SECTOR UPDATE

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Autos (OVERWEIGHT)

Expanding into the US with robotics

- Boston Dynamics last week released a video showing E-Atlas autonomously sorting and moving parts.
- We believe unmanned factories—integrating robotics and smart systems—could help manufacturers withstand headwinds from US tariffs and competition with Chinese EVs.
- Hyundai Motor and Kia derive more than 60% of their operating profit from the US. Deploying robotics at their US plants from end-2025 should enhance operational visibility.

AT A GLANCE

Hyundai Motor (005380 KS,)		
Target price	KRW285,000	30.4%
BUY		
Kia (000270 KS, 103,000)		
Target price	KRW140,000	35.9%
BUY		
Hyundai Mobis (012330 KS,)		
Target price	KRW370,000	23.5%
BUY		
Hyundai AutoEver (307950 KS,)		
Target price	KRW195,000	20%
BUY		

WHAT'S THE STORY?

E-Atlas equipped with problem-solving capabilities: Boston Dynamics highlighted progress in large behavior models (LBMs) developed with Toyota Research Institute (TRI) in a YouTube video featuring its E-Atlas humanoid robot.

- **E-Atlas running on LBMs:** LBMs generate generalized knowledge by training on hundreds of behavioral patterns through videos, simulations, and sensor data, and can be materialized as end-to-end policies. When language, visual, or sensor inputs are received, Atlas translates them into whole-body control commands—enabling autonomous planning and execution without human input.

  TRI has particular strength in LBMs. Boston Dynamics signed a cooperation agreement with TRI in Oct 2024 and is also partnering with Nvidia on reinforcement learning in simulation environments.

- **E-Atlas carrying out diverse tasks:** The video shows E-Atlas performing whole-body movements—walking, crouching, lifting—to accomplish a range of packing, sorting, and organizing tasks.

- **E-Atlas solving problems autonomously:** When engineers disrupt its tasks (*eg*, closing a box lid or scattering parts on the floor), Atlas adapts by reopening the lid or picking up the parts and placing them back in the box.

  Boston Dynamics has long excelled in control technology, but it lacks AI capabilities. Thus, Hyundai Motor Group (HMG) drew criticism for its acquisition of the robotics firm. Yet, partnerships with TRI and Nvidia have strengthened its AI capacity. At end-2025, Atlas is slated for deployment at HMG's Metaplant, raising expectations of meaningful economic benefits from humanoid robotics.

(Continued on the next page)

- **HMG injecting around KRW700b into Boston Dynamics in Aug 2025:** Boston Dynamics has conducted two rights offerings since it was acquired by HMG in 2021. SoftBank declined to participate, lifting HMG's stake to nearly 90%.

Robotics, a game changer for auto industry costs and production: Robotics should eliminate two long-standing risks for the auto industry—labor relations and geopolitics.

- **Auto industry as major employer:** The auto industry has the world's most extensive value chain. As a major employer, it is highly exposed to the risk of strikes. In Korea, rigid labor relations have long been a discount factor.

  Given the high labor portion of costs, automakers have historically located production in low-wage countries and exported to high-demand regions such as the US and Europe. In today's environment of elevated geopolitical risk, autos are often bargaining chips in trade negotiations.

- **Humanoid adoption to slash labor costs…** Early humanoid robots are expected to cost about USD100,000. If one operates continuously for five years, the hourly cost would be USD3.4—roughly one-tenth of the labor cost at Hyundai Motor's (HMC) Korean plants. If widespread adoption drives the price down to USD30,000, the hourly cost would fall to USD1.2, or about one-twentieth of Korean labor costs. Advances in robotics would allow automakers to shift production from low-wage regions to locations with strong demand.

- **…and boost per-plant productivity by 60%:** Auto plants typically run two shifts, each comprising eight regular hours plus two hours of overtime. Robots operating around the clock, 365 days a year, could lift production volume by 60% at the same facility.

  HMG's US production capacity (Alabama, Georgia, and Metaplant combined) is 1.2m units. If fully unmanned, output could rise to 1.92m units, enabling HMC/Kia to produce 100% of vehicles sold in the US locally.

