PL Capital
PRABHUDAS LILLADHER

Cross Sector Analysis

Theme Report

October 15, 2025

Chinese anti-involution – Hamlet's 'to be or not to be'?

As Chinese companies engage in price wars bleeding each other, the government announced an anti-involution policy in 2024/25. However, the contours of the same have been left open for the companies to decide. In this context, we analyze similar actions initiated across the globe and come to the conclusion that such consolidation has been successful only in developed nations, or where unemployment is not an issue. Our industry checks also suggest that, so far, no concrete steps for capacity closures have been taken in China.

Like the typical fund disclaimer that says past performance is not a precursor to the future, it is difficult to say if things would be different this time. But <u>such restrictions in the past have only been similar to Hamlet's profound indecisiveness</u>. Will it result in better profitability or the tragic death of many, only time will tell. We believe, <u>China's high unemployment, at +5%, will make consolidation a distant mirage</u>.

- **Refining consolidation largely witnessed in developed countries**: Since 2000, our analysis suggests that meaningful consolidation in the refining industry has happened only in countries like France, Italy, the UK, Australia and Japan. For example, Italy has seen 27% reduction in its refining capacity during 2000-24, while Australia has seen 71% reduction. Larger economies of France, the UK and Japan have also seen 31-42% reduction in capacity.

- **Teapot refineries of China:** These refiners, largely located in Shandong, have always been notorious for their low utilization, higher pollution, and low profitability. Despite multiple attempts, in 2009, 2014, 2018 and recently in 2025, to cut down their capacities, they have come out stronger.

- **Petrochem consolidation in South Korea**: Just a couple of months ago, South Korea announced restructuring of its petrochemical sector. The companies have announced closure of 2.7-3.7mmtpa on a base of ~13.5mmtpa. The country had undertaken a similar exercise during the 1999 financial crisis as well. However, data suggests that as against expected reduction in capacity, ethylene cracking capacity rose from 4mmtpa in 1995 to 4.8mmtpa in 2000 and further 5.9mmtpa in 2005.

- **China+1 strategy for chemicals**: In 2017, after a major chemical plant explosion near the Yangtze River, 40% of chemical capacity was shut citing excessive pollution and lack of adequate safety, and a green tax was applied. Polluting companies were asked to shift their units away from population centers, while smaller ones were to shut down. However, market share of China in global chemical sales has only grown stronger, from 39.8% in 2017 to ~44% in 2024.

- **Our conclusion**: Looking at the past, we strongly believe that the anti-involution policy would not result in any meaningful capacity closures in the short term. As a result, instead of anti-involution related tailwinds, one should focus on the bottom-up approach for identifying possible investment candidates in related sectors. Hence, avoiding the brouhaha of anti-involution, we stick to our top picks- ONGC, Oil India, Mahanagar Gas, Fine Organics, Tata Steel and JSP.

Swarnendu Bhushan
swarnendubhushan@plindia.com | 91-22-66322260
Tushar Chaudhari
tusharchaudhari@plindia.com | 91-22-663222391
Saurabh Ahire
saurabhahire@plindia.com | 91-22-66322537
Pranav Iyer
pranaviyer@plindia.com | 91-22-66322539

Poor profitability sets the tone for anti-involution

Worsening profitability across industries

Multi-sector phenomenon: In order to position itself as the global manufacturing hub, China has been adding capacities across sectors like refining, steel, chemicals, solar as well as batteries. Lack of adequate global demand and ongoing geo-political/economical issues have further challenged the profitability of the companies across the sectors.

Refining/petrochem: unrefined profits: Although % profit margin is not the right metric, but in absolute terms also, the following table suggests sharp decline in profits of the refining and petrochemical companies in China.

Exhibit 1: PAT of Chinese ref/petrochem companies trending down (RMB, mn)

	CY21	CY22	CY23	CY24
Sinopec	2,073	-2,846	-1,346	311
Rhongsheng Petrochem	13,236	3,341	1,158	725
Jiangsu Eastern Shenghong	4,575	611	717	-2,297

Source: Industry, PL

Battery/solar: profits stare sunset: Profit margins of battery manufacturers in China show a mix trend with CATL, the largest player increasing its PATM due to economies of scale and process efficiencies. However, large number of companies like Gotion, Sunwoda, CALB, Farasis are hardly making significant margins. The story is even starker in solar companies, where most companies are not seen making money in 2024.

