Korea Viewpoint

Caught in the middle: Rising uncertainty amid tariffs escalation & US-China AI race

20 February 2025 Corrected

GEM Economics
Asia | Korea

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HBM: High-bandwidth memory

FTA: Free Trade Agreement

BoK: Bank of Korea

AI: Artificial Intelligence

An eventful start to the year: tariffs, Fed, DeepSeek

The year's beginning saw a bunch of front-loaded events: 1) Trump administration kickstarted trade war 2.0 soon after the inauguration, and plans to include more targeted economies (Mexico and Canada) from the term start; 2) the Fed decided to hold during the Jan meeting and the likelihood of further cuts seems remote; and 3) China developed a generative AI that is comparable to that of the US's, only at much cheaper costs. Although most of the above-mentioned risks have been highlighted in our Year-Ahead report, recent developments suggest they are more tilted to the downside.

Risks tilted to downside; cut 2025E GDP growth to 1.5%

With limited near-term support from monetary and fiscal policies, and the low business and consumer confidence due to domestic political uncertainties, we trim our 2025 GDP growth forecast to 1.5% from 1.8%. We still expect 3 cuts this year, starting from Feb 25th, but the likelihood of a lower terminal rate looks slimmer on rising rate differentials.

Broader tariff threats – risk of FTA renegotiation

The US and Korea have signed FTA agreements since 2012, where the bilateral effective tariffs are almost zero. During Trump's first term, the FTA terms have been slightly amended, mostly to address the trade imbalances in the auto sector. However, its trade deficit with Korea still widened to USD66bn in 2024 from USD20bn previously, and is the 8th highest trade deficit among key trading partners. Since the recent US tariff imposition has already extended beyond China and includes Canada and Mexico, and Korean steel makers also face an universal 25% tariff, we see a higher likelihood of tariff risks to Korean goods this time, with potential FTA renegotiation and/or specific tariffs covering auto, chemical or even semi exports.

Hawkish Fed – likely to cap boundary of terminal rate

The Fed decided to pause in Jan. Given a strong labor market outcome and sticky inflation in the US, our US economists do not expect further Fed cuts. With the potential widening path for rate differential between the two countries (to a record level of 200bp by 3Q if the BoK conducts three more cuts), we do believe the Fed's move will limit the lower boundary of terminal rate for the BoK. Even with the weaker growth momentum this year, we see a low likelihood of BoK terminal cuts to be beyond 2.25% this time around amid lingering concern about FX level.

Rise in China AI - new uncertainty for tech exports

Korea's HBM exports have been tightly linked with AI demand, and grew notably last year. The rise of DeepSeek has drawn more attention and the market sees a chance of lower developing cost for AI models; hence, less need for high-end chips. So far, we have not yet seen any steep order cuts for high-end memory orders, especially from major US tech companies (see DeepSeek impact report published 1st Feb), though uncertainties linger. Also, with the potential further tightening in chip supply to China, as well as the potential tariffs on semi exports, the volatility of semis export growth momentum could also rise and affect the certainty in domestic facility investment, in our view.

From macro to micro: an eventful start to the year

There is no shortage of events in the year beginning: **1)** the Trump administration kickstarted Trade War 2.0 right after inauguration, proposing 25% tariffs on Mexico/Canada and additional 10% on China, with reciprocal tariffs on a country-by-country basis and additional import levies across various key sectors; **2)** the Fed decided to hold in the Jan meeting and the easing cycle may have already ended; **3)** China developed a Generative AI comparable to that of US, only with much cheaper costs.

All those dynamics of new incidents, in our view, would contribute to a higher exposure of downside risks. The weaker external demand, combined with less room in monetary easing, may dampen the industrial production and investment outlook.

