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The information and statistics set out in this section and other sections of this document were extracted from the report prepared by Frost & Sullivan, which was commissioned by us, and from various official government publications and other publicly available publications. We engaged Frost & Sullivan to prepare the Industry Report, an independent industry report, in connection with the [REDACTED]. The information from official government sources has not been independently verified by us, the Sponsor, the [REDACTED], the [REDACTED], the [REDACTED], the [REDACTED], or any of our or their respective directors and advisers or any other persons or parties involved in the [REDACTED], and no representation is given as to its accuracy.

SOURCE OF INFORMATION

We have commissioned Frost & Sullivan, an independent market research and consulting company, to conduct an analysis of, and to prepare a report on the Hong Kong structural steelwork market. The report prepared by Frost & Sullivan for us is referred to in this document as Industry Report. We agreed to pay Frost & Sullivan a fee of HK\$400,000 which we believe reflects market rates for reports of this type.

Founded in 1961, Frost & Sullivan has 40 offices with more than 2,000 industry consultants, market research analysts, technology analysts and economists globally. Frost & Sullivan's services include technology research, independent market research, economic research, corporate best practices advising, training, client research, competitive intelligence, and corporate strategy.

We have included certain information from the Industry Report in this document because we believe this information facilitates an understanding of the Hong Kong structural steelwork market for the prospective investors. The Industry Report includes information of the Hong Kong structural steelwork market as well as other economic data, which have been quoted in this document. Frost & Sullivan's independent research consists of both primary and secondary research obtained from various sources in respect of the Hong Kong structural steelwork market. Primary research involved in-depth interviews with leading industry participants and industry experts. Secondary research involved reviewing company reports, independent research reports and data based on Frost & Sullivan's own research database. Projected data were obtained from historical data analysis plotted against macroeconomic data with reference to specific industry-related factors. Except as otherwise noted, all the data and forecasts contained in this section are derived from the Industry Report, various official government publications and other publications.

In compiling and preparing the research, F&S assumed that the social, economic, and political environments in the relevant markets are likely to remain stable in the forecast period, which ensures the steady development of the Hong Kong structural steelwork market.

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OVERVIEW OF HONG KONG STRUCTURAL STEELWORK MARKET

Definition and Classification

Structural steelwork refers to the fabrication and forming of steel structures, typically serving as the backbone of buildings and infrastructure during initial construction stage. Essentially, structural steelwork involves columns and beams which are riveted, bolted or welded together. Structural steelwork providers supply, cut, bend, weld and assemble structural steel frames, trusses and other components into structures in accordance with the specifications provided in the building plans and designs.

Due to the strength, durability, availability, and ease of pre-fabrication of steel, structural steelwork also allows for flexibility in design, reducing the time required for on-site assembly and can help to speed up the entire construction process. The use of pre-fabricated steel structures reduces on-site construction time and provides an efficient, precise and quality-controlled method of building. Structural steelwork requires high levels of technical skill, expertise and certification to meet strict safety and building standards. The scope of structural steelwork include:

- **Steel Structure Fabrication:** Cutting, bending and welding steel members into frames, trusses, columns, beams, etc. as required for the construction project. This is done in a fabrication workshop.
- **Steel Formation:** Transporting the fabricated steel members to the construction site and assembling them into the required structural steel framework. This involves lifting, placing and joining the steel pieces together using bolts or welds.
- **Additional Finishing Works:** Installing additional components like floor beams, metal decking, stairs, handrails, etc. to the basic steel structure. This is done to complete the structural skeleton and reinforcement.

Value Chain

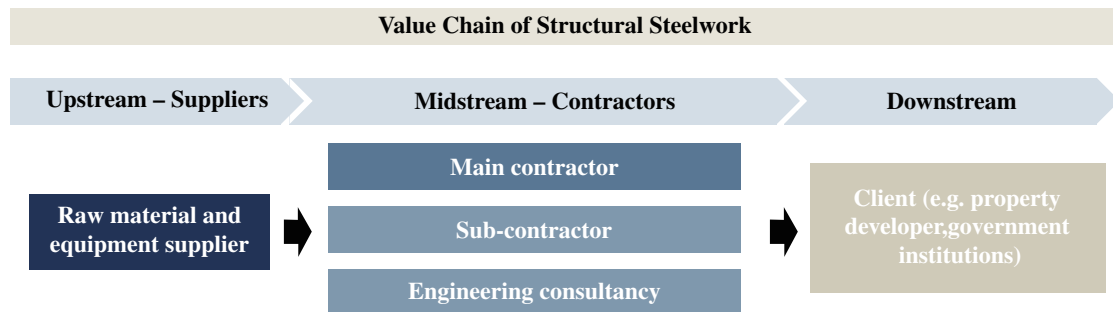
Upstream raw material and equipment suppliers provide relevant steel plates, bars, beams, columns, etc. from steel mills and suppliers, as well as machineries such as cutting, bending and welding machines. Main contractors in the midstream focus on pre-fabrication, where raw steel materials are cut, welded and pre-assembled into structural sections at fabrication plants according to the building plans and designs. This pre-fabrication process aims to minimise on-site construction work. Subsequently, pre-fabricated steel sections are erected and assembled on site, connected to the building's concrete foundations, and subsequently concrete floor slabs, beams and columns are then added to support the weight of the building.

