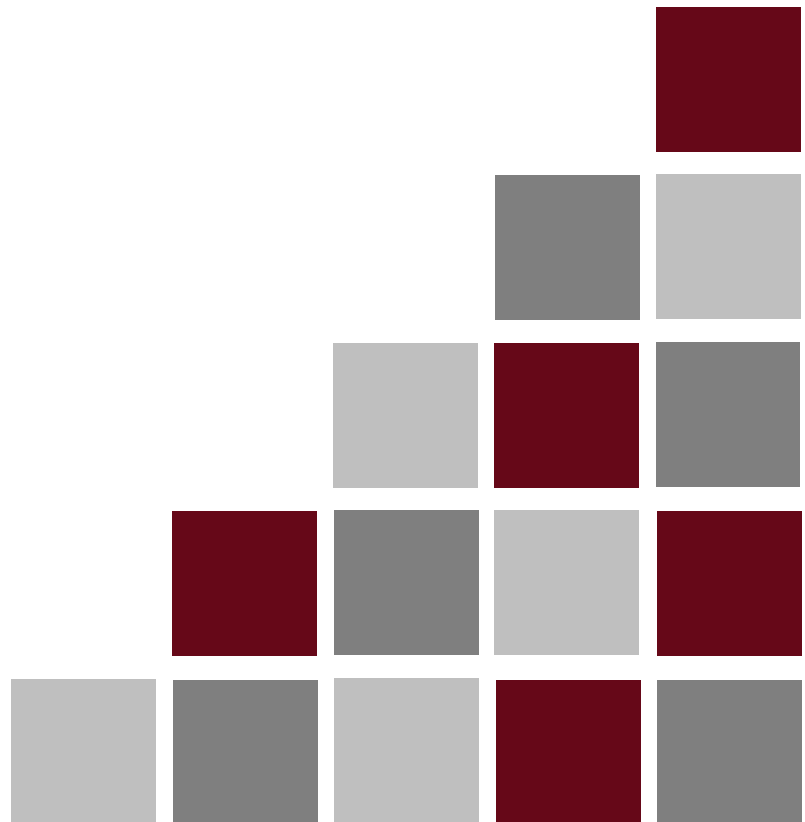


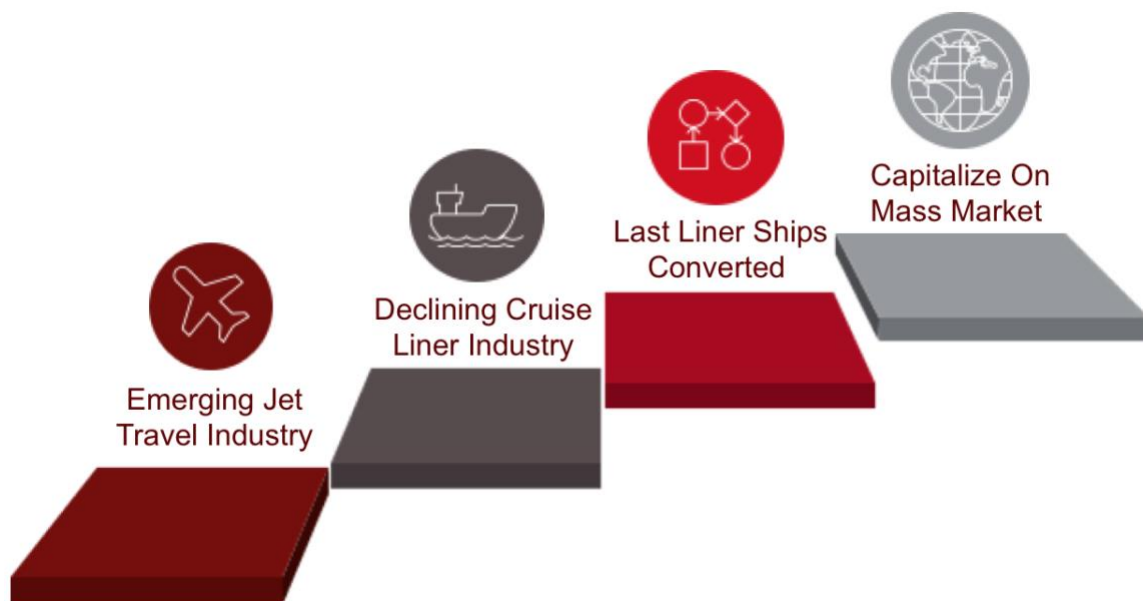
Principles by IUCG:

