ASIA-PACIFIC PORTFOLIO STRATEGY

Korea: Favorable risk/reward even with more conservative valuation assumptions

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Korea's headline KOSPI index has fallen 40% and retraced half its gains over the prior bull run. The decline has been driven by investor concerns over the heavyweight memory sector and amplified by retail derisking. The sharp market drop in the context of record corporate profits has brought the 12m forward P/E to 4x (-3 s.d.). We examine memory and non-memory sectors along with volatility and earnings momentum, and conclude the market is pricing an overly negative fundamental outlook. We lower our KOSPI target from 12000 to 9000 to incorporate more conservative assumptions about how the market may price underlying fundamentals but still view the market as offering attractive risk/reward at current levels.

- **Semiconductor memory:** The KOSPI semiconductor sector is pricing a 65% decline in 2027 earnings at current levels based on the close historical price/book vs. ROE relationship. This appears overly negative based on the current outlook.
- **Non-memory sectors** account for about half the index weight and trade at 7.6x NTM P/E (-2.1 s.d.) and 1.1x P/B, indicating over 30% undervaluation vs. 14.2% ROE. Memory sector concerns have spilled over to the rest of the market in a broad-based derisking.
- **Volatility weighs on valuation:** The 4 s.d. recent spike in volatility coincided with a 2pp increase in the equity risk premium. This equates to a 20% P/B de-rating, which explains half the equity market's 40% decline from its June peak.
- **Slower earnings momentum weighs on valuation:** Earnings estimates have consistently risen this year, but the momentum of estimate increases has slowed in recent months which could keep valuation below fair levels.
- **Lower target, but still significant upside.** We lower our KOSPI 12m target from 12000 to 9000, implying 6.5x consensus forward P/E and 1.5x P/B vs. 23% ROE. On these metrics, the market would remain over 20% undervalued, while pricing in elevated volatility and slowing earnings momentum. The Korean equity market appears deeply undervalued and offers over 60% upside from current levels. Accordingly, we lower our regional MXAPJ index target to 1,040 from 1,120.
- **Implementation:** Beyond the memory sector, attractive themes include power, industrials, corporate governance, reflationary beneficiaries, and K-culture. We favor risk reversal derivative strategies and highlight GS Buy-rated stocks.

Investors should consider this report as only a single factor in making their investment decision. For Reg AC certification and other important disclosures, see the Disclosure Appendix, or go to www.gs.com/research/hedge.html.

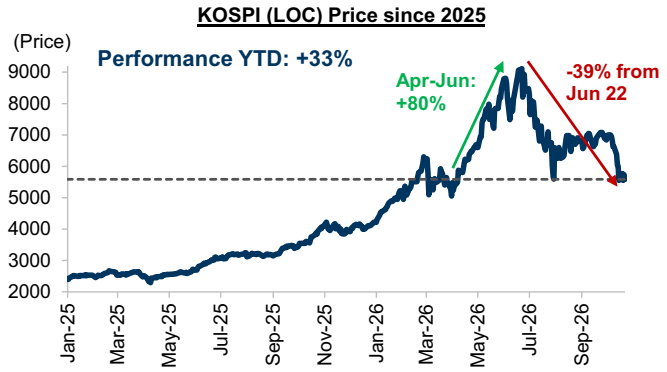
Favorable risk/reward even with more conservative valuation assumptions

After rising over 300% from April 2025 to June 2026, Korea's headline KOSPI index has fallen 40% and retraced half its gains over the prior bull run. The decline has been driven primarily by investor concerns over the heavyweight memory sector and amplified by retail derisking, notably in leveraged ETFs. The sharp market drop in the context of record corporate profits has brought the 12m forward P/E to 4x and -3 s.d. below mean, in turn prompting questions of what the market is pricing and what an appropriate valuation should be.

We address this in four ways. First, we assess what earnings outlook the semiconductor memory sector is pricing in the context of past cycles. Second, we evaluate the non-memory part of the market in terms of its current and historical valuation ranges. Third, we gauge the extent to which elevated volatility may suppress valuation. Last, we refresh our analysis of how the market prices earnings momentum given the prospect of slower EPS growth in 2027-28 after the outsized increase this year.

Our conclusion is that the market is pricing an overly negative fundamental outlook. We lower our KOSPI target from 12000 to 9000 to incorporate more conservative assumptions about how the market may price underlying fundamentals but still view the market as offering attractive risk/reward at current levels. In addition to the memory sector, attractive themes include power, industrials, corporate governance, reflationary beneficiaries, and K-culture.

