China ambitions in cruise sets their agenda for full value chain – a potentially lucrative opportunity awaits

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Agenda

Cruise tourism is restarting in China and is expected to see an exponential growth – government incentivizes boost of domestic value chain while foreign cruise operators enhance local presence with JVs

State-owned shipyards jump on the booming cruise ship market – strong commitment with clear roles and responsibility drive innovation and results-focused mentality

Long-term role of China cruise industry on global stage remains to be seen, but emergence of domestic supply chain calls for global participants



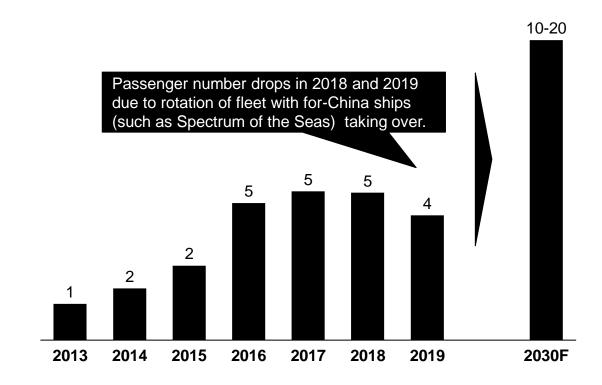
Cruise restarts in China with domestic routes first – passenger volume is expected to grow 2-5 times by 2030

Overview of China cruise tourism

China cruise route calendar – December 2021

Domestic routes restarting – 3-7 nights South China sea routes are most popular ones during winter months, while international routes scheduled from March 2022. 2021年11月 -南海:南海之梦 南海:南海之梦 自由行:全富岛+银屿岛 +... 自由行:纯玩最美西沙+绝... 12月1日 南海·南海之梦 南海 南海之梦 南海 南海之梦 自由行·探秘西沙 打卡粉... 目的地参团'一价全含+VI... 南海 南海之梦 南海 南海之梦 海南海峡 长乐公主 海南海峡:长乐公主 自由行·【三趟VIP专车接... 15 海南海峡 长乐公主 南海·南海之梦 南海 南海之梦 海南海峡 长乐公主 南海 南海之梦 自由行'爸妈放心游「1晚... 目的地参团'一价全含+VI... 自由行' [三趟VIP专车接... 自由行 探秘西沙 打卡粉... ¥5180起 全部 ~ 南海 南海之梦 南海·南海之梦 海南海峡 长乐公主 海南海峡 长乐公主 海南海峡 长乐公主 南海 南海之梦 自由行·【元旦西沙升国旗... 目的地参团·一价全含+VI... 自由行· 纯玩全富岛+银屿... 自由行·爸妈放心游『1晚... 自由行·【三揃VTP专车接 海南海峡 长乐公主 海南海峡 长乐公主 南海·南海之梦 海南海峡 长乐公主 海南海峡·长乐公主 南海 南海之梦 ¥4680起 全部 > ¥4280起 全部 ~ ¥4950起 全部 ~

China cruise passenger volume, in millions



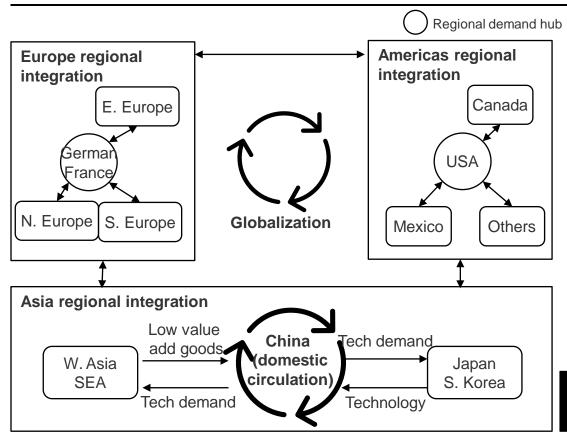
Source: ctrip.com; China cruise industry development report.