Typically, main contractors in the midstream are responsible for supervising the overall progress and quality of the construction project, monitoring the daily operation of the construction site and coordinating subcontractors to carry out construction works. Main contractors would generally subcontract some of the construction works to subcontractors with specialist licenses or capabilities in certain areas based on their track records, business

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relationship and capital requirements because (i) subcontractors often possess the necessary experience and expertise in performing specific areas of tasks and it is generally more cost effective to subcontract different parts of construction works to different subcontractors which are specialised in the field of expertise; and (ii) labour intensive works such as structural steelwork are subcontracted to subcontractors for the supply of sufficient direct labour as main contractors generally only hire a small number of direct labour on a permanent basis to control cost. As part of the tender conditions and to ensure quality assurance, main contractors would generally select structural steelwork contractors registered on the List of Approved Specialist Contractors for Public Works maintained by the Development Bureau to carry out the structural steelwork in a construction project.

Structural steelwork subcontractors in the midstream generally work with main contractors and are mainly responsible for managing structural steelwork workers, coordinating subcontractors and supervising the progress and quality of structural steelwork. Some of the structural steelwork subcontractors, such as our Group, possess in-house capacity to fabricate structural steel. During the fabrication process of structural steel, raw steel materials are cut, welded and pre-assembled into structural sections at fabrication plants according to the building plans and designs. The pre-fabrication process aims to minimise on-site construction work. Where structural steelwork subcontractors do not possess in-house capacity to fabricate structural steel, they would generally outsource the structural steel fabrication process to third party structural steel suppliers. Subsequently, pre-fabricated steel sections are erected and assembled on site, connected to the building's concrete foundations, and subsequently concrete floor slabs, beams and columns are then added to support the weight of the building. It is a common practice for structural steelwork contractors in Hong Kong to engage subcontractors to perform site works.



Source: Frost & Sullivan

Market size of Hong Kong Structural Steelwork Market

Structural steelwork is an integral part of construction industry and are integrated into construction projects due to the material's robustness, resilience, and adaptability. Attributable to the completion of large-scale infrastructure projects in 2018, such as Hong Kong-Zhuhai-Macau Bridge and Express Rail Link (Hong Kong section), the civil engineering industry in Hong Kong has become temporarily sluggish in 2019 and 2020, which led to the decline of structural steelwork. The decrease in market size of structural steel works in Hong Kong from 2019 to 2020 was mainly attributable to the outbreak of COVID-19, resulting in delay to the progress of the then ongoing construction projects and delay in commencement of new construction projects in Hong Kong. The market size of

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structural steel works subsequently recovered in 2022 because the COVID-19 pandemic has gradually been contained. Overall, the market size of structural steelwork increased from HK\$9,411.0 million in 2018 to HK\$9,913.6 million in 2022, at a CAGR of 1.3%.

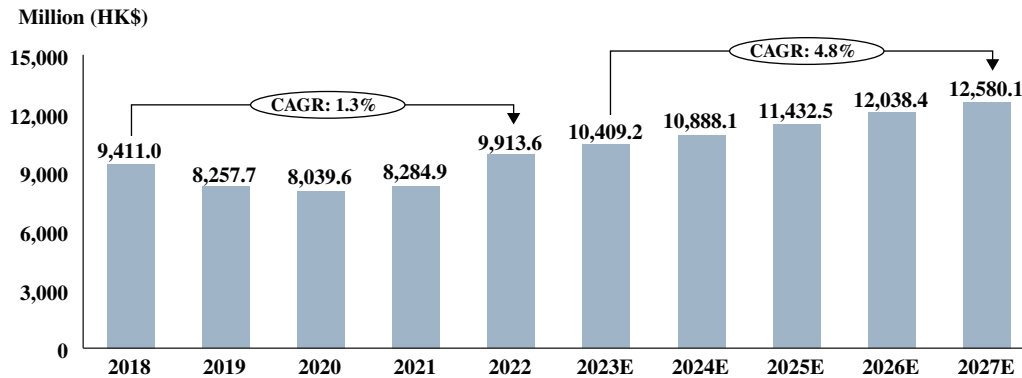
The rollout and commencement of projects such as Tung Chung New Town Extension which was commenced in 2018 and expected to complete by 2030, Three Runway System development which was commenced in 2016 and expected to complete by 2024, Site 3 of the New Central Harbourfront development which was commenced in 2022 and expected to complete by 2027, Caroline Hill Road Causeway Bay commercial project which was commenced in 2022 and expected to complete by 2026, Kwu Tung North New Development Area which was commenced in 2019 and expected to complete by 2026 and Yuen Long South New Development Areas which was commenced in 2022 and expected to complete by 2038, shall create the needs for construction of bridges, stadiums and arenas, commercial buildings, other social amenities and residential buildings, which in turn drive the demand for structural steelwork in Hong Kong. The market size of structural steelwork in Hong Kong is expected to increase at a CAGR of 4.8% from 2023 to 2027. Driven by various growth drivers including:

- (i) the demand for structural steelwork generated from the planned and ongoing infrastructural and property developments in both public and private sectors in Hong Kong such as the Three Runway System development, Kwu Tung North, Hung Shui Kiu/Ha Tsuen and Yuen Long South New Development Areas, New Central Harbourfront development and the Caroline Hill Road Causeway Bay commercial project;
- (ii) the increasingly common adoption of structural steelwork for construction in Hong Kong owing to its eco-friendliness nature, flexibility of use and better performance in achieving space efficiency; and
- (iii) the growing emphasis and continuous support from the Hong Kong government for the development of the structural steelwork industry, including the establishment of the Chinese National Engineering Research Centre for Steel Construction at the Hong Kong Polytechnic University ("**PolyU**"), which is likely to improve applied research and technology in structural steel engineering and infrastructure sustainability, as well as strengthen the structural steel engineering industry's productivity, capability and competitiveness. In the meantime, PolyU has been granted HK\$9.75 million, representing the largest amount granted under the Research Impact Fund 2022/23, for a research project on innovative building technologies focusing on the demolition and reuse of steel and composite structures. In addition, the Hong Kong Government has in recent years promoted the use of steel structures in major infrastructure projects, such as the steel structure erection projects for the concourse and apron of the Hong Kong International Airport third runway program, which has a contract value exceeding HK\$1.2 billion, and 2,400 tonnes of structural steel were used for the construction of Hong Kong's West Kowloon Xiqu Centre. Moreover, 425,000 tonnes of steel were utilised in the construction of the Hong Kong-Zhuhai-Macao Bridge, which is currently the longest steel-structured bridge in the world. The Traffic Center of the Zhuhai Border Crossing of the Hong Kong-Zhuhai-Macao Bridge adopts a

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large-span spatial lattice steel structure system, with a building height of 23.9 meters, a floor area of 138,000 square meters, and a steel structure dosage of more than 8,000 tonnes, with a total of about 50,000 components. The gross value of structural steelwork in Hong Kong is expected to maintain a steady growth.

Market Size of Structural Steelwork (Hong Kong), 2018 – 2027E



Source: Census and Statistics Department of Hong Kong, Frost & Sullivan

Key Growth Drivers

Demand for Public and Private Sectors Development – Outlined in the Hong Kong government’s Budget 2023-24, the total spending on public infrastructure is expected to reach approximately HK\$89,027 million in the 2023 to 2024 fiscal year. Some of the sizeable public sector infrastructural projects include the New Development Areas in Kwu Tung North, Hung Shui Kiu/Ha Tsuen and Yuen Long South, Kau Yi Chau Artificial Islands in Lantau Islands, and expansion works of the Science Park and Cyberport. Meanwhile, private sector developments are also expected to subsist and an example of which is the commercial project in Caroline Hill Road Causeway Bay co-developed by Hysan Development and Chinachem Group, which is expected to complete by 2026. Taking into consideration structural steel is increasingly used in construction due to its strength, durability, high strength-to-weight ratio and its flexibility in design to meet specific load requirements, it is expected that the increase in demand for construction works will translate into growth opportunities for the structural steelwork in Hong Kong.

Benefits Brought by Pre-fabrication of Structural Steelwork – In the pre-fabrication model of structural steelwork, pre-fabricated steel components are fabricated in a controlled factory using precision tools and then transported to the construction site for assembly. Pre-fabricating structural steel elements off-site in controlled factory can significantly reduce on-site construction time where pre-fabricated pieces can just be lifted and connected on-site, eliminating the need for fabrication on-site and hence the related labour cost incurred. Besides, factory pre-fabrication allows for tighter quality control and minimises defects as the work is done in a controlled environment using precision machinery and welding equipment. Overall, the pre-fabrication process streamlines the construction process, accelerates the schedule, reduces labour cost, improves quality and safety and results in higher quality finished products.

