

Thailand Automotive

Unlikely to return to previous prosperity

- Thailand may lose its status as a key automotive manufacturing hub in Southeast Asia.
- We estimate that the core profit for the sector in 2024 could shrink by 25-30% y-y. We expect a swift recovery in 2H25 at the earliest.
- Downgrade to UNDERWEIGHT rating.

Thailand's domestic car sales in 2024 dropped to the lowest in 15 years

In 9M24, Thailand's automotive industry suffered greatly due to economic problems, high household debt, and strict lending controls by banks. This resulted in a decline in production to just 1.1m units, with domestic sales in September falling to only 39,048 units, the lowest in 53 months. As a result, total domestic sales for 9M24 reached just 438,659 units (-25.3% y-y). With only three months remaining in the year, we expect that domestic car sales for 2024 may reach only 560,000 units, a significant decline of 28.0% y-y, which is well below the Thai Automotive Industry Association's target of 750,000 units.

Unlikely to return to previous prosperity

Thailand's automotive industry has been significantly impacted by the most major changes in the past 40 years, both in terms of technology, which has shifted toward EVs, and the change in market players. The changes occurring in Thailand's automotive industry will make it unlikely for the industry to return to its previous state. Thailand may lose its status as a key automotive manufacturing hub in Southeast Asia, in our view. Currently, Thailand produces 60% of vehicles for export and uses 40% domestically. The domestic market is shrinking and Thailand's exports are significantly impacted because the country serves as a key production base for Japanese car manufacturers, which have been slower to transition to EVs.

Expect a recovery in 2H25 at the earliest

The earnings of companies in the automotive sector have been struggling and declining since 2022, reflecting the country's vehicle production figures. For 9M24, Thai car production totaled 1.1m units (-18.6% y-y). Sales revenue from the four companies under our coverage (AH, IRC, SAT, and STANLY) contracted by 12.7% y-y to an aggregate THB39.4b, with core profit totaling THB2.8b (-22.2% y-y), accounting for only 60% of our full-year profit estimate for 2024. 4Q24 profit is likely to decline both q-q and y-y due to the sluggish vehicle sales. We estimate that the core profit for the sector in 2024 could shrink by 25-30% y-y. We expect a swift recovery in 2H25 at the earliest.

Downgrade to UNDERWEIGHT despite cheap valuations

We downgrade the auto sector to Underweight due to slower profit growth and a prolonged recovery, which we expect to take at least half a year. Although the stocks are undervalued, we believe it is too early to invest. The high dividend yields may not justify the potential decline in stock prices.



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Thailand’s domestic car sales in 2024 the lowest in 15 years

The automotive industry is a large and important sector for the economic development of Thailand, contributing to value creation, employment, and technological advancement in the automotive field. Thailand is a key automotive manufacturing hub globally, as reflected by the fact that the country once produced up to 1.8m vehicles per year, the highest in ASEAN, and ranked 10th in the world. Vehicles, parts, and components are also Thailand’s top export category. Over the past three years (2021-23), the average annual export value has been between USD28b-32b, accounting for approximately 10-11% of the country’s GDP.

The market structure of Thailand’s automotive parts manufacturing industry is primarily focused on exports, accounting for about 60% of production, while the remaining 40% is for domestic sales. The domestic market is divided into two segments: the original equipment manufacturer (OEM) market, which accounts for approximately 30-40% of the domestic market value, and the replacement equipment manufacturer (REM) market, which makes up about 60-70% of the domestic market value.

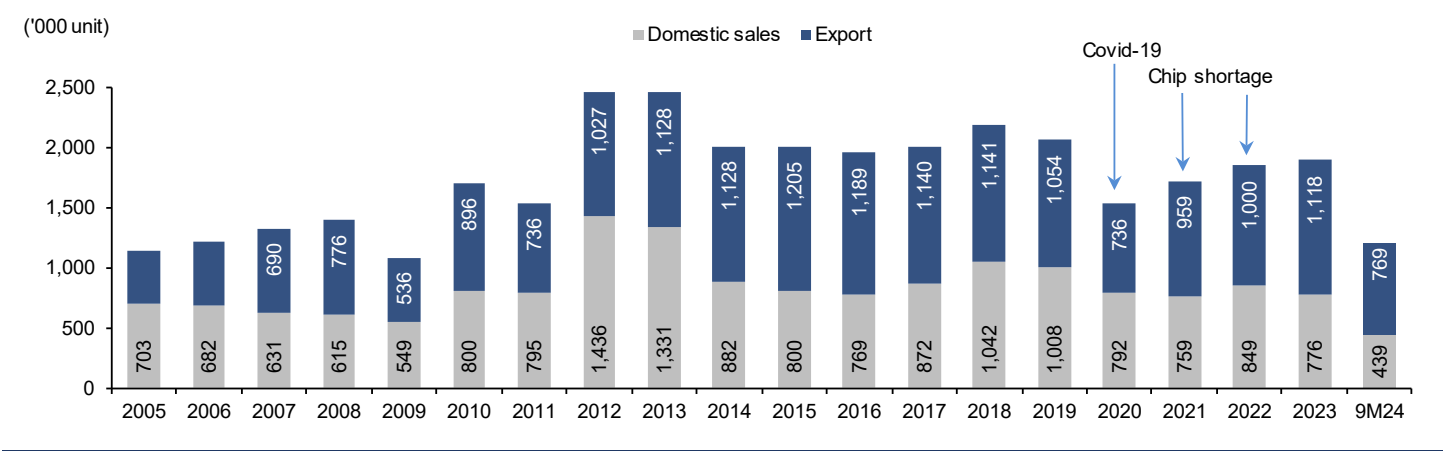
The automotive industry is one of the sectors that was significantly affected by Covid-19. Both demand and supply were impacted by the global lockdowns, causing disruptions across the entire supply chain. As a result, Thailand’s vehicle production in 2020 dropped to just 1.4m units, the lowest in 11 years. Although production volumes rebounded in 2021-22, the industry continued to face challenges, such as the global chip shortage, which kept production at around 1.8m units per year.

For 9M24, Thailand’s automotive industry suffered greatly due to economic problems, high household debt, and strict lending controls by banks. This resulted in a decline in production to just 1.1m units, with domestic sales in September falling to only 39,048 units, the lowest in 53 months. As a result, total domestic sales for 9M24 reached just 438,659 units (-25.3% y-y). With only three months remaining in the year, we expect that domestic car sales for 2024 may reach only 560,000 units, a significant decline of 28.0% y-y, which is well below the Thai Automotive Industry Association’s target of 750,000 units.

The segment with the most significant sales decline is the pickup truck category, with only 268,789 units sold during 9M24, representing a 26.8% y-y decline. This figure accounts for just 55.6% of the total pickup truck sales in 2023.

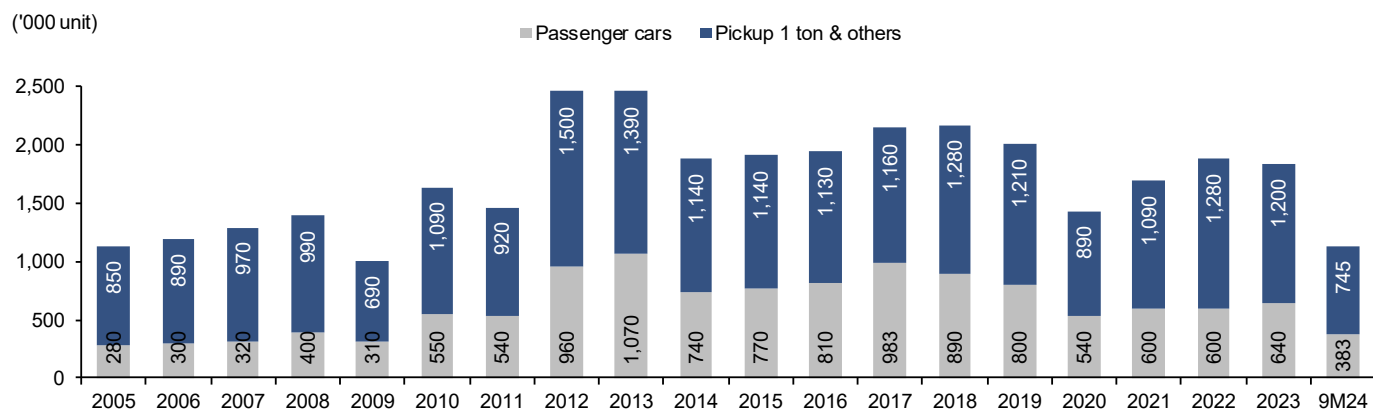
The export volume for 9M24 was only 768,887 units (-6.4% y-y). The decrease in exports was primarily due to the conflict in the Middle East, which led to fewer shipping trips and reduced spending in several key partner markets. As a result, exports declined in all markets except for Australia, where exports continued to grow.

