

Statement Regarding The Economist’s Piece “The Hidden Risks in Taiwan’s Boom” and Related Reports

In the articles¹ including “The Hidden Risks in Taiwan’s Boom” published by The Economist on Nov. 13, 2025 (hereinafter referred to as “the articles”), the publication claimed that based on its Big Mac Index, Taiwan’s long-standing policy of keeping its currency weak to support exports has impaired Taiwan’s purchasing power, pushed up housing prices, and stored up growing financial risks, which the publication characterized as the “Taiwanese disease” (or “Formosan flu”).

In reality, exchange rates are determined by market dynamics of supply and demand. Especially with financial liberalization, supply and demand forces in foreign exchange (FX) markets are mainly associated with financial transactions, while those related to real trade are limited. The equilibrium exchange rate cannot be adequately measured by the price of a single product (such as a Big Mac). The Economist has in the past acknowledged that its Big Mac Index might not be the suitable indicator for currency valuation. Therefore, the adverse outcomes attributed to an undervalued New Taiwan Dollar (NTD) by The Economist in its Nov. 13, 2025 articles lack sufficient basis.² Given the recent discussions surrounding the articles, and to help the public better understand the facts, the Bank offers the following Q&A clarification to avoid misinterpretations regarding the Bank’s policies.

Q1: Is the Big Mac Index, based on the Purchasing Power Parity (PPP) theory, an appropriate indicator to assess whether the NTD is overvalued or undervalued? Is the NTD exchange rate being deliberately suppressed?

Q2: What factors have contributed to the expansion of Taiwan’s current account surplus (trade surplus)? Can exchange rate adjustments alone adequately resolve trade imbalances?

Q3: What are the drivers behind the significant accumulation of Taiwan’s FX reserves? What are the strategic benefits and policy efficacy of maintaining robust FX reserves?

¹ The Economist published articles on November 13, 2025 titled “The Hidden Risks in Taiwan’s Boom,” “Taiwan’s Amazing Economic Achievements Are Yielding Alarming Strains,” and “The Dollar Depreciation Society: Why Taiwan Likes Its Currency Weak.”

² See the Bank’s press release dated November 14, 2025, titled “Statement Regarding The Economist’s Recent Piece ‘The Hidden Risks in Taiwan’s Boom.’”

- Q4: What is the actual state of the NTD's purchasing power? What are the underlying reasons for the decline in Taiwan's labor share of income?
- Q5: Has the Bank engaged in "money printing" for foreign exchange intervention, thereby leading to excess liquidity in the financial system, low interest rates, and soaring housing prices?
- Q6: What are the causes of the currency mismatch on the balance sheets of Taiwan's life insurance industry? Will it trigger systemic financial risk? What is the purpose of the Bank's participation in the interbank swap market?
- Q7: Is the exchange rate the key factor in the transformation and upgrading of the domestic manufacturing sector?
- Q8: Has the Bank compromised its statutory mandate for the remittance of surplus earnings to the national treasury?

Q1: Is the Big Mac Index, based on the PPP theory, an appropriate indicator to assess whether the NTD is overvalued or undervalued? Is the NTD exchange rate being deliberately suppressed?

The Economist claimed that, for decades, Taiwan has kept the currency undervalued, giving manufacturing exporters a competitive boost. According to the GDP-adjusted Big Mac Index (The Economist's measure of how far exchange rates depart from their underlying values), the NT dollar is 55% undervalued against the American dollar. The Bank offers the following clarification.

A1:

- **Both the World Bank and the OECD point out that PPP is designed to gauge price levels and purchasing power across countries; furthermore, they explicitly state that PPP should not be used to assess currency overvaluation or undervaluation.**
 - **In principle, exchange rates are determined by market dynamics of supply and demand. Currently, supply and demand forces in foreign exchange markets are primarily associated with financial transactions. Therefore, PPP, whether calculated based on a single product or a basket of goods and services, may not be deemed appropriate as an indicator for determining the equilibrium exchange rate.**
 - **The NTD exchange rate has exhibited two-way fluctuations and a general trend of appreciation over the long term. The Bank implements a managed floating exchange rate regime to maintain dynamic stability and does not engage in deliberate suppression of the currency.**
- 1. Both the World Bank and the OECD point out that PPP is designed to gauge price levels and purchasing power across countries, and they explicitly state that PPP should not be used to assess currency overvaluation or undervaluation.**
- (1) PPP refers to the amount of local currency required to purchase a standardized basket of goods and services,**

equivalent to what US\$1 would buy in the base country (the U.S.).

- (2) International institutions, including the World Bank and the United Nations, estimate PPP through **the International Comparison Program (ICP) to conduct cross-country comparisons and measure price levels and purchasing power** (see Appendix).
- (3) **The ICP website, the World Bank, and the OECD** all explicitly state that **PPP is not an equilibrium exchange rate and should not be used to assess currency under- or over-valuation.**³ The main reasons are as follows:
 - A. The PPP basket includes tradables as well as non-tradables; however, **the prices of these non-tradables do not directly influence supply and demand in foreign exchange markets.**
 - B. The prices of tradables are subject to **transportation costs, trade barriers, and product differentiation**, resulting in significant deviations between PPP and actual exchange rates.
 - C. **PPP fails to account for cross-border capital flows** (e.g., cross-border stock and bond transactions and cross-border financing), thereby disregarding the pivotal role of financial transactions in determining exchange rates..
- (4) The **“PPP theory”** in international economics **is distinct from the PPP used by the ICP for cross-country GDP comparisons** (Table 1-1). Moreover, in practice, the factors influencing price levels often diverge from those influencing exchange rates. Consequently, the PPP theory has proven to be **a poor predictor of exchange rate movements,**⁴ **let alone a valid tool for assessing whether a currency is overvalued or undervalued.**

³ World Bank (2014), “2011 International Comparison Program Summary Results Release Compares the Real Size of the World Economies,” Apr. 29; Eurostat (2024), “Eurostat-OECD Methodological Manual on Purchasing Power Parities (2023 edition),” Publications Office, Jul. 31.

⁴ Goldberg, P. K. and M. M. Knetter (1997), “Goods Prices and Exchange Rates: What Have We Learned?” *Journal of Economic Literature*, 35(3), 1243-1272; Gopinath, G., P. O. Gourinchas, C.T. Hsieh, and N. Li (2011), “International Prices, Costs, and Markup Differences,” *The American Economic Review*, 101(6), 2450-2486; Isard, P. (1977), “How Far Can We Push the Law of One Price?” *The American Economic Review*, 67(5), 942-948.

Table 1-1 Comparison Between the PPP Theory in International Economics and PPP Used by ICP

	The PPP Theory in International Economics⁵	PPP Used by ICP for Cross-Country GDP Comparisons⁶
Origin & Concept	Cassel (1918) argued that, provided there is free movement of merchandise and sufficiently comprehensive trade between two nations, the actual exchange rate is unlikely to diverge substantially from PPP.*	<ol style="list-style-type: none"> 1. Cross-country comparisons based on nominal GDP in USD are prone to distortion owing to high exchange rate volatility and the presence of non-tradables. Conversion at a single market exchange rate can lead to a distorted reflection of purchasing power. 2. International institutions, such as the World Bank, regard PPP as an indispensable metric for reflecting the cost of living and measuring real economic development. 3. The UN has promoted the ICP based on PPP since 1965.
Coverage	Limited to tradable goods (in principle)	Covering all final expenditure components of GDP (including non-tradable services, construction, and government expenditure)
Valuation Basis	Primarily based on export prices	Based primarily on domestic purchasers' prices (including taxes, transportation costs, and retail margins)
Primary Use	To determine whether a currency is overvalued or undervalued in the long run	For cross-country comparisons of GDP, GDP per capita, real purchasing power, and price levels
Applications	The Big Mac index; the iPhone index	GDP based on PPP in IMF World Economic Outlook; the OECD Comparative Price Levels
Suitability for Judging Currency Valuation	<p>Purely theoretical; in practice (post-financial liberalization), it is invalid primarily because:</p> <ul style="list-style-type: none"> ➤ Capital mobility: FX markets are dominated by financial transactions, not just trade flows. ➤ Market frictions: Prices are influenced by non-tradables, transportation costs, trade barriers, and product differentiation. 	International institutions and programs, including the ICP, the World Bank, the OECD, and the ADB, all explicitly state that PPP should not be used to assess whether a currency is overvalued or undervalued.

Note: * PPP here refers to absolute PPP.

Source: Compiled by the Bank.

⁵ Cassel, G. (1918), "Abnormal Deviations in International Exchange," *The Economic Journal*, 28, 413-415; Krugman, P., M. Obstfeld, and M.J. Melitz (2015), *International Economics: Theory and Policy*, Pearson Higher Education.

⁶ Eurostat (2024), "Eurostat-OECD Methodological Manual on Purchasing Power Parities (2023 edition)," Publications Office, Jul. 31.

(5) **PPP is not a sufficient indicator for determining the equilibrium exchange rate**; consequently, it may not be deemed appropriate as a standard for assessing whether a currency is over- or under-valued, **much less when using a single product to measure overall currency valuation. The Economist has in the past acknowledged that its Big Mac Index might not be the suitable indicator for currency valuation.**

A. A single-product index is an inadequate measure for overall currency valuation. **The Economist admitted in 2003 that its Big Mac Index “is flawed,”** and even noted **in 2006 that the Index has been “widely used and abused** around the globe.”⁷

B. **Using other single-product indexes to assess whether a currency is over- or under-valued may yield drastically different results.** For instance, in 2016, Nomura Holdings Inc. calculated the “**iPhone Index**” based on the prices of iPhones in different countries. Among the 23 global peers included in the comparison at that time, the US dollar was deemed the most severely undervalued currency,⁸ a conclusion that was notably different from the Big Mac Index. Furthermore, based on the latest iPhone prices, the NTD is still overvalued by 17.1% against the US dollar, which runs contrary to the Big Mac Index’s assessment of a 55% undervaluation according to the aforementioned articles.

2. In principle, exchange rates are determined by market dynamics of supply and demand. Currently, supply and demand forces in foreign exchange markets are primarily associated with financial transactions. Consequently, PPP, whether calculated based on a single product or a basket of goods and services, may not be deemed appropriate as an indicator for determining the equilibrium exchange rate.

(1) According to the BIS, the average daily global foreign exchange turnover in April 2025 reached approximately US\$9.6

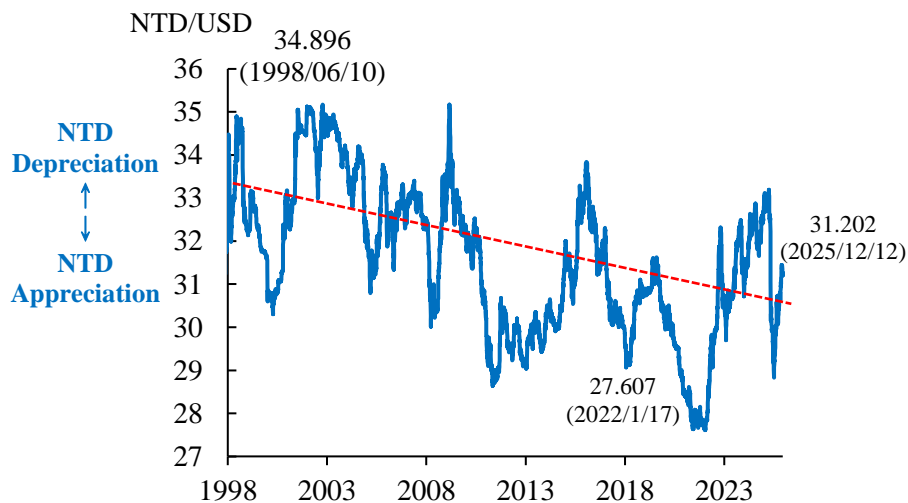
⁷ The Economist has pointed out that the Big Mac Index has its flaws. For instance, the Big Mac is not a cross-border tradable item as required by the PPP theory, and its price is also influenced by factors such as tax rates, tariffs, profit margins, and non-tradable costs (such as rent). See The Economist (2003), “McCurrencies,” *The Economist*, Apr. 24. Furthermore, The Economist has also noted that many politicians have used the Big Mac Index too freely to suit their own ends. See The Economist (2006), “McCurrencies,” *The Economist*, May 25.

⁸ Barton, Susanne (2016), “Drop the Big Mac, Pick Up an iPhone to Divine Dollar’s Direction,” *Bloomberg*, Jul. 26.

trillion.⁹ It is estimated that financial transactions (such as cross-border stock and bond investments) dominated the market, accounting for approximately 97%, whereas trade-related transactions represented only about 3%.

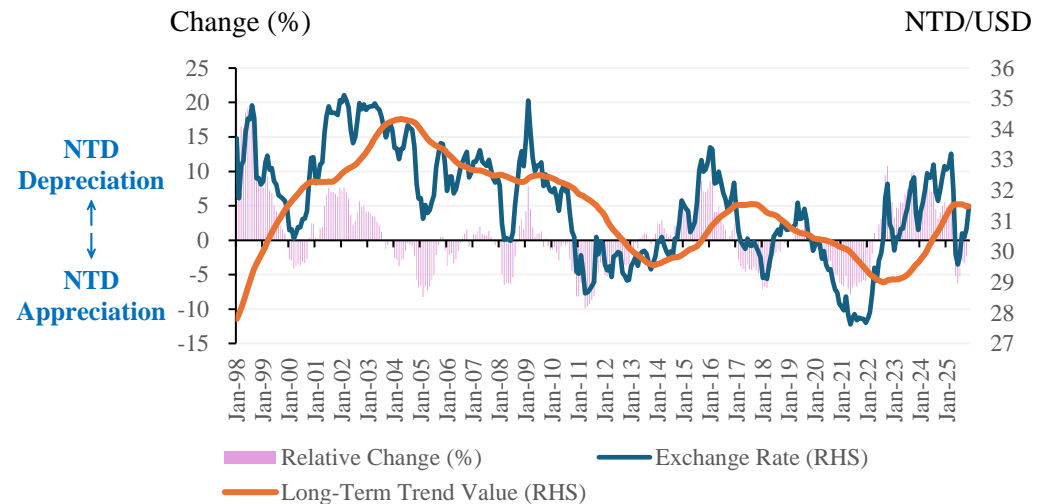
- (2) Taking Taiwan as an example, total cross-border capital flows in 2024 were 19.3 times the volume of trade. Consequently, transactions related to goods and services accounted for only about 5% of total foreign exchange turnover.

