Goldman Sachs Research

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ASIA PORTFOLIO STRATEGY: KOREA AND TAIWAN

The Leverage Amplifier in a Fundamentally Strong Market: Leveraged ETF Flows, Dealer Gamma Rebalancing, and Retail Margin Dynamics

Volatility amplified in Korea and Taiwan: We remain **Overweight Korea and Taiwan**, supported by solid tech fundamentals and attractive valuations. However, the surge in leveraged ETF AUM, options implied volatility, and margin balances has created a structural environment in which dealer gamma rebalancing mechanically amplifies daily price moves — more acutely in Korea. We recommend **maintaining core positions with derivative overlays** to manage near-term drawdown risk, with put spread collars offering a cost-efficient hedge relative to outright puts or put spreads; any technical correction driven by these positioning dynamics would, in our view, present a tactical opportunity to add exposure.

Leveraged ETFs at record scale: Korea and Taiwan LETF AUM have reached US$40bn and US$9bn (+380% and +280% YTD), with leveraged exposure at ~2.6% and ~0.6% of market free float. Around 70% of Korea's AUM growth since 2025 has been return-driven rather than flow-driven, implying that effective gamma exposure has expanded passively and tends to unwind procyclically during drawdowns.

Large and concentrated rebalancing flows: The daily leverage-restoration mechanism generates systematic end-of-day flows. **A 5% market move would imply ~US$4.7bn (Korea) and ~US$1.1bn (Taiwan) of dealer delta rebalancing** (~13% and ~3% of daily turnover). At the single-stock level, estimated flows in **SK Hynix, Samsung Electronics, and TSMC could exceed 20% of ADV**, amplified by their large index weights and dedicated single-stock LETF products.

Options add a procyclical channel: Dealers writing puts for institutional hedging demand and calls for retail upside positioning are likely net short gamma on both sides, adding intraday rebalancing pressure on top of LETF flows. Korea's 3M implied volatility has risen to ~80% (vs. ~20% a year ago), with skew near recent highs and the term structure in backwardation, indicating increased near-term uncertainty and a front-loaded dealer short gamma position. Taiwan's 3M implied volatility has also risen to ~40%, but with compressed skew and a near-flat term structure, pointing to more stable and orderly dealer gamma dynamics.

Margin risk mainly concentrated in newer positions: Korea's margin loans (~US$26bn, ~0.8% of free float) and Taiwan's (~US$14bn, <0.4% of free float) remain moderate in normalized terms following the equity rally, with Taiwan's aggregate margin coverage ratio at ~180%, well above the 130% maintenance threshold. System-wide stress appears contained, while newer leveraged positions are more exposed in a higher-volatility environment.

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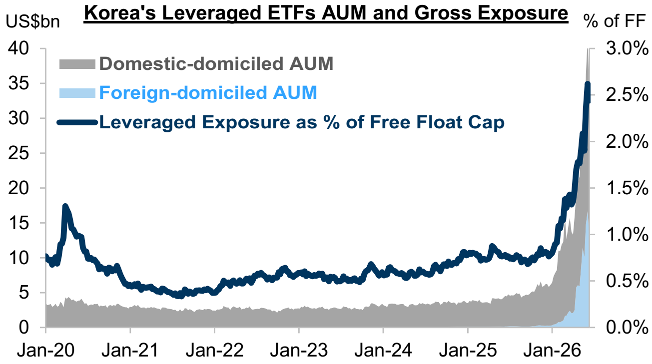
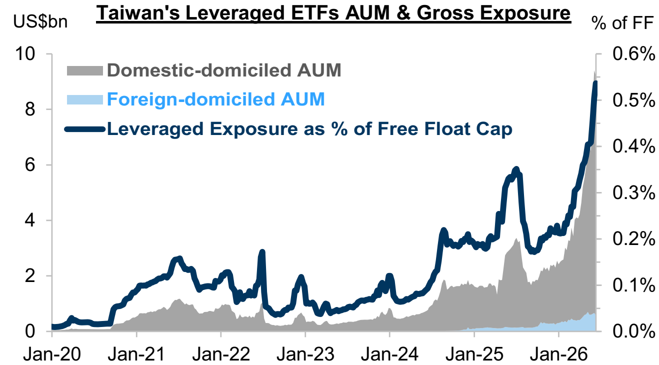
Rising leveraged ETF exposure and dealer gamma rebalancing amplify end-of-day procyclical flows