Commercial Cruise Industry Disruptions



INDUSTRY OVERVIEW

Navigating back to the mid-nineteenth century and the inception of the first cruise liner, the commercial cruise industry is a rapidly evolving space within the leisure and travel sector. Surging demand has compelled firms to increase passenger capacity and enlighten the onboard sea excursion. The SS France, established in 1960 as a transatlantic method of travel from Europe to the Americas, sparked the birth of the commercial cruise industry when it was purchased by Norwegian Cruise Line. The commercial cruise industry is dynamic at its core, having an extensive spectrum of ship composition, destination, and on-board experiences. The few, large corporations who maintain ground in the industry are consistently adapting to customer demographics in order to maximize their vacation experience. In 2015, roughly \$40 billion was generated industry-wide, a metric which has grown substantially, and continues to do so. The structure of the current market share of the commercial cruise industry is limited and compacted, which addresses the difficult barriers to enter the space.⁷

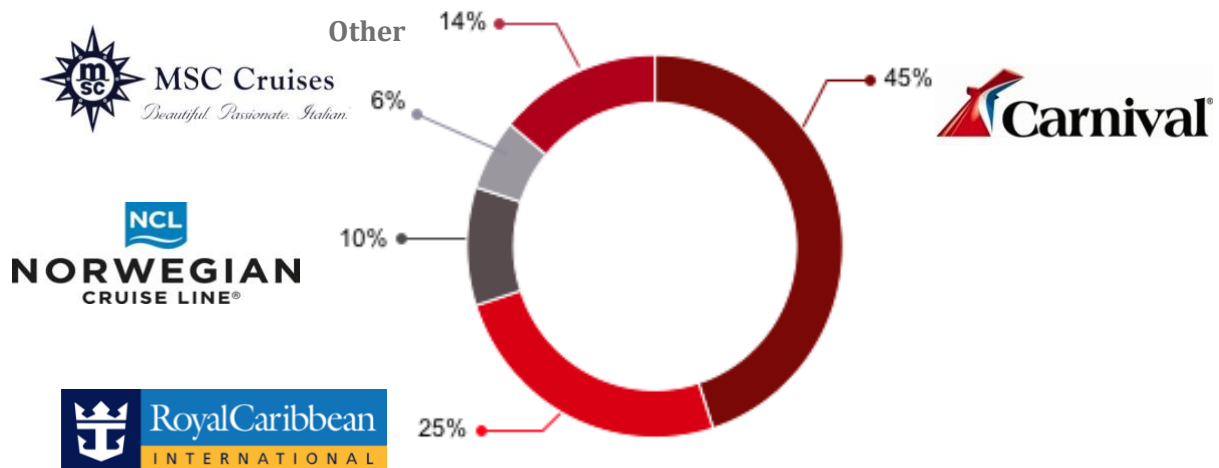


History

During the 1960's, the emergence of the commercial flight industry provided transatlantic travel in a fraction of the time and casted the commercial ocean liner out of the spotlight. With this cheaper, quicker, and higher volume alternative, many ocean liners were decommissioned or converted into the first commercial cruise

vessels. These conversions had their limitations as the liners were not equipped with the desired luxury amenities. Rather, they were designed for speedy travel that caused for high fuel costs. Up to this point, the luxury of a cruise was one that few could afford, but socioeconomic developments driven by a growing middle class opened up opportunities for a mass market of cruise passengers. In an effort to capitalize, the following major players created the commercial cruise industry as we know it today.¹¹

