MiniMax Group (0100.HK)

Key debates post-M3 launch and path to optimal ARR quadrant; Buy

0100.HK	12m Price Target: **HK$860.00**	Price: **HK$416.60**	Upside: **106.4%**

BUY

Ronald Keung, CFA
+852-2978-0856 | ronald.keung@gs.com
Goldman Sachs (Asia) L.L.C.

Lincoln Kong, CFA
+852-2978-6603 | lincoln.kong@gs.com
Goldman Sachs (Asia) L.L.C.

Steve Qiu
+852-2978-2672 | steve.qiu@gs.com
Goldman Sachs (Asia) L.L.C.

We dive into investor concerns post MiniMax's M3 launch on Jun 1, where shares underperformed (-41% post launch vs. HSI's -4%) and M3 received mixed reception vs. HK-listed peer, Knowledge Atlas' (Zhipu, 2513.HK, not covered) post-GLM5.2 model launch strength; GLM5.2 was launched on Jun 13 and Knowledge Atlas' shares were up +34% vs. HSI's -1%). We attribute the divergence to 1) MiniMax's M3 pricing cuts post launch, which likely led to concerns on M3's performance with the price cut suggesting a lack of pricing power; 2) still-pending Hailuo 3 launch time (with concerns vs. Seedance's SOTA (state-of-the-art) performance/early-mover advantage and whether MiniMax's multi-modal strategies are diluting its ability to achieve frontier performances of each in a timely way); and 3) higher funding/balance sheet strength of peers (e.g. DeepSeek reportedly raised more than US$7bn on >US$50bn valuation, vs. MiniMax's IPO proceeds of US$0.6bn in Jan 2026).

- **M3 pricing cuts: We see MiniMax pursuing an alternative path to achieving its ARR targets via attractive pricing/higher adoption** (which we identify as one of two favorable quadrants under our token vs. pricing cross-plot framework, see Exhibit 1). Beyond the favorable quadrant of "Highest intelligence that drives highest pricing power" premium segment (focused on high-end coding scenarios, at US$0.9-1.2 per 1M tokens blended, e.g. GLM/Qwen Max models), we see MiniMax M3's pricing strategy pivot as an alternative path to achieving ARR scale via higher token share (driven by agentic usage in the lower-priced segment, at US$0.1-0.2 per 1M tokens blended), where "good enough" performance alongside MiniMax's global reach should position the company well in tapping the significant 2C/SME market globally (within our five key AI debates/themes, Exhibit 4). With M3's unique dataset/cost efficiencies (at 428 billion total parameter size,

Key Data

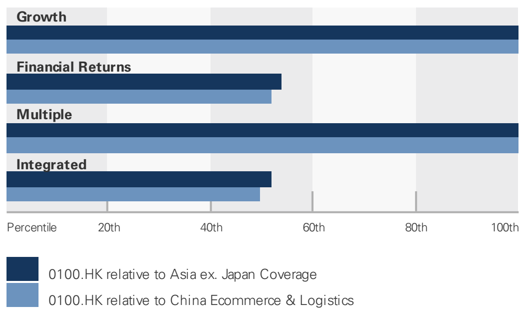
Market cap:	HK$130.7bn / $16.7bn
Enterprise value:	HK$124.3bn / $15.9bn
3m ADTV:	HK$1.5bn / $189.0mn
	China
	China Ecommerce & Logistics
M&A Rank:	3
Leases incl. in net debt & EV?:	Yes

GS Forecast

	12/25	12/26E	12/27E	12/28E
Revenue ($ mn) New	**79.0**	**300.0**	**880.1**	**2,469.6**
Revenue ($ mn) Old	79.0	300.0	880.1	2,469.6
EBITDA ($ mn)	(294.7)	(452.5)	(518.8)	(396.7)
EPS ($) New	**(2.31)**	**(1.35)**	**(1.48)**	**(1.08)**
EPS ($) Old	(2.31)	(1.31)	(1.31)	(0.62)
P/E (X)	NM	NM	NM	NM
P/B (X)	NM	NM	NM	NM
Dividend yield (%)	NM	NM	NM	NM
CROCI (%)	NM	NM	NM	NM

	6/25	12/25	6/26E	12/26E
EPS ($)	(1.38)	(0.93)	(1.69)	(2.14)

GS Factor Profile



Source: Company data, Goldman Sachs Research estimates. See disclosures for details.

BUY

MiniMax Group (0100.HK)

Rating since May 4, 2026

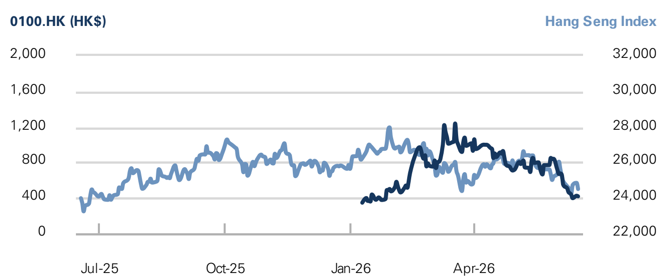
Ratios & Valuation

	12/25	12/26E	12/27E	12/28E
P/E (X)	NM	NM	NM	NM
P/B (X)	NM	NM	NM	NM
FCF yield (%)	–	(1.7)	(3.0)	(1.6)
EV/EBITDAR (X)	–	NM	NM	NM
EV/EBITDA (excl. leases) (X)	–	NM	NM	NM
CROCI (%)	NM	NM	NM	NM
ROE (%)	NM	NM	NM	NM
Net debt/equity (%)	18.3	33.3	10.3	0.4
Net debt/equity (excl. leases) (%)	18.4	33.4	10.5	0.7
Interest cover (X)	(442.5)	(1,713.9)	(794.3)	(421.5)
Days inventory outst, sales	–	–	–	–
Receivable days	40.9	40.9	40.9	40.9
Days payable outstanding	337.1	206.3	118.7	94.1
DuPont ROE (%)	9.5	17.3	16.2	10.7
Turnover (X)	0.1	0.2	0.6	1.4
Leverage (X)	NM	NM	NM	NM
Gross cash invested (ex cash) ($)	(3,187.6)	(3,323.0)	(3,282.8)	(3,359.6)
Average capital employed ($)	(2,094.6)	(3,189.4)	(3,238.4)	(3,252.4)
BVPS ($)	(24.37)	(7.82)	(9.15)	(10.05)

Growth & Margins (%)

	12/25	12/26E	12/27E	12/28E
Total revenue growth	158.9	279.6	193.3	180.6
EBITDA growth	(6.0)	(53.6)	(14.7)	23.5
EPS growth	(2.7)	41.4	(9.3)	27.1
DPS growth	NM	NM	NM	NM
EBIT margin	(376.2)	(151.8)	(59.4)	(16.3)
EBITDA margin	(372.8)	(150.8)	(59.0)	(16.1)
Net income margin	(317.4)	(141.5)	(53.8)	(14.2)

Price Performance



	3m	6m	12m
Absolute	(59.4)%	–	–
Rel. to the Hang Seng Index	(57.2)%	–	–

Source: FactSet. Price as of 16 Jun 2026 close.

