Accounting Rules, Currency Hedging and External Adjustment: Evidence from Taiwan's Life Insurers

Ilker Aslan, PhD*

Lecturer, Kalaidos University of Applied Sciences, Zürich

November 2026

Abstract. Taiwan's current-account surplus reached 19.6 per cent of GDP in 2025, and its life insurers are the main channel through which it is invested abroad. Whether they hedge determines how much of the surplus reaches the spot market and who bears the currency risk. I study an accounting change, effective in January 2026, that lets insurers amortise exchange differences on foreign bonds held at amortised cost over the bonds' remaining lives. In a model in which insurers penalise the variance of both economic and reported earnings, the response of the hedge ratio identifies the share of hedging done to protect reported earnings. The sector's hedge ratio fell from 59 to 43 per cent between November 2025 and June 2026, about NT$2.4 trillion of hedges or two-fifths of the 2025 surplus; the largest insurer cut its ratio by about 19 points in the month the draft appeared. At least 30 per cent of prior hedging served reported earnings. The cost of offshore forward hedges fell below that of onshore swaps, and the Taiwan dollar weakened by 0.5 to 0.7 per cent against regional currencies on the two most informative announcements. Futures prices show the dollar's forward discount against the Taiwan dollar closing in the six weeks after the change was proposed. Interbank turnover in outright forwards fell by more than a third; swap turnover did not change. Accounting rules for institutional investors are a channel of external adjustment.

JEL classification: F31, F32, G15, G22, M41. **Keywords:** currency hedging; external adjustment; life insurance; accounting rules; self-insurance; Taiwan.

1 Introduction

Taiwan ran a current-account surplus of US$181.1 billion in 2025, equal to 19.6 per cent of GDP. Over the same year the financial account recorded a net acquisition of foreign assets of US$157.2 billion, while the central bank's reserve assets rose by US$20.0 billion (Central Bank of the Republic of China (Taiwan), 2026a). The difference between the last two figures is the private recycling of the surplus, and its largest single channel is the life insurance sector. Taiwanese life insurers collect long-dated premiums in New Taiwan dollars and invest most of them abroad, because the domestic market offers too few long-duration assets at the yields guaranteed on legacy policies (Financial Supervisory Commission, 2025a; Chang et al., 2025).

*ORCID 0000-0001-9241-9420. Correspondence: ilker.aslan@alumni.unifr.ch.

At the end of 2025 their foreign investments stood at NT$22.8 trillion; after netting policies denominated in foreign currency, NT$15.4 trillion was exposed to the exchange rate (Financial Supervisory Commission, 2026b).

How much of this exposure insurers hedge is a macroeconomic quantity as well as a corporate decision. A hedged position is a forward sale of dollars. The dealers who take the other side lay off their position by selling dollars spot and holding the proceeds in local currency, so hedging carries the surplus's demand for domestic currency into the spot market and transfers the currency risk to intermediaries. An unhedged position does neither. The surplus is then recycled without pressure on the exchange rate, and the risk of a later appreciation stays with insurers and, through them, with policyholders. The hedge ratio therefore governs two objects that the literature on external adjustment usually treats separately: the pressure a surplus exerts on the exchange rate, and the distribution of the valuation risk the surplus creates (Gourinchas and Rey, 2007; Bénétrix et al., 2015).

This paper studies a change in the accounting rules that bear on that ratio. From 1 January 2026, Taiwanese insurers may amortise exchange differences on foreign-currency bonds measured at amortised cost over each bond's remaining life, instead of recognising them in profit or loss in the period in which they arise, as IAS 21 requires (Financial Supervisory Commission, 2025a; International Accounting Standards Board, 2003). The industry association proposed the change in November 2025, after the Taiwan dollar's appreciation of May 2025 (Bloomberg News, 2025). The regulator published a draft on 23 December 2025 and issued the amendment at the end of January 2026. The sector's hedge ratio, 59.0 per cent in November 2025, fell to 50.2 per cent in December and to 42.9 per cent by June 2026, the lowest since the regulator began compiling the series in 2020 (Financial Supervisory Commission, 2026b). The decline implies that about NT$2.4 trillion of hedges, roughly US$75 billion, were not renewed. That is two-fifths of the 2025 current-account surplus and nearly four times the year's increase in reserve assets.

I ask whether an accounting rule for one class of institutional investor can move the exchange rate of a large surplus economy, and through which margins. The question connects two literatures that rarely meet. Work on the hedging channel of exchange-rate determination shows that institutional investors' hedge ratios move forward and spot rates when intermediaries' risk-bearing capacity is limited (Gabaix and Maggiori, 2015; Liao and Zhang, 2025; Du and Huber, 2024). Work on insurers shows that statutory and accounting treatment shapes their portfolio and trading decisions, at times more than the economics of the underlying positions (Koijen and Yogo, 2015, 2016; Ellul et al., 2011, 2015). If hedge ratios respond to accounting rules, an accounting rule is a determinant of hedging demand and, through it, of the exchange rate.

The paper makes three contributions. The first is conceptual. I write down a hedging problem in which the insurer penalises the variance of both economic and reported earnings, and in which the accounting regime sets how much of an exchange-rate movement reaches reported earnings. The optimal hedge ratio falls when that share falls, and the size of the response identifies the share of the insurer's aversion to currency risk that arises from reported rather

than economic results. On the Taiwanese figures that share is at least 0.30, and about 0.53 once the measured fall in hedging costs is taken into account. A substantial part of what was recorded as hedging of currency risk was hedging of reported earnings. In the terms of Ehrlich and Becker (1972), the reform replaced market insurance, bought from hedge counterparties, with self-insurance held on insurers' own balance sheets.

The second contribution is empirical, and it concerns prices. In the offshore non-deliverable forward market, which insurers left first because positions there can be closed without the central bank's approval, the annualised cost of an insurer's dollar hedge fell from 6.6 per cent in May 2025 to 0.29 per cent in December 2025, the month of the largest reduction. Onshore swaps, which carry the same interest differential, still cost 2.13 per cent. The gap between the two instruments, which nets out the differential, swung from 3.6 percentage points in favour of swaps to 1.8 points in favour of NDFs. This is the movement in the hedging premium that the hedging channel predicts when demand for hedges falls. Daily prices of Taiwan-dollar futures in Singapore date the movement. The dollar's three-month forward discount stood at 3.6 per cent on the eve of the industry's proposal and had closed by the end of December, while the same measure for other Asian currencies moved by 0.6 points; in the six years for which the contract's prices exist it had not been below 1 per cent for more than a day. It did not respond within the two-day announcement windows. In the interbank market, turnover in outright forwards fell by 38 per cent from January 2026, while turnover in foreign-exchange swaps did not change. The reform was announced in identifiable steps between September 2025 and January 2026. Comparing the Taiwan dollar with regional currencies over two-day windows around these steps, I find that it weakened by 0.5 to 0.7 per cent in the two windows that carried most information, the industry's proposal and the issuance of the amendment, each of which is in the top decile of two-day movements in the sample. Summed over all six windows the effect is positive but not statistically significant, as one would expect in a market in which the central bank smooths the spot rate.

The third contribution concerns the accounting of external adjustment. Combining the change in hedge ratios with the sector's exposure and its foreign-exchange buffers, I show where the currency risk of Taiwan's surplus sat before and after the reform. About NT$2.4 trillion of exposure moved from hedge counterparties onto insurers' balance sheets in the six months after the draft was published, raising the unhedged position to NT$8.9 trillion, against buffers that the regulator estimates would absorb an appreciation of 11.9 per cent (Economic Daily News, 2026a). The rule thereby absorbs part of the spot-market adjustment that the surplus would otherwise have induced, without any change in official reserves. Commentary has read the change in similar terms (Setser, 2026; Hsieh, 2026); the contribution here is to quantify the mechanism and to separate it from coincident changes in hedging costs, buffers and solvency rules.

The paper relates to several further strands of work. The literature on the cross-currency basis documents persistent deviations from covered interest parity that arise from constraints on intermediaries' balance sheets (Du et al., 2018; Avdjiev et al., 2019; Borio et al., 2016). Taiwan's deviation is among the largest in Asia, which Chang et al. (2025) relate to insurers' hedging

demand and to regulatory constraints on private foreign investment. Portfolio flows and the currency management of funds affect exchange rates (Hau and Rey, 2006; Camanho et al., 2022; Bräuer and Hau, 2025), and recent policy work emphasises the growing weight of life insurers in international capital flows (Aquilina et al., 2025; Bank for International Settlements, 2026). Finally, the analysis connects to work on where currency losses on surplus economies' foreign assets are ultimately borne, including on central-bank balance sheets (Aslan, 2026).

The rest of the paper is organised as follows. Section 2 describes the institutional setting and the sequence of rule changes. Section 3 develops the model and its predictions. Section 4 describes the data and the empirical design. Section 5 presents the results. Section 6 discusses alternative explanations and implications, and Section 7 concludes.