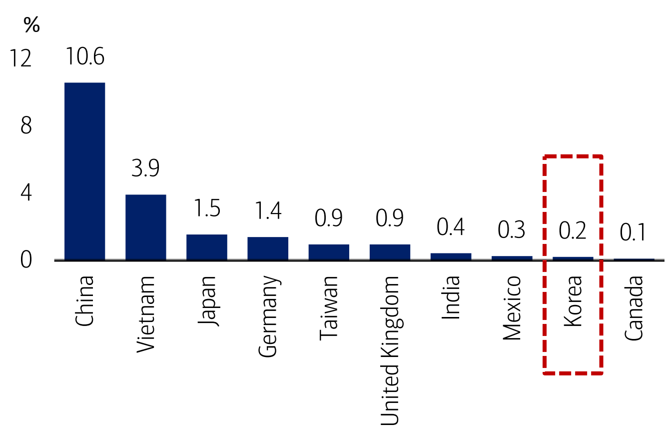
In this report, we assess the potential impacts on Korea economic growth through the above channels. In all, we are now relatively more cautious versus few months back, and have trimmed the 2025 GDP growth forecast to 1.5% from 1.8%.

#1 FTA risks renegotiation in addition to tariffs on steel

Korea has traditionally been treated as an "ally" of the US in terms of international trades. The US-Korea Free Trade Agreement (KORUS) has been enacted since 2012, where it eliminates or reduces tariffs on over 98.8% of goods and services traded between two countries (Exhibit 1). Currently, the bilateral effective tariffs are almost zero, compared with the US-to-Global weighted average tariff of 3% (Exhibit 1).

However, recent proposed US tariff imposition has already included its three largest trading partners (China, Mexico and Canada). Given Korea is among the economies with higher exports, higher trade surplus, as well as lower tariffs (Exhibit 2), combined with the recent trade treatment revision in various industries that started to include Korea, we may see more uncertainties in the near term. There is a higher likelihood of renegotiation of KORUS this time, along with other potential tariff changes.

Exhibit 1: Effective US tariffs of its top 10 trading partners
Korea faces one of the lowest US tariffs among top US trading partners



Source: Haver, BofA Global Research

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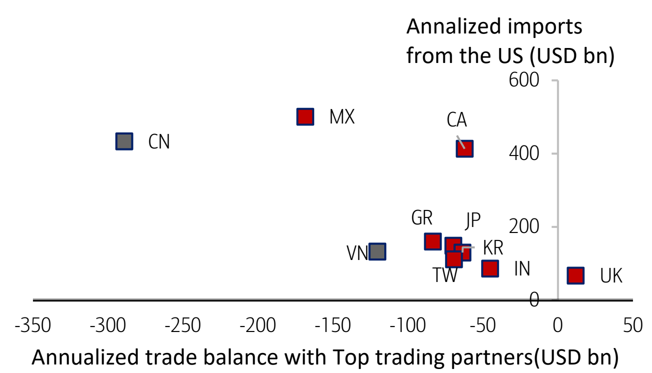
Exhibit 2: Imports from the US and its trade balances with top 10 trading partners in last 12 months
Korea is among the top economies to have high exports, higher trade surplus yet with lower trade tariffs with the US



Source: Haver, BofA Global Research
Note: Dots in red indicate country with lower US tariffs compared to its weight-average tariffs

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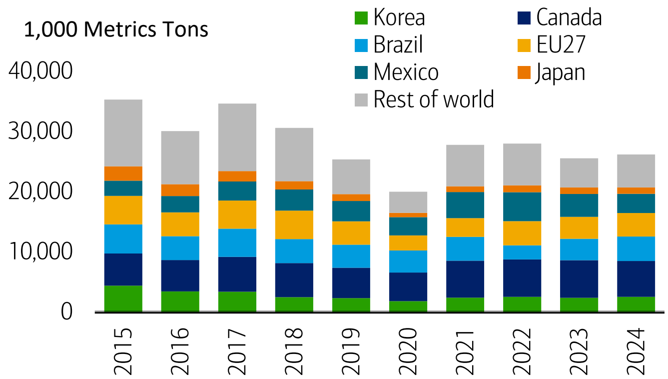
Steelmakers face the initial trade shock

Steelmakers are the first group of exporters in Korea to face the US trade shocks, as President Trump decided on Feb 11 to impose a 25% tariff on steel imports, effective from Mar 12. Korea is among the top-5 steel exporters to the US (Exhibit 3). Before the tariff implementation, steel products shipped to the US have been exempted from tariff under the KORUS, though shipments have been capped at 2.6mn tons per year since 2017 (Exhibit 6). Such agreement has enabled Korea to be one of the top steel exporters to the US, only behind Canada, Mexico, Brazil and EU.