Figure 1-1 Two-Way Fluctuations and Long-Term Appreciation of the NTD/USD Exchange Rate



Source: CBC.

Figure 1-2 Two-Way Fluctuations of the NTD/USD Exchange Rate Relative to Its Long-Term Trend Value



Note: The long-term trend value refers to the 36-month moving average of the exchange rate. The magnitude of deviation is calculated as: $(\text{Exchange Rate} / \text{Long-Term Trend Value}) - 1$.

Source: Bloomberg.

⁹ BIS (2025), “Triennial Central Bank Survey of Foreign Exchange and Over-the-Counter (OTC) Derivatives Markets in 2025,” Sep. 30.

3. The NTD exchange rate has exhibited two-way fluctuations and a general trend of appreciation over the long term. The Bank implements a managed floating exchange rate regime to maintain dynamic stability and does not engage in deliberate suppression of the currency.

(1) In principle, the NTD exchange rate is determined by market dynamics of supply and demand. It exhibits two-way fluctuations, appreciating and depreciating, while showing a long-term trend of appreciation.

A. Since the Asian financial crisis in 1998, the NTD/USD exchange rate has experienced two-way fluctuations, having weakened to 34.896 and strengthened to 27.607 at various times. Overall, it has trended upward, appreciating by approximately 11.8% from its 1998 low of 34.896 to 31.202 as of December 12, 2025 (Figure 1-1).

B. The deviation (Figure 1-2, purple bars) of the NTD/USD exchange rate (Figure 1-2, blue line) from its long-term trend (Figure 1-2, orange line) exhibits two-way fluctuations. With its mean (0.6%) and standard deviation (5.3%) both small, this demonstrates the dynamic stability of the NTD exchange rate.¹⁰

(2) The Bank implements a managed floating exchange rate regime to maintain the dynamic stability of the NTD exchange rate, and does not deliberately suppress the currency.

A. The Bank adopts a managed floating exchange rate regime. When irregular factors (such as massive short-term capital flows) or seasonal factors cause excessive volatility or disorderly movements in the NTD exchange rate that may threaten economic and financial stability, the Bank will, in accordance with its mandate, conduct “two-way” smoothing operations to maintain the dynamic stability of the NTD.

(a) In 2020, as the Fed launched massive quantitative easing (QE) leading to large capital inflows, the Bank made net purchases of US\$39.1 billion in foreign exchange to maintain the dynamic stability of the NTD.

(b) From 2022 to 2023, owing to the Fed’s aggressive rate hikes and quantitative tightening (QT), foreign capital flowed

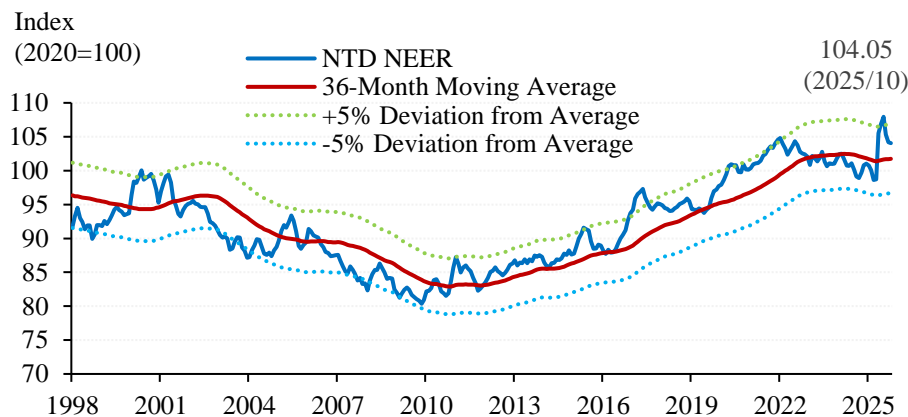
¹⁰ Using the same methodology, the mean deviations for the Japanese yen (JPY) and Korean won (KRW) are 1.7% and 2.5%, respectively, with standard deviations of 10.9% and 12.1%. This indicates that the NTD/USD exchange rate is relatively stable compared to the JPY and KRW.

out. The Bank made net sales of US\$13.0 billion in 2022 and US\$2.77 billion in 2023 in the forex market. In 2024, to address excess market demand for US dollars, the Bank also made net forex sales totaling US\$16.42 billion.

B. Observing the nominal effective exchange rate (NEER) compiled by the BIS, the NTD NEER has exhibited dynamic stability over the long term (since 1998), mostly falling within a $\pm 5\%$ range of its 36-month moving average, and has shown an appreciating trend.

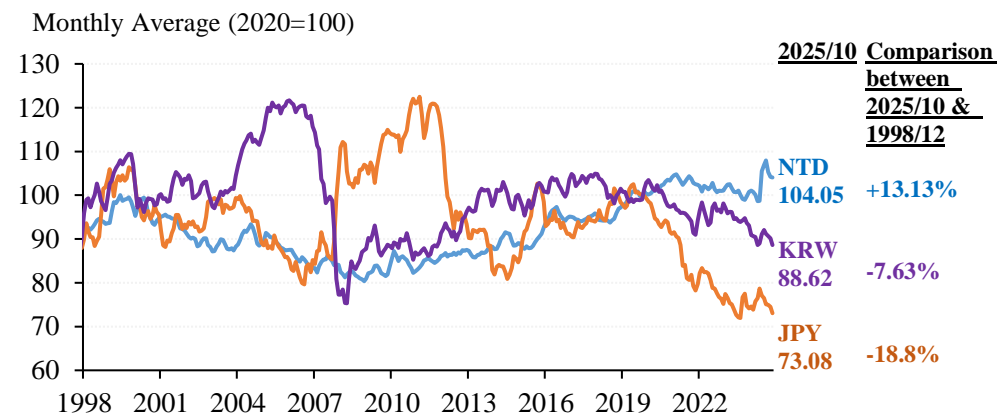
From the end of 1998 to October 2025, the NTD NEER rose by 13.13% (Fig. 1-3), indicating that the NTD appreciated against the currencies of major trading partners. During the same period, the KRW NEER and JPY NEER fell by 7.63% and 18.8%, respectively (Fig. 1-4), with greater volatility.¹¹ This demonstrates that the NTD exchange rate has trended upward over the long term and remained relatively stable.

Figure 1-3 NTD NEER and Its 36-Month Moving Average



Sources: Bloomberg; BIS; staff calculations.

Figure 1-4 NEER Indices of Taiwan, S. Korea, and Japan



Sources: Bloomberg; BIS; staff calculations.

¹¹ Since 1998, the JPY and KRW NEERs have frequently exceeded the $\pm 5\%$ range of their 36-month moving averages. Notably, from 1998 to April 2009, when South Korea adopted a “free floating” exchange rate regime, the KRW NEER deviated significantly from its 36-month moving average. After the IMF reclassified South Korea’s exchange rate regime to “floating” (managed floating) in May 2009, the KRW NEER has mostly fallen within the $\pm 5\%$ range of its 36-month moving average.

Q2: What factors have contributed to the expansion of Taiwan's current account surplus (trade surplus)? Can exchange rate adjustments alone adequately resolve trade imbalances?

The Economist claimed that, Taiwan's central bank has suppressed the NT dollar to keep exports competitive, but that has also contributed to a bulging current account surplus. According to the latest data for 2025, Taiwan's current account surplus has reached 16 percent of GDP. The Bank offers the following clarification.

A2:

- **In recent years, the expansion of Taiwan's trade surplus has been primarily driven by growing foreign demand, global supply chain realignments and the upgrading of Taiwan's industrial structure, alongside the strengthening international competitiveness of high-tech products. The exchange rate is not the primary determinant.**
- **The widening of the current account surplus reflects structural economic issues, such as long-term high domestic saving and low investment.**
- **Financial liberalization and the development of global supply chains have made the exchange rate a less effective instrument for correcting trade imbalances.**

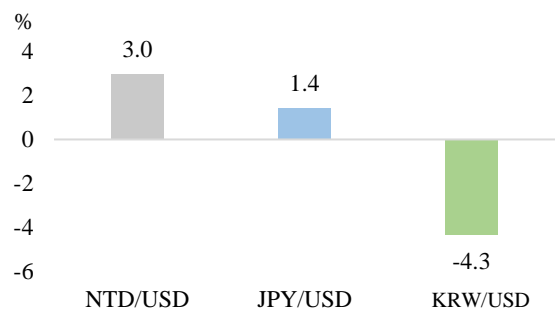
1. In recent years, the expansion of Taiwan's trade surplus has been primarily driven by growing foreign demand, global supply chain realignments and the upgrading of Taiwan's industrial structure, alongside the strengthening international competitiveness of high-tech products. As such, the exchange rate is not the primary determinant.

(1) The impact of exchange rate movements on a country's trade balance has been smaller than commonly expected.

Taking the first eleven months of 2025 as an example, the NT dollar appreciated by 3.0% against the US dollar compared with the same period in 2024, and the Japanese yen appreciated by 1.4%, while the Korean won depreciated by 4.3% (Fig. 2-1).

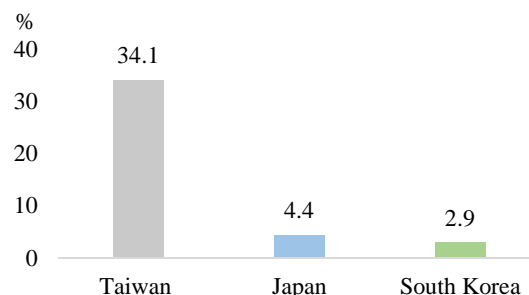
Over the same period, Taiwan’s merchandise exports grew by 34.1% year on year, significantly exceeding the growth rates recorded by Japan and South Korea, at 4.4% and 2.9%, respectively (Fig. 2-2). Taiwan’s trade surplus expanded to US\$137.9 billion. In contrast, Japan recorded a trade deficit, and South Korea registered a trade surplus of US\$66.1 billion, approximately half the size of Taiwan’s surplus (Fig. 2-3). These comparisons indicate that exchange rate movements are not the primary determinant of a country’s trade balance.

Figure 2-1 Exchange Rate Changes of Major Currencies against the USD (Jan.-Nov. 2025, year-on-year)



Source: CBC.

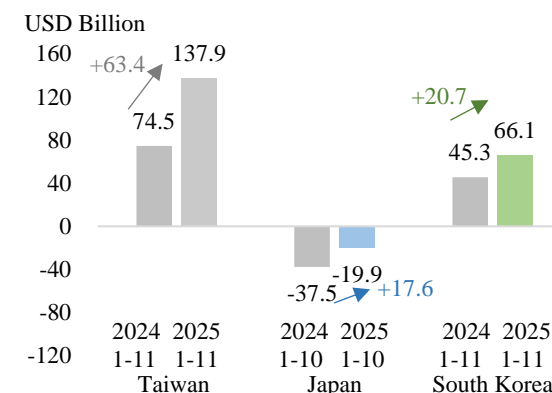
Figure 2-2 Export Growth Rates (USD Basis) (Jan.-Nov. 2025, year-on-year)



Note: Data for Japan cover Jan.-Oct. 2025.

Source: National customs statistics.

Figure 2-3 Merchandise Trade Balance



Source: National customs statistics.

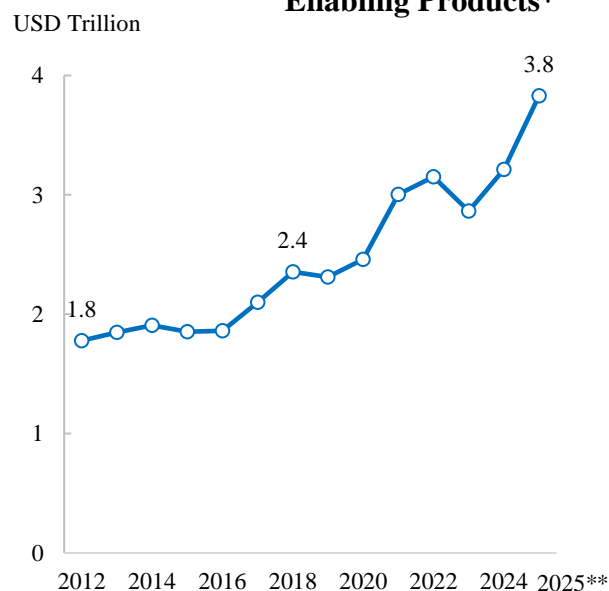
(2) In addition to relative price effects arising from exchange rate movements and foreign demand, a country’s external trade performance is also influenced by factors such as its degree of participation in global value chains (GVCs) and firm-level productivity.

A. Taiwan’s export performance has remained strong in recent years, driven by rising global demand in artificial intelligence (AI) and other emerging technology applications (Fig. 2-4). Since the onset of U.S.-China trade tensions in 2018, global supply chains have been reconfigured, encouraging firms producing high value-added goods to reshore investment in Taiwan. In addition, Taiwan’s sustained focus on high-technology and information security sectors has

strengthened its strategic position in the global semiconductor supply chain, supporting an expansion of its global market share in AI-related products (Fig. 2-5). Together, these factors have contributed to a sustained widening of Taiwan’s trade surplus.