Exhibit 2: PATM of battery manufacturers in China (%)

	CY21	CY22	CY23	CY24
Contemporary Amperex Technology Co., Limited (CATL)	13.7	9.4	11.0	14.0
Gotion High-Tech Co., Ltd.	1.0	1.4	3.0	3.4
EVE Energy Co., Ltd.	18.6	10.1	9.3	8.7
Sunwoda	2.5	2.0	2.2	2.6
CALB	2.1	3.4	1.1	2.1
Farasis	-27.2	-8.0	-11.4	-2.8

Source: Industry, PL

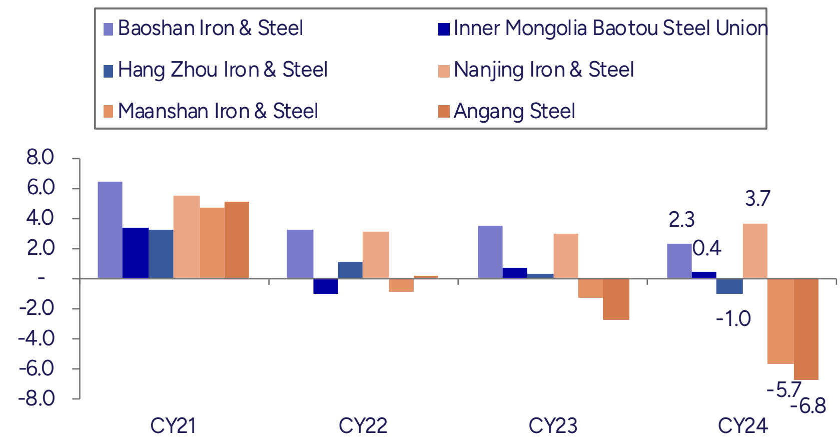
Exhibit 3: PATM of Chinese solar companies trending down (%)

	CY21	CY22	CY23	CY24
LONGi Green Energy Technology Co., Ltd.	11.2	11.4	8.3	-10.4
Tongwei Co., Ltd.	12.9	18.1	9.8	-7.7
JinkoSolar Holding Co., Ltd.	2.8	3.6	6.3	0.1
JA Solar Technology Co., Ltd.	0.8	1.1	1.0	-0.1
Trina Solar Limited	4.1	4.3	4.9	-4.3

Source: Industry, PL

Steel- profitability anything but the name: Profit margins of Chinese steel majors have dwindled significantly during the past few years. Baoshan has seen its PATM declining from 6.5% in 2021 to 2.3% in 2024. Hang Zhou, Maanshan & Angang Steel have been in loss in 2024 with net loss margin of 1-7%. Inner Mongolia Baotou Steel's PATM was also meagre 0.4%.

Exhibit 4: Profitability of Chinese steel companies trending down (%)



Source: Industry, PL

Chemicals- disintegrating profits: Despite the expected consolidation since environmental and safety issues since 2017, unchecked expansions have led to profits getting hammered. Most of the cases see sharp contraction in profit margins as shown below.

Chinese chemical companies appear to run at 60-65% utilization as per industry checks

Exhibit 5: Profitability of Chinese chemical companies trending down (%)

	CY21	CY22	CY23	CY24
China Sunshine	7.4	6.0	9.4	8.3
Limin	6.5	4.4	1.5	1.9
Dongye	13.1	19.3	4.9	5.7
Shenzhen Capchem	18.8	18.2	13.5	12.0
Lianhe	4.8	8.9	-7.2	1.8
Suli	10.1	10.0	1.0	-0.5
Zhejiang Zhongxin Fluoride	11.4	11.5	-14.0	-13.2
Jiangsu Lanfeng	-34.0	-22.2	-19.1	-14.1
Yunnan New Energy	34.0	31.6	21.1	-5.3
Hunan Yuneng	16.8	7.0	3.8	2.6

Source: Industry, PL

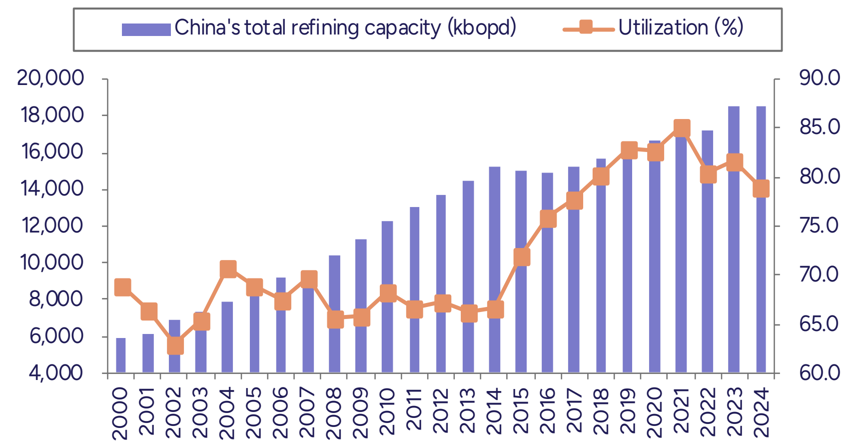
Declining profits sets the stage for anti-involution in 2024/25: Battling pricing competition across sectors resulting in poor profitability as seen in above examples, the Chinese government has called for the companies to reign in the price wars. However, the contours of the same have been left for the companies to decide. That makes it all the important to study past such attempts to rationalize capacities in order to boost profitability.