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Government and Academia Supporting Industry Growth – The construction industry in Hong Kong faces significant challenges such as labour shortage and an ageing workforce. To address these issues, the Hong Kong government has stepped up efforts to provide financial support for improving industry standards. In the Hong Kong Budget 2022 to 2023, the Government has proposed allocating HK\$1 billion to the Construction Industry Council to support manpower training. This includes increasing training opportunities and allowance amounts for trades facing labour shortages, with a view to attracting new entrants and job changers to the construction industry. The structural steelwork industry, as a key subsegment of Hong Kong's construction industry, is expected to benefit substantially from the Government's efforts, especially through the Construction Industry Council. The Council will use the budget to expand steel fabrication and erection training programs, which will help produce more skilled steel workers to meet increasing demands for steel structures in building and infrastructure projects. Allowances for steel workers will also be raised, making careers in structural steel more appealing and compensated. With more extensive training and higher pay, the structural steelwork industry can overcome its own long-standing labour challenges. Besides, universities and research regarding structural steelwork are playing an increasingly important role in supporting the long-term strength and competitiveness of the structural steelwork industry. For instance, the establishment of the Chinese National Engineering Research Centre for Steel Construction at the Hong Kong Polytechnic University signifies a trend towards greater support for the structural steelwork industry from academia and education in Hong Kong. As structural steelwork sector continues advancing into more complex areas like high-rises towers and long-span structures, skilled professionals with expertise in specialised steel technologies and design are in demand, the establishment of related platform would be tailored to the needs of the industry. In turn, an expanded, well-trained and motivated workforce will strengthen the industry's capabilities, productivity and competitiveness, and will ultimately boost steel fabrication and construction activities that are crucial for Hong Kong's development goals.

Eco-friendliness of adopting Structural Steelwork – According to the China Steel Construction Society (中國鋼結構協會), the production process of steel structures are 3% more energy-efficient and emit 10% less carbon dioxide than the production process of concrete structures. Moreover, during the construction process, steel structures are more eco-friendly than concrete structures with energy savings of 13% and a reduction in carbon dioxide emissions of 15%. In addition, once steel structures reach the end of their lifespan or usage, the steel materials can be dismantled, collected and remelted to manufacture new products. Recycling steel requires only a fraction of the energy needed to produce new steel from raw materials. As such, steel recycling has significant environmental benefits like reducing landfill waste, lowering emissions from mining and manufacturing operations, and conserving natural resources required for new steel production. In contrast, concrete from demolished structures typically ends up as landfill waste because it cannot be recycled in the same way as steel. The raw materials used to produce concrete like sand, gravel and limestone also require heavy mining operations which result in damages to the environment. While new concrete mixes are being developed using recycled materials, the current recycling rate remains low compared to steel. Driven by the increasing awareness of eco-friendliness and sustainable property development by property developers and construction contractors, structural steelwork has been increasingly used for construction in Hong Kong. According to Trade Map, an online trade analysis and information tool developed by the International Trade Centre, a joint organisation of the World Trade Organisation and the United Nations Conference on Trade and Development, the import

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quantity by tonnes of structures and components made of iron or steel in Hong Kong increased from 256.0 thousand tonnes in 2018 to 346.1 thousand tonnes in 2022, at a CAGR of 7.8%, which indicates an increasing demand for structural steelwork in Hong Kong.

Positive Impact on Gross Floor Area through Structural Steelwork – Steel structures provide an opportunity to gain usable floor space due to material properties that allow for more open floor plans and efficient spaces. With smaller column diameters, greater spanning distances between columns, thinner slabs, and simpler foundations, steel construction minimises the amount of space required for structural and load-bearing elements. Compared to concrete alternatives, steel can achieve the same load-bearing capacity with a smaller physical footprint by enabling more slender and open structural designs. With optimisation, these inherent efficiencies of steel translate into increased usable floor area and more return on space. For multi-level buildings where added floor area means added revenue or occupancy potential, the space-saving qualities of steel become a compelling benefit and serve as an impetus to the structural steelwork market in Hong Kong.

Market Trends and Opportunities

Advocacy of construction waste sorting and recycling – Construction waste sorting and recycling has become an important trend that benefits the structural steelwork industry in Hong Kong. Steel fabrication and erection generate scrap metal, used bolts and other waste materials that can be recycled. Recycling steel minimises the amount of waste sent to landfills from construction projects. Widespread recycling will yield more waste steel and increase the scale of recycling operations. This can boost efficiency for structural steelwork companies by providing a steady supply of recycled material to reuse. It enhances the sustainability credentials of the structural steelwork industry, which is an important consideration for environmentally-conscious clients and is therefore becoming a prevailing trend.

