

# MARINE INDUSTRIES INDUSTRY OPPORTUNITIES IN JAPAN & CHINA



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**MAINE INTERNATIONAL TRADE CENTER**  
*Global Resources. Local Expertise.*

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# Japan

## I. Summary of the Opportunities

Maritime industry in Japan has had a significant influence on the country's history and economic development. Japanese maritime cluster is internationally significant even though it is losing its market share to China and South-Korea. Being an island nation with few natural resources, Japan is very dependent on seaborne trade and has established secure sources of raw materials. Habara states in his report Maritime policy in Japan (2011) that 96% of the supplies entering and leaving the country are carried by maritime transport. According to the same report, the value of the Japanese international shipping industry was around five trillion yen in 2011. The country's access to reliable and cost-effective shipping has helped it in becoming a major industrial power.<sup>1</sup>

## II. Industry Prospects

Japanese maritime business structure has a close relationship with other industries in Japan. The maritime cluster in the country is composed of three major groups – shipping companies, together with ship owners, shipbuilding companies and shippers/manufacturers. The fact that these three industries have been set up independently and upheld effectively is a unique feature of the Japanese maritime industry. The close cooperation of these groups and the financial support provided by the Zaibatsu, (Japanese financial combines) has led to successful results for the Japanese maritime cluster. There are several different organizations to enhance the cooperation among the country's maritime industry, e.g. the Shipbuilders' Association of Japan (SAJ), Japan Ship Technology Research Association (JSTRA), and Japan Ship Machinery & Equipment Association (JSMEA).

Japan is trying to increase its maritime industry's international cooperation. For instance, Japan and Norway organized a seminar in June 2013 to help companies find global business partners and share the latest innovations in products and services. The aim is to create green growth in the maritime sector. Possibilities for collaboration between countries were presented in the areas of LNG, innovations for oil and gas exploitations, offshore wind, the Arctic, and fuel efficient designs and operations.

Even with the fierce competition, there are opportunities for the Japanese maritime cluster to enhance its competitiveness in its strong areas, or break into new territories in the global markets. According to Habara (2011), the global volume of ocean-borne cargo movement has increased about 50% over the past decade. He also points out that the growth of the cargo volume is expected to continue. The increase in maritime transport and the plans of Japanese shipping companies to more than double the number of their Japanese registered vessels because of the tonnage tax are very good opportunities for the maritime industry in Japan. The increase in Japanese registered ships will boost the country's shipbuilding industry because its international shipping industry acquires 90% of its vessels from domestic builders. Japanese government also wants its ports to utilize the growing maritime transport, and is investing in the Keihin port and Hanshin port to transform them into major hubs. A great opportunity for the Japanese maritime cluster is the growing demand for green technology. Japan's MLIT (Ministry of Land, Infrastructure, Transport and Tourism) has set a goal to reduce GHG emissions for a 30% from international shipping. It also expects the demand for high efficient vessels to grow heavily. MLIT plays a big role in reaching the set goals by supporting Japanese maritime cluster's R&D of new technologies.

## Opportunities

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The Japanese shipbuilding industry is trying to overcome its competitiveness issues. One way of coping with this is through shifting the focus of construction from one ship type to another. For example MHI's Kobe shipyard ceased to manufacture merchant vessels and is now constructing offshore units and research vessels, while also focusing on a cruise ship construction. Others are focusing more on shipbuilding services like providing design, technology support, or training of engineers. According to the Council Working Party on Shipbuilding's report (2013), both of these strategies require increasing efforts on R&D for the development of new competencies. The report shows that in Japanese listed companies, the investments in R&D have more than doubled from 2006 to 2011 (to USD 157 million). The focus of the Japanese shipbuilders' R&D is to increase energy saving and environmental technologies. Examples of these efforts include reducing CO2 emissions and improving fuel efficiency. Some of these R&D efforts are done in cooperation with other companies in order to improve development. For example, ClassNK is working with Imabari and Sanoyas Shipbuilding Corporation to test technologies that meet new EEDI regulations in actual operating environments.

MLIT's report of the green growth and maritime industries also emphasizes the R&D efforts to increase the industry's competitiveness through green innovations. While focusing on green growth in shipbuilding and especially the development of LNG-fueled ships, the report states that there are other industries that can utilize the new green technology. For example wind power generation at sea and the development of undersea resources can benefit from the new technological innovations. According to the report, regulations are good for the industry because they force the maritime cluster to invest in new technologies. An already mentioned example of this is the maritime sector's regulations on GHG emissions and the followed investments in energy saving technologies.

In April 2013, Japan approved a new Basic Plan on Ocean Policy. The aim of this plan is to protect the Japanese interests at sea. The first ocean policy was announced in 2008, but due to different factors such as weak institutional coordination, it did not lead to concrete action. Now Japanese policymakers face a fiercely growing global competition, motivating them to make more proactive plans to enhance the country's position among global maritime powers. Implementation of the new ocean policy also means increased efforts in securing the maritime transit routes and territorial waters.<sup>2</sup>

One other example of green growth came in September 2014, when Mitsui Engineering and Shipbuilding Co. received an order for a bulk carrier that will become its first large eco-friendly ship. The vessel will be 25 percent more fuel-efficient than conventional bulk carriers.