Shadows of Hamlet everywhere in the past

Global consolidation in refining/petrochem

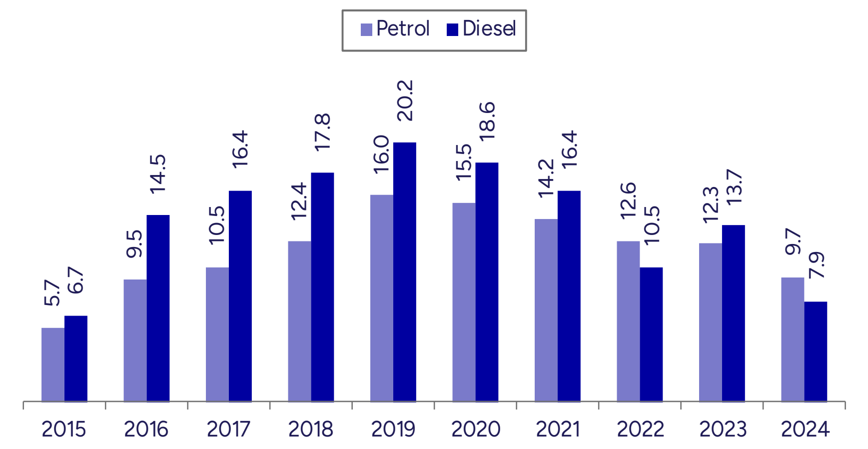
Net exports of diesel and petrol have grown over the years: As a reason for capacity additions, net export of diesel and petrol have grown over the years, except for 2024, when utilization itself has come down to 79%. Battling rising use of electric vehicles, it is only now that the country has capped its refining capacity at 20mnbopd. However, that itself is a large number and as pick up of EVs continues, the current capacity itself would result in rising exports.

Exhibit 6: Chinese growing refining capacity



Source: BP Statistical Review, PL

Exhibit 7: Net export of petrol and diesel (mmt)



Source: Company, PL

Capacity expansion continues unabated: Despite the rising exports and low utilizations, we see several new refineries under construction. It appears from the table below that almost 1.5mnbopd of new refineries are under construction.

Exhibit 8: Chinese refining capacity additions (kbopd)

Refinery name	Company	Country	Capacity	Expected by	NOC?
Shandong	Yulong Petrochem	China	400	Q1CY25	Partly
Quanzhou	Sinochem	China	60	2025	Y
Daxie	CNOOC	China	130	2025	Y
Zhenhai Refining	Sinopec	China	240	2025	Y
Huanjin	Saudi Aramco/Norinco	China	320	2026	Y
Qilu Petrochem	Sinopec	China	70	2028	Y
Gulei Phase II	Sinopec/Fujian	China	320	2030	Y

Source: IEA, PL

Chinese teapot refineries have always resisted & survived closure attempts

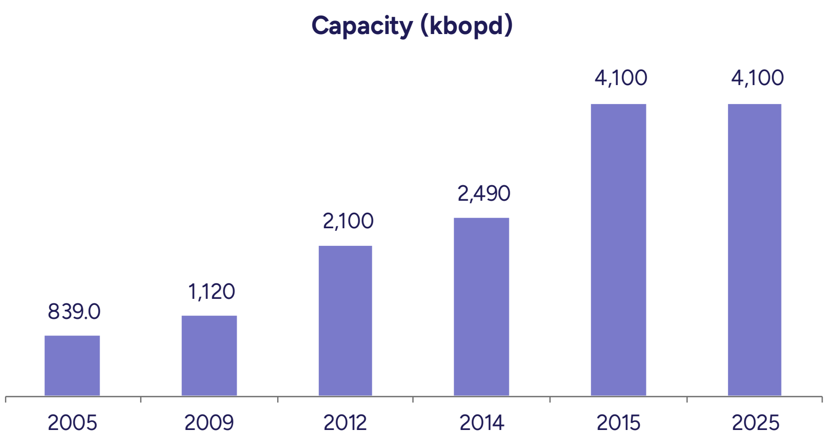
Teapot refineries of China: Shandong in China is home to several teapot refineries accounting for ~22% of total Chinese refining capacity as of date. These are small size refineries often associated with inefficient operations and high pollution. There have been several attempts in the past to shutter these. In 2009, the National Development and Reform Commission recommended closure of those with capacity below 20,000bopd by 2011 and those below capacity of 40,000bopd by 2013 or to upgrade them. The result was that the refineries merged or upgraded in capacity/complexity to avoid closures. There have been clampdowns in 2014, 2018 and recently in 2025 on tax evasions or cutback in rebates on import of feedstock. However, they have always survived, their capacity rising from 839kbopd in 2005 to 4,100kbopd currently.