B. The value-added ratio of Taiwan’s manufacturing sector increased from 20.6% in 2012 to 35.8% in 2024, while that of the information and electronics industry rose markedly from 26.4% to 48.1% (Fig. 2-6), an increase of more than 20 percentage points that reflect rising international competitiveness of Taiwan’s high-technology products.

Figure 2-4 Global Imports of AI-Enabling Products*

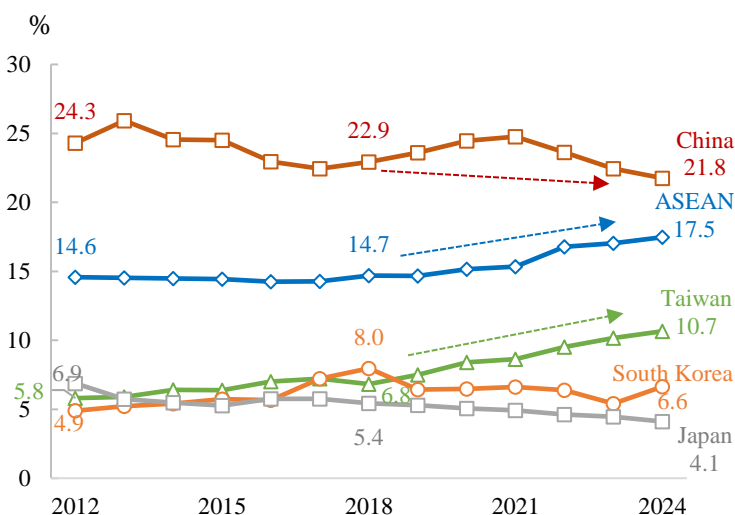


Notes: * AI-enabling goods refer to key hardware that supports the operation of AI systems. Based on the list compiled in the WTO’s *World Trade Report 2025*, these include electronics and information and communication technology products, production equipment, raw materials, and chemicals that support AI.

** Data for the current year are estimated based on year-on-year growth rates derived from the available monthly data released by the world’s top two import markets (China and the U.S.).

Source: International Trade Centre (ITC).

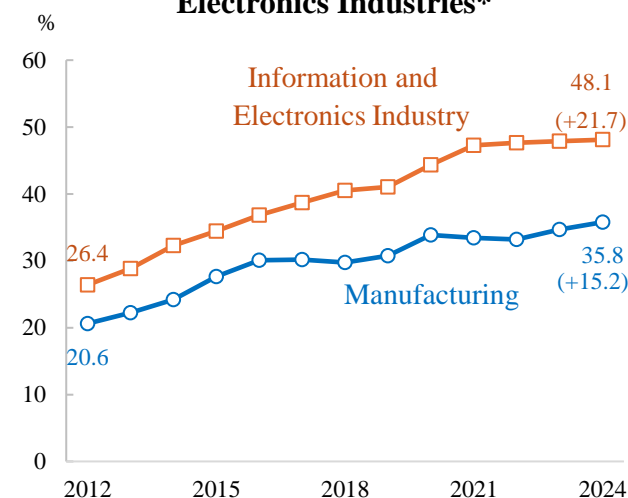
Figure 2-5 Major Economies’ Global Export Shares of AI-Enabling Products



Note: Compiled according to the list of AI-enabling products in the WTO’s *World Trade Report 2025*.

Source: ITC.

Figure 2-6 Value-Added Ratios of Taiwan’s Manufacturing and Information and Electronics Industries*



Note: * The information and electronics industry includes (1) manufacture of electronic parts and components and (2) manufacture of computers and electronic and optical products.

Source: DGBAS.

2. The widening of the current account surplus reflects structural economic issues, such as long-term high domestic saving and low investment.

- (1) According to the national income accounting identity, the current account surplus (or deficit) and excess saving (or saving shortfall) are two sides of the same coin. Specifically,

$$(X-M)=(S-I)+(T-G)$$

Where X denotes exports, M imports, S gross national saving, I gross domestic investment, T government tax revenue, and G government expenditure (including government consumption and investment). The $S-I$ represents the private sector balance, while $T-G$ represents the government sector balance.

- (2) Over the long term, Taiwan's excess savings¹² have remained elevated, driven by high national saving and relatively insufficient domestic investment.

A. The saving ratio has remained high, while the investment ratio has remained low.

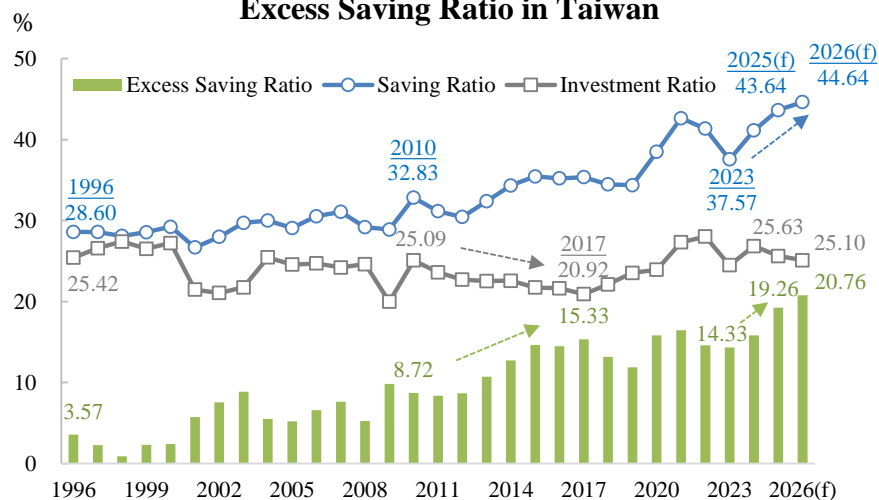
(a) As declining fertility and population aging have intensified in Taiwan, the working population has shrunk, constraining consumption growth and keeping the saving ratio at a high level.

(b) Prior to 2018, domestic investment momentum was dampened by the offshore relocation of production. Following the onset of U.S.-China trade frictions, Taiwanese firms expanded investment back at home, and Taiwan's semiconductor companies continued to invest in advanced manufacturing processes. While these developments lifted the overall investment ratio, the saving ratio rose more (Fig. 2-7), leaving excess savings elevated.

B. By sector, Taiwan's excess savings are concentrated mainly in households, followed by enterprises, with the government sector contributing a relatively small share. Excess savings are projected to register above NT\$5 trillion in 2025 and above NT\$6 trillion in 2026.

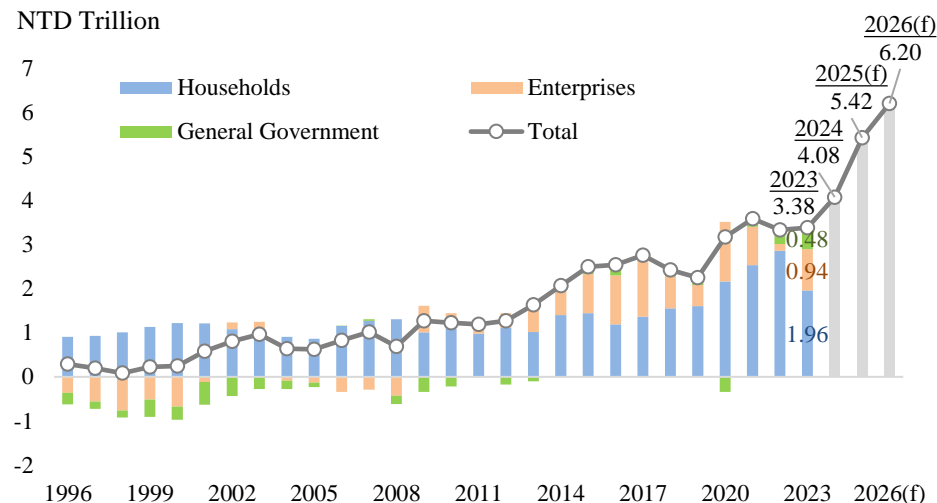
¹² Excess savings are defined by the DGBAS as the difference between saving and investment.

Figure 2-7 Saving Ratio, Investment Ratio, and Excess Saving Ratio in Taiwan



Note: Saving ratio = gross national saving / GNI;
 Investment ratio = gross domestic investment / GDP;
 Excess saving ratio = (gross national saving – gross domestic investment) / GDP.
 Source: DGBAS.

Figure 2-8 Sources of Taiwan’s Excess Savings, by Sector



Source: DGBAS.

3. Financial liberalization and the development of global supply chains have made the exchange rate a less effective instrument for correcting trade imbalances.

(1) Globally and in Taiwan, exchange rates are increasingly driven by financial account transactions, limiting their effectiveness in correcting trade imbalances.

A. In April 2025, global daily foreign exchange turnover amounted to approximately US\$9.6 trillion,¹³ of which an estimated 97% was related to financial transactions, such as cross-border equity and bond investments.

¹³ BIS (2025), “Triennial Central Bank Survey of Foreign Exchange and Over-the-Counter (OTC) Derivatives Markets in 2025,” Sep. 30.

- B. Over the past three decades, Taiwan has gradually liberalized cross-border capital flow regulations. Foreign exchange transactions related to cross-border capital movements, including foreign and domestic capital flows (such as overseas investment and financial and liquidity management by resident individuals and firms), recorded a marked increase. In 2024, cross-border capital transactions amounted to 19.3 times the value of merchandise trade flows.
 - C. The NT dollar is often influenced by the monetary policy stance of major economies and movements in the US dollar, while large and frequent capital flows by foreign investors amplify exchange rate fluctuations, constraining the exchange rate's effectiveness in correcting trade imbalances.
- (2) As a small, highly open economy deeply integrated into GVCs, Taiwan experiences limited effectiveness in reducing its current account surplus through exchange rate adjustments.
- A. With a global presence and a focus on enhancing advanced process technologies, Taiwan's high-tech firms, including semiconductor producers, strive to strengthen client partnership and maintain key positions in global supply chains. As a result, the sensitivity of exports to exchange rate movements has declined.
 - B. With limited domestic resources, the production of Taiwan's exports relies heavily on imported raw materials; agricultural and industrial raw material imports account for approximately two-thirds of total imports. Appreciation or depreciation of the NT dollar would affect not only export prices but also import costs, leading to a partial offset.
 - C. Taiwan's high degree of participation in GVCs has also weakened the influence of exchange rate movements on exports.^{14,15}

¹⁴ Ahmed, Swarnali, M. Appendino, and M. Ruta (2015), "Global Value Chains and the Exchange Rate Elasticity of Exports," *IMF Working Paper* No. 15/252; Sato, Kiyotaka and Shajuan Zhang (2019), "Do Exchange Rates Matter in Global Value Chains?" *RIETI Discussion Paper Series* 19-E-059.

¹⁵ Liang, K.-H. (2020). "The Effects of NT Dollar Movements on Taiwan's Trade from a Global Value Chain Perspective," *Public Finance Monthly* No. 85, pp. 3-11, Jan. (in Chinese).

- 4. The recent expansion of Taiwan's trade surplus has been driven mainly by external demand, global supply chain adjustments, and the enhanced competitiveness of Taiwan's information and communication technology (ICT) sector. Exchange rate developments have not been a major contributing factor, and there is therefore no incentive to guide the NT dollar toward depreciation. The Bank's longstanding exchange rate policy is to maintain the dynamic stability of the NT dollar, rather than to seek competitive advantage through deliberate exchange rate depreciation.**

Q3: What are the drivers behind the significant accumulation of Taiwan's FX reserves? What are the strategic benefits and policy efficacy of maintaining robust FX reserves?

The Economist claimed that, Taiwan has for decades suppressed the value of its currency to maintain export competitiveness; as a result, its foreign-currency reserves have grown steadily and massively, from US\$90 billion (32% of GDP) in 1998 to US\$600 billion (72% of GDP). The Bank offers the following clarification.

A3:

- **The accumulation of FX reserves is primarily attributable to accrued investment income and market operations conducted to fulfill the Bank's statutory mandate of maintaining exchange rate stability.**
 - **In the aftermath of the Asian financial crisis, central banks in most small open economies, particularly those in Asia, have built up FX reserves as a strategic buffer to uphold exchange rate stability against the volatility of surging capital inflows.**
 - **Foreign capital flows in Taiwan are characterized by their massive scale and high concentration over short periods. Robust FX reserves function as a critical buffer to withstand the shocks arising from these substantial cross-border capital movements.**
- 1. The accumulation of FX reserves is primarily attributable to accrued investment income and market operations conducted to fulfill the Bank's statutory mandate of maintaining exchange rate stability.**

The expansion of Taiwan's FX reserves is attributable **not merely to investment earnings**, but also to external monetary dynamics. During global economic downturns, **the spillover effects of QE measures implemented by major economies have tended to trigger massive and concentrated capital inflows into Taiwan**, which could precipitate severe disequilibria in FX market supply and demand, undermining economic and financial stability. Consistent with **its statutory**

mandate to uphold exchange rate stability, the Bank have conducted stabilization measures (via net FX purchases) to restore market order should such circumstances arise.

2. In the aftermath of the Asian financial crisis, central banks in most small open economies, particularly those in Asia, have built up FX reserves as a strategic buffer to uphold exchange rate stability against the volatility of surging capital inflows.

(1) During the 1997 **Asian financial crisis**, the **inadequacy of FX reserves** rendered certain Asian nations unable to fend off attacks by international speculators and the ensuing panic of capital flight. **This precipitated currency crises** that wreaked havoc on their economic and financial stability. Drawing lessons from this experience, these central banks **began to amass FX reserves out of precautionary motives**, while concurrently undertaking financial reforms.