Exhibit 3: US steel imports from major destinations (in quantity)

Korea is one of the top steel exporters to the US, behind Canada, Brazil, Mexico, and EU



Source: US ITA, BofA Global Research

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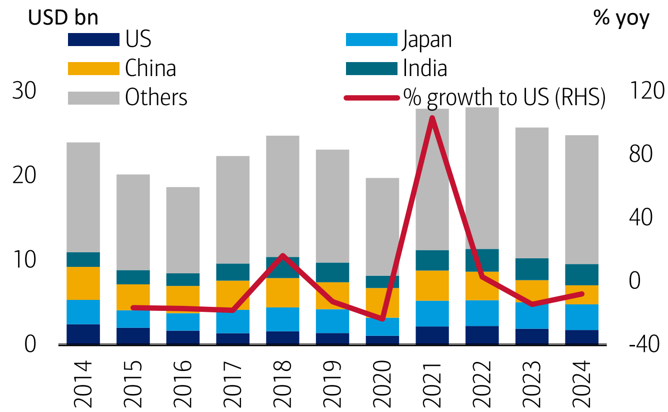
Exhibit 4: Korea iron & steel exports by major destinations

That said, Korea's export destination for steel is diversified



Source: Haver, BofA Global Research

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Korea's acting President Choi Sang-mok said the government will seek to discuss the issue with the US before the tariff takes effect. That said, we see a low likelihood of a major change to the implementation given the limited time left for negotiation. The silver lining is, however, the direct impact on GDP would be fairly limited, as steel products accounted for only 3.4% of total exports in 2024. In addition, Korea's steel export destinations are quite diversified. The US accounted for around 14% of their export markets, lower than the size of exports to Japan, China and India (Exhibit 4).

More concerned about an FTA renegotiation and/or new tariffs on key items

The potential tariff on Korean steel makers has more of a signaling effect, rather than actual impacts. We believe what's more concerning ahead is the potential renegotiation or the ceasing of the entire KORUS, while more of the important export sectors may have been included with a wider impact.

A quick recap of KORUS

KORUS (or US-Korea FTA) almost eliminates/reduces all bilateral tariffs for goods and services between the two countries. The deal came into effect in 2012, and has been the only existing free-trade agreement between the US and a major exporter in Asia. Although certain products are not exempted from the US tariffs due to strategic reasons (e.g. rice), and the Trump administration imposed a global tariff on washing machines and solar panels in 2018, the deal still opened up significant opportunities to most manufacturing exporters in Korea, notably automobile manufacturers.

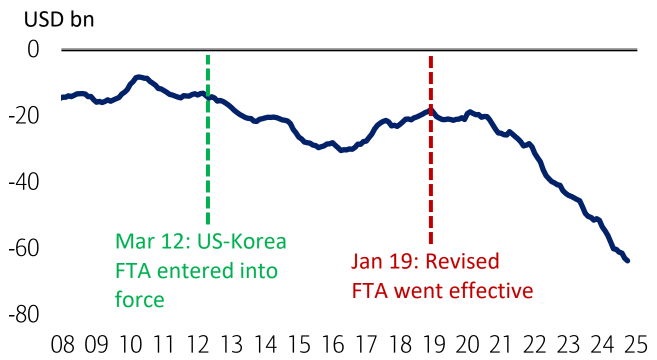
Currently, Korea faces one of the lowest effective US tariff rates among top US trading partners, similar to the tariff rate faced by Mexico and Canada under the US-Mexico-Canada Agreement (USMCA). That said, the two deals are still quite different fundamentally, as KORUS focuses on lowering barriers on trade and market access between Korea and the US, while the USMCA is a broader agreement designed to regulate trade and investment in North America, in addition to provisions for manufacturing, labor standards, digital trade and dispute resolution mechanisms.