Key Players & Market Share



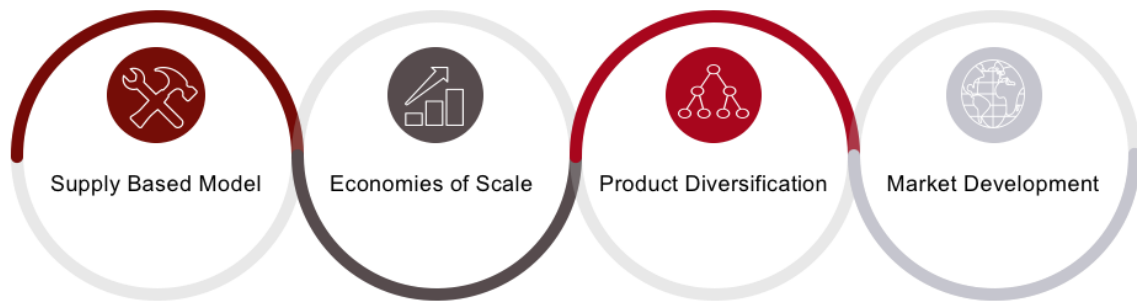
This industry, by nature, is driven by scale. Given this, entering the market poses sizable barriers that are challenging to overcome for startups. It is exceedingly difficult for smaller players to impact market share and disrupt the positioning of the 'Big 3' (Carnival, Royal Caribbean, and Norwegian). With 85% of a growing industry being controlled by only three companies, it is forecasted that no major alterations in standing will occur. From the beginning of the industry's surge, Carnival Corporation has retained its leading market share, and is expected to continue doing so into the future. This is according to a study conducted by Cruise Industry News that projects Carnival will hold its near 50% of the entire market. Looking at the industry through a broader lens, the 26 million passengers and \$40 billion in revenue is predicted to escalate as firms continue to develop larger ships and diversified experiences.

BUSINESS ANALYSIS

Economic Model

The economic model forming the basis of the cruise industry is one of supply: ships

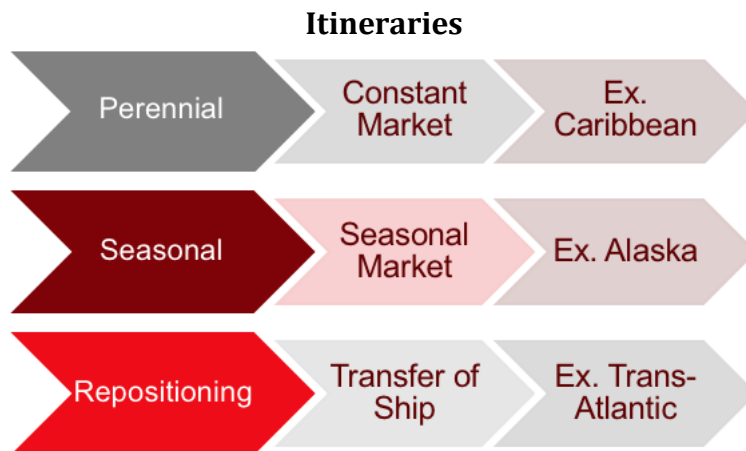
are constructed and then filled with aggressive marketing campaigns utilizing economies of scale to drive volume. Through the combination of diversified locations and on-board amenities tailored to a wide range of demographics, the demand for commercial cruising has increased significantly over the past decade. In order to accommodate the recent surges in demand, corporations are developing ships with greater capacity. To put this growth in perspective, in 2015, there were about 22.2 million passengers industry wide, a 68% increase since 2000. There are several key industry trends that are driving the expanding market that provide insight as to where the industry is headed.¹¹



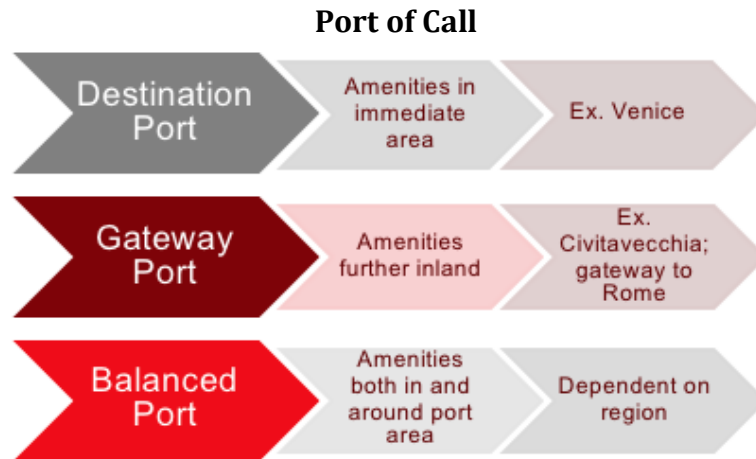
Product Diversification

To address the challenges presented by the economies of scale business model, the commercial cruise industry has been forced to constantly adapt to the preferences of the consumer and supply the market with an incredibly diverse offering of voyages, destinations and amenities. In order to understand the product that the cruise industry offers, we will break it down into three segments: itineraries, port of call, and amenities.¹¹

Itineraries are the outlined plan for an excursion consisting of ports, and the various amenities available on the ship. The various types of itineraries and ports are outlined in the graphics below.