(2) Following the 2008 **global financial crisis**, the 2011 euro area debt crisis, and the outbreak of the **COVID-19 pandemic** in 2020, **major central banks implemented successive rounds of QE, driving substantial capital inflows into Asian small open economies**. In response, **central banks in these jurisdictions engaged in large-scale FX purchases – aimed either at upholding specific exchange rate regimes (e.g., Singapore and Hong Kong) or at preserving FX market stability – thereby driving the expansion of their FX reserves** (Table 3-1).

(3) The **Swiss National Bank** aggressively deployed FX interventions to cushion domestic price stability and economic activity against the spillover effects of QE, leading to a dramatic surge in its FX reserve holdings.

3. Foreign capital flows in Taiwan are characterized by their massive scale and high concentration over short periods. Robust FX reserves function as a critical buffer to withstand the shocks arising from these substantial cross-border capital movements.

(1) **Taiwan’s economy features a high degree of openness, with the value of goods exports and imports accounting for 113% of GDP** in 2024. Moreover, as of the end of November 2025, **the aggregate market value of foreign-held**

domestic equities and bonds, together with NTD deposit balances amounted to US\$1,089.9 billion, **representing 182% of FX reserves.**

- (2) As Taiwan is not a member of the IMF, **maintaining ample FX reserves with high liquidity is imperative for upholding economic security and financial stability.** Such reserves are essential to buffer against global business cycle fluctuations, idiosyncratic risks, and the shocks of massive capital flows, thereby safeguarding national financial resilience.
- (3) Throughout the onset of the pandemic in 2020 as well as the geopolitical risks and financial market turbulence of 2022, Taiwan’s economic and financial landscape remained relatively stable. Notably, ample FX reserves played a pivotal role in enabling Taiwan to weather the 1997 Asian financial crisis and the 2008 global financial crisis unscathed.

Table 3-1 Evolution of FX Reserves Across Central Banks in Small Open Economies

End of Year	FX Reserves (US\$100 mil.)								Percentage Increase in FX Reserves, 1997-2024 (%)	FX Reserves / GDP, 2024 (%)
	1997	1998	2007	2008	2019	2020	2021	2024		
South Korea	197	520	2,618	2,005*	3,979	4,301	4,383	3,919	1,889.3	20.9
Thailand	257	284	851	1,083	2,146	2,460	2,248	2,108	720.2	40.0
Singapore	711	750	1,636	1,775	2,765**	3,589	4,078**	3,575	402.8**	65.3**
Taiwan	835	903	2,703	2,917	4,781	5,299	5,484	5,767	590.7	72.0
Hong Kong	928	896	1,469	1,781	4,234	4,753	4,787	4,079	339.5	100.2
Switzerland	390	412	439	442	7,981	10,133	10,338	8,080	1,971.8	83.3

Notes: * As the 2008 global financial crisis spread, South Korea grappled with a substantial exodus of international capital, precipitating a sharp contraction in its foreign exchange reserves, which fell by approximately US\$61 billion by year-end 2008 relative to the previous year. The nation successfully weathered the storm only after the U.S. Federal Reserve extended a timely US\$30 billion currency swap facility.

** Singapore, drawing on international metrics and domestic economic imperatives, calibrates its optimal foreign exchange reserve buffer within a reserves-to-GDP ratio band of 65% to 75%. By the first quarter of 2019, as the ratio escalated to 82%, the MAS transferred SGD45 billion (US\$31.8 billion) to GIC for deployment in longer-term investment horizons; post-transfer, the ratio moderated to 73%. Subsequently, in the third quarter of 2021, with the ratio reaching approximately 111%, MAS announced plans to transfer approximately SGD185 billion in assets to GIC. Executed in tranches, this initiative aims to progressively realign the ratio with the Authority’s determined optimal band. Adjusting for these two strategic transfers, the expansion of Singapore’s foreign exchange reserves from 1997 to 2024 surpassed 600%, with the reserves-to-GDP ratio exceeding 95% by year-end 2024.

Sources: Bloomberg; official websites of respective central banks.

Q4: What is the actual state of the NTD's purchasing power? What are the underlying reasons for the decline in Taiwan's labor share of income?

The Economist claimed that, Taiwan has kept the local currency weak to boost export competitiveness. In effect, this acts as a tax on consumers. In an economy that depends on imports for food and fuel, the cheap currency has pushed up import prices, shifting purchasing power from ordinary households to exporters. Moreover, labor productivity has doubled since 1998, yet pay has not risen in tandem. Taiwanese unit labor costs, a measure of what workers earn per unit of output, have fallen by 25% over the same period. The workers' share of Taiwan's swelling industrial output, in other words, has shrunk. The Bank offers the following clarification.

A4:

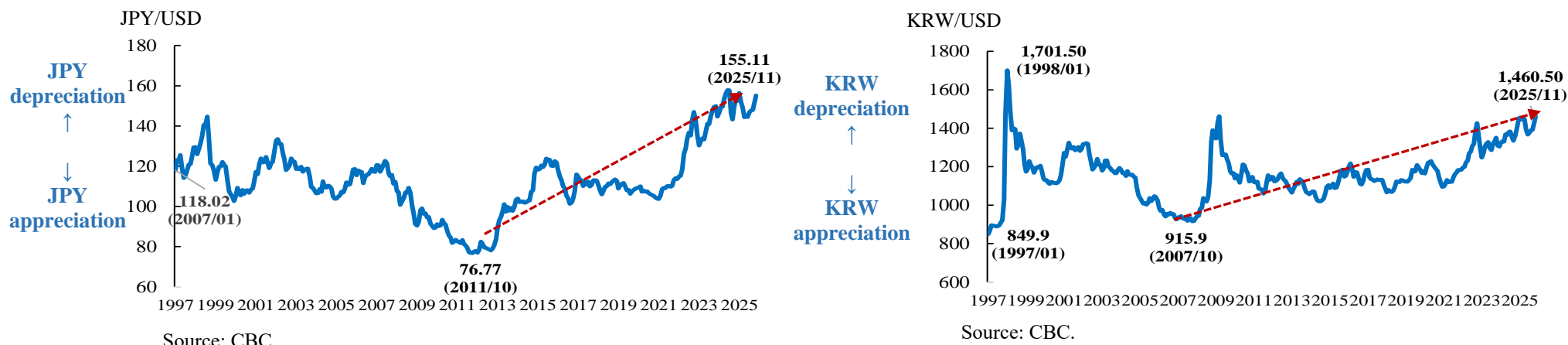
- **According to the Price Level Indices (PLIs) published by the World Bank's International Comparison Program (ICP), the price level for household consumption in Taiwan is lower than those in Japan, South Korea, and Singapore, indicating high purchasing power.**
- **The decline in Taiwan's labor share is primarily driven by globalization, technological advancement, financialization, and the domestic manufacturing sector's shift toward capital-intensive industries. Meanwhile, the decrease in unit labor costs (ULC) primarily reflects industrial structural changes and significant productivity growth. Therefore, it is inappropriate to cite falling ULC as evidence that workers are reaping fewer benefits from economic growth.**

1. Based on the World Bank's ICP data, Taiwan's household consumption price level is lower than Japan, South Korea, and Singapore, demonstrating high purchasing power.

(1) Since its low point following the 1998 Asian financial crisis, the NTD has exhibited a long-term appreciation trend against the US dollar (Fig. 1-1). The Bank has not deliberately undervalued the exchange rate. Meanwhile, the JPY has

continuously depreciated since October 2011. The KRW depreciated sharply during the Asian financial crisis and subsequently recovered, but has trended toward depreciation since October 2007 (Fig. 4-1). The depreciation of the JPY and KRW increased import costs and diminished household purchasing power in those nations.

Figure 4-1 JPY and KRW Exchange Rates Against the US dollar



- (2) Based on the 2021 PLIs by the World Bank’s ICP, a comparison of household consumption price levels among Taiwan, Japan, South Korea, and Singapore (Table 4-1) reveals that Taiwan’s price level is lower than those of Japan and South Korea. This reflects the government’s implementation of supply-side measures (such as stabilizing oil and electricity prices), which have effectively mitigated the impact of global energy and food price shocks on domestic inflation (see Appendix).
- (3) Using the PPP data from the IMF, Taiwan’s overall GDP price level for 2025 is estimated at approximately 44% of that of the U.S.; the corresponding figures of South Korea, Singapore, and Japan are approximately 55%, 60%, and 63%, respectively (Fig. 4-2). This indicates that the purchasing power of Taiwan’s currency is superior to that of South Korea, Singapore, and Japan.

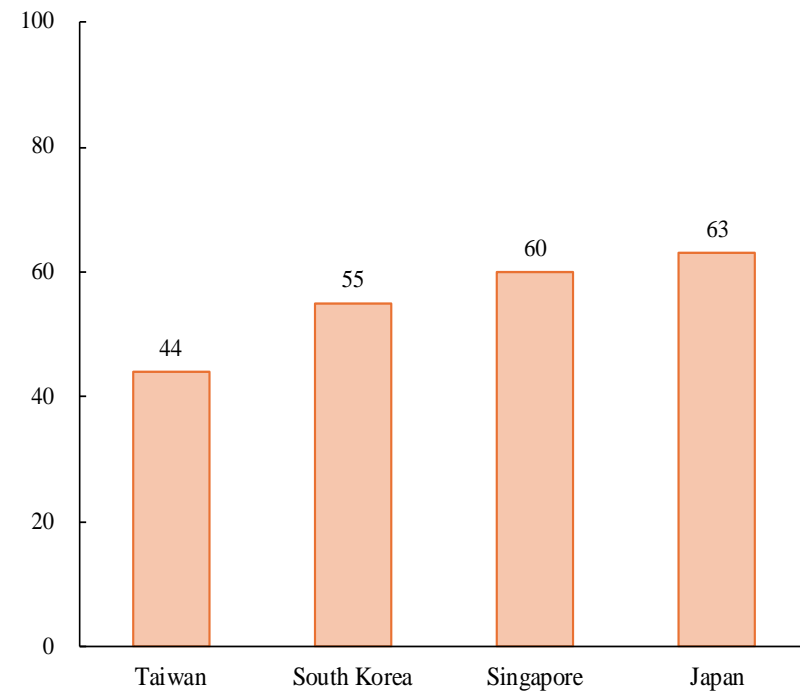
Table 4-1 The 2021 Price Level Index (World=100)

	Taiwan	Japan	S. Korea	Singapore
Actual Individual Consumption	82.7	142.8	121.1	118.3
Food and Non-Alcoholic Beverages	140.0	191.2	204.1	129.0
Food	142.0	199.5	208.8	130.8
Bread and Cereals	149.0	206.1	198.2	123.5
Meat	132.8	191.8	275.3	127.6
Vegetables	204.9	304.1	293.2	164.4
Fruit	132.8	281.7	239.5	144.1
Actual Housing, Water, Electricity, Gas and Other Fuels	71.0	177.4	108.7	135.0
Actual Health	51.4	97.2	80.7	130.0
Transport	86.6	150.4	114.4	172.9
Actual Education	87.2	137.7	158.9	129.0
Restaurants and Hotels	62.2	147.9	141.7	69.7

- Notes: (1) This table presents the 2021 PLI data from the World Bank's ICP.
 (2) The PLI can be calculated by dividing each country's PPP by its currency's exchange rate against the US dollar, converting national prices into a single currency unit with equivalent purchasing power. The global average price level is set at 100, allowing for comparisons of price levels across countries.
 (3) A PLI greater than 100 indicates that the country's price level is higher than the global average, and a PLI less than 100 indicates that it is lower than the global average.

Source: World Bank ICP 2021.

Figure 4-2 The 2025 Price Level Index (US=100)

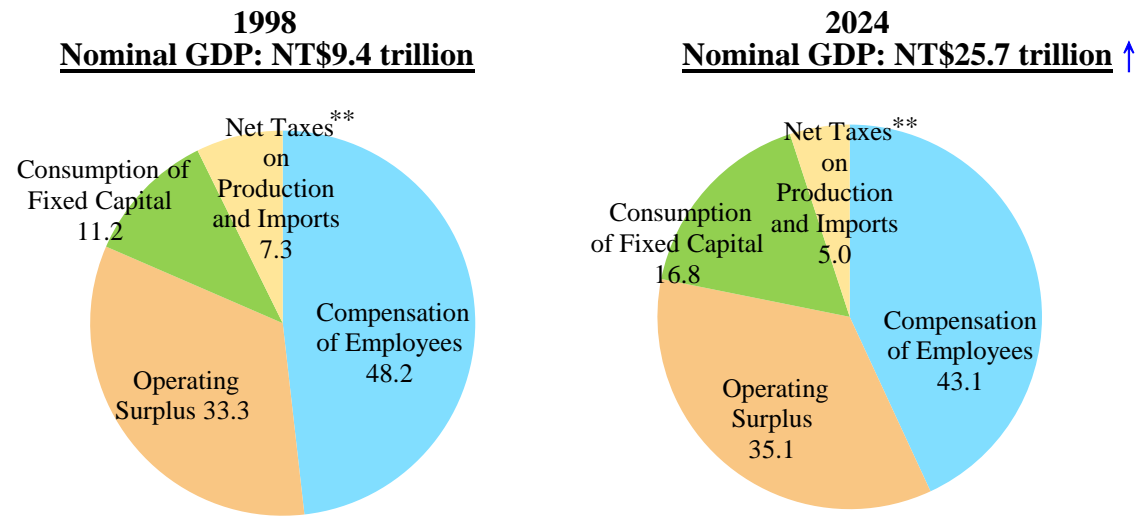


- Notes: (1) The PLI in this figure is based on the 2025 PPP projections from the IMF World Economic Outlook Database. The US price level is set at 100, and the prices for other countries are expressed as percentages of their respective price indices relative to the US price index.
 (2) A PLI greater than 100 indicates that the country's price level is higher than that of the U.S., and a PLI less than 100 indicates that it is lower than that of the U.S.

