. With rising feed and production costs caused by surging imported grain prices, prices of meats, eggs, and cereals and cereal products rose by 5.70%, 26.39%, and 4.29%, and accounted for 0.14, 0.08, and 0.07 percentage points in the CPI inflation rate, respectively.

(2) Reflecting the rise in housing prices, as well as higher prices of maintenance and repair of dwellings, prices of residential rent grew by 1.68%, contributing 0.25 percentage points to CPI inflation.

(3) For 2022, Brent oil prices averaged US\$100.94 per barrel, increasing by 42.67% from the previous year. Despite imported oil prices surging, the government made efforts to lower the commodity tax rates on gasoline and diesel and implement a price stabilization mechanism through state-owned energy suppliers aiming at restraining oil price hikes. Consequently, domestic fuel and lubricant prices went up relatively mildly by 8.40% and accounted for 0.24 percentage points in the CPI inflation rate.



(4) The rises in imported raw material costs, ocean freight rates, and wages, combined with the supply of domestic vehicles and home appliances constrained by global supply chain bottlenecks, pushed up prices of durable consumer goods by 2.00%, contributing 0.21 percentage points to CPI inflation.

(5) Influenced by increasing costs resulting from shortages of raw materials such as base metals and plastics and the rise in wages, prices of vehicle parts and maintenance moved up by 4.97% and accounted for 0.09 percentage points in the CPI inflation rate.

(6) Less discounts in clothing sales drove up prices of garments by 2.23%, accounting for 0.08 percentage points in the CPI inflation rate.

(7) Owing to an upswing in construction costs of materials and services, prices of maintenance and repair of dwellings went up by 5.83%, contributing 0.07 percentage points to CPI inflation.

(8) With soaring prices of toilet paper and napkins because of rising imported wood pulp and paper prices, as well as price hikes in toothpaste and shampoo, prices of cosmetic items rose by 1.99%, contributing 0.06 percentage points to CPI inflation.

(9) As elevated international gold prices brought prices of gold ornaments and jewelry higher, prices of personal effects climbed by 2.56%, contributing 0.06 percentage points to CPI inflation.

(10) An increase in accommodation and tour group fees on account of growing demand for travel amid the easing of the domestic pandemic-related restrictions and border reopening caused prices of entertainment services to grow by 1.91%, accounting for 0.06 percentage points in the CPI inflation rate.

### Percentage Changes in the Major Components of the CPI in 2022

Item	Annual Rate of Change (%)	Contribution to CPI Inflation Rate (Percentage Point)
CPI	2.95	2.95
Food	5.66	1.39
Food Away from Home	5.77	0.56
Fruit	10.40	0.22
Meats	5.70	0.14
Eggs	26.39	0.08
Cereals & Cereal Products	4.29	0.07
Fish & Seafood	6.30	0.07
Cooked Food	6.25	0.05
Residential Rent	1.68	0.25
Fuels & Lubricants	8.40	0.24
Durable Consumer Goods	2.00	0.21
Vehicle Parts & Maintenance	4.97	0.09
Garments	2.23	0.08
Maintenance & Repair of Dwellings	5.83	0.07
Cosmetic Items	1.99	0.06
Personal Effects	2.56	0.06
Entertainment Services	1.91	0.06
Total		2.51
Others		0.44

Source: *Price Statistics Monthly*, DGBAS, Executive Yuan.

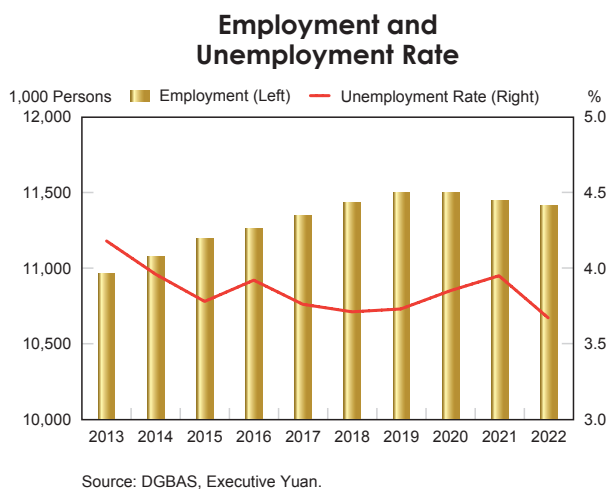
## 5. Labor Market

### Decrease in Employment for Two Consecutive Years

As the domestic COVID-19 resurgence in mid-April 2022 battered the labor market, employment decreased from 11.47 million persons in the beginning of the year to 11.37 million persons in May. Afterwards, employment gradually picked up and reached 11.45 million persons in December as the pandemic's impact waned and the government eased pandemic-related restrictions. However, the average number of employed persons for the year as a whole decreased by 29 thousand persons or 0.26% from the previous year to 11.42 million persons, recording two consecutive years of decline. This was mainly attributable to a declining fertility rate and an aging population in Taiwan.<sup>3</sup>