Exhibit 1: KOSPI has corrected 40% and retraced half its strong gains over the previous year

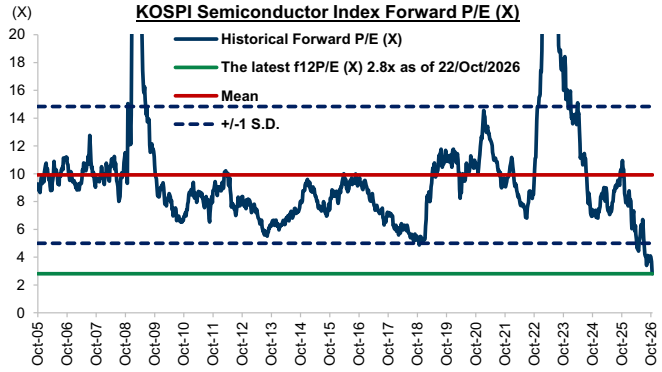


Source: FactSet, Goldman Sachs Global Investment Research

1. Semiconductor memory sector: pricing an imminent sharp downturn

The semiconductor memory sector accounts for about half of the KOSPI index weight. The two main constituents, Samsung Electronics and SK Hynix, are typically more volatile than stocks in other sectors and both rose more and fell further than the broader market during its April 2025 – June 2026 bull move and ensuing decline (+6x, -42% and +17x, -59%, respectively). On consensus forecasts, both stocks are presently trading at 3x forward P/E, which is a record low level and one that poses the question of what fundamental outlook they are pricing.

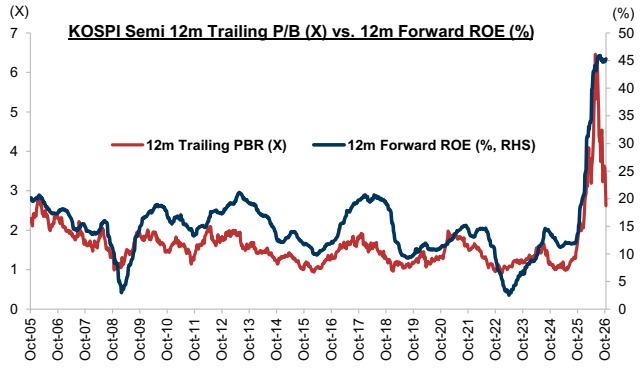
Exhibit 2: Korea's semiconductor memory sector is trading at record low forward P/E levels, indicating the market's lack of conviction in the sustainability of earnings



Source: Quantiwise, Goldman Sachs Global Investment Research

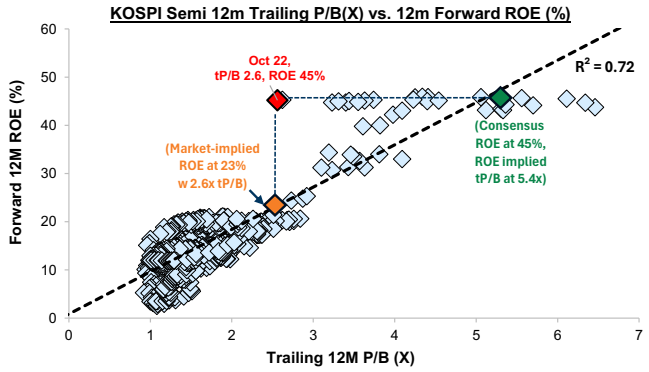
The rebuttal to arguments that the memory stocks are cheap in P/E terms is that they are typically deeply cyclical and tend to trade at low multiples at the top of the cycle and higher valuations at the trough. Accordingly, the market tends to price the stocks on book value, which historically has been a more consistent metric. We observe a close relationship between trailing PBR and 12m forward return on equity (72% r-square on 20-year monthly observations). This enables us to estimate what level of profitability the market is currently implying for 2027 ROE based on the current 2.6x sector trailing PBR.

Exhibit 3: Korea's semiconductor memory sector trailing PBR tends to trade closely with forward ROE



Source: Quantiwise, Goldman Sachs Global Investment Research

Exhibit 4: 12m forward ROE explains 72% of the variance in the semiconductor memory sector's trailing price/book valuation



Source: Quantiwise, Goldman Sachs Global Investment Research

Exhibit 5 provides a sensitivity analysis of a) the changes to consensus earnings and margin forecasts required to arrive at different ROE levels in 2027, and b) what the sector price return could be over the coming 12m from valuation changes and growth in book value. The current sector price weakness reflects worries that the memory cycle may turn down and the decline from current high operating profit margins could be steep. While our frequently expressed view is that this tech hardware cycle is likely to be longer and stronger than typical ones (see here, here, and here), calculating what changes to forward fundamentals are implied by current pricing helps ground the discussion.