While the KORUS was renegotiated and slightly revised in 2018 against the backdrop of widening US trade deficit with Korea during 2012-2016[1], the modest revisions have not

[1] Amid rising trade deficit with Korea, KORUS was negotiated on 2018 and went effective in Jan 2019. Only several changes on sectoral policies were made including: **1)** To address trade imbalance in automobile sector, Korea agrees to increase the number of US cars that could be imported without meeting Korea safety standards, from 25,000 to 50,000 per manufacturer per year. Korea also extended the phase-out of it 25% tariff on US pickup trucks to 2041, **2)** Korea commits to avoiding competitive devaluation of its currency, ensuring a level playing field for US exporters, **3)** Korea agrees to improve transparency and revise its pricing policies for certain pharmaceutical and medical services

reversed the trade balance trend (Exhibit 5). Since the pandemic, imports from Korea (especially automobiles) have surged, and cumulative trade deficit with Korea reached US$66bn in 2024, the 8th highest trade deficit among trading partners. Given the recent US tariff negotiation has already included its three largest trading partners, we see a higher likelihood of KORUS renegotiation this time, with more targeted restrictions on sectors that lead to a higher trade imbalance with the US, including auto, machinery, chemicals and even semiconductors.

Exhibit 5: US trade balance with Korea
Trade deficit with Korea ballooned since the pandemic



Source: Haver, BofA Global Research

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Exhibit 6: Selected Korean exports excluded from tariff exemptions
During the past years with KORUS, several products have been excluded from tariff exemption due to strategic reasons

Products	US Tariff	Expiry date	Remarks
Pickup Trucks	25%	2041	Tariffs originally phased out in 2021, extended to 2041 after 2018 KORUS revision
Steel Products	25% if exceeds quotas	-	Excluded from full FTA benefits; subject to quota under Section 232.
Washing machines	20% under quota, 50% if exceeds quota	2023	Subject to U.S. trade restrictions under Section 201 (unrelated to KORUS FTA)
Solar Panels	30%	2023	Subject to U.S. trade restrictions under Section 201 (unrelated to KORUS FTA)

Source: USITC, KORUS, BofA Global Research

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Automakers could be the next on the list for tariff threats

On Feb 14, President Trump announced potential tariffs on auto imports, to be implemented around Apr 2. Auto and auto parts were the top exports to US, accounting for almost 29% of total US-bound exports (Exhibit 7). The sector also registered USD39bn trade surplus with the US in 2024, equivalent to 70% of total Korea-US goods trade surplus. The sizable surplus naturally makes it the most vulnerable sector to any new trade restrictions. Previously, we analyzed how the supply chain disruption since pandemic and the introduction of Inflation Reduction Act (IRA) boosted Korea's auto exports (especially EV) to the US (see report: US-Korea trade Viewpoint). In our view, auto exports could be subject to much higher tariff in case the US attempts to renegotiate KORUS near-term.

Exhibit 7: Top 10 exports to US in 2020-2023
Auto, EV battery, electronics parts, refined oil are among the top exports to US

HS code	Key items within the category	% share of total exports to US
8703	Motor vehicles and other passenger cars	22.4
8708	Motor vehicles parts	6.2
8473	Computer and server components	5.8
2710	Refined oils	4.8
8523	Recording devices	4.2
8507	EV battery	3.2
8418	Freezers, refrigerators	2.1
8517	Smartphone	2.1
8541	Semiconductor devices	1.2
7306	Steel or iron pipes	1.1

Source: ITC Trade Map, BofA Global Research

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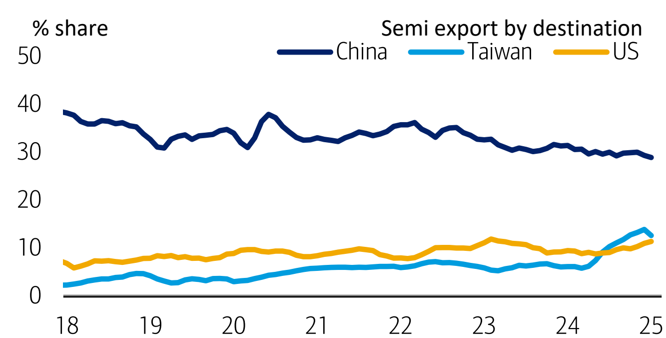
Exhibit 8: Semi exports to US, China and Taiwan
Semi exports to China accounted for about 30% of total semi & electronic manufacturing products, while that to US and Taiwan is about 10%



Source: Haver, BofA Global Research

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That said, on a company basis (rather than Korea-bound export basis), the impact would also be limited, in our view. Automakers in Korea have already been finding ways to mitigate the risks. First, major automakers have been directly investing in the US over the past years for domestic production, and can fit with over one-third of the US market demand already. In 2024, 33% of Hyundai's vehicles sold in the US were produced domestically (vs 67% produced in Korea), and 37% of Kia's vehicles sold in the US were produced domestically (vs 45% in Korea). In addition, Hyundai is also drafting up full utilization plans in its US Georgia plant beyond 2025, while Kia also has a contingency plan to redirect specific model exports from Mexico plant to other regions. In our view, if universal tariffs are imposed on all ex-US manufactured autos, the impact on Korean manufacturers would be relatively limited, given its higher US-based manufacturing capacities vs. other competitors.

