2011 World Shipping Review

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I concluded my 2010 Annual Review on an optimistic note suggesting the worst in macroeconomic terms was behind us and that the maritime sector would stem its decline in 2010. While one could argue parenthetically that there was nowhere to go but up given where the industry was a year ago, credit must however be given where it is due. The shipping industry performed far better than expected in 2010 and at least in the liner sector, the turnaround was simply stunning.

Though the economic recovery is still far from being elevated to any level of *fait accompli,* it did put to rest firmly the likelihood of a double-dip recession that some had conjectured. World output grew by about 5 percent in 2010 and trade in goods and services by 11.4 percent in contrast to its 11 percent decline in 2009. Domestically, the longest post-WWII economic downturn in American history ended; unemployment figures are heading in the right direction and economic policies are bearing fruit although at least 14 million Americans are still searching for a job.

While real GDP growth in most OECD countries was slightly higher than expected, once again, the global recovery was anchored by China and India. The Chinese GDP grew an estimated 10.3 percent in 2010. However, unlike prior years, it was not the Middle Kingdom's exports to North America or Europe that served as the backbone for a shipping recovery but their increased imports and also the fast growing intra-Asia trade. Chinese import of US manufactured goods alone rose 31 percent in 2010, one-third more than in 2009. Indian GDP also grew at a blistering pace of 9.7 percent with both exports and imports picking up tremendously, and several new carriers calling Indian ports.

A rejuvenated global economy is music to the ears of ship owners and operators, given the derived demand nature of the industry. Seaborne trade in 2010 rose to 8.3 billion metric tons, an increase of 438 million tons from 2009. US manufacturing exports, a key agenda item for President Obama, grew by 20 percent driven primarily by the lower valued dollar; exports to South Korea experienced the largest increase. However, this is where the humiliating Sisyphean curse of ship owners and operators reappears. The improving market conditions have led to a renewed splurge in ordering new ships, driven at least in part by shipyards' eagerness to drum up new business. Such a cavalier attitude toward capacity building intrinsically leads toward excess supply and rate erosion. So, although world economy is in a far better shape today than it was a year ago, its performance is not to be taken for granted. A recent survey by international shipping consultant Moore Stephens found sustained drop in shipping confidence which is a rather bitter pill to swallow at this stage in the recovery game.

So, overall this has been a year for reflection and strategic re-alignment by the maritime sector although some of the recent fleet expansion decisions of ship owners leave one questioning their rationale. The current market conditions and other domestic and international developments of interest are discussed in this review.

Market Developments

I remarked last year that despite a painful end, the first decade of the new millennium was the finest in recent maritime history for ship construction, operations, and revenue growth. The year 2010 turned out to be the watershed year for the maritime sector in stemming its pecuniary decline. While increased world trade in goods and services provided the ambience for a shipping market recovery and even a modest level of across-the-board prosperity, the good judgment and the extra-ordinary caution exercised by ship owners and operators in their business decisions (in 2009 and early 2010) also contributed toward the nascent ongoing market recovery. The core strategy used was fundamental economics: controlling supply to match market demand and in the liner markets in particular, restoring freight rates from their abysmal lows in 2009. Less than two-third of new ships scheduled for delivery in 2010 were actually delivered; many new ship construction contracts were postponed to a later year or in some cases, even cancelled at a significant cost penalty. In the liner market in particular, the impact of excess capacity was ameliorated through judicious slow steaming. Overall, current market conditions appear to be somewhat analogous to where we were in 2003 before the shipping boom began although the uncertainties are more complex today.

Dry Bulk Market

The demand for dry bulk tonnage increased 13 percent in 2010, and marginally exceeded the growth in new tonnage supply according to the 2011 Plateau Report. A substantial increase in production by all major steel producing nations contributed toward the increased demand. Although Chinese dry bulk imports did not grow as much as expected, the differential was more than offset by increased imports by other nations and the booming intra-Asia trade. The average daily income (charterhire) for dry bulk carriers in 2010 amounted to only a third of the peak earnings in 2007 and 2008. Indeed for the bigger sized bulk carriers (Capesize) for which new tonnage grew at a rate of 23 percent (190 new ships in 2010), the daily charterhire was below 2009 levels. So, although both freight rates and ship values rose moderately during the first half of the year, the recovery lost steam during the second half as more new ships entered the trade at a blistering pace and the dry bulk index reached its nadir in early February, 2011. Korea Lines, a major dry bulk carrier that operated 180 ships, declared bankruptcy in early 2011 after encountering severe loss for two years.