2 Institutional setting

2.1 Life insurers in Taiwan's external accounts

Taiwan's life insurers hold one of the largest stocks of foreign bonds of any national insurance sector. Their foreign investments reached NT$22.3 trillion at the end of October 2025 (Financial Supervisory Commission, 2025a) and NT$22.8 trillion at the end of 2025, more than 90 per cent of it in US dollars and mostly in US corporate bonds. Part of this position is matched by policies denominated in foreign currency. The remainder, NT$15.1 to 15.4 trillion between September and December 2025, is a currency mismatch between Taiwan-dollar liabilities and dollar assets (Financial Supervisory Commission, 2026b).

The weight of this position in the balance of payments follows from the structure of Taiwan's saving. With a current-account surplus near a fifth of GDP and limited domestic investment opportunities at long maturities, the surplus must be matched by a net acquisition of foreign assets. The central bank's reserve accumulation was the principal channel before the mid-2000s and again after 2008; since the mid-2010s insurers' purchases of foreign bonds have taken that role (Chang et al., 2025). In 2025 reserve assets accounted for US$20.0 billion of a net acquisition of foreign assets of US$157.2 billion (Central Bank of the Republic of China (Taiwan), 2026a).

2.2 Hedging instruments and their cost

Insurers hedge with onshore currency swaps and with offshore non-deliverable forwards (NDFs), and in earlier years also with proxy hedges in baskets of Asian currencies. The NDF market is offshore only and limited in depth, and swap costs rose from 2022 with US policy rates (Financial Supervisory Commission, 2025a). Hedging has been expensive relative to the sector's earnings: from 2019 to October 2025 cumulative hedging costs amounted to NT$1.6 trillion, against after-tax profits of NT$1.4 trillion over the same period (Financial Supervisory Commission, 2025a). In May 2025, as the Taiwan dollar appreciated, the annualised cost of swaps reached about 3 per cent and that of NDFs 6.6 per cent, both record highs. Total hedging costs fell from NT$385.1 billion in 2024 to NT$292.2 billion in 2025 and NT$68.2 billion in the first half of 2026; by February 2026 the annualised cost was 1.96 per cent for swaps and 1.01 per

cent for NDFs (Financial Supervisory Commission, 2026b; Economic Daily News, 2026a). The composition of hedges has shifted towards swaps. NDFs made up about 31 per cent of hedges in 2024, 25 to 28 per cent in 2025 and less than a quarter in 2026, and proxy hedging had practically ceased by February 2026. According to insurers, NDFs were cut first because, unlike swaps, they can be unwound without the central bank's prior approval.

2.3 The foreign-exchange valuation reserve

Since March 2012 life insurers have operated a foreign-exchange valuation reserve, a liability-side buffer into which part of exchange gains is accrued and against which exchange losses can be offset. Its purpose is to smooth reported earnings without requiring full hedging. The rules have been revised repeatedly. A regime announced in August 2024 and applied from 6 September 2024 allowed insurers to transfer five categories of liability reserves into the buffer; thirteen of twenty-one insurers adopted it. When the appreciation of April and May 2025 drained the buffer from NT$283.6 billion at the end of March to a trough of NT$18.8 billion, the regulator announced three temporary measures on 12 June 2025 (Financial Supervisory Commission, 2025b). Insurers that released policy reserves under these measures transferred most of them into the buffer and committed 30 per cent of their 2025 pre-tax profit to it; thirteen insurers did so, depositing NT$82.3 billion in December 2025. The buffer reached NT$613.7 billion at the end of 2025 and NT$699.7 billion at the end of June 2026; with special surplus reserves held in equity, total buffers exceeded NT$1 trillion (Table 2, Figure 1).

In mid-February 2026 the regulator restructured the buffer into four components: a volatility reserve and a fixed reserve under liabilities, and a fixed and an enhanced foreign-exchange risk reserve under equity. Accruals to the fixed liability reserve and to the enhanced equity reserve rise as an insurer's hedge ratio falls, and their recognition as capital under the new solvency regime is restricted during the transition (Economic Daily News, 2026b). The regulator has described the objective as turning the buffers into a long-term self-insurance mechanism; it estimates that filling them will take seven to eight years.

Each of these changes lowered the share of an exchange-rate movement that reaches reported earnings, and the sector's hedge ratio drifted down with them, from a peak of 78 per cent after 2020 to 66.4 per cent at the end of 2024 and around 60 per cent in the second half of 2025.

2.4 The 2026 accounting change

The amendment to the regulations on insurers' financial reports applies to debt instruments that insurers hold directly, measure at amortised cost and have not designated in a foreign-currency hedge; assets measured at amortised cost amounted to about NT$18 trillion. For these instruments, unrealised exchange differences on the foreign-currency amortised cost are no longer recognised in profit or loss as they arise. They are amortised to exchange gains or losses on a straight-line basis, bond by bond, over each instrument's expected remaining life. Unamortised balances are carried as other assets or other liabilities and released to profit or loss on disposal. The regulator based the departure from IAS 21 on paragraphs 19 and 20 of

IAS 1, which allow a departure from a standard in exceptional circumstances provided its effects are disclosed (Financial Supervisory Commission, 2025a; International Accounting Standards Board, 2007). The change applies from the 2026 financial year. The industry estimated the annual saving in hedging costs at about NT$90 billion (Bloomberg News, 2025).

Table 1 lists the sequence of events. Three features matter for identification. First, the change was requested by the industry, and information about it reached the market in steps from September 2025, so a single event date would understate any announcement effect. Second, the effective date coincided with the adoption of IFRS 17 and of a new risk-based solvency regime, the Taiwan Insurance Capital Standard. The latter raises the confidence level of capital requirements from 95 to 99.5 per cent and values assets held at amortised cost at current values in the solvency balance sheet, so exchange-rate movements continue to affect solvency capital even when they no longer pass through profit or loss (Financial Supervisory Commission, 2026a). Third, insurers' boards resolved to apply the new method on different days between 21 and 30 January 2026.

Table 1: Sequence of rule changes and announcements, 2024–2026

Date	Event
6 Sep 2024	Optional regime for the foreign-exchange valuation reserve takes effect; 13 of 21 insurers adopt it
2 and 5 May 2025	Taiwan dollar records its largest one-day appreciation since the 1980s
12 Jun 2025	Regulator announces three temporary measures, including the release of policy reserves into the valuation reserve
16 Sep 2025	Industry association asks members to develop accounting relief with their auditors
21 Nov 2025	Association proposes recognising exchange differences over time; estimates annual savings of NT$90 billion
8–9 Dec 2025	Accounting Research and Development Foundation supports a departure from IAS 21
18 Dec 2025	Regulator reports to the Legislative Yuan; Finance Committee holds a public hearing
19 Dec 2025	Stakeholder consultation meeting
23 Dec 2025	Draft amendment published; 30-day comment period
1 Jan 2026	Effective date; IFRS 17 and the new solvency regime take effect
21–30 Jan 2026	Insurers' boards resolve to adopt the new method
26–29 Jan 2026	Comment period closes; amendment issued
Mid-Feb 2026	Revised guidance splits the valuation reserve into four components

Sources: Financial Supervisory Commission (2025a,b); Bloomberg News (2025); Economic Daily News (2026b); Central News Agency and Commercial Times reports of 30 January and 10 March 2026.

3 A model of hedging with an accounting wedge

3.1 The insurer's problem

A representative insurer holds foreign-currency bonds with value A, measured in domestic currency at the start of the period, against liabilities in domestic currency. Let Δs denote the log change in the domestic-currency price of the dollar over the period, with mean zero and variance σ^2. The insurer sells forward a fraction $h \in [0, 1]$ of A. Hedging costs c per unit of

hedged exposure per period, where $c = \delta + \beta$ combines the interest differential δ between dollar and domestic rates and a premium $\beta \geq 0$ that counterparties charge for absorbing the position, which corresponds to the absolute value of the cross-currency basis.

The economic exchange result on the unhedged position is $G^E = (1-h)A\,\Delta s$. The reported result depends on the accounting regime. Let $\kappa \in (0,1]$ denote the ratio of the variance of the reported exchange result to that of the economic result, per unit of unhedged exposure, so that $\mathrm{Var}(G^R) = \kappa\,(1-h)^2 A^2 \sigma^2$. Under translation at the spot rate with no buffer, as IAS 21 prescribes, $\kappa = 1$. A valuation reserve that absorbs a share ρ of each period's exchange result lowers κ to $(1-\rho)^2$. Under straight-line amortisation over a remaining life of τ years, an exchange-rate movement reaches reported earnings in equal parts over τ years; with serially uncorrelated movements, the variance of the annual reported result is a fraction $1/\tau$ of that of the economic result, so that $\kappa \approx (1-\rho)^2/\tau$.