Several important observations emerge from the sensitivity table. First, **the market is pricing a 65% cut to 2027 consensus earnings at the current trailing price/book valuation**. Second, the **potential returns from current valuation levels could be substantial** if the market regains confidence in the forward outlook: the combination of book value accretion and valuation recovery imply the sector doubling, assuming past ROE vs. PBR relationships hold and no changes to consensus forecasts. Third, **2027 consensus earnings would have to be revised down over 70% before losses would be incurred** over the coming 12 months. Last, the table shows an array of potential sector returns relative to potential earnings revisions and therefore enables investors to calibrate return expectations relative to their industry outlook.

In sum, this exercise shows the market is pricing a bearish view of memory prospects in 2027 and at the left tail of potential outcomes. This implies the risk/reward is favorable at current levels, especially considering the two dominant memory manufacturers have committed to returning at least 50% of free cash flow to shareholders through dividends and buybacks.

Exhibit 5: Korea semiconductor sector 2027 earnings scenarios and resulting ROEs, implied PBR levels, and potential returns from current valuation

KOSPI Semi Sector Earnings Scenarios

					Current LTM PBR						*Current Earnings*	
Potential f12m Earnings Revisions	**-90%**	**-85%**	**-80%**	**-70%**	**-65%**	**-50%**	**-40%**	**-30%**	**-20%**	**-10%**	**0%**	**10%**
Forward 12 month Book Value Revisions	-38%	-36%	-34%	-30%	**-28%**	-21%	-17%	-13%	-8%	-4%	**0%**	4%
Potential ROE for f12m (%)	8%	11%	15%	21%	**23%**	31%	35%	39%	42%	45%	**48%**	51%
Potential OP Margin for f12m (%)	7% (-0.9 s.d)	12% (-0.5 s.d)	16% (-0.1 s.d)	24% (+0.7 s.d)	**27% (+1.0 s.d)**	37% (+2.0 s.d)	42% (+2.5 s.d)	47% (+3. s.d)	52% (+3.4 s.d)	56% (+3.8 s.d)	**60% (+4.2 s.d)**	63% (+4.5 s.d)
ROE implied LTM PBR (A)	0.8	1.2	1.6	2.3	**2.6**	3.4	3.9	4.3	4.7	5.1	**5.4**	5.7
f12/t12 month Book Growth (B)	7%	11%	15%	22%	**26%**	37%	45%	52%	60%	67%	**75%**	82%
Re-Rating Upside (A) (Current LTM PBR 2.6x) + f12m Book Growth (B)	-63%	-44%	-27%	6%	**22%**	64%	89%	113%	135%	156%	**176%**	194%

**** Note : (1) Assuming dividends should be revised in the same magnitude of earnings revisions***

(2) The latest pricing is as of 22st of October, 2026

Source: Quantiwise, FactSet, Goldman Sachs Global Investment Research

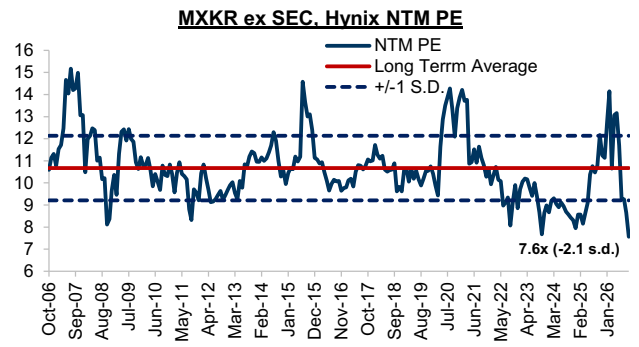
2. Non-memory sectors: at the low end of their valuation range

To simplify our market analysis, we evaluate the non-memory part of the market as a block, recognizing there are differences between the main sectors (notably industrials, consumer, and financials) that comprise this half of the index. Clubbing these sectors together shows the market has sold them down to levels rarely seen in absolute terms and out of alignment with their earnings growth and profitability.

First, the non-memory part of the market currently trades at **7.6x NTM P/E**, which is 2.1 s.d. below the longer-term mean and a level rarely reached. Second, this part of the market is also growing earnings rapidly: consensus has steadily revised up **2026 EPS growth forecasts for 2026 to +84%, expects another +16% for 2027 and +11% for 2028**. Third, ROE is also robust at 14.2% and the close historical relationship with price/book suggests **the current 1.1x PBR is undervalued by 30%**. Fourth, the volatility of profits and ROE for this part of the market is much lower than for the memory sector, which should support a more confident valuation level. Last, none of the foregoing points incorporate the positive corporate governance changes of the Value Up program, which argue for gradually higher valuations as further measurable improvements are made in addition to changes to the Commercial Act, dividend taxation, and treatment of share repurchase rules.