Income Statement ($ mn)

	12/25	12/26E	12/27E	12/28E
Total revenue	79.0	300.0	880.1	2,469.6
Cost of goods sold	(59.0)	(221.9)	(666.3)	(1,624.7)
SG&A	(88.7)	(134.8)	(259.4)	(530.5)
R&D	(252.8)	(467.6)	(549.5)	(791.8)
Other operating inc./(exp.)	24.0	68.9	72.3	75.9
EBITDA	**(294.7)**	**(452.5)**	**(518.8)**	**(396.7)**
Depreciation & amortization	(2.7)	(2.9)	(3.9)	(4.8)
EBIT	**(297.4)**	**(455.4)**	**(522.8)**	**(401.5)**
Net interest inc./(exp.)	(0.7)	(0.3)	(0.7)	(1.0)
Income/(loss) from associates	–	–	–	–
Pre-tax profit	**(257.7)**	**(424.5)**	**(473.5)**	**(351.9)**
Provision for taxes	0.0	0.0	0.0	0.0
Minority interest	–	–	–	–
Preferred dividends	–	–	–	–
Net inc. (pre-exceptionals)	**(250.9)**	**(424.5)**	**(473.5)**	**(351.9)**
Post-tax exceptionals	(1,620.8)	(68.9)	(72.3)	(75.9)
Net inc. (post-exceptionals)	**(1,871.6)**	**(493.4)**	**(545.8)**	**(427.8)**
EPS (basic, pre-except) ($)	**(2.31)**	**(1.35)**	**(1.48)**	**(1.08)**
EPS (diluted, pre-except) ($)	**(2.31)**	**(1.35)**	**(1.48)**	**(1.08)**
EPS (basic, post-except) ($)	**(17.23)**	**(1.57)**	**(1.71)**	**(1.31)**
EPS (diluted, post-except) ($)	**(17.23)**	**(1.57)**	**(1.71)**	**(1.31)**
DPS ($)	–	–	–	–
Div. payout ratio (%)	0.0	0.0	0.0	0.0

Balance Sheet ($ mn)

	12/25	12/26E	12/27E	12/28E
Cash & cash equivalents	507.6	1,041.1	727.6	543.8
Accounts receivable	10.7	56.5	140.7	412.7
Inventory	–	–	–	–
Other current assets	489.0	502.7	560.7	719.7
Total current assets	**1,007.4**	**1,600.3**	**1,429.0**	**1,676.2**
Net PP&E	3.9	5.3	6.5	7.4
Net intangibles	–	–	–	–
Total investments	0.0	0.0	0.0	0.0
Other long-term assets	77.1	79.2	85.0	100.9
Total assets	**1,088.4**	**1,684.8**	**1,520.5**	**1,784.5**
Accounts payable	57.7	193.1	240.2	597.2
Short-term debt	35.5	235.5	435.5	535.5
Short-term lease liabilities	1.3	1.5	2.4	3.3
Other current liabilities	3,639.2	3,702.9	3,762.9	3,919.4
Total current liabilities	**3,733.6**	**4,133.1**	**4,441.0**	**5,055.4**
Long-term debt	–	–	–	–
Long-term lease liabilities	0.6	2.3	3.6	5.0
Other long-term liabilities	2.3	2.3	2.3	2.3
Total long-term liabilities	**3.0**	**4.6**	**5.9**	**7.3**
Total liabilities	**3,736.6**	**4,137.7**	**4,446.9**	**5,062.7**
Preferred shares	–	–	–	–
Total common equity	(2,648.2)	(2,452.7)	(2,926.2)	(3,278.0)
Minority interest	**--**	**--**	**--**	**--**
Total liabilities & equity	**1,088.4**	**1,684.8**	**1,520.5**	**1,784.5**
Net debt, adjusted	(486.0)	(819.4)	(306.0)	(22.1)

Cash Flow ($ mn)

	12/25	12/26E	12/27E	12/28E
Net income	(1,871.6)	(493.4)	(545.8)	(427.8)
D&A add-back	2.7	2.9	3.9	4.8
Minority interest add-back	–	–	–	–
Net (inc)/dec working capital	6.3	137.6	(41.0)	66.7
Other operating cash flow	1,583.0	69.1	73.0	76.9
Cash flow from operations	**(279.6)**	**(283.7)**	**(509.8)**	**(279.5)**
Capital expenditures	(0.9)	(1.5)	(1.8)	(2.1)
Acquisitions	(2,207.1)	–	–	–
Divestitures	4,865.2	–	–	–
Others	(13.7)	–	–	–
Cash flow from investing	**72.3**	**(1.5)**	**(1.8)**	**(2.1)**
Repayment of lease liabilities	(2.2)	(1.1)	(1.2)	(1.3)
Dividends paid (common & pref)	–	–	–	–
Inc/(dec) in debt	15.5	199.7	199.3	99.0
Other financing cash flows	427.5	620.0	0.0	0.0
Cash flow from financing	**426.1**	**818.6**	**198.2**	**97.8**
Total cash flow	**218.7**	**533.5**	**(313.5)**	**(183.8)**
Free cash flow	(282.8)	(286.3)	(512.8)	(282.9)

Source: Company data, Goldman Sachs Research estimates.

while performing on par with 1T+ models at a similarly low pricing level, therefore with most sustainable positive GPM even at US$0.2 pricing), strong ramp up in M3 model token volumes (reached #1 used by token volumes on third-party API platforms like OpenRouter over the past week) and sufficient computing resources (across domestic and int'l locations, where MiniMax announced its token speed has increased from 30TPS since launch to now at 70TPS, and will further speed up by another 30-40%), we believe MiniMax remains well positioned towards our revenue forecasts/its ARR targets.

- **Upcoming Hailuo 3 launch: Well positioned in a much-less competitive landscape vs. text models at favorable margins:** We believe MiniMax's next video-generation model, Hailuo 3, has mostly completed model training and is mainly taking time in preparation for a smoother launch in coming weeks (vs. M3 with multiple changes needed post-launch). With reports on Seedance 2.0's further ramp up in ARR to US$2bn (at 70% API margins, on par with MiniMax's current multi-modal API margin levels), we believe the video-generation segment remains much more favorable in terms of competitive landscape and pricing vs. foundation text models, which bodes well for MiniMax's multi-modal approach/more favorable overall margin outlook vs. other AI independent players that are generally focused on the foundation text segment (more fragmented at highly competitive pricing).
- **Funding will remain key for AI independent players given turnaround time around 2029:** We acknowledge funding/balance sheet strength will be one of the key important factors for AI independent players including MiniMax, given positive gross margins from API tokens/subscription plans will be key to cover AI training costs and opex, for China AI model companies to eventually reach EBIT breakeven, which we estimate will be still a few years out for MiniMax by 2029E. Higher ARR/frontier model performances will be important metrics to drive valuations of AI model companies and their ability to fund further model iterations/launches. MiniMax has announced A-share listing plans (alongside its HK listing in Jan 2026, with six-month lock up expiry to come in early July 2026).

