

5.0 Assessment - By Vessel Type

5.1 Aircraft Carriers



5.1.1 Summary

The used international market for aircraft carriers can be characterized as limited and very specific since only nine nations currently operate these types of vessels. Of these nine operators, only six can be characterized as prospective suppliers with a total of eight platforms available from 2004 through 2018 although several additional units could possibly become available if circumstances (political, requirements etc) change. Prospective recipients that will purchase used aircraft carriers can be characterized the same as the prospective suppliers in that only several will be procured over the next decade.

Currently, only three of the world's navies procure aircraft carriers from the international market, with up to four new entrants arriving on the scene after 2013. A major determining factor in the selection of a used aircraft carrier will be the type of air-wing that will be used (catapult launched, vertical take off and landing (VTOL), and vertical/short take off and landing (VSTOL).

The following table depicts those nations that operate aircraft carriers, which nations that must be considered prospective suppliers and prospective recipients of such vessels from 2004 through 2013. Additionally, future potential operators of aircraft carriers after 2013 are also depicted, indicating future business potential in the used international market:

Nations with Operational Aircraft Carriers	Prospective Suppliers of Used Carriers	Prospective Recipients of Used Carriers (2004-2013)	Future Operators After 2013
Brazil	France	Argentina	China
France	Italy	Brazil	Japan
India	Spain	India	South Korea
Italy	Russia		Turkey
Russia	Thailand		
Spain	United Kingdom		
Thailand			
United Kingdom			
United States			

catapult-assisted aircraft generally operate a myriad of attack, fighter and specialized aircraft. Those that do not rely on catapult assistance operate only Sea Harrier and SU-27 aircraft with future potential for the US Joint Strike Fighter (JSF) currently under development.

It must be noted that Sea Harrier, Su-27 and JSF aircraft are also adaptable to large deck and full-length flight deck amphibious vessels. These vessels, however, are categorized as amphibious vessels and are listed in the Amphibious Vessel category of this report, although, they may be recognized by some as small aircraft carriers.

As listed above there are only nine countries operating aircraft carriers today. The United States operates the largest carrier fleet in the world with twelve vessels, followed by the United Kingdom with three and the remaining nations operate with one unit per nation. France, although it currently operates only one, has the intention of procuring a second unit (new construction) later in the decade as it has historically operated two aircraft carriers. It should be noted that several other nations that have historically operated aircraft carriers have departed the business over the past several decades, and may or may not regain the capability. Examples of these nations include Argentina and Australia. Australia currently is not planning to reintroduce an aircraft carrier to its fleet, while on the other hand, Argentina continues to speak of an aircraft carrier acquisition.

Due to financial constraints, if Argentina does reenter the market, it will certainly be a used vessel.



5.1.2 Navy's With Aircraft Carrier Requirements

In the world today, only nine nations operate full-fledged aircraft carriers that can conduct fixed wing operations. These carriers can generally be divided into two types: those that utilize catapult assistance to launch aircraft; and those that do not. Aircraft carriers that do operate

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since its budget over the long term will not support the acquisition of a new construction aircraft carrier.

5.1.3 Prospective Suppliers

There are only a handful of countries today that have the ability to indigenously construct and maintain aircraft carriers. These same nations typically operate carriers over a thirty to fifty year life cycle, then replace the capability with a new construction vessel, freeing up the decommissioning carrier for resale.

These nations include:

- France
- Italy
- Russia
- Spain
- Thailand
- United Kingdom
- United States

Of the candidates listed above, the United States cannot be considered a prospective supplier of the traditional aircraft carrier since it does not historically supply these types of vessels on the used international market, and in the not to distant future, the entire American carrier fleet will be nuclear-powered and definitely not for resale. The United States, however, does operate large numbers of amphibious vessels that can operate Sea Harrier and the future JSF and could be procured and utilized as a small aircraft carrier. As mentioned above these candidates can be found in the Amphibious Vessel section of this report.

Special note must also be made of France, which currently operates one nuclear-powered aircraft carrier that will not be resold. However, France also operates one helicopter carrier used as a training ship that may be an option for resale when it decommissions in the not too distant future.

Nations that operate aircraft carriers today which may be candidates for

transfer to a recipient nation when replaced are listed as follows with the prospective decommissioning date, vessel name, and country:

Projected Year Of Decommissioning	Ship Name	Country
2006	<i>Invincible (R05)</i>	United Kingdom
2007	<i>Giuseppe Garibaldi</i>	Italy
2012	<i>Illustrious (R06)</i>	United Kingdom
2015	<i>Ark Royal (R07)</i>	United Kingdom
2018	<i>Principe De Austrias</i>	Spain
Anytime	<i>Jeanne D'Arc</i>	France
Anytime	<i>Admiral Kuznetsov</i>	Russia
Anytime	<i>Chakri Naruebet</i>	Thailand

The *Chakri Naruebet* operated by the Royal Thai Navy (RTN), while still a very young ship, has also been listed as a possible ship for transfer, as press reports indicate that the Navy has neither the required funding to operate the air-wing nor funding for steaming days. Thailand, which is not a builder of aircraft carriers, is traditionally a recipient nation in this category. The Navy has used the ship for humanitarian assistance after particularly damaging storms but the use of a capital ship exclusively for this role is difficult to afford and justify for the long haul. The Commander-in-Chief of the Navy Admiral Chumpol Pachusanon has identified the ship as needing a modernization program but whether the monies will be found is still an unanswered question.