Exhibit 9: Clampdown on Chinese teapot refineries

Year	Policy	Action taken
2009	NDRC mandated closure, upgradation or merger of all refineries below 40,000bopd capacity 1) Closure of capacities below 20,000bopd by 2011 2) Closure of capacities below 40,000bopd by 2013	Refineries upgraded both capacity as well as complexity to avoid closures
2014, 2018	Tightening of tax loopholes being exploited by teapot refiners	
2025	Cutback in rebate on feedstock imports	~360kbopd of refining capacity temporarily closed or taken in maintenance

Source: Industry, PL

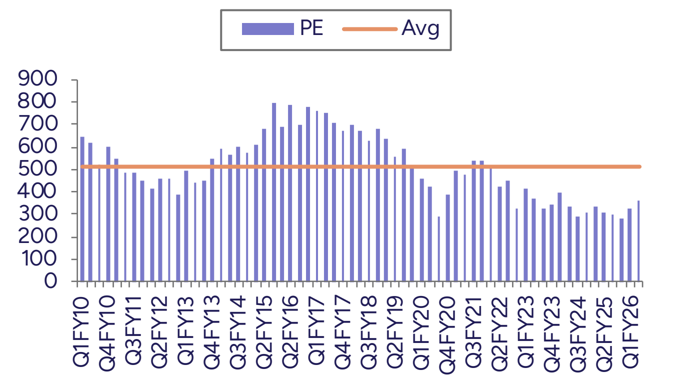
Exhibit 10: Capacity trend of Chinese teapot refineries



Source: Company, PL

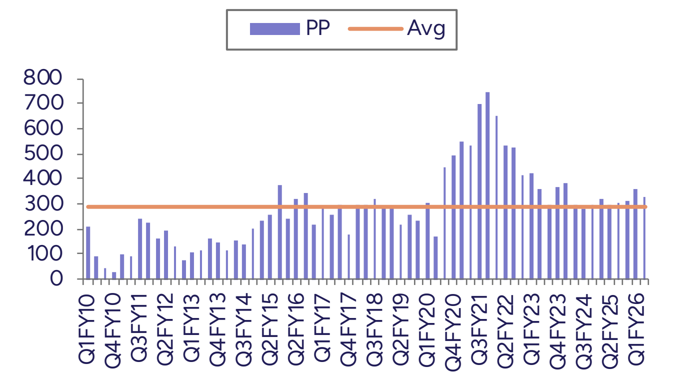
Same story playing out in petrochemicals: Unchecked petrochemical expansions in China to remove import dependence has resulted in current petrochem spreads below long-term average. PE-naphtha is currently at 29% lower than the average since Q1FY20. PP-naphtha is 14% higher. However, compared with 5-year average, both PE and PP are 6% and 23% lower respectively. Despite the global glut, China appears to continue its Petrochem expansions unabated.

Exhibit 11: PE-naphtha lower than long-term average (USD/mt)



Source: Industry, PL

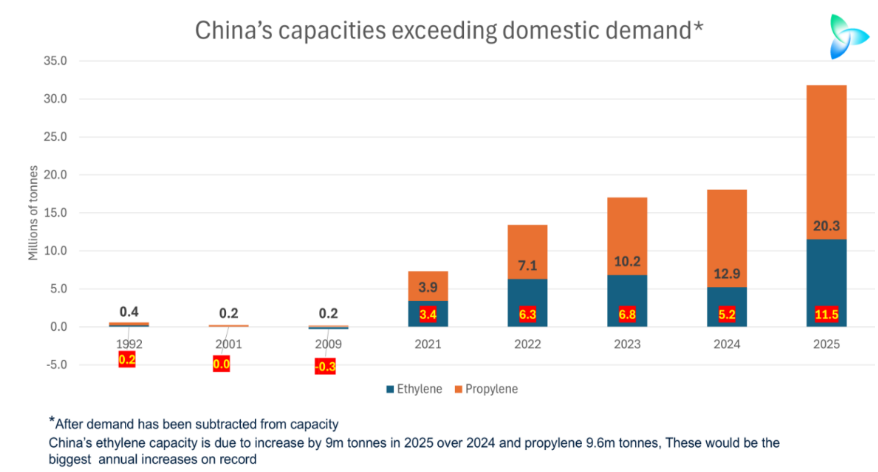
Exhibit 12: PP-naphtha marginal higher than long-term (USD/mt)