In February, a Chinese joint venture of Kawasaki Heavy Industries Ltd. received an order for the world's first car carrier that reduces carbon dioxide emissions by using both liquefied natural gas and oil as fuel. Kawasaki Heavy is also developing liquid hydrogen carriers, in preparation for a future society in which hydrogen is used as a clean energy source.<sup>3</sup>

According to Seatrade Maritime News, Japan already has several technically advanced yards that have an impressive track record of building a wide range of vessel types from FPSO's and LNG tankers, all the way through to cruise ships. Many yards have recently revealed new fuel efficient and environmentally friendly designs, claiming a reduction in fuel consumption of more than 30% compared to traditional designs delivered only a few years ago. This is good news for ship owners where fuel consists of approximately 60-70% of operational cost.... We are gradually witnessing a strategic move in Japanese

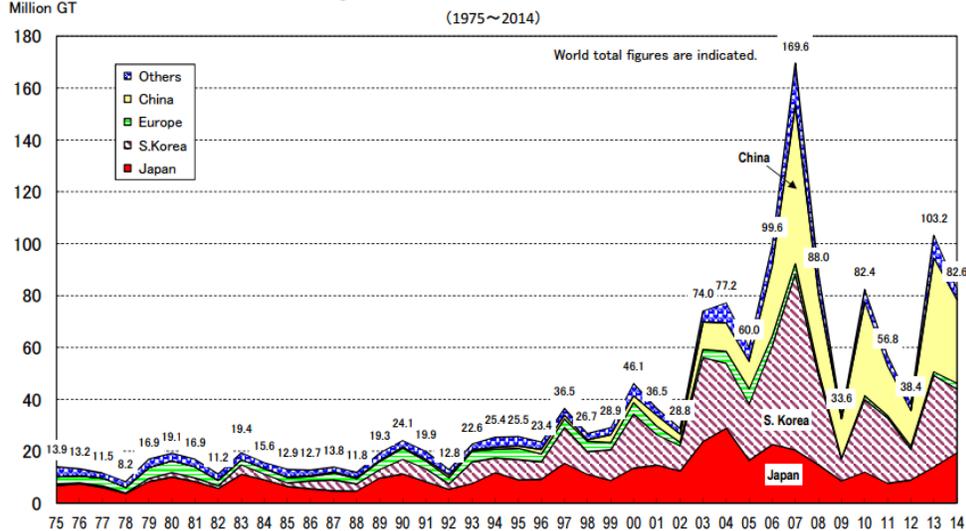
shipbuilding: from the mass production of long-series standard bulk carriers (and oil tankers), to short-series, technically advanced high-end units, more or less tailor-made for specific future use. Owners of these units, often intended for the offshore sector, are more challenging for the yards than “traditional” owners, and they have crystal-clear expectations of the builder: quality and timely delivery.<sup>4</sup> Citigroup’s research supports this, saying, “Shipbuilding in Japan is going through a renaissance. The sharp depreciation of the yen has provided a cost advantage to manufacturers.”<sup>5</sup>

Following the introduction of the package of measures aimed at reviving the Japanese economy (including bond purchases and increased government spending) the yen has depreciated by over a third against the US dollar over the past 18 months. Most shipbuilding is priced in US dollars so local currency depreciation improves pricing for buyers. Moreover, the risk of FX volatility is taken by the shipyard, despite only 20% to 30% of the purchase cost being paid up front.

Japanese costs are now comparable to South Korea and China while reliability and consistency are considered superior: consequently activity has increased with, for example, the order of two bulkers, worth US\$68mn, from Japanese Oshima Shipyard by Taiwanese dry-bulk carrier U-Ming Marine Transport in November 2012.

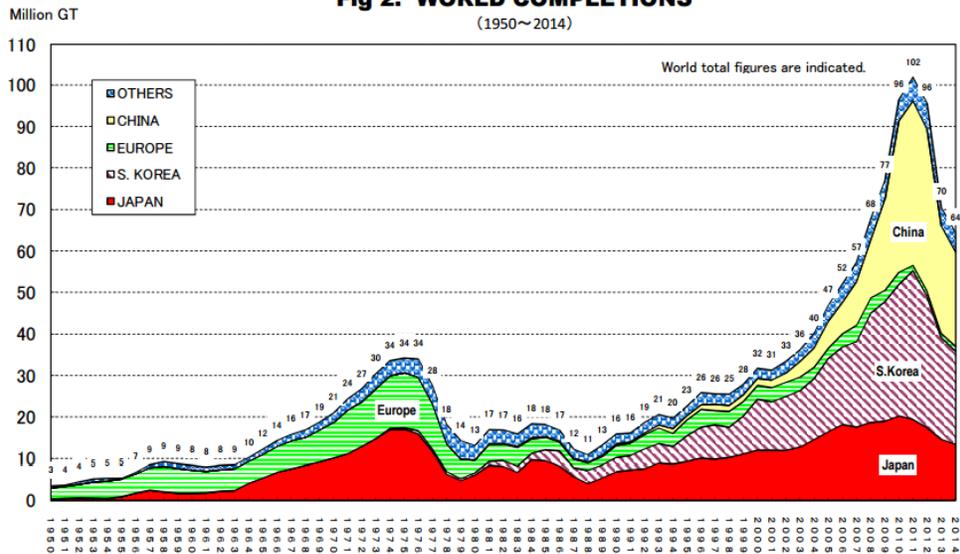
The flexibility of Japan’s ECAs, Japan Bank for International Cooperation (JBIC) and Nippon Export and Investment Insurance (Nexi) has also supported its shipbuilding resurgence. In August 2013, Hong Kong-based Pacific Basin Shipping finalised terms of 12-year post-delivery ECA financing for two handymax bulk vessels, lead arranged by Citi. The facility, which totals US\$50.9mn, had Citibank Japan as co-financing lender. JBIC and Nexi supported the transaction despite the vessels being manufactured in China as the shipbuilder had an equity and technology tie-up with a Japanese shipyard. Similarly, support has been extended to shale gas exports from Australia and the US – although no Japanese equipment was used – because the end user of LNG is in Japan.<sup>6</sup>