Ship itineraries, for a long time, have been a deciding factor for customers during the selection process for a cruise. The three main types of itineraries have evolved overtime and have shaped corporations' methods of strategizing logistics.



There are three main types of ports that elevate the onboard adventure of taking a cruise: destination ports, gateway ports, and balanced ports. While all three serve the same purpose in terms of docking and fueling the ship, as well as giving customers the opportunity to explore multiple exotic locations, they all possess individual nuances at their core.

Amenities

As for amenities on the ships themselves, the today's boats offer just about everything a passenger can imagine. In an effort to keep up with volatile consumer preferences, vessels today are loaded with amenities such as go-karts, water parks, and live-performances. This has changed drastically since the industry's beginning which was primarily comprised of restaurants and lounges. This evolution now includes virtual reality (VR) experiences and fully equipped fitness centers.

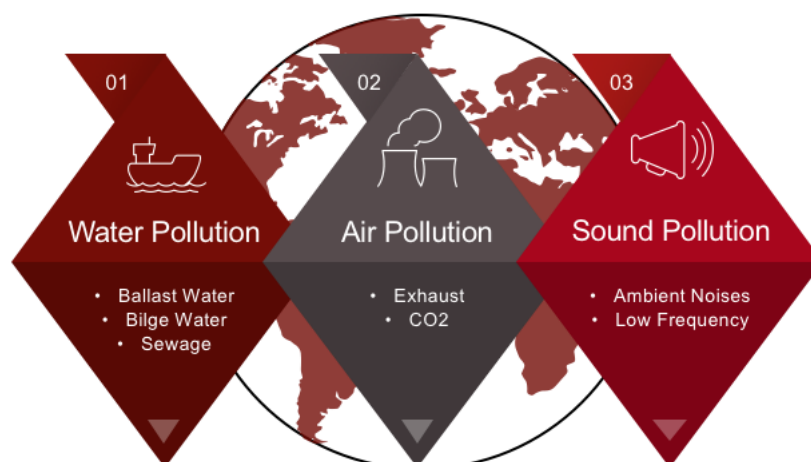
MARKET DEVELOPMENT

As mentioned earlier, the commercial cruise industry has experienced rapid growth in recent decades. Market development is only expanding this global empire. The development of these new markets can be divided into three primary components: demographic shifts, the emergence of luxury international markets, and rapid ship development.

1. **Demographic shifts:** The passenger demographic is drastically changing as younger consumers are choosing this form of travel and leisure. During the 1990s, the average passenger age was 65 years old. This has since dropped to a current average age of 45 years old. There is also the emergence of multigenerational families enjoying cruise excursions together, creating demand for a diverse offering of amenities.
2. **Luxury international markets:** The emergence of wealthier markets will provide opportunities for more profitable voyages for the commercial cruise industry. The Chinese markets exploded in recent years and will continue to increase six-fold to a projected 4.5 million passengers per year by 2020. Recent economic growth in China resulted in a rise of the middle class and disposable incomes. With this came an increased desire for luxury goods. Dubai is becoming the gateway to the Middle East cruise market with demand for super luxury accommodations to see the diverse attractions the region has to offer. In 2009, there were about 90 ships docked in Dubai, a number that has increased to just under 160 ships docked in 2017.¹⁰
3. **Rapid ship development:** Companies are eager to bring the latest and greatest vessels to growing markets. A total of \$25 billion has been invested in new ships to be deployed in 2020. In 2016 alone, 27 new vessels hit the seas. This trend of rapid construction is supplying the rapidly increasing demand and responding to changes in consumer preferences.

ENVIRONMENTAL IMPACT

The benefits and experiences of a cruise do not come without a detriment to the environment. These massive ships have a devastating effect on their natural surroundings, most notably through water, air and sound pollution.