However, government eyes beyond the tourism industry, aiming to establish a domestic cruise ecosystem for increase value capture domestically

From a flat world to dual circulation economy policy in Beijing

China's new view on globalization: multi-model structure



Selected policies for boosting cruise ecosystem development



- Guidance of the Promotion for China Cruise Industry Development - the National Development and Reform Commission, 2008
- Made in China 2025 strategy State Council, 2015
- 13th Five-year Plan (2016-2020) for large cruise ship construction State Council, 2015
- 14th Five-year Plan (2021-2025) for large cruise ship construction – State Council, 2020

Downstream

- Guidance of Promotion for China Cruise Transportation Development – MoT, 2014
- The National Coastal Cruise Port Layout Plan MoT, 2015
- 13th Five-year Plan (2016-2020) for Cruise Tourism Development – State Council, 2015
- 14th Five-year Plan (2021-2025) for Cruise Tourism Development – State Council, 2020

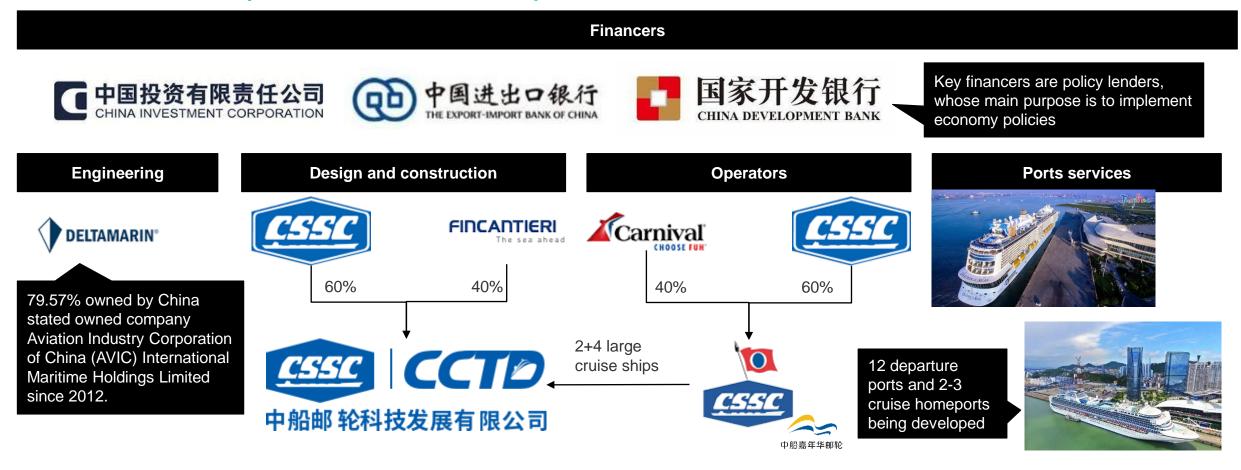
Central government is incentivizing development of domestic demand, while deepening its supply-side structural reform to ensure level of independence – same happens in cruise ecosystem with state-owned companies acting as enforcers.

Source: Reddal interviews with economists from ICBC International; The State Council of The People's Republic of China.



State-owned companies act as pioneers pushing development of ecosystem, well financed by government via various financers

Translation from state policies to state-owned companies' actions



Source: The State Council of The People's Republic of China (2015); China securities news; CSSC Shanghai Waigaoqiao Shipbuilding (2018) press release.



Chinese cruise operators rush to test the water within past 2 years with 4 ships bought

Key Chinese ocean cruise operators











Ownership

Owned by state-owned firms: COSCO shipping and China tourism group

Owned by state-owned firms: China **Communications Construction** Company and China tourism group

Public listed with Shandong provincial government as main shareholder

Private-owned

Homeport

Xiamen

Sanya

Dalian

Shanghai

Cruise ship MV Piano Land

- Built by Meyer Werft Papenburg in 1993
- Bought by Astro Ocean in 2019
- 69153 GT