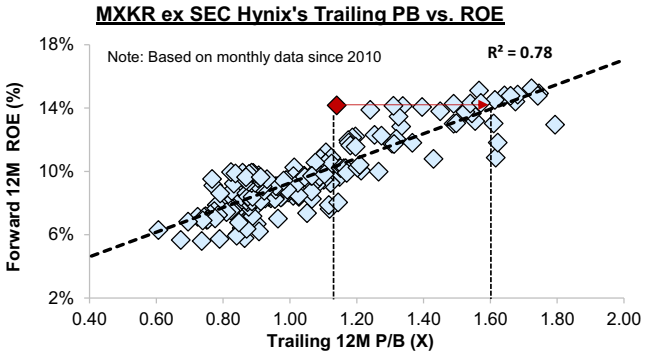
Overall, concerns over the memory sector appear to have spilled over to the rest of the market in a broad-based derisking. This suggests risk/reward from current levels is also attractive.

Exhibit 6: Korea ex-memory stocks currently trade at a record low 7x NTM P/E



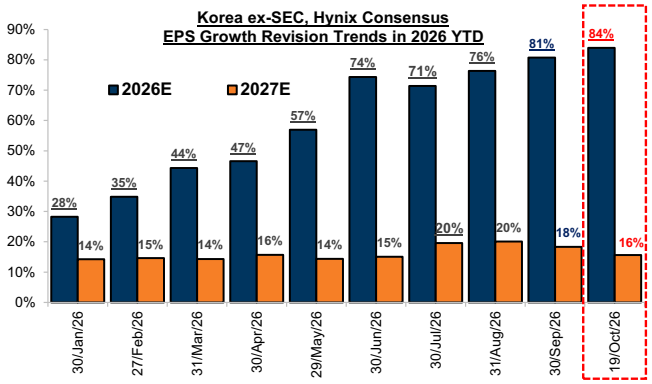
Source: FactSet, MSCI, Goldman Sachs Global Investment Research

Exhibit 7: The non-memory sector is more than 30% undervalued based on the strong historical relationship between forward ROE and trailing P/B



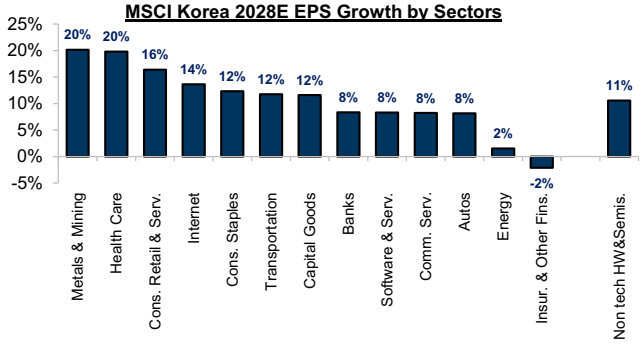
Source: FactSet, MSCI, Goldman Sachs Global Investment Research

Exhibit 8: Consensus growth expectations for the non-memory part of the market are strong for 2026 and 2027...



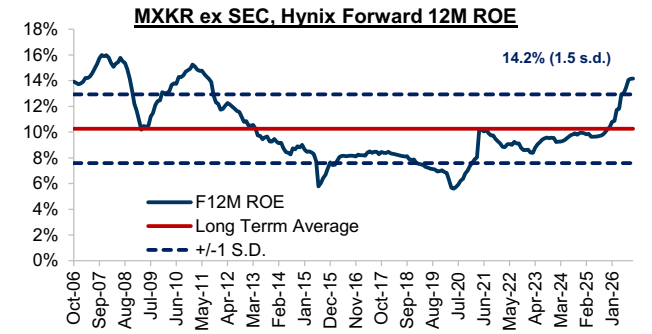
Source: FactSet, MSCI, Goldman Sachs Global Investment Research

Exhibit 9: ... with a further 11% increase in 2028



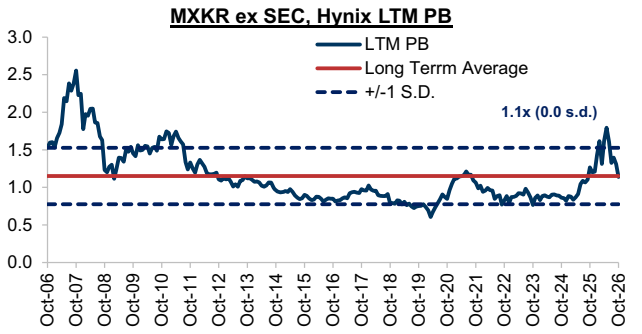
Source: FactSet, MSCI, Goldman Sachs Global Investment Research

Exhibit 10: The non-memory sector ROE is strong and less volatile than the memory sector...