Source: Industry, PL

Chinese petrochem expansions are ahead of domestic demand

Exhibit 13: Chinese expansions- supply net of demand

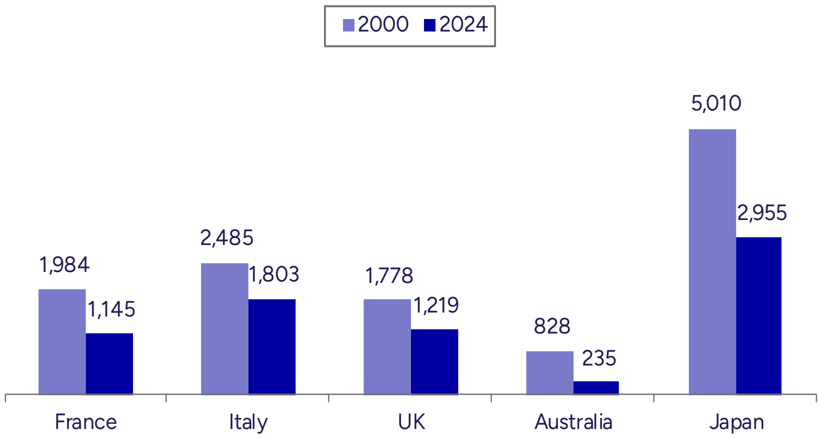


Source: ICIS, PL

Only developed nations have shown meaningful cut down in capacity: Although several countries keep announcing cut-down in capacities, as per the table below, only developed nations appear to have cut down significantly their refining capacities during 2000-24. For example, Australia has cut down its refining capacity by 71%. Other developed nations, most prominent being Japan, has cut down by 27-42%.

Only developed nations appear to have gone down the path of capacity closures

Exhibit 14: Major cutdown in refining capacities globally (kbopd)

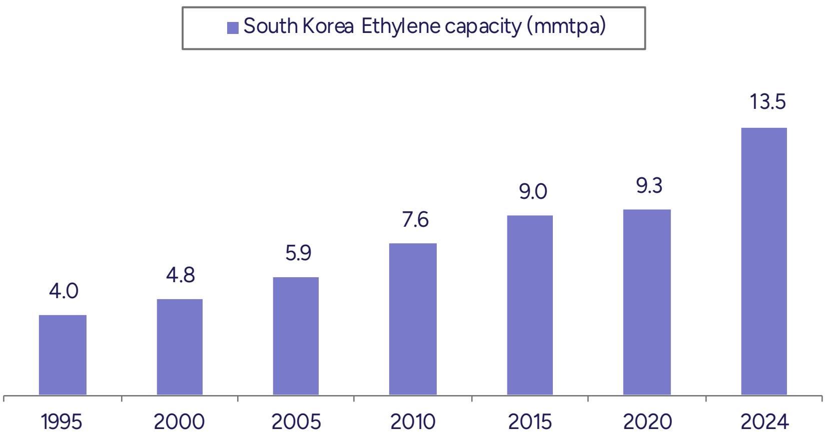


Source: BP Statistical Review, PL

South Korean petrochem rationalization of 1999: Facing financial crises in 1999, South Korea set upon a restructuring of its petrochem capacities. However, as one can see in the chart below, the capacities kept increasing only. In 2025, a renewed cry for cut down of capacities have been attempted where the companies have committed cutting down 2.7-3.7mmtpa or ~one-fourth of its capacity.

Despite restructuring of 1999, South Korean capacities have grown around that period

Exhibit 15: Capacity trend of South Korean petrochem



Source: Industry, PL

China retains highest market share in chemicals

No cut down in aggregate numbers: Despite environmental and safety issues of 2017 and beyond, China has continued its output growth each year at a much faster rate than the world. Even in 2020, when global production fell by 0.5%, China stood as an outlier with 2.9% growth in production. Even in H1CY25, despite poor profitability, production growth stands at 7.9% vs global production growth of 4.2%.