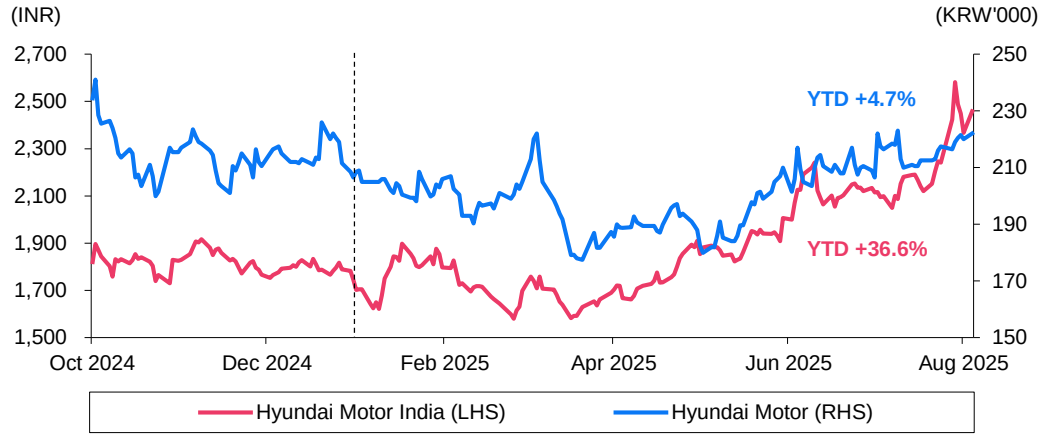
HMG's governance solution: A Boston Dynamics IPO could help dismantle HMG's circular ownership structure and ease the gift tax burden on the group chairman.

- **Boston Dynamics IPO expected in 2027:** By 2029, HMG aims to deploy 30,000 Boston Dynamics robots across its US assembly plants. Elon Musk has noted that humanoid training data centers require at least 10x the computing capacity of autonomous driving—implying investments of about USD10b. HMG is expected to fund these large-scale data center investments in 2027 through a Boston Dynamics IPO.

- **Indian IPO success boosts confidence:** HMC successfully listed its Indian subsidiary in Oct 2024, selling a 17.5% stake. Under Indian law requiring at least 25% public float, HMC is expected to list more shares over the coming 3-5 years. The 17.5% stake raised about USD2.2b in cash after capital gains taxes and other expenses, compared to a pre-tax value of USD3.3b. The subsidiary's market cap has since risen from USD1.76b at IPO to USD2.28b (KRW31.6t) today, with shares up 36.6% ytd versus HMC's 4.7% gain.

Group chairman's 21.4% stake: When Boston Dynamics lists, the group chairman is unlikely to exit but will likely retain his 21.4% stake, participating in the company's growth. As Boston Dynamics's enterprise value rises, the collateral value of his holdings will increase, helping mitigate governance concerns at HMG.