The insurer chooses h to minimise

$$\mathcal{L}(h) = c\,h\,A + \tfrac{1}{2}\,(\lambda_R\,\kappa + \lambda_E)\,(1-h)^2 A^2 \sigma^2, \tag{1}$$

where $\lambda_R \geq 0$ prices the volatility of reported earnings and $\lambda_E \geq 0$ prices economic volatility. Reported earnings matter because dividend capacity, rating assessments, supervisory triggers and management compensation are set on reported figures; economic volatility matters through risk-based capital and the value of the firm. The first-order condition gives

$$h^* = 1 - \frac{c}{(\lambda_R\,\kappa + \lambda_E)\,A\sigma^2}, \tag{2}$$

truncated to the unit interval. Three properties follow.

First, $\partial h^*/\partial \kappa > 0$ whenever $\lambda_R > 0$: a rule that lowers the share of exchange-rate movements reaching reported earnings lowers the optimal hedge ratio. The fall is larger the more the insurer's aversion to currency risk arises from reported rather than economic results.

Second, the response identifies that share. Define

$$\omega \equiv \frac{\lambda_R\,\kappa_0}{\lambda_R\,\kappa_0 + \lambda_E} \tag{3}$$

as the share of the insurer's aversion to exchange-rate risk that arises from reported earnings under the initial regime. When the regime changes from κ_0 to κ_1 and the hedging cost from c_0 to c_1, equation (2) implies

$$\omega = \frac{1 - \dfrac{c_1}{c_0}\,\dfrac{1-h_0}{1-h_1}}{1 - \kappa_1/\kappa_0}. \tag{4}$$

The derivation is in Appendix A. Under the 2026 change with an unchanged buffer, $\kappa_1/\kappa_0 = 1/\tau$.

Third, if hedging costs fall when the rule changes, as they will if the premium β rises with aggregate hedging demand, the observed decline in h understates the effect of the rule at constant costs, and equation (4) with $c_1/c_0 = 1$ gives a lower bound on ω.

The buffer and the hedge are, in this framework, substitutes. Both reduce the variance

of reported earnings; the hedge does so by transferring the risk to a counterparty at cost c, the buffer by retaining it and absorbing it out of accumulated gains. The distinction is the one Ehrlich and Becker (1972) draw between market insurance and self-insurance, and their result that the two are substitutes carries over: anything that makes self-insurance cheaper in reported terms, as amortisation and larger buffers do, lowers the demand for market insurance.

3.2 Market clearing

Aggregate hedging demand is $H = hA$, a forward sale of dollars. Following Gabaix and Maggiori (2015) and Liao and Zhang (2025), I assume that the intermediaries who take the other side have limited risk-bearing capacity, so that the premium they charge rises with the net position they absorb:

$$\beta = \Gamma_f \, (H - \bar{H}), \tag{5}$$

where $\bar{H}$ is offsetting demand from other participants and $\Gamma_f > 0$ measures the inverse of intermediaries' capacity. Intermediaries hedge their forward purchases of dollars by selling dollars spot and holding domestic-currency assets. If the central bank absorbs a share $\psi \in [0, 1]$ of the resulting spot flow, the spot rate moves by

$$\Delta s = -\Gamma_s \, (1 - \psi) \, \Delta H, \tag{6}$$

so that a fall in hedging demand weakens the domestic currency relative to the path it would otherwise have followed.

3.3 Predictions

The model delivers four predictions for a rule that lowers κ.

P1. *Quantities.* The hedge ratio falls, by more for insurers with larger buffers, a larger share of foreign bonds at amortised cost and a smaller share of foreign-currency policies.

P2. *Forward market.* Lower hedging demand lowers β: the dollar's forward discount narrows, the NDF-implied Taiwan-dollar interest rate rises towards the onshore rate, and the cost of hedging falls.

P3. *Spot market.* The Taiwan dollar weakens relative to comparable currencies, by less where the central bank leans against the flow.

P4. *Allocation of risk.* The unhedged position $(1 - h)A$ rises; currency risk on the surplus moves from intermediaries, and from the central bank where it supplies swaps, onto insurers' balance sheets and buffers.

3.4 From hedging to external adjustment

The surplus is recycled through insurers' purchases of foreign bonds, and by equation (6) the part of that recycling that reaches the spot market as demand for domestic currency is

proportional to h. A rule that lowers h therefore lowers the exchange-rate pressure generated per unit of surplus. This slows adjustment through relative prices, and it shifts the valuation channel of adjustment onto domestic balance sheets: an eventual appreciation imposes losses on domestic insurers rather than on their hedge counterparties (Gourinchas and Rey, 2007; Lane and Milesi-Ferretti, 2007).

The buffers introduce a non-linearity. Insurers can remain unhedged as long as the buffer absorbs the cumulative appreciation. Once it is exhausted, exchange losses reach reported earnings in full, κ jumps back towards one, and the incentive to re-hedge returns at once. The episode of April and May 2025, when the buffer fell to less than a tenth of its March level and insurers sought cover in the NDF market as the currency appreciated (Bank for International Settlements, 2026), illustrates the mechanism. A lower κ thus converts a continuous adjustment into a state-contingent one: less pressure on the exchange rate in normal times, and a larger and more abrupt adjustment if appreciation exceeds the buffer.

4 Data and empirical design

4.1 Data

Sector data. The Insurance Bureau of the Financial Supervisory Commission publishes, with each month's statistics on insurers' profits, the sector's hedge ratio, the composition of hedges by instrument, hedging costs, the exchange result before and after hedging, and the balance of the valuation reserve; since early 2026 it also reports the net unhedged exposure and the ratio of buffers to that exposure. I compile these figures from the reports of the releases by Taiwan's main financial news services, which reproduce the regulator's figures; Appendix Table 11 lists each observation and its source.

Spot rates. Daily Federal Reserve noon buying rates for the Taiwan dollar, the Korean won and the Singapore dollar, from 1 July 2025 to 30 June 2026. The won and the Singapore dollar serve as comparison currencies: both belong to open Asian economies with large current-account surpluses and are exposed to the same shifts in the dollar and in regional risk sentiment. Because the rates are recorded at noon in New York, after the Taipei market has closed, a two-day window beginning on an announcement day in Taipei captures the response of the following New York noon fixings.

Hedging costs by instrument. The same releases report the annualised cost of the sector's swap and NDF hedges. Because a swap and an NDF hedge the same dollar exposure over similar horizons and embed the same interest differential, the difference between their costs isolates the premium paid in the offshore market relative to the onshore one. Daily settlement prices of the Singapore Exchange's currency futures, from the exchange's published daily files (Singapore Exchange, 2026), give a daily measure of the dollar's forward discount.

Macroeconomic data. Quarterly balance of payments from the central bank.

4.2 Event study

For a daily change Δy_t in the outcome for the Taiwan dollar and the corresponding change $\Delta \bar{y}_t$ for the comparison currencies, the abnormal change is $\Delta y_t - \hat{b}\,\Delta \bar{y}_t$, where $\hat{b}$ is the slope of a regression of Δy_t on $\Delta \bar{y}_t$ over the sample. I sum abnormal changes over two-day windows beginning on each event date in Table 1 from September 2025 onwards, six windows in all. The outcome is the log price of the dollar in local currency, so that a positive change is a weaker local currency.

With six events, conventional standard errors are unreliable. I therefore use randomisation inference. For each window, the p-value is the share of non-event two-day windows in the sample with a larger absolute abnormal change. For the sum over the six windows, I compare it with 20,000 sums of six windows drawn without replacement from the non-event windows.

4.3 Threats to identification

Four confounds require attention. *Anticipation*: information about the change reached the market from September 2025, so events are dated by first public information rather than by legal milestones. *Concurrent regulation*: IFRS 17 and the new solvency regime took effect on the same day. Both were announced years in advance, and the solvency regime raises the penalty on economic risk, λ_E, which works against finding a fall in hedge ratios. *Official operations*: central-bank intervention dampens spot responses ($\psi > 0$); the offshore NDF market is less directly affected. *Global factors*: US monetary policy and broad movements of the dollar are removed by the comparison currencies, but they are not removed completely on days of large news. The first window, beginning on 16 September 2025, includes a US policy-rate decision on 17 September.

5 Results

5.1 Hedging quantities

Table 2 and Figure 1 report the sector's hedge ratio and buffers. Through the appreciation of spring 2025 the hedge ratio barely moved: it rose by 0.1 percentage points to 64.0 per cent in May, when hedging costs reached record highs. It eased to about 60 per cent in the autumn as the buffers were rebuilt under the temporary measures. It then fell by 8.8 percentage points in December 2025, from 59.0 to 50.2 per cent, and continued down to 47.0 per cent in January, 44.3 per cent in April and 42.9 per cent in June 2026. Market reports indicated that some of the largest insurers had unwound almost all of their offshore hedges by late January (Bloomberg News, 2026b).

The timing is informative. Most of the decline occurred in December, after the legislative hearing and the publication of the draft but before the amendment was issued. Because insurers roll hedges at one- to three-month maturities, letting December maturities run off without renewal was the natural first response to a rule expected to apply from 1 January. The regulator

reported that in 2025 the insurers with the largest buffers cut their NDF hedges the most, as prediction P1 implies; Section 5.5 returns to the cross-section.