Exhibit 1: Korea's leveraged ETF AUM has risen to US$40bn at peak (leveraged exposure at 2.6% of market free float); Close to half of the notional is from foreign-domiciled products, amplifying cross-border rebalancing flows



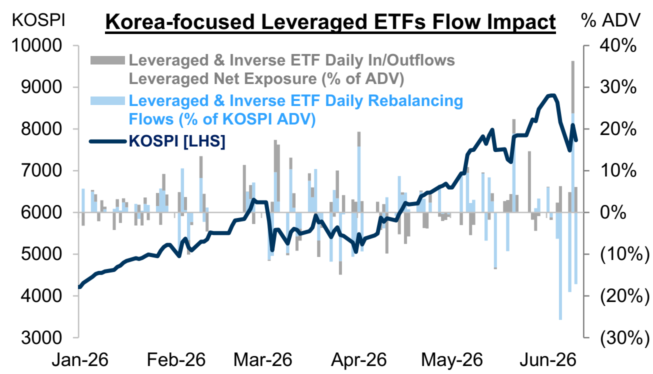
Source: EPFR, Goldman Sachs Global Investment Research

Exhibit 2: Taiwan's leveraged ETF AUM has reached over US$9bn (leveraged exposure at 0.5-0.6% of market free float), roughly one-fifth of Korea's, and is predominantly domestically issued



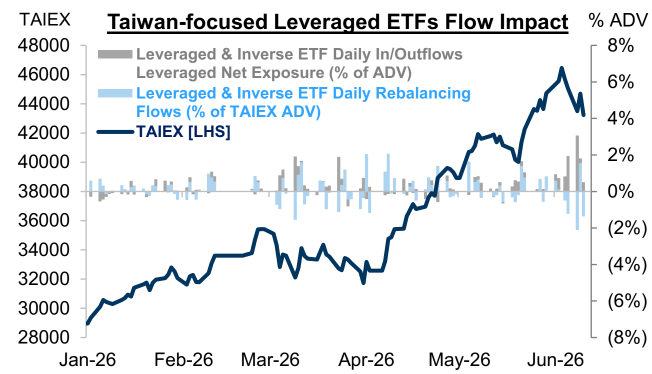
Source: EPFR, Goldman Sachs Global Investment Research

Exhibit 3: LETF dealer gamma rebalancing is procyclical and can exceed 20% of Korea's market ADV on large-move days, with buy-the-dip inflows and elevated selling outflows reinforcing the dynamic



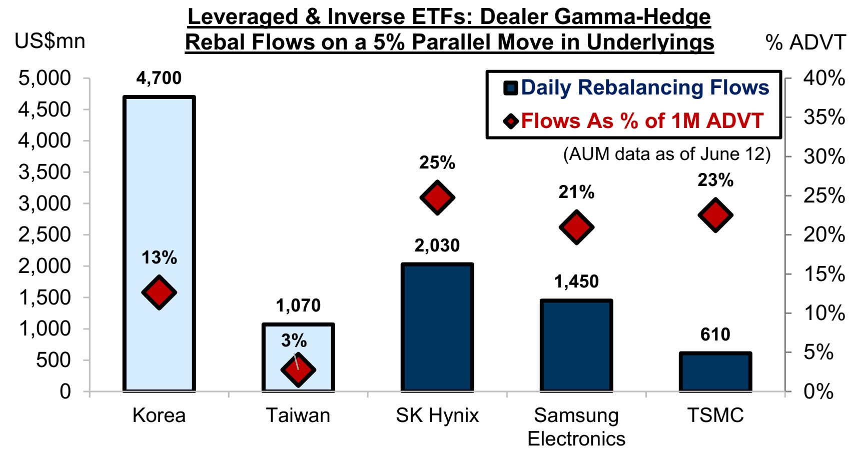
Source: Bloomberg, EPFR, Refinitiv, Goldman Sachs Global Investment Research

Exhibit 4: Taiwan's dealer gamma rebalancing flows remain modest at <2% of daily turnover even on large move days, roughly 10x smaller than Korea on a flow/turnover basis



Source: Bloomberg, EPFR, Refinitiv, Goldman Sachs Global Investment Research

Exhibit 5: Leveraged ETF Daily Rebalancing Flows: We estimate a 5% market move implies ~US$4.7bn for Korea (~13% of daily turnover) and ~US$1.1bn for Taiwan (~3%) of dealer gamma rebalancing; impacts on mega-caps such as Samsung Electronics, SK Hynix, and TSMC could exceed 20% of ADV, amplified by their large index weights and dedicated single-stock LETF products