Exhibit 1: Thailand vehicle production by market



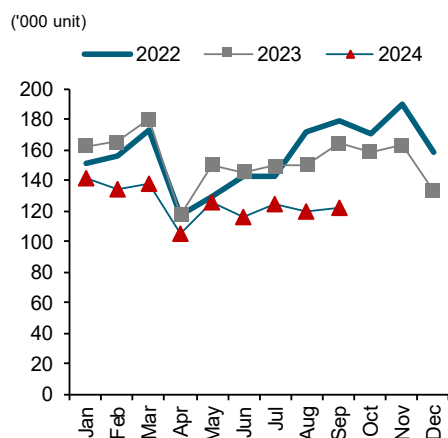
Sources: The Federation of Thai Industries, FSSIA’s compilation

Exhibit 2: Thailand vehicle production by type



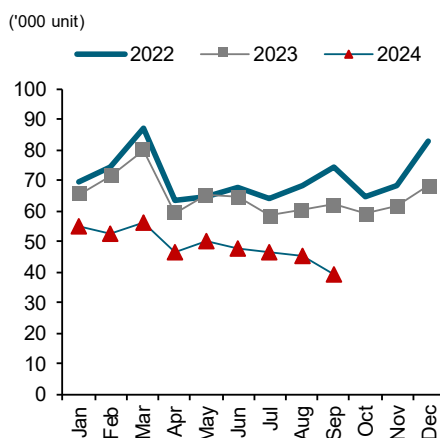
Sources: The Federation of Thai Industries, FSSIA's compilation

Exhibit 3: Car production



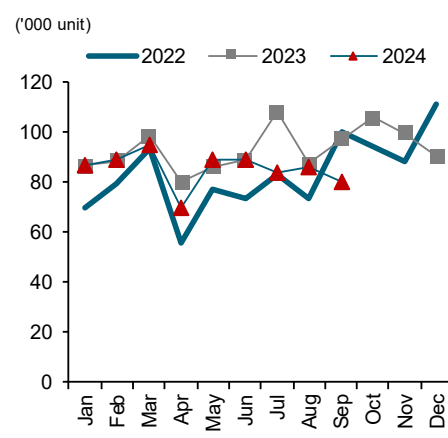
Source: The Federation of Thai Industries

Exhibit 4: Domestic car sales



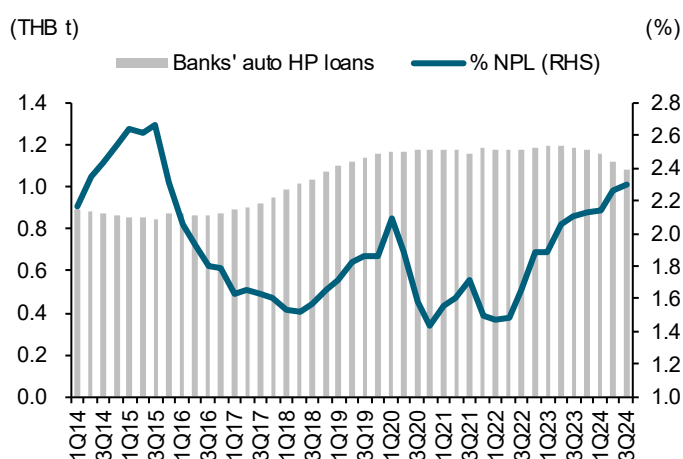
Source: The Federation of Thai Industries

Exhibit 5: Car exports



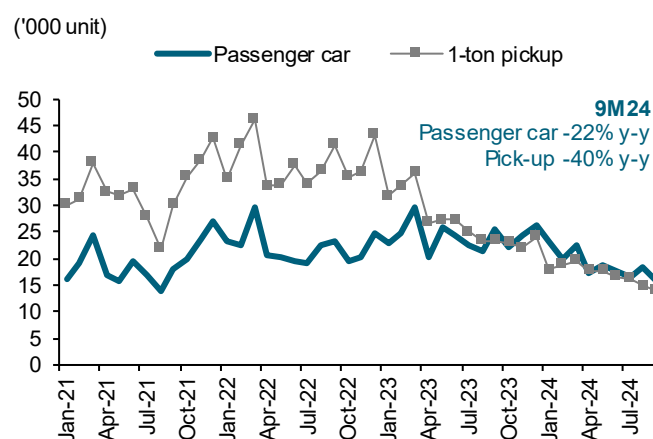
Source: The Federation of Thai Industries

Exhibit 6: Bank auto hire purchase loans vs NPLs



Sources: The Bank of Thailand

Exhibit 7: Passenger car & one-ton pickup sales

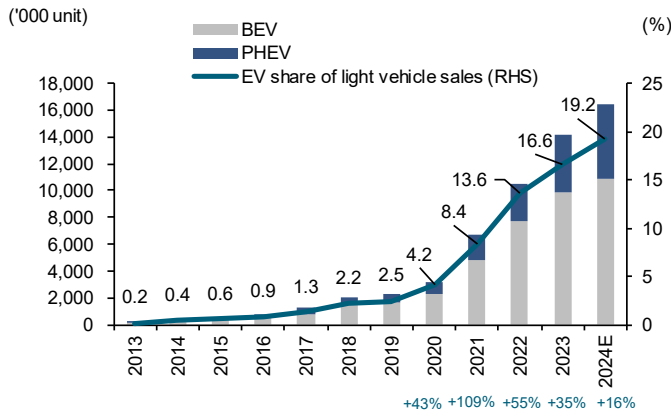


Sources: The Federation of Thai Industries

EV sales have started to slow down in some global markets

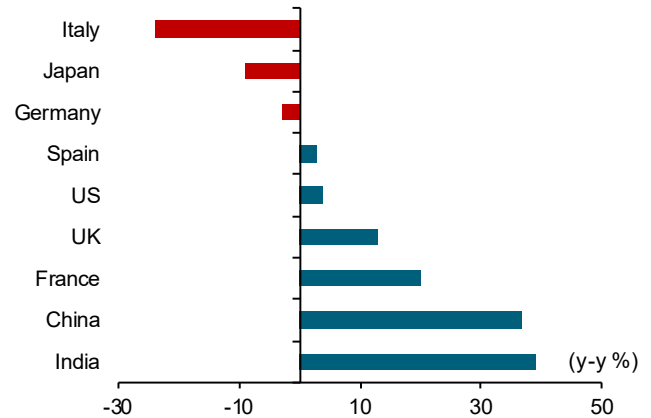
In 2024, global EV sales continued to increase, but some car markets are clearly starting to slow down. This is due to factors such as geopolitical tensions, trade protection measures to safeguard domestic production, and many European governments reducing subsidies faster than expected. While EV technology has improved and become more affordable, along with a decrease in raw material costs and excess production capacity in China, these factors have led to a reduction in EV prices.

Exhibit 8: Global sales of new EVs



Note: Light vehicles include passenger cars and LCVs. EVs include BEVs and PHEVs.
Sources: The electric vehicle world sales database, EV Volumes.