Table 2: Life insurers' hedge ratio and foreign-exchange buffers

Month-end	Hedge ratio (%)	Valuation reserve (NT$bn)	Special surplus reserve (NT$bn)
Dec 2024	66.39	219.6	
Mar 2025	61.50	283.6	
May 2025	64.00	18.8[a]	
Aug 2025	62.25	372.6	
Sep 2025	60.10	341.9	
Oct 2025	58.55	384.5	
Nov 2025	59.03	513.8	
Dec 2025	50.23	613.7	289.7
Jan 2026	47.00		289.7
Feb 2026	45.10	625.9	289.7
Mar 2026	45.15	621.4	289.7
Apr 2026	44.31	680.1	289.7
May 2026	43.66	691.3	289.7
Jun 2026	42.89	699.7	365.1

Notes: The hedge ratio is hedged exposure as a share of foreign-exchange exposure net of foreign-currency policies. Blank cells: not reported. [a]Trough reached during the appreciation of April and May 2025. Sources: Financial Supervisory Commission (2026b); see Appendix Table 11.

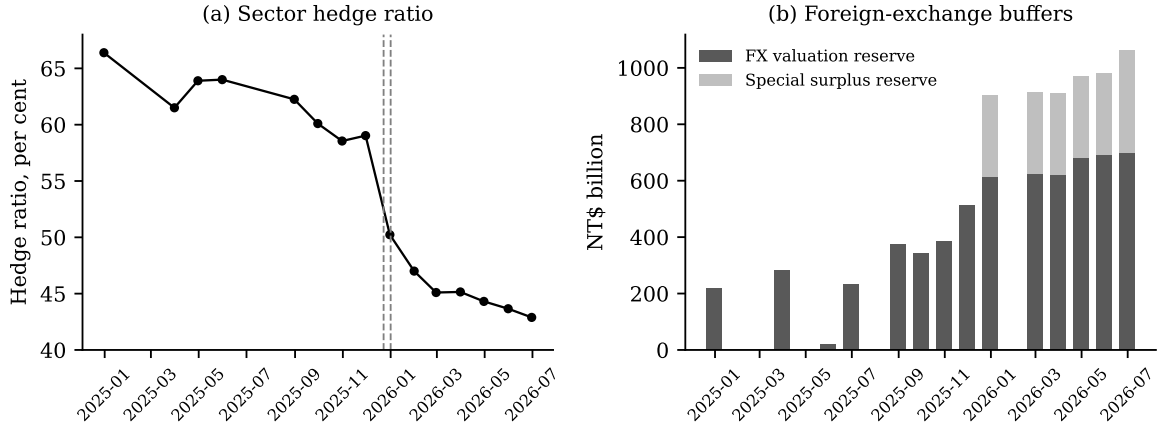


Figure 1: Hedge ratio and foreign-exchange buffers of Taiwan's life insurers. Dashed lines mark the publication of the draft amendment (23 December 2025) and its effective date (1 January 2026). Source: Table 2.

5.2 The accounting motive for hedging

Equation (4) converts the change in the hedge ratio into an estimate of the share of insurers' aversion to currency risk that arises from reported earnings. Table 3 reports the calculation with $h_0 = 0.5903$, the last month before the draft, and $h_1 = 0.4289$, the latest observation, for remaining bond lives of 10, 15 and 20 years. At constant hedging costs, ω lies between 0.30 and 0.31. It is insensitive to the assumed remaining life, because amortisation over any horizon of this order removes most of the reported variance.

Hedging costs did not stay constant. Dividing the sector's monthly hedging cost by the hedged amount gives an annualised cost of about 2.8 per cent between September and December 2025 and 1.96 per cent in the first half of 2026, a ratio of 0.70; the regulator's own figure for the annualised swap cost in February 2026, 1.96 per cent, is the same. Part of the fall reflects lower US policy rates and part the lower demand for hedges that equation (5) predicts. Using the measured ratio, ω rises to between 0.52 and 0.55. On either measure, a large share of the sector's hedging before the reform protected reported earnings rather than economic value.

Three qualifications apply. The calculation holds the perceived variance of the exchange rate constant; if insurers judged a repetition of the appreciation of May 2025 less likely by early 2026, part of the decline reflects a lower σ^2 and ω is overstated. The buffer grew over the same months, which lowers κ_0 and attributes part of the buffer's smoothing effect to the accounting change; both, however, operate on the same margin, the share of exchange movements that reach reported earnings. The new solvency regime and the hedge-ratio-linked accruals introduced in February 2026 both raise the cost of remaining unhedged, so the observed decline understates the response to the accounting rule taken alone.

Table 3: Share of the hedging motive attributable to reported earnings, ω

	Remaining life of amortised-cost bonds, τ		
	10 years	15 years	20 years
Hedging costs unchanged ($c_1/c_0 = 1.00$)	0.314	0.303	0.297
Measured change in hedging costs ($c_1/c_0 = 0.70$)	0.553	0.533	0.524

Notes: Computed from equation (4) with $h_0 = 0.5903$ (November 2025), $h_1 = 0.4289$ (June 2026) and $\kappa_1/\kappa_0 = 1/\tau$. The cost ratio divides the annualised hedging cost per unit hedged in the first half of 2026 (1.96 per cent) by its average from September to December 2025 (2.81 per cent).

5.3 The spot market

Table 4 reports the response of the Taiwan dollar in the six announcement windows. Two windows stand out. On the day the industry association made its proposal public, and on the day the amendment was issued and the largest insurers resolved to adopt it, the Taiwan dollar weakened by 0.5 to 0.7 per cent against the comparison currencies. Each of these responses is exceeded by only about seven per cent of non-event windows ($p = 0.07$ and $p = 0.07$). The responses on the days of the legislative hearing, the publication of the draft and the first adoption were small. The first window moved in the opposite direction, by 0.52 per cent; it contains a US policy-rate decision, and the news it carries, that insurers had begun to work on accounting relief, was the least specific of the six.

Summed over the six windows, the abnormal weakening is 1.01 per cent against the won and Singapore dollar together and 0.73 per cent against the Singapore dollar alone. Neither sum is large relative to the distribution of sums over non-event windows (one-sided $p = 0.19$ and 0.33). Drawing the comparison windows from January 2019 to June 2026 instead (1,852 non-event windows) gives p-values of 0.05 and 0.08 for the same two windows and a one-sided p-value of 0.03 for the sum. I treat the within-year comparison as the benchmark, because comparison windows should come from the same volatility regime as the events; against the longer history

the announcement responses are unusual.The spot evidence is therefore consistent in sign with prediction P3, and strongest where the information was most specific, but it does not establish an effect on its own. This is what equation (6) leads one to expect in a market in which the central bank leans against sharp moves: a high ψ absorbs much of the flow before it reaches the spot rate.

Table 4: Spot response of the Taiwan dollar on announcement days

			Abnormal change against		
Window	Event	Raw change	SGD	KRW and SGD	p
16 Sep 2025	Industry asks members to develop accounting relief	−0.66	−0.50	−0.52	0.11
21 Nov 2025	Industry association proposes the change	+0.64	+0.72	+0.63	0.07
18 Dec 2025	Regulator reports to the legislature; public hearing	+0.10	+0.05	+0.06	0.82
23 Dec 2025	Draft amendment published	−0.35	−0.17	+0.04	0.90
21 Jan 2026	First insurer resolves to adopt	+0.03	+0.09	+0.18	0.57
29 Jan 2026	Amendment issued; large insurers adopt	+0.76	+0.54	+0.62	0.07
Sum over the six windows			+0.73	+1.01	
Randomisation p, one-sided (two-sided)			0.33 (0.41)	0.19 (0.24)	
Standard deviation of two-day abnormal change			0.33	0.34	

Notes: Changes in the log price of the US dollar in local currency, in per cent, over two-day windows beginning on the event date; a positive value is a weaker Taiwan dollar. Abnormal changes subtract the comparison currency's change times the slope of a regression of daily Taiwan-dollar changes on it (slopes 0.47 and 0.27). The p-value for each window is the share of the 230 non-event two-day windows with a larger absolute abnormal change (KRW and SGD comparison). Randomisation p-values for the sum compare it with 20,000 sums of six windows drawn from the non-event windows. Federal Reserve noon buying rates, 2 July 2025 to 30 June 2026 (249 trading days).

5.4 The forward market

Prediction P2 concerns the price of hedges. Table 5 reports the annualised cost of the sector's hedges by instrument in the months for which the regulator published it. In May 2025, when insurers sought cover as the Taiwan dollar appreciated, an NDF hedge cost 6.6 per cent a year, more than twice the cost of a swap. By December 2025, the month in which the hedge ratio fell by 8.8 points and the reduction was concentrated in NDFs, the NDF cost had fallen to 0.29 per cent, while swaps still cost 2.13 per cent. In January and February 2026 the NDF cost recovered partly, to 0.74 and 1.01 per cent, as the reduction slowed, and the swap cost edged down to 1.96 per cent.