Hyundai Motor India: Share-price performance since IPO

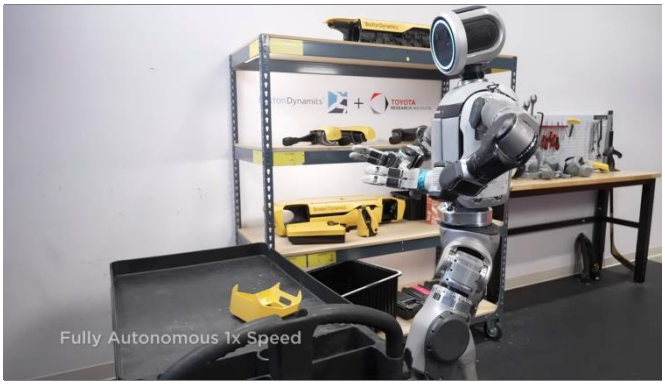


Source: Bloomberg, Samsung Securities

E-Atlas: Advancing with intelligence

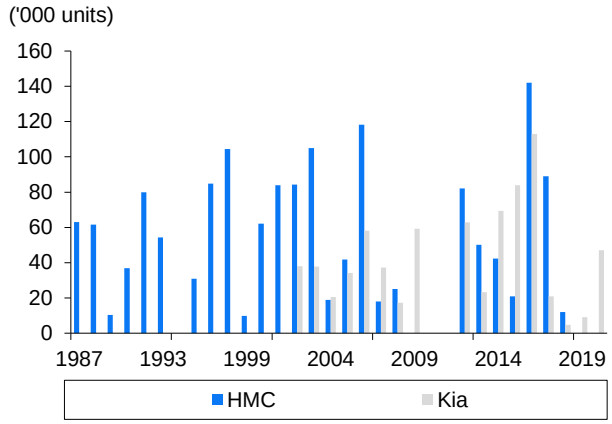
Source: Company data

E-Atlas: Advancing with intelligence



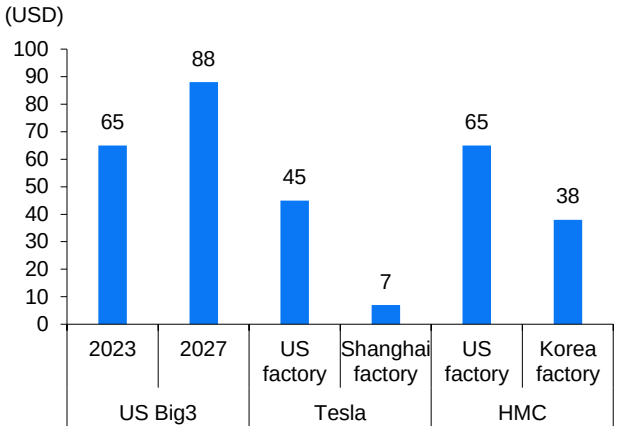
Source: Company data

HMC/Kia: Production losses due to strikes



Source: Company data, Samsung Securities

Hourly wages in the US, China and Korea



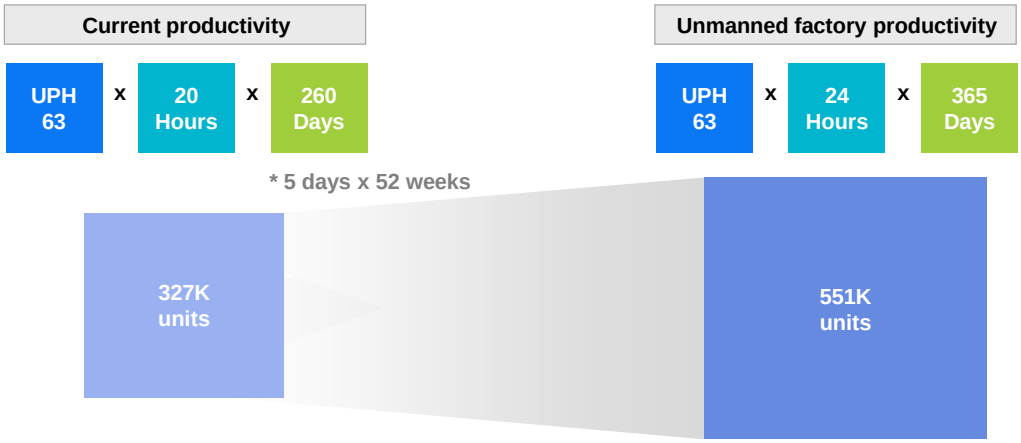
Source: Company data, Samsung Securities

Humanoid robot: Cost per hour

(USD)	Case 1	Case 2	Note
Robot price	100,000	30,000	
FSD technology	8,000	8,000	
Battery replacement cost	5,037	4,030	4.4 times/year * 5 years
Maintenance cost	25,000	7,500	5% of purchase price * 5 years
Total robot cost	138,037	49,530	
Hourly cost	**3.4**	**1.2**	**22 hours/7 days/52 weeks/5 years**