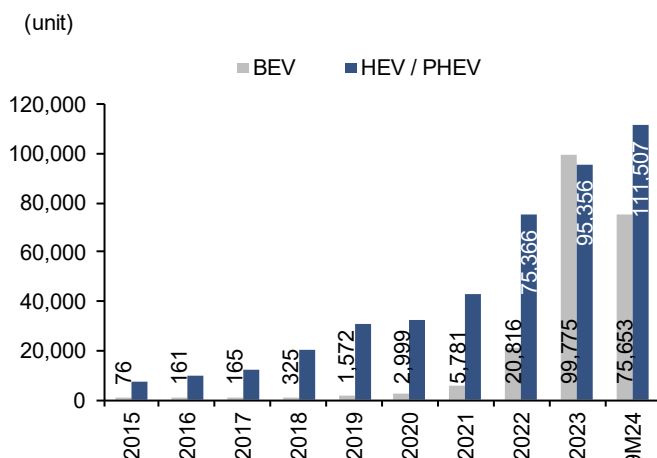
Exhibit 9: Change in EV sales by country



Note: EVs include BEVs and PHEVs.
Sources: BloombergNEF, data as of 1Q24

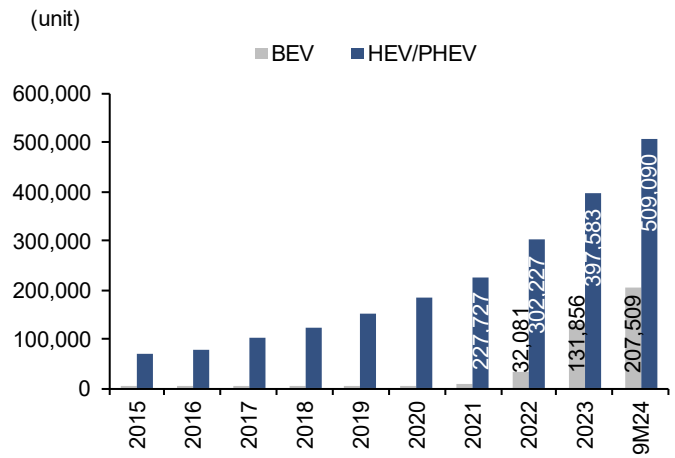
EV market in Thailand decreased by 21% y-y in September 2024. Although EV demand in Thailand has rapidly grown due to the Thai government's EV 3.0 program and ESG trends, the lower purchasing power led to a 21% y-y decrease in the EV segment in September 2024. EVs saw total sales of 13,102 units, accounting for 34% of the total car market. Sales of hybrid EVs (HEVs) also experienced slower growth, increasing by only 11% y-y, but they still held the largest market share within the xEV segment, with 7,355 units sold, representing 56% of the total xEV market. Meanwhile, sales of battery EVs (BEVs) reached 4,982 units, a decline of 32% y-y.

Exhibit 10: Number of new EV registrations



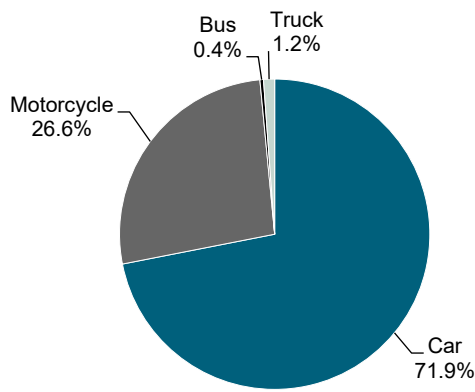
Source: Electric Vehicle Association of Thailand

Exhibit 11: Accumulated number of EV registrations



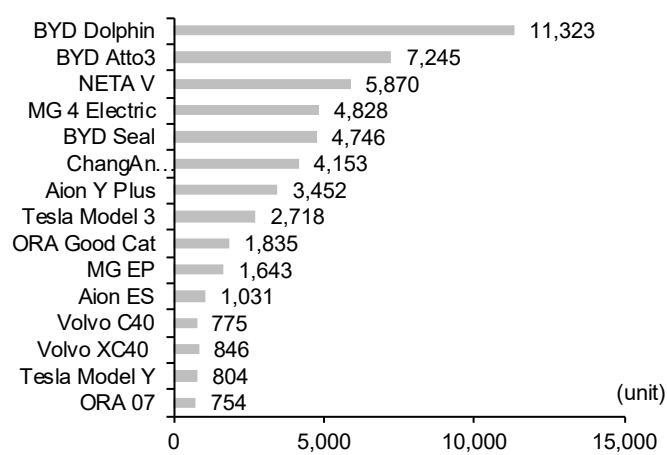
Source: Electric Vehicle Association of Thailand

Exhibit 12: Accumulated BEV registrations in 9M24



Sources: Electric Vehicle Association of Thailand

Exhibit 13: EV registrations in 10M24 by model



Sources: Autolife Thailand

Thailand’s automotive industry unlikely to return to the way it was before

Thailand’s automotive industry has been significantly impacted by the most major changes in the past 40 years, both in terms of technology, which has shifted toward EVs, and the change in market players. Previously dominated by Japanese and European automakers, the industry is now seeing a rise in Chinese car manufacturers as key players.

The changes occurring in Thailand’s automotive industry will make it unlikely for the industry to return to its previous state, and the country may lose its status as a key automotive manufacturing hub in Southeast Asia. Currently, Thailand produces 60% of vehicles for export and uses 40% domestically. The domestic market is shrinking, and Thailand’s exports are significantly impacted because it serves as a key production base for Japanese car manufacturers. Since Japanese carmakers have been slower to transition to EVs, Thailand may also be affected as it struggles to adapt to the rapidly changing market.

We believe it is very difficult for the Thai automotive industry to return to its previous prosperity due to the following:

- **The Thai economy is growing at a slower pace and the population is aging more rapidly.** The Thai economy is facing structural issues. The country is producing goods that do not align with global demand. The tourism sector is still focused on quantity rather than quality and price. Thai labor is being disrupted by technology and AI. In 2024, Thailand became a fully aging society, with approximately 13m people aged 60 and above, accounting for 20% of the total population. This leads to issues such as labor shortages, increased production costs, and long-term economic slowdown.
- **Thai people are carrying more debt.** As of 2Q24, Thailand's household debt stood at THB16.3t, or 89.6% of GDP. Although it has decreased from the peak of 90.7% in 1Q24, it remains high and far from the 80% of GDP threshold considered by the Bank of Thailand (BOT) and the Bank for International Settlements (BIS) as non-damaging to the economy and consumption. The high level of debt may limit consumption growth, particularly for big-ticket items like homes and cars.
- **Domestic car market is saturated.** Currently, there are 20.7m vehicles on the road in Thailand, which equals 277 vehicles per 1,000 people. Thai people tend to keep and use their cars for a relatively long time. Consumer behavior is changing as EVs begin to take market share from internal combustion engine (ICE) vehicles. At the same time, the prices of EVs are decreasing, and there are more brands available, giving consumers more choices. This may lead to a delay in purchasing decisions, as consumers anticipate further price reductions due to the nearing saturation of EV production in China.

- **The number of automotive manufacturers is decreasing and layoffs are increasing.** EVs require only 1,500-3,000 parts per vehicle, approximately 10 times fewer parts than the 30,000 parts required for ICE vehicles. The parts that are eliminated include the engine, exhaust system, radiator, fuel tank, and others. This shift will impact nearly 1,000 automotive parts manufacturers out of the total 2,500 in the industry, affecting over 300,000 workers.

Earnings show no signs of recovery

The earnings of companies in the automotive sector have been struggling and declining since 2022, reflecting the country's vehicle production figures. For 9M24, Thai car production totaled 1.1m units (-18.6% y-y). Sales revenue from the four companies under our coverage (AH, IRC, SAT, and STANLY) contracted by 12.7% y-y to an aggregate THB39.4b, with core profit totaling THB2.8b (-22.2% y-y), accounting for only 60% of our full-year profit estimate for 2024.

Most of the profits were hit hard in 2Q24, which is the low season with fewer working days. However, we started to see a recovery in profits in 3Q24, solely driven by cost management strategies. For example, STANLY consolidated its lighting factory operations to achieve economies of scale, improving its margins, while other companies have been focusing on controlling costs and reducing expenditures.

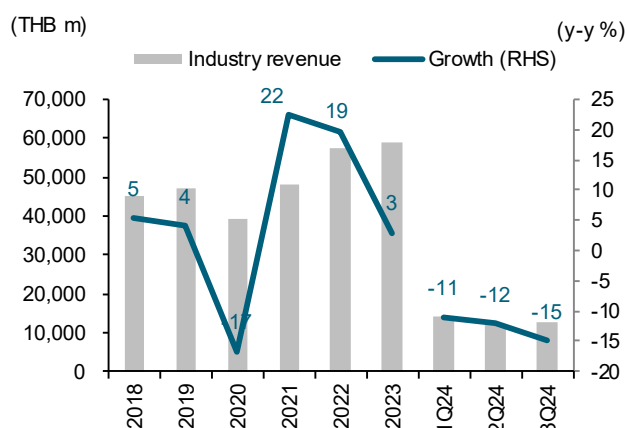
However, most companies have not been very successful in reducing SG&A expenses, resulting in profits declining faster than revenue in 9M24.