Lower US policy rates over the period reduced the interest differential, but that affects both instruments alike. The difference between the two costs, which nets it out, turned from 3.6 percentage points against NDFs to 1.8 points in their favour. In the market where insurers reduced their positions first, the premium for absorbing their dollar forward sales, measured against the onshore cost, therefore disappeared and turned negative, as equation (5) implies when H falls below the offsetting demand $\bar{H}$. The onshore swap market, where positions can only be closed with the central bank's approval and where most remaining hedges sit,

shows a much smaller movement. Two caveats apply. The monthly figures cannot separate the announcement dates from other news in the same month. And the offshore price of forward dollars also reflects positioning by other participants: as the Taiwan dollar weakened in late 2025, demand for forward dollars from investors expecting further depreciation would have narrowed the dollar's discount as well. The size of the swing, and its concentration in the instrument and the month in which insurers cut their hedges, nonetheless point to the fall in hedging demand as its main source: the Taiwan dollar depreciated by 2 per cent over November and was unchanged over December, yet the NDF cost reached its low in December.

Table 5: Annualised cost of insurers' hedges by instrument

Month-end	Swap (%)	NDF (%)	NDF less swap (pp)	Hedge ratio (%)
May 2025	≈3.00	6.60	+3.60	64.00
Dec 2025	2.13	0.29	−1.84	50.23
Jan 2026	2.03	0.74	−1.29	47.00
Feb 2026	1.96	1.01	−0.95	45.10

Notes: Annualised cost of the sector's currency-swap and NDF hedges as reported by the regulator. December 2025 values are implied by the January levels and the reported monthly changes. Sources: Financial Supervisory Commission (2026b); Economic Daily News, March 2026; World Journal, June 2025.

Exchange-traded futures give a daily measure of the same price. The Singapore Exchange lists cash-settled futures on the Taiwan dollar with monthly expiries and publishes a settlement price for each contract every day; the two nearest contracts traded on every day of the sample. The ratio of the settlement prices of two contracts measures the dollar's forward discount between their expiry dates, free of any difference in timing between spot and forward quotes. I compute it from the nearest contract to the next, a span of one month, and from the nearest to the fourth, a span of three months, and compare it with the same measure for the exchange's actively traded futures on the Korean won, the Indian rupee and the offshore renminbi (Singapore Exchange, 2026). Figure 2 plots the three-month measure.

The dollar's three-month forward discount against the Taiwan dollar averaged 7.2 per cent a year in July 2025, in the aftermath of the appreciation of May, and narrowed to 2.7 per cent by October as the demand for cover of that episode subsided. It narrowed no further in November: on 20 November, the day before the industry association's proposal, it stood at 3.6 per cent. From the following week it narrowed steadily, to zero at the end of December, a change of 3.8 percentage points in 29 trading days. Over the same days the average discount for the three comparison currencies narrowed by 0.6 points. The discount did not reopen in 2026; by June 2026 the dollar stood at a forward premium of 1.1 per cent against the Taiwan dollar. The timing agrees with interbank quotes: in the first week of January 2026 the twelve-month NDF points for the dollar against the Taiwan dollar were reported to have turned positive for the first time in more than nine years (Bloomberg News, 2026c). The futures also track the market in which insurers hedge: the one-month measure averaged 0.27 per cent in December, against the 0.29 per cent NDF cost that the regulator reported for that month.

The exchange's files contain the contract from March 2020, which allows the movement to be set against six years of history. Until the middle of 2025 the contract hardly traded, so

its settlement prices for those years reflect the quotes on which the exchange bases them and not trades. Over the 1,480 trading days from March 2020 to the day before the proposal, the three-month discount averaged 3.9 per cent; its lowest monthly average was 1.7 per cent, in January 2025, and it was below 1 per cent on a single day. From January to June 2026 it averaged -0.5 per cent, and the dollar stood at a forward premium on 73 per cent of days. The level after the reform therefore lies outside the range of the contract's earlier history. The speed of the change is less exceptional than the level. Measured against the comparison currencies, 1.5 per cent of the 1,551 windows of 29 trading days that do not overlap the one from the proposal to the end of the year show a narrowing as large, and 13 of these 23 begin in June or July 2025, when the discount of the May episode unwound. The windows overlap one another, so the share describes how unusual the movement was and is not a test.

In the two-day announcement windows themselves the response is small (Table 6). Summed over the six windows, the discount narrowed by 243 basis points on the one-month measure and 133 on the three-month measure relative to the comparison currencies, but sums of this size are common among non-event windows (one-sided $p = 0.26$ and 0.28). Only the window in which the amendment was issued stands out ($p = 0.08$ and 0.10). Drawing the comparison windows from the whole history since 2020 leaves the conclusion unchanged ($p = 0.20$ and 0.16 for the sums). The forward market therefore adjusted over the weeks in which maturing hedges were not renewed, and not on the days of the announcements. That is the timing to expect when insurers reduce hedges by letting forwards expire, and it matches the monthly path of the hedge ratio in Table 2. Two limits apply. The narrowing between July and October shows that the discount also responds to forces unrelated to the reform, so the attribution of the later movement rests on its timing and on the comparison with other currencies. And contracts beyond the second seldom trade, so their settlement prices follow dealers' forward quotes more than trades on the exchange.

Turnover in the Taipei interbank market gives a check on quantities from a source that is independent of the insurers' statements and of the regulator's hedge ratio. The central bank reports each month the foreign-exchange transactions of authorised banks and offshore banking units by instrument (Central Bank of the Republic of China (Taiwan), 2026c). Outright forwards, the class of instrument to which NDFs belong, averaged US$2.70 billion a day in 2025 and US$1.69 billion a day in the first nine months of 2026, a fall of 38 per cent (Table 7). The step lies between December 2025 (2.66) and January 2026 (1.72), the month in which the rule took effect, and every month of 2026 is below every month of 2025; the difference in means has a t-statistic of 8.8. The share of outright forwards in total turnover fell from 5.7 to 3.4 per cent. Foreign-exchange swaps did not fall: they averaged US$25.4 billion a day in 2025 and US$25.5 billion in 2026. The central bank's own outstanding swaps of US dollars against Taiwan dollars moved little over the same months, from US$79.3 billion at the end of November 2025 to US$75.9 billion at the end of June 2026 (Central Bank of the Republic of China (Taiwan), 2026b). This is the composition that the regulator described, a reduction concentrated on NDFs with swap positions largely retained, and it is what the model predicts when hedgers withdraw from the instrument whose price is set by their own demand. The turnover data have two limits: they cover all currency pairs and not only the Taiwan dollar,

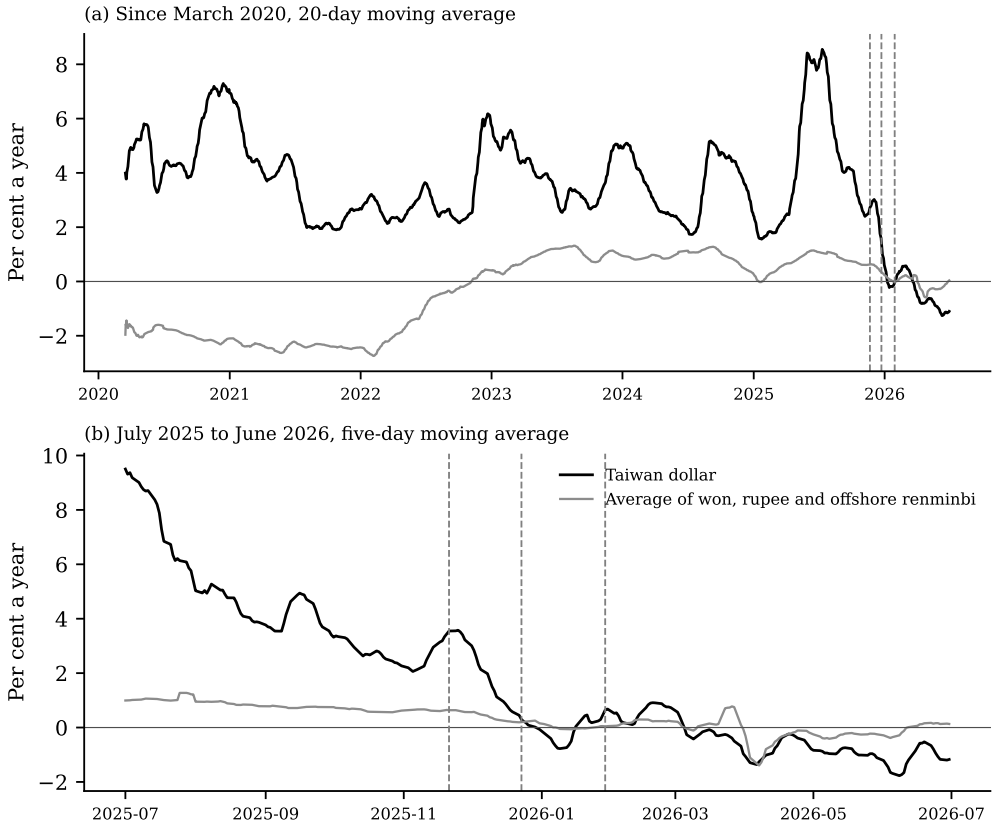


Figure 2: Dollar's three-month forward discount implied by Singapore Exchange currency futures. Annualised difference between the settlement prices of the nearest and the fourth contract; positive values are a forward discount of the dollar, negative values a premium. Dashed lines mark the industry's proposal (21 November 2025), the draft amendment (23 December 2025) and the issuance of the amendment (29 January 2026). Source: Singapore Exchange.