Estimates & Valuation

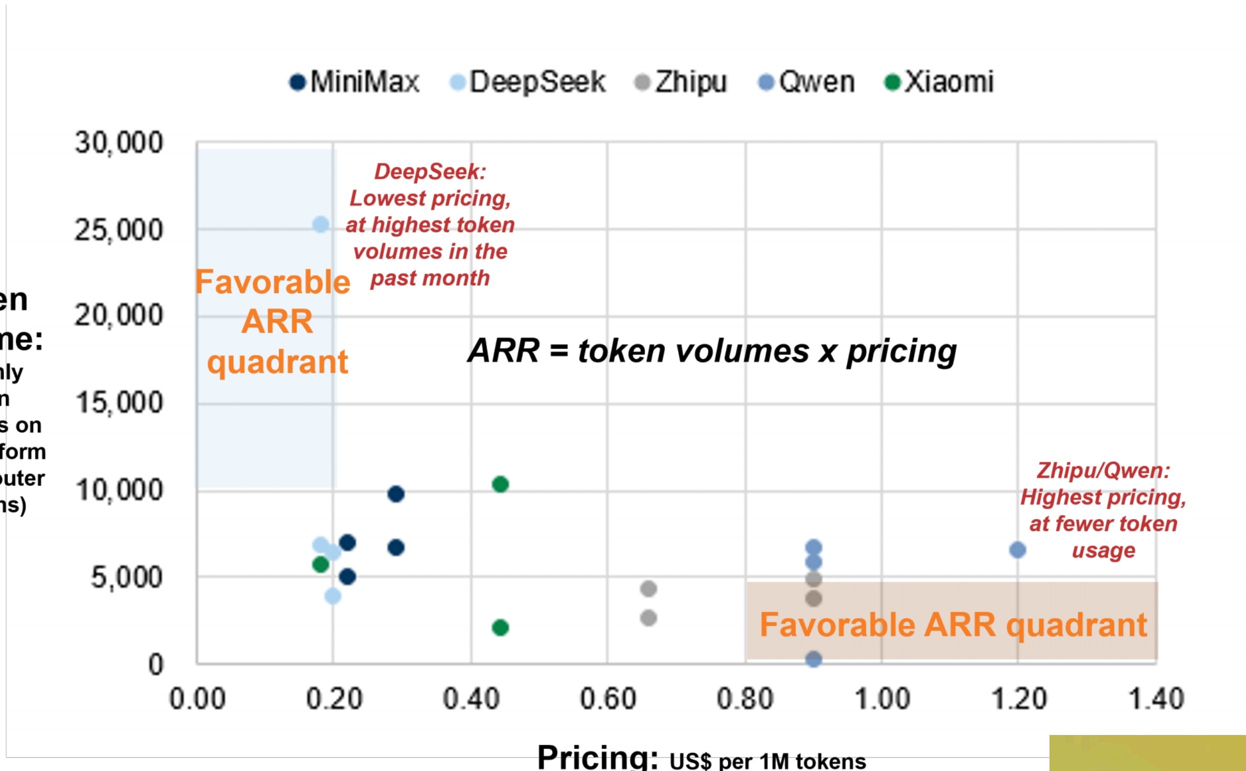
- **We maintain our 2026E/2027E revenues, but cut our earnings estimates by -4%/-13% on lower foundation text API gross margins (higher token volumes, lower pricing thus lower gross margins at unchanged revenues).** We lower our API revenue gross margins to 40%/30%/35% (from 50%/50%/55%) for FY26E/FY27E/FY28E on the back of M3's more aggressive pricing strategy, where we estimate multi-modal API margins to remain healthy, but with lower foundation text model API margins (we estimate at 10-20% for M3 vs. last generation M2.7 at 40%, GSe). We now estimate adj. net loss of -US$425mn/-US$485mn/-US$376mn vs. prior -US$409mn/-US$420mn/-US$203mn on lower API margins for foundation text models given price cuts across AI model companies in the low-end agentic-focused segment.
- **Our 12-m TP moves to HK$860 (prior HK$1,000, implied US$35bn valuation, vs. last close of US$17bn and HK-listed peer Knowledge Atlas of US$84bn)** is based on a DCF valuation, with 12% WACC and 2% terminal growth rate (consistent with

our coverage) that assumes continued market share gain of 0.2-0.7ppts p.a. on the back of its ongoing MiniMax foundation text + Hailuo multi-modal model adoptions (reaching 2.5% global foundational model subscription+API revenue market share by 2030E, unchanged), and a long-term adj. EBIT margin of 18% (from 21%) by 2035E, driven by operating leverage from training/other opex costs yet at lowered API margin assumptions. Accordingly, we also refresh our bull case valuation to HK$1,350 (vs. prior HK$1,600) and bear case valuation to HK$330 (vs. prior HK$420) with key assumptions in Exhibit 6.

We continue to see MiniMax as well positioned amongst Chinese AI model companies to capture the significant global TAM growth potential across text/coding, multi-modal and agentic/co-worker (digital labor) on the back of its comprehensive multi-modal offerings, strong commercialization capability, AI model per token cost advantages and high organizational efficiency. Maintain Buy.

Key risks: Weaker-than-expected model performance amid the competition in the global foundation model industry; Slower-than-expected path to profit visibility; Weaker-than-expected commercialization capability; risks around IP/content generation; cash burn/self-funding capability; risks around geopolitics under an intensified tech race between the US and China.

Exhibit 1: We identify two favorable ARR quadrants (in maximizing ARR) which is a combination of maximizing token volumes and/or pricing level. We see MiniMax emerging towards the top left after its pricing cuts decision, with strong pick-up in token volumes



Source: Company data, OpenRouter, Goldman Sachs Global Investment Research

Exhibit 2: MiniMax M3 has recently moved up to #1 on OpenRouter weekly token consumption ranking after launch, with significant increase in total tokens and China AI models' market share

As of Apr 1st, 2026 (Rolling 30 days)			As of Jun 8th, 2026 (Rolling 7 days)			As of Jun 15th, 2026 (Rolling 7 days)		
Ranking	Model	Tokens usage	Ranking	Model	Tokens usage	Ranking	Model	Tokens usage
1	MiMo-V2-Pro	6.87T	1	DeepSeek V4 Flash	3.69T	1	MiniMax M3	4.56T
2	MiniMax M2.5	6.02T	2	Hy3 preview	2.94T	2	DeepSeek V4 Flash	4.29T
3	Step 3.5 Flash	5.45T	3	MiniMax M3	2.50T	3	Hy3 preview	3.87T
4	DeepSeek V3.2	4.59T	4	MiMo-V2.5	2.19T	4	MiMo-V2.5	3.64T

Source: OpenRouter, Data compiled by Goldman Sachs Global Investment Research

Exhibit 3: Parameter and price of flagship models by key domestic players at a glance

	MiniMax	DeepSeek		Xiaomi		Tencent	Z.AI	Alibaba
Model	MiniMax M3	DeepSeek V4 Pro	DeepSeek V4 Flash	Mimo V2.5 Pro	Mimo V2.5	Hy3-preview	GLM-5.2	Qwen 3.7 Max
Parameters								
# of parameters (bn)	428	1600	284	1020	310	295	744	Not disclosed
# of activated parameters (bn)	23	49	13	42	15	21	40	Not disclosed
Activation %	5.4%	3.1%	4.6%	4.1%	4.8%	7.1%	5.4%	NA
Blended price (USD per 1M tokens)	0.22	0.18	0.06	0.18	0.06	0.10	0.9*	1.43

GLM-5.2 price not disclosed yet, we show GLM-5.1 blended price here; price blended at 7:2:1 (cache-input-output).