Exhibit 14: Aggregate auto industry – sales revenue

	2017	2018	2019	2020	2021	2022	2023	1Q24	2Q24	3Q24
	(THB m)	(THB m)	(THB m)	(THB m)	(THB m)	(THB m)	(THB m)	(THB m)	(THB m)	(THB m)
AH	15,776	16,738	18,389	17,172	20,433	27,967	30,034	7,452	6,436	6,530
IRC	5,233	5,562	5,430	4,364	5,297	5,883	5,417	1,127	1,209	1,101
SAT	8,593	8,194	8,006	5,883	8,598	8,931	9,089	2,044	1,712	1,853
STANLY	13,220	14,635	15,150	11,728	13,582	14,448	14,380	3,722	2,996	3,231
Industry revenue	42,822	45,129	46,974	39,147	47,911	57,230	58,920	14,346	12,352	12,715
Thailand car production (m unit)	1.99	2.17	2.01	1.43	1.69	1.88	1.84	0.41	0.35	0.37

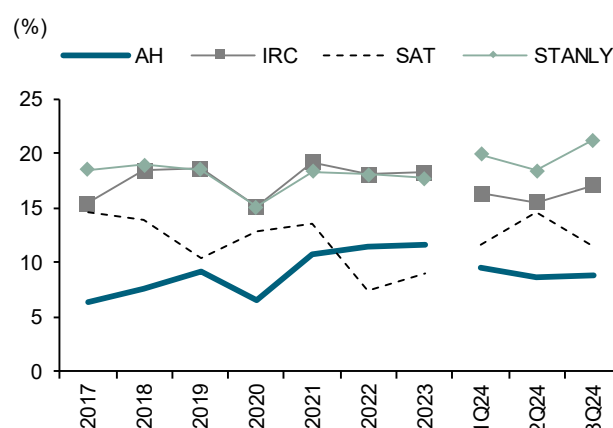
Sources: The Federation of Thai Industries, Company data, FSSIA's compilation

Exhibit 15: Aggregate auto industry – revenue and growth



Sources: Company data, FSSIA's compilation

Exhibit 16: Aggregate auto industry – gross margins



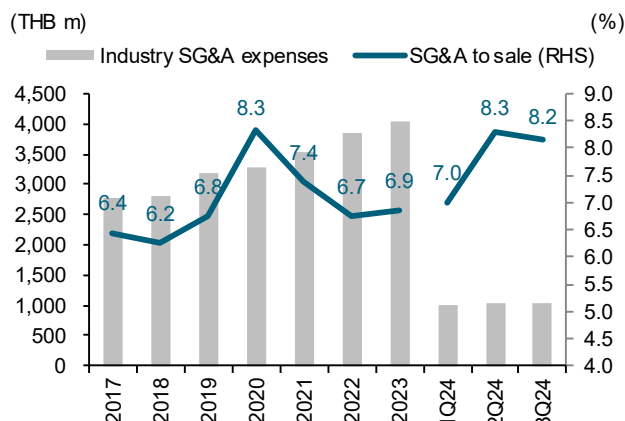
Sources: Company data, FSSIA's compilation

Exhibit 17: Aggregate auto industry – core profit

	2017	2018	2019	2020	2021	2022	2023	1Q24	2Q24	3Q24
	(THB m)	(THB m)	(THB m)	(THB m)	(THB m)	(THB m)	(THB m)	(THB m)	(THB m)	(THB m)
AH	1,060	1,314	941	146	792	1,708	1,771	301	100	212
IRC	424	359	237	219	340	110	160	52	91	159
SAT	727	912	894	384	955	948	979	184	140	160
STANLY	1,639	2,027	1,981	1,034	1,496	1,742	1,724	482	304	576
Total	3,849	4,611	4,053	1,783	3,583	4,507	4,633	1,018	634	1,107

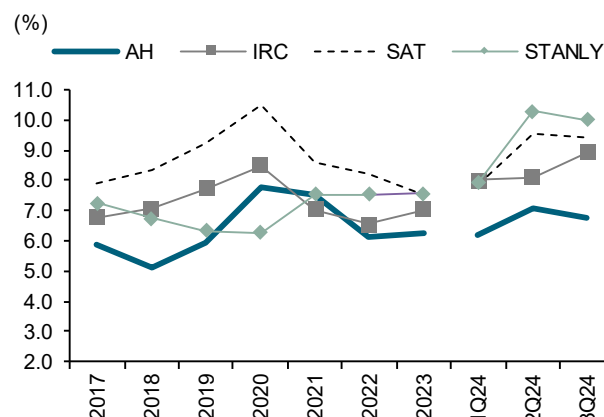
Sources: Company data, FSSIA's compilation

Exhibit 18: SG&A expenses



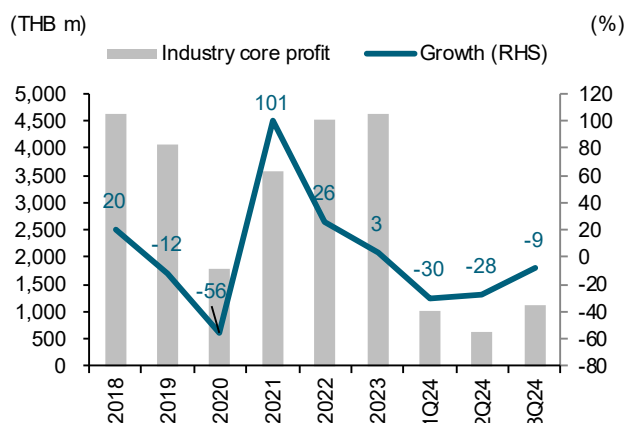
Sources: Company data, FSSIA's compilation

Exhibit 19: SG&A expenses to sales



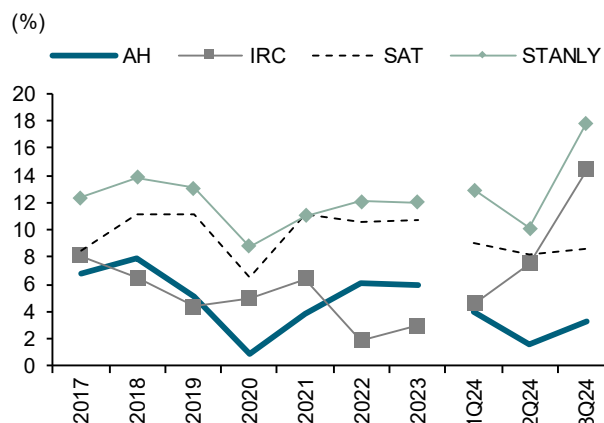
Sources: Company data, FSSIA's compilation

Exhibit 20: Aggregate auto industry – core profit and growth



Sources: Company data, FSSIA's compilation

Exhibit 21: Aggregate auto industry – core profit margin



Sources: Company data, FSSIA's compilation

Dividend yield cannot compensate for capital loss

4Q24 profit is likely to decline both q-q and y-y due to the sluggish vehicle sales. We estimate that the core profit for the sector in 2024 could shrink by 25-30% y-y. We expect a swift recovery in 2H25 at the earliest.

On a positive note, the covered companies have low debt levels, with an average net D/E ratio of only 0.2x as of the end of 3Q24, allowing them to pay dividends. Some companies, like STANLY, have even increased their payout ratios. However, the dividend yield provided to investors is not enough to compensate for the capital loss from the decline in stock prices. Hence, we believe it is too early to invest in auto stocks.

Exhibit 22: Dividend yield

	2018	2019	2020	2021	2022	2023
	(%)	(%)	(%)	(%)	(%)	(%)
AH	6.8	2.4	0.8	3.5	5.2	5.9
IRC	4.4	2.7	4.0	4.9	2.0	3.0
SAT	8.8	8.7	3.7	6.9	7.1	8.8
STANLY	3.3	4.6	4.9	3.1	4.6	10.8
Average	5.8	4.6	3.4	4.6	4.7	7.1

Note: Share price as at end of period
Sources: SET, FSSIA's compilation

Exhibit 23: Share price performance

	Price performance				
	1M	3M	6M	1Y	YTD
	(%)	(%)	(%)	(%)	(%)
AH	(9.2)	8.2	(7.5)	(32.7)	(29.6)
IRC	0.0	2.2	2.9	4.4	2.2
SAT	(8.9)	(5.1)	(26.8)	(37.8)	(38.1)
STANLY	0.0	5.3	1.9	22.5	17.5
SETAUTO	(4.7)	(0.4)	(14.3)	(29.1)	(28.1)
SET	(1.8)	9.3	6.7	2.7	3.3

Sources: SET, FSSIA's compilation

The sustainability mandate

According to data from the Emissions Database for Global Atmospheric Research (EDGAR) in 2022, vehicles and logistics emitted 39.2m tons of carbon dioxide. This accounted for 30% of the total carbon dioxide emissions globally. As a result, EVs have become an emerging trend in the effort to reduce such emissions.