Sources: IMF World Economic Outlook Database (Oct. 2025); compiled by the Bank.

2. **The decline in Taiwan's labor share is primarily driven by globalization, technological advancement, financialization, and the domestic manufacturing sector's shift toward capital-intensive industries. Meanwhile, the decrease in ULC primarily reflects industrial structural changes and significant productivity growth. Therefore, it is inappropriate to cite falling ULC as evidence that workers are reaping fewer benefits from economic growth.**
- (1) Over the past two decades, while **Taiwan's nominal GDP has grown significantly, the labor share** (the total compensation of employees given as a percentage of GDP) **has contracted** by 5.1 percentage points. This is primarily attributed to **globalization** and **technological advancement**, which have weakened labor bargaining power. Additionally, **financialization** has driven corporate governance toward maximizing shareholder value, leading to a 1.8 percentage point **increase in the share of operating surplus**. Furthermore, as Taiwan's manufacturing sector focuses on **capital-intensive industries** such as semiconductors, expanded investment and rising depreciation have resulted in a 5.6 percentage point **increase in the share of consumption of fixed capital** (Fig. 4-3).

Figure 4-3 Taiwan's Nominal GDP and Distribution of GDP (%)*



Changes in GDP Distribution (2024 vs. 1998)

Unit: percentage point

Compensation of Employees	Operating Surplus	Consumption of Fixed Capital	Net Taxes on Production and Imports
-5.1	+1.8	+5.6	-2.3

Notes: * GDP distribution data are available only through 2024.

** Including net commodity tax, net import duty, value-added tax (VAT), and other net taxes.

Source: DGBAS.

- (2) The significant drop in Taiwan's manufacturing ULC between 1998 and 2024 primarily reflects (1) the sector's shift toward capital-intensive information and electronics industry, and (2) a substantial surge in labor productivity within the information and electronics industry. It is, therefore, inappropriate to use this decline as an explanation for workers receiving a smaller share of economic growth gains.
- A. Taiwan's semiconductors hold a strategic position in the global supply chain. Coupled with strong demand for new AI and emerging technology applications, **the production value of Taiwan's information and electronics industry has surged**, accounting for 41.8% of the total manufacturing production value in 2024, up from 25.7% in 1998 (Table 4-2).
- B. **Between 1998 and 2024, the decline in ULC in the manufacturing sector was primarily driven by the information and electronics industry.** As this industry's share of manufacturing expanded, labor productivity growth significantly outpaced the increase in total wage per hour (Table 4-2).
- (a) **ULC = (total wage index / production index) = (total wage per hour index / output per hour index) = (total wage per hour index / labor productivity).**
- (b) Within manufacturing ULC, the **electronic parts and components industry** saw the sharpest **decline** at 58.0%, followed by **the computers and electronic and optical products industry** at 49.5%. **This primarily reflects substantial labor productivity growth** in these two sectors (578.5% and 422.6%, respectively), which **exceeded their total wage per hour growth** of approximately 520.5% and 373.1%.
- (c) In contrast, **traditional industries**, such as basic metals, machinery and equipment, food, and textiles, experienced ULC increases of 49.1%, 13.0%, 44.8%, and 42.8%, respectively. This was due to **relatively moderate labor productivity growth** (7.5%, 39.5%, 5.6%, and 12.5%), which lagged behind the growth in total wage per hour.

Table 4-2 Shares of Production Value in Total Manufacturing, Labor Productivity, and Unit Labor Cost in Taiwan, by Major Industry

Unit: %

		Total Manufacturing	Information and Electronics		Basic Metals	Machinery and Equipment	Chemical Materials and Fertilizers	Food	Textiles	
			Electronic Parts and Components	Computers, Electronic and Optical Products						
1998	Production Value	100	25.7	14.5	11.2	8.6	5.1	7.5	4.8	5.4
2024		100	41.8	32.8	8.9	8.0	4.7	8.1	4.7	1.4
Growth Rate of 2024 over 1998	Total Wage per Hour Index (1)	158.2	--	520.5	373.1	56.6	52.5	84.1	50.4	55.3
	Labor Productivity (2)	187.7		578.5	422.6	7.5	39.5	95.2	5.6	12.5
	ULC \approx (1)-(2)	-29.5		-58.0	-49.5	49.1	13.0	-11.1	44.8	42.8

Sources: DGBAS; MOEA.

Q5: Has the Bank engaged in “money printing” for foreign exchange intervention, thereby leading to excess liquidity in the financial system, low interest rates, and soaring housing prices?

The Economist claimed that, to suppress the value of the local currency, Taiwan’s central bank has bought foreign exchange in the market, causing foreign-currency reserves to pile up. However, the central bank has only partially sterilized the funds released from these purchases. This has flooded Taiwan’s financial system with liquidity, pushed down interest rates, and led house prices to soar since 1998. The Bank offers the following clarification.

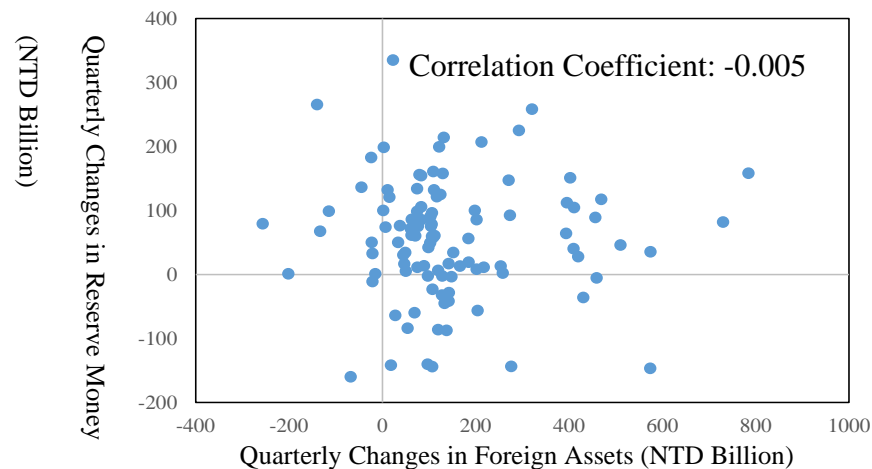
A5:

- **The Bank utilizes various sterilization instruments to properly manage liquidity within the banking system; the growth rate of domestic reserve money has remained stable and has not increased rapidly in tandem with the accumulation of foreign exchange reserves.**
 - **Taiwan’s interest rates are stable, mainly reflecting relatively mild inflation over the long term and massive excess saving, resulting in an ample supply of funds.**
 - **Housing prices are influenced by a range of factors, and interest rates constitute only one element. Maintaining a healthy real estate market requires joint efforts by relevant central ministries and local governments. In accordance with the division of responsibilities, the Bank adopts selective credit control measures as appropriate to contain excessive credit flows into the real estate market.**
1. **The Bank utilizes various sterilization instruments to properly manage banking system liquidity. The domestic reserve money growth rates remain stable and have not accelerated in line with the accumulation of foreign exchange reserves.**
- (1) When the Bank conducts foreign exchange operations, it simultaneously employs policy instruments such as open market operations (e.g., issuance of certificates of deposit) and foreign exchange swaps to sterilize excess liquidity in the banking

system. This ensures that domestic bank reserves are maintained at appropriate levels. These measures are complemented by the required reserve system to further strengthen the management of bank liquidity.

- (2) There is no significant long-term positive correlation between changes in the Bank’s foreign assets and changes in domestic reserve money. From the first quarter of 2000 to the third quarter of 2025, the correlation coefficient between the two was only -0.005 (Fig. 5-1). This demonstrates that the Bank’s use of sterilization instruments has effectively offset the expansionary effect of foreign asset accumulation on domestic reserve money.
- (3) The Bank’s empirical research also indicates that, over the past 20 years, the Bank has implemented sterilization measures that were close to full sterilization.¹⁶ Consequently, fluctuations in foreign assets have had a negligible impact on domestic reserve money.

Figure 5-1 Relationship Between Changes in the Bank’s Foreign Assets and Changes in Reserve Money



Note: The data period is from Q1 2000 to Q3 2025. The X-axis represents quarterly changes in the Bank’s foreign assets, and the Y-axis represents quarterly changes in reserve money.

Source: *Financial Statistics Monthly* (Nov. 2025), CBC.

¹⁶ For empirical results regarding the Bank’s sterilization operations, please refer to the CBC (2024), “Explanation of Issues Related to the Bank’s Monetary Policy, Issue 1: Explanation of the Bank’s Proper Management of Liquidity in the Banking System,” *Supplementary Materials for the Post-Monetary Policy Meeting Press Conference*, Sep. 19.

2. Taiwan's interest rates are stable, mainly reflecting relatively mild inflation over the long term and massive excess saving, resulting in an ample supply of funds.

(1) Taiwan's stable interest rates reflect relatively mild inflation.

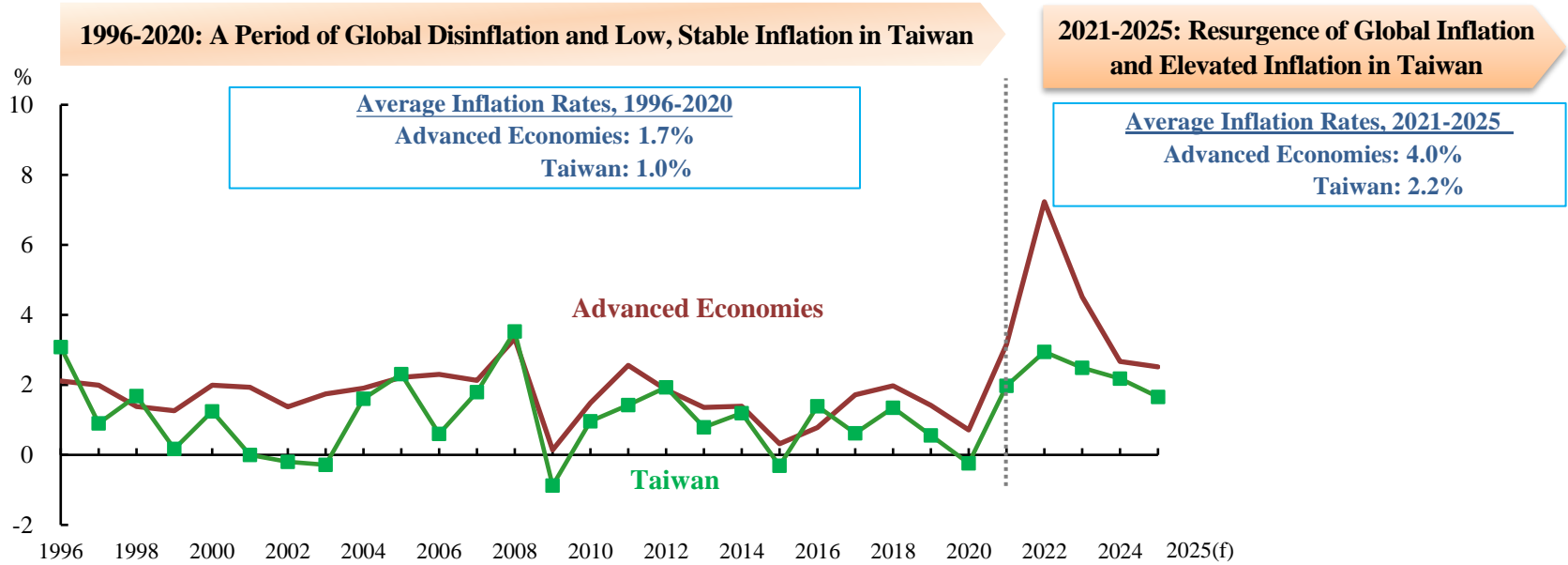
A. Prior to 2021: Taiwan's inflation was low and stable (averaging 1.0% during 1996-2020), lower than that of advanced economies (averaging 1.7%) (Fig. 5-2); however, Taiwan's average short-term interest rate was broadly in line with that of advanced economies (2.0%) (Fig. 5-3).

B. From 2021 onwards: Although domestic inflation has trended up, with the government's effective supply-side measures and the Bank's gradual monetary tightening, **Taiwan's average inflation rate** during 2021-2025 was 2.2%, **well below** the 4.0% in **advanced economies** (Fig. 5-2). Consequently, Taiwan's short-term interest rate has been lower than that of advanced economies.

(2) Taiwan's relatively stable interest rates also reflect sustained current account surpluses and the continued accumulation of excess saving, resulting in an ample supply of funds that makes upward adjustments in interest rates less likely.