Source: Artificial Analysis, Company data, Data compiled by Goldman Sachs Global Investment Research

A recap of our views on five key AI topics (link)

Exhibit 4: Summary of the latest five key AI topics/questions, investor focuses/concerns and our views, published in our 'What to do from here' report

Key Topic	Key Questions	Investor Concerns	Our Views/Analysis
1. US vs. China AI Models	Are Chinese models "good enough" for day-to-day tasks, and will their lower prices disrupt the AI value chain pricing/margins?	Whether Chinese models' much lower pricing ($0.2-$1 per 1M tokens vs. US SOTA models at $4 blended) and "good enough" performance will impact global market shares and profit pools. Concerns also include computing resource access, anti-distillation tactics, and security regulations.	Chinese models will strengthen their value-for-money positioning. Token demand is splitting between frontier models for high-value scenarios and cheaper flash/SLM/Chinese models for agentic tasks. Chinese models hold up to 50% token market share on OpenRouter but represent only a single-digit share of the revenue pool. Multi-modal models have higher pricing power (e.g., Seedance 2.0).
2. Chinese AI Model Competition & Moats	Will there be another sector-wide price war or a two-tiered pricing landscape? How will the eventual China model landscape look?	Fragmentation (5-6 independents and 4 mega-caps) and whether frontier/intelligence leaders can establish pricing premiums (e.g., Qwen3.7 Max at $1.4, GLM-5.1 at $0.9 per 1M tokens) against deep price cuts from competitors like DeepSeek/MiMo ($0.2 per 1M tokens).	Coding, multi-modal performance, training efficiencies, and balance sheet strength are key differentiators. Output metrics show strong momentum, with Alibaba MaaS ARR targeting $4.4bn by year-end, ByteDance targeting $2.2bn for CY2026, and Zhipu and MiniMax both targeting >= $1bn ARR by 2026 year-end.
3. Token Growth Drivers & ROI	Will Enterprise or Consumer AI be bigger drivers? Can ROI be justified as token bills explode?	Token cost burdens from "tokenmaxxing" and agentic tools. According to an Entelligence.AI survey, 82% of enterprise tokens are lost to engineering overheads (debugging), with only 18% delivering actual value.	Agentic AI will drive a 24X surge in global token consumption by 2030, led by enterprise agents (55X) over consumer agents (12X), as detailed by our US Research Team. China's daily token scale reached 140 trillion in March 2026 where we estimate to grow 2.5X to 350 trillion by year-end. ROI will depend on all-in costs where token pricing is a key swing factor.
4. Hyperscaler Margins & Capex/FCF	Will Chinese hyperscalers see substantial capex uplifts like US peers? Why are AI cloud margins lower in China?	High-end chip access, domestic chip ramp-up, custom silicon/memory cost push, and the sustainability of capex if value only accrues to the hardware layer.	China's cycle is a year behind the US. Expect China hyperscalers to lift capex over 2H26-2027 as domestic chip supply ramps up. The pivot to domestic chips/custom silicon will accelerate over 2026-28. MaaS/cloud margins have upside (30% for AI-related revenues for Alibaba Cloud). Gross margin expansion of inference tokens is critical.
5. Consumer AI Agents	How will the landscape look between OS-level agents vs. In-app agents in China? What is the margin impact to agentic functions and eventual TAM?	Battle between OS-level agents (handset makers) and In-app agents (super-apps like Weixin), risk of standalone apps becoming backend utility providers, and less favorable cost structures due to high inference costs.	Consumer Agentic AI is a profound paradigm shift threatening traditional apps by taking over traffic entry points. Expect fierce strategic battles and partnerships (e.g., Meituan with Weixin/Yuanbao). Consumer AI faces risks of lower incremental margins due to inference costs, with revenue hinging on advertising TAM shifts rather than new enterprise TAM.

Source: Goldman Sachs Global Investment Research

Exhibit 5: MiniMax: Old vs. New estimates

December year-end (US$ mn)	New 2026E	Old 2026E	Diff (%)	New 2027E	Old 2027E	Diff (%)	New 2028E	Old 2028E	Diff (%)
AI-native products	149	149	0%	558	558	0%	1,622	1,622	0%
yoy %	182%	182%		273%	273%		191%	191%	
Open API platform and other AI-based enterprise services	151	151	0%	322	322	0%	848	848	0%
yoy %	480%	480%		114%	114%		163%	163%	
Revenue	**300**	**300**	**0%**	**880**	**880**	**0%**	**2,470**	**2,470**	**0%**
yoy %	280%	280%		193%	193%		181%	181%	
Cost of sales	(222)	(207)	7%	(666)	(602)	11%	(1,625)	(1,455)	12%
Amongst which: Inference cost	(181)	(181)	0%	(535)	(535)	0%	(1,262)	(1,262)	0%
Gross (loss)/profit	**78**	**93**	**-16%**	**214**	**278**	**-23%**	**845**	**1,014**	**-17%**
yoy %	289%	364%		174%	198%		295%	265%	
Selling and distribution expenses	(75)	(75)	0%	(180)	(180)	0%	(400)	(400)	0%
Administrative expenses	(60)	(60)	0%	(80)	(80)	0%	(130)	(130)	0%
Research and development expenses	(468)	(468)	0%	(549)	(549)	0%	(792)	(792)	0%
Amongst which: Training cost	(360)	(360)	0%	(400)	(400)	0%	(545)	(545)	0%
Operating profit	(524)	(509)	3%	(595)	(531)	-12%	(477)	(308)	-55%
Adj. operating profit - non-IFRS	**(455)**	**(440)**	**-3%**	**(523)**	**(458)**	**-14%**	**(401)**	**(232)**	**-73%**
yoy %	-53%	-48%		-15%	-4%		23%	49%	
(Loss)/Profit before tax	**(493)**	**(478)**	**-3%**	**(546)**	**(492)**	**-11%**	**(428)**	**(279)**	**-53%**
Income tax expense	-	-		-	-		-	-	
Net profit/(loss)	(493)	(478)	-3%	(546)	(492)	-11%	(428)	(279)	-53%
Adj. net profit/(loss) - non-IFRS	**(425)**	**(409)**	**-4%**	**(473)**	**(420)**	**-13%**	**(352)**	**(203)**	**-73%**
yoy %	-69%	-63%		-12%	-3%		26%	52%	
GPM	26%	31%	-502bps	24%	32%	-731bps	34%	41%	-686bps
Adj. OPM	-152%	-147%	-502bps	-59%	-52%	-731bps	-16%	-9%	-686bps
Adj. NPM	-141%	-136%	-502bps	-54%	-48%	-607bps	-14%	-8%	-602bps