Source: FactSet, MSCI, Goldman Sachs Global Investment Research

Exhibit 11: ..., but price/book valuation has recently compressed



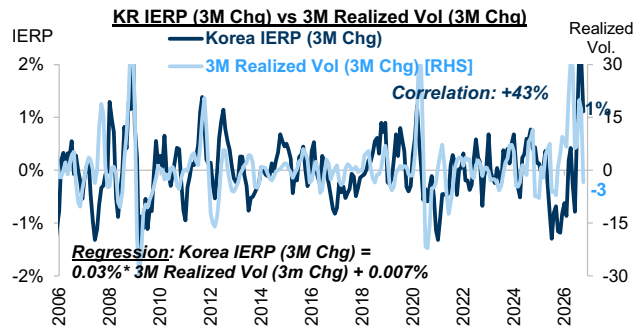
Source: FactSet, MSCI, Goldman Sachs Global Investment Research

3. Volatility weighs on valuation

While both the memory and non-memory parts of the market appear significantly undervalued, the Korean equity market has remained under pressure in part because of its recent elevated volatility. Over the past 5 years, KOSPI's 60-day annualized trailing volatility ranged between 10-30% but spiked to over 80% in the sharp sell-off in July. This was partly due to the volatility-enhancing mechanics of leveraged ETFs where dealers must pro-cyclically buy or sell at the daily close to ensure the ETF retains its 2x leverage. This factor has moderated with leveraged ETF AUM dropping from US$53bn at the June peak to $16bn currently. However, retail investor sentiment is bruised from losses incurred in the 3Q downturn and foreign investor risk appetite is suppressed as shown by $140bn net selling ytd, indicating that the effects of the spike in volatility are still impacting the market.

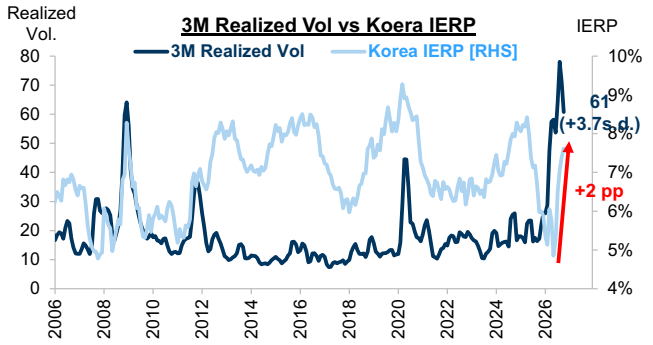
To gauge the impact of elevated volatility on the equity market, we examine the relationship between volatility and the equity risk premium from our dividend discount model. The historical relationship is fairly consistent (+43% correlation) and indicates that the ERP tends to increase (i.e. valuations compress) when volatility rises. **The nearly 4 s.d. spike in volatility coincided with a roughly 2pp increase in the equity risk premium. Mapping this to the market's trailing price/book valuation indicates a 20% P/B de-rating**, which would explain about half of the equity market's 40% decline from its June peak.

Exhibit 12: Higher volatility correlates well with increases in Korea's equity risk premium



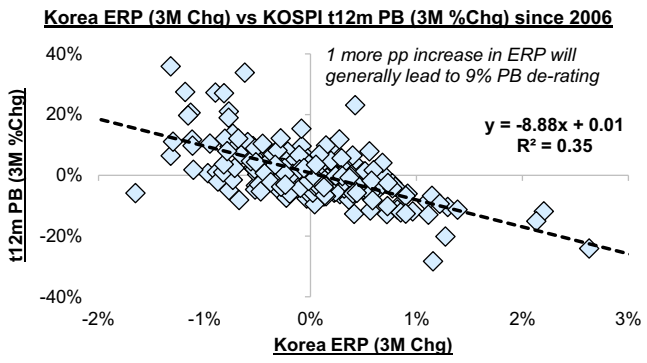
Source: FactSet, Goldman Sachs Global Investment Research

Exhibit 13: The recent spike in equity volatility has coincided with a 2pp rise in the equity risk premium



Source: FactSet, Goldman Sachs Global Investment Research

Exhibit 14: A 1pp increase in Korea's ERP is roughly equivalent to a 9% de-rating in PBR