Will semi exports be at stake?

Trump has stated that he will impose reciprocal tariffs on all other nations and will reveal details by Apr 1. On Feb 13, Trump said he is unlikely to grant exemptions or waivers on the reciprocal tariffs proposed. Despite giving Apple a pass on tariffs he imposed on China during his first term, the tariff package would "apply to everybody across the board". On Feb 18, he has also threatened to levy 25% tariffs on semi exports that to the US. While we previously thought semiconductor makers are less vulnerable to such tariff shocks given its strategic importance to the US, the risk is building up as blanket tariffs may come with no exemption.

However, the extent of potential impacts could be limited as well. Most of the Korea semi exports ships to China and Taiwan, before shipping to end markets, and that directly to the US only accounted for less than 10% (Exhibit 8). In addition, with the high dependence of semi imports from Korea and Taiwan, we expect strong tariff passthroughs to end consumers, if enacted. This is especially true for high-end chips from Korea given its better position along the semi value chain. Overall, we are less worried about the impact on demand amid higher tariff for semi products. Rather, we are worried that such mounting tariff risk could limit future investment/CAPEX plans, and, as such, affect the domestic investment activities of Korean manufacturers.

#2 Hawkish Fed posing a floor on BoK terminal rate

Despite the stronger headwinds on trade, any aggressive easing from the BoK could also be constrained by the Fed amid FX concerns, in our view. Hence, even with the slimmer growth outlook, we still expect three cuts this year, rather than any level beyond.

Rate differential may widen to a historical high level if Fed continues to hold

Policymakers are very cautious on the impact of policy rate changes on exchange rate. Between July'23 and Aug'24, the rate differential between Fed rate and Korea base rate reached a record-high level of 175bp (Exhibit 9), and persistently weighed on USDKRW. The rate differential of the 10y spreads also showed a similar trend (Exhibit 10).

Currently, after an aggressive two 50bp cuts from the Fed, the rate differential had narrowed to 125bp. However, according to Governor Rhee, the recent political instability had led to about KRW30 rise in USDKRW since Dec'24. Hence, USDKRW is still hovering at 1,450, a level that places BoK to remain vigilant for future changes.

In a media interview in early Feb, Governor Rhee continued to highlight the importance of assessing market conditions when considering future cuts. He said: "if the exchange rate is depreciating quite rapidly, you don't want to put oil on the fire".

Going forward, if Fed continues to pause for the rest of the year, while BoK carries out three more cuts as we forecast, the rate differential will be widening to beyond previous high level to 200bp. In our view, such extensive gap may limit BoK to lower rates further, and the growth momentum to be acquired via credit expansion would be capped.

Natural interest rate is likely to be higher, limits the floor for a rate cut

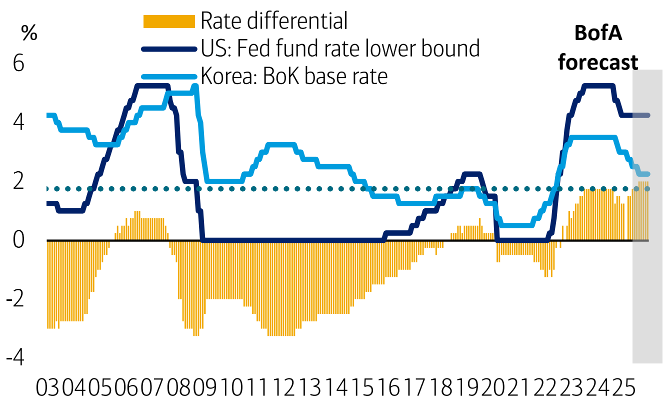
In addition, recent BoK research also suggested that the natural interest rate (NIR) in Korea could be understated in previous models[2], signaling a renewed (higher) targeted interest rate level for the central bank. According to the latest BoK working paper which