5.1.4 Prospective Recipients

Prospective recipients for aircraft carriers from the used international market must be considered in two categories: those that have traditionally utilized the international market to meet their requirements, and those nations that may emerge as aircraft carrier operators in the future.

Lack Ability to Construct

These nations lack the ability to construct vessels of this size and have little choice in the procurement of such vessels from the used ship market. Nations that have historically procured aircraft carriers from the used international market include:

- Argentina
- Brazil

Acquiring or Have the Capability to Construct

It is a natural progression for a navy as it acquires expertise as well as increases its fleet size that it wishes to pursue regional hegemony and eventually have the ability for power projection. India is an example of a country in this transition phase,

preparing to build its first aircraft carrier the Air Defense Ship, but in the interim still reliant on the used ship market. The nations listed below may not be in the immediate market for an aircraft carrier, though Japan is contracting to build its first Landing Platform Helicopter





(LPH) euphemistically called a Destroyer Helicopter (DDH), however, these countries may well consider acquiring an aircraft carrier from the used market and gaining some experience before trying to develop their own indigenous carrier program. India has recently committed itself in this direction with the acquisition of the *Admiral Gorshkov*.

- China
- India
- Japan
- South Korea
- Turkey

5.1.5 Situational Assessment of Potential Recipient Navies India

When reviewing possibilities of procuring aircraft carriers from the used international market, the first nation that comes to mind is India. India, with only one Hermes class aircraft carrier (*Viraat*) left in inventory down from two (Majestic class *Vikrant* decommissioned in 1997), in the late 1990s, the Indian Navy has a stated requirement for at least three vessels.

The Indian Navy has been planning for the construction of three new aircraft carriers under their Air Defense Ship (ADS) Program. Current planning calls for continued operations of the *Viraat* until after the first new carrier can be commissioned. In January 2004, the sea service, after years of negotiating, completed the acquisition of the Russian Kiev class aircraft carrier

Admiral Gorshkov. However, the extent of the overhaul is such that this ship is not expected to be delivered to India until 2008. Therefore the *Viraat* is likely to stay in service until at least 2008. Depending on the status of the ADS program, the Indian Navy could be in the market for a second used vessel. A prime candidate could be the Royal Navy's (RN) Invincible class carrier *HMS Invincible*, which may decommission as early as 2006. Procurement of the *Invincible* would allow the Navy to decommission the *Viraat*, which would be approaching its fiftieth birthday, and give the Indian Navy a two-ship carrier force in 2008 and then attain its goal of a three-ship carrier force with the commissioning of the first new ADS in 2012.

Brazil

By the beginning of the next decade, Brazil may itself be in the market for an aircraft carrier to replace the *Sao Paulo*, (ex-*Clemenceau*), which it procured from France in 2000. The *Sao Paulo* is already forty years old, and will be 50 years of age in 2013. The replacement of the *Sao Paulo* may be difficult as the Brazilians operate the A-4 Skyhawk airwing, which requires catapult assistance for launch. Unfortunately for the Brazilians, catapult equipped aircraft carriers are unique only to the United States and France, but today, almost all in inventory are nuclear-powered making them non-transferable. For Brazil, there are only a few candidates including the Invincible class if not all are acquired, and the Thai *Chakri Naruebet*, in the unlikely event that the RTN can no longer afford the vessel and the Thai government makes the strategic decision to give up the capability.

However, all of the vessels would require an airwing of VTOL or VSTOL aircraft of which Brazil has neither experience nor any aircraft of this type. For Brazil, this will be a very expensive endeavor if it desires to stay in the carrier business past the next decade.

Argentina

Argentina retired its only aircraft carrier, *Veinticinco de Mayo*, in 1998 due to the Navy's inability to maintain such an aged vessel, which had been largely nonoperational since the mid-1980s. Since the retirement of the vessel, the Argentine Navy has continued to operate its A-4 Skyhawk airwing with the Brazilian Navy.

Like the Brazilian Navy, Argentina would face a problem in that all aircraft carriers available on the used market require the use of VTOL or VSTOL aircraft, of which

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Argentina has none. They, like Brazil, would have to decommission their A-4 Skyhawk airwing and move forward with the procurement of new or used aircraft that do not require catapult assistance.

Others

Future candidates such as China, Japan, South Korea, and Turkey all have significant shipbuilding capabilities and may attempt to build their own aircraft carriers.

However, with the exception of Japan, which would most likely build its own aircraft carrier, the other countries may well utilize the international market as a stepping-stone to reduce risk prior to embarking on an indigenous program.

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