Water Pollution

In order to maintain balance in the water, ships take on and release ballast water from the immediate environment. This can transport harmful chemicals from one port to another and introduce harmful invasive species to new environments. Bilge water is the oily water remnants in the base of the ship, which is treated and dumped into the ocean however malpractice has occurred in the past. Sewage amounting to around 21,000 gallons a day is dumped into the ocean. While it is treated, it can nonetheless cause numerous problems. The chemical toxins and sewage increases the acidity of the water and reduce oxygen levels posing a severe threat to ocean life and coral reefs.⁵

Air Pollution

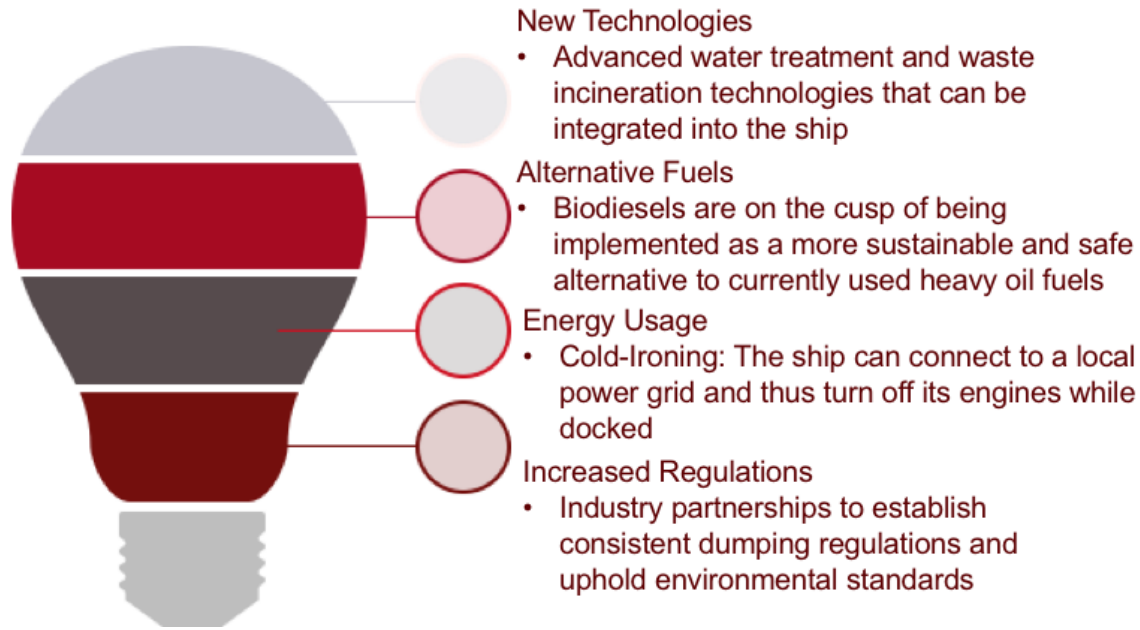
The exhaust emitted from the engines of the ship contain several harmful chemicals including sulfur dioxides and nitrous oxides which are a leading cause of acid rain. Additionally, an incredible amount of CO₂ is released into the atmosphere with a seven-day cruise emitting about one ton of carbon dioxide per person. This contributes to the fact that 30% of the world's smog comes from ships.⁴

Sound Pollution

Ambient noises and low-frequency sounds created by the ships can affect the behavior and navigation patterns of animals that use sound as the basis of their survival.³ The large engines of commercial cruise ships create ambient noises and low-frequency sounds that can travel long distances under the water's surface. While these sounds may appear very mild to the passengers of the ship, they can create havoc for sea animals that depend on their sense of hearing to survive. The sound interruptions can inhibit an animal's ability to hunt, navigate, and communicate with one another threatening their ability to survive.¹⁶

Reducing the Environmental Impact

As the environment continues to change the landscape of both the world and business, the cruise industry has again adapted to face the environmental challenges created by their product. With an improved strategy and environmental conscience, the industry has invested in new technologies to enable a more sustainable path forward.¹⁵



OUTLOOK

With scoping the future of the Commercial Cruise Line industry, one must address the limitations to economies of scale in terms of maximizing capacity of ships. We forecast a continuing adaptation to onboard amenities and experiences that are tailored to multiple demographics. In addition, we expect corporations to increase marketing on repositioning cruises, Alaska to the Caribbean for example, in order to increase passenger capacity during the off-season. By strategically marketing the repositioning season, firms will be able to maintain sufficient revenue streams. While we do not see this segment as a source of growth, it will alleviate sunken costs during a time where capacity is traditionally lower.