Thailand, at the COP29 meeting on 19 November 2024, committed to reducing its greenhouse gas (GHG) emissions by 43% by 2030, surpassing the initial target of 30-40%. This would equate to a reduction of 222m tons of CO2 equivalent (MtCO2eq) from operations in five sectors: energy, transportation, waste and wastewater management, industrial processes and product use, and agriculture.

To achieve two key objectives – transitioning to a low-carbon society in the future and developing the EV manufacturing industry along with its supply chain in Thailand, The National Electric Vehicle Policy Committee (EV Board) has launched the "30@30" policy. The goal is to produce zero-emission vehicles (ZEVs), making up at least 30% of the total vehicle production by 2030.

Automotive parts manufacturers are making significant efforts to reduce carbon dioxide (CO2) emissions in their production processes. The overall goal of the automotive industry is to achieve carbon neutrality by effectively eliminating GHG emissions throughout the vehicle lifecycle, from production to disposal, by 2050.

The four companies in the automotive sector under our coverage have recognized the importance of environmental, social, and governance (ESG) factors. Each company has clear targets and is actively working toward them. Among the four, **SAT** has received the highest score from us, with a SET ESG rating of AA from the Stock Exchange of Thailand (SET). Meanwhile, **AH** and **IRC** have received an A rating, and **STANLY** is not included in the SET's sustainable stocks list. SAT has set the most challenging GHG emissions reduction targets, while also emitting the least amount of GHGs among the group.

In addition, SAT has also received the highest ESG score from Refinitiv and the highest disclosure score from Bloomberg, further highlighting the company's strong commitment to ESG practices.

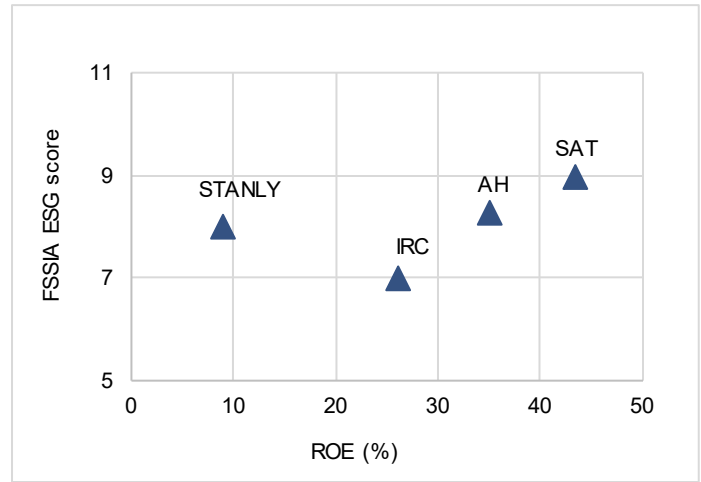
In terms of social responsibility and governance, all four companies perform similarly. They each prioritize the well-being of their employees and the surrounding communities, ensuring that they do not face any legal disputes with local communities or shareholders.

Exhibit 24: ESG Analysis

ESG Analysis	
Environment	
AH	AH is installing solar cells across all of its factories, with the goal of completing the installations by the end of 2024. In 2023, the company saved THB4m in electricity costs due to its use of solar energy. Additionally, the company is in the process of transitioning its forklift trucks and vehicles used for inter-company logistics from diesel and LPG to electric vehicles. This move aims to further reduce its reliance on fossil fuels and decrease the company's carbon footprint, contributing to its long-term sustainability goals.
IRC	IRC has fully installed solar rooftop systems on the rooftops of its factories, allowing the company to save THB10m per year in electricity costs. This installation also contributes to a reduction of 1,270 tons of CO2 emissions per year. Additionally, the company has taken measures to prevent heat energy loss by insulating its rubber dryers, which helps to reduce GHG emissions by 30 tons of CO2 per year. Furthermore, IRC has implemented a system to reuse condensate waste in the production process, replacing the use of electric heaters, resulting in a reduction of 40 tons of CO2 emissions per year.
SAT	SAT has set a target to increase the proportion of renewable energy consumption in line with its goal of achieving 10% renewable energy usage by 2030. Currently, SAT uses renewable energy for 5% of its total electricity consumption. In 2023, SAT utilized renewable energy generated from solar cells, amounting to 5,965 MWh, resulting in cost savings of THB9m and a reduction of 3,155 TonCO2 eq in GHG emissions. By 2024, the company plans to install solar cells with a capacity of 540 MWp, which is expected to further reduce GHG emissions by 368 TonCO2 eq annually, translating to an additional cost saving of THB0.3m.
STANLY	STANLY uses a significant amount of water in its production processes. Approximately 81% of the water is sourced from public water supply agencies. The company has been increasing its use of recycled water in its manufacturing process, particularly at the lighting production factory, where recycled water now accounts for 71.1% of the total wastewater used. Additionally, STANLY installed solar rooftop systems on the factory roofs in 2023, which helped reduce CO2 emissions by 740.65 tons per year and saved THB4.8m in electricity costs. The company plans to expand its solar capacity with additional installations in 2025-26.
Social	
AH	AH places significant importance on human resources both within and outside the organization, focusing on workplace safety with a commitment to zero accidents. The company also provides training to employees. In terms of community involvement, AH supports initiatives such as converting rice straw into organic fertilizer to replace burning, which contributes to reducing PM2.5 dust. Additionally, the company has a green space expansion project. In 2023, AH planted 780 trees and aims to increase this number by another 3,500 trees by 2025.
IRC	IRC prioritizes the well-being of its employees by focusing on both health and skill development. The company conducts annual employee satisfaction surveys, and the 2023 survey results revealed that 92% of employees are satisfied, with the turnover rate decreasing to 12.5%. Additionally, IRC is committed to social responsibility and has implemented various community programs to contribute positively to society.
SAT	SAT places a strong emphasis on creating a safe working environment and providing opportunities for career growth and skill development, including both soft skills and hard skills. Additionally, SAT is actively involved in social activities such as improving the local environment, hiring people with disabilities from the community, and establishing learning centers for the elderly to meet the needs of the community.
STANLY	STANLY takes great care of its employees by providing welfare and workplace amenities, as well as promoting knowledge and skills development. One of the initiatives is the Cashless Program, which encourages employees to reduce their cash usage for transactions. The company's factory is located in Pathum Thani and is not situated within an industrial estate, so the company takes extra precautions to mitigate any potential impact on nearby communities. Furthermore, STANLY has never had any disputes with the local community.
Governance	
AH	AH recognizes the potential risks of misuse of internal information and has established policies to protect the confidentiality of financial and critical business information that has not yet been disclosed to the public. This includes safeguarding information that could potentially affect the trading of the company's securities.
IRC	IRC recognizes the importance of preventing the misuse of inside information for personal gain by directors, executives, and employees. As such, the company has established guidelines regarding the use of inside information and ensures regular monitoring of compliance. Additionally, the company protects the rights of minority shareholders by scheduling meetings with an advance agenda and providing opportunities for shareholders to exercise their right to individually appoint directors.
SAT	SAT has been evaluated in the Corporate Governance Report of Thai Listed Companies (CGR) and is recognized as one of 782 listed companies with an "Excellent" CG score for the year 2023 by the Thai Institute of Directors (IOD). The company also ensures the proper use of inside information, ensuring equal treatment of all shareholders, and giving special attention to the rights of minority shareholders.
STANLY	STANLY ensures transparency in information disclosure and facilitates communication through various channels and documents to prevent the misuse of internal information for personal gain. The company regularly provides shareholders with the opportunity to propose board candidates for the annual general meeting.