In terms of employment by sector, the industrial sector was affected by the decline in export growth amid a global economic slowdown, as well as a shortage of construction workers, with employment decreasing by 17 thousand persons or 0.41%. Within this sector, employment in the manufacturing and construction sectors both registered the largest job losses with eight thousand persons each. Meanwhile, with the recovery of domestic demand and loosened border controls, employment in the services sector decreased only mildly by one thousand persons or 0.01%. Within this sector, employment in the wholesale and retail trade sector saw the larger decline of 28 thousand persons. Employment in the agricultural sector also went down by 12 thousand persons or 2.24%. Of total employment, the services sector accounted for the major share at 59.96%, up by 0.15 percentage points from the previous year, while the shares of the industrial and the agricultural sectors edged down by 0.05 and 0.09 percentage points to 35.40% and 4.64%, respectively.

In terms of employed persons by occupation, employment of white-collar workers<sup>4</sup> accounted for 45.76% of total employment and increased by 35 thousand persons or 0.67%. Services and sales employment made up 19.91% of total employment and decreased by five thousand persons or 0.22%.



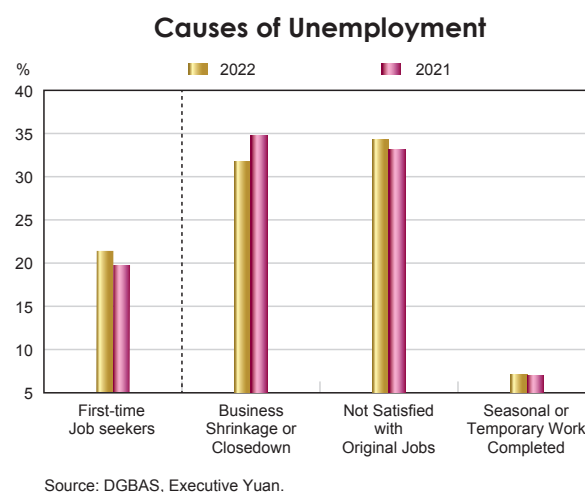
<sup>3</sup> In 2022, the civilian population aged 15 and over was 20.03 million persons, a decrease of 165 thousand persons or 0.82% compared with 2021; the working-age population (people aged 15 to 64) was 16.3 million persons, a decrease of 186 thousand persons or 1.12% compared with 2021.

<sup>4</sup> Including legislators, senior officials, managers, professionals, technicians, associate professionals, and clerical support workers.

while the employment of blue-collar workers,<sup>5</sup> accounting for 34.33% of total employment, suffered the largest decline of 57 thousand persons or 1.43%.

### Lowest Unemployment Rate Since 2001

The unemployment rate rose from 3.61% in the beginning of the year to 3.79% in August owing to the domestic coronavirus flare-up in April and the seasonal factor of new graduates entering the job market. Afterwards, the unemployment rate gradually moved down to 3.52% in December owing to the recovery of domestic economic activity amid an improving pandemic situation. For the year as a whole, the unemployment rate was 3.67%, the lowest since 2001.



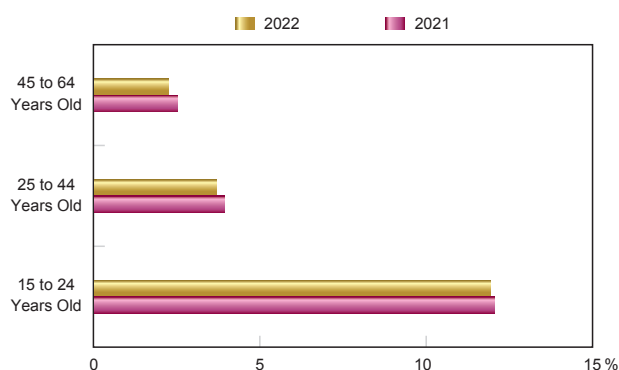
Reflecting the pandemic's impacts on experienced job seekers, unemployment duration increased by 1.01 weeks over the previous year to 21.25 weeks. In terms of age groups, unemployment duration of the age group 45-64 increased the most by 3.60 weeks to 22.90 weeks, followed by the 17.63 weeks for age group 15-24 with an increase of 0.64 weeks. The unemployment duration of the age group 25-44 remained 22.32 weeks. Meanwhile, the average number of the long-term unemployed<sup>6</sup> was 58 thousand persons, an increase of eight thousand persons compared to that in the previous year.

