THAILAND INDUSTRY OUTLOOK 2024-26

Construction Materials



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Krungsri Research

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EXECUTIVE SUMMARY



Demand for construction materials tends to slump through 2024 due to delays in the approval and disbursement of the fiscal budget, which has then held up progress on both megaprojects and general work on public utilities and infrastructure around the country. At the same time, work on private sector residential and commercial developments has been impacted by only weak growth in purchasing power, the run-up in the cost of living, and the recent high interest rates. The total market for construction materials is thus expected to contract by between -2.0% and -3.0% across the year. However, an uptick in spending on public sector construction and a brighter outlook for the economy will then boost the pace of work on both new private sector projects and repairs and renovations, and this should feed through into growth of 4.5-5.0% in 2025 and then of 5.0-5.5% in 2026.

Given this, manufacturers and distributors of construction materials will have to endure a poor outlook for 2024, but as demand is expected to record growth in 2025 and 2026, incomes will grow again. Going forward, major manufacturers will compete to invest in the advanced production technologies needed to cut their greenhouse gas emissions and meet the ESG goals. Distributors will increasingly adapt to the changing needs of digital consumers by leaning more heavily on online distribution channels. Nevertheless, manufacturers and distributors will likely face higher energy and transport costs, and increased pressure on sales due to low-cost imports that will come especially from China and Vietnam.

Krungsri Research view

Continuing weakness in consumer spending power and delays to work on government infrastructure projects will drag on the industry through 2024, but over 2025 and 2026, the outlook for the construction will improve thanks to: (i) an expansion in public sector construction in both Thailand and neighboring countries, especially for work on megaprojects; (ii) an acceleration in work on real estate developments, particularly in the Bangkok Metropolitan Region and in provincial centers; and (iii) a stronger outlook for the economy that will lift incomes and boost demand for the repair and renovation of residential properties.

Producers of construction materials:

- **Cement:** Income growth will be depressed through 2024 but an expected increase in spending on construction in 2025 and 2026 will lift incomes, while some manufacturers will also look to move beyond their traditional export targets of the CLM countries by breaking into new markets in Australia and New Zealand.

- **Construction steel (bar & section):** Receipts will fall in 2024, and although these will recover in 2025, growth will remain limited due to pressure from low-cost imports from China and Vietnam.
- **Ceramic tile and sanitary ware:** As with other segments, income will soften in 2024, but a rebound in real estate markets, especially for residential properties, should then drive recovery in sales. Nevertheless, the large backlog of unsold housing stock, the tightening of credit conditions by lenders (in particular for low- and middle-income borrowers) and competition with cheap Chinese imports will mean that growth will remain anemic.

Traders of construction materials:

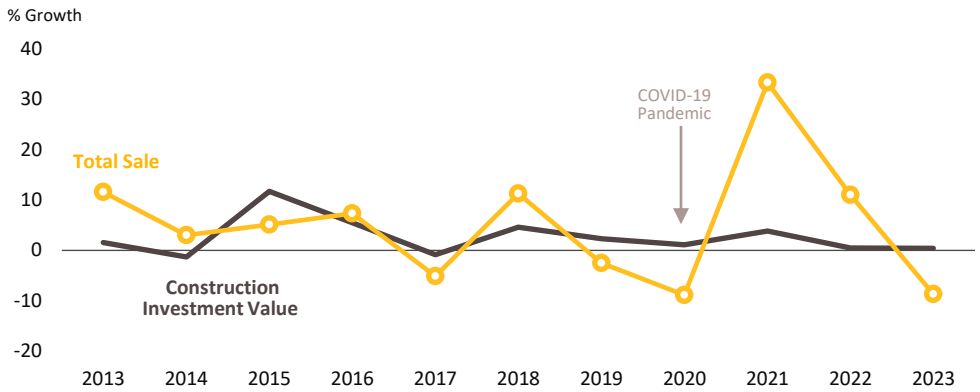
- **Modern traders:** Income will grow gradually, helped by: (i) improving spending on construction and overall economic outlook; (ii) an expansion in the reach of branch networks and an increasing reliance on using online platforms to distribute goods; (iii) growth in the number of house brand products that are on sale; and (iv) consumers' increasing preference for shops that carry a wide and comprehensive range of choices and that offer after-sales services such as home repairs, renovations and extensions.
- **Traditional traders:** For traditional wholesalers, although income will expand due to an increase in construction-related activity across the country, players will face obstacles in the form of rising competition from modern trade outlets and manufacturers selling directly to their customers. For traditional retailers, income will remain flat, although sales from these are generally of home decorations or goods used in home repairs and extensions, and these product categories may see some growth.



Overview

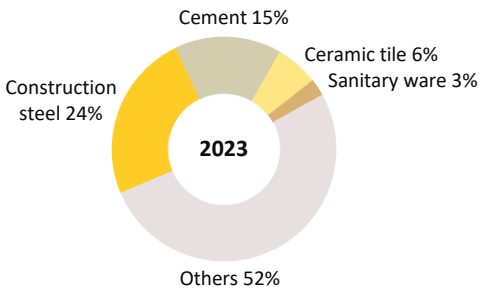
Construction supplies are a crucially important upstream component of the construction and real estate sectors, and because some 60% of all construction costs are for materials (Input-Output Table, 2015), the outlook for the construction supplies industry tends to move with these in a coordinated fashion (Figure 1). The most important product groups can be split into building materials (e.g., cement and construction steel), which account for 40% of the market for all construction materials, and home decorations (e.g., ceramic tile and sanitary ware), which represent another 10% of the market (Figure 2). With the exception of sanitary wares, sales of the main product categories are mostly into the domestic market (Figure 3).

Figure 1: Total Sale Value of Construction Materials and Construction Investment Value (Gross Fixed)



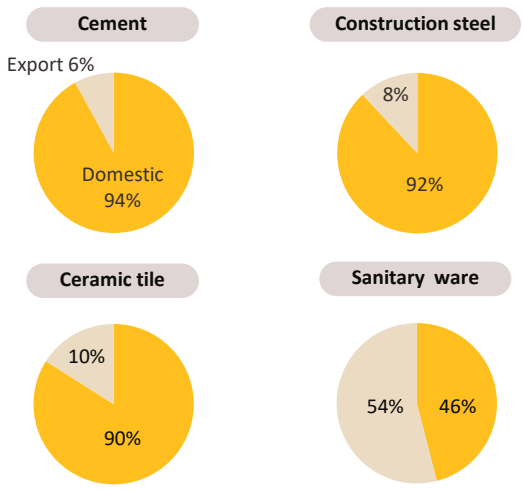
Source: Office of The National Economic and Social Development Council (NESDC), Office of Industrial Economics (OIE)
Note: Construction materials include cement, construction steel, ceramic tiles and sanitary wares.

Figure 2: Share of Total Sale Value by Major Product



Source: OIE
Note: Cement refers to Portland cement and mixed cement
Construction steel refers to bar and section (hot-rolled structural steel).
Others include glass, concrete blocks, concrete pipes, precast concrete sections, high tensile steel, and galvanized steel sheets.)