**Fig 1. WORLD NEW ORDERS**



(Note) 1. Data Source : JSEA report based on LR until 1994. IHS (Former Lloyd's Register) "World Shipbuilding Statistics" from 1995.  
2. Ship Size Coverage : 100 Gross Tonnage and over.

**Fig 2. WORLD COMPLETIONS**  
(1950~2014)



(Note) 1. Data Source : IHS(Former Lloyd's Resister). Until 1967, launched base. After 1968, delivered base.  
2. Ship Size Coverage : 100 GT and over.

Source: [The Shipbuilders' Association of Japan](#)

### **Pleasure Boats Market**

The Japanese marine industry is small and the domestic market is at a developing stage. While Japan's import market is very small, the country exports quite a number of boat engines. According to the National Marine Manufacturers Association, Japan is currently the world's 11th largest boat market, and it should expand with overall economic growth. Another factor that will spur growth will be the retirement of post-war baby-boomers who have extra money and will be looking to spend on leisure activities like boating.

There are seven boat engine firms for every boating company in Japan, and the engine industry continues to be an important sector in the Japan market.

The size of Japan's boating market, which includes sailboats, inboard/sterndrive motor boats, other rigid boats, inflatable boats over 2.5 m and 20 kg, and PWC, increased across the board in 2012 compared to the previous year. Boat production, imports, as well as boat exports were strong. Much of the boost came as many people replaced boats damaged by the Great East Japan Earthquake and the tsunami. The dual disasters also created opportunities to rebuild some marinas, which were previously built exclusively for the fishing industry. New marinas are now built to appeal to recreational users as well.

Specialized trading firms market imports to domestic end-users including manufacturers, private users, and law enforcement, defense, and other government agencies. Many U.S. manufacturers also have partnerships with their Japanese counterparts. New-to-market firms should consider partnering with trading firms knowledgeable about marine industry networks.

Japanese manufacturers of marine motors play a strong role in the industry. Manufacturers include:

- Toyota Motor Corporation
- Nissan Marine Co., Ltd.

- Honda Motor Co., Ltd.
- Yamaha Motor Co., Ltd.
- Yanmar Co., Ltd.
- Suzuki Motor Corporation
- Tohatsu Corporation<sup>7</sup>

### III. Japan Market Overview

As the world’s fourth-largest buyer of American products and the world’s third-largest economy, Japan, among the most dynamic and advanced countries in the world, is a market that should be considered by all American exporters. Japan is a technology powerhouse, a proving ground for consumer goods and services, and in the social and commercial vanguard of developed market demographics. Further, Japanese companies are also major investors in the United States, and as a result Japan sees dozens of visits by senior U.S. state and city officials annually. While the reasons U.S. firms engage with Japan are diverse, the strategic and tactical importance of the Japanese market is critical not only for their business in Japan, but in the United States and third-country markets as well.

Japan continues to enjoy attention in the business news this year owing to a variety of factors, including the strong performance of the Japanese stock market in 2013, continued brighter business and consumer sentiment, a yen that has seemingly stabilized at a level sharply lower than that of recent years, and the apparent end of stubborn deflation. The new economic policies linked to these developments are known collectively as “Abenomics”-- a three pronged strategy of bold monetary loosening, fiscal stimulus centered on infrastructure spending, and growth-oriented structural reform. While the implications and ultimate success of this strategy in reigniting long-term growth in Japan are uncertain, it has drawn considerable attention from U.S. businesses.

#### Country Profile

- **Full name:** Japan
- **Population:** 127,103,388 (July 2014 est.)
- **Median Age:** 46.1 years
- **Largest District:** Tokyo
- **Area:** 377,915 sq km
- **GDP:** USD \$4.77 trillion (2014 est.)
- **GDP per capita:** USD \$37,800 (2014)
- **Unemployment rate:** 3.6% (2014)
- **Monetary unit:** Yen (JPY)
- **Main exports:** motor vehicles; semiconductors; iron and steel products; auto parts; plastic materials; power generating machinery
- **Investment in fixed capital:** 22.2% of GDP (2014)
- **Inflation rate:** 2.8% (2014)

Source: CIA World Factbook

The U.S., Japan and ten other countries are negotiating the Trans-Pacific Partnership (TPP). With Japan’s participation, its members would account for nearly 40 percent of World GDP. Moreover, the liberalization expected to be required of TPP member countries may play an important role in promoting the domestic economic reforms likely to be called for under “Abenomics.” As of May 2014, the U.S.-Japan TPP talks have been proceeding vigorously, with most topics already or nearly agreed upon.

While Japan has made significant steps toward economic healing following the tragic combined earthquake, tsunami, and nuclear incident of March 2011, lasting changes on various levels remain

noticeable, including idled nuclear power plants. In particular, greater levels of manufacturing by Japanese companies outside of Japan, increased fuel imports and a weakening yen have turned Japan's multi-decade trade surplus into a trade deficit.