On average, three new bulk carriers were delivered each day of the year in 2010 even after the postponing or cancelling 40 percent of contracted new ships. The supply imbalance in this sector is expected to worsen until 2013 as there will be even more infusion of new dry bulk ships at an annual growth rate of 9.5 percent as per Lloyd's Register-Fairplay Research statistics. Increased momentum in recycling older tonnage and a major boost in the world demand for dry bulk commodities is required to offset the projected increase in supply; otherwise, this market will become even more volatile during the next 2-3 years.

One new trend in the dry bulk market is the evolution of purpose-built very large ore carriers (VLOCs). This is led by Vale, the Brazilian mining giant who has announced plans for a giant fleet of 80 VLOCs by 2015. Of these, 36 ships will be of 400,000 DWT, which is roughly twice as large as existing Capesize ships.

Tanker Market

The 2009 decline in global oil consumption after 40 years of continuous rise appears to have been short-lived. Oil consumption in 2010 increased 3.2 percent worldwide, with China's consumption alone rising 11.6 percent and the US, 2.5 percent. This led to a major boost of 7 percent annual increase in demand for tanker ton-miles. The 5 percent fleet growth did not keep up with the increased demand which led to good rate recovery in the first half of 2010. The freight rate for very large crude carriers (VLCCs) went up to $50,000 per day before dropping to $19,000 per day during the second half of the year and earning a yearly average of $30,800 per day as per Plateau Report. Tanker ship valuations went up by 4 percent although the average time charter hire per day is still only at 40 percent of the peak values reached in early 2008.

What worsened the fortunes of VLCCs in the latter half of 2010 was the release of several ships from their use as floating storage tankers. These ships returned to active trading by late summer, and created a supply spike even after accounting for the required removal of 25 million DWT of single hull tankers. The market imbalance will worsen in coming years with supply exceeding demand and even more VLCCs coming off their storage tanker engagement; a recent drop in resale value of second hand ships confirms this.

A year ago, it was unclear what would happen to all the relatively new single hull tankers that were administratively phased out. Forty-two of these VLCCs are now being converted to VLOCs, the brand new category of dry bulk ships previously mentioned. Interestingly, one new covert to this category is the Chinese owned Don Fang Ocean, formerly known as the ill-fated Exxon Valdez (built in 1986).

Liner Market

The liner sector completely turned around its fortune in 2010 thanks to the global economic recovery and increasing consumer confidence worldwide. Container imports to the US alone increased 15 percent in 2010, with more than half of those containers originating from China. Even after accounting for intentionally delayed new ship deliveries, capacity increased 14 percent with 61 of the new ships able to carry 7,500 twenty foot containers (TEUs) or more. Freight rate per TEU rose 30 percent in 2010 and the liner sector earned an all-time high of $13 billion profit compared to 2009's collective loss of about $15 billion. Contrary to wide speculations, there were no major bankruptcies or consolidations among liner operators. In fact, CMA CGM, the French operator that underwent a $5 billion restructuring in 2009 returned to profitability in 2010 and its founding CEO, asked to step down as part of the then bail-out, was reinstated in early 2011.

All major liner operators are reporting record profits for the year. The performance by Maersk Line, the world's biggest container ship operator, is an excellent case study in analyzing the sector's $28 billion turnaround. From a loss of 2.13 billion in 2009, Maersk ended 2010 with a profit of $2.64 billion. While the reversal is partly attributable to the increase in world trade and rate restoration, the company undertook several cost cutting efforts which were very helpful too. Maersk, as well as several of its competitors have adopted slow-steaming as an enduring business strategy, cutting down their ships' service speed by 25 percent to 17-18 knots. The 2011 Plateau Report estimates that slow steaming by all containership operators in 2010 absorbed 600,000 TEUs and created an additional 3 percent demand.

Trade volumes continue their rise and monthly figures show significant growth especially in the trade with emerging nations. However, as forecast by Alphaliner, a shipping consultancy group, the global container fleet will grow 8.7 percent in 2011, with 1.2 million TEUs due for delivery in 2011 and another 1.33 million TEUs in 2012. As noted previously, this is a major cause for concern although in theory, there should be a threadbare, delicate balance between capacity growth and projected trade growth. With all the new big ships coming on line, the chances of a shift in emphasis from rate restoration to market share enhancement is very likely.