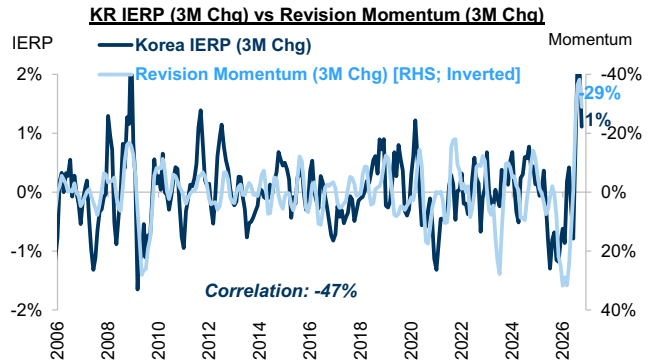
Source: FactSet, Goldman Sachs Global Investment Research

4. Earnings momentum: slower momentum weighs on valuation

Korea has historically been sensitive to the momentum of earnings growth, since this "second derivative" of earnings is a lead indicator of change in a deeply cyclical market. To quantify this, we observe a **-47% correlation between the 3m change in analysts' earnings revisions and the 3m change in the market's equity risk premium**. In simple terms, rising estimates correlate with higher valuation and vice versa.

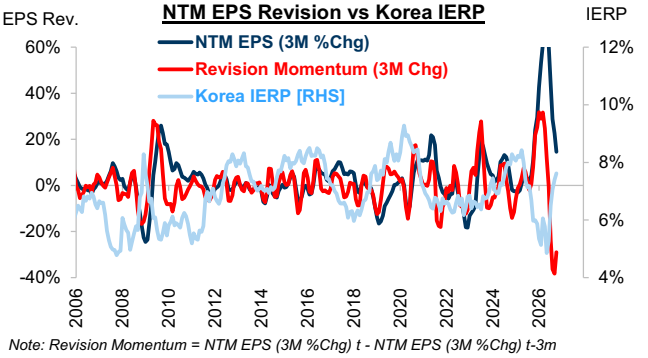
Earnings estimates have consistently increased during this year, but the momentum of estimate increases has slowed meaningfully in the past few months. This has coincided with the equity risk premium rising and the market's overall valuation compressing. Looking forward, annual earnings growth will inevitably slow from over 300% this year to 38% in 2027 and 12% in 2028, based on our top-down forecasts, which will weigh on valuations.

Exhibit 15: Earnings revision momentum correlates well with market valuation



Source: FactSet, Goldman Sachs Global Investment Research

Exhibit 16: The slowing pace of earnings upgrades has led to negative revision momentum, which coincides with a higher equity risk premium (i.e. lower valuation)



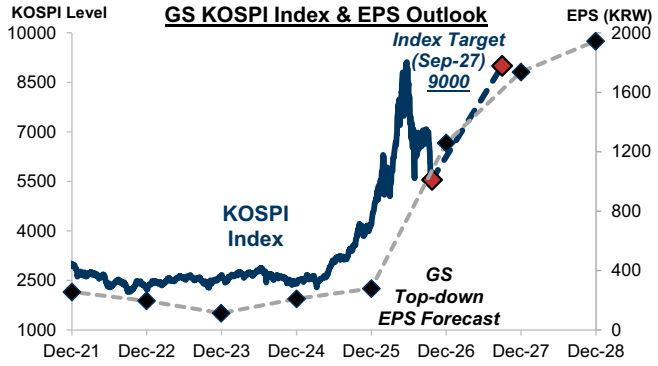
Source: FactSet, Goldman Sachs Global Investment Research

5. Composite market view: lower target, but still significant upside

Pulling these threads together, **we lower our KOSPI 12m target from 12000 to 9000**. On consensus forecasts, this target implies 6.5x forward P/E and 1.5x P/B vs. 23% ROE. At that PBR vs. ROE, the market would be over 20% undervalued based on the historical relationship. However, allowance must be made for elevated volatility and for slowing earnings momentum, which together may suppress valuation below profitability-implied levels. Moreover, investors may remain skeptical regarding the duration of the memory cycle, which would also keep the market below fair valuation. We therefore choose to be conservative and reduce our target accordingly.

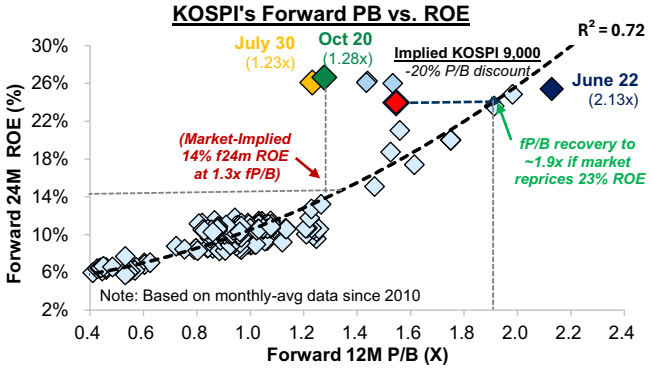
Even allowing for these factors, **the Korean equity market appears deeply undervalued and offers over 60% upside from current levels**. To view the current index level as fair (or too high) would require a base case of substantial earnings cuts next year which appear unlikely based on current macro and semiconductor industry conditions.