Table 6: Forward discount implied by Taiwan-dollar futures on announcement days

		One month		Three months	
Window	Event	Change (bp)	p	Change (bp)	p
16 Sep 2025	Industry asks members to develop accounting relief	+13	0.85	+3	0.95
21 Nov 2025	Industry association proposes the change	+69	0.30	+4	0.94
18 Dec 2025	Regulator reports to the legislature; public hearing	−21	0.71	0	0.99
23 Dec 2025	Draft amendment published	+1	0.97	+23	0.49
21 Jan 2026	First insurer resolves to adopt	+30	0.62	+35	0.30
29 Jan 2026	Amendment issued; large insurers adopt	+150	0.08	+68	0.10
Sum over the six windows		+243		+133	
Randomisation p, one-sided		0.26		0.28	
Standard deviation of non-event windows		100		45	

Notes: Two-day narrowing of the dollar's annualised forward discount against the Taiwan dollar, in basis points, implied by the settlement prices of Singapore Exchange TWD/USD futures: nearest contract against the next (one month) and against the fourth (three months). Changes are net of the average change for futures on the Korean won, the Indian rupee and the offshore renminbi times the regression slope (0.06 and 0.09). A positive value means the discount narrowed. Inference as in Table 4. Sample 2 July 2025 to 30 June 2026 (259 trading days). Source: Singapore Exchange.

and they measure transactions and not outstanding positions.

Table 7: Turnover in the Taipei foreign-exchange market by instrument

Quarter	Outright forwards (US$ bn a day)	FX swaps (US$ bn a day)	Forwards, share of total turnover (%)
2025 Q1	2.28	26.7	4.8
2025 Q2	3.13	24.1	6.6
2025 Q3	2.71	27.0	5.6
2025 Q4	2.69	23.8	5.9
2026 Q1	1.75	24.8	3.6
2026 Q2	1.69	25.9	3.4
2026 Q3	1.62	25.8	3.2
2025	2.70	25.4	5.7
2026, January to September	1.69	25.5	3.4

Notes: Averages of monthly turnover per trading day, net of double counting of interbank transactions, for authorised foreign-exchange banks and offshore banking units, all currency pairs. Trading days are total turnover divided by the reported daily average. Source: Central Bank of the Republic of China (Taiwan), monthly releases on the Taipei foreign exchange market.

5.5 Insurer-level responses

Statements by the largest insurers at their investor conferences allow a look below the sector aggregate (Table 8). Three observations stand out.

First, the timing of the largest insurer's response matches the announcement of the rule. Cathay Life reported a hedge ratio of about 60 per cent at the end of September 2025 and slightly below 60 per cent in late November, when its management said that the ratio in 2026

would be lower but that the decision awaited the accounting proposal. At the end of December, the month of the draft, the ratio was about 41 per cent, and by early March 2026 about 35 per cent, with NDFs almost entirely closed and only swaps remaining. Over January and February the insurer cut its forward positions by 78 per cent.

Second, insurers moved at different times. KGI Life still reported a hedge ratio of 65 per cent at the end of 2025 and about 40 per cent by mid-March 2026, after the rule had taken effect. Fubon Life, whose ratio had been between 50 and 60 per cent, reported 23.9 per cent at the end of March 2026 and a long-run target range of 20 to 40 per cent. Both cut forward positions by more than half in the first two months of the year. Nan Shan Life cut its forward positions by only 8.8 per cent in those two months, but its hedge ratio, above 70 per cent before the transition, was about 51 per cent at the end of March; its management described the reduction as deliberately gradual. Shin Kong Life, at 66 per cent in August 2025, set a range of 40 to 50 per cent for 2026 and said that the reduction would fall mainly on NDFs. Taiwan Life, at 53 per cent in May 2025, reported about 32 per cent in August 2026 and expected 25 to 30 per cent by the end of the year as maturing NDFs were not renewed. In January and February together the six largest insurers halved their forward positions, the fastest reduction on record (Bloomberg News, 2026a).

Third, the insurers themselves attribute the change to the rule and to the buffers. Cathay's management put the saving from closing its NDF hedges at more than NT$20 billion a year, and Fubon's linked its lower target to the amortisation rule and to its valuation reserve, the largest in the sector. Fubon also reported that, on the reclassification of assets at the adoption of IFRS 17, the share of its assets at amortised cost fell from about 60 to about 50 per cent, which narrows the base to which the rule applies and shows that the classification margin is itself a choice.

The response was therefore general: each of the six largest insurers lowered its hedge ratio by roughly 20 to 30 percentage points within three quarters of the proposal, and the five that had announced a decision by late February 2026 had all resolved to apply the rule. The model suggests two variables that should order the size of the response across insurers, the buffer and the share of assets at amortised cost, which is the base to which the rule applies. Neither does so clearly. The ordering by buffers goes in the predicted direction: Fubon and Cathay, with the largest reserves at the end of 2025, have the lowest ratios after the reform, and the rank correlation between the reserve and the approximate fall in the hedge ratio is about 0.6. With six insurers and ratios that are not reported on a common definition, this cannot be distinguished from zero. The ordering by the amortised-cost share does not go in the predicted direction: Nan Shan, with the highest share, 68 per cent of financial assets, moved last and least, and the rank correlation is about zero. One reason is that the amortised-cost share is itself a choice made at the same time. On adopting IFRS 17, Fubon lowered its share from about 60 to about 50 per cent and Taiwan Life from about 50 to about 40 per cent, so the shares observed in mid-2026 are outcomes of the transition as much as determinants of the response. What the insurer-level evidence does establish is the sequence and the breadth: the largest insurer cut by about 19 points in the month of the draft, the others followed once the

rule was in force, and none of the six kept its earlier ratio.

Table 8: Hedge ratios, forward positions, buffers and accounting classification of the six largest insurers

	Hedge ratio (%)		Forwards	Reserve	AC
Insurer	Before	After	(%)	(NT$bn)	(%)
Cathay Life	≈60 (Sep 25)	≈35 (Mar 26)	−78	113.8	40
Fubon Life	50–60 (2025)	23.9 (Mar 26)	below −50	142.1	47
Nan Shan Life	above 70 (2025)	≈51 (Mar 26)	−8.8	68.1	68
Shin Kong Life	66 (Aug 25)	40–50 (2026)	n.r.	99.0	37
KGI Life	65 (Dec 25)	≈40 (Mar 26)	below −50	43.4	55
Taiwan Life	53 (May 25)	≈32 (Aug 26)	n.r.	28.1	44

Notes: Hedge ratios are the share of exposure hedged with swaps and NDFs as stated by each insurer's management; definitions are not harmonised across insurers; n.r.: not reported. Cathay Life also reported about 41 per cent for December 2025; the entry for Shin Kong Life is the range its management set for 2026. Forwards are the change in outstanding currency forwards in January and February 2026 compiled by Bloomberg News (2026a). Reserve is the foreign-exchange valuation reserve at the end of 2025. AC is the share of financial assets measured at amortised cost in the half-year financial statements for 2026. The rank correlations in the text use the falls implied by the first and last entries, with midpoints for ranges. Sources: Cathay Financial Holdings et al. (2026); reserves from the insurers' monthly statements as reported in Commercial Times, January 2026; AC shares from Commercial Times, 10 September 2026.

Share prices offer a further check at the announcement dates. If the rule relieved insurers of hedging costs, the listed groups whose earnings depend most on life insurance (Cathay, Fubon, KGI and Taishin-Shin Kong) should have outperformed bank-centred financial groups when it was announced. Table 9 reports the abnormal return of an equal-weighted portfolio of the former against one of the latter. Summed over the six windows, the insurance-heavy groups returned −1.5 percentage points relative to the bank-centred ones (one-sided $p = 0.85$), and no single window stands out. Share prices therefore show no announcement gain. Two considerations bear on the reading of this result. The test has little power: the standard deviation of a two-day abnormal return is 1.4 percentage points, so the sum over six windows has a standard deviation of about 3.4 points, in a period when insurers' share prices were moved by large equity-market gains and by the transition to new reporting and solvency standards. And the absence of a gain is what the design of the reform would lead one to expect: the regulator required the savings in hedging costs to be set aside in reserves and not distributed (Section 2), so the rule changed where currency risk is held more than what shareholders receive.