Figure 3: Share of Sale Volume by Product and Market
(Average 2021-2023)



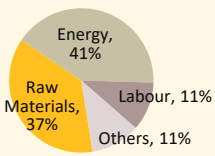
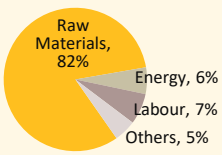
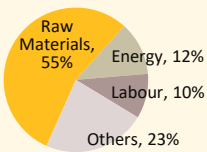
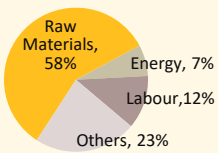
Sources: OIE, Ministry of Commerce (MOC), Iron and Steel Institute of Thailand (ISIT)

Industry structure

- **Producers:** According to 2023 data, there were some 801 mid- and large-sized operators1/ registered in Thailand that were active in the construction materials industry. These enjoy advantages relative too smaller players in virtue of their stronger financial base, their better management of production processes, and their favorable bargaining position relative to suppliers with regard to, for example, price and deliveries of inputs. This then allows these players to mass produce goods more efficiently, which in turn generates economies of scale. In contrast, smaller operators, of which there were 2,153 players in the country, tend to be on a weaker financial footing and this then forces these to produce goods in smaller production runs, adding to marginal manufacturing costs. The structure of the manufacturing side of the industry is summarized in Table 1 below.
- **Traders**: As of 2023, Thailand was home to 7,303 distributors of construction materials[1/], split between 280 large players, 1,172 mid-sized operators, and 5,851 small companies. These can be further categorized according to the characteristics of each business.
    - **Modern Traders** are notable for their use of comprehensive management systems across their businesses, from sales floor to back-office services. These operations stock a wide range of construction materials and related goods under a single roof, and these generally cover the complete spread of consumer and trade needs, from basic construction materials through to home repairs, decorations and furniture. Players are generally medium- or large-scale operations, and these have advantages in terms of their capital base and their lower operating costs. Many of these are now in the process of expanding their customer bases in the provinces by extending their upcountry branch networks. One favored strategy for increasing contact points with customers is by offering after-sales services, such as those for home repair and the installation of appliances in and outside the home. Within Thailand, five large players dominate the market and as of 2023, these had a combined 31% share of all income going to retailers of construction materials. These are: The HomePro group (HomePro shops themselves are more oriented towards retail and home decorations, while MegaHome is focused on the wholesale and trade market), Thai Watsadu, Siam Global House, Dohome, and the Boonthavorn Group.
    - **Traditional traders** are operators in the construction sector using more old-fashioned management systems. Their operations emphasize the distribution of basic building materials, such as cement, sand and hardware (e.g., locks, nails, etc.) together with materials used in home repairs and decoration, and this is targeted at meeting consumer demand within the local area. However, in the face of rising competition from modern trade outlets, some players are also now beginning to raise their competitiveness by modernizing their operations and offering a more comprehensive set of services. This extends to giving their customers a wider range of choices that includes not just building materials but also home decorations, renovating their premises, using alternative distribution channels (especially by increasing their online presence), putting in place modern stock control systems, and offering organized delivery services. Nevertheless, traditional players remain at a disadvantage relative to modern trade outlets with regard to their finances, marketing, and the strength of their brand.

1/ This includes only companies that have submitted complete accounts for the years 2018-2023.

Table 1: Structure of the Construction Material Industry (Main Products) in Thailand

	Cement	Construction steel	Ceramic tile	Sanitary ware
Production and investment	• Setting up and operating in this market carries significant investment overheads, and production is generally integrated across up- and downstream activities. It is thus difficult for new players to enter the market. • There are 3 players that have a production capacity greater than 10 million tonnes/year, and these account for 85% of all Thai cement production capacity.	• The main products in this market are bar and section steel, and manufacturers can likewise be divided into those that do and do not operate their own furnaces. • Thailand lacks an upstream steel industry and so manufacturers are reliant on imported steel that they then process themselves. This adds to production costs, and domestic prices also tend to move in step with those set on international markets.	• Most manufacturers are SMEs, often producing to order. • However, large players typically have ready access to capital and so these are able to utilize significant technological resources and to develop their own products. By value, these also control some 90% of the market.	• Manufacturing sanitary ware entails major investments, and most production is integrated across up- and downstream sections of the supply chain. • 5 large operations are active in the market. These include Thai companies, joint ventures between Thai and foreign operations, and leading international players that have established production facilities in Thailand.
Major market	• Goods are distributed primarily to the domestic market and because products are bulky and expensive to transport, just 9% of production goes to overseas markets. • 60% of output is used in private sector construction (mostly in residential and commercial properties), with the remaining 40% going to public sector projects.	• Production is largely for domestic consumption (especially by the public sector) and only 11% of output is exported. • Cheap imports from China are taking an increasing market share.	• Only 17% of output is exported and so the domestic market is by far the most important. • This segment is notable for the high level of competition from imports (which are especially competitive on price) and the wide range of alternative products.	• Sales are split 54:46 between the domestic and export markets, though most sales are to real estate projects. • At present, competition is rising from low-cost Chinese imports. This is a change from the past, when imports were generally of high-end products.
Cost structure (IO Table 2015)				
Major indicators (annual averages) for the 3 years from 2021-2023 [2/]				
Production	34.9 million tonnes/year	3.7 million tonnes/year	127.3 million sq.m./year	6.5 m pieces/year
Domestic sales	32.1 million tonnes/year	3.8 million tonnes/year	155.0 million sq.m./year	3.1 m pieces/year
Export	2.5 million tonnes/year	0.6 million tonnes/year	37.6 million sq.m./year	91k tonnes/year
Import[3/]	1.1 million tonnes/year	0.7 million tonnes/year	64.6 million tonnes/year	49k tonnes/year
Capacity utilization	69.9%	49.3%	62.2%	52.1%
Major operators in the segment	SCG, INSEE, TPI, Siam City Cement	TATA STEEL, GJS, SYS, MILLCON	SCG, Unicer Group, DYNASTY TILETOP	SCG, KOHLER, TOTO, LIXIL, Villeroy & Boch

Sources: OIE, MOC, and ISIT, compiled by Krungsri Research

2/ Portland cement and mixed cement

3/ The move by Thai producers to establish production facilities overseas and then to reimport from there to Thailand has led to a large amount in the import figures.

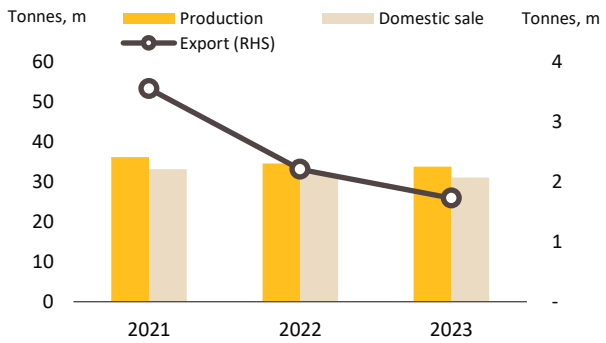
Situation

Producer

In 2023, depressed conditions in the construction sector undercut production and distribution in almost all the main product categories. This was principally the result of the only slow progress that was made on government infrastructure projects, which was itself a consequence of delays to the establishment of the new government and the start of budget disbursements. In addition, the private sector real estate market saw only relatively low levels of growth, and so overall spending on construction expanded by just 0.4% in the year, split between a -2.2% contraction in public sector investment and growth of 3.9% in private sector spending. Alongside this, exports also slipped4/ on the weaker economic outlook in core export markets, which then left importers with significant inventories of construction materials.