Growing sophistication in architectural design – Growing sophistication in Hong Kong's architectural design can largely spur the opportunities for collaboration, technical innovation, prestige, and sustainable construction within the structural steel industry. In particular, sophisticated architectural designs nowadays frequently incorporate curved forms, angular shapes and intricate details and structural steel is ideal for achieving these geometries with its ability to be rolled, cut and welded into any form. Steel providers with advanced fabrication capabilities are well-placed to deliver customised and unique components. Close collaboration among architects, engineers and structural steelwork contractors is continuously fostered where they work together to contribute ideas, address constructability issues, and gain a shared understanding of design intent. Steel companies that invest in advanced capabilities, flexible design solutions and partnerships with visionary architects will be at the forefront of progress.

Adoption of structural steel in urban renewal project – Structural steelwork offers significant advantages for urban renewal projects in Hong Kong being one of the densest cities where buildable space and time are constrained. Steel construction allows for taller buildings on compact sites due to lighter materials and smaller foundations that occupy less area, saving on costs. The light-weight property of steel also permits additional height within

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existing foundations, maximising floor space. With on-going urban redevelopment in Hong Kong, structural steelwork unlocks substantially higher and faster skyward potential where foundations cannot be expanded and projects cannot be prolonged.

Market Challenges and Threats

Shortage of Labour – Due to Hong Kong’s ageing population and more stringent requirements on workers’ skills and qualifications, the structural steelwork industry has been facing a severe shortage of experienced and skilled labour. According to the Construction Industry Council, there will be a shortfall of 5,000 to 10,000 skilled construction workers in Hong Kong until 2023. Among structural steel welder, the workers aged 50 and above accounted for 60.6% of the workforce by the end of 2022. Lack of sufficient suitable labour may cause delays in project completion as well as potential quality issues and reworks, which can lead to cost overruns and declining profitability. Some companies may not be able to take up new projects or expand their operations due to lack of manpower, which can also lead to loss of potential business opportunities and slower growth. Overall, the shortage of labour would pose further cost of operation to industry players and may lead to operational pressure.

Higher material cost – Over the past five years, prices of major raw materials used in structural steelwork have experienced significant increase. For example, the price indexes of steel plates increased from 117.7 in 2018 to 196.3 in 2022. Such increases in material cost will result in higher expenditures of structural steelwork, which may further negatively impact their profit margin.

Rising project requirements – In Hong Kong, the structural steelwork industry is encountering a trend of rising project requirements in respect of sustainability and compliance. There is a growing focus on sustainability in construction projects in Hong Kong, which can add complexity to the design and construction process. For example, incorporating energy-efficient features or green spaces into a building design may require additional planning and expertise. Hong Kong also has strict building codes and regulations in place to ensure the safety and quality of construction projects. Compliance with these regulations can add complexity to the design and construction process of structural steelwork industry, particularly for large and complex projects.

Hong Kong Government’s Fiscal Deficit - In the face of the challenges of fiscal deficits and a declining reserve, the government’s ability to allocate funds for infrastructure development may be limited. As governments may need to prioritize spending, namely in education and healthcare, and reduce overall expenditure, infrastructure projects may face budget cuts or delays. This can impact the construction, maintenance, and expansion of infrastructure such as roads, bridges, ports, and public transportation systems. Public infrastructure works, such as the construction of roads, bridges, and transportation systems, play a significant role in urban development and act as catalysts for private construction of buildings, as they enhance connectivity, accessibility, and the overall attractiveness of an area. The delay in infrastructure works can lead to decrease in demand for private construction projects such as residential buildings, commercial complexes, and offices.

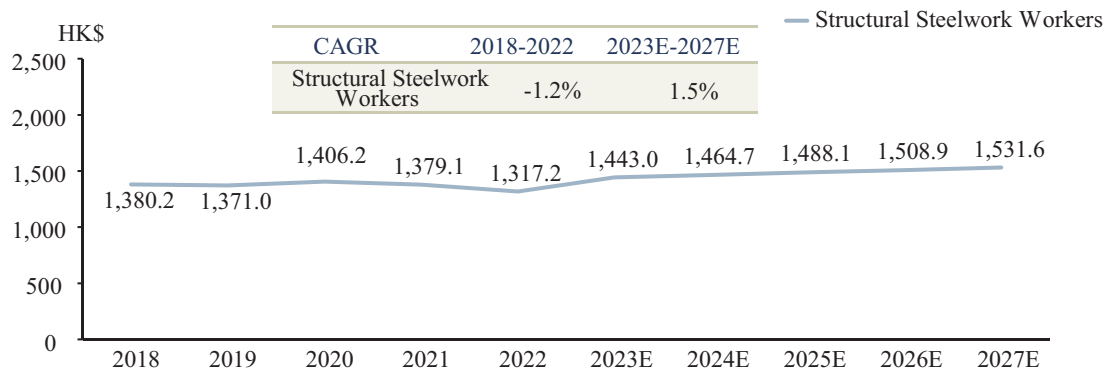
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Property Market Downturn - The property market downturn in Hong Kong persists, amidst a falling property demand caused by the slowdown in economic growth and surging interest rates. According to the Ratings and Valuation Department, the price index of private residential units in Hong Kong fell by 8.7% in 2023 compared to 2022 and fell by 14.0% in 2023 compared to 2021. The demand for overall property market is still falling. In the first ten months of 2023, the number of property transactions in Hong Kong dropped by 5.8% on a year-over-year basis to 37,519 units, with sales volume declining by 4.3% on a year-over-year basis to HK\$345.3 billion over the same period. During a property market downturn, there is typically a decrease in demand for new construction projects, both in the residential and commercial sectors, which lead to a slowdown in private construction works as developers may postpone or cancel planned projects due to decreased market demand.