Japan remains the world's third-largest economy, after the United States and China, with a GDP of almost \$6 trillion. Japan is the fourth-largest export market for U.S. goods and services, and our fourth-largest trading partner overall. In 2013 the U.S. exported \$65 billion in goods to Japan. The United States runs a persistent trade deficit with Japan in merchandise, and a surplus in services.

Japan is the second-largest foreign investor in the United States, with a cumulative investment of approximately \$310 billion.

During 2013 the Japanese yen weakened appreciably and is currently near 5- year lows against the dollar. Even so, U.S. products remain competitive in Japan.

Japan's large government debt, which totals over 200 percent of GDP, and an aging and shrinking population are major challenges confronting the economy, but the latter can also present opportunities for U.S. companies.

In 2013 the top exporters to Japan were China, the United States, Australia, Saudi Arabia, South Korea, the UAE, and Indonesia. The top importers from Japan were China, the United States, South Korea, Taiwan, and Hong Kong.

The United States-Japan alliance is a cornerstone of U.S. security interests in Asia and is fundamental to regional stability and prosperity. The U.S.-Japan alliance continues to be based on shared vital interests and values. These include stability in the Asia-Pacific region, the preservation and promotion of political and economic freedoms, support for human rights and democratic institutions, and securing of prosperity for the people of both countries and the international community as a whole. Japan is one of the world's most prosperous and stable democracies.

### **Market Challenges**

The degree of difficulty in penetrating the Japanese market depends on the product or service involved. Key variables include the degree of local or third-country competition, the number of regulatory hurdles to be overcome, and cultural factors such as language (both spoken and written), service and quality expectations, and business practices. Tariffs on most imported goods into Japan are low. However, cultural, regulatory, or other non-tariff barriers exist that can make market entry difficult. These can include Japanese import license requirements, restricted or prohibited imports, temporary entry of goods, certifications, standards, labeling requirements, etc.

### **Market Opportunities**

U.S. companies wishing to enter the Japanese market should consider hiring a reputable, well-connected agent or distributor, and cultivating business contacts through frequent personal visits.

Japan's business culture attaches a high degree of importance to personal relationships, and these take time to establish and nurture. Patience and repeated follow-up are typically required to clinch a deal. The nature and pace of dealmaking in Japan are quite different from those in the United States. U.S. business executives are advised to retain a professional interpreter, as many Japanese executives and decision-makers do not speak English or prefer to speak Japanese.<sup>8</sup>

## China

### IV. Summary of the opportunities

China's marine equipment industry currently lags behind the shipbuilding industry. Equipment that is in high demand includes machinery, key electric-mechanical equipment, communications systems, diesel engine crank-shafts and components, high-powered diesel engines, ship superstructures, deep-sea exploration ship products, high-grade steel plates and section bars, and environmentally friendly paint.

### V. Industry Prospects

This section covers the use and development of sea-related industries including shipbuilding, ports, pleasure boats, sea communications and transportation, offshore oil and gas, sea-related chemicals, and sea fisheries.

As the world's largest exporter, China has become a center of maritime activity, and China's major state-owned shipping and shipbuilding companies are among the world's largest. According to the Ministry of Land and Resources of the People's Republic of China, the marine industry will gradually become one of the pillars of China's economy.

According to the Global Trade Atlas statistics, China's total value of sea-based imports and exports reached \$41 billion in 2012, of which ship imports accounted for \$1.8 billion. Trade volume reached a historic high of approximately \$45 billion in 2011. However, oceanic pollution, a 43% tax rate on imported yachts, underdeveloped ports, and cost increases continue to present challenges for the development of the marine industry.<sup>9</sup>

In the last two decades, with China's emerging as a global giant on exporting, a vital foundation has been provided to its maritime development. The rapid development and expanding of maritime industry in China has significantly contributed to the country's GDP growth. According to the latest government report, the maritime industry has employed more than 34 million workers, and reported a total production value of 5 trillion yuan (about USD 810 billion) in 2012, which contributed almost 10% of the country's GDP and is thus seen as "a new engine for growth." Furthermore, this report has predicted that the total production value of China's maritime industry would exceed 20 trillion yuan (over USD 3 trillion) by 2030, accounting for over 15% of the country's GDP.

As an open and highly competitive market, the global shipbuilding used to be dominated by European, Japanese and South Korean shipbuilders from the mid-19<sup>th</sup> century to the early stage of the new millennium. By 2010, China had gained nearly 44% of the global ship market surpassing other major competitors, and has been ranked as the largest shipbuilding country in terms of order book volumes since then. In 2012, the completion volume of China's shipbuilding industry was 60.2 DWT and new order quantity was 20.4 million DWT.

Shipbuilding industry in China has transformed from defense-focused into a commercial enterprise since 1982, and it has been expanding considerably with China's accelerated economic growth. Nowadays, the primary focus of this rapidly growing industry is on commercial vessels, and most of the production is 6,000-and-under TEU container ships, bulk cargo carriers, crude oil tankers, and high value and sophisticated vessels. Though the primary aim of increasing shipbuilding capacity in China has been to maintain self-sufficiency in sea transport and satisfy domestic use, ships and boats are also exported to 169 countries and regions, mainly to Asia and Europe. As the world's biggest ship manufacturer, 80% of the gross output of Chinese shipyards is devoted to export customers.