Note: Dealers trade with the daily market move to restore target exposure for each leveraged/inverse ETF; delta rebalancing flows are estimated by ($L^2 - L$) × NAV × daily return (e.g., a 2× fund trades ~2× its return). We aggregate across all products, weighted by AUM and index constituent weights

Source: Bloomberg, EPFR, Refinitiv, Goldman Sachs Global Investment Research

Exhibit 6: List of Korea and Taiwan stocks most exposed to dealer gamma-hedging flows from leveraged and inverse ETFs

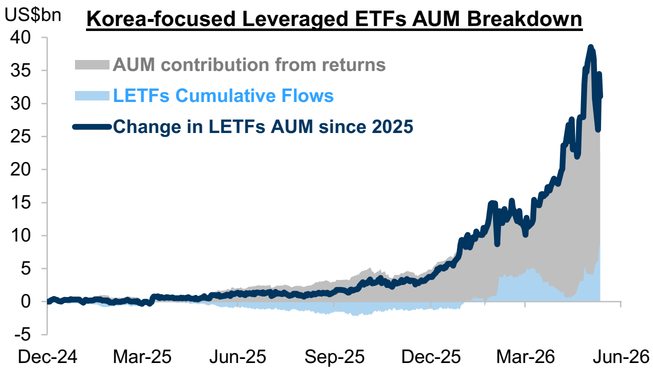
Stocks that could experience >US$10mn of LETF rebalancing flows and >7.5% of 1M ADV under a 5% market move, as of June 12

				>US$10mn	*>7.5%*
BBG Ticker	**Company Name**	**Listed Market Cap (US$mn)**	**1M ADVT (US$mn)**	**L&I ETFs Dealer Gamma-Hedge Rebal Flows per 5% Mkt Moves**	**Flows as % of 1M ADV**
Korea					
000660 KP	SK Hynix	978,941	8,201	**US$ 2,038 mn**	**25%**
005930 KP	Samsung Electronics	1,142,807	6,904	**1,454**	**21%**
006400 KP	Samsung SDI	26,263	326	**33**	**10%**
005490 KP	POSCO	18,546	159	**28**	**18%**
012450 KP	Hanwha Aerospace	34,182	181	**26**	**14%**
086520 KQ	Ecopro	9,658	141	**26**	**18%**
196170 KQ	ALTEOGEN	12,156	151	**25**	**17%**
105560 KP	KB Financial	35,130	160	**23**	**15%**
247540 KQ	Ecopro BM	10,508	99	**21**	**21%**
373220 KP	LG Energy Solution	58,821	173	**21**	**12%**
055550 KP	Shinhan Financial	30,069	104	**20**	**19%**
028260 KP	SAMSUNG C&T	43,468	207	**19**	**9%**
000270 KP	Kia	39,817	198	**18**	**9%**
051910 KP	LG Chem	14,607	106	**16**	**15%**
032830 KP	Samsung Life Insurance	47,725	137	**15**	**11%**
086790 KP	Hana Financial	20,592	80	**15**	**18%**
010140 KP	Samsung Heavy Industries	14,555	124	**14**	**11%**
009540 KP	HD Korea Shipbuilding & Engineering	17,374	80	**14**	**17%**
068270 KP	Celltrion	24,082	89	**13**	**15%**
267260 KP	HD Hyundai Electric	24,344	150	**12**	**8%**
064350 KP	Hyundai Rotem	13,443	86	**12**	**14%**
028300 KQ	HLB	4,128	29	**11**	**37%**
000810 KP	Samsung F&M Insurance	19,352	88	**11**	**12%**
316140 KP	Woori Financial	14,469	53	**10**	**20%**
034730 KP	SK	27,255	107	**10**	**10%**
Taiwan					
2330 TT	TSMC	1,842,602	2,693	**609**	**23%**
2891 TT	CTBC Financial	41,946	125	**12**	**10%**
2882 TT	Cathay Financial	46,556	135	**10**	**8%**

Note: Delta rebalancing flows are estimated by ($L^2 - L$) × NAV × daily return (e.g., a 2× fund trades ~2× its return). We aggregate across all products, weighted by AUM and index constituent weights. Data as of Jun 12, 2026