Exhibit 17: Korean equities have sharply undershot the aggregate earnings trajectory and have room to rebound



Source: Goldman Sachs Global Investment Research

Exhibit 18: At our 9000 12m target, KOSPI would be over 20% undervalued based on its PB vs. ROE relationship



Source: FactSet, Goldman Sachs Global Investment Research

6. Implementation: themes, derivatives, stocks

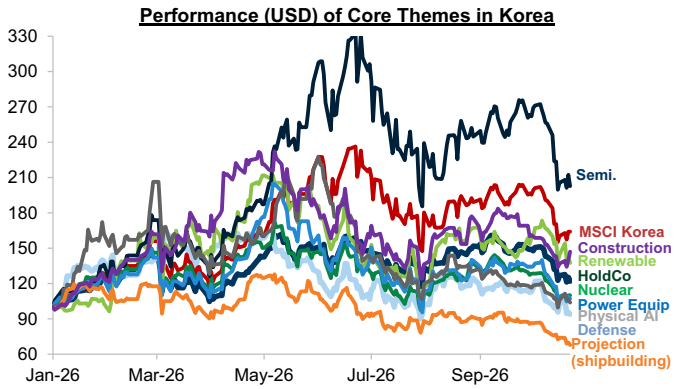
Strategically, we emphasize themes in five categories:

- **AI and the adjacent energy area** (semiconductors, physical AI, power equipment);
- **Industrials** (defense, shipbuilding);
- **Corporate governance** (undervalued holding companies, high dividend yield, share buybacks/cancellation, preferred shares);
- **Reflation** (financials, construction, department stores); and
- **Korea soft power** (the K-culture theme).

Tactically, derivative strategies can offer exposure in a risk-controlled and positively asymmetric manner. Given lower spot price and volatility, **risk reversals** appear attractive, such as selling a 83.5% put to fund a 120% call for zero cost. Alternatively, shorting a 88%/75% put spread can fund a 120% call, all on a Jan 2027 basis.

At the single stock level, our GS Buy-rated names trade at median levels of 9x forward earnings and 17% EPS growth and have corrected sharply from their respective peaks.

Exhibit 19: Korea has many attractive themes in addition to semiconductor memory with attractive entry points following the recent sell down



Themes	Korea Implementation Ideas
AI / Energy	Memory / Semis / Physical AI / Nuclear / Renewable / Power Equip.
Industrials	Defense / Shipbuilding
Corporate Governance	Holdcos / Preferred Shares / High DY Low PB / Treasury Shares Cancellation
Reflationary Trade	Financials / Construction / Department Stores
K-Soft Power	K-Culture

Source: FactSet, MSCI, Goldman Sachs Global Investment Research

Exhibit 20: Our analysts' Buy-rated names trade at 9 median P/E with 15% median earnings growth