Source: Goldman Sachs Global Investment Research

Exhibit 6: MiniMax: Our base, bear and bull case valuations

Scenarios for valuation	Bear case	Base case	Bull case
	2027E EV/Sales-based	DCF-based	DCF-based, mid-2028E ARR-implied
MiniMax	Applying 15X EV/Sales multiple to 27E revenue of US$880mn. Bear case valuation implies MiniMax's revenue pool share to stabilize at total market share of 0.7% in 2027 to 2030E.	Assuming MiniMax's revenue pool share to expand 0.2-0.7ppts p.a. from 2027 to 2030E, reach long-term market share of 2.5%, and 18% EBIT margin. Applying 12% WACC and 2% terminal growth rate (consistent with our coverage).	Bull case valuation assumes MiniMax's revenue pool share to expand 0.2-2.2ppts p.a. from 2027 to 2030E, reaching a total market share of 5.4% by 2030E. Implies 25X mid-2028E ARR, discounting back using 12% p.a.
Valuation per share (HK$)	**330**	**860**	**1350**
Valuation (US$bn)	**14**	**35**	**54**
Upside/downside	**-22%**	**102%**	**218%**

Source: Goldman Sachs Global Investment Research

Exhibit 7: MiniMax: Our DCF valuation

(USD mn)	2022	2023	2024	2025	2026E	2027E	2028E	2029E	2030E	2031-35E
Revenue	**0**	**3**	**31**	**79**	**300**	**880**	**2,470**	**5,908**	**11,554**	**147,896**
yoy %			782%	159%	280%	193%	181%	139%	96%	
Implied % of revenue pool		0.1%	0.3%	0.3%	0.5%	0.7%	1.1%	1.7%	2.5%	
					0.2%	0.2%	0.4%	0.6%	0.7%	
Inferencing cost as % of revenue		118%	85%	70%	60%	61%	51%	52%	51%	
Training cost as % of revenue		1365%	461%	228%	120%	45%	22%	14%	10%	
Non-GAAP operating profit	**(13)**	**(98)**	**(280)**	**(297)**	**(455)**	**(523)**	**(401)**	**(42)**	**567**	**22,523**
Non-GAAP operating margin %		-2831%	-917%	-376%	-152%	-59%	-16%	-1%	5%	15%
Income tax rate %	0%	0%	0%	0%	0%	0%	0%	0%	-18%	-18%
Income tax expenses/benefits	-	-	-	-	-	-	-	-	(102)	(4,054)
NOPAT (adjusted)	(13)	(98)	(280)	(297)	(455)	(523)	(401)	(42)	465	18,469
Depreciation & amortization	0	1	2	3	3	4	5	5	6	47
Change in working capital	2	26	14	6	138	(41)	67	49	(10)	658
Capital expenditures	(1)	(4)	(2)	(3)	(4)	(5)	(6)	(7)	(7)	(57)
Free cash flow	**(12)**	**(76)**	**(266)**	**(292)**	**(319)**	**(565)**	**(336)**	**5**	**453**	**19,116**
Free cash flow (with terminal value), 12% WACC	(12)	(76)	(266)	(292)	(319)	(565)	(336)	5	453	89,899
FCF margin	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**4%**	**13%**

Source: Company data, Goldman Sachs Global Investment Research

The authors would like to thank Iris Xiao for her contribution to the report.

Related research

Navigating China Internet/AI models: Key AI & mega-cap debates; What to do from here?, June 9, 2026

Navigating China Internet/AI models: Framing five key AI debates; Buy Alibaba (on CL); upgrade MiniMax to Buy, May 4, 2026

MiniMax Group (0100.HK): Global full-modal AI company reaching hypergrowth stage; initiate at Neutral on valuation, Feb 23, 2026

Price Target Risks and Methodology - MiniMax Group

We are Buy rated on MiniMax with a 12-month target price of HK$860. Our valuation is based on DCF valuation, with 12% WACC and 2% terminal growth rate, where we assume 0.2-0.7ppts global subscription+API revenue market share gains p.a. over 2027-30E (reach LT market share of 2.5%).

Key risks: Weaker-than-expected model performance amid the competition in the global foundation model industry; Slower-than-expected path to profit visibility; Weaker-than-expected commercialization capability; risks around IP/content generation; cash burn/self-funding capability; risks around geopolitics under an intensified tech race between the US and China.

Disclosure Appendix

Reg AC

We, Ronald Keung, CFA and Damian Xie, hereby certify that all of the views expressed in this report accurately reflect our personal views about the subject company or companies and its or their securities. We also certify that no part of our compensation was, is or will be, directly or indirectly, related to the specific recommendations or views expressed in this report.

Unless otherwise stated, the individuals listed on the cover page of this report are analysts in Goldman Sachs' Global Investment Research division.

Contributing Authors: Ronald Keung, CFA Goldman Sachs (Asia) L.L.C., Lincoln Kong, CFA Goldman Sachs (Asia) L.L.C., Steve Qiu Goldman Sachs (Asia) L.L.C., Damian Xie Goldman Sachs (Asia) L.L.C..

Unless otherwise stated, the individuals listed in the Contributing Authors disclosure of this report are analysts in Goldman Sachs' Global Investment Research division.

GS Factor Profile

The Goldman Sachs Factor Profile provides investment context for a stock by comparing key attributes to the market (i.e. our universe of rated stocks) and its sector peers. The four key attributes depicted are: Growth, Financial Returns, Multiple (e.g. valuation) and Integrated (a composite of Growth, Financial Returns and Multiple). Growth, Financial Returns and Multiple are calculated by using normalized ranks for specific metrics for each stock. The normalized ranks for the metrics are then averaged and converted into percentiles for the relevant attribute. The precise calculation of each metric may vary depending on the fiscal year, industry and region, but the standard approach is as follows:

Growth is based on a stock's forward-looking sales growth, EBITDA growth and EPS growth (for financial stocks, only EPS and sales growth), with a higher percentile indicating a higher growth company. **Financial Returns** is based on a stock's forward-looking ROE, ROCE and CROCI (for financial stocks, only ROE), with a higher percentile indicating a company with higher financial returns. **Multiple** is based on a stock's forward-looking P/E, P/B, price/dividend (P/D), EV/EBITDA, EV/FCF and EV/Debt Adjusted Cash Flow (DACF) (for financial stocks, only P/E, P/B and P/D), with a higher percentile indicating a stock trading at a higher multiple. The **Integrated** percentile is calculated as the average of the Growth percentile, Financial Returns percentile and (100% - Multiple percentile).

Financial Returns and Multiple use the Goldman Sachs analyst forecasts at the fiscal year-end at least three quarters in the future. Growth uses inputs for the fiscal year at least seven quarters in the future compared with the year at least three quarters in the future (on a per-share basis for all metrics).

For a more detailed description of how we calculate the GS Factor Profile, please contact your GS representative.

M&A Rank

Across our global coverage, we examine stocks using an M&A framework, considering both qualitative factors and quantitative factors (which may vary across sectors and regions) to incorporate the potential that certain companies could be acquired. We then assign a M&A rank as a means of scoring companies under our rated coverage from 1 to 3, with 1 representing high (30%-50%) probability of the company becoming an acquisition target, 2 representing medium (15%-30%) probability and 3 representing low (0%-15%) probability. For companies ranked 1 or 2, in line with our standard departmental guidelines we incorporate an M&A component into our target price. M&A rank of 3 is considered immaterial and therefore does not factor into our price target, and may or may not be discussed in research.