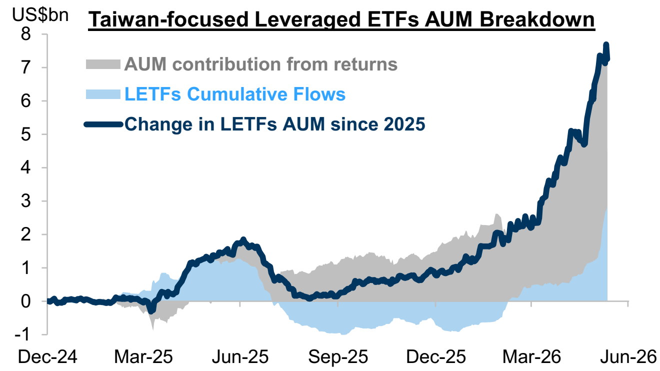
Source: FactSet, Bloomberg, EPFR, Refinitiv, Goldman Sachs Global Investment Research

Exhibit 7: Over 70% of Korea's LETF AUM growth since 2025 has been return-driven rather than flow-driven; effective gamma exposure has expanded passively and tends to unwind procyclically during drawdowns



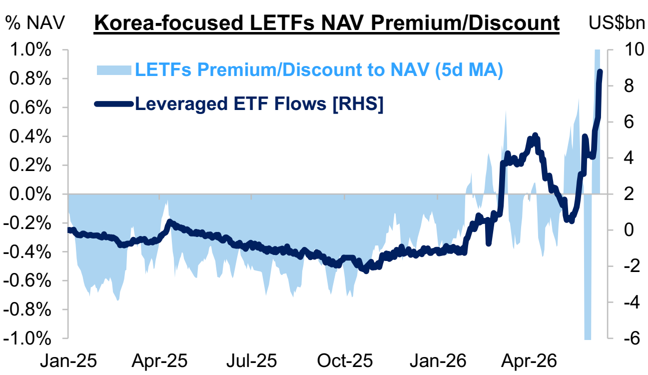
Source: EPFR, Bloomberg, Refinitiv, Goldman Sachs Global Investment Research

Exhibit 8: Taiwan's LETF AUM growth has shifted to being inflow-driven in 2026 YTD (>50%), suggesting active retail participation that sustains dealer short gamma exposure through the cycle



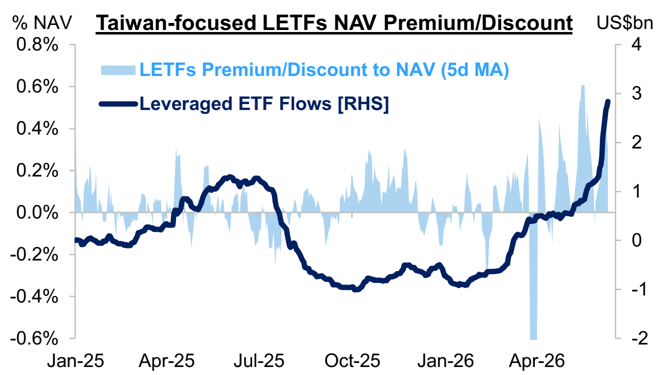
Source: EPFR, Bloomberg, Refinitiv, Goldman Sachs Global Investment Research

Exhibit 9: Korea's leveraged ETFs have traded at a NAV premium through recent drawdowns, consistent with persistent retail buy-the-dip demand and functioning arbitrage



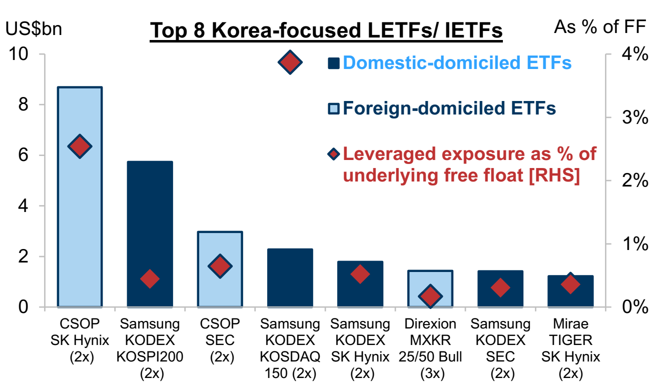
Source: EPFR, Bloomberg, Refinitiv, Goldman Sachs Global Investment Research

Exhibit 10: Taiwan's leveraged ETFs have maintained a stable NAV premium over recent months, reflecting steady retail demand with lower premium volatility than Korea