Based on statistics in 2005, the number of shipbuilding companies in China exceeded 2 000, employing approximately 400 000 workers. Currently there are four types of firms in China's shipbuilding industry: large state-owned enterprises (SOEs), joint ventures, small private-owned enterprises, and military shipyards. The first three types are discussed more often in terms of exporting: more than 78% of the export sales comes from SOEs, over 16% comes from joint ventures, and over 5% is contributed by the small private-owned enterprises.

The SOEs, as the key players, refer to the two massive state-owned conglomerates: the China State Shipbuilding Corporation (CSSC) that handles shipbuilding activities in the east and the south of China, and the China Shipbuilding Industry Corporation (CSIC) that deals with those in the north and the west of the country.

With China's ever-increasing trade and its flourishing shipbuilding business, China's total demand for maritime shipping is the largest among all countries. As the biggest iron ore importer, the second biggest crude oil importer, and the biggest exporter of manganese, copper and chrome ore in the world, over 90% of China's foreign trade cargo delivery (including nearly 95% of imported crude oil and 99% of imported iron ore) are carried by sea. Therefore, China's shipping industry has become a vital industry, which is highly related to the rapid development of the economy, foreign trade, and national security.

By the end of 2012, China owned 2 486 oceangoing vessels (on average 27 932 DWT per vessel) and 10 947 coastal trading vessels (on average 5 959 DWT per vessel), and the dimension of China's shipping fleet ranks 3<sup>rd</sup> in the world. The volume of trade from sea shipping service exceeded EUR 37,5 billion in 2011. Moreover, this increasing demand of shipping will keep stimulating the development of China's shipping industry – according to Qinetiq, Lloyd's Register and University of Strathclyde's united report of "Global Marine Trends 2030", by growing from 15% in 2010 to 24% in 2030, China will have the largest growth in fleet ownership among all countries and regions by then.

As the country increasingly gains ascendance in global trade, China has been experiencing a boom also in harbor construction. Maritime infrastructure in China continues to be developed at an extremely fast pace. Currently there are over 150 seaports in China, providing an overall port throughput of over 100 million TEU annually that tops the world list. In the meantime, China's port handling efficiency also set world record. Among the world's top 20 sea ports in terms of total throughput capacity and container handling capacity, China has 12 and 8 ports in the lists respectively. Moreover, in the past decade,

Chinese ports have continuously been the world leaders in terms of the total throughput capacity and container handling capacity. China has become a significant sea-nation after the 60 years of development.

Besides productivity, China has also been promoting technological innovation and R&D capability of its shipbuilding industry. China will invest more in high-tech and high value-added technologies, for example in environmental-friendly and energy-saving shipbuilding like those utilizing wind and sea water, maritime equipment projects, and critical internal equipment within ships. In addition, offshore drilling rig industry has been developing as a future alternative to China's traditional shipbuilding. The ongoing changes, which are all with military implications, are increasing emphasis on hull-block construction, investing in major new "greenfield" shipyards, and increasing Chinese firms' ability to produce marine diesels and gas turbines. In the meantime, the shipping industry also works effectively on strengthening design and R&D competitiveness in volume ship types, for instance, tankers, bulk carriers and container vessels. For the long-term development of the industry, China has been increasing its focus on human capital such as skilled workforce and high-level technological human resources, which refers to the investment on Chinese universities and maritime academies that produce marine engineers and naval architects.

### **Foreign Investment**

Though most of the shipyards are state-owned and the openness of Chinese shipbuilders to foreign shipbuilding companies is limited, the situation is changing gradually. There is currently a number of joint ventures and small private shipbuilding enterprises that are actively connected with foreign partners. In the recent years, foreign investment has been engaged in support activities of shipbuilding industry, such as marine equipment industry. Most of the foreign capital comes from Europe, South Korea, the U.S., and Japan (e.g. Wärtsilä, MAN B&W, ABB, Caterpillar, Daeyang, Samsung Group, Daewoo). Foreign investment in most joint ventures has been limited to a 49% share, especially when it concerns shipyards, diesel engine and crankshaft manufacturing enterprises. They are also required to "transfer their expertise to local partners through the establishment of technology centers."

Besides such joint ventures, the cooperation between China and foreign shipbuilding companies has also been increasing. For instance, the increasingly topical polar scientific research has brought the Helsinki-based Aker Arctic Technology Inc. (hereafter Aker Arctic) and China together. In 2012, Aker Arctic signed a contract with China, who chose Aker Arctic to design a new icebreaker that is equipped with advanced scientific equipment for the purpose of China's research on polar oceans.<sup>10</sup>

## Opportunities

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### **Sub-Sector Best Prospects**

Best prospects in China's marine industries include shipbuilding and related accessories, recreational marine, port related accessories and sea transportation.

Shipbuilding: Chinese shipbuilding orders and deliveries have experienced fast growth for seven consecutive years, and China is currently ranked second in the world in both categories. According to statistics issued by Clarkson, a United Kingdom consultancy, Chinese shipbuilders' volume was 62 million Deadweight Tonnage (DWT) from January to November of 2011, with an increase of 9% compared with the same period in 2010. New ship orders were 75 million DWT in 2010, which was up 189% compared with the same period in 2009. The market share of Chinese shipbuilding output, new ship orders and ship orders in hand, respectively accounted for 42%, 65.49% and 41% of world totals in 2010.<sup>11</sup>

The country plans to build three major shipbuilding bases in the Bohai Gulf area, East China Sea and South China Sea. When completed in 2015, the East China base will be the largest shipyard in the world.