Cruise Market
The cruise sector continued its relentless growth in 2010. Twelve new ships costing $5.9 billion joined the fleet in 2010 including Royal Caribbean's *Allure of the Seas* delivered in November. She is 5 cm longer than *Oasis of the Seas*, her sister-ship delivered a year ago and boasts the first ever Starbucks at sea. Cruise Lines International Association (CLIA) member lines operated at 103 percent occupancy rate and carried 15 million passengers in 2010, 74 percent of which were North Americans. According to CLIA data, cruise lines and their passengers reportedly spent $17.15 billion directly on US goods and services in 2009 and generated total economic benefits of $35.11 billion. This includes 313,998 jobs paying $14.23 billion in wages and salaries nationwide. The sector estimates carrying 6.6 percent more passengers in 2011. Fourteen new cruise ships are expected in 2011 and eight in 2012. Utopia, the 1st luxury residential ship costing $1.1 billion, is scheduled for delivery in 2013.

The US Merchant Marine

There were several developments in 2010, with impetus coming from various governmental initiatives and also the commercial sector. The current privately-owned oceangoing US-flag commercial fleet consists of 97 Jones Act ships and 94 Foreign Trade ships. A recent PricewaterhouseCoopers Study estimated the total economic impact of the Jones Act fleet to be around $100 billion including $29 billion in wages and $11 billion in taxes. The Foreign Trade fleet has an average age of 15 years; among the 94, 50 are container ships and 23, Roll-On Roll-Off. These ships transport 1.5 percent of US waterborne commerce and employ approximately 3,760 mariners. Sixty Foreign Trade ships are covered under the Maritime Security Program (MSP) and receive a fixed payment of $2.9 million per ship annually. President Obama extended the MSP program to FY2025 through the National Defense Authorization Act of 2011.

DOT/MARAD chose three contractors to operate 10 National Defense Reserve Fleet (NDRF) ships through July 27, 2015. The $77 million contract is to make sure that the ships will be maintained in good condition with their crew available on demand. Eight of these ships are in the Ready Reserve Force (RRF) and two are used to assist Missile Defense Agency operations. RRF ships have been activated 91 times since 2002. The second round of Department of Transportation (DOT) infrastructure grants (TIGER II) were announced in October 2010; 17 percent of the $600 million is for seaports. The oft-cited guesstimate of US-flag shipping operation being three times more expensive than standard international flag operation remains an enigma. MARAD has hired a consultant to investigate this.

The BP Oil Spill

In spring 2010, the national attention became riveted on the BP/Deepwater Horizon oil spill incident. The prolonged battle that ensued between mother-nature and human ingenuity to circumvent her fury left an indelible imagery in the American psyche. The National Oil Spill Commission, appointed by President Obama to investigate the incident, released its final report in January 2011. The Commission traced bulk of the problem to a failure of management on the part of all three key players (BP, Halliburton and Transocean). Minerals Management Service, the government agency responsible for regulating offshore drilling services, was also found negligent for not developing world-class safety standards.

Some critics of the cleanup efforts postulated that the Jones Act shipping provisions impeded using foreign oil skimming vessels during the ordeal and introduced a Senate bill (S. 3525, The Open America's Waters Act) to repeal the 1920 cabotage legislation. The argument was immediately refuted by the USCG; it also energized key defenders of Jones Act who referred to it as "misleading and misinformed." In reality, a Jones Act waiver is not required for operating oil skimmers farther than 3 miles offshore; also, given the gravity of this particular case, USCG approved the use of foreign oil skimmers even within the 3 mile zone. Another political offshoot of the BP incident was a new oil spill law considered by Congress. Had it been enacted as passed by the House of Representatives, it would have had a drastic impact on oil spill liability.

Cargo Preference Clarification:

The 1954 Cargo Preference Act law gives priority to US-flag ships for transporting all government generated cargoes. This has been a cornerstone of US maritime policy and often accounts for 50 percent of the cargoes carried by American ships. Its application to imports funded through the Department of Energy (DOE) loan guarantees (Title XVII of the Energy Act of 2005) gained attention in 2010 when their lawyers interpreted the law differently. The issue was resolved in favor of US carriers and avoided delays and costly litigation.