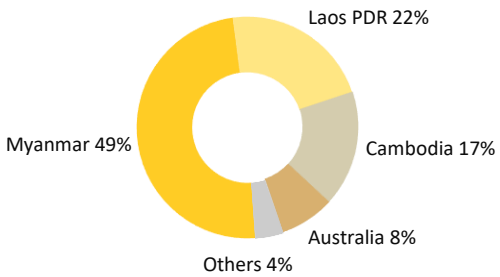
- **Cement**
  - **Production** (portland and mixed cement) dropped -2.4% to 33.8 million tonnes, thus extending 2022's -4.3% decline. **Domestic sales** also slipped, and having fallen -4.1% in 2022, this declined by another -2.5% to 31.1 million tonnes (Figure 4). Declines were driven by: (i) depressed demand, which was undercut by the drop-off in public sector construction work; and (ii) the run-up in energy prices, which then added to manufacturing and transportation costs.
  - **Exports** (not including clinker) slumped -21.8% by volume and -13.3% by value to totals of 1.7 million tonnes and THB 4.1 billion. Sales to Myanmar (mostly of Portland cement and comprising 49% of all Thai cement exports) dropped -8.9% as a result of the country's ongoing political troubles and the impacts of this on both government and private sector construction projects (Figure 5). Exports to Cambodia (17% of the total) also crashed -43.1% on continuing weakness in the real estate sector. Export to Lao PDR (22% of all cement exports) jumped 66.1% on strong investment in SEZs across the country despite continuing risk factors on economy that include a fall in the value of the kip to a 20-year low, a public debt crisis, and rampant inflation.

Figure 4: Cement - Production, Domestic Sales and Exports



Source: OIE (Portland cement และ Mixed cement)

Figure 5: Cement Export Markets by Volume
(2023)

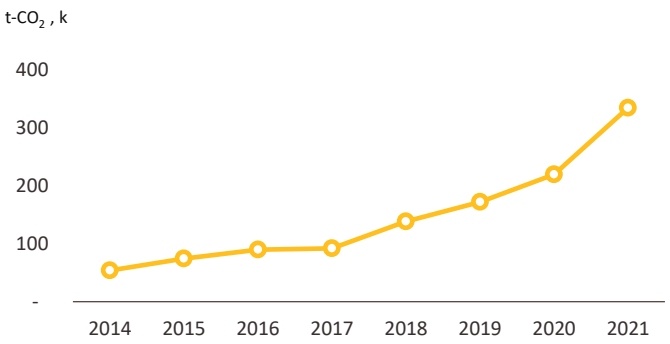


Source: MOC

4/ Exports are largely of cement, construction steel, ceramic tile, and sanitary ware.

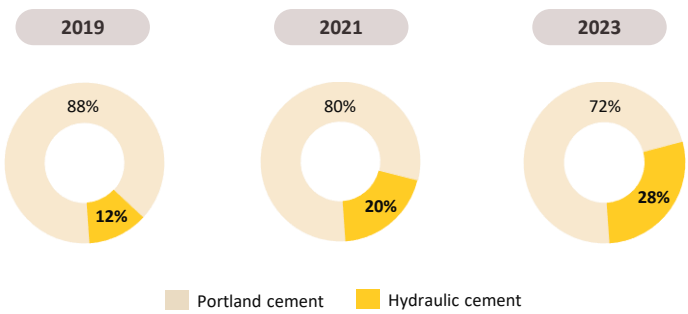
- In recent years, cement producers have begun to move the industry onto a more sustainable footing by investing in the development of new technology, including the production of hydraulic cement. Because production of the latter uses eco-friendly materials in place of clinker[5/], this helps to cut CO2 emissions, and since hydraulic cement can be used instead of clinker-intensive portland cement, its widespread uptake has the potential to help make significant inroads into reducing construction-related carbon emissions (Figure 6). Over the past few years, Thai manufacturers have thus been stepping up production of this for distribution to both domestic and export markets (Figure 7). Players have also been experimenting with the use of biomass-derived energy in place of the coal that the industry has traditionally relied on, for example in trials using Napier grass that have been carried out in the Saraburi Sandbox[6/].

Figure 6: The Estimated Amount of the Greenhouse Gas Reduction (t-CO2)
(by Using Hydraulic Cement)



Source: Thai Cement Manufacturers Association (TCMA)

Figure 7: Thailand Hydraulic Cement Exports



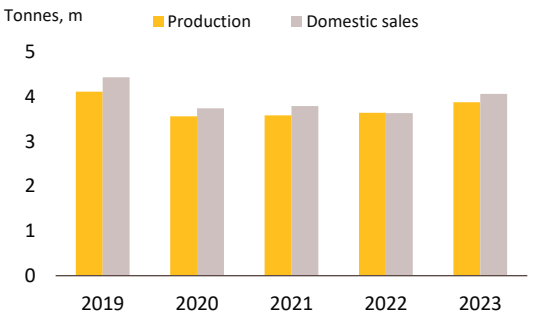
Source: Trademap
Note: HS 252329 , HS 252390

5/ Exports are largely of cement, construction steel, ceramic tile, and sanitary ware.
Materials that are used in place of clinker include limestone (Thailand's ample supplies of high-quality limestone mean that this is a common domestic option), lime, fly ash, pozzolan (e.g., silica fume, rice husk, and kaolin), and slag sourced from blast furnaces.

6/ A 100-rai pilot project has been initiated within the Saraburi Sandbox (Thailand's first low-carbon city) to use Napier/elephant grass in cement production. This has the advantage of rapidly absorbing atmospheric carbon and also of providing a source of animal feed (Thai Cement Manufacturers Association, February 2024).

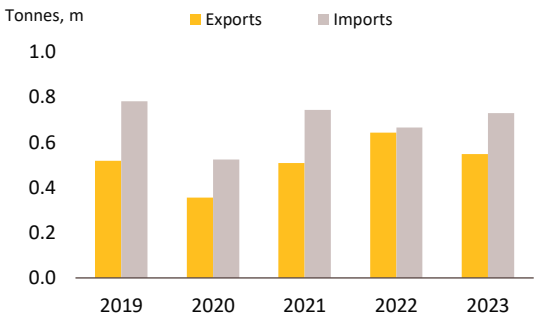
- **Construction steel (bar and section)**
  - **Output** of construction steel climbed 6.6% to 3.9 million tonnes in 2023, while having contracted -4.3% to 3.6 million tonnes a year earlier, the volume of domestic sales jumped 11.9% to reach 4.1 million tonnes (Figure 8). Sales were boosted by the strength of private sector demand, which itself benefited from ongoing contracts for work on government-backed projects as well as developments undertaken by SME contractors, many of which were unable to complete projects due in the previous year as a result of cashflow problems, labor shortages and/or the rising cost of construction materials.
  - **Exports** of steel bar edged up 2.7% to 0.26 million tonnes on the strength of Thailand's major overseas markets, including Myanmar (+101.8%), India (+35.0%) and Lao PDR (+8.8%), and in particular the increase in spending by governments on the construction of utilities and infrastructure. However, exports of steel section moved in the opposite direction, contracting -26.2% to 0.29 million tonnes (Figure 9). Declines were thus seen in sales into the major markets of Malaysia (-12.1%), Singapore (-36.7%) and the Philippines (-47.6%) as Thai products increasingly competed for space with Chinese imports; in 2023, imports of Chinese steel section to Malaysia and Singapore jumped by respectively 21.5% and 12.4% by value as Chinese producers responded to worsening trade tensions with the US by dumping low-cost steel on Southeast Asian markets. In the year, exports of Japanese steel to the Philippines also rose 1.8%. At the same time, **imports** to Thailand were up 6.7% for steel bar and 44.1% for steel section, with these largely coming from China, Japan and South Korea (Figure 10).
  - Following a couple years of increases, prices for construction steel set on global markets softened through 2023. The average price of rebar thus dropped -11.8% to THB 22,964/tonne, while for steel channel, this fell -18.0% to THB 27,783/tonne (Figure 11). Markets were affected by the depressed state of the Chinese real estate sector, which because it is the largest single consumer of steel in the country then rippled through to the steel industry, and with domestic Chinese production remaining high, players were forced to divert their output to international markets. This then increased supply and dragged on prices (Figure 12 and Figure 13).