In addition, we hope to see corporations and their respective ports become environmentally compatible with their operation. Detrimental impacts will begin to surface if the traditional methods continue to play out.

REFERENCES

1. Kennedy, Sarah. 2017 *Cruise Industry Outlook*. Cruise Lines International Association, 2016, 2017 *Cruise Industry Outlook*, www.cruising.org/docs/default-source/research/clia-2017-state-of-the-industry.pdf.
2. Cederholm, Teresa. "An investor's guide to Carnival, the world's largest cruise company." *Market Realist*, Market Realist, 14 Jan. 2015, marketrealist.com/2015/01/key-drivers-carnivals-revenue-growth.
3. Bennett, Mia. "Cruising's Environmental Impact." *The Maritime Executive*, 14 Apr. 2017, 17:33:57, www.maritime-executive.com/magazine/cruisings-environmental-impact#gs.wmdob0g.
4. Watson, Bruce. "Murky waters: the hidden environmental impacts of your cruise." *The Guardian*, Guardian News and Media, 5 Jan. 2015, www.theguardian.com/sustainable-business/2015/jan/05/cruise-ship-holidays-environmental-impact.
5. Dasgupta, Soumyajit. "How Ships are Destroying Coral Reefs Around the World?" *Marine Insight*, 21 July 2016, www.marineinsight.com/environment/how-ships-are-destroying-coral-reefs-around-the-world/.
6. Rastogi, Nina. "How bad for the environment are cruise ships?" *Slate Magazine*, 1 Sept. 2009, www.slate.com/articles/health_and_science/the_green_lantern/2009/09/a_supposedly_green_thing_i_might_do_again.html.
7. "A New Wave of Growth for the Cruise Industry." *Crane Worldwide*, 4 May 2016, www.craneww.com/a-new-wave-of-growth-for-the-cruise-industry/.
8. "The Cruise Industry." *The Geography of Transport Systems*, 2 Feb. 2018, transportgeography.org/?page_id=7055.
9. Cederholm, Teresa. "Comparing the major cruise line's operating and net margins." *Market Realist*, 22 Jan. 2015, 11:23AM, marketrealist.com/2015/01/key-drivers-royal-caribbeans-operating-profitability.
10. Golden, Fran. "Why the Cruise Industry Is Booming in the Middle East." *Bloomberg.com*, Bloomberg, 14 Nov. 2017, www.bloomberg.com/news/articles/2017-11-14/why-the-cruise-industry-is-booming-in-the-middle-east.
11. Staff, Cruzely. "Cruzely Staff." Cruzely.com | *Everything Cruising*, 22 Dec. 2016, www.cruzely.com/heres-how-much-money-cruise-ships-make-off-every-passenger-infographic/.
12. "Norwegian Cruise Line Profit Margin (Quarterly)." *YCharts*, 26 Feb. 2018, ycharts.com/companies/NCLH/profit_margin.
13. "Royal Caribbean Cruises Ltd." *MarketWatch*, 26 Feb. 2018, www.marketwatch.com/investing/stock/rcl/profile.
14. Caric, Hrvoje, and Peter Mackelworth. "Cruise tourism environmental impacts – The perspective from the Adriatic Sea." *Ocean & Coastal Management*, Elsevier, 26 Oct. 2014, www.sciencedirect.com/science/article/pii/S0964569114002890.

15. Lane, Jim. "Ocean Going Vessels Going Green." *Biofuels Digest*, 22 Nov. 2016, www.biofuelsdigest.com/bdigest/2016/11/22/ocean-going-vessels-going-green/.
16. Christopher, Idris, et al. "8 Ways in which Cruise Ships Can Cause Marine Pollution." *Marine Insight*, 20 July 2016, www.marineinsight.com/environment/8-ways-in-which-cruise-ships-can-cause-marine-pollution/.