Jones Act Developments

The Maritime Cabotage Task Force, a broad-based coalition of US maritime interests, has renamed itself the American Maritime Partnership. Another key player, the American Shipbuilding Association (ASA) with a membership that included six big shipyards and over a 100 suppliers, dissolved on December 31, 2010. ASA's mission was to educate the policymakers and the American public on the need for a strong shipbuilding industrial base for national security and economic prosperity. The Aker Philadelphia Shipyard delivered its 10th product tanker (of 46,000 DWT) to the American Shipping Company in September, 2010. Aker has two more ships to deliver under this agreement.

A class action shipper lawsuit accusing Horizon Lines and Matson Navigation of price fixing on routes between the U.S. mainland and Hawaii and Guam was dismissed by a US District Court. For the second time, the judge ruled that plaintiffs failed to prove their claim that carriers had participated in an antitrust conspiracy.

A separate criminal investigation into allegations about a wide-ranging conspiracy to rig bids, fix prices, and allocate market shares in the US-Puerto Rico trade over a six year period from 2002 to 2008 resulted in five convictions—three former carrier executives from Horizon Lines and two from Sea Star Line were convicted for collusion on pricing or tampering with evidence. A fourth carrier, Trailer Bridge was cleared of all charges. Shippers were given the choice of accepting the settlement, receiving a two year freeze in base rates, or opting out and pursuing on their own, each carrier's offer to be treated separately. A total of 1,470 small shippers settled the class-action lawsuit, accepting the $52.25 million payment from Horizon Lines ($20 million), Sea Star ($ 18.5 million) and Crowley ($13.75 million) of which $25 million would go to the plaintiff's lawyers. Many large shippers such as Wal-Mart, Unilever, Home Depot, Kraft, and Proctor and Gamble opted out of the settlement.

In February 2011, Horizon Lines pleaded guilty to antitrust violations in the Puerto Rico trade and agreed to pay $45 million in fines, payable in installments over five years. They also entered into a $1.8 million settlement with the Commonwealth of Puerto Rico and attorneys representing indirect purchasers of goods transported by Horizon Line. The company will not face any additional charges in either the Puerto Rican or Alaskan trade. In addition, Horizon underwent a top-level management shake-up.

Marine Highways Initiative:

DOT announced its support for the Marine Highways program in 2010 and chose eight projects from 35 applicants for $7 million grant funding. The program's goal is to reduce congestion in road and rail networks through greater use of the waterways. The European Union has accomplished this very effectively; 40 percent of all non-bulk cargoes there are transported by coastal ships compared to 2 percent here. In addition to being environmentally friendly, a system of marine highways will likely create numerous new jobs.

American Feeder Lines (AFL) could become the first major player on the American marine highways, and the company is planning a hub-and-spoke model for providing coastal shipping services on the East and Gulf coasts, from Portland, Maine to Galveston, Texas. Their project, sponsored by the South Carolina State Port Authority in Charleston, SC and the Port of Galveston, is one among the eight that received the DOT grant. AFL plans to raise $750 million and build ten 1,300 TEU containerships in US shipyards at $70 million apiece. Their target market is the 1.2 million TEUs of specialized (mostly too heavy to travel by road) cargoes, 90 percent being domestic containers. AFL is now putting together a US-flag coastal service from Halifax to Portland, ME and Boston, following the old Yankee Clipper route. AFL's longer term plan includes a fleet of 30-40 energy efficient ships of optimal capacity, some wholly owned and the rest on long-term charter.

Marine Highways of the proposed scope remain an untested business model in the US. Ironically, Columbia Coastal, an established operator for past 20 years, decided to shut down its container-on-barge service from Port Elizabeth, NJ to Boston one week after becoming eligible for the DOT grant. The reintroduction of direct port calls to Boston took away its market niche. Another marine highways venture that went south for lack of financing is Seabridge Freight, a pioneer marine highways operator between Port Manatee, FL and Brownswille, TX. The company began its tug-and-barge, four day schedule operations in December 2008 targeting containers too heavy to move by road. It did not raise enough capital to implement its business plan and wound up operations in November 2010.

Labor Issues:

The decision by Del Monte Fresh Produce Company to move their shipping operations from an International Longshormen's Association (ILA) terminal in Philadelphia to a non-union terminal in New Jersey became controversial. Unannounced, ILA workers at the six container terminals in the Port of New York and New Jersey (Port of NY&NJ) brought all cargo operations to a complete standstill for two days, protesting the loss of 200 union jobs. The New York Shipping Association, the affected port employer, is now seeking $5 million in damages resulting from the illegal secondary boycott.