[2] "Exploring the Natural Interest Rate in Korea: A multi-model Approach", BoK Working Paper, Nov 2024

employs semi-structural and time-series models, it is found that the NIR estimate was on average 0.3ppt higher during the post-pandemic period of higher policy rates, compared to the models that mostly incorporated the period of ultra-low US policy rates since Global Financial Crisis. Further, with increasing macro-prudential considerations amid high household leverage ratio in Korea, we expect BoK to aim for a higher natural interest rate when considering the rate cuts.

Exhibit 9: BoK base rate and Fed rate (lower bound) differentials

If Fed decides to hold for the rest of the year, the rate differential may widen to a historical high level of 200bp (vs. 175bp in the most period of 2023-24)



Source: Haver, BofA Global Research

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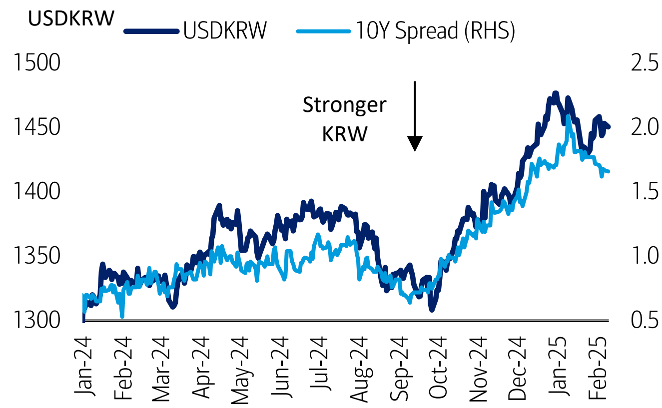
Exhibit 10: USDKRW and 10Y yield differential

10y yield differential for UST and KTB also closely tracks with USDKRW since 2024



Source: Haver, BofA Global Research

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#3 Rise in China AI to pose new uncertainty on tech export

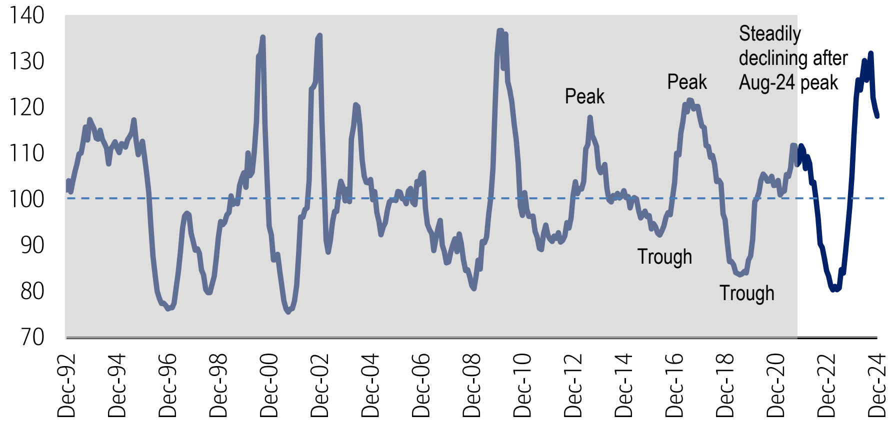
Near-term impacts may be limited…

Korea's semi exports have been tightly linked to the surging AI demand and posted a growth of 44% in 2024. Of which, HBM (fit with the demand for high-end GPUs) sales spiked by over 300% in 2024, and drove most of the price increase in semi exports (Exhibit 12). With semiconductor accounting for 20% of total Korean exports, and its significant contribution from the AI demand growth story, the sector's medium-term outlook is key for exports' growth momentum, in addition to the potential tariff risks.

At the beginning of the year, market expectation held up relatively well. However, the recent rise of DeepSeek (Chinese AI) has drawn more attention and the market sees scope for lower training cost for AI models; hence, less need for high-end chips than before. Currently, our sector analysts are relatively optimistic on the potential DeepSeek impact towards existing players, and believe it will present new growth opportunities for memory chipmakers (see DeepSeek impact report published 1st Feb). From leading companies' perspective, major US tech companies have not yet cut orders for high-end memory (see report: [Cloud Q4 review: all hyperscalers going big on capex]), and SK Hynix's management team still expect a price recovery from 2Q due to production cuts.