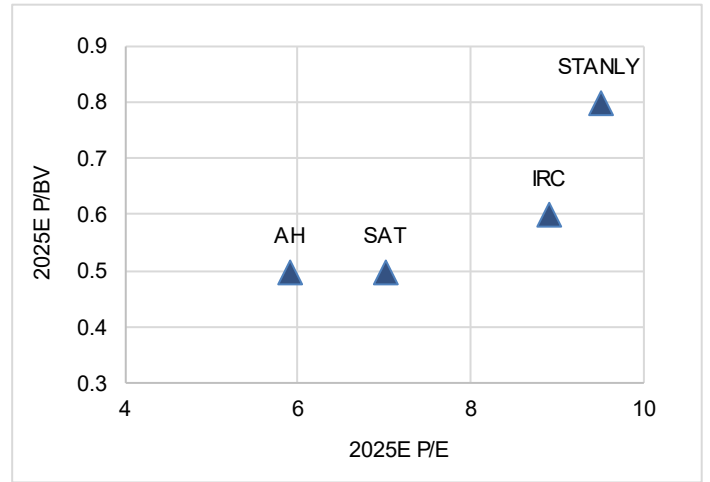
Sources: AH, IRC, SAT, STANLY, FSSIA analysis

Exhibit 25: 2025E ROE vs FSSIA ESG score



Sources: FSSIA estimates

Exhibit 26: 2025E P/E vs 2025E P/BV



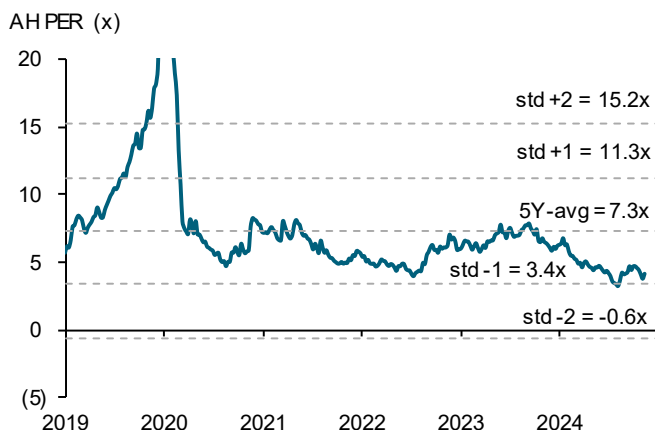
Sources: FSSIA estimates

Exhibit 27: ESG – peers comparison

	FSSIA	Domestic ratings						Global ratings						Bloomberg	
	ESG score	DJSI	SET ESG	SET ESG Rating	CG score	AGM level	Thai CAC	Morningstar Sustainalytics	ESG Book	MSCI	Moody's	Refinitiv	S&P Global	ESG score	Disclosure score
SET100	67.71	5.69	4.38	4.05	4.77	4.43	4.02	Medium	57.34	BBB	22.70	60.82	67.31	1.19	35.34
Coverage	66.17	5.16	4.33	3.94	4.81	4.43	3.83	Medium	56.41	BBB	18.92	59.20	65.82	1.38	35.46
AH	35.14	--	Y	A	5.00	4.00	Certified	--	--	--	--	30.05	--	--	47.73
IRC	26.17	--	--	A	5.00	5.00	--	--	--	--	--	49.34	--	--	--
SAT	43.39	--	Y	AA	5.00	5.00	Certified	--	--	--	--	55.29	29.00	--	57.08
STANLY	9.00	--	--	--	4.00	--	--	--	--	--	--	--	--	--	--

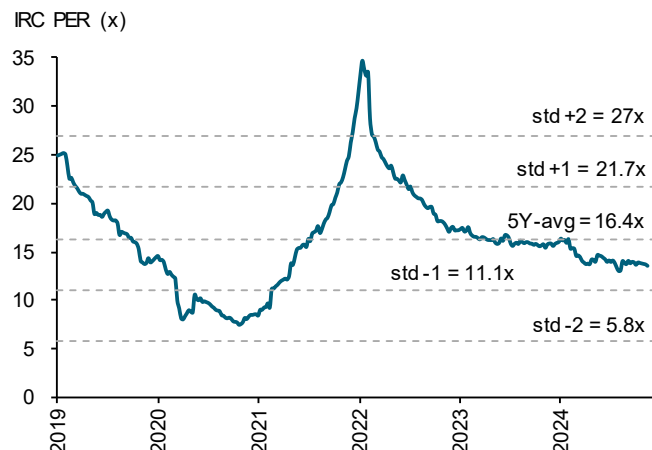
Sources: SETTRADE.com, FSSIA's compilation

Exhibit 28: AH – one-year rolling forward P/E band



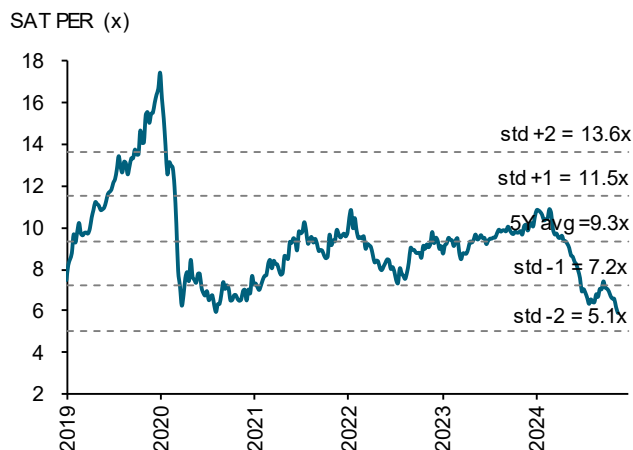
Sources: Bloomberg, FSSIA estimates

Exhibit 29: IRC – one-year rolling forward P/E band



Sources: Bloomberg, FSSIA estimates

Exhibit 30: SAT – one-year rolling forward P/E band



Sources: Bloomberg, FSSIA estimates

Exhibit 31: STANLY – one-year rolling forward P/E band



Sources: Bloomberg, FSSIA estimates

Exhibit 32: Peers comparison – as of 20 November 2024

Company name	BBG code	Share price (LCY)	Target price (LCY)	Upside (%)	Market Cap. (USD m)	PE		PBV		ROE		Div yld	
						24E (x)	25E (x)	24E (x)	25E (x)	24E (%)	25E (%)	24E (x)	25E (x)
AAPICO Hitech	AH TB	18.60	20.00	8	191	7.4	5.9	0.6	0.5	7.4	8.3	4.4	5.5
Inoue Rubber (Thailand)	IRC TB	14.00	12.40	(11)	81	6.9	8.9	0.7	0.6	9.4	7.0	7.3	5.6
Somboon Advance Technology	SAT TB	11.10	12.70	14	136	7.4	7.0	0.6	0.5	8.6	9.0	7.6	8.3
Thai Stanley Electric	STANLY TB	218.00	210.00	(4)	483	11.0	9.5	0.8	0.8	6.9	8.0	6.1	8.4
Sector average					890	8.2	7.8	0.7	0.6	8.1	8.1	6.4	7.0