Chinese production increased despite closures expected post environmental and safety crisis of 2017

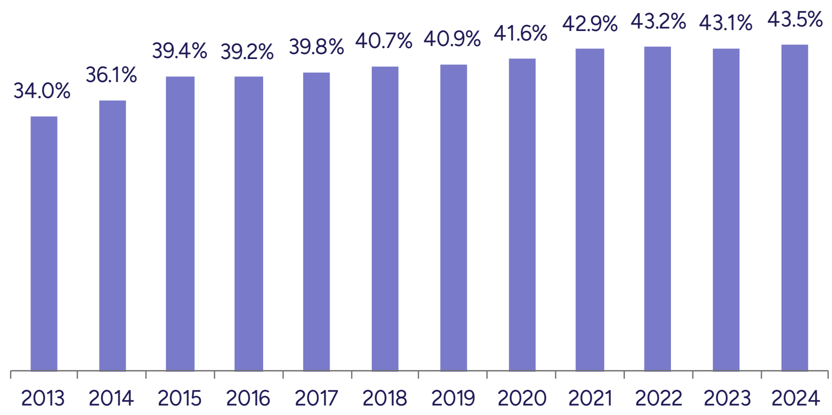
Exhibit 16: Production growth (%, YoY)

% production gr.	2017	2018	2019	2020	2021	2022	2023	2024	H1 2025
EU27	3.7	-0.5	-1.7	-2.4	6.0	-5.9	-9.0	2.4	-2.4
Russia	7.6	3.9	3.4	7.4	7.1	-2.5	5.3	3.1	2.5
USA	0.4	-0.4	-5.3	-4.9	4.2	2.6	-0.2	0.3	2.6
Brazil	1.2	-0.3	-1.5	-	3.6	1.1	-6.0	3.0	4.3
China	3.8	3.6	4.6	2.9	8.6	5.7	9.6	9.1	7.9
Japan	5.8	1.4	-1.2	-12.0	5.3	-3.7	-6.6	-3.5	-1.1
South Korea	3.5	2.3	-1.4	-3.1	8.4	-10.0	-9.4	2.0	-1.2
India	0.1	2.3	1.2	-5.4	8.5	4.5	-0.5	1.4	-1.0
World	3.2	2.0	1.3	-0.5	6.8	1.5	2.0	4.8	4.2

Source: CEFIC, PL

Rising market share: While the world expected consolidation in Chinese capacities due to the policies of 2017 when older and environmental plants were to shut or shift to lesser populated areas, we have seen China's market share rising from 39.8% in 2017 to ~44% in 2024.

Exhibit 17: Rise in market share of China in chemicals



Source: CEFIC, PL

Even Chinese steel industry has the same story to tell

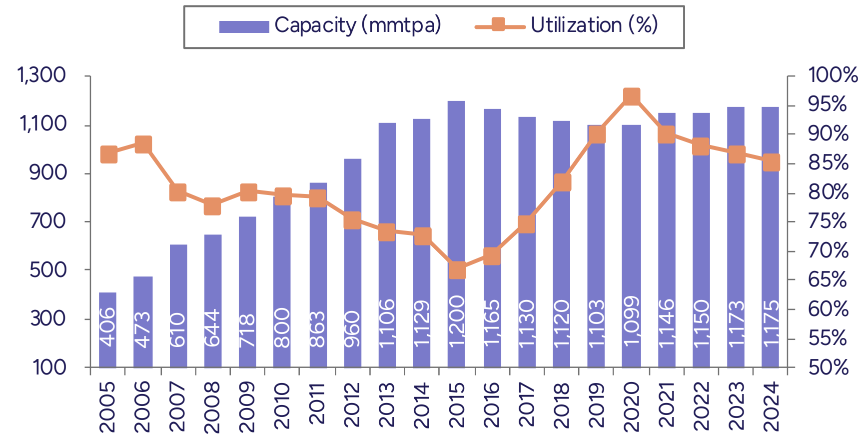
No aggregate cut-down in Chinese steel capacity: Over the years, several restrictions have been announced. During 12th five year plan, 90mmtpa of obsolete steel/iron plants were to be shut. On an aggregate basis, capacity only grew during that period. In 2016 too, 100-150mmtpa of capacity was targeted to be closed during 2016-21. In 2025, as a part of anti-involution, 50mmtpa has been targeted to be closed down.