MS Charming

- Built by Fincantieri in 1997
- Bought in 2020

- 77499 GT

Nanhai Dream

- Built in 2012 by CSSC GSI
- Bought in 2016
- 24572 GT

MS Chinese Taishan

- Built by Blohm-Voss in 1999
- Bought in 2014 from Costa
- 24427 GT

MV Blue Dream Star

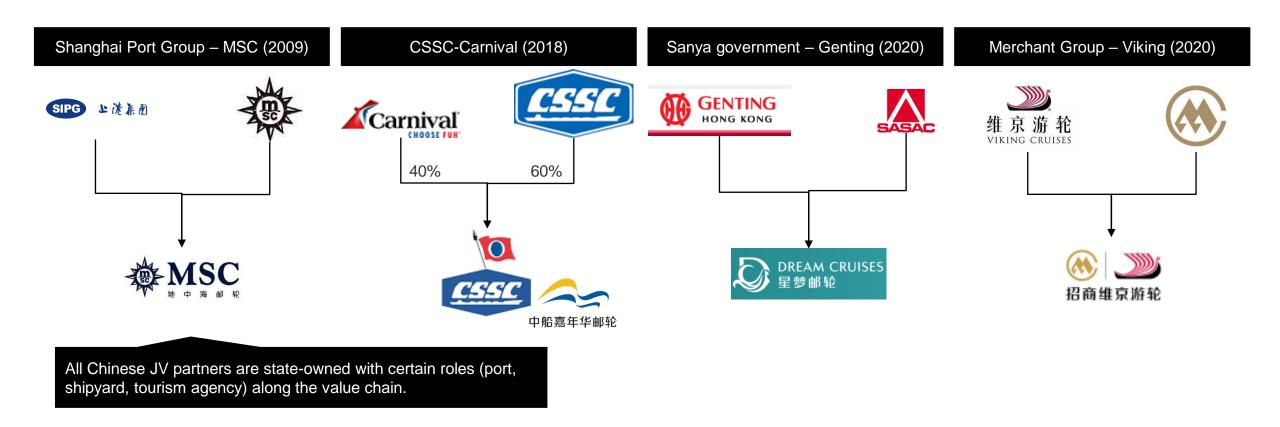
- Built in 2000
- Bought in 2020
- 24138 GT

Source: company websites.



Seeing the trend, foreign cruise operators start forming JVs with state-owned companies for licenses to operate on domestic routes

Overview of cruise operator joint ventures in China



Source: SIPG announcement; Genting announcement; Viking Merchant group announcement; CSSC and Carnival announcement.



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Three state-owned shipyards are mobilized to capture value on upstream

Major Chinese shipyards involved in cruise ship building





CSSC Shanghai Waigaoqiao Shipbuilding (SWS)



Ownership:

Public listed with state as biggest shareholder

Annual capacity:

Over 7 million DWT

Current focus in cruise:

 2 Carnival cruise ships in order book and 4 options



China Merchants Cruise Shipbuilding Haimen base



Public listed with state as biggest shareholder

220 000 DWT

- Focus on small- to medium sized cruise ship
- Order book of three Infinityclass expedition cruise ship (three delivered) and potential four mid-sized cruise



CSSC Guangzhou Shipyard International (GSI)



Public listed with state as biggest shareholder

Over 3.6 million DWT

 Focus on roll-on/roll-off passenger vessels while supporting SWS yard

Source: company websites; Reddal interviews with industry experts.



Construction is progressing as planned – with outfitting commencing, challenges wait ahead

Status of large cruise ship construction in CSSC SWS



- Hull blocking and assembly completed
- Outfitting and system integration commenced
- CSSC relies largely on Fincantieri's supply chain
- Target delivery date remains while challenges of labor and materials shortage emerge due to COVID impact on global supply chain

Source: China Central Television.



Strong commitment to program plan, enhanced by clear roles with mandates and accountability, drive innovation and results-focused mentality

State of art equipment with strong focus on digitization and automation





Large diameter pipe flange welding machine

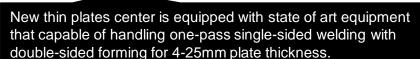


Plane section line - longitudinal welding



Plasma steel cutting machine

Welding robots





CSSC has chosen
Hexagon Intergraph
Smart 3D system (same
used by Fincantieri) as
digital platform for design
and construction – next
is to develop additional
module tailored for
CSSC needs.

Application of IoT across the production lines to monitor current status, track KPIs, and highlight potential issues based on predictive measures.



Source: International maritime news; China association of national shipbuilding industry.