In terms of causes of unemployment, total unemployment in 2022 was 434 thousand persons, decreasing by 37 thousand or 7.81% from the previous year, mainly because unemployment of experienced job seekers, with a share 78.23% of total unemployment, decreased by 36 thousand persons or 9.71%. Among them, unemployment because of shrinkage or closedown of business recorded the largest decline by 26 thousand persons or 15.76%, and its share of total unemployment also decreased from 35.16% the previous year to 32.13%, mainly because the nationwide level-3 epidemic alert in 2021 had a more severe impact on the labor market compared to the pandemic resurgence in 2022. Meanwhile, unemployment because of dissatisfaction with their original jobs dropped by seven thousand persons or 4.67%, with a 34.52% share of total unemployment. Unemployment because of conclusion of seasonal or temporary work also decreased by two thousand persons or 7.39%, with a share of 7.29%.

<sup>5</sup> Including skilled workers in agricultural, forestry, fishing, and animal husbandry industries, and craft and machinery related workers.

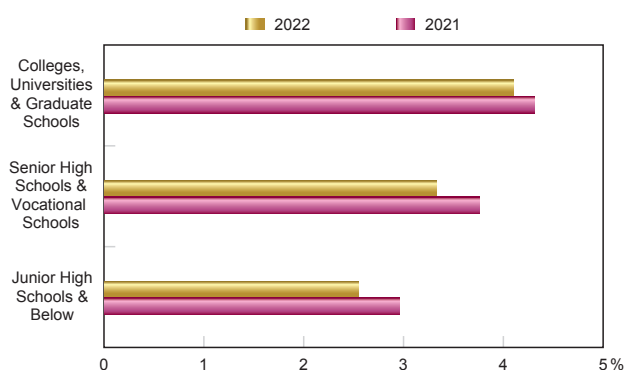
<sup>6</sup> Referring to those who have been unemployed for 53 weeks or more.

### Unemployment Rate by Age



Source: DGBAS, Executive Yuan.

### Unemployment Rate by Education Background

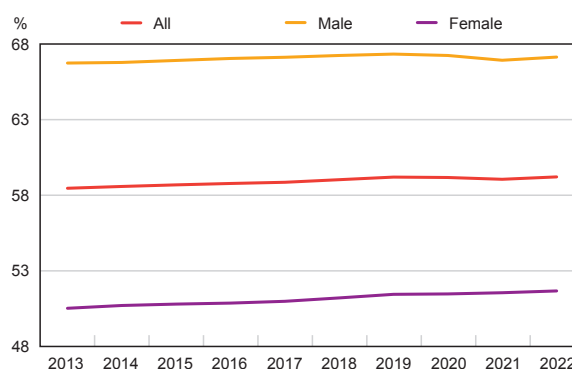


Source: DGBAS, Executive Yuan.

In terms of age groups, in the year 2022 the unemployment rates of people with the age groups 25-44 and 45-64 dropped by 0.24 and 0.26 percentage points from the previous year to 3.72% and 2.26%, respectively. The unemployment rate of the age group 15-24 also slid by 0.14 percentage points to 11.97%, the highest rate among all the age groups.

In terms of educational background, the unemployment rates shrank for all groups in 2022. For people with a junior high school degree or below, a senior high school or vocational school degree, and a college degree or above, the unemployment rate decreased by 0.41, 0.43, and 0.21 percentage points to 2.56%, 3.34%, and 4.11%, respectively. Younger persons and highly educated people suffered higher unemployment rates in 2022, reflecting a mismatch between skills acquired through tertiary education and demand for skills in the labor market.

### Labor Force Participation Rate



Source: DGBAS, Executive Yuan.

### Labor Force Shrank While Labor Participation Rate Increased

Affected by structural demographic changes driven by a declining fertility rate and an aging population in Taiwan, the labor force (employed and unemployed combined) decreased by 66 thousand persons, or 0.55%, to 11.85 million persons in 2022, declining for two years in a row. In addition, the non-labor force dropped by 99 thousand persons, or 1.2%, to 8.18 million persons. The average labor force participation rate went up by 0.16 percentage points over the previous year to 59.18% in 2022, the highest since 1993.

In terms of gender, the male labor force participation rate was 67.14%, an uptick of 0.21 percentage points from the year before. The female labor force participation rate has continued to grow since 2001 and it increased by 0.12 percentage points to 51.61% in 2022, showing that government policies have been effective in promoting gender equality, improving the work environment, and facilitating female employment in recent years.

In terms of age groups, the labor participation rates of age groups 25-44 and 45-64 increased by 0.63 and 0.84 percentage points to 89.98% and 65.49%, respectively, while that of age group 16-24 decreased by 0.08 percentage points to 36.73%. With the pandemic's impact diminishing, the labor force participation rate returned to the pre-pandemic level (59.17% in 2019), but remained lower than those of the United States (62.2%), Japan (62.5%), South Korea (63.9%), and Singapore (70.0%) owing to several structural factors such as the extension of schooling and early retirement.