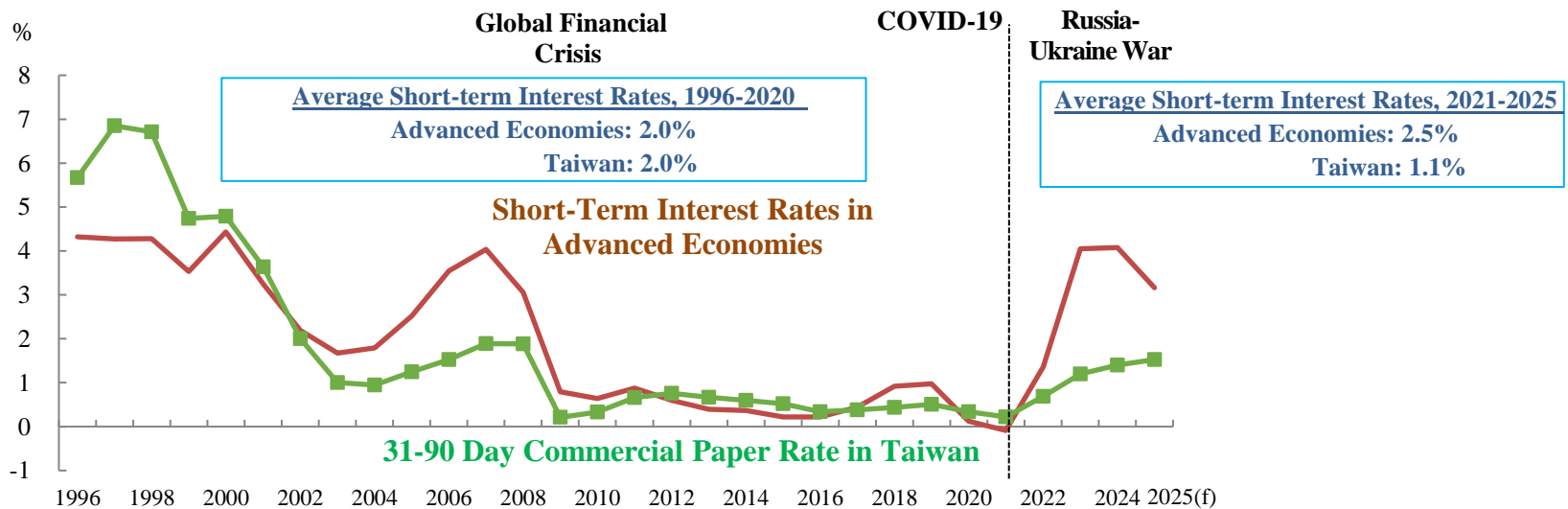
Taiwan's excess saving has expanded continuously from NT\$0.69 trillion in 2008 to NT\$4.08 trillion in 2024. **They are forecast to rise to over NT\$5 trillion and NT\$6 trillion in 2025 and 2026**, respectively (Fig. 2-8).

Figure 5-2 Inflation Rates in Taiwan & Advanced Economies (1996-Present)



Source: S&P Global (Dec. 15, 2025).

Figure 5-3 Short-term Interest Rates in Taiwan & Advanced Economies (1996-Present)



Source: S&P Global (Dec. 15, 2025).

3. **Housing prices are influenced by a range of factors, and interest rates constitute only one element. Maintaining a healthy real estate market requires joint efforts by relevant central ministries and local governments. In accordance with the division of responsibilities, the Bank adopts selective credit control measures as appropriate to contain excessive credit flows into the real estate market.**
- (1) **Housing prices are affected by numerous factors.** Key factors include public expectations regarding housing prices, real estate-related tax burdens, the availability and affordability of real estate loans, land prices, construction costs, and changes in household composition and income. **Interest rates are only one of the factors** affecting housing prices, and they influence housing market supply and demand **through bank credit channels and wealth effects.**
- (2) **Adjustments to policy rates have a wide-ranging impact.** In addition to affecting mortgage rates, such adjustments also affect corporate and other individual loans. **Central banks' interest rate policies are primarily aimed at stabilizing prices, rather than addressing housing price issues.**
- (3) Some factors affecting housing prices involve the authority of local governments and regional development. **Stabilizing housing prices requires relevant government ministries and local governments to jointly implement measures under the Healthy Real Estate Market Plan via coordinated efforts on the demand, supply, and institutional sides.** In accordance with the division of responsibilities, **the Bank adopts selective credit control measures as appropriate to contain excessive credit flows into the real estate market.**
- A. **Domestic housing prices have repeatedly reached new highs in recent years.** In addition to **rising land prices and construction costs**, this trend has been mainly driven by **expanded corporate investment** in Taiwan, as well as the government's development of industrial parks and major transportation infrastructure projects. These factors have **strengthened public expectations of housing price rises** and boosted housing demand, which in turn has given rise to speculative activity.

- B. **From December 2020 to June 2023: Under the Bank’s five adjustments to its selective credit control measures, combined with other ministries’ efforts to enhance measures for a healthy housing market,** housing market transactions cooled and the rise in housing prices moderated in the first half of 2023.
- C. **Since the second half of 2023, amid the domestic economic recovery and the implementation of the new Preferential Housing Loans for the Youth program, public expectations of housing price increases** have risen, leading to a surge in housing market transaction volume. Housing price indices in major metropolitan areas have mostly hit new highs, with price gains widening. To take preventive measures, **in mid-August 2024, the Bank requested banks to enhance internal control of aggregate real estate lending volumes** for the period from the fourth quarter of 2024 to the fourth quarter of 2025. The Bank also **adjusted selective credit control measures twice, in June and September 2024.** Under the Bank’s credit control measures, **since the fourth quarter of 2024,** the concentration of credit resources in real estate loans has gradually improved, housing market transactions have slowed, the rise in housing prices has moderated, and public expectations of rising housing prices have eased, **with policy effects gradually becoming apparent.**

Q6: What are the causes of the currency mismatch on the balance sheets of Taiwan's life insurance industry? Will it trigger systemic financial risk? What is the purpose of the Bank's participation in the interbank swap market?

The Economist claimed that, Taiwan's central bank has found a subtler way to channel Taiwan's vast current-account surplus through the life-insurance industry. Taiwanese insurers have made US\$960 billion of promises to savers, which are backed by US\$700 billion in higher-return foreign (principally American) assets. The industry thus suffers from an alarming mismatch, backing NT dollar promises with US dollar holdings. The central bank has encouraged this overseas investment spree by reducing the risk for the insurers through interventions in the market for foreign-currency swaps. Although the central bank has helped the insurers reduce their exposure to movements in exchange rates, this hedging has not eliminated the risk entirely. A sharp appreciation of the NT dollar could leave the insurers insolvent. Allowing them to collapse, however, would devastate Taiwanese savers and could trigger a broader financial crisis. The Bank offers the following clarification.

A6:

- **The currency mismatch on the balance sheets of Taiwan's life insurance industry primarily has stemmed from the fact that its funding sources were dominated by long-term NTD-denominated insurance liabilities. However, given the limited depth of the domestic bond market and the shortage of long-term investment instruments, insurers allocate their funds overseas to better match asset-liability maturities and mitigate negative interest rate spreads. Such investment decisions are driven by market conditions and were not the result of deliberate guidance by the Bank.**
- **The life insurance industry has already adopted various strategies to manage exchange rate risk. Additionally, the Financial Supervisory Commission (FSC) continues to promote measures to strengthen the financial soundness of the life insurance industry, which will enhance the sector's resilience against financial shocks and prevent systemic financial crises.**
- **As for foreign exchange swaps, they are one of the Bank's monetary policy tools. By participating in the interbank swap market, the Bank provides US dollar liquidity and lowers the cost of foreign currency funding for domestic borrowers, consistent with the Bank's mandate of fostering economic development. Therefore, the asset-liability currency mismatch and the expansion of overseas investments by life insurers are not attributable**

to the Bank's provision of FX swaps.

1. Reasons for the currency mismatch on the balance sheets of the life insurance industry

(1) The liability structure is mainly NTD-denominated.

A. After financial liberalization in the 1990s, competition in the life insurance market intensified, and the insurance product structure shifted from term life insurance policies to whole life insurance policies with high guaranteed interest rates. The duration of liabilities for such NTD policies is long, and they have remained high-guaranteed-rate liabilities on life insurance companies' balance sheets to this day.

B. After 2000, in the wake of the dot-com bubble and the global financial crisis, interest rates in major countries remained low for a long period. However, Taiwan's economy grew steadily, and domestic household wealth continued to increase. Massive funds continued to flow into the life insurance industry, driving the rapid growth of NTD savings-type policies and forming a long-term, NTD-centric liability structure for life insurance companies. As of the end of September 2025, the NTD policy liabilities of the life insurance industry amounted to NT\$22.85 trillion, accounting for 78% of insurance liabilities and 62% of total assets.

(2) The asset structure is mainly foreign currency-denominated.

As mentioned above, the funding sources of the life insurance industry are mainly NTD long-term insurance liabilities. According to the principle of asset-liability matching, assets should also be allocated to NTD long-duration investment instruments. However, owing to the limited depth of the domestic bond market and the severe shortage of long-duration (10 years or more) investment instruments, insurers turned to overseas investments to match asset-liability maturities and alleviate the pressure of negative spreads. In addition, to meet insurers' investment needs and improve their capital utilization efficiency, the FSC also successively relaxed the limits on overseas investments by the insurance industry,

driving the rapid growth of their overseas investment scale, which in turn contributed to a predominantly foreign currency-denominated asset structure. As of the end of September 2025, overseas investments by the life insurance industry reached NT\$22.08 trillion, accounting for 68% of investable funds and 60% of total assets.

(3) In summary, the current currency mismatch structure characterized by “foreign currency assets and NTD liabilities” in Taiwan’s life insurance industry was primarily due to the high level of liabilities arising from past sales of NTD high-guaranteed-rate whole life insurance policies. Coupled with steady economic growth and increasing household wealth, massive funds flowed into savings-type policies, causing the industry’s asset scale to expand significantly. In an environment characterized by the limited depth of the domestic bond market and the severe shortage of long-duration instruments, insurers turned to overseas investments to match asset-liability maturities and alleviate negative spreads. This development was attributable to a confluence of factors and did not stem from any deliberate policy guidance by the Bank.

2. The life insurance industry has already adopted various strategies to manage exchange rate risk. Additionally, the FSC continues to promote measures to strengthen the financial soundness of the life insurance industry, which will enhance the sector’s resilience against financial shocks and prevent systemic financial crises.

(1) As mentioned earlier, in the presence of currency mismatch in the life insurance industry, exchange rate volatility has become a significant variable affecting profit and loss and net worth in financial reports; therefore, exchange rate risk management is crucial.

(2) Currently, insurers mainly use derivatives and the Foreign Exchange Valuation Reserve to manage exchange rate risk. Among them, the Foreign Exchange Valuation Reserve mechanism was established and implemented by the FSC in 2012, but as the accumulated balance is not yet substantial (the reserve balance was NT\$384.5 billion as of the end of October 2025), its ability to absorb exchange losses is limited. Therefore, to effectively reduce the impact of exchange rate fluctuations, insurers mainly rely on the use of foreign exchange hedging instruments. As of the end of October 2025, the

foreign exchange hedging ratio was approximately 59%, dominated by FX swaps at 38%, followed by non-deliverable forwards (NDFs) at 17%.

- (3) To manage exchange rate risk, the life insurance industry has already adopted various hedging instruments and autonomously determines hedging ratios based on its overseas investment strategies, fund allocation, and hedging needs. Furthermore, to continuously strengthen the financial health of the life insurance industry, in addition to releasing localization and transitional adjustment measures for the new generation solvency system to be implemented in 2026, the FSC will promote reforms in three aspects: “assets, liabilities, and net worth.” These include increasing the proportion of domestic investments on the asset side to mitigate asset-liability maturity and currency mismatches; promoting “moving away from long-term guarantees” on the liability side to reduce liability costs; and continuously strengthening capital measures on the net worth side, including provisions for the Foreign Exchange Valuation Reserve and capital increases. These measures should enhance insurers’ resilience against financial shocks and avoid triggering systemic financial risk.
- 3. As for foreign exchange swaps, they are one of the Bank’s monetary policy tools. By participating in the interbank swap market, the Bank regulates the liquidity of NTD and foreign currency in the banking system. By supplying foreign currency funds to the banking system for on-lending to firms or life insurance companies, the Bank can reduce their foreign currency funding costs and assist them in managing exchange rate risk, which is beneficial to domestic industrial development. As for the currency mismatch and the expansion of overseas investment scale in the life insurance industry, the reasons have been explained above and are not attributable to the Bank’s provision of foreign exchange swaps.**

Q7: Is the exchange rate the key factor in the transformation and upgrading of the domestic manufacturing sector?

The Economist claimed that, one reason that the weak-currency policy has persisted is the export lobby. Low-tech firms, which account for around 70% of jobs in manufacturing, subsist on thin margins and would be severely hurt by an appreciation. As a result, powerful forces are arrayed to defend the status quo. The Bank offers the following clarification.

A7:

- **Following financial liberalization, the domestic foreign exchange market comprises numerous participants. The NT dollar exchange rate is determined jointly by diverse suppliers and buyers of foreign exchange; thus, it cannot be tailored to any single industry. In accordance with the statutory mandate, the Bank maintains the dynamic stability of the NT dollar exchange rate. Exchange rate policy has never been a component of industrial policy.**
 - **In an environment of exchange rate volatility, enterprises should assume operational responsibility and mitigate exchange rate risks through hedging strategies.**
 - **To cope with globalization and international competition, encouraging enterprises to engage in innovation, research and development (R&D), and investment is the only way to effectively facilitate industrial upgrading.**
1. **Following financial liberalization, the NT dollar exchange rate is determined jointly by numerous foreign exchange market participants, making it impossible to adjust specifically for any single industry; meanwhile, based on the statutory mandate, the Bank maintains the dynamic stability of the NT dollar exchange rate, and exchange rate policy has never been a component of industrial policy.**
- (1) Following financial liberalization, the domestic foreign exchange market comprises numerous participants. In addition to importers and exporters, participants also include foreign investors, domestic financial institutions, and individuals.

A. Demand for foreign exchange: Sources include importers, foreign capital outflows, increases in foreign asset holdings by financial institutions, cross-border investment and wealth management by nationals, and outbound travel by nationals.

B. Supply of foreign exchange: Sources include exporters, foreign capital inflows, repatriation of overseas investment income by financial institutions and nationals, and inbound travel by foreign tourists.

(2) The NT dollar exchange rate is determined jointly by diverse suppliers and buyers of foreign exchange; consequently, it cannot be tailored to any single industry. Acting in accordance with the statutory mandate, the Bank seeks solely to maintain the dynamic stability of the NT dollar exchange rate. Exchange rate policy has never been a component of industrial policy.

2. In an environment of exchange rate volatility, enterprises should assume operational responsibility and mitigate exchange rate risks through hedging strategies.