Exhibit 18: Initiatives to close down steel plants in China

Year	Policy	Action taken
2011-16	90mmtpa of obsolete iron/steel plants or 11% of capacity in 2010 to be shut	Aggregate capacity rose by 337mmtpa
2016	State Council announced closure of 100-150mmtpa over next 5years	Achieved 100mmtpa reduction by 2020 before rising again in 2021
2025	Anti-involution policy to cut 50mmtpa	

Source: Industry, PL

Exhibit 19: Chinese steel capacity trend

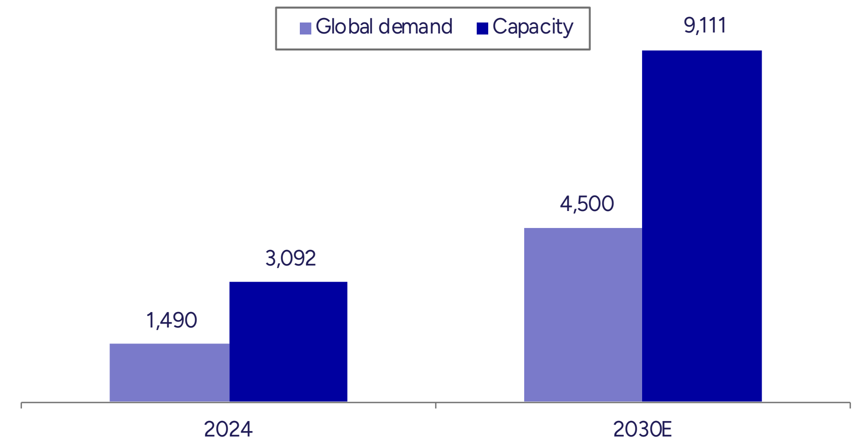


Source: Industry, PL

China has led the glut in new energy segments

Battery manufacturing- over-charged capacities: Against global demand of 1,490GW of batteries in 2024, global capacity stood at 3,092GW. Out of this, 2,775GW is in China alone. On top of it, various companies in China have announced expansions of 3,023GW. This combined with nearly similar capacity getting added elsewhere, global utilization is expected to be ~50% by 2030.

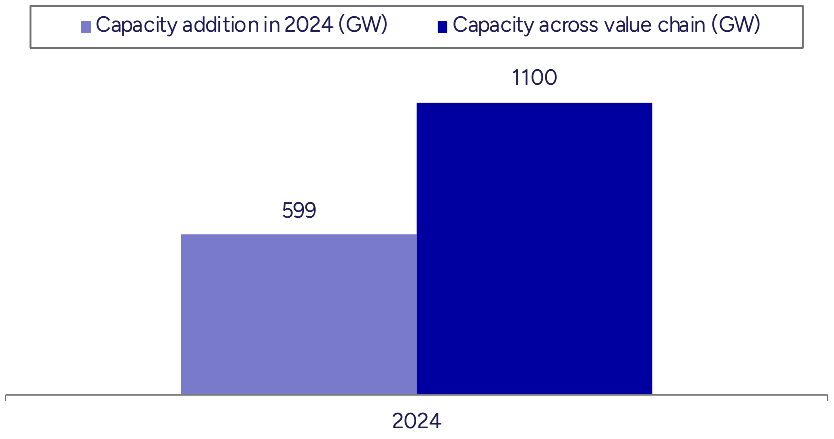
Exhibit 20: Battery demand and supply outlook (GW)



Source: Volta, PL

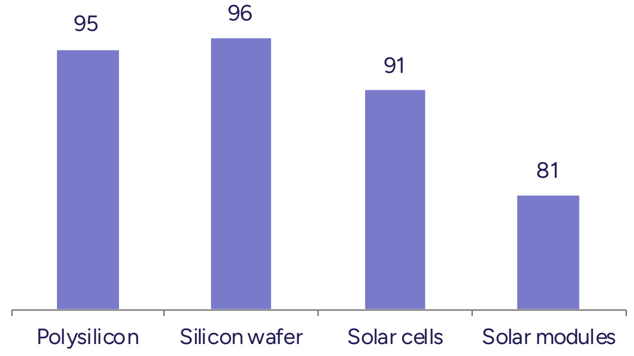
Solar capacities in China- dark clouds ahead: Against global capacity of ~1,100GW, capacity addition in 2024 stood at meagre 599GW. China has highest market share across value chain- polysilicon (95%), silicon wafer (96%), solar cells (91%) and solar modules (81%). As a result of the over-capacity, price declines have been severe in 2024- polysilicon (39%), silicon wafer (50%), solar cells (30%) and solar modules (29%).