5.6 Who bears the currency risk of the surplus

Table 10 applies the change in the hedge ratio to the sector's exposure. Before the draft, about NT$9.1 trillion of the NT$15.4 trillion exposure was hedged and NT$6.3 trillion was carried by insurers. By June 2026 the hedged amount had fallen to NT$6.7 trillion, and the regulator reported a net unhedged exposure of NT$8.9 trillion (Economic Daily News, 2026a). The decline in hedges, NT$2.4 trillion or about US$75 billion, equals 41 per cent of the 2025 current-account surplus and nearly four times the increase in reserve assets in that year. Against the larger

Table 9: Share-price response of insurance-heavy financial groups on announcement days

Window	Event	Abnormal return (pp)	p
16 Sep 2025	Industry asks members to develop accounting relief	+0.70	0.59
21 Nov 2025	Industry association proposes the change	−0.70	0.59
18 Dec 2025	Regulator reports to the legislature; public hearing	+0.33	0.80
23 Dec 2025	Draft amendment published	−0.25	0.85
21 Jan 2026	First insurer resolves to adopt	−1.85	0.16
29 Jan 2026	Amendment issued; large insurers adopt	+0.32	0.80
Sum over the six windows		−1.46	
Randomisation p, one-sided (two-sided)		0.85 (0.69)	

Notes: Two-day log returns, in per cent, of an equal-weighted portfolio of Cathay, Fubon, KGI and Taishin-Shin Kong less the return of an equal-weighted portfolio of E.Sun, Mega, First, Hua Nan, Taiwan Cooperative, SinoPac times the regression slope (1.10). Inference as in Table 4. Dividend-adjusted closing prices, Taiwan Stock Exchange, 2 July 2025 to 30 June 2026.

unhedged position, total buffers of NT$1,065 billion would absorb an appreciation of 11.9 per cent, on the regulator's calculation; in April the corresponding figure had been 11.1 per cent (Central News Agency, 2026).

In terms of prediction P4, a volume of currency risk comparable to a large part of a year's surplus moved from hedge counterparties onto domestic balance sheets in about six months, without any transaction by the central bank. By equation (6), the corresponding forward sales of dollars no longer reach the spot market as demand for Taiwan dollars. The regulator presents the same facts from the other side: counting buffers as if they were hedges, it reports an effective hedge ratio of about 55 per cent (Economic Daily News, 2026a). That figure is the self-insurance reading of Section 3. It is correct as a measure of insurers' capacity to absorb losses, and it is also a measure of how much of the currency risk of the surplus is now held inside Taiwan.

Table 10: Allocation of the sector's currency exposure before and after the reform

	Nov 2025 ($h = 59.03\%$)	Jun 2026 ($h = 42.89\%$)	Change
Exposure net of foreign-currency policies (NT$tn)	15.40	15.66	+0.26
Hedged exposure (NT$tn)	9.09	6.72	−2.37
Unhedged exposure (NT$tn)	6.31	8.94	+2.63
Change in hedged exposure (US$bn)			−75.1
Memorandum items (2025, US$bn): current-account surplus 181.1; increase in reserve assets 20.0			
Buffers, June 2026 (NT$bn): valuation reserve 699.7; special surplus reserve 365.1; total 1,064.8			
Appreciation absorbed by buffers, June 2026 (regulator's calculation): 11.9%			

Notes: November 2025 exposure is the end-2025 figure of NT$15.4 trillion. June 2026 exposure is implied by the reported net unhedged exposure of NT$8.94 trillion and the hedge ratio. Conversion at NT$31.6 per US dollar, the average of June 2026. Sources: Financial Supervisory Commission (2026b); Economic Daily News (2026a); Central Bank of the Republic of China (Taiwan) (2026a).

6 Discussion

6.1 Alternative explanations

Hedging costs. Lower costs raise the optimal hedge ratio in equation (2). Costs per unit hedged fell by about 30 per cent between the autumn of 2025 and the first half of 2026, so falling costs cannot account for the decline in hedge ratios; they make the constant-cost estimates in Table 3 conservative.

Expected depreciation. The Taiwan dollar weakened from about 30.1 per US dollar in mid-September 2025 to 32.0 at the end of March 2026. Insurers that expected further depreciation had a reason to reduce hedges irrespective of the rule, since unhedged positions then accrue exchange gains. Two features of the evidence point to the rule rather than to timing. During the steepest depreciation before the draft the hedge ratio fell only gradually, from 62.3 per cent in August to 59.0 per cent in November, and then by 8.8 points in the month the draft was published. And the dispersion across insurers, from a cut of 78 per cent in forward positions to one of under 9 per cent within the same two months, is hard to reconcile with a common expectation about the exchange rate; it points to differences in when and how each insurer applied the rule. The largest insurer's management said in November that its hedge ratio would fall in 2026 once the accounting proposal was settled, and cut it by about 19 points in the month the draft appeared.

Buffers. The growth of the valuation reserve also lowered κ. It is part of the same mechanism: both measures reduce the share of exchange-rate movements that reach reported earnings, and both were adopted for that purpose.

Solvency regime. The new solvency regime took effect on the same day and values amortised-cost assets at current values for capital purposes, so exchange-rate movements still reach solvency capital. On its own it predicts higher hedge ratios. Its presence biases the analysis against the result.

6.2 Implications

The first implication concerns the reach of accounting standards. A provision drafted for financial reporting changed hedging demand by an amount comparable to two-fifths of a year's current-account surplus. In an economy whose net foreign assets are held largely by institutional investors, the accounting and supervisory rules that govern those investors are determinants of the exchange rate, and changes to them can have effects of the same kind as foreign-exchange intervention while leaving official reserves unchanged. Assessments of exchange-rate policy that track only official operations will miss them.

The second implication concerns where the risk of external adjustment now sits. The reform raised insurers' unhedged position by about 40 per cent. Their buffers absorb an appreciation of about a tenth; beyond that, exchange losses return to reported earnings and capital, and the incentive to re-hedge reappears abruptly. The adjustment of the surplus through the exchange rate has been made less gradual and more state-contingent, and its valuation consequences have

been concentrated on domestic insurers and their policyholders. Where the central bank stands behind the market as a supplier of hedges, part of the risk ultimately returns to the public balance sheet (Chang et al., 2025; Aslan, 2026).

The third implication extends beyond Taiwan. Other surplus economies recycle savings through institutional investors whose hedging decisions are shaped by accounting and solvency rules, including life insurers and pension funds in Japan and Korea. Switzerland, with a persistent surplus, safe-haven pressure on its currency and large foreign holdings by insurers and pension funds, belongs to the same class of cases. In each, the rules that govern how currency movements reach reported results are part of the mechanism of external adjustment, and changes to them deserve the attention given to changes in official reserves.

7 Conclusion

Taiwan's 2026 accounting change offers a clear view of a channel that is usually hidden: the effect of accounting rules for institutional investors on the hedging of a surplus economy's foreign assets, and through it on the exchange rate. Between November 2025 and June 2026 the life insurance sector's hedge ratio fell by 16 percentage points, an unwinding of hedges of about US$75 billion. A hedging model with an accounting wedge implies that at least 30 per cent, and on measured costs about half, of insurers' prior hedging motive was attributable to reported earnings. In the offshore forward market, where insurers cut first, the premium for absorbing their dollar sales disappeared and turned negative relative to the onshore market. Futures prices date the closing of the dollar's forward discount to the six weeks between the industry's proposal and the date the rule took effect. The Taiwan dollar weakened against regional currencies on the announcements that carried most information, though by amounts that the central bank's smoothing keeps within the range of ordinary movements.

Three limitations bound these conclusions. The sector-level observations are monthly and few around the reform. The model treats the cost of hedging as given to the insurer and abstracts from the dynamics of the buffer. And the period after the reform is short; whether the lower hedge ratio persists through an episode of appreciation large enough to exhaust the buffers is an open question. Further work should examine that episode when it occurs, test the cross-sectional prediction on consistent insurer-level positions, and measure, across surplus economies, how the accounting and solvency treatment of institutional investors' currency exposure shapes the speed and form of external adjustment.

Data availability

The monthly sector data are compiled from public releases of the Financial Supervisory Commission and reports of them, listed in Appendix B; spot rates are from the Federal Reserve. The code that reproduces all results is available from the author and will be deposited with Zenodo.

References

Aquilina, M., Garavito, F., Gelos, G., Lewrick, U., Packer, F., Pinter, G., Sushko, V., and Todorov, K. (2025). The transformation of the life insurance industry: Systemic risks and policy challenges. BIS Papers 161, Bank for International Settlements.

Aslan, I. (2026). Who sets the deduction? Central bank losses and the fiscal cost of monetary tightening. Working paper, Kalaidos University of Applied Sciences.