Combined, we still see limited direct impact on HBM exports for now. Although we have already passed the peak of the current memory cycle (Exhibit 11), our sector analysts still expect a mild recovery from 2Q to 4Q this year (see weekly Global Memory Tech report published 8th Feb), and believe the memory sales would grow at 8% yoy (though it likely to moderate notably from +87% last year).

Exhibit 11: BofA memory indicator – Hit year-low in Dec-2024, but still above mid-cycle
Correction continued for four consecutive months (Sept-Dec) after Aug peak but still above midcycle at 111



Source: DRAMeXchange, WSTS, MoTIE Korea, BofA Global Research
The shaded area represents backtested results from January 1991 to March 2021. The unshaded area represents actual performance since April 2021. This performance is backtested up to March-2021, and does not represent the actual performance of any account or fund. Back-tested performance depicts the theoretical (not actual) performance of a particular strategy over the time period indicated. No representation is being made that any actual portfolio is likely to have achieved returns similar to those shown herein.
Disclaimer: The BofA Memory Indicator is intended to be an indicative metric only and may not be used for reference purposes or as a measure of performance for any financial instrument or contract, or otherwise relied upon by third parties for any other purpose, without the prior written consent of BofA Global Research. This indicator was not created to act as a benchmark.

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…yet, increasing uncertainties may linger on AI tech path & tech competition

That said, despite the neutral impact near-term, we see more uncertainties are rising, especially in the medium term. The source of risks may arise from two major channels: **1)** the uncertainties on the ultimate memory demand under different technology pathways; **2)** the potential impacts from intensifying US-China tech competition.

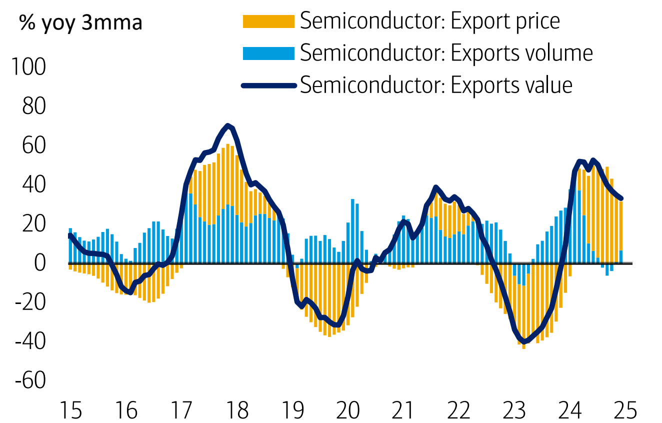
For the former, in terms of generative AI, traditional approach relies more on training (like GPT), where large models require HBM to handle massive parameters and intermediate data. Models developed by DeepSeek, however, utilize the "inference phase", of which it reduced activated parameters and memory footprint; hence, lowering the HBM dependency from training. That said, the long-context inference still requires efficient bandwidth utilization supported by HBM. As such, the key lies on whether the pathway emphasizing "inference" could deliver equivalent/or even larger HBM demand going forward, and this is still with question marks.

For the latter, China has proven its ability to develop own comparable Generative AI models under the already tightened advanced chip supply. With the ongoing measures in curbing China tech development from the US, any further tightening may dampen the China semi demand outlook. In recent months, we already noted lower semi/electrical machinery equipment exports to China (Exhibit 13), the potential tightened supply is also a tail risk.

In all, the risks may not necessarily translate into lower-than-before semi export growth in the near-term, but will certainly lead to higher volatility than before, and may impact the medium-term capex for major Korean companies. We remain vigilant on further development in the tech space.