Cost Structure Analysis

Structural steel welder is one of the general labour types in the structural steelwork industry. Labour types of the structural steelwork industry also include structural steel erectors and general workers and labourers. The average daily wage of these workers has decreased from HK\$1,380.2 in 2018 to HK\$1,317.2 in 2022 at a CAGR of -1.2%. With the waning of the COVID-19 epidemic and the gradual resumption of construction work, the average labour wages in the first half of 2023 has demonstrated an upward trend. With the positive growth of the structural steelwork industry in Hong Kong, the demand for structural steelwork workers would continue to grow. Going forward, it is anticipated that between 2023 and 2027, the average daily wages of structural steelwork workers will increase at a CAGR of approximately 1.5%, reaching HK\$1,531.6 by 2027.

**Average Daily Wage of Workers Engaged in Structural Steelwork Market
(Hong Kong), 2018-2027E**



Source: Census and Statistics Department, Frost & Sullivan

Note: The above data refers to the average salary of general workers and labourers, structural steel welders and structural steel erectors engaged in public sector construction projects.

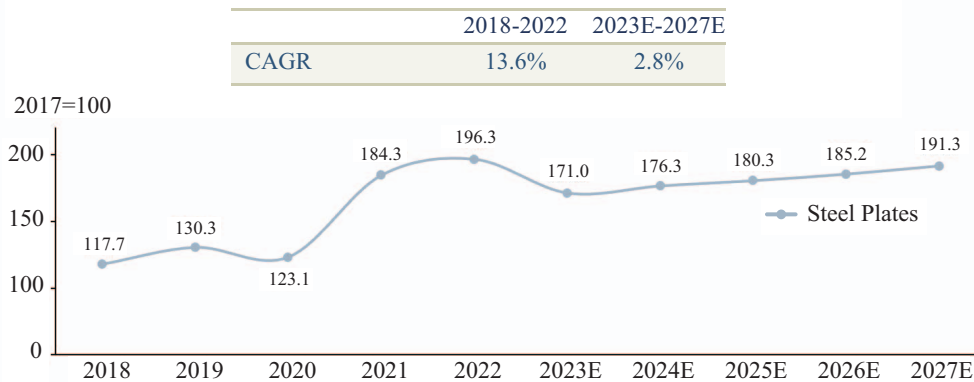
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According to the Census and Statistics Department, the price index of steel plates increased from 117.7 in 2018 to 196.3 in 2022, at a CAGR of approximately 13.6%. Specifically, the price index of steel plates in Hong Kong recorded a significant increase from 123.1 in 2020 to 184.3 in 2021, representing an annual growth rate of approximately 49.7%, primarily due to the decrease in steel production, the cancellation of export tax rebates of exported steel and the increase in export tariffs on major components of steel in the PRC. The decrease in steel production in 2021 was mainly due to the restriction on heavy industry production, including steel sectors, imposed by the PRC Government in order to reduce carbon emission since 2021. In addition, the PRC Government cancelled the export tax rebates on 146 kinds of steel products in May 2021, resulting in an increase in the price of exported steel, including steel plates. From 1 August 2021 onward, the export tariffs on major components of steel such as high-purity pig iron are adjusted from 15% to 20% and ferrochrome are adjusted from 20% to 40%.

In 2022, the price index of steel plates in Hong Kong further increased to 196.3, representing an increase of approximately 6.5% as compared to 184.3 in 2021. Such increase in price of steel was primarily due to further decrease in steel production in the PRC in 2022 and the impact from the fifth wave outbreak of COVID-19. The decrease in steel production in the PRC in 2022 was mainly due to the abovementioned restrictions imposed by the PRC Government since 2021. In addition, in response to the fifth wave outbreak of COVID-19, there were temporary disruptions and partial suspension of the supply and transportation of construction materials from the PRC to Hong Kong during 2022, resulting in an increase in price of construction materials, including steel plates.