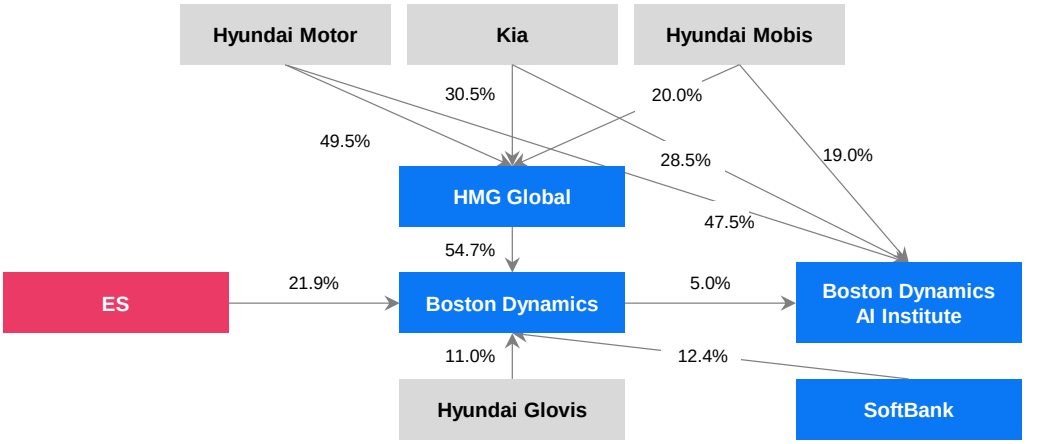
Source: Samsung Securities estimates

Annual production: Manned factory vs fully unmanned factroy



Source: Samsung Securities estimates

Boston Dynamics: Governance structure



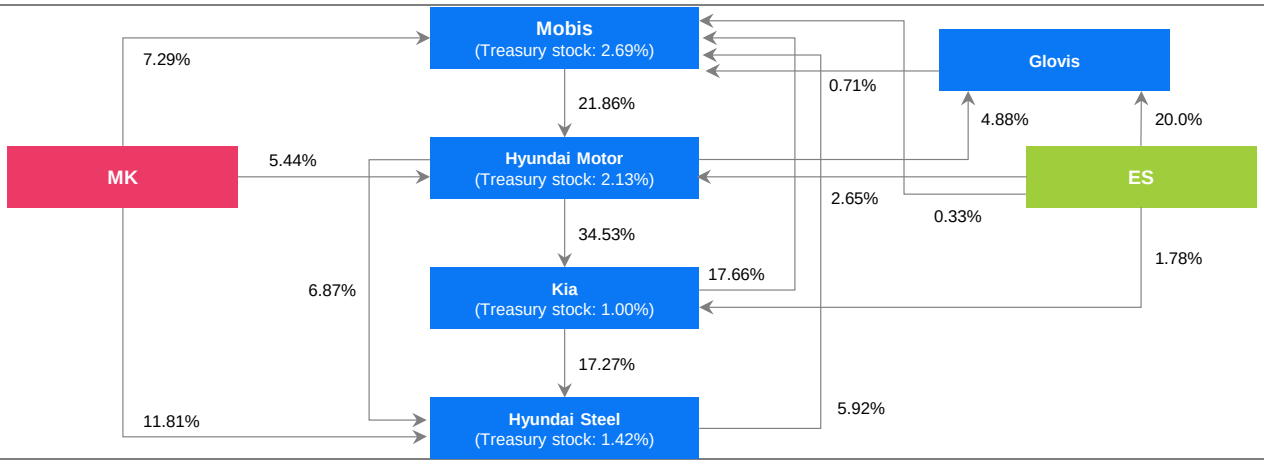
Source: Company data, Samsung Securities

Value of stakes if Boston Dynamics goes public with a market cap of USD20b

	Stake (%)	Stake value (USDb)	Stake value (KRWb)
HMC	27.1	5,415	7,581
Kia	16.7	3,337	4,671
Mobis	10.9	2,188	3,063
ES	21.9	4,380	6,132
Glovis	11.0	2,200	3,080
SoftBank	12.4	2,480	3,472
Total	**100**	**20,000**	**28,000**

Note: Assuming exchange rate fo KRW 1,400/USD
Source: Samsung Securities

Hyundai Motor: Governance structure



Source: Company data, Samsung Securities

HMG's stake in Hyundai Mobis

(KRWb)	Stake (%)	Stake value *	After tax**
Kia	17.66	4,855	3,641
Hyundai Steel	5.92	1,628	1,221
Total	23.58	6,483	4,862
Share buyback and cancellation over 15 years		1,297	

Note: * As of Aug 22 2025
** Assuming a tax rate of 25%
Source: FnGuide, Samsung Securities