Quantum

Quantum is Goldman Sachs' proprietary database providing access to detailed financial statement histories, forecasts and ratios. It can be used for in-depth analysis of a single company, or to make comparisons between companies in different sectors and markets.

Disclosures

Other disclosures

Third party brands used in this report are the property of their respective owners, and are used here for informational purposes only. The use of such brands should not be viewed as an endorsement, affiliation or sponsorship by or for Goldman Sachs or any of its products/services.

The rating(s) for MiniMax Group is/are relative to the other companies in its/their coverage universe: Alibaba Group (ADR), Alibaba Group (H), DiDi Global Inc., Full Truck Alliance Co., J&T Global Express Ltd., JD Logistics, JD.com Inc. (ADR), JD.com Inc. (H), Jingdong Industrials Inc., Kerry Logistics Network Ltd., Meituan, MiniMax Group, PDD Holdings, S.F. Holding (A), S.F. Holding (H), STO Express, Sinotrans Ltd. (A), Sinotrans Ltd. (H), Tencent Holdings, Vipshop Holdings, YTO Express Group, Yunda Holding, ZTO Express (Cayman) Inc. (ADR), ZTO Express (Cayman) Inc. (H)

Company-specific regulatory disclosures

The following disclosures relate to relationships between The Goldman Sachs Group, Inc. (with its affiliates, "Goldman Sachs") and companies covered by Goldman Sachs Global Investment Research and referred to in this research.

Goldman Sachs has received compensation for investment banking services in the past 12 months: MiniMax Group (HK$416.60)

Goldman Sachs expects to receive or intends to seek compensation for investment banking services in the next 3 months: MiniMax Group (HK$416.60)

Goldman Sachs had an investment banking services client relationship during the past 12 months with: MiniMax Group (HK$416.60)

Distribution of ratings/investment banking relationships

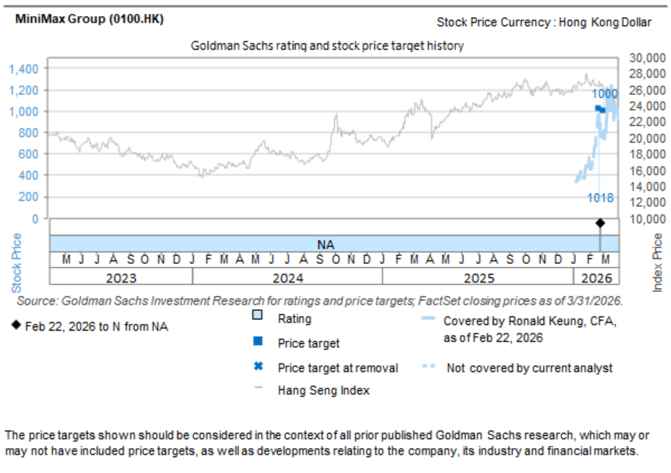
Goldman Sachs Investment Research global Equity coverage universe

	Rating Distribution			Investment Banking Relationships		
	Buy	Hold	Sell	Buy	Hold	Sell
Global	50%	34%	16%	65%	60%	45%

As of April 1, 2026, Goldman Sachs Global Investment Research had investment ratings on 3,074 equity securities. Goldman Sachs assigns stocks as Buys and Sells on various regional Investment Lists; stocks not so assigned are deemed Neutral. Such assignments equate to Buy, Hold and Sell for the purposes of the above disclosure required by the FINRA Rules. See 'Ratings, Coverage universe and related definitions' below. The Investment Banking

Relationships chart reflects the percentage of subject companies within each rating category for whom Goldman Sachs has provided investment banking services within the previous twelve months.

Price target and rating history chart(s)



Target price history table(s)

MiniMax Group (0100.HK)

Date of report	Target price (HK$)	Closing price (HK$)
03-Mar-26	1,000.00	821.00
22-Feb-26	1,018.00	970.00

Price targets shown in table(s) are unadjusted for corporate actions.

Regulatory disclosures

Disclosures required by United States laws and regulations

See company-specific regulatory disclosures above for any of the following disclosures required as to companies referred to in this report: manager or co-manager in a pending transaction; 1% or other ownership; compensation for certain services; types of client relationships; managed/co-managed public offerings in prior periods; directorships; for equity securities, market making and/or specialist role. Goldman Sachs trades or may trade as a principal in debt securities (or in related derivatives) of issuers discussed in this report.

The following are additional required disclosures: **Ownership and material conflicts of interest:** Goldman Sachs policy prohibits its analysts, professionals reporting to analysts and members of their households from owning securities of any company in the analyst's area of coverage. **Analyst compensation:** Analysts are paid in part based on the profitability of Goldman Sachs, which includes investment banking revenues. **Analyst as officer or director:** Goldman Sachs policy generally prohibits its analysts, persons reporting to analysts or members of their households from serving as an officer, director or advisor of any company in the analyst's area of coverage. **Non-U.S. Analysts:** Non-U.S. analysts may not be associated persons of Goldman Sachs & Co. LLC and therefore may not be subject to FINRA Rule 2241 or FINRA Rule 2242 restrictions on communications with a subject company, public appearances and trading in securities covered by the analysts.

Distribution of ratings: See the distribution of ratings disclosure above. **Price chart:** See the price chart, with changes of ratings and price targets in prior periods, above, or, if electronic format or if with respect to multiple companies which are the subject of this report, on the Goldman Sachs website at https://www.gs.com/research/hedge.html.

Additional disclosures required under the laws and regulations of jurisdictions other than the United States