There were continued allegations of racketeering at the Port of NY&NJ. Three ILA members were charged with committing perjury during testimony before a federal grand jury investigating mob activity on the waterfront. In early 2011, there was a major federal crackdown on organized crime that led to 127 arrests; eighteen among them had connections to the Port, and sixteen were current or former ILA members, many of them being elected officials. Thirteen former union members were charged with various racketeering-related offenses including extortion of some New Jersey members for annual "Christmas tribute" payoffs, illegal bookmaking, gambling, and other crimes. The Christmas tribute racket involved ILA members being pressured to donate part of their container royalty bonuses (paid by shipping companies) to their union's local officials who would then divert those funds to the Genovese crime family. The ILA is planning to place its Newark Local 1235 under a trustee.

Port Dilemmas:

The challenges facing American ports today are particularly vexing. There are far too many uncertainties on the horizon, especially for the East Coast container ports. Their temporary gains in market share over West Coast rivals were stemmed in 2010. West Coast ports are once again capitalizing on their geographical advantage and capturing high value time sensitive cargo bound for eastern consumption centers. An all-water movement from Shenzhen, China to Savannah, Georgia takes 37 days whereas an intermodal transit through the West Coast takes only 22 days, resulting in significant lower total logistics costs. The rising fuel costs add upward of $800 in fuel surcharge for the all-water route to East Coast. Given the current trend toward slow-steaming and increasing bunker costs, the likelihood of more ships skipping West Coast ports seems unlikely. In fact, the numbers have already started turning around. East Coast ports remain heavily trucking-dependent and provide competitive intermodal services only when containers travel all the way to the Midwest.

Then there is the ongoing $5.25 billion Panama Canal expansion, due for completion in 2014. The very rationale for building the 3rd set of locks is now questionable because of changing market conditions. Regardless, while a wider Panama Canal will bring bigger ships to the East Coast, it is unlikely to gain additional cargo at the expense of West Coast ports. Furthermore, while West Coast's anti-growth sentiment and labor issues seem to be abating, conditions on the East Coast are heading the other way. The current demeanor of ILA and the ensuing contract renewal negotiation in 2012 especially in light of their recent industrial action do not augur well.

Even with a widened Panama Canal and increased all-water services to the East Coast, the competitive dynamics among US ports do not look promising. There is the increasing threat of competition from potential Caribbean hub ports where mother ships could make direct call and lessen the role of U.S. ports to secondary, feeder port status. Aside from that, intra-regional port competition is raising the ante higher. With the exception of Norfolk, no other East Coast port is capable of handling the bigger 6,500+ TEU ships transiting the widened canal. As illustrated by the ongoing legal tussle between the ports of South Carolina and Georgia, neighboring areas are engaged in legal maneuvers for slowing down, if not preventing, competing ports from deepening their approach channels.

Environmental Issues:

The US-Canadian Emission Control Area (ECA) adopted in March 2010 is the world's largest ECA. It extends up to 200 miles off the coast and will come into effect on August 1, 2011. In another year's time, oceangoing ships are required to use low sulfur fuel oil within the region. The IMO has also approved a much smaller US Caribbean ECA that covers waters adjacent to the coasts of Puerto Rico and the US Virgin Islands. It is expected to come into force by 2014 and will lower emissions from ships.

The Clean Air Action Plan (CAAP) provisions adopted by the ports of Los Angeles and Long Beach will enter their next phase on January 1, 2012. As of that date, all pre-2007 model trucks will be prohibited from operating in the port region; ships will lower speed while approaching the port and once on berth, switch to shore power. The Southern California ports are well ahead in terms of meeting their stated goals and are setting more aggressive CAAP goals. Similar efforts, including the implementation of aggressive clean-trucks program, are underway in other ports too.

Regulatory Developments:

The US Supreme Court ruled that the Carmack Amendment (of 1914) does not apply to cargoes shipped from overseas under a COGSA (Carriage of Goods by Sea Act) bill of lading if it also includes a Himalaya Clause, extending the bill's defense and liability limitations to the carrier's subcontractors (Kawasaki Kisen Kaisha Ltd. v. Regal-Beloit Corp., No. 08-1553, June 21, 2010). This will provide some level of comfort for shippers and carriers engaged in seamless international liner-oriented intermodal movements until a more elegant solution if found.