Figure 8: Production & Domestic Sales of Construction Steel



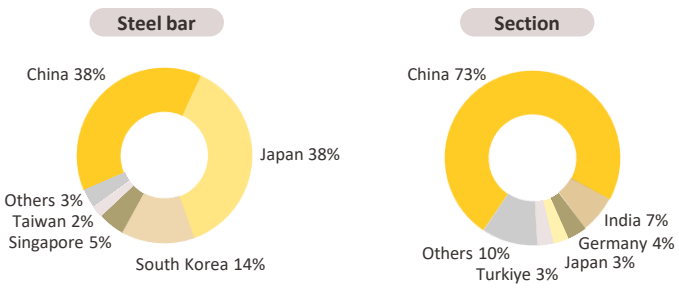
Source: ISIT

Figure 9: Exports and Imports of Construction Steel



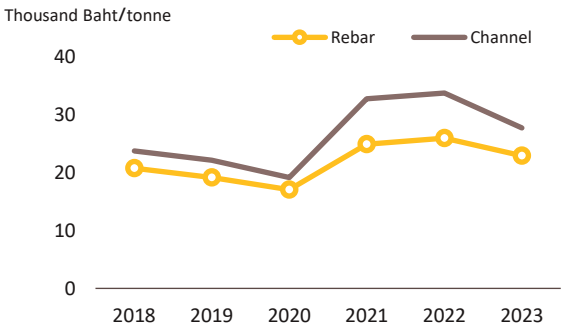
Source: ISIT

Figure 10: Thai Steel bar & Section Imports by Country (2023)



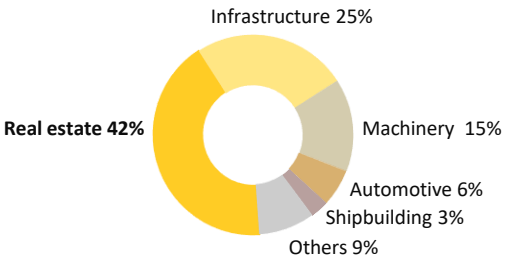
Source: ISIT

Figure 11: Average Domestic Steel Prices



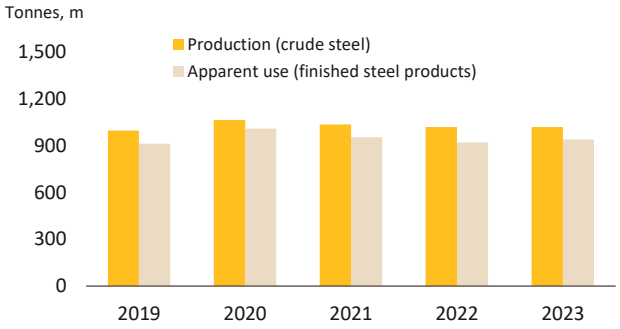
Source: ISIT

Figure 12: China Steel consumption by Type of End User



Source: Bloomberg Intelligence (2021)

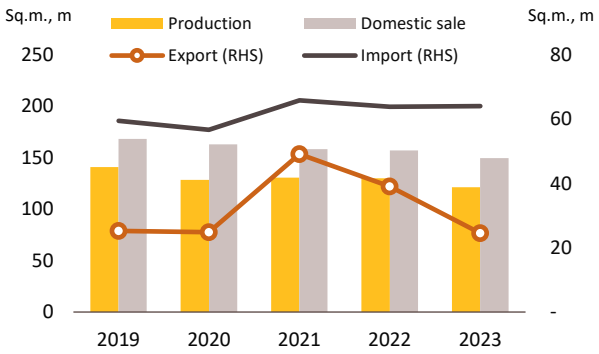
Figure 13: China Crude Steel Production & Apparent Steel Consumption



Source: Worldsteel

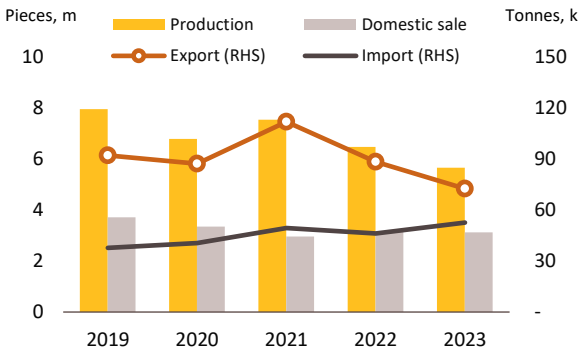
- **Ceramic tile and sanitary ware**
  - **Output** of floor and wall ceramic tile fell back -6.7% to 121.3 million sq.m., while at 5.7 million pieces, production of sanitary ware contracted -12.5%. The quantity of goods distributed to the domestic market also slipped. For tile, this was at the slightly slower rate of -4.8% (to 149.6 million sq.m.), which thus extended the -0.8% fall recorded in 2022, while the market absorbed 3.1 million sanitary ware items (down -1.0%). Declines were driven by the high level of household debt, which then dragged on the construction of new homes and the repair and renovation of existing units (Figure 14 and Figure 15). Nationwide, the number of newly constructed and registered homes thus fell -3.3% in 2023, reversing 2022's 5.1% growth. In the particular case of the Bangkok Metropolitan Region, Chiang Mai, Chonburi, Nakhon Ratchasima and Khon Kaen (these together represent 39% of new national housing stock), declines ran to -3.9%. 158,870 new units were thus added to supply in these areas, down from 2022's growth of 165,363 units. Alongside this, higher energy prices added to production and transportation costs.
  - Slow growth in overseas housing markets and weak consumer spending meant that **exports** performed badly in the year, slumping -37.2% for ceramic tile to 24.5 million sq.m. and -17.9% for sanitary ware (down to 72,400 tonnes) (Figure 14 and Figure 15). In the case of tile, sales into the main export market of Lao PDR (21% of all exports of ceramic floor and wall tile) crashed -42.9% as importers switched to sourcing goods from Vietnam and India, while for sanitary ware, sales to the US (29% of exports) and Cambodia (9% of exports) dropped by respectively -14.8% and -27.5%. **Imports** of tile edged up 0.3% to 64.1 million sq.m., though imports from China (with a 56% market share, Thailand's major supplier) contracted -8.9% on high levels of stockholding; as of the end of 2023, combined inventories stood at 41.5 million sq.m., up from 36.6 million sq.m. a year earlier. However, imports of sanitary ware jumped to 52,600 tonnes, up 14.0% on a 15.6% rise in the quantity of goods coming from China (the country supplies 96% of imports of sanitary ware to Thailand and so is almost its only overseas supplier) (Figure 14 and Figure 15).