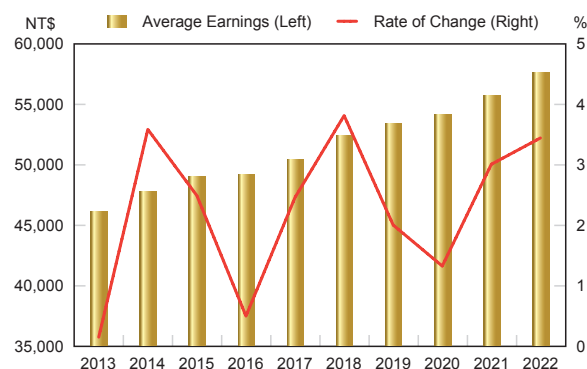
In terms of education background, the labor force participation rate of workers with a college degree or above rose by 0.38 percentage points to 66.60%, while the participation rates of workers with a junior high school degree or below and those with a senior high school or vocational degree dropped by 0.68 and 0.23 percentage points to 37.56% and 62.22%, respectively.

## Modest Wage Growth

For the year 2022, the average monthly earnings per worker of the non-farm sector grew by 3.45% to NT\$57,718, the largest increase over the past four years. The increase mainly benefited from the recovery in domestically-oriented industries with the pandemic's impact alleviating, as well as higher pay (including regular earnings and irregular earnings such as overtime pay and bonuses) raises in the manufacturing sector on account of the expansion of exports. Accounted for a higher inflation rate, there was a modest increase of 0.48% in average real monthly earnings, which reached a historical high at NT\$53,741.

In terms of major sectors, industrial sector wages grew at a slower pace amid soft export growth in 2022, whereas the services sector performed better as an abated domestic pandemic and the easing of border controls gave a boost to consumer spending. The average monthly earnings of the industrial and services sectors grew by 4.69% and 2.55% to NT\$58,938 and NT\$56,840, respectively, while

**Amount and Rate of Change of Average Earnings of Non-farm Workers**



Source: DGBAS, Executive Yuan.



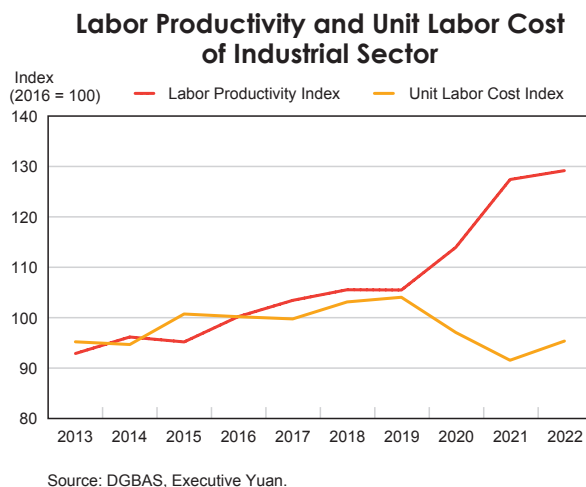
in real terms they increased by 1.69% and decreased by 0.39%, respectively.

In terms of industrial classification, the finance and insurance sector had the highest average monthly earnings with NT\$100,378, and the electricity and gas supply sector came in second with NT\$95,605. On the other hand, the education sector<sup>7</sup> and the accommodation and food services sector earned average monthly wages of NT\$32,236 and NT\$36,113, respectively, the lowest two among all sectors owing to a large number of part-time employees in these sectors. In terms of growth rates, the transportation and storage sector's average monthly earnings witnessed the highest increase of 8.08%, followed by the manufacturing sector at 5.12%.

### Labor Productivity and Unit Labor Cost Both Increased

As total production increased and total working hours decreased, labor productivity of the industrial and the manufacturing sectors rose by 1.37% and 1.48%, respectively, compared with the previous year. In the manufacturing sector, repair and installation of industrial machinery and equipment manufacturing registered the largest growth in labor productivity with 16.85%, followed by computers, electronic and optical products manufacturing, and other transport equipment and parts manufacturing, both increasing by 7.77%.

Since the increase in total earnings was higher than that in production, unit labor costs of the industrial and the manufacturing sectors increased by 4.20% and 4.16% year on year, respectively. Of all the manufacturing sectors, the leather, fur and related products manufacturing sector experienced the largest increase in unit labor cost with 23.29%, followed by basic metals manufacturing with an increase of 22.85%.



<sup>7</sup> Excluding schools at all levels within the formal education system (except preschools).