A sudden reversal of fortune in the container shipping sector in 2010 caused unwelcome surprises for the shipper community. Many shippers complained that their shipments suffered from shortage of equipment; they also blamed carriers for excessive control of supply thereby keeping the rates artificially high. This led to an investigation by the Federal Maritime Commission (FMC). As a result, FMC now requires carrier associations that cover the trans-Pacific trades to maintain a verbatim record of all their meetings. FMC will also look into the slow-steaming practice to evaluate if there is any "unreasonable constraint" on the international supply chain. There was an unsuccessful attempt in the last Congress to abolish the limited anti-trust immunity given to carriers under the Shipping Act of 1984 as amended. Meanwhile, the FMC has stated its desire to further amend the 1984 Act.

International Issues

Green Shipping

According to an EU Report, greenhouse gas (GHG) emissions from maritime transport (also referred to as the carbon footprint) constitute 4-5 percent of all such emissions worldwide. As yet, there is no global consensus on an acceptable methodology to cut emissions from ships. Some IMO member nations prefer a cap-and-trade system while others opt for a tax on bunker fuel (with the funds raised used to assist developing countries curb their carbon emissions).

If unchecked, shipping emissions may reach one-fifth of global CO2 emissions by 2050. There is speculation that the IMO may be 10 years away from reaching a consensus which has prompted the EU to threaten unilateral action. European nations see their goal slipping away of cutting emissions to 20 percent below the 2005 levels by 2020. Should the EU enforce their Emissions Trading Scheme (ETS) rule on all ships calling EU ports, the impact on the industry will be between $3.3-4.5 billion per year for emission permits depending upon the benchmark price per metric ton of emission. The introduction of larger container ships and the current proclivity toward slow steaming has lowered the carbon produced (in grams per ton mile) by 25 percent in four years. Yet, even in the most environmentally efficient Asia-Europe trade route, the CO2 emission rate for a door-to-door movement is 0.4 tons per ton of cargo delivered.

Overall, there is considerable pressure on ship owners to cut down their fuel use and GHG emissions. Maersk Line, the market leader in liner shipping, is advocating a green label on consumer goods that shows carbon emissions associated with the product's door-to-shelf supply chain. The day that customers will have the option to track the carbon footprint of their shipments is not far off. EEDI (Energy Efficiency Design Index) is now available as a benchmarking scheme for ship designers to create more fuel-efficient ships. Together with SEEMP (Ship Energy Efficiency Management Plan), it shows potential reduction in emissions attainable from individual ships and provides a methodology to calculate the CO2 emitted in grams/ton-mile. In future, ship builders will include pre-delivery trials to verify that vessels do reach the planned EEDI threshold. The first ever EEDI certificate was issued to a Hapag-Lloyd container ship in June 2010 by Germanischer Lloyd, the German classification society.

In 2008, IMO's Marine Environmental Protection Committee amended the existing pollution prevention regulation (MARPOL Annex VI) to phase in low sulfur fuel on ships. Accordingly, the sulfur content in bunker fuel used will drop from 4.5 percent to 0.5 percent by 2020. It doubles the cost of fuel but lowers health-risk from pollutants by more than 80 percent. However, limited availability of low sulfur fuel may necessitate IMO to exercise its authorized discretion and postpone the 2020 deadline by five years. In designated ECAs, the SO2 emissions should drop to 0.1 percent by 2015. Options available to shipowners include switching to ultra low sulfur diesel fuel from HFO (Heavy Fuel Oil), installing and operating exhaust gas scrubbers when entering the ECA, or using LNG (Liquified Natural Gas) as the marine fuel.

LNG boil-off has been used as fuel in steam-turbine based propulsion plants for many years; it is cheaper than HFO, and produces 20-25 percent less CO2, reduces NOx by 85-90 percent and cuts out nearly all SOx and Particulate Matter (PM) emissions. LNG is ideal for short sea and ferry operations in ECAs, and is seen as a strong alternative to traditional bunker fuel in future years.

Shipbuilding

The IMO Maritime Safety Committee adopted goal-based ship construction standards in May 2010, charting the course for a new era in ship building. It provides designers and builders the freedom to pursue a more flexible system to achieve safety and environmental protection goals rather than the traditional, highly detailed, prescriptive standards. It will promote innovation without compromising quality and safety, and will apply to oil tankers and bulk carriers 150 meters in length or more.