Figure 14: Ceramic tile - Production, Domestic Sales, Exports and Imports



Sources: OIE & MOC

Figure 15: Sanitary ware - Production, Domestic Sales, Exports and Imports

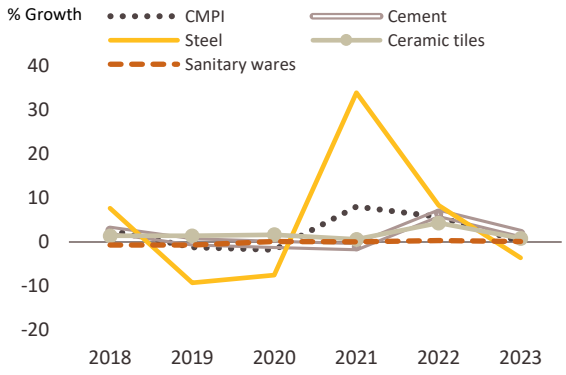


Sources: OIE & MOC

Construction Materials Price Index

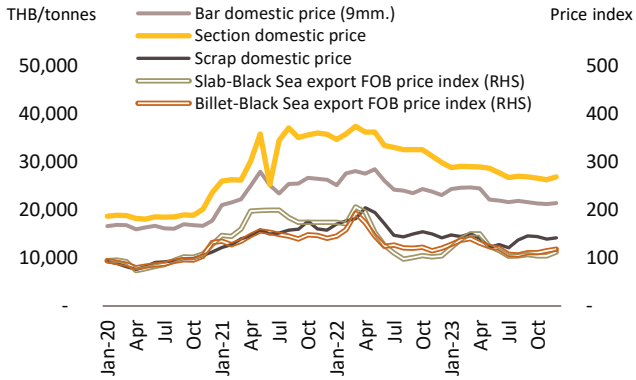
The Construction Materials Price Index (CMPI) inched up 0.1% in the year, having risen 5.8% a year earlier. The index of construction steel prices (29% of the CMPI weighting) slipped -3.6% on delays to government budget disbursements that then disrupted work on building projects (Figure 16). Steel prices were also affected by the real estate crisis in China, which badly impacted domestic demand and forced Chinese producers to dump low-cost products on markets in Southeast Asia, and as such, both domestic and international steel prices came under pressure (Figure 17). However, the higher cost of inputs, in particular the 5.0% increase in the cost of gypsum, fed through into price rises for cement and concrete products (respectively 17% and 12% of the CMPI weighting) of 1.9% and 1.4% each. In particular, prices rose for ready-mixed concrete, lean concrete and concrete drainage pipes.

Figure 16: Construction Material Price Index (CMPI)



Source: MOC

Figure 17: Construction Steel's Domestic Price and Oversea Price Index



Source: ISIT

Situation in 1H24

Spending on construction contracted -11.2% YoY in 1H24 due to the delayed passing of the 2024 budget, which then triggered a -19.3% YoY slump in government spending, though this especially affected work on infrastructure megaprojects (down -23.2% YoY). This came despite the 1.2% increase in private-sector investment in non-residential properties (overall private-sector spending on construction rose 6.7% YoY) and so demand for construction materials remained depressed through the first half of the year.

- **Producer**
  - **Domestic sales:** Over 1H24, sales of **cement and construction steel** fell by -12.2% YoY and -15.6% YoY respectively, while manufacturers and suppliers of **tile and sanitary ware** had to endure declines of -8.8% YoY and -11.1% YoY. Demand for construction materials was hurt by the rise in the cost of living and overall sluggishness in the economy. This then drained purchasing power from the markets for new homes (in particular for properties targeted at low- to middle-income buyers) and home renovations and improvements, and so in the period, overall private sector investment in residential accommodation dropped by -3.2% YoY, down from a 3.6% YoY expansion in 1H23. Alongside this, government spending on construction also remained very subdued.
  - **Exports:** Exports of most product categories softened in the period. For **cement,** overseas sales contracted -6.2% YoY to 0.82 million tonnes due to the continuing weakness of the Myanmar market (the source of 42% of export orders), where continuing political upheaval translated into a -17.8% YoY drop in sales. However, this was partly offset by the 81.5% YoY surge in exports of cement to Lao PDR (with a 33% market share by volume, Thailand's second most important export target). Exports of **tile and sanitary ware** were also down by -14.9% YoY and -11.2% YoY (Table 2), again as a result of weaker demand from Myanmar that led to falls in sales of tiles and sanitary ware to the country of respectively -26.9% YoY and -41.1% YoY. Nevertheless, overseas sales of **construction steel** jumped 35.4% YoY in the period. Exports of steel bar were up 74.1% YoY to 0.17 million tonnes on firmer demand from buyers in the main markets of Canada, Lao PDR and Australia, while the strength of the Singaporean and Australian markets boosted exports of steel section by 12.2% YoY.
  - **Imports:** The depressed state of the construction industry weighed on imports, and so for **construction steel,** total import fell by -21.5% YoY because import from China contracted -38.3% YoY. However, while total imports of **ceramic tile** declined -0.3% YoY, imports from China rose 7.3%. Similarly, efforts by Chinese producers to run down their inventories led to a 5.4% YoY increase in imports of Chinese **sanitary ware**, and this then helped to lift overall imports of these by 6.5% YoY.

Table 2: Construction Materials Situation (1H24)

Products	Unit (million)	Production	% YoY	Domestic Sales	% YoY	Export Volume	% YoY
Cement	Tonnes	15.83	-9.1	14.50	-12.2	0.82	-6.2
Construction steel	Tonnes	1.79	-10.1	1.81	-15.6	3.28	35.4
Ceramic tile	Sq.m.	57.17	-9.8	71.13	-8.8	11.73	-14.9
Sanitary ware	Pieces	2.65	-5.9	1.41	-11.1	33,022 Tonnes	-11.2

Sources: OIE, MOC, ISIT, Krungsri Research

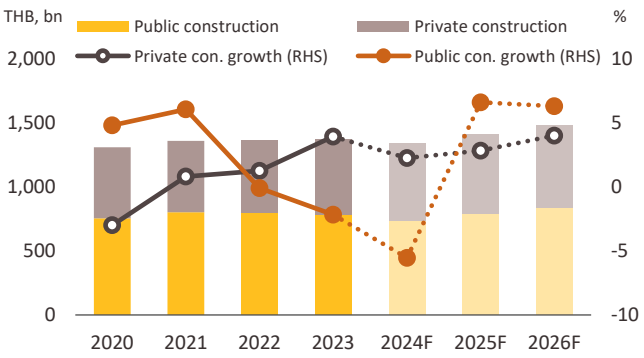
- **The Construction Materials Price Index** fell back -0.7 % YoY on declines in prices in all the main product categories. Thus, with supply from China expanding, prices for steel and steel products were down -2.8% YoY, the stabilizing cost of coal helped to bring prices for cement goods down by -0.3% YoY, and prices for tile and sanitary ware softened by -0.1% YoY and -3.2% YoY on a combination of sluggishness in domestic residential property markets and the rise in interest rates.

Outlook

Demand for construction materials is likely to contract through 2024. On the public sector side of the market, the delayed passing of the fiscal budget and the ensuing interruptions to disbursements have held up work on both megaprojects and general work on infrastructure and utilities around the country. Meanwhile, in the private sector, the increasing cost of living, the recent decade-high interest rates, and the slow and uneven growth in spending power have together dragged on both the residential and commercial property segments. **Overall spending on construction is therefore forecast to slip by between -2.0% and -3.0% this year, though this should then rebound to growth of 4.5-5.0% in 2025 and 5.0-5.5% in 2026** as government funding flows back into the industry and consumer spending power rallies, thereby adding to demand for new housing developments and the repair and renovation of existing properties (Figure 18). This will naturally then provide a lift to sales of construction materials, although both producers and traders of these will remain exposed to risk arising from higher energy and transportation costs, and from increased pressure from imports of low-cost Chinese and Vietnamese goods.