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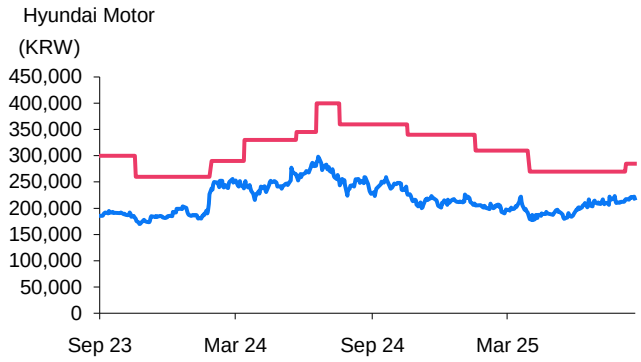
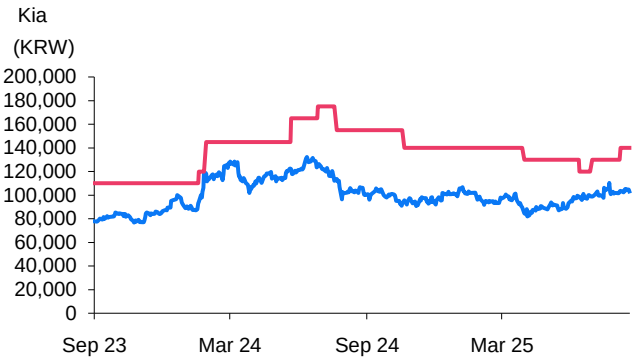
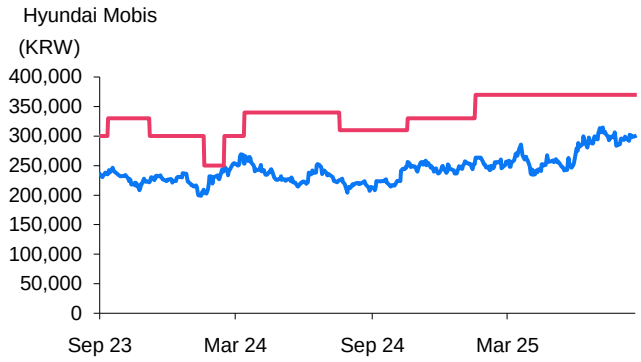
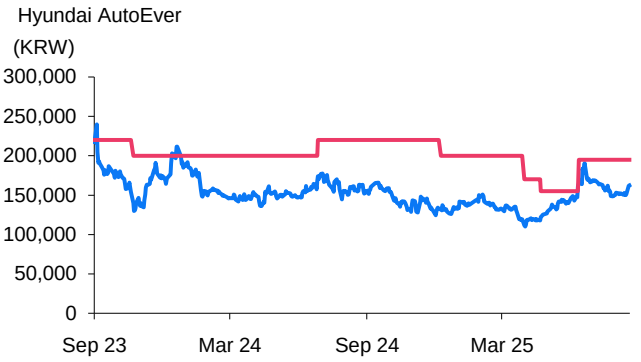
Target price changes in past two years









Rating changes over past two years (adjusted share prices)

Hyundai Motor											
Date	2023/4/26	10/26	2024/2/5	3/20	5/29	6/25	7/26	10/25	2025/1/24	4/7	8/14
Recommendation	BUY	BUY	BUY	BUY	BUY	BUY	BUY	BUY	BUY	BUY	BUY
Target price (KRW)	300000	260000	290000	330000	345000	400000	360000	340000	310000	270000	285000
Gap* (average)	-34.65	-28.49	-15.25	-26.19	-21.52	-31.63	-32.30	-37.27	-34.90	-26.06	
(max or min)**	-30.00	-12.69	-11.90	-16.06	-16.96	-25.50	-28.06	-33.38	-28.39	-17.41	
Kia											
Date	2023/8/4	2024/1/26	2/5	5/29	7/4	7/29	10/28	2025/4/7	6/20	7/7	8/14
Recommendation	BUY	BUY	BUY	BUY	BUY	BUY	BUY	BUY	BUY	BUY	BUY
Target price (KRW)	110000	120000	145000	165000	175000	155000	140000	130000	120000	130000	140000
Gap* (average)	-24.00	-12.23	-19.81	-24.20	-31.41	-34.54	-30.66	-30.49	-17.88	-21.50	
(max or min)**	-9.09	-0.42	-11.38	-19.82	-27.83	-27.68	-23.79	-23.38	-15.75	-15.08	
Hyundai Mobis											
Date	2023/2/16	9/19	11/14	2024/1/26	2/22	3/20	7/26	10/25	2025/1/24		
Recommendation	BUY	BUY	BUY	BUY	BUY	BUY	BUY	BUY	BUY		
Target price (KRW)	300000	330000	300000	250000	300000	340000	310000	330000	370000		
Gap* (average)	-24.71	-31.32	-25.70	-9.38	-16.07	-30.85	-28.56	-24.95			
(max or min)**	-17.17	-25.30	-21.00	-2.40	-10.33	-21.76	-19.35	-21.67			
Hyundai AutoEver											
Date	2023/7/31	8/31	10/30	2024/1/29	4/1	7/4	12/16	2025/4/7	4/29	6/19	
Recommendation	BUY	BUY	BUY	HOLD	BUY	BUY	BUY	BUY	BUY	BUY	
Target price (KRW)	185000	220000	200000	200000	200000	220000	200000	170000	155000	195000	
Gap* (average)	-15.33	-17.42	-13.82	-25.13	-24.37	-31.39	-32.39	-30.67	-10.17		
(max or min)**	-5.46	9.09	5.75	-20.65	-15.85	-19.41	-24.60	-29.18	3.87		

Note: * [(average, maximum, or minimum share price over duration of target price minus target price) / target price] x 100%
** Maximum/minimum share price if new target is higher/lower than market close on the business day prior to target price change

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Industry

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Percentage of ratings in 12 months prior to 2025.06.30

BUY(81.8%)·HOLD(18.2%)·SELL(0%)

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