The following disclosures are those required by the jurisdiction indicated, except to the extent already made above pursuant to United States laws and regulations. **Australia:** Goldman Sachs Australia Pty Ltd and its affiliates are not authorised deposit-taking institutions (as that term is defined in the Banking Act 1959 (Cth)) in Australia and do not provide banking services, nor carry on a banking business, in Australia. This research, and any access to it, is intended only for "wholesale clients" within the meaning of the Australian Corporations Act, unless otherwise agreed by Goldman Sachs. In producing research reports, members of Global Investment Research of Goldman Sachs Australia may attend site visits and other meetings hosted by the companies and other entities which are the subject of its research reports. In some instances the costs of such site visits or meetings may be met in part or in whole by the issuers concerned if Goldman Sachs Australia considers it is appropriate and reasonable in the specific circumstances relating to the site visit or meeting. To the extent that the contents of this document contains any financial product advice, it is general advice only and has been prepared by Goldman Sachs without taking into account a client's objectives, financial situation or needs. A client should, before acting on any such advice, consider the appropriateness of the advice having regard to the client's own objectives, financial situation and needs. A copy of certain Goldman Sachs Australia and New Zealand disclosure of interests and a copy of Goldman Sachs' Australian Sell-Side Research Independence Policy Statement are available at: https://www.goldmansachs.com/disclosures/australia-new-zealand/index.html. **Brazil:** Disclosure information in relation to CVM Resolution n. 20 is available at https://www.gs.com/worldwide/brazil/area/gir/index.html. Where applicable, the Brazil-registered analyst primarily responsible for the content of this research report, as defined in Article 20 of CVM Resolution n. 20, is the first author named at the beginning of this report, unless indicated otherwise at the end of the text. **Canada:** This information is being provided to you for information purposes only and is not, and under no circumstances should be construed as, an advertisement, offering or solicitation by Goldman Sachs & Co. LLC for purchasers of securities in Canada to trade in any Canadian security. Goldman Sachs & Co. LLC is not registered as a dealer in any jurisdiction in Canada under applicable Canadian securities laws and generally is not permitted to trade in Canadian securities and may be prohibited from selling certain securities and products in certain jurisdictions in Canada. If you wish to trade in any Canadian securities or other products in Canada please contact Goldman Sachs Canada Inc., an affiliate of The Goldman Sachs Group Inc., or another registered Canadian dealer. **Hong Kong:** Further information on the securities of covered companies referred to in this research may be obtained on request from Goldman Sachs (Asia) L.L.C. **India:** Further information on the subject company or companies referred to in this research may be obtained from Goldman Sachs (India) Securities Private Limited, Research Analyst - SEBI Registration Number INH000001493, 10th Floor, Ascent-Worli, Sudam Kalu Ahire Marg, Worli, Mumbai-400 025, India, Corporate Identity Number U74140MH2006FTC160634, Phone +91 22 6616 9000, Fax +91 22 6616 9001. Goldman Sachs may beneficially own 1% or more of the securities (as such term is defined in clause 2 (h) the Indian Securities Contracts (Regulation) Act, 1956) of the subject company or companies referred to in this research report. Investment in securities market are subject to market risks. Read all the related documents carefully before investing. Registration granted by SEBI and certification from NISM in no way guarantee performance of the intermediary or provide any assurance of returns to investors. Goldman Sachs (India) Securities Private Limited compliance officer and investor grievance contact details can be found at: https://www.goldmansachs.com/worldwide/india/documents/Grievance-Redressal-and-Escalation-Matrix.pdf, and a copy of the annual audit compliance report can be found at this link: https://publishing.gs.com/content/site/india-annual-compliance-report.html. **Japan:** See below. **Korea:** This research, and any access to it, is intended only for "professional investors" within the meaning of the Financial Services and Capital Markets Act, unless otherwise agreed by Goldman Sachs. Further information on the subject company or companies referred to in this research may be obtained from Goldman Sachs (Asia) L.L.C., Seoul Branch. **New Zealand:** Goldman Sachs New Zealand Limited and its affiliates are neither "registered banks" nor "deposit takers" (as defined in the Reserve Bank of New Zealand Act 1989) in New Zealand. This research, and any access to it, is intended for "wholesale clients" (as defined in the Financial Advisers Act 2008) unless otherwise agreed by Goldman Sachs. A copy of certain Goldman Sachs Australia and New Zealand disclosure of interests is available at: https://www.goldmansachs.com/disclosures/australia-new-zealand/index.html. **Russia:** Research reports distributed in the Russian Federation are not advertising as defined in the Russian legislation, but are information and analysis not having product promotion as their main purpose and do not provide appraisal within the meaning of the Russian legislation on appraisal activity. Research reports do not constitute a personalized investment recommendation as defined in Russian laws and regulations, are not addressed to a specific client, and are prepared without analyzing the financial circumstances, investment profiles or risk profiles of clients. Goldman Sachs assumes no responsibility for any investment decisions that may be taken by a client or any other person based on this research report. **Singapore:** Goldman Sachs (Singapore) Pte. (Company Number: 198602165W), which is regulated by the Monetary Authority of Singapore, accepts legal responsibility for this research, and should be contacted with respect to any matters arising from, or in connection with, this research. **Taiwan:** This material is for reference only and must not be reprinted without permission. Investors should carefully consider their own investment risk. Investment results are the responsibility of the individual investor. **United Kingdom:** Persons who would be categorized as retail clients in the United Kingdom, as such term is defined in the rules of the Financial Conduct Authority, should read this research in conjunction with prior Goldman Sachs research on the covered companies referred to herein and should refer to the risk warnings that have been sent to them by Goldman Sachs International. A copy of these risks warnings, and a glossary of certain financial terms used in this report, are available from Goldman Sachs International on request.

European Union and United Kingdom: Disclosure information in relation to Article 6 (2) of the European Commission Delegated Regulation (EU) (2016/958) supplementing Regulation (EU) No 596/2014 of the European Parliament and of the Council (including as that Delegated Regulation is implemented into United Kingdom domestic law and regulation following the United Kingdom's departure from the European Union and the European Economic Area) with regard to regulatory technical standards for the technical arrangements for objective presentation of investment recommendations or other information recommending or suggesting an investment strategy and for disclosure of particular interests or indications of conflicts of interest is available at https://www.gs.com/disclosures/europeanpolicy.html which states the European Policy for Managing Conflicts of Interest in Connection with Investment Research.

Japan: Goldman Sachs Japan Co., Ltd. is a Financial Instrument Dealer registered with the Kanto Financial Bureau under registration number Kinsho 69, and a member of Japan Securities Dealers Association, Financial Futures Association of Japan Type II Financial Instruments Firms Association, and Investment Management Association of Japan. Sales and purchase of equities are subject to commission pre-determined with clients plus consumption tax. See company-specific disclosures as to any applicable disclosures required by Japanese stock exchanges, the Japanese Securities Dealers Association or the Japanese Securities Finance Company.

Ratings, coverage universe and related definitions

Buy (B), Neutral (N), Sell (S) Analysts recommend stocks as Buys or Sells for inclusion on various regional Investment Lists. Being assigned a Buy or Sell on an Investment List is determined by a stock's total return potential relative to its coverage universe. Any stock not assigned as a Buy or a Sell on an Investment List with an active rating (i.e., a stock that is not Rating Suspended, Not Rated, Early-Stage Biotech, Coverage Suspended or Not Covered), is deemed Neutral. Each region manages Regional Conviction Lists, which are selected from Buy rated stocks on the respective region's Investment Lists and represent investment recommendations focused on the size of the total return potential and/or the likelihood of the realization of the return across their respective areas of coverage. The addition or removal of stocks from such Conviction Lists are managed by the Investment Review Committee or other designated committee in each respective region and do not represent a change in the analysts' investment rating for such stocks.

Total return potential represents the upside or downside differential between the current share price and the price target, including all paid or anticipated dividends, expected during the time horizon associated with the price target. Price targets are required for all covered stocks. The total return potential, price target and associated time horizon are stated in each report adding or reiterating an Investment List membership.

Coverage Universe: A list of all stocks in each coverage universe is available by primary analyst, stock and coverage universe at https://www.gs.com/research/hedge.html.