Sources: FSSIA estimates

Disclaimer for ESG scoring

ESG score	Methodology	Rating																				
The Dow Jones Sustainability Indices (DJSI) By S&P Global	The DJSI World applies a transparent, rules-based component selection process based on the companies' Total Sustainability Scores resulting from the annual S&P Global Corporate Sustainability Assessment (CSA). Only the top-ranked companies within each industry are selected for inclusion.	Be a member and invited to the annual S&P Global Corporate Sustainability Assessment (CSA) for DJSI. Companies with an S&P Global ESG Score of less than 45% of the S&P Global ESG Score of the highest scoring company are disqualified. The constituents of the DJSI indices are selected from the Eligible Universe.																				
SET ESG Ratings List (SETESG) by The Stock Exchange of Thailand (SET)	SET ESG quantifies responsibility in Environmental and Social issues by managing business with transparency in Governance, updated annually. Candidates must pass the preemptive criteria, with two crucial conditions: 1) no irregular trading of the board members and executives; and 2) free float of >150 shareholders, and combined holding must be >15% of paid-up capital. Some key disqualifying criteria include: 1) CG score of below 70%; 2) independent directors and free float violation; 3) executives' wrongdoing related to CG, social & environmental impacts; 4) equity in negative territory; and 5) earnings in red for > 3 years in the last 5 years.	To be eligible for SETESG inclusion , verified data must be scored at a minimum of 50% for each indicator, unless the company is a part of DJSI during the assessment year. The scoring will be fairly weighted against the nature of the relevant industry and materiality. SETESG Index is extended from the SET ESG Ratings companies whose 1) market capitalization > THB5b (~USD150b); 2) free float >20%; and 3) liquidity >0.5% of paid-up capital for at least 9 out of 12 months. The SETTHSI Index is a market capitalisation-weighted index, cap 5% quarterly weight at maximum, and no cap for number of stocks.																				
CG Score by Thai Institute of Directors Association (Thai IOD)	An indicator of CG strength in sustainable development, measured annually by the Thai IOD, with support from the Stock Exchange of Thailand (SET). The results are from the perspective of a third party, not an evaluation of operations.	Scores are rated in six categories: 5 for Excellent (90-100), 4 for Very Good (80-89), 3 for Good (70-79), 2 for Fair (60-69), 1 for Pass (60-69), and not rated for scores below 50. Weightings include: 1) the rights; 2) and equitable treatment of shareholders (weight 25% combined); 3) the role of stakeholders (25%); 4) disclosure & transparency (15%); and 5) board responsibilities (35%).																				
AGM level By Thai Investors Association (TIA) with support from the SEC	It quantifies the extent to which shareholders' rights and equitable treatment are incorporated into business operations and information is transparent and sufficiently disclosed. All form important elements of two out of five the CG components to be evaluated annually. The assessment criteria cover AGM procedures before the meeting (45%), at the meeting date (45%), and after the meeting (10%). <i>(The first assesses 1) advance circulation of sufficient information for voting; and 2) facilitating how voting rights can be exercised. The second assesses 1) the ease of attending meetings; 2) transparency and verifiability; and 3) openness for Q&A. The third involves the meeting minutes that should contain discussion issues, resolutions and voting results.)</i>	The scores are classified into four categories: 5 for Excellent (100), 4 for Very Good (90-99), 3 for Fair (80-89), and not rated for scores below 79.																				
Thai CAC By Thai Private Sector Collective Action Against Corruption (CAC)	The core elements of the Checklist include corruption risk assessment, establishment of key controls, and the monitoring and developing of policies. The Certification is good for three years. <i>(Companies deciding to become a CAC certified member start by submitting a Declaration of Intent to kick off an 18-month deadline to submit the CAC Checklist for Certification, including risk assessment, in place of policy and control, training of managers and employees, establishment of whistleblowing channels, and communication of policies to all stakeholders.)</i>	The document will be reviewed by a committee of nine professionals. A passed Checklist will move for granting certification by the CAC Council approvals whose members are twelve highly respected individuals in professionalism and ethical achievements.																				
Morningstar Sustainabilitycs	The Sustainabilitycs' ESG risk rating provides an overall company score based on an assessment of how much of a company's exposure to ESG risk is unmanaged. <i>Sources to be reviewed include corporate publications and regulatory filings, news and other media, NGO reports/websites, multi-sector information, company feedback, ESG controversies, issuer feedback on draft ESG reports, and quality & peer reviews.</i>	A company's ESG risk rating score is the sum of unmanaged risk. The more risk is unmanaged, the higher ESG risk is scored. <table><tr><th>NEGL</th><th>Low</th><th>Medium</th><th>High</th><th>Severe</th></tr><tr><td>0-10</td><td>10-20</td><td>20-30</td><td>30-40</td><td>40+</td></tr></table>	NEGL	Low	Medium	High	Severe	0-10	10-20	20-30	30-40	40+										
NEGL	Low	Medium	High	Severe																		
0-10	10-20	20-30	30-40	40+																		
ESG Book	The ESG score identifies sustainable companies that are better positioned to outperform over the long term. The methodology considers the principle of financial materiality including information that significantly helps explain future risk-adjusted performance. Materiality is applied by over-weighting features with higher materiality and rebalancing these weights on a rolling quarterly basis.	The total ESG score is calculated as a weighted sum of the features scores using materiality-based weights. The score is scaled between 0 and 100 with higher scores indicating better performance.																				
MSCI	MSCI ESG ratings aim to measure a company's management of financially relevant ESG risks and opportunities. It uses a rules-based methodology to identify industry leaders and laggards according to their exposure to ESG risks and how well they manage those risks relative to peers. <table><tr><td>AAA</td><td>8.571-10.000</td><td rowspan="3">Leader:</td><td rowspan="3">leading its industry in managing the most significant ESG risks and opportunities</td></tr><tr><td>AA</td><td>7.143-8.570</td></tr><tr><td>A</td><td>5.714-7.142</td></tr><tr><td>BBB</td><td>4.286-5.713</td><td rowspan="3">Average:</td><td rowspan="3">a mixed or unexceptional track record of managing the most significant ESG risks and opportunities relative to industry peers</td></tr><tr><td>BB</td><td>2.857-4.285</td></tr><tr><td>B</td><td>1.429-2.856</td></tr><tr><td>CCC</td><td>0.000-1.428</td><td>Laggard:</td><td>lagging its industry based on its high exposure and failure to manage significant ESG risks</td></tr></table>		AAA	8.571-10.000	Leader:	leading its industry in managing the most significant ESG risks and opportunities	AA	7.143-8.570	A	5.714-7.142	BBB	4.286-5.713	Average:	a mixed or unexceptional track record of managing the most significant ESG risks and opportunities relative to industry peers	BB	2.857-4.285	B	1.429-2.856	CCC	0.000-1.428	Laggard:	lagging its industry based on its high exposure and failure to manage significant ESG risks
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Moody's ESG solutions	Moody's assesses the degree to which companies take into account ESG objectives in the definition and implementation of their strategy policies. It believes that a company integrating ESG factors into its business model and relatively outperforming its peers is better positioned to mitigate risks and create sustainable value for shareholders over the medium to long term.																					
Refinitiv ESG rating	Designed to transparently and objectively measure a company's relative ESG performance, commitment and effectiveness across 10 main themes, based on publicly available and auditable data. The score ranges from 0 to 100 on relative ESG performance and insufficient degree of transparency in reporting material ESG data publicly. <i>(Score ratings are 0 to 25 = poor; >25 to 50 = satisfactory; >50 to 75 = good; and >75 to 100 = excellent.)</i>																					
S&P Global	The S&P Global ESG Score is a relative score measuring a company's performance on and management of ESG risks, opportunities, and impacts compared to its peers within the same industry classification. The score ranges from 0 to 100.																					
Bloomberg	ESG Score	Bloomberg score evaluating the company's aggregated Environmental, Social and Governance (ESG) performance. The score is based on Bloomberg's view of ESG financial materiality. The score is a weighted generalized mean (power mean) of Pillar Scores, where the weights are determined by the pillar priority ranking. Values range from 0 to 10; 10 is the best.																				
Bloomberg	ESG Disclosure Score	Disclosure of a company's ESG used for Bloomberg ESG score. The score ranges from 0 for none to 100 for disclosure of every data point, measuring the amount of ESG data reported publicly, and not the performance on any data point.																				

[Rating](#) regarding the sustainable development of Thai listed companies, both on the SET and MAI, are publicly available on the website of the Securities and Exchange Commission of Thailand (SEC). Currently, ratings available are 1) "**CG Score**"; 2) "**AGM Level**"; 3) "**Thai CAC**"; and 4) **THSI**. The ratings are updated on an annual basis. FSSIA does not confirm nor certify the accuracy of such ratings.