(1) Enterprises may utilize hedging instruments, such as forwards, foreign exchange swaps, cross currency swaps, and currency options, to hedge against exchange rate risks during the settlement period of payments and receipts.

(2) Matching foreign currency accounts payable and accounts receivable can enhance the degree of natural hedging. Additionally, enterprises may stipulate in sales contracts that exchange rate risk be transferred to the counterparty or shorten the sales transaction period, thereby mitigating the exposure of foreign currency receipts to exchange rate volatility.

3. To cope with globalization and international competition, encouraging enterprises to engage in innovation, R&D, and investment is the only way to effectively facilitate industrial upgrading.

(1) R&D represents a strategic choice in corporate operations, influenced by a multitude of factors, including expectations regarding industry trends, the availability of R&D personnel, and fluctuations in input and output prices. Large enterprises

generally possess greater capacity to conduct R&D to enhance product competitiveness, whereas small and medium-sized enterprises (SMEs) require government assistance and guidance.

- (2) Following the U.S.-China trade dispute in 2018, global supply chains have undergone restructuring, leading Taiwanese firms to expand their domestic investments. This trend, coupled with expanding demand for emerging technology applications such as AI and high-performance computing (HPC) and complemented by the promotion of government policies such as the Five Trusted Industry Sectors Promotion Plan and amendments to the *Industrial Innovation Statute* (extending the period of tax credits for equipment investment, expanding the scope of applicable items, and raising the expenditure cap), serves to facilitate industrial upgrading.
- (3) In recent years, Taiwan's semiconductor and server industries have played an indispensable role in the global value chain, highlighting the fruition of enterprises' sustained efforts in innovation and R&D.

Q8: Has the Bank compromised its statutory mandate for the remittance of surplus earnings to the national treasury?

The Economist claimed that, the central bank prints NT dollars to buy foreign currency, pushing down the value of the NT dollar in the process. Printing NT dollars to hoover up foreign-currency assets has minted handsome profits, which are remitted to the government and have become a big source of revenue. The Bank offers the following clarification.

A8: Remitting surplus earnings to the national treasury is not a statutory goal of the Bank, nor is it a key indicator used for the Bank's performance evaluation. Furthermore, gains or losses resulting from exchange rate fluctuation in valuing foreign currency assets held by the Bank cannot be listed in the current year's profit or loss. Consequently, the Bank does not need to, nor would it, suppress the NTD exchange rate to increase contributions to the national treasury.

1. Pursuant to Article 2 of *The Central Bank of the Republic of China (Taiwan) Act*, the Bank's statutory mandates encompass promoting financial stability, guiding sound banking business, and maintaining the stability of the internal and external value of the currency (specifically, maintaining domestic price stability and the dynamic stability of the NTD exchange rate). Additionally, within the scope of the above objectives, the Bank is tasked with fostering economic development. **The remittance of surplus earnings to the government does not constitute a statutory goal of the Bank.**
2. According to the *Budget Act*, the Bank formulates an operating fund budget, in which the surplus earnings remitted to the national treasury forms an integral part of the government's general budget. Upon the settlement of final accounts for each fiscal year, and following the allocation of legal reserves from the Bank's annual surplus earnings, the remaining balance is fully remitted to the national treasury. **Major central banks and monetary authorities**, including the Fed, BoJ, BoE, BoC, BoK, and MAS, **are similarly required by law to remit their surplus earnings to their respective national treasuries**, regardless of their organizational structure.

3. Over the long term, the implementation of sound monetary, credit, and FX policies has enabled **the Bank to successfully fulfill its statutory mandates**. Concurrently, upholding the responsibility of a prudent administrator, the Bank manages FX reserves with due diligence and **remits any resulting surplus earnings to the national treasury as required by law**. For example, the domestic banking sector exhibits sound operations and robust asset quality, and inflation remains stable (with Taiwan's annual CPI growth rate from 2000 to 2024 averaging only 1.2%). Moreover, the volatility of the NTD against the USD has remained lower than that of major currencies, including the euro, the Korean won, and the Japanese yen. Notably, Taiwan's long-term economic performance has outpaced the global average (with Taiwan's GDP growth rate from 2000 to 2024 averaging 3.8%, surpassing the global average of 2.8%).
4. Pursuant to Article 43 of *The Central Bank of the Republic of China (Taiwan) Act*, **gains or losses resulting from exchange rate fluctuation in valuing foreign currency assets held by the Bank cannot be listed in the current year's profit or loss**. Furthermore, **the amount of surplus earnings remitted does not serve as a primary indicator used for the Bank's performance evaluation**. Consequently, **the Bank does not need to, nor would it, suppress the NTD exchange rate** to increase contributions to the national treasury.

Appendix: Explanation of IMF Forecasts for Taiwan's 2025 Nominal GDP per Capita and PPP GDP per Capita

1. The IMF predicts that Taiwan's GDP per capita in US dollars in 2025 will outperform that of South Korea and Japan, primarily owing to Taiwan's strong economic growth momentum and the relatively smaller depreciation of the NTD compared with the KRW and JPY.

- (1) In October 2025, the IMF released projections of GDP per capita in US dollars for nearly 200 economies. Taiwan's GDP per capita is forecasted to reach US\$37,827 in 2025, an increase of US\$11,834 from 2019 (Appendix Table 1).
- (2) Rise in Taiwan's Global Ranking: Since the COVID-19 pandemic, driven by robust demand from the stay-at-home economy and AI applications, Taiwan has delivered outstanding economic performance. Consequently, its global ranking rose from 41st in 2019 to 35th in 2025, surpassing South Korea (37th) and Japan (40th) (Appendix Table 1).

Appendix Table 1 Rankings of Major Economies by GDP per Capita in US Dollars (Comparison between 2019 and 2025)

Country	GDP Per Capita (US\$)	Rank (2025)	Rank (2019)	Change in Rank (vs. 2019)	Increase in Amount (vs. 2019)
Switzerland	111,047	4	3	-1	26,565
Singapore	94,481	6	8	2	28,529
U.S.	89,599	8	9	1	24,038
Hong Kong	56,844	20	17	-3	8,566
U.K.	56,661	21	24	3	13,948
Canada	54,935	23	21	-2	8,504
Taiwan	37,827	35	41	6	11,834
South Korea	35,962	37	30	-7	2,135
Japan	34,713	40	27	-13	-5,835

- Notes: 1. The IMF compiles GDP per capita statistics for nearly 200 economies.
 2. In December 2025, the DGBAS forecasted Taiwan's GDP per capita (US\$) to reach US\$38,748 for 2025, an increase of US\$12,750 compared to 2019.
 Source: IMF World Economic Outlook Database (Oct. 2025).

Appendix Table 2 Factors Affecting Nominal GDP per Capita in US Dollars for Japan, S. Korea, and Taiwan (2019-2025)

	Average Annual Growth Rate of GDP per Capita (US\$) (A)	Factors Affecting GDP per Capita (US\$)			
		Average Annual Growth Rate of Real GDP (1)	Average Annual Growth Rate of GDP Deflator (2)	Average Annual Growth Rate of Population (3)	Average Annual Change in Exchange Rate against the USD (4)
Taiwan	5.8	3.6	1.9	-0.1(-)	-0.1 (Depreciation against the USD)
South Korea	0.4	1.9	1.9	0.0(-)	-3.3 (Depreciation against the USD)
Japan	-1.7	0.2	1.6	-0.4(-)	-3.9 (Depreciation against the USD)

- Notes: 1. Nominal GDP per Capita (US\$) = (Real GDP in Local Currency × Domestic Price Level × Exchange Rate Conversion) ÷ Population; therefore, (A) ≈ (1) + (2) + (3) + (4).
 2. The symbol “(-)” indicates that the annual population growth rate makes a negative contribution to the annual growth rate of nominal GDP per capita.
 3. Owing to rounding differences, the sum of the factors affecting GDP per capita (US\$) may not equal the average annual growth rate of GDP per capita (US\$).

Source: IMF World Economic Outlook Database (Oct. 2025).

(3) GDP per capita in US dollars is mainly affected by factors such as real GDP, domestic price levels, population size, and exchange rates. From 2019 to 2025, Taiwan’s average annual growth rate of GDP per capita (US\$) outperformed that of South Korea and Japan. The main reasons are as follows (Appendix Table 2):

A. Relatively strong economic growth momentum: Taiwan’s economy grew at an average rate of 3.6%, higher than South Korea (1.9%) and Japan (0.2%).

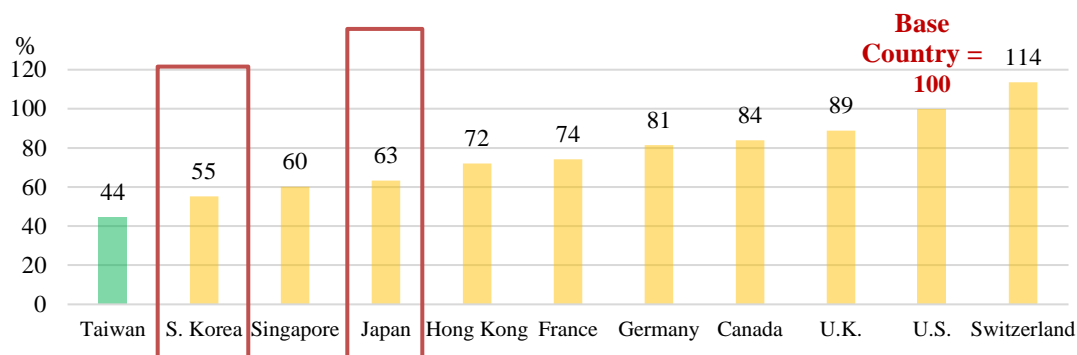
B. Smaller currency depreciation: The average annual change in the NT dollar exchange rate against the USD was -0.1%, representing a smaller depreciation than that of the KRW (-3.3%) and the JPY (-3.9%).

(4) Price comparison: Taiwan’s average annual GDP deflator growth rate was 1.9%, the same as that of South Korea and higher than that of Japan (1.6%) (Appendix Table 2).

2. According to IMF estimates for 2025, Taiwan’s PLI is less than half that of the U.S. and lower than that of other major economies. This relatively low PLI reflects the relatively strong purchasing power of Taiwan’s currency and demonstrates the effectiveness of the government’s long-term price stabilization efforts.

(1) The IMF estimates that Taiwan’s PLI for 2025 is approximately 44% of that of the U.S., compared to 55% for South Korea and 63% for Japan. Taiwan’s price level is lower than that of other major economies, indicating that the purchasing power of Taiwan’s currency is relatively stronger than that of these major economies (Appendix Fig. 1).

Appendix Figure 1 PLIs of Major Economies in 2025



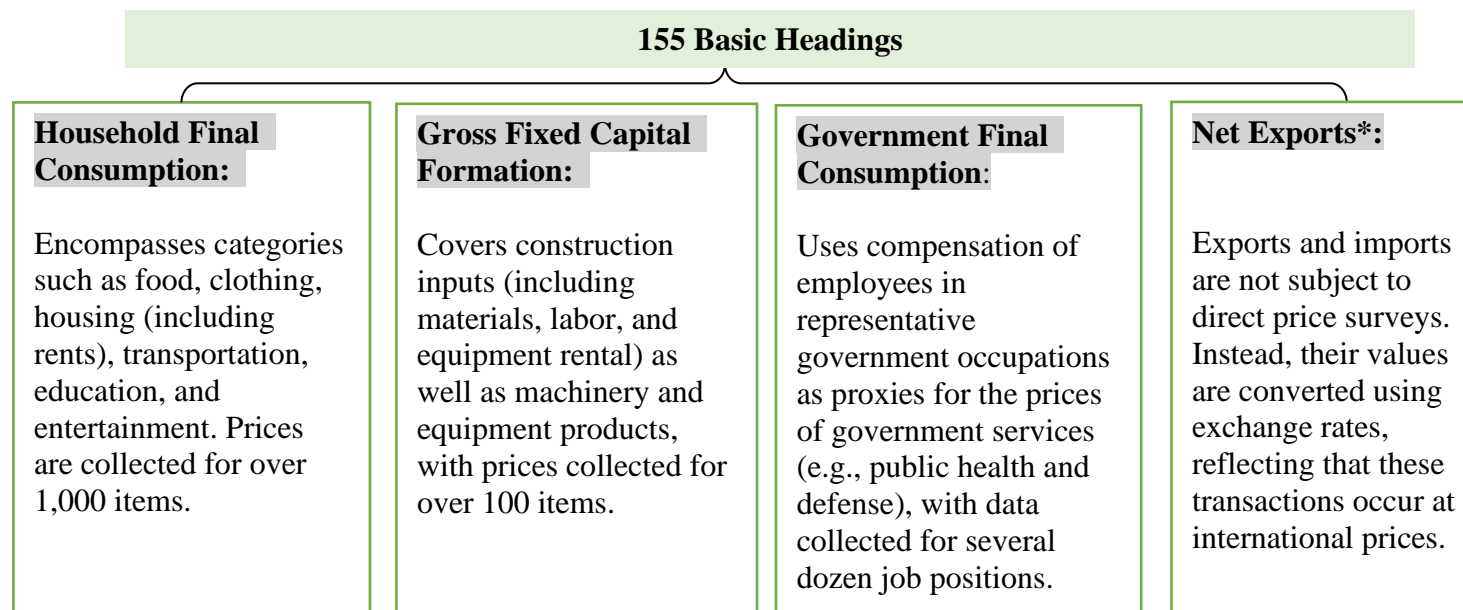
Sources: IMF (Oct. 2025); compiled by the Bank.

In Taiwan, the cost of purchasing a standardized basket of goods and services is less than half that in the U.S. and also lower than in other major economies.

This reflects the relatively strong purchasing power of Taiwan’s currency and demonstrates the effectiveness of the government’s long-term price stabilization measures.