Additionally, large infrastructure and manufacturing projects are being built in Haikou in Hainan province and Zhuhai in Guangdong province. In 2010, the State Council announced plans to make Hainan Island an international tourism destination.

In February 2009, China's State Council approved a revitalization plan for the Chinese shipbuilding industry. According to the plan, the government will encourage financial institutions to expand financing to purchasers of ships and extend financial support for domestic buyers of long-range ships until 2012. The plan will also support the industry by stabilizing production, growing domestic market demand, developing marine engineering equipment, supporting consolidation of the industry through mergers and acquisitions, as well as technical innovations. China needs high-technology, machinery, and management tools for the shipbuilding industry.

The best prospects for shipbuilding include: raw materials, coating equipment and coating materials, computer aided design (CAD) software and associated technologies for ship design and construction, equipment maintenance, Global Positioning Systems (GPS), navigation and on-board computer systems, and cutting and welding technology. China has routinely sought foreign design support for large marine engineering projects, but to date has relied heavily on European and Asian firms. With marine engineering projects as a targeted area of growth in the industry revitalization plan, and with United States expertise in offshore energy projects, there will be increasing opportunities for American design firms in this segment.

Recreational Marine Industry: With rapid economic growth, China's recreational marine market is forecast to expand sharply in the coming years. In 2010, China imported over \$90 million worth of yachts and pleasure vessels, which was an increase of 133%, compared with 2009 (Source: Global Trade

Atlas). Based on the confidence that pleasure boats will become a part of the country's expanding upper and middle-class lifestyles, provincial governments, property developers and boat builders are all investing heavily in this industry. Business experts estimate that the overall market size may reach \$10 billion over the next decade, which presents significant opportunities for the export of United States's pleasure boats, accessories, marina planning, and construction materials (Source: China Boat Industry and Trade Association). China's importing of super yachts has increased dramatically, and comprises 44.6% of total yacht imports.

Although there are presently only a handful of marinas in China, dozens more are under construction or in the planning process. Many luxury residences in major cities incorporate waterways and boating facilities in their developments. The Shanghai government has decided to build marinas and cruise ship centers along the downtown riverfront as part of the efforts to remake Shanghai into a world-class city. Zhoushan, Qingdao, Dalian, Ningbo, Beihai, Dongguan, Shenzhen, and Hainan Island also have marina projects or are in the planning process.<sup>12</sup>

In 2012, the Chinese yacht market was about CNY 1.75 billion (USD 282 million) with an annual growth rate of about 10 percent. The market shows bright prospects; yacht sport will become a major choice for entertainment for the rising Chinese middle class. Marine yacht sport will be a new highlight in marine tourism and individualized consumption.

The government has shown clear interest in the yachting industry, demonstrated by the more than 50 infrastructure projects set to take place. Additionally, these locations show good potential because they will require U.S. expertise.

The yacht industry exists almost exclusively in coastal provinces, most prominently in Guangdong, Shandong, Shanghai, Zhejiang, and Jiangsu. The demand for yachts from Chinese cities will also be centered in areas such as Guangzhou and Shenzhen. U.S. companies must maintain a long-term vision and not expect quick profits because although the market is still in the earliest stages of development, it offers huge potential.<sup>13</sup>

Maritime Emergency Response and Port Safety: China is one of the world's largest maritime markets with a coastline of 32,000 kilometers and over 1,400 harbors. From North to South along China's eastern coastline, there are five established coastal port groups: Bohai Bay Rim Port Cluster, Yangtze River Delta Port Cluster, Southeast Coast Port Cluster, Pearl River Delta Port Cluster, and Southwest Coast Port Cluster. These ports are administered by the local Port Authority, together with the Maritime Safety Administration, which are both agencies under the Chinese Ministry of Transport.

Under the 12th Five-Year Development Plan of Transportation Safety and Emergency, by 2015, China expects to make significant advancement in the areas of regulations and emergency plans, equipment and facilities, information technology, workforce quality and infrastructure safety capabilities. The Chinese government also announced that it will spend over \$450 billion on maritime environmental

protection and oil spill response with a focus on importing advanced equipment for emergency management and enhancing maritime safety soft skills.

**Port Construction and Sea-Transportation:** China is allocating significant capital for port and waterway construction to meet significant growth in freight volume. Currently, there are 57 officially registered yacht clubs and marinas with around 600 berths. China's port flow is increasing at exponential rates, reflecting foreign trade growth. Eight ports in mainland China, Shanghai, Shenzhen, Qingdao, Tianjin, Guangzhou, Xiamen, Ningbo and Dalian, are included among the 30 largest container harbors in the world. In 2010, total cargo turnover in China exceeded 9 trillion tons, rising 17% from 2009, and container throughput reached 146 million twenty-foot equivalent units (TEU) which was an annual increase of 19%. The port of Shanghai is by far the busiest in the world. The cargo turnover of the Shanghai port exceeded 650 million tons and container flow reached 29 million TEU in 2010. (Source: China Ports Year Book 2011).

To facilitate global trade, most ports in China are placing emphasis on expanding capacity, upgrading port facilities, and modernizing operations. The products and technologies in high demand are vessel traffic management information systems, laser-docking systems, terminal tractors, dredging equipment and security equipment for ports and vessels to enable them to comply with the International Ship and Port Security Code (ISPS).