In 2023, the PRC Government relaxed the measures imposed on containing the outbreak of COVID-19 which contributed to an increase in the supply of steel from the PRC. The price index of steel plates in Hong Kong is expected to decrease from 196.3 in 2022 to 171.0 in 2023. Going forward, the price index of steel plates in Hong Kong is forecasted to grow at a CAGR of approximately 2.8% from 2023 to 2027 mainly attributable to work resumption as well as increase in demand from continued infrastructure development in Hong Kong and automobile manufacturing in the PRC.

Price Trends of Steel Plates (Hong Kong), 2018-2027E



Source: Census and Statistics Department, Frost & Sullivan

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COMPETITIVE LANDSCAPE

Overall, the structural steelwork market in Hong Kong is highly competitive with service providers focusing on both private and public sectors specialising in certain segments, such as bridges, stadiums and arenas, commercial buildings, other social amenities and residential buildings. According to the Development Bureau, there are 50 contractors registered on the List of Approved Specialist Contractors for Public Works maintained by the Development Bureau under the category of structural steelwork, as of February 2024. As estimated, there are more than 500 market participants in the structural steelwork industry in Hong Kong.

With increasing complexity of construction projects, the structural steel contractors extend their service scope to fulfill the rising client's expectations. As the market develops into a mature stage, leading market participants are seeking expansion opportunities through vertical integration and product portfolio diversification. Some structural steelwork contractors acquire production or process facilities to leverage operational flexibility by consolidating all the key segments in the value chain from materials and components sourcing, manufacturing, processing, to supply and installation of structural steel products.

With the vertically integrated business model, the leading market participants usually have own processing or manufacturing facilities, which enable them to control production costs and product quality more effectively and to respond to market demand more quickly. With their own processing facilities, they are able to ensure a consistent supply of products for customers and enjoy greater flexibility in adjusting the supply and installation schedules to meet supplemental orders and tight timeline from unforeseen demand. Specifically, this strength offers the market participants unparalleled capabilities to drive revenue growth and expand market shares. Within the pool of over 500 structural steelwork contractors in Hong Kong, only around 2% of them have possessed in-house capacity to fabricate structural steel. Our Group is one of the few structural steelwork contractors in Hong Kong who have own processing or manufacturing facilities.

The top five players in the structural steelwork market in Hong Kong contributed 17.0% of the entire market in terms of revenue for the year ended 31 December 2022. Our Group recorded revenue of approximately HK\$336.4 million for the provision of structural steelwork for the year ended 31 December 2022, which accounted for about 3.4% of the total industry revenue in Hong Kong.

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Ranking and Market Share of Structural Steelwork by Revenue (Hong Kong), year ended 31 December 2022

Rank	Companies	Listing Status	Estimated Revenue in Year ended 31 December 2022 (HK\$ million)	Market Share (%)
1	TTE Federal Construction Limited	Private	475.5	4.8%
2	KPa-BM Holdings Limited	Listed	426.4	4.3%
3	Our Group	Private	336.4	3.4%
4	Goldfield N&W Construction Company Limited	Private	250.3	2.5%
5	Goldford Engineering (HK) Limited	Private	200.0	2.0%
	Top five subtotal		1,688.6	17.0%
	Others		8,225.0	83.0%
	Total		9,913.6	100.0%

1. TTE Federal Construction Limited is a private company engaging in the provision of structural steelwork in Hong Kong. It has a registered capital of HK\$63.3 million.
2. KPa-BM Holdings Limited is a company listed on the Main Board of the Stock Exchange (stock code: 2663) which is principally engaged in the provision of structural engineering works with a focus on design and build projects and trading of building material products in Hong Kong. It has a market capitalisation of approximately HK\$155.9 million as at 20 February 2024.
3. Goldfield N&W Construction Company Limited is a private company focusing on civil engineering and maintenance work including structural steelwork in Hong Kong. It has a registered capital of HK\$30.0 million.
4. Goldford Engineering (HK) Limited is a private company specialising in metal works in Hong Kong. It has a registered capital of HK\$2.5 million.
5. The revenues of the market participants are estimated revenues derived from the provision of structural steelwork in Hong Kong for the year ended 31 December 2022, based on the published annual reports, trade interviews and other publicly available information. Actual revenues of the private companies incorporated in Hong Kong are not available in the public domain.
6. The market shares of the market participants are the ratio of their estimated revenue to the market size of structural steelwork, which are the estimated figures based on the gross value of construction works published by the Census and Statistics Department of Hong Kong.