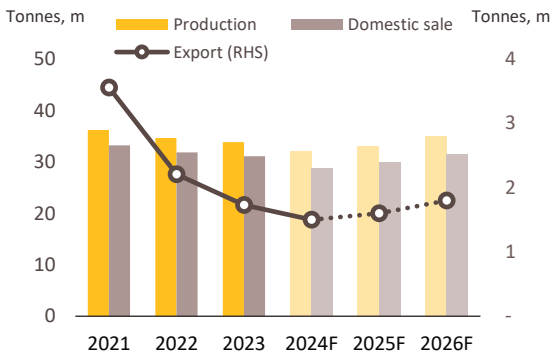
- **Producers of construction materials:** Overall income to the industry will decline in 2024 in line with reduced spending on construction. However, this will return to growth in 2025-2026 as the timetables set out in the Ministry of Transport's Action Plan on Thailand Logistics Development for 2023-2027 come closer into view. This covers 77 projects with a budget of THB 337.8 billion, and so work on these both in the EEC and elsewhere in the country will accelerate. Progress on other megaprojects will also help to crowd in greater private-sector investment in construction in 2025 and 2026, though this will especially impact residential developments along metro lines and other new transport and logistic links, as well as factories and industrial estates in nearby areas.

Figure 18: Construction Investment Forecast



Source: NESDC, forecast by Krungsri Research

Figure 19: Cement Industry Forecast

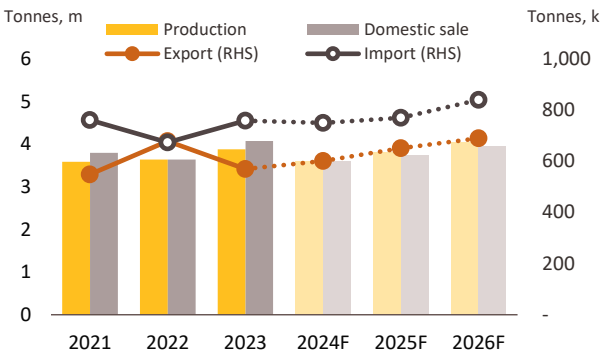


Source: OIE, forecast by Krungsri Research

- **Cement:** The quantity of **domestic sales** will slip by between -7.0% and -8.0% in 2024 but greater progress on infrastructure projects will bring this back to growth of 4.5-5.0% in 2025 and 2026 (Figure 19). Businesses will benefit from the increased demand for cement for use in the initial stages of construction, for example when building the new roads that will link to the EEC and laying the foundations for elevated metro lines. **Exports** will also remain depressed in 2024, but with the International Monetary Fund forecasting growth for the CLMV countries and the Philippines (Thailand's five most important overseas markets for white Portland cement), rising investment and strengthening economies will lift work on infrastructure and real estate projects, and so exports will strengthen in 2025 and 2026. Players will also look to diversify export sales and reduce risk by breaking into new markets in Australia and New Zealand.

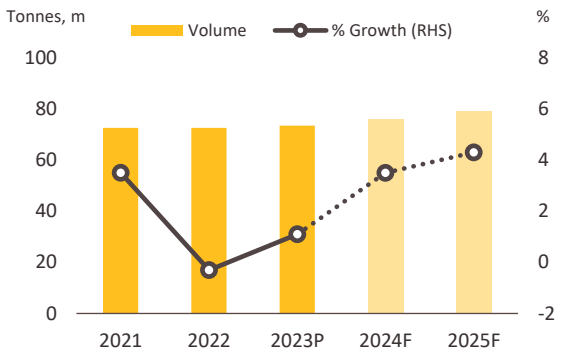
- **Construction steel (bar and section): Domestic sales** will fall by -11.0% to -12.0% in 2024 before strengthening investment in public-sector infrastructure and private-sector property developments returns this to growth of 4.0-5.0% annually through the following two years (Figure 20). **Exports** will also strengthen steadily, helped by the post-COVID uptick in infrastructure investment seen in many countries, though given their status as major export targets for Thai producers, the likely increase in spending in the ASEAN nations will be especially important. This is in line with Worldsteel's forecast that having grown 1.1% in 2023, demand for steel across the ASEAN zone will rise by 3.5% in 2024 and 4.3% in 2025 (Worldsteel, April 2024) (Figure 21). Likewise, **imports** will increase in step with stronger investment and growth in the construction sector, but overall, the Thai steel industry is coming under pressure from the broadening of supply to global markets, especially from Chinese players, against whom Thai producers are at a disadvantage with regard to their production costs and access to upstream inputs. Given this, capacity utilization is slipping, having fallen to just 29.3% over 1H24 (Federation of Thai Industries, August 2024).

Figure 20: Construction Steel (Bar &Section) Forecast



Source: OIE, forecast by Krungsri Research

Figure 21: Forecast of Steel Demand in ASEAN 5



Source: The World Steel Association, as of April 2024
Note: ASEAN 5 Refers to Indonesia, Malaysia, the Philippines, Singapore, and Thailand



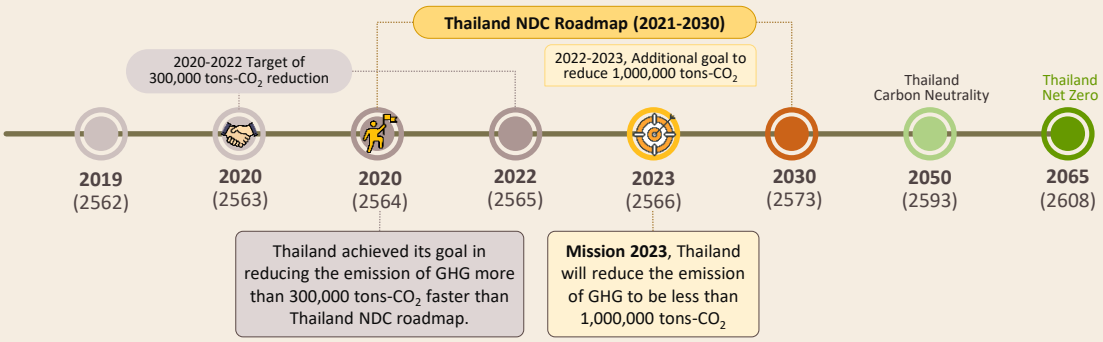
Box 1 Greening the construction materials industry (Sustainability): Cement

On January 1, 2024, the Thai cement industry entered a new era as it officially endorsed the use of hydraulic cement as its main structural product while simultaneously pushing forward with the development of other new low-carbon products (Thai Cement Manufacturers Association, April 2024). In keeping with rising global concerns over environmental issues, manufacturers, and in particular the major producers, are increasing both production and imports of green/low carbon/hydraulic cement, and so in the first quarter of 2024 alone, imports to Thailand of hydraulic cement jumped 39.6% YoY. Interest in hydraulic cement is especially intense since while regular portland cement generates around 60% of its weight in CO_2 (the most important greenhouse gas)[7/] during the production process, this falls to around 40% for hydraulic cement (Verified Market Research, November 2022).

In addition to reducing the amount of clinker consumed in the manufacturing process, manufacturers are also cutting their greenhouse gas emissions by replacing coal with alternative fuels. These include biomass energy sources and refuse derived fuel (RDF), which it is estimated could cut CO_2 emissions by 9-12 million tonnes of CO_2 annually (Thai Cement Manufacturers Association, February 2024). Beyond this, players are working on the development of new varieties of low-carbon cement, including limestone calcined clay cement (LC^3). This is classified as a green cement in virtue of its 50% reduction in clinker use (Figure 23) and the resulting savings in greenhouse gas emissions. Importantly, manufacturing limestone calcined clay cement uses fewer inputs and less energy, and so production costs are some 25% lower than for portland cement, thus allowing this to be distributed at very competitive prices (Adoption of Limestone Calcined Clay Cement and Concrete in The U.S. Market, A Joint Report by ACEEE and GE, March 2024).