Source: FSSIA's compilation

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History of change in investment rating and/or target price

AAPICO Hitech (AH TB)



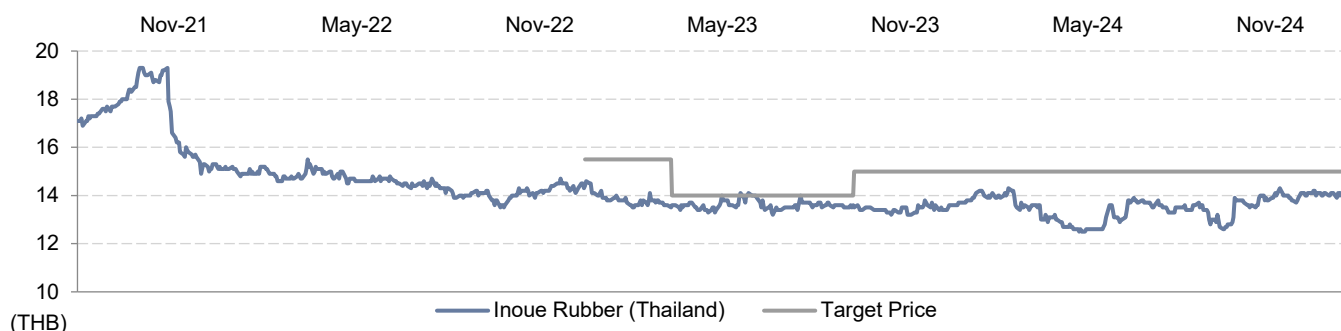
Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
02-Feb-2022	HOLD	28.00	28-Oct-2022	BUY	35.50	14-Mar-2024	BUY	35.00
16-Mar-2022	BUY	28.00	25-Nov-2022	BUY	42.00	29-May-2024	BUY	29.00
01-Aug-2022	BUY	29.50	11-Oct-2023	BUY	45.00			

Jitra Amornthum started covering this stock from 01-Oct-2020

Price and TP are in local currency

Source: FSSIA estimates

Inoue Rubber (Thailand) (IRC TB)



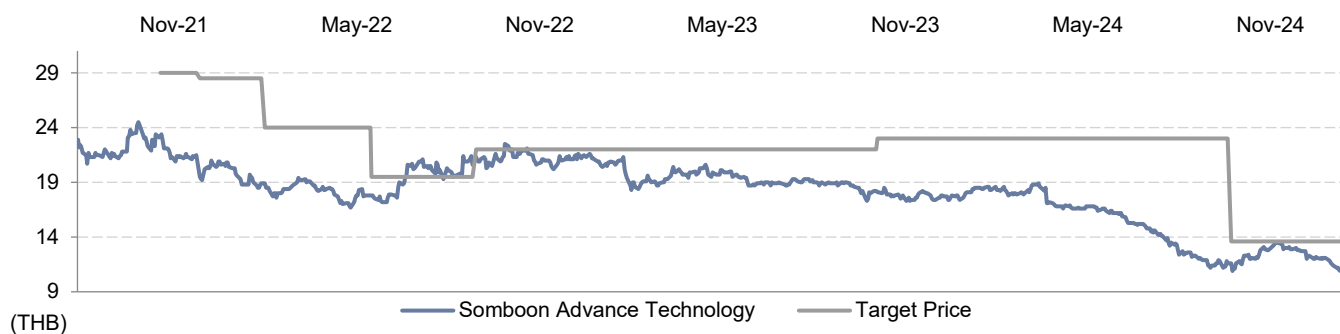
Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
01-Feb-2023	HOLD	15.50	21-Sep-2023	BUY	15.00	-	-	-
17-Apr-2023	HOLD	14.00	05-Feb-2024	HOLD	15.00			

Jitra Amornthum started covering this stock from 01-Feb-2023

Price and TP are in local currency

Source: FSSIA estimates

Somboon Advance Technology (SAT TB)



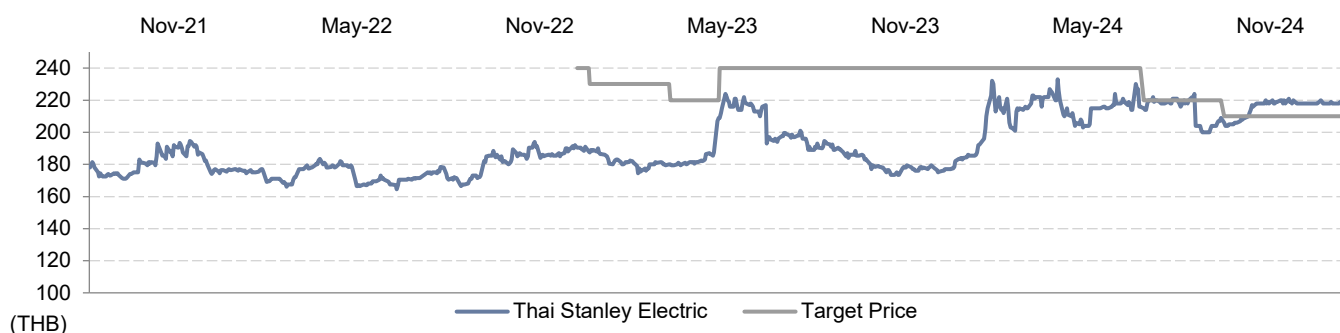
Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
31-Jan-2022	BUY	29.00	01-Aug-2022	HOLD	19.50	09-Aug-2024	BUY	13.60
04-Mar-2022	BUY	28.50	28-Oct-2022	HOLD	22.00			
29-Apr-2022	BUY	24.00	11-Oct-2023	BUY	23.00			

Jitra Amornthum started covering this stock from 01-Oct-2020

Price and TP are in local currency

Source: FSSIA estimates

Thai Stanley Electric (STANLY TB)



Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
19-Jan-2023	BUY	240.00	10-Apr-2023	BUY	220.00	24-May-2024	HOLD	220.00
30-Jan-2023	BUY	230.00	23-May-2023	BUY	240.00	02-Aug-2024	HOLD	210.00

Jitra Amornthum started covering this stock from 19-Jan-2023

Price and TP are in local currency

Source: FSSIA estimates

Company	Ticker	Price	Rating	Valuation & Risks
AAPICO Hitech	AH TB	THB 18.60	BUY	Key downside risks to our P/E-derived TP include lower-than-expected car production volumes and lower car sales in both Thailand and Malaysia, higher steel prices, semiconductor shortages, and exchange rate risk.
Inoue Rubber (Thailand)	IRC TB	THB 14.00	HOLD	Downside and upside risks to our P/E-based TP include 1) weaker or stronger demand from the automotive industry; 2) a sharp rise or decrease in the price of crude oil; and 3) chip supply shortages or oversupply.
Somboon Advance Technology	SAT TB	THB 11.10	BUY	The key downside risks to our P/E-based TP are the domestic car manufacturing industry recovering slower than expected, a faster-than-expected adoption rate for electric vehicles in Thailand, higher raw material prices, and worse global demand for pickup trucks.
Thai Stanley Electric	STANLY TB	THB 219.00	HOLD	Downside risks to our P/E-based TP include 1) weak global automotive demand; 2) higher raw material prices and utility costs; 3) global semiconductor shortages; and 4) fluctuations in the THB.

Source: FSSIA estimates

Additional Disclosures

Target price history, stock price charts, valuation and risk details, and equity rating histories applicable to each company rated in this report is available in our most recently published reports. You can contact the analyst named on the front of this note or your representative at Finansia Syrus Securities Public Company Limited.

All share prices are as at market close on 21-Nov-2024 unless otherwise stated.

RECOMMENDATION STRUCTURE

Stock ratings

Stock ratings are based on absolute upside or downside, which we define as $(\text{target price}^* - \text{current price}) / \text{current price}$.

BUY (B). The upside is 10% or more.

HOLD (H). The upside or downside is less than 10%.

REDUCE (R). The downside is 10% or more.

Unless otherwise specified, these recommendations are set with a 12-month horizon. Thus, it is possible that future price volatility may cause a temporary mismatch between upside/downside for a stock based on market price and the formal recommendation.

* In most cases, the target price will equal the analyst's assessment of the current fair value of the stock. However, if the analyst doesn't think the market will reassess the stock over the specified time horizon due to a lack of events or catalysts, then the target price may differ from fair value. In most cases, therefore, our recommendation is an assessment of the mismatch between current market price and our assessment of current fair value.

Industry Recommendations

Overweight. The analyst expects the fundamental conditions of the sector to be positive over the next 12 months.

Neutral. The analyst expects the fundamental conditions of the sector to be maintained over the next 12 months.

Underweight. The analyst expects the fundamental conditions of the sector to be negative over the next 12 months.

Country (Strategy) Recommendations

Overweight (O). Over the next 12 months, the analyst expects the market to score positively on two or more of the criteria used to determine market recommendations: index returns relative to the regional benchmark, index sharpe ratio relative to the regional benchmark and index returns relative to the market cost of equity.

Neutral (N). Over the next 12 months, the analyst expects the market to score positively on one of the criteria used to determine market recommendations: index returns relative to the regional benchmark, index sharpe ratio relative to the regional benchmark and index returns relative to the market cost of equity.

Underweight (U). Over the next 12 months, the analyst does not expect the market to score positively on any of the criteria used to determine market recommendations: index returns relative to the regional benchmark, index sharpe ratio relative to the regional benchmark and index returns relative to the market cost of equity.