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Factors of Competition

Comprehensive Offering with In-house Capacity– The market for structural steelwork products is highly competitive and fragmented. To differentiate themselves from other market participants, structural steelwork providers who offer comprehensive engineering contracting services are typically preferred by downstream clients, including property developers and government agencies. In particular, structural steelwork contractors which possess in-house capacity to process and fabricate structural steel and operate its own processing or manufacturing facilities are generally able to control production costs and product quality more effectively, respond to market demand more quickly, ensure a consistent supply of products for customers and enjoy greater flexibility in adjusting the supply and installation schedules to meet supplemental orders and tight timeline from unforeseen demand, thereby facilitating them in improving their profitability and negotiation power and increasing their market presence.

Established Relationship with stakeholders – Established contractors with stable relationships with clients are preferred as they have a better understanding of client requirements. Most importantly, attributable to their abundant construction experience, they are more capable of providing customised services for clients, including main contractors and property developers, by saving time and costs in negotiation and coordination and ensuring that steel structures meet the design and construction requirements accurately. In addition, maintaining long-term relationships with acknowledged suppliers of raw materials can help structural steelwork providers maintain competitive pricing and a stable supply of high-quality materials. It is also crucial for structural steelwork providers to maintain good relationships with government agencies, as this can help them better understand government policies and regulations, ensuring that their products and services meet relevant standards and requirements, and gain trust and support from the Government. Overall, maintaining good relationships with stakeholders may lead to more opportunities for continued cooperation and referrals.

Recognition and qualification – Qualification serves as a key factor of competition in the industry. In particular, the Development Bureau publishes and regularly updates the List of Approved Suppliers of Materials and Specialist Contractors for Public Works, including works categories and contract value of public works for tendering, which are accessible by the public and potential clients. Being recognised by the authority and granted the qualification to tender for public sector projects with no limitation on the contract value for structural steelwork suppliers, giving them more business opportunities and increasing the chance to be considered favourably by construction contractors. Furthermore, structural steelwork contractors obtaining certain widely recognised certificates including ISO 9001, ISO 45001, and ISO 14001 in the area of quality system management, occupational health, and environmental management are more competitive in the market.

Entry Barriers

Proven Track Record – In general, structural steelwork encompasses various infrastructure and facilities such as bridges, public venues and contractors are required to deliver high-quality of works within the prescribed timeframe and budget. Defective designed structural steelwork can lead to damage to existing facilities or utilities, such as

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structural fractures leading to prolonged construction periods, greater property damage and safety hazards. In addition, clients of structural steelwork (e.g. Hong Kong government, large property developers) would evaluate contractors in different aspects such as quality of works, timeliness of project delivery as well as capability of meeting safety and environmental requirements as part of their assessment criteria for tender awards. New entrants without sound reputation founded on the past collaboration with the industry stakeholders and experience in delivering structural steelwork would hurdle its market presence.

Initial Capital Requirements – As a significant amount of capital is required for the recruitment and training of workers, the procurement of raw materials and equipment, as well as the establishment of on-site warehousing and factory for fabrication, the capital demand poses an obstacle to new entrants to the structural steelwork industry. Structural steelwork contractors generally experience net cash outflows as project up-front costs at the early stage of a project. The up-front costs generally include payment made to suppliers for materials, subcontracting fees for construction site works subcontractors and structural steel fabrication works subcontractors, manufacturing overheads and machinery service fees. In addition, large amount of capital may be required for the issuance of performance guarantee for sizable construction projects as requested by new customers, which is usually equivalent to 10% of the contract sum. Failure to make timely payments for production or construction costs and/or issuance of performance guarantee may delay project schedules and/or affect the credibility of the structural steelwork contractor. Additionally, given that payments are usually settled based on the completion of the construction work, it is more common for contractors to advance funds early. In addition, sufficient capital reserves could demonstrate the capacity to cope with risks like material shortages, equipment failures, etc., which is equally beneficial for contractors to bid and engage in sizeable construction projects.

Technical Know-how – Technical knowledge is one of the key barriers for new market entrants to structural steelwork industry. Existing market participants generally have a strong understanding of the design, fabrication, and installation of steel components and module units in order to deliver quality services. Specifically, steel structures are usually used for high-rise, long-span, complex architectural shapes which require the capacity of heavy loads or crane lifting, and high-temperature durability and so on, therefore the contractors need to consider the steel properties to select steel structures, such as frames, grids, and cables which vary according to the application. And only expertise with sufficient construction experience and mechanical knowledge can conduct layout design in consideration of the system characteristics, load distribution and properties from a comprehensive perspective. With such technical know-how, the quality of work can be assured and the diversified demand of customers can be met.

COMPETITIVE STRENGTHS OF OUR GROUP

Please refer to the paragraph headed "Business – Competitive strengths" in this document for a detailed discussion of the competitive strengths of our Group.