				>US$500mn	>US$3mn										
				Size and Liquidity		Market Perf (LOC)		NTM Valuations				2027 Valuations			
BBG Ticker	Company Name	GICS Sub-Industry	Quoted Price (KRW)	Listed Market Cap (US$mn)	6M ADVT (US$mn)	Year Start to Peak (22 Jun)	Peak to Current	NTM P/E (X)	10 Year Z-Score	NTM PEG Ratio (X)	10 Year Z-Score	2027E P/E (X)	2027E P/B (X)	2027E EPS Growth (%)	GS Rating
GS Buy-rated Korea Stocks															
005930 KP	Samsung Electronics	Technology Hardware Storage & Peripherals	214500	947,365	5,098	195%	-41%	3.1	(1.8)	0.2	(1.4)	3	1.3	54	B*
000660 KP	SK Hynix	Semiconductors	1223000	674,921	6,610	348%	-58%	2.7	(0.1)	0.1	(0.7)	3	1.3	32	B
373220 KP	LG Energy Solution	Electrical Components & Equipment	390000	68,943	109	5%	-1%	68.2	(0.4)	0.6	(0.7)	53	4.0	-	B
009150 KP	Samsung Electro-Mechanics	Electronic Components	1145000	64,610	1,021	774%	-51%	26.6	0.8	0.4	(1.3)	25	6.2	119	B
207940 KP	Samsung BioLogics	Life Sciences Tools & Services	1361000	49,465	60	-24%	15%	32.3	(0.3)	2.3	(0.4)	30	5.5	15	B
105560 KP	KB Financial	Diversified Banks	158200	42,390	145	26%	-3%	7.7	1.2	1.0	0.5	8	0.9	9	B*
000270 KP	Kia	Automobile Manufacturers	108800	32,090	113	24%	-30%	4.7	(0.8)	0.5	(0.6)	5	0.6	9	B
055550 KP	Shinhan Financial	Diversified Banks	90300	32,025	91	27%	-11%	6.5	0.5	0.9	0.2	7	0.7	9	B
012450 KP	Hanwha Aerospace	Aerospace & Defense	811000	31,592	148	20%	-31%	13.7	(0.5)	0.9	0.4	14	2.9	29	B*
086790 KP	Hana Financial	Diversified Banks	119900	24,544	74	27%	-5%	6.4	1.0	0.8	(0.3)	7	0.7	9	B
012330 KP	Hyundai Mobis	Automotive Parts & Equipment	337000	22,867	194	53%	-43%	6.5	(0.7)	0.8	(0.1)	7	0.5	14	B
000810 KP	Samsung F&M Insurance	Property & Casualty Insurance	608000	20,507	58	38%	-12%	9.5	0.2	1.5	0.8	9	0.8	15	B
298040 KP	Hyosung Heavy Industries	Heavy Electrical Equipment	1924000	13,553	110	115%	-52%	16.2	0.5	0.4	0.2	16	4.5	44	B
051910 KP	LG Chem	Commodity Chemicals	238000	12,692	56	-3%	-29%	11.4	(0.7)	0.1	(0.9)	11	0.5	-	B
010950 KP	S-Oil	Oil & Gas Refining & Marketing	139800	11,890	39	29%	21%	5.5	(0.4)	-	-	7	1.2	(26)	B*
024110 KP	Industrial Bank Of Korea	Diversified Banks	19850	11,958	17	-2%	-6%	5.3	0.6	-	-	5	0.4	6	B
035720 KP	Kakao	Interactive Media & Services	30350	10,157	55	-39%	-18%	16.9	(2.4)	0.9	(1.4)	16	1.1	56	B
030200 KP	KT Corporation	Integrated Telecommunication Services	47550	9,053	15	-1%	-10%	7.4	(0.7)	1.1	0.9	8	0.6	9	B
278470 KP	APR	Personal Care Products	291000	8,230	78	61%	-23%	14.2	(1.2)	0.5	(1.6)	14	8.1	39	B
064350 KP	Hyundai Rotem	Construction Machinery & Heavy Equipment	85500	7,050	57	8%	-60%	9.9	(0.0)	0.4	(0.7)	10	2.0	14	B
259960 KP	Krafton	Interactive Home Entertainment	191800	6,653	19	-9%	-16%	8.2	(2.0)	0.6	(1.5)	8	1.0	33	B
090430 KP	Amorepacific	Personal Care Products	133500	5,899	25	-16%	30%	19.5	(1.4)	1.4	(0.2)	20	1.5	21	B
352820 KP	HYBE	Movies & Entertainment	177200	5,771	36	-35%	-17%	22.3	(1.7)	0.8	(0.9)	20	2.0	117	B
036570 KP	NCsoft	Interactive Home Entertainment	211500	3,442	20	29%	-21%	8.9	(3.0)	1.5	1.2	9	1.0	2	B
138930 KP	BNK Financial	Regional Banks	13940	3,231	13	7%	-21%	4.8	0.5	0.5	(1.0)	5	0.4	13	B
108490 KQ	ROBOTIS	Electronic Components	232000	2,571	61	11%	-24%	177.6	(0.1)	1.6	0.4	149	9.7	410	B
Median				**11,958**	**58**	**20%**	**-21%**	**8.9**	**(0.5)**	**0.7**	**(0.6)**	**9**	**1.1**	**15**	
Aggregate Numbers				**2,128,670**	**14,373**										

Note: Valuations and earnings growth forecasts are based on I/B/E/S estimates. Pricing as of Oct 22, 2026.

* Indicates stock is on the regional Conviction List

Source: FactSet, Goldman Sachs Global Investment Research

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Reg AC

We, Timothy Moe, CFA, John Kwon, Alvin So, CFA, Sunil Koul, Kinger Lau, CFA, Amorita Goel, CFA and Terry Chan, hereby certify that all of the views expressed in this report accurately reflect our personal views, which have not been influenced by considerations of the firm's business or client relationships.

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