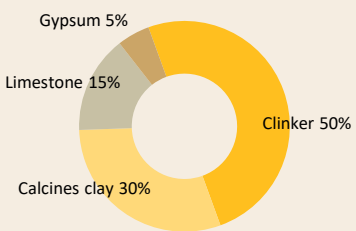
Over 2024-2033, the global market for green cement is forecast to enjoy annual growth of 5.4%, taking its value from USD 653.73 million at the start of the period to USD 1,046.76 million at its end (Precedence Research, February 2024).

Figure 22: The Progress of the Clinkers Substitution



Source: Thai Cement Manufacturers Association (TCMA)

Figure 23: Materials Used for LC^3



Source: LC^3 Project Office

Table 3: Approaches/Technologies to Lower Carbon Emissions from Portland Cement

Incorporating top-grade fly ash	Using a cement-lime mix	Using modified pozzolans	Firing low-energy clinker with CO_2
• This can replace up to 20% of the portland cement that is required.	• This can replace 5-15% of demand for portland cement.	• Using modified fly ash and regular pozzolans can replace 50-100% of portland cement content.	• This can cut use of portland cement by 20-50%.

Source: Green Cement Inc.

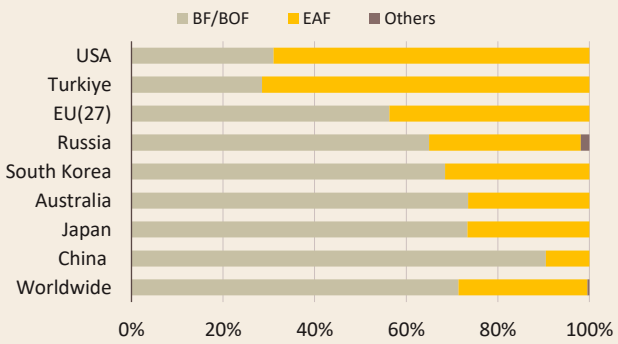
7/ The major greenhouse gases are: carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), and fluorinated gases, including the hydrofluorocarbons (HFCs), sulfur hexafluoride (SF6), perfluorochemicals (PFCs), nitrogen trifluoride (NF3), and the chlorofluorocarbons (CFCs).

Box 2 Greening the construction materials industry (Sustainability): Construction steel

Following the lead set by major players, Thai steel manufacturers are increasingly switching to the use of electric arc furnaces (EAFs). Using EAFs offers companies a number of advantages, including improving and more accurate quality control when producing molten steel, greater ability to remove adulterants, and a 75% reduction in energy consumption compared to traditional production technologies (Millcon Steel, 2022). EAFs will therefore have an important role to play in helping the industry reduce its carbon footprint and to increase its output of environmentally friendly 'green steel'. These stand in contrast to more traditional induction furnaces, which although they generate heat using electromagnetic induction, are not effective at removing contaminants from scrap metal (Millcon Steel, 2023). In addition, traditional furnaces are powered by fossil fuels (often coal) and this makes these a significant source of emissions. Nevertheless, most smaller manufacturers continue to operate blast furnaces (BFs) and blast oxygen furnaces (BOFs).

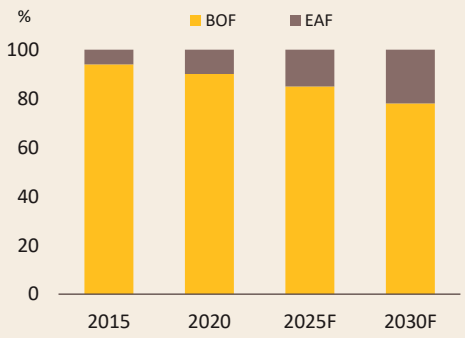
In the major steel-producing nations, EAFs account for almost 30% of output, though this is with the notable exception of China, where their contribution to total output falls to just 10% (Figure 24). The Chinese authorities are thus in the process of reducing pollution and emissions by closing foundries that are not up to standard. Nevertheless, China's use of EAFs is on an upward track (Figure 25) thanks to plans to cut the energy consumed in steel production by more than 2% per tonne of output by 2025. This will be achieved by: (i) increasing energy efficiency and reducing emissions; (ii) halting approvals of projects that do not meet environmental standards; (iii) increasing the share of steel produced using EAFs; and (iv) promoting the use of hydrogen-based reduction processes in steel production (Iron and Steel Institute of Thailand, S&P Global Commodity Insights, June 2024).

Figure 24: Share of Crude Steel Made by Process
(% of Steel Output by Process, 2022)



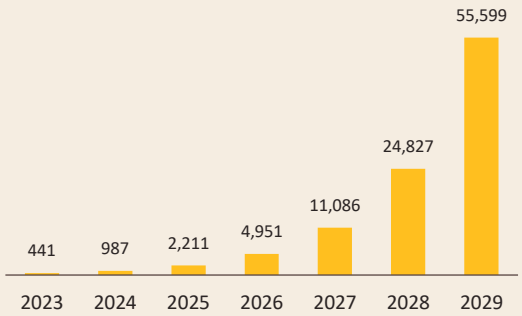
Source: Worldsteel (2023 World Steel in Figures)

Figure 25: China Crude Steel Production Forecast by Process



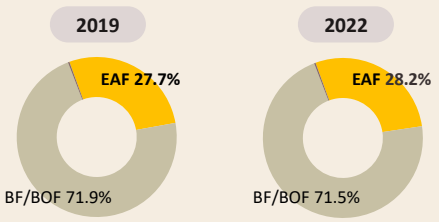
Sources: CoalMint, steelmintevents, and International Energy Agency (IEA)

Figure 26: Global Green Steel Market
(USD, bn)



Source: Precedence Research, February 2023

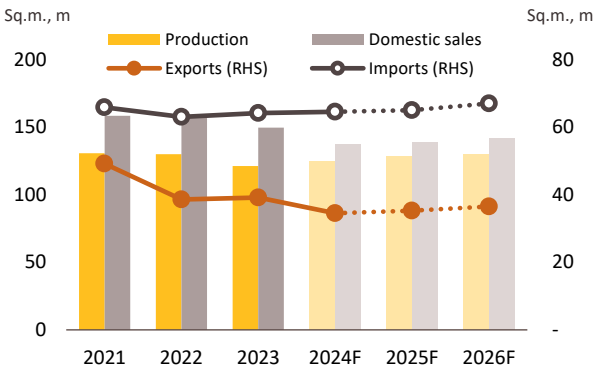
Figure 27: Global Crude Steel Made by Electric Arc Furnace Worldwide



Source: Worldsteel

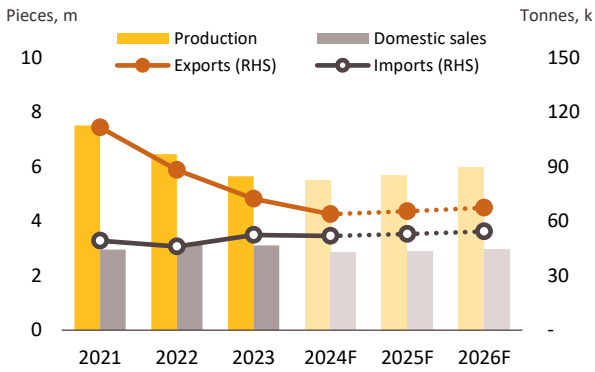
- **Ceramic tile and sanitary ware:** The **domestic market** will remain depressed through 2024, and the quantity of tile and sanitary ware distributed to it is forecast to contract by between -8.0% and -9.0% in the year. However, an improving outlook for the economy and the ongoing recovery in the tourism sector (arrivals are forecast to return to their pre-COVID level in 2025) will lift consumer spending power and boost investment in residential and commercial properties including offices, hotels, and other types of accommodation. Given this, sales are expected to grow by 1.0%-2.0% over 2025 and 2026 (Figure 28 and Figure 29) as domestic real estate markets firm up. Similarly, **exports** of tile and sanitary ware will slump by -11.0% to -12.0% in 2024 before swinging back to growth of 2.0%-3.0% annually over 2025-2026, driven in particular by the strength of the Laotian and Cambodian markets. Data from 2021 (the latest available) show that Thailand accounted for respectively 40% and 50% of all imports of tiles and sanitary ware to Lao PDR due to the post-pandemic recovery in the real estate sector. At the same time, **imports** of tile and sanitary ware are expected to increase by respectively 1.5% and 1.2% per year as residential, commercial, and industrial real estate markets improve. These goods will largely be imported from China and Vietnam.