Not Rated (NR). The investment rating, target price and earnings estimates (where relevant) are removed pursuant to Goldman Sachs policy when Goldman Sachs is acting in an advisory capacity in a merger or in a strategic transaction involving this company, when there are legal, regulatory or policy constraints due to Goldman Sachs' involvement in a transaction, and in certain other circumstances. **Early-Stage Biotech (ES).** An investment rating and a target price are not assigned pursuant to Goldman Sachs policy when this company has neither a drug, treatment or medical device that has passed a Phase II clinical trial nor a license to distribute a post-Phase II drug, treatment or medical device. **Rating Suspended (RS).** Goldman Sachs Research has suspended the investment rating and price target for this stock, because there is not a sufficient fundamental basis for determining an investment rating or target price. The previous investment rating and target price, if any, are no longer in effect for this stock and should not be relied upon. **Coverage Suspended (CS).** Goldman Sachs has suspended coverage of this company. **Not Covered (NC).** Goldman Sachs does not cover this company.

Global product; distributing entities

Goldman Sachs Global Investment Research produces and distributes research products for clients of Goldman Sachs on a global basis. Analysts based in Goldman Sachs offices around the world produce research on industries and companies, and research on macroeconomics, currencies, commodities and portfolio strategy. This research is disseminated in Australia by Goldman Sachs Australia Pty Ltd (ABN 21 006 797 897); in Brazil by Goldman Sachs do Brasil Corretora de Títulos e Valores Mobiliários S.A.; Public Communication Channel Goldman Sachs Brazil: 0800 727 5764 and / or contatogoldmanbrasil@gs.com. Available Weekdays (except holidays), from 9am to 6pm. Canal de Comunicação com o Público Goldman Sachs Brasil: 0800 727 5764 e/ou contatogoldmanbrasil@gs.com. Horário de funcionamento: segunda-feira à sexta-feira (exceto feriados), das 9h às 18h; in Canada by Goldman Sachs & Co. LLC; in Hong Kong by Goldman Sachs (Asia) L.L.C.; in India by Goldman Sachs (India) Securities Private Ltd.; in Japan by Goldman Sachs Japan Co., Ltd.; in the Republic of Korea by Goldman Sachs (Asia) L.L.C., Seoul Branch; in New Zealand by Goldman Sachs New Zealand Limited; in Russia by OOO Goldman Sachs; in Singapore by Goldman Sachs (Singapore) Pte. (Company Number: 198602165W); and in the United States of America by Goldman Sachs & Co. LLC. Goldman Sachs International has approved this research in connection with its distribution in the United Kingdom.

Goldman Sachs International ("GSI"), authorised by the Prudential Regulation Authority ("PRA") and regulated by the Financial Conduct Authority ("FCA") and the PRA, has approved this research in connection with its distribution in the United Kingdom.

European Economic Area: Goldman Sachs Bank Europe SE ("GSBE") is a credit institution incorporated in Germany and, within the Single Supervisory Mechanism, subject to direct prudential supervision by the European Central Bank and in other respects supervised by German Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht, BaFin) and Deutsche Bundesbank and disseminates research within the European Economic Area.

General disclosures

This research is for our clients only. Other than disclosures relating to Goldman Sachs, this research is based on current public information that we consider reliable, but we do not represent it is accurate or complete, and it should not be relied on as such. The information, opinions, estimates and forecasts contained herein are as of the date hereof and are subject to change without prior notification. We seek to update our research as appropriate, but various regulations may prevent us from doing so. Other than certain industry reports published on a periodic basis, the large majority of reports are published at irregular intervals as appropriate in the analyst's judgment.

Goldman Sachs conducts a global full-service, integrated investment banking, investment management, and brokerage business. We have investment banking and other business relationships with a substantial percentage of the companies covered by Global Investment Research. Goldman Sachs & Co. LLC, the United States broker dealer, is a member of SIPC (https://www.sipc.org).

Our salespeople, traders, and other professionals may provide oral or written market commentary or trading strategies to our clients and principal trading desks that reflect opinions that are contrary to the opinions expressed in this research. Our asset management area, principal trading desks and investing businesses may make investment decisions that are inconsistent with the recommendations or views expressed in this research.

The analysts named in this report may have from time to time discussed with our clients, including Goldman Sachs salespersons and traders, or may discuss in this report, trading strategies that reference catalysts or events that may have a near-term impact on the market price of the equity securities discussed in this report, which impact may be directionally counter to the analyst's published price target expectations for such stocks. Any such trading strategies are distinct from and do not affect the analyst's fundamental equity rating for such stocks, which rating reflects a stock's return potential relative to its coverage universe as described herein.

We and our affiliates, officers, directors, and employees will from time to time have long or short positions in, act as principal in, and buy or sell, the securities or derivatives, if any, referred to in this research, unless otherwise prohibited by regulation or Goldman Sachs policy.

The views attributed to third party presenters at Goldman Sachs arranged conferences, including individuals from other parts of Goldman Sachs, do not necessarily reflect those of Global Investment Research and are not an official view of Goldman Sachs.

Any third party referenced herein, including any salespeople, traders and other professionals or members of their household, may have positions in the products mentioned that are inconsistent with the views expressed by analysts named in this report.

This research is not an offer to sell or the solicitation of an offer to buy any security in any jurisdiction where such an offer or solicitation would be illegal. It does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients. Clients should consider whether any advice or recommendation in this research is suitable for their particular circumstances and, if appropriate, seek professional advice, including tax advice. The price and value of investments referred to in this research and the income from them may fluctuate. Past performance is not a guide to future performance, future returns are not guaranteed, and a loss of original capital may occur. Fluctuations in exchange rates could have adverse effects on the value or price of, or income derived from, certain investments.

Certain transactions, including those involving futures, options, and other derivatives, give rise to substantial risk and are not suitable for all investors. Investors should review current options and futures disclosure documents which are available from Goldman Sachs sales representatives or at https://www.theocc.com/about/publications/character-risks.jsp and https://www.goldmansachs.com/disclosures/cftc_fcm_disclosures. Transaction costs may be significant in option strategies calling for multiple purchase and sales of options such as spreads. Supporting documentation will be supplied upon request.

Differing Levels of Service provided by Global Investment Research: The level and types of services provided to you by Goldman Sachs Global Investment Research may vary as compared to that provided to internal and other external clients of GS, depending on various factors including your individual preferences as to the frequency and manner of receiving communication, your risk profile and investment focus and perspective (e.g., marketwide, sector specific, long term, short term), the size and scope of your overall client relationship with GS, and legal and regulatory constraints. As an example, certain clients may request to receive notifications when research on specific securities is published, and certain clients may request that specific data underlying analysts' fundamental analysis available on our internal client websites be delivered to them electronically through data feeds or otherwise. No change to an analyst's fundamental research views (e.g., ratings, price targets, or material changes to earnings estimates for equity securities), will be communicated to any client prior to inclusion of such information in a research report broadly disseminated through electronic publication to our internal client websites or through other means, as necessary, to all clients who are entitled to receive such reports.

All research reports are disseminated and available to all clients simultaneously through electronic publication to our internal client websites. Not all research content is redistributed to our clients or available to third-party aggregators, nor is Goldman Sachs responsible for the redistribution of our research by third party aggregators. For research, models or other data related to one or more securities, markets or asset classes (including related services) that may be available to you, please contact your GS representative or go to https://research.gs.com.

Disclosure information is also available at https://www.gs.com/research/hedge.html or from Research Compliance, 200 West Street, New York, NY 10282.