Exhibit 12: Export growth for semiconductor

Semiconductor exports soared in the past few quarters, mainly through price recovery



Source: Haver, BofA Global Research

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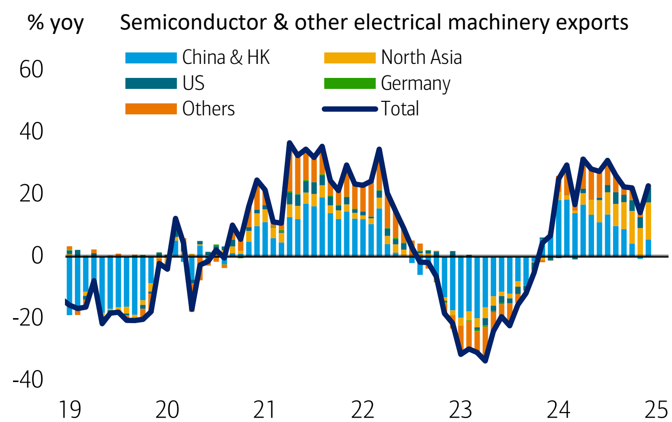
Exhibit 13: Semiconductor and related exports growth (by region)

Semi and other electrical machinery exports growth still held up, while that to China already slowed



Source: Haver, BofA Global Research

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Risks tilted to the downside; cut '25 GDP growth to 1.5%

In our Year-Ahead report (see report: 2025 Year Ahead) published in last Nov, we have addressed most of the concerns highlighted. However, the recent developments from both US and China, the two largest economies and largest Korean trade partners, make us believe more risks could be tilted to the downside.

Exhibit 14: Korea key economic indicators

We lower 2025 GDP forecast to 1.5% from 1.8%, mostly on lower export and investments

		2020	2021	2022	2023	2024	2025F	2026F
GDP by expenditure								
Real GDP growth	% yoy	-0.7	4.6	2.7	1.4	2.0	1.5	2.0
Final consumption expenditure	% yoy	-2.2	4.2	4.2	1.6	1.3	1.6	2.5
Fixed capital formation	% yoy	2.8	4.3	-0.2	1.4	-0.6	1.3	3.1
Contribution to GDP growth								
Net exports	pp	0.5	0.5	0.0	0.0	1.9	-0.4	0.0
Major activity indicators								
Household consumption	% yoy	-4.6	3.7	4.2	1.8	1.1	1.3	2.7
Construction investment	% yoy	1.7	-0.2	-3.5	1.5	-2.7	-1.5	4.7
Facility investment	% yoy	4.3	10.2	-0.3	1.1	1.8	3.7	1.2
Intangibles investment	% yoy	3.0	6.5	7.8	1.7	0.7	2.6	3.0
Exports of goods	% yoy	0.1	10.9	3.9	2.9	6.3	1.0	0.3
Import of goods	% yoy	0.2	12.5	4.7	-0.3	1.2	2.4	2.1
Trade balance (BOP)	US$ bn	80.6	75.7	15.6	37.7	100.1	82.8	46.7
Trade balance (Customs)	US$ bn	44.8	29.0	-47.1	-10.6	52.2	32.2	-4.7
Current account	% of GDP	4.3	4.4	1.4	1.8	5.4	4.6	1.9
Key price and policy indicators								
Headline CPI	% yoy avg	0.5	2.5	5.1	3.6	2.3	1.8	2.0
Core CPI (ex. food & energy)	% yoy avg	0.4	1.4	3.6	3.4	2.2	1.6	1.6
BoK base rate	% year-end	0.50	1.00	3.25	3.50	3.00	2.25	2.25
USDKRW	year-end	1,088	1,186	1,267	1,289	1,470	1,440	1,360

Source: Haver, CEIC, BofA Global Research

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In our view, the rising tariff risks for Korea and the rest of the world will pose near-term external demand shock and affect both export and investment activities in Korea. While the impact from recent tech innovation in AI space may take time to realize, the higher volatility in end-demand may also affect facility investment growth. Korea government has recently announced new policies toward facilitating investment activities in the high-tech space, but more efforts are needed amid the recent political instability.

Overall, with the potential capped additional easing to come from the monetary side, and the slow progress in potential fiscal stimulus package (via supplementary budget), we trim 2025 GDP growth to 1.5% from 1.8% previously. The revision is mostly reflected by a weaker net export contribution and lesser capital formation ahead of the intensifying trade conflicts. In terms of monetary policy expectations, as argued, we continue to expect three cuts this year, with the next policy rate cut likely to be delivered on February 25th. However, further cuts beyond 2.25% are less likely with the concern over FX volatility, even with this weaker growth outlook.

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