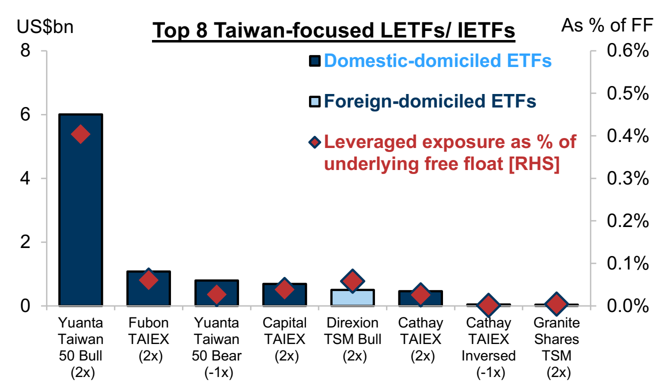
Source: EPFR, Bloomberg, Refinitiv, Goldman Sachs Global Investment Research

Exhibit 11: Korea has 9 LETF products with AUM above US$1bn; foreign-listed products account for ~half of total notional gamma exposure, which may be underrepresented in domestic-only frameworks



Source: EPFR, Bloomberg, Refinitiv, Goldman Sachs Global Investment Research

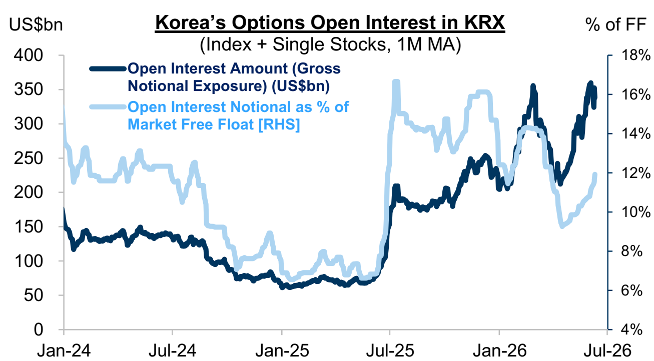
Exhibit 12: Taiwan's Leveraged ETF exposure is concentrated in domestic and broad-market products, limiting the concentration risk seen in Korea



Source: EPFR, Bloomberg, Refinitiv, Goldman Sachs Global Investment Research

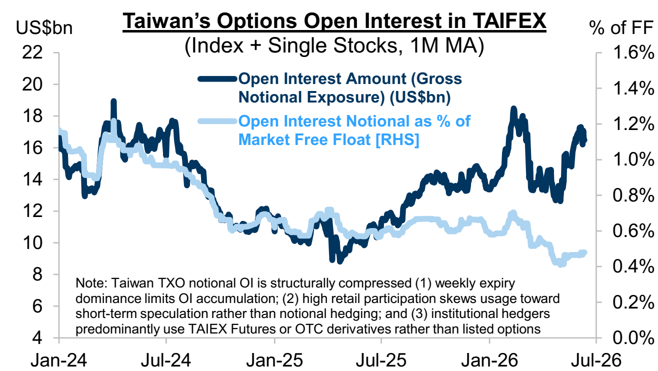
Rising options open interest and elevated implied volatility add to dealer gamma-hedging flows

Exhibit 13: Korea's options gross notional OI has reached new highs but remains mid-range relative to cap; dealer gamma exposure is material but not at historical extremes



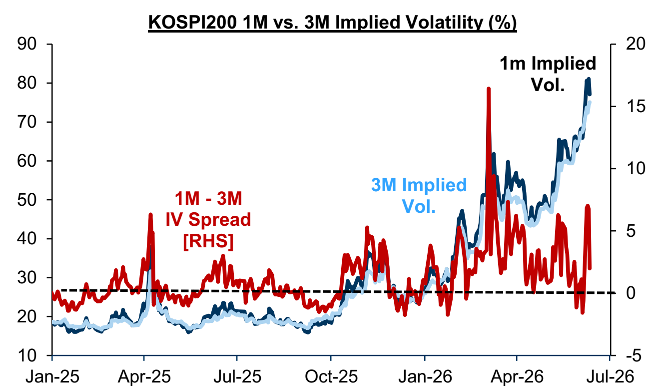
Source: KRX, FactSet, Goldman Sachs Global Investment Research

Exhibit 14: Taiwan's options gross notional OI remains structurally low, implying modest options-driven dealer gamma rebalancing flows relative to Korea