Exhibit 21: Global demand and supply outlook of solar modules (GW)



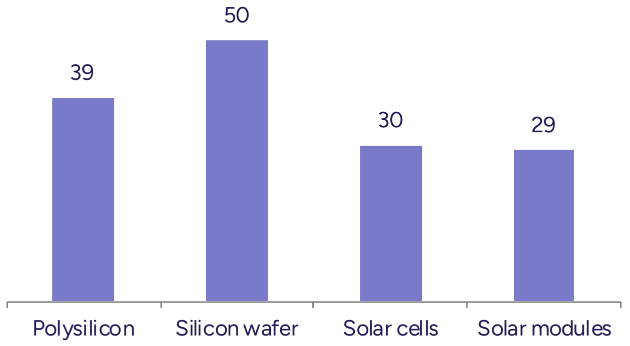
Source: JA Solar, PL

Exhibit 22: Market share of China across solar value chain (%)



Source: JA Solar, PL

Exhibit 23: Price decline across value chain in 2024 (% YoY)



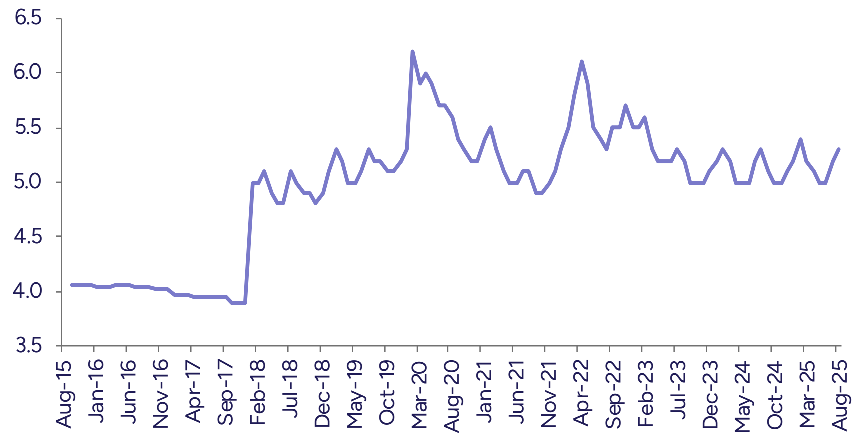
Source: JA Solar, PL

Our take on Anti-involution

No imminent action anticipated

High unemployment rate in China: Chinese urban unemployment rate appears high at 5.3% in Aug'25. As a result, our industry checks make us believe that despite poor profitability, the companies are reluctant to cut down on production which may worsen unemployment.

Exhibit 24: **Rising unemployment in China (%)**



Source: National Bureau of Statistics, China, PL

Pricing pressure likely to continue in sectors battling over-capacity: Since we do not expect meaningful capacity consolidation in China, we expect sectors like ref/petrochem, steel, chemicals, battery and solar to remain under pressure. We may expect volumes to rise along with demand but large underutilization would ensure that prices do not rise up significantly.

Stick to bottom-up approach

Oil and Gas: We expect refining and petrochem margins to be subdued going forward too. The profitability of the OMCs, however, is also a function of the marketing margins which appear strong. However, at 1.0/1.4/1.5x FY27 BV, IOCL/HPCL/BPCL do not leave much of an upside. Our top picks remain Oil India, ONGC and Mahanagar Gas. We reiterate that oil prices would stabilize in USD70-80/bbl. This combined with 6.1/8.6x FY27 PE for ONGC (conso)/Oil India (standalone), make them attractive bets. Mahanagar Gas is expected to witness strong volume growth of ~10% for next two years and is trading at 10.6x FY27, which makes it another attractive investment candidate in the space.

Chemicals: We expect pricing pressure to continue across agrochemicals as well as for refrigerant gases. As a result, our top picks remain Fine Organics and PCBL. Fine Organics is adding gross block of Rs7.5bn in India and USD135mn in USA, which would aid its expansions in the future. We expect its EPS to jump from Rs161 in FY27 to Rs223 in FY28. We believe that PCBL is currently witnessing bottom cycle as far as its EBITDA/mt is concerned.

Steel: Recently announced 50mmtpa capacity reduction in China is likely to benefit global steel pricing if implemented seriously. In CY25YTD, Chinese mills have effectively curtailed steel production gradually although capacities' closures have not been announced. GoI's imposition of 12% safeguard duty w.e.f. 22nd Apr'25 has created a floor for domestic HRC prices along with other measures to restrict cheaper imports. We remain constructive on domestic steel space with Tata Steel/JSP as top picks.

PL's Recommendation Nomenclature

Buy	:	> 15%
Accumulate	:	5% to 15%
Hold	:	+5% to -5%
Reduce	:	-5% to -15%
Sell	:	< -15%
Not Rated (NR)	:	No specific call on the stock
Under Review (UR)	:	Rating likely to change shortly

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3rd Floor, Sadhana House, 570, P. B. Marg, Worli, Mumbai-400 018, India | Tel: (91 22) 6632 2222 Fax: (91 22) 6632 2209

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