Avdjiev, S., Du, W., Koch, C., and Shin, H. S. (2019). The dollar, bank leverage, and deviations from covered interest parity. *American Economic Review: Insights*, 1(2):193–208.

Bank for International Settlements (2026). Capital flows, exchange rates and financial conditions in EMEs in an evolving international monetary system. BIS Papers 171, Bank for International Settlements.

Bénétrix, A. S., Lane, P. R., and Shambaugh, J. C. (2015). International currency exposures, valuation effects and the global financial crisis. *Journal of International Economics*, 96(S1):S98–S109.

Bloomberg News (2025). Taiwan insurers seek relief with 'rare' accounting change. Bloomberg, 21 November.

Bloomberg News (2026a). Taiwan insurers cut currency hedges at the fastest pace on record. Bloomberg, March; reported in Economic Daily News, Taipei, 18 March.

Bloomberg News (2026b). Taiwan insurers cut most offshore hedges before dollar selloff. Bloomberg, 29 January.

Bloomberg News (2026c). Taiwan lifers cut FX protection, fueling slump in hedging costs. 6 January 2026.

Borio, C., McCauley, R. N., McGuire, P., and Sushko, V. (2016). Covered interest parity lost: Understanding the cross-currency basis. *BIS Quarterly Review*, pages 45–64.

Bräuer, L. and Hau, H. (2025). Do funds engage in optimal FX hedging? Working paper, University of Geneva and Swiss Finance Institute.

Camanho, N., Hau, H., and Rey, H. (2022). Global portfolio rebalancing and exchange rates. *Review of Financial Studies*, 35(11):5228–5274.

Cathay Financial Holdings, Fubon Financial Holding, KGI Financial Holding, Nan Shan Life Insurance, Taishin Shin Kong Financial Holding, and CTBC Financial Holding (2026). Investor conferences and management statements, second quarter of 2025 to second quarter of 2026. As reported by Economic Daily News, Commercial Times, cnyes and Business Today, Taipei, May 2025 to September 2026.

Central Bank of the Republic of China (Taiwan) (2026a). Balance of payments (Q4 2025). Press release and Balance of Payments Quarterly, Taipei, February.

Central Bank of the Republic of China (Taiwan) (2026b). Outstanding amounts of the bank's NT dollar–US dollar swap transactions and foreign currency call loans. Monthly table, accessed 18 November 2026.

Central Bank of the Republic of China (Taiwan) (2026c). Taipei foreign exchange market. Monthly press releases, January 2025 to September 2026.

Central News Agency (2026). Regulator: Life insurers' foreign-exchange reserves can absorb a NT$3.51 appreciation (in Chinese). Central News Agency, Taipei, 28 May.

Chang, J.-J., Chang, W.-T., Chien, Y., and Kuo, C.-H. (2025). Who paid for the profits of Taiwan's central bank? Working Paper 2025-017, Federal Reserve Bank of St. Louis.

Du, W. and Huber, A. W. (2024). Dollar asset holdings and hedging around the globe. NBER Working Paper 32453, National Bureau of Economic Research.

Du, W., Tepper, A., and Verdelhan, A. (2018). Deviations from covered interest rate parity. *Journal of Finance*, 73(3):915–957.

Economic Daily News (2026a). Life insurers' hedge ratio falls to 43 per cent while foreign-exchange buffers exceed one trillion (in Chinese). Economic Daily News, Taipei, 30 July.

Economic Daily News (2026b). Regulator locks the hedging-cost savings of the new accounting regime into reserves (in Chinese). Economic Daily News, Taipei, February.

Ehrlich, I. and Becker, G. S. (1972). Market insurance, self-insurance, and self-protection. *Journal of Political Economy*, 80(4):623–648.

Ellul, A., Jotikasthira, C., and Lundblad, C. T. (2011). Regulatory pressure and fire sales in the corporate bond market. *Journal of Financial Economics*, 101(3):596–620.

Ellul, A., Jotikasthira, C., Lundblad, C. T., and Wang, Y. (2015). Is historical cost accounting a panacea? Market stress, incentive distortions, and gains trading. *Journal of Finance*, 70(6):2489–2538.

Financial Supervisory Commission (2025a). FSC announces proposed amendments to the "Regulations Governing the Preparation of Financial Reports by Insurance Enterprises" as concerns foreign exchange gains and losses. Press release, Taipei, 23 December.

Financial Supervisory Commission (2025b). Three temporary measures for the insurance industry following the appreciation of the New Taiwan dollar. Announcement by the Insurance Bureau, Taipei, 12 June.

Financial Supervisory Commission (2026a). Calculation methods and reporting forms for insurers' own funds and risk-based capital under the Taiwan insurance capital standard. Press release, Taipei, 8 September.

Financial Supervisory Commission (2026b). Monthly statistics on insurers' profits, net worth, exchange gains and losses and hedging. Insurance Bureau, monthly releases, Taipei, 2025–2026; individual observations and their sources are listed in Appendix B.

Gabaix, X. and Maggiori, M. (2015). International liquidity and exchange rate dynamics. *Quarterly Journal of Economics*, 130(3):1369–1420.

Gourinchas, P.-O. and Rey, H. (2007). International financial adjustment. *Journal of Political Economy*, 115(4):665–703.

Hau, H. and Rey, H. (2006). Exchange rates, equity prices, and capital flows. *Review of Financial Studies*, 19(1):273–317.

Hsieh, C.-T. (2026). The AI boom's hidden victim: Taiwan's fragile insurance sector. CommonWealth Magazine, 17 March.

International Accounting Standards Board (2003). IAS 21 the effects of changes in foreign exchange rates. IFRS Foundation, London.

International Accounting Standards Board (2007). IAS 1 presentation of financial statements. IFRS Foundation, London.

Koijen, R. S. J. and Yogo, M. (2015). The cost of financial frictions for life insurers. *American Economic Review*, 105(1):445–475.

Koijen, R. S. J. and Yogo, M. (2016). Shadow insurance. *Econometrica*, 84(3):1265–1287.

Lane, P. R. and Milesi-Ferretti, G. M. (2007). The external wealth of nations mark II: Revised and extended estimates of foreign assets and liabilities, 1970–2004. *Journal of International Economics*, 73(2):223–250.

Liao, G. Y. and Zhang, T. (2025). The hedging channel of exchange rate determination. *Review of Financial Studies*, 38(1):1–38.

Setser, B. W. (2026). Taiwan's backdoor currency manipulation. Follow the Money (blog), Council on Foreign Relations, 26 January.

Singapore Exchange (2026). Derivatives daily settlement data: currency futures. Daily files, July 2025 to June 2026.

A Derivation of equation (4)

Let $K \equiv \lambda_R \kappa + \lambda_E$. From equation (2), $1 - h = c/(KA\sigma^2)$ in each regime, so that

$$\frac{1-h_1}{1-h_0} = \frac{c_1}{c_0} \cdot \frac{K_0}{K_1}.$$

Holding λ_R, λ_E, A and σ^2 constant,

$$\frac{K_1}{K_0} = \frac{\lambda_R \kappa_1 + \lambda_E}{\lambda_R \kappa_0 + \lambda_E} = 1 - \omega \left(1 - \frac{\kappa_1}{\kappa_0}\right).$$

Combining the two expressions and solving for ω gives equation (4). If $c_1 < c_0$, setting $c_1/c_0 = 1$ enlarges the subtracted term in the numerator and lowers the computed ω, so the constant-cost value is a lower bound.

B Data sources

Table 11: Monthly sector observations and their sources

Month	Source
Dec 2024	Hedge ratio: Economic Daily News, 27 January 2026. Reserve: end-2025 level less the 2025 increase of NT$394.1 billion (Central News Agency, 10 March 2026)
Mar 2025	Insurance Journal, 12 June 2025, citing the regulator; reserve: Economic Daily News, February 2026
May 2025	World Journal, June 2025, citing the regulator (hedge ratio and costs); reserve trough: Economic Daily News, February 2026
Aug 2025	cnyes, 30 September 2025
Sep 2025	Central News Agency, 28 October 2025; exposure: cnyes, 3 December 2025
Oct 2025	cnyes, 28 November 2025; Financial Supervisory Commission (2025a)
Nov 2025	cnyes, 30 December 2025
Dec 2025	Central News Agency, 10 March 2026; Economic Daily News, 27 January 2026
Jan–Feb 2026	Central News Agency, 10 and 31 March 2026
Mar 2026	Economic Daily News, April 2026
Apr 2026	Central News Agency (2026)
May 2026	Central News Agency, 2 July 2026
Jun 2026	Economic Daily News (2026a)
Daily spot	Federal Reserve H.10 noon buying rates (FRED series DEXTAUS, DEXKOUS, DEXSIUS)
Hedging costs	Economic Daily News, March 2026 (Dec 2025 to Feb 2026); World Journal, June 2025 (May 2025)