This is a timely change as owners are demanding better designs and greater efficiency today. The Norwegian ship classification society (DNV) is reportedly undertaking design analysis for VLCCs fueled by LNG with planned market entry by 2014. Initial tests for the concept VLCC shows 34 percent less CO2 emission, and significant reduction in NOx, SOx and Particulate Emissions. These ships will cost more to build but their new hull design will help eliminate the need for ballast water and result in considerable savings.

The backlog in construction has started ebbing with shipyards delivering more tonnage than new orders received. Newbuilding prices in 2010 reflect these market developments, and are much lower than 2008 figures. As an aftermath of the market conditions that laid up close to 800 container ships in 2009, no new orders were executed from late 2008 to June 2010. Evergreen Lines broke the stalemate by ordering 10 new ships at $103 million per ship, followed by several others including a gigantic order from the industry leader Maersk Line. The Maersk order is to build ten 18,000 TEU ships for a total cost of $1.9 billion, the largest single order in the entire history of containerization. This is part of a reported $6 billion newbuilding plan that includes options for additional ships. The ships will be of the biggest size that can transit Malacca Strait (Malaccamax). Maersk is referring to them as Triple E ships because of planned economies of scale, energy efficiency, and environmental performance. They will be 1,312 ft long with dedicated slow steaming engines, perhaps fueled by LNG, and will reportedly lower unit transport cost by 26 percent.

As noted previously, there are serious market concerns about the number and size of new shipbuilding orders, and their underlying economics. The number of new ships that will be delivered before 2013 include 600 oil tankers, 2,850 bulk carriers and more than 400 containerships (with carrying capacity greater than 3,300 TEUs). Data from shipping consultant Clarkson show that seaborne trade will have to grow at least 7 percent annually to fully utilize the projected infusion of new ships. In post-WWII era, this has only happened during two decades: 1950-60 (7.5 percent) and 1961-70 (9.1 percent). Even during the recent boom period (2001-09) led by an emergent China, seaborne trade grew only 2.9 percent and we are unlikely to surpass that in the near future.

Shipbuilding in China

China had a very modest shipbuilding base in December 2001 when she joined the World Trade Organization but her subsequent growth has been truly meteoric. Chinese shipbuilders focused initially on building tankers and bulk carriers and then gradually progressed into building complex ships such as drill ships, jack-up rigs, and LNG carriers. The eight point stimulus framework enacted by the Chinese government to support shipping and ship building industries include providing preferential interest rates to shipbuilders, special financing options for foreign owners, tax cuts and subsidies to domestic owners, state-owned shipping taking over cancelled contracts, and a scrapping program for domestic fleet.

There are now over 100 major yards in China. Nine among the top eighteen yards are state-owned and employ a million people. Chinese banks are actively engaged in the sector through traditional financing as well as direct ship ownership. In 2010, a $5 billion fund was established to attract Greek ship owners. All of this contributed to Chinese shipbuilding’s spectacular annual growth rate of 41 percent according to IHS Global. She overtook Japan in 2009, Korea in 2010 and is now the unquestionable world leader in order-book and contracting.

Piracy

2010 was a record year for maritime piracy with 445 attacks, almost twice as many as in 2006; 53 ships were hijacked, 1181 mariners taken hostage, and eight killed. Somalia, the anarchic East African nation with a 20 year law and order lacuna, accounted for 92 percent of all ship seizures and 1016 hostages. The pirates have become more aggressive, often using hijacked ships as mother ships for secondary attacks with hostage crews serving as human shields. Pirate activities in the Gulf of Aden have subsided because of the presence of naval forces and adoption of BMP 3 (Best Management Practices Version 3), a booklet published by the shipping industry and the navies. The pirate economy however, seems to be thriving and ransom payments have escalated (see Table 1). While the average ransom payment was $1 million in 2008 and $2 million in 2009, the reported payment now exceeds $4 million per ship. There are 587 mariners of various nationalities held as hostage on board 28 ships under Somali pirates' custody as of late March, 2011.