- (2) International institutions such as the World Bank and the OECD note that PPP reflects relative currency purchasing power. While PPP adjustments facilitate meaningful cross-country comparisons of real GDP, **PPP is not an equilibrium exchange rate and should not be used to assess currency overvaluation or undervaluation.**
- A. Cross-country comparisons of nominal GDP per capita in US dollars are prone to distortion, primarily because:
- (a) **Exchange rates are influenced by numerous factors and are subject to high volatility.** This causes nominal GDP per capita in US dollars to fluctuate significantly, complicating precise comparisons.
 - (b) **Economies consist of many non-tradable goods and services that are not traded internationally.** Therefore, converting domestic output using market exchange rates may not accurately reflect actual purchasing power.
 - (c) Such comparisons fail to account for **differences in the cost of living or currency purchasing power across countries**, thereby leading to misleading conclusions.
- B. International institutions such as the World Bank and the United Nations estimate PPP through the ICP. Since PPP reflects relative purchasing power more accurately than market exchange rates, these organizations frequently use PPP-adjusted GDP per capita for international comparisons.
- (a) PPP refers to the amount of local currency required to purchase a standardized basket of goods and services, equivalent to what US\$1 would buy in the base country (the U.S.).
 - (b) **The standardized basket of goods and services comprises 155 basic headings.** The selected items must meet the criteria of comparability (having identical quality and specifications across countries) and representativeness (being actually sold in local markets, with stable prices and frequently purchased). Moreover, **as the basket corresponds to the expenditure side of GDP** (Appendix Fig. 2), **the PPP-adjusted approach allows for valid cross-country comparisons of real GDP.**

Appendix Figure 2 Components of the Standardized Basket of Goods and Services



Note: * PPP serves as a price adjustment tool for cross-country comparisons. Net exports, however, are calculated separately using exchange rates rather than through direct price comparisons.

Source: Compiled by the Bank.

C. The World Bank and the OECD emphasize that **PPP is not an equilibrium exchange rate and should not be used to assess currency under- or over-valuation.**

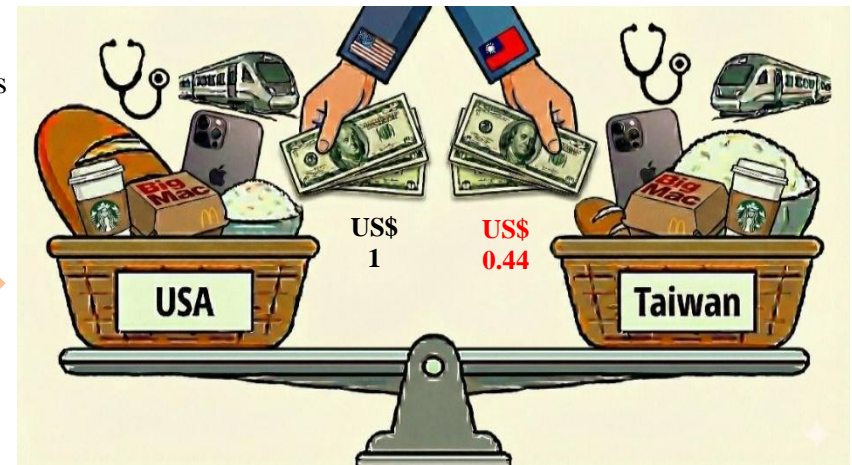
D. The IMF projects an NTD/USD exchange rate of 30.52 and estimates Taiwan's PPP at 13.56 for 2025. This implies that purchasing a standardized basket of goods and services that costs US\$1 in the U.S. (base country) costs only NT\$13.56 in Taiwan (Appendix Fig. 3-1). **In other words, at the projected exchange rate, a basket costing US\$1 in the U.S. would cost the equivalent of only US\$0.44 in Taiwan** ($\approx 13.56 \div 30.52$) (Appendix Fig. 3-2).

Appendix Figure 3-1 Taiwan's PPP at 13.56 (2025)



Appendix Figure 3-2 Taiwan's Price Level at Approximately 44% of the U.S. (2025)

The IMF projects the NTD/USD exchange rate at 30.52.



Note: While PPP employs a standardized basket of goods and services with identical items across countries to ensure cross-country comparability, this is illustrated by a balance scale showing identical baskets on both sides to convey the concept of parity that their values are equal. However, taking into account differences in lifestyles and cultural habits across countries, the expenditure weights assigned to items in the basket vary. Accordingly, in the illustration, bread appears larger and rice smaller in the U.S. basket, whereas bread is smaller and rice larger in the Taiwan basket, indicating that differences in dietary culture between the two economies lead to different expenditure weights for these items.

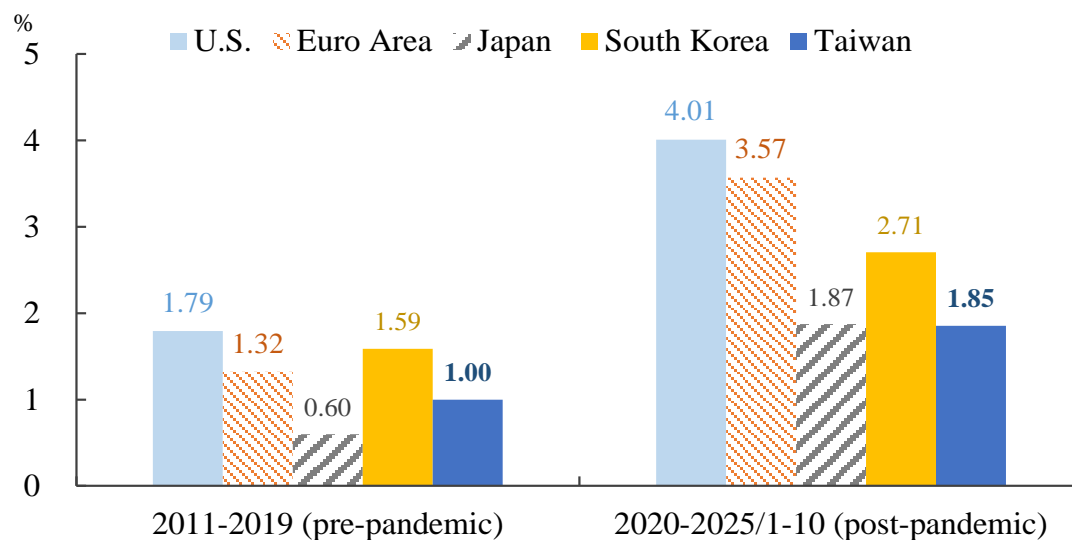
Sources: IMF (Oct. 2025); images generated by Gemini.

3. **Taiwan’s inflation structure has changed since the pandemic, and the inflation rate in Taiwan remains relatively moderate compared with major economies, mainly attributable to the effectiveness of government supply-side measures.**

(1) Before the pandemic (2011 to 2019), inflation rates in major economies and Taiwan were low and stable. During and after the pandemic (2020 to October 2025), inflation rates were relatively high.

Since 2020, owing to supply-side shocks stemming from the pandemic and unexpected events such as the Russia-Ukraine war, as well as the normalization of post-pandemic life, which led to excess demand for tourism and other entertainment services, the average inflation rates of the U.S., Europe, Japan, South Korea, and Taiwan from 2020 to 2025 have all exceeded their pre-pandemic averages (2011 to 2019). However, Taiwan’s inflation rate remained relatively moderate (averaging 1.85%) (Appendix Fig. 4).

Appendix Figure 4 Average Annual Growth Rates of CPI in Major Economies



Sources: Official statistics websites.

(2) Taiwan has taken more effective supply-side measures to address higher inflation caused by supply-side factors, resulting in a relatively moderate inflation rate in Taiwan.

A. Taiwan: Taiwan's government rolled out the following **supply-side measures** from the outset to respond to fluctuations in energy and food prices and to reduce their spillover effects. **These measures have been instrumental in stabilizing inflation.**

(a) **Stabilizing oil and electricity prices;**

(b) **Reducing the excise tax** on gasoline and diesel fuel; **exempting** imported soybeans, corn, and wheat **from business tax; reducing import tariffs** on wheat, beef, butter, and milk powder for baking;

(c) **Keeping the prices of liquefied natural gas (LNG) and domestic bottled gas unchanged.**

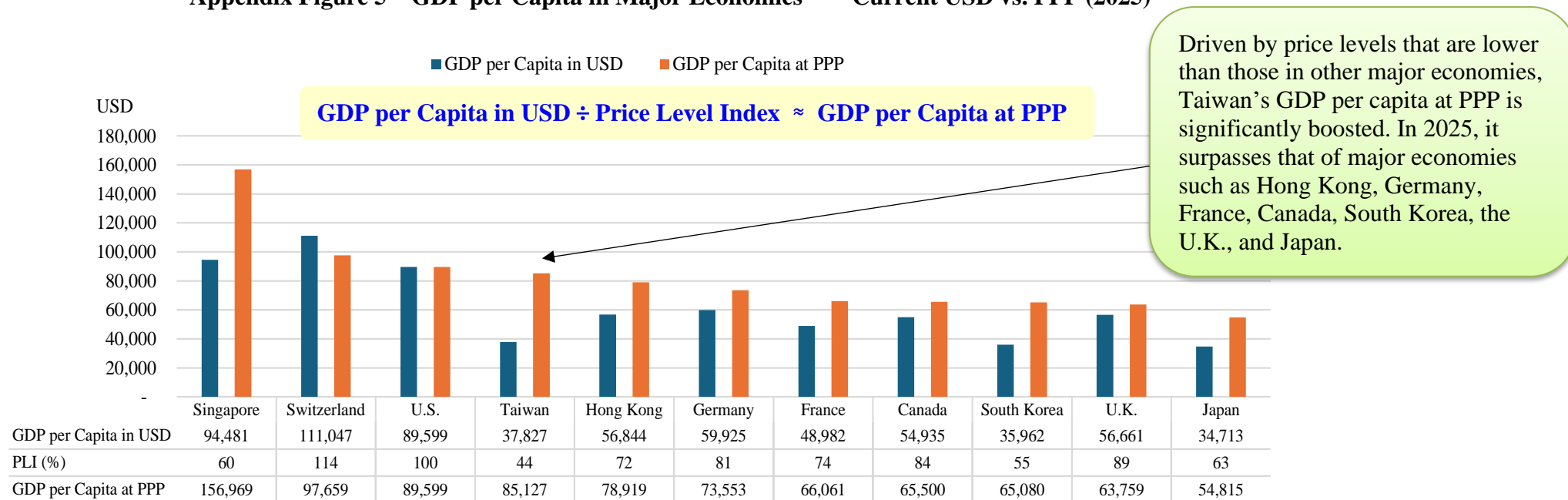
B. The U.S. and Europe: The coping mechanisms adopted differed from those of Taiwan, leading to limited effectiveness.

In the U.S. and in Germany within the euro area, energy companies are privately owned. In the early stages of the pandemic, oil and electricity prices were allowed to fully reflect market conditions, leading energy inflationary pressures to spill over to other goods (such as food) and services. Subsequently, both governments allocated fiscal resources for subsidies and implemented consumption tax cuts to ease households' burdens from energy and food expenditures. However, these measures proved insufficient to alleviate inflationary pressures, resulting in limited effectiveness.

3. The IMF estimates that Taiwan’s 2025 PPP GDP per Capita Approaches US Levels, Reflecting Robust Economic Performance and Strong Purchasing Power.

- (1) According to IMF projections, Taiwan’s 2025 nominal GDP per capita is estimated at US\$37,827. While this remains lower than Hong Kong (US\$56,844), Germany (US\$59,925), France (US\$48,982), Canada (US\$54,935), and the U.K. (US\$56,661), it exceeds that of South Korea (US\$35,962) and Japan (US\$34,713) (Appendix Fig. 5).
- (2) When expressed in PPP terms, Taiwan’s relatively lower price levels boost its real purchasing power. Consequently, Taiwan’s GDP per capita at PPP surpasses all the aforementioned economies (Appendix Fig. 5).

Appendix Figure 5 GDP per Capita in Major Economies – Current USD vs. PPP (2025)



Note: Based on the DGBAS forecast (Nov. 28, 2025) of US\$38,748 for Taiwan’s nominal GDP per capita, and applying a price level index of 44%, Taiwan’s GDP per capita at PPP is estimated at US\$87,201.

Source: IMF World Economic Outlook Database (Oct. 2025).

- (3) Taiwan’s 2025 nominal GDP per capita in USD is US\$37,827. However, owing to relatively low price levels enhancing purchasing power, this translates to an equivalent of US\$85,127 in the U.S., closely approaching the U.S. GDP per capita at PPP of US\$89,599 (Appendix Table 3).
- (4) The IMF projects that Taiwan’s ranking of GDP per capita at PPP will leap significantly, rising from 25th pre-pandemic (2019) to 12th in 2025 (Appendix Table 3), demonstrating Taiwan’s robust economic performance and strong real purchasing power in recent years.

Appendix Table 3 Rankings of Major Economies by GDP per Capita at PPP (2019 vs. 2025)

Country	GDP per Capita at PPP (2025)	Rank (2025)	Rank (2019)	Change in Rank	Increase in Amount (vs. 2019)
Singapore	156,969	2	4	2	51,634
Switzerland	97,659	8	8	-	23,617
U.S.	89,599	11	11	-	24,038
Taiwan	85,127	12	25	13	32,496
Hong Kong	78,919	18	14	-4	17,800
Canada	65,500	30	29	-1	14,916
South Korea	65,080	32	33	1	18,569
U.K.	63,759	33	31	-2	13,819
Japan	54,815	42	38	-4	11,998

Note: Rankings are based on data from nearly 200 economies covered by the IMF.
Source: IMF World Economic Outlook Database (Oct. 2025).