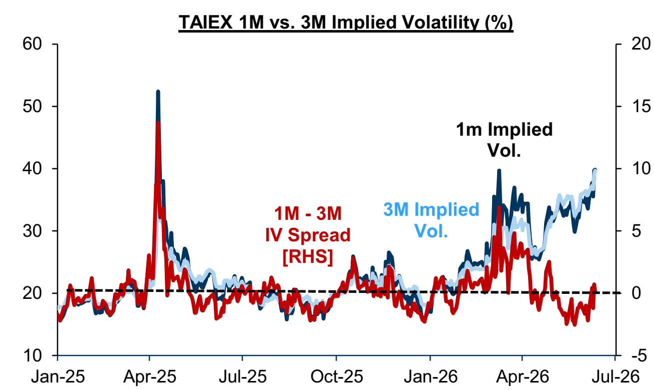
Source: TAIFEX, FactSet, Goldman Sachs Global Investment Research

Exhibit 15: KOSPI200 3M implied vol at ~80%, with the term structure in backwardation, indicating increased near-term uncertainty and a front-loaded dealer short gamma position



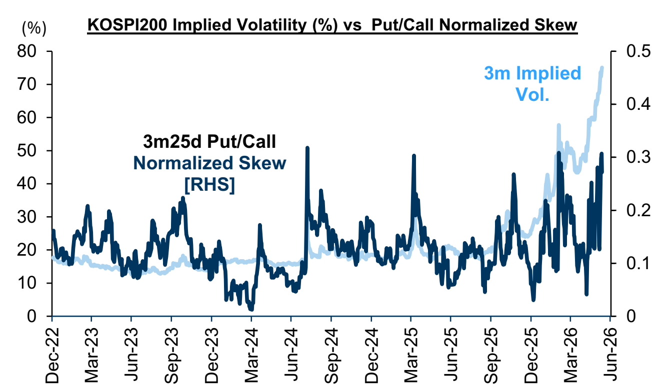
Source: Bloomberg, Goldman Sachs Global Investment Research

Exhibit 16: TAIEX 3M implied vol doubled to ~40% YTD; a near-flat/contango term structure signals more stable, orderly dealer gamma flows than Korea



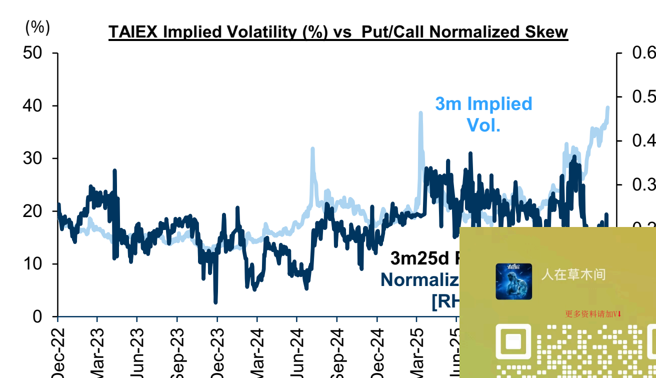
Source: Bloomberg, Goldman Sachs Global Investment Research

Exhibit 17: KOSPI200 3M implied vol rose with elevated put/call skew, reflecting increased downside protection demand; put spread collars remain cost-efficient



Source: Bloomberg, Goldman Sachs Global Investment Research

Exhibit 18: TAIEX implied vol rose with compressed skew; dealers short gamma on both sides add two-way procyclical rebalancing pressure



Source: Bloomberg, Goldman Sachs Global Investment

Margin balances reached record highs, but system-wide stress remains contained, while newer leveraged positions are more vulnerable

Exhibit 19: Korea's margin loans reached a record ~US$26bn, while the free-float ratio has eased to 0.8% from ~1.3% in 2025 as the equity rally outpaced leverage growth

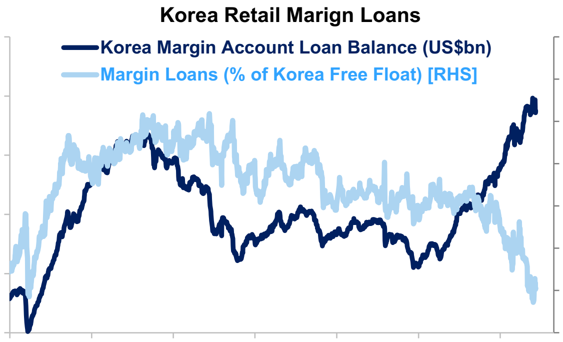


Exhibit 20: Taiwan's margin loans rose to ~US$14bn but remain at the lower end of the range at <0.4% of free float, around half of Korea's level

Disclosure Appendix

Reg AC

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