China is building more deep-water berths to handle the larger fifth and sixth-generation container vessels. The largest project is the construction of Yangshan deep-water port, approximately 20 miles offshore from Shanghai and linked to the mainland by a 20 mile causeway bridge. The master plan calls for the completion of 50 berths by 2020, which will cost over \$10 billion. It also includes a logistics park and new harbor city on mainland China. Lianyungang, a northern port city in Jiangsu Province, is racing to build an international port after winning State Council approval to construct a 300,000 DWT deep-water channel and a 300,000 DWT berth for handling crude oil and ore.

### **Opportunities**

China's marine equipment industry currently lags behind the shipbuilding industry. Equipment that is in high demand includes machinery, key electric-mechanical equipment, communications systems, diesel engine crank-shafts and components, high-powered diesel engines, ship superstructures, deep-sea exploration ship products, high-grade steel plates and section bars, and environmentally friendly paint. Other potential prospects for shipbuilding can be seen in 67 markets for coating equipment, computer-aided design software and associated technology for ship design and construction, equipment maintenance, high-tech equipment (such as GPS, navigation and on-board computer systems), and cutting and welding technology.

Pleasure boats are one of the best prospects for exporters. It is estimated that in 2014, China will see a 40% increase in the import of super yachts. China's recreational marine industries are poised to expand rapidly in the coming years. Confident that pleasure boats will become incorporated into the lifestyle of China's growing wealthy class, provincial governments, property developers and boat builders are all

investing heavily in this expanding industry, presenting significant opportunities for United States exporters of pleasure boats, accessories, marina planning services, and construction materials.

Maritime emergency response and port safety equipment and services have also begun attracting attention in China. There are good opportunities for equipment, technology, and services related to communication and supervision systems, flight supervision and maritime rescue, marine oil spills, salvage, mapping, waterway maintenance, and public security.<sup>14</sup>

#### Strengths:

- China's economic growth
- State support
- Low cost labour
- Basic vessel production
- Shipping fleet size
- Vessel technology related to e.g. large vessels
- Port capacity & handling efficiency

#### Opportunities:

- Constructing complex vessels designed elsewhere, e.g. Arctic
- Technology transfer from foreign companies
- Environmental friendly & energy saving shipbuilding
- Increasing R&D investments
- Future market demand for shipping<sup>15</sup>

#### **Innovation Drivers**

The Chinese government has published The National Outline for Medium and Long Term Science and Technology Development, which guides the landscape of innovation in China for the next 15 years. This is the “mother publication” on strategic development plans within innovation in China. In this publication, different plans, programs, and projects are enlisted, and they each target either research and science purposes, or industrial technology-oriented purposes.

The innovation drivers in the Chinese maritime sector are thus based on two main programs by the government: 1) research support and 2) industry support.<sup>16</sup>

## VI. Shanghai Marine Industries

Although there are presently only a handful of marinas in China, dozens more are under construction or in the planning process. Many luxury residences in major cities incorporate waterways and boating facilities in their developments. The Shanghai government has decided to build marinas and cruise ship centers along the downtown riverfront as part of the efforts to remake Shanghai into a world-class city. Other cities and areas that either have on-going marina projects, or are in the planning process include Zhoushan, Qingdao, Dalian, Ningbo, Beihai, Dongguan, Shengzhen and Hainan Island.

### Port Construction and Sea-Transportation

China is allocating significant capital for port and waterway construction to meet significant growth in freight volume. Since 2004, China has stepped up its construction of ports with 467 berths built or rebuilt in 2010. China's port flow is increasing at exponential rates, reflecting foreign trade growth. Eight ports in mainland China, namely Shanghai, Shenzhen, Qingdao, Tianjin, Guangzhou, Xiamen, Ningbo and Dalian, are included among the 30 top container harbors in the world. In 2010, the cargo turnover of all ports in China exceeded 8.9 trillion tons, rising 16.7 percent from 2009, and container throughput reached 146 million TEU which was an annual increase of 19.4 percent. The port of Shanghai is by far the busiest in the world. The cargo turnover of Shanghai port exceeded 650 million tons and container flow reached 29 million twenty-foot equivalent units (TEU) in 2010. Both of these two indexes have surpassed Singapore, making it the world's largest port (Source: China Ports Year Book 2011).

China is building more deep-water berths to handle the larger fifth and sixth-generation container vessels. The largest project is the construction of Yangshan deep-water port, approximately 20 miles offshore from Shanghai and linked to the mainland by a 32.5-kilometer causeway bridge. The master plan calls for the completion of 50 berths by 2020, which will cost over \$10 billion. It also includes a logistics park and new harbor city on the mainland. Lianyungang, a northern port city in Jiangsu Province, is racing to build an international port after winning State Council approval to construct a 300,000 DWT deepwater channel and a 300,000 DWT berth for handling crude oil and ore, in conjunction with development of the neighboring Yangshan Deep Water Port in Shanghai and the existing Ningbo Port.<sup>17</sup>

## VII. China Market Overview

In November 2013, following the Third Plenum of the 18th Chinese Communist Party Congress, President Xi Jinping rolled out an ambitious agenda to re-shape the Chinese economy and fully embrace the market as the “decisive force” in shaping the country’s economic future. In order to continue China’s labor force evolution and to supplement the strong manufacturing exports that have fueled its unprecedented growth, Xi directed his administration to implement policy changes that increase domestic consumption, stimulate domestic innovation, and develop a world-class services sector – all the while expanding China’s middle class and moving millions of rural Chinese citizens to urban centers.

### Market Challenges

The depth and complexity of China’s proposed macroeconomic reforms bring with them significant challenges and pitfalls that will require skillful policy making and implementation. Problem areas to look out for include rising local debt, potential property bubbles, outflows of capital, shadow banking, excess capacity in industry sectors, and endemic corruption across industry sectors. China continues to make steady progress on the world stage as an emerging market in which to do business. The World Bank recently ranked China 96th (out of 189) in its Ease of Doing Business Report. However, China’s explosive economic growth of the last several decades is beginning to slow. In 2013, real GDP grew 7.7 percent (down from 10.4 percent in as recently as 2010). While the government has set a 7.5 percent growth target, some economists predict that China’s GDP growth will slow to 7.3 or 7.4 percent in 2014, which would represent China’s slowest economic expansion since 1990. U.S. companies doing business in China remain concerned about rising costs for labor, enforcing intellectual property rights, competition with Chinese state-owned or state-supported companies, lack of transparency, burdensome bureaucracy, and protectionism in the business licensing and approval process.

### Market Opportunities

Despite these and other longstanding concerns, China remains an extremely attractive market for many U.S. companies. In fact, ninety percent of U.S.-China Business Council member companies responding to a USCBC survey report that their China operations are profitable, the highest percentage reported since 2006. Foreign direct investment into China saw modest growth in 2013, rising 5.3% year-on-year compared with a 3.7% drop in 2012. Furthermore, many of the economic reforms called for as part of the Third Plenum, particularly those related to foreign investment, are starting to take shape.

### Country Profile

- **Full name:** People's Republic of China
- **Population:** 1,355,692,576 (July 2014 est.)
- **Median Age:** 36.7 years (2014 est.)
- **Largest District:** Beijing
- **Area:** 9,596,960 sq km
- **GDP:** \$17.63 trillion (2014 est.)
- **GDP per capita:** USD \$12,900 (2014 est.)
- **Unemployment rate:** 4.1% (2014 est.)
- **Monetary unit:** 1 Renminbi yuan (RMB) (Y) = 10 jiao = 100 fen
- **Main exports:** Manufactured goods, including textiles, garments, electronics, arms
- **Investment in fixed capital:** 46%
- **Inflation rate:** 2.1% (2014 est.)

Source: CIA World Factbook

Some highlights so far include:

- Revising the three basic laws that govern foreign investment in China.
- Slashing the number of business or administrative approvals needed while delegating much of the approval responsibility to provincial or local government.
- Relaxing “paid in” and minimum registered capital requirements for foreign-invested enterprises, and replacing the annual government inspection procedure with an online filing system.
- Undertaking efforts to improve the legal and enforcement regime for intellectual property (IP) rights, and amending the trademark law to provide stronger protection and enforcement tools for all trademark owners.
- Liberalizing financial controls, including interest rates and limits on foreign exchange.

In a move that garnered significant attention, China established the Shanghai Pilot Free Trade Zone (SFTZ) in September 2013. Covering approximately 29 square kilometers in Shanghai’s Pudong district, the SFTZ was envisioned as a venue for China’s leaders to experiment with market-based reforms, such as relaxed controls on foreign investment, increased market access in industry sections not on a “negative list,” streamlined administrative procedures, and financial and foreign exchange reforms, but regulatory details are still slowly trickling out.<sup>18</sup>

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<sup>1</sup> [Smart Comp Project](#)

<sup>2</sup> [Smart Comp Project](#)

<sup>3</sup> <http://www.japantimes.co.jp/news/2014/09/29/business/japanese-shipbuilders-seek-regain-edge-lost-china-south-korea/#.VWh1hc9Viko>

<sup>4</sup> <http://www.seatrade-maritime.com/news/asia/why-the-sun-has-yet-to-set-on-japanese-shipbuilding.html>

<sup>5</sup> [http://www.citigroup.com/transactionsservices/home/trade\\_svcs/docs/asian\\_shipbuilding.pdf](http://www.citigroup.com/transactionsservices/home/trade_svcs/docs/asian_shipbuilding.pdf)

<sup>6</sup> *ibid.*

<sup>7</sup> [Pleasure Boat International Resource Guide: 2014 Guide for U.S. Exporters](#)

<sup>8</sup> [Doing Business in Japan: 2014 Country Commercial Guide for U.S. Companies](#)

<sup>9</sup> [Doing Business in China: 2014 Country Commercial Guide for U.S. Companies](#)

<sup>10</sup> [SmartComp Research Report](#)

<sup>11</sup> Analysis on China’s Shipbuilding Industry by China Shipbuilding Industry Association

<sup>12</sup> [Doing Business in China: 2014 Country Commercial Guide for U.S. Companies](#)

<sup>13</sup> [Pleasure Boat International Resource Guide: 2014 Guide for U.S. Exporters](#)

<sup>14</sup> [Doing Business in China: 2014 Country Commercial Guide for U.S. Companies](#)

<sup>15</sup> [SmartComp Research Report](#)

<sup>16</sup> [Chinese Maritime R&D](#)

<sup>17</sup> [Export.gov](#)

<sup>18</sup> [Doing Business in China: 2014 Country Commercial Guide for U.S. Companies](#)