Table 1. Selected Ships (Captured by Somali Pirates) and Ransom Payments

Vessel	Type	DWT	Ransom ($)	Released
Sirius Star	VLCC	319430	3,000,000	Jan 2009
Saldanha	Bulk Carrier	75707	1,900,000	Mar 2009
De Xin Hai	Bulk carrier	76432	3,500,000	Dec 2009
Maran Centaurus	VLCC	300,294	6,000,000	Jan 2010
Al Khaliq	Bulk Carrier	38,305	3,100,000	Feb 2010
Talca	Reefer	11,055	2,500,000	May 2010
Motivator	Product Tanker	13,065	1,500,000	Jul 2010
Al Nisr al Saudi	Product Tanker	5,136	2,000,000	Aug 2010
Samho Dream	VLCC	319,430	9,500,000	Nov 2010
Golden Blessing	Product Tanker	14,445	9,000,000	Nov 2010

Source: Various

The post-hijack *modus operandus* has become more or less standardized as per Lloyd's List. Once a ship's hijack is confirmed, the owner informs their insurer and attorneys, and engages a specialist response consultant. The consultant provides guidance and training to the owner's Crisis Management Team that includes various specialists including a negotiator and a designated spokesperson. The negotiations begin typically once the ship is closer to the Somali coastline, and is always conducted in English. Each case is unique but the pirates typically begin asking for the moon, and the process, long and drawn out. The challenge for the owner's team is to gain the pirates' confidence and manage their expectations. Some owners include all stakeholders in the negotiations, including cargo owners. The pirates play the usual psychological games including mock execution of the Master within hearing of the crew, taking the Master ashore, and firing gunshots, although of late, the level of barbaric mental and physical tortures have exacerbated along with increased use of lethal weapons. There may be a trade-off between the period of captivity and ransom payment. Commercial factors could play a role in the outcome as well as governmental involvement, pressure from family members and media. Higher ransom payments typically encourage pirates to demand more.

Negotiations include the physical payment details and subsequent release of crew and vessel. The ransom funds may be air dropped or delivered by craft. It is unusual for pirates to renege a deal once agreed. A 2010 Actuarial Profession report puts the total cost of piracy at $9 million per "successful" incident.

The piracy situation went up many notches in early 2011 when the Seychelles Coast Guard's attempt to save the hostage crew of Beluga Nomination, 390 miles north of the island, resulted in the death of a pirate. In retaliation, the pirates executed a crew member on January 22, 2011. The Round Table of International Shipping Associations and the International Transport Workers Federation (ITF) strongly condemned this as well as many governments and others. According to the ITF, many mariners are at their breaking point today when passing through the piracy-prone waters off Somalia. There is increasing call for restoring law and order in Somalia and its waters, and a permanent cessation of the lucrative pirate economy that dissuades its natives from seeking other gainful employment. Inaugurating the 2011 IMO World Maritime Day theme of "Piracy: orchestrating the response" on February 3, 2011, the UN Secretary General Ban Ki-moon stated the "completely unacceptable" status of piracy conditions that persist off Somalia. He advocated the need for a well orchestrated response to maritime piracy based on lessons learned so far. The consequently released 2011 IMO action plan includes six objectives, including caring for those attacked or held hostage and their families during the post-traumatic period. IMO believes the new theme will be an effective rallying point, and an appropriate legal framework will soon emerge to prosecute captured pirates.

American ships affected by piracy are primarily those engaged in carrying food aid cargoes to East African countries. The CG strongly encourages US owners to have armed self-protection teams on board ships transiting the area. However, the ship owner's liability upon exercising self-defense remained unclear until recently as the applicable law (enacted in 1819) had not been reviewed in court since then. The Coast Guard Authorization Act of 2010 (signed into law on October 15, 2010) contains a self-defense civil liability provision according to which ship owners will not be held liable for monetary damages for any injury or death caused if the actions were in accordance with standard rules of armed self-protection (that are to be proscribed by the DHS Secretary by May 2011). Many aspects of this provision remain unclear including criminal liability issues and applicability of foreign laws. However, this is an encouraging development.

Mariner Issues

According to the 2010 Shipping Industry Flag State Performance Table, only six flags are completely safe, those being Denmark, France, Germany, Greece, the Isle of Man, and Norway. The black-listed flags now include Albania, Bolivia, Cambodia, Colombia, Costa Rica, Cote d'Ivoire, DR Congo, Georgia, Honduras, Lebanon, St. Kitts and Nevis, Sao Tome and Principe, and Sierra Leone. Overall, the number of black-listed states has declined significantly, implying a rising tide in compliance and safety at sea.

As my Proceedings article in the December issue (*Down to the