Figure 28: Ceramic Tile Forecast



Sources: OIE, MOC, forecast by Krungsri Research

Figure 29: Sanitary Ware Forecast

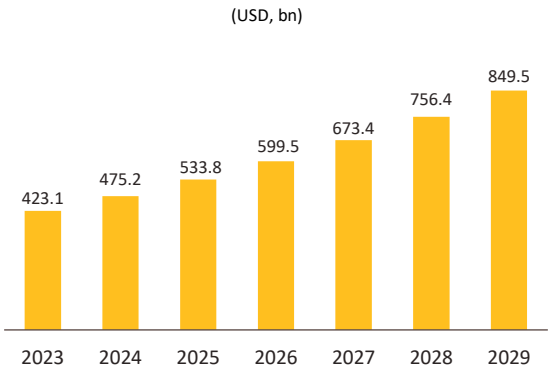


Sources: OIE, MOC, forecast by Krungsri Research

- **Traders**: Over 2024-2026, modern trade outlets will enjoy growth that will outpace that of traditional distributors.
  - **Modern traders: Income will gradually rise in step with growth in the real estate market and demand for home repairs and renovations.** This improving outlook will also be supported by the business strategies that players will put into effect, including: (i) reducing shop sizes to facilitate deeper penetration into local communities; (ii) opening and running new outlets in cooperation with major producers that will better meet the particular needs of individual customer groups such as the joint venture between Boonthavorn and SCG, which have together launched a construction materials retail operation under the 'SCG HOME Boonthavorn' brand that will expand into the regions; (iii) increasing the quantity of goods sold via house brands, which offers the advantage of better cost control and higher profit margins; (iv) increasing the range of distribution channels used to connect with customers by extending the use of online channels and mobile applications, as well as distributing through online marketplaces such as Lazada and Shopee; and (v) investing in ongoing branch expansion both at home and abroad, especially in the ASEAN region.
  - **Traditional traders: Revenue growth will tend to remain flat.** Players will benefit from greater government spending on infrastructure over 2025 and 2026, which will then spur an uptick in private sector investment. The resulting economic expansion should help to lift the incomes of low- to mid-level segments of the market, especially in the provinces. However, traditional outlets will struggle against strong competition from modern trade operations, which are extending their branch networks into second-tier cities, and manufacturers, which will increasingly distribute directly to smaller construction companies.

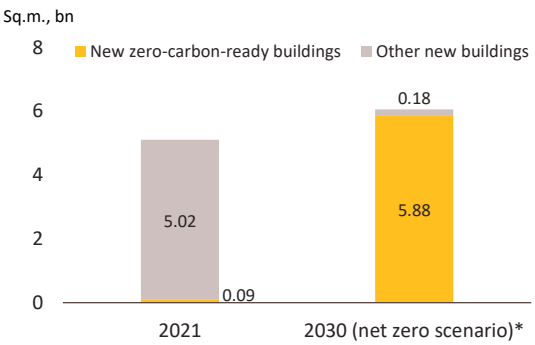
- **Challenges facing the industry:** For **producers,** the need to increase production of eco-friendly products will require greater investment in more modern and more sophisticated manufacturing technologies. However, this will come at a time when the cost of energy is already elevated, and so on average prices will rise. For example, green steel is some 20-30% more expensive than regular products (SSAB, 2018). Meanwhile, stiffening competition will mean that **traders** will need to sharpen both their operations and their marketing. With major players continuing to expand their branch networks while implementing rolling sales promotions programs, SMEs will come under increasing pressure and their profitability will be squeezed.
- **Over the medium term, producers** of construction materials will likely invest in the new technologies required to produce the next generation of high-quality goods, especially the more environmentally friendly products such as green steel, green (or hydraulic) cement, and eco tiles (Figure 30). This will then allow players to better meet what is expected to be rapid growth in the total area of new green buildings under construction (Figure 31). In addition, players will exploit new distribution channels as they develop their ability to respond to more individualized consumer demand (e.g., from property developers and major construction companies) for improved design services, construction times, and building durability. **Traders** will also look to adjust their operations in line with the changing behavior of modern digital consumers. For their part, this may extend to offering end-to-end services, connecting with consumers through a range of channels that mix on- and offline vehicles (i.e., using omnichannel marketing), and building personalized marketing platforms that take advantage of the opportunities offered by big data analytics. In the long run, as global megatrends unfold and support for the ESG goals strengthens, manufacturers and distributors are expected to form tighter alliances as they look to move their business development onto a more sustainable footing.

Figure 30: Market Value Forecast of Green Construction Materials Worldwide



Source: Precedence Research, May 2024

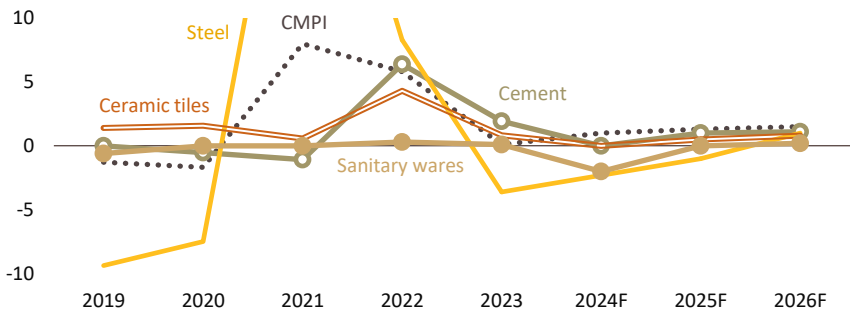
Figure 31: New Building Construction Worldwide Forecast by Type



Source: Statista
Note: * Forecast on the construction project development that will be necessary to meet the net zero scenario by 2050

- **Over 2024 to 2026, several factors will help to keep construction material prices flat or push these up only slightly (Figure 32).** (i) Having remained depressed in 2023-2024, greater public-sector spending on construction work will help to lift demand through 2025 and 2026. In addition, the post-COVID rebound in the business environment is supporting an increase in spending on infrastructure worldwide, and this is buoying demand for construction steel, even as major Chinese manufacturers are trimming output in the face of the as-yet unresolved crisis in the Chinese real estate sector. (ii) Companies will need to increase spending on the technologies and innovations needed to reduce the environmental impacts of their manufacturing processes. (iii) Geopolitical tensions will likely remain prolonged, and this will keep energy prices elevated, with knock-on effects for transportation costs. Nevertheless, overall price rises will be limited by only weak growth in domestic purchasing power, though this is particularly a problem for provincial markets, where the impacts of high household debt and tighter credit conditions are more pronounced. In addition, the cost of some inputs may fall. This should include prices for scrap and iron ore, which in the latter case the World Bank sees declining by -8.8% in 2024 and then by another -4.5% in 2025 (World Bank, April 2024).

Figure 32: Growth of Construction Material Price Index



Source: MOC, forecast by Krunsgsri Research

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