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In the long term, China's role in global marine and cruise industry remains to be seen – four distinctive scenarios are identified

Scenarios of China's role in global marine industry in 2035

Strong development: Global productivity increases fast driven by technological development, new operating models and good availability of capital. Trust in current economic system is strong and economic principles remain the same.

Scenario 4: Disintegration into large regional trade areas

In a protectionist world, large regional trade market alliances are competing and creating new technological solutions inside them. Solutions are enabled by public infrastructure investments and protected by regulatory changes. The economy is growing fueled by the regional financial revival packages and increasing productivity, but world trade is ineffective.

Marine industry is building for the own regional markets (North America, EU, China) while the demand is high, and new ecological ships are being built. Shipbuilding in Finland is focused on new prototype passenger ships that are mainly >185kGT in size

Local: Yards employ majority of and delivered to western operators. the work force and

Scenario 3: Polarization geopolitical competition

Increasing protectionism trend lead countries to reduce the international collaboration as they try to protect their own economies. China with large domestic market can revive its economy and is growing, while western countries are experiencing a zero-growth era.

Shipyards are driving the marine industry and seek to increase efficiency by increasing the integration of the value chain. Shipbuilding demand is weak in western countries which aim to ensure domestic security of supply. Shipbuilding demand in China is strong driven by domestic operators. Majority of Finnish yards have been closed.

Scenario 1: Multi-disciplinary technological conglomerates

Sustainability awareness and disruptive ecological technology solutions ensure global economic and welfare growth. Multi-disciplinary technology conglomerates increase their importance and power also in shipbuilding.

Marine industry's demand is high and Europe leads the advanced passenger ship building market with innovative and progressive "yard platforms". China has created competitive cruise shipbuilding cluster but produces cruises still mainly for Asian operators; shipyards in EU compete tightly with Finnish yards and tough competition from Chinese yards may realize in the coming years.

Shipbuilding value chain

Scenario 2: Platform economy of shipbuilding and cost competition

Economy is stagnating and wealth inequality is increasing, but countries aim to avoid recession by enforcing open free trade. Consumers have divided into price sensitive and ecologically aware groups.

The amount of new build projects in cruise is low as the current capacity is enough to meet the demand. Ships are built with a "gig economy" model in yard platforms to minimize the costs due to the tight cost competition in global shipbuilding where the cheapest yards win the orders. Companies in the value chain must be international and efficient to survive. Finnish yards are in crisis, and they try to survive by taking ship orders for a wide range of ship types.

Global: open global competition, vards work as project platforms and employ only necessary roles.

Weak development: Global productivity growth is slow or flat due to the moderate progress in technology development and in developing new models in organizing work and operations. More limited availability of capital weakens the productivity growth potential. Trust in economic system is weak, and China's role in global economy strengthens in comparison to western countries.

Source: Meriteollisuuden tilannekuva ja skenaariot alan kehityksestä report prepared by Reddal for Ministry of Economic Affairs and Employment of Finland



prefer local TKsupplier networks.

In the short term, emergence and growth imperatives of domestic value chain provides a potentially lucrative opportunity

Overview of potential opportunities and risks

Localizing supply chain calls for international material, components, and turnkey suppliers Strong demand of new cruise ships and increasing complexity call for engineering companies Strong focus on digitization calls for experienced software providers

While market offers a potentially lucrative opportunity for foreign players, technology transfer, IPR infringement and political risks remain key challenges when entering the market.



China ambitions in cruise sets their agenda for full value chain – a potentially lucrative opportunity awaits

Summary

- Cruise industry in China is taking off passenger volume is expected to grow significantly up to 5-10 million per year
- Given changing global dynamics, Chinese government pushes to boost cruise ecosystem development while keeping the value within the country
- State-owned companies, ranging from shipyards to cruise operators, act as pioneers to implement government's vision financial performance is not a key concern with policy lenders commit to finance development
- With the large cruise ship entering outfitting phase, challenges emerge in labor and materials (largely imported) supply due to COVID-19 shipyard has an urgent need for a domestic supply chain
- Emergence of domestic supply chain calls for global participants, offering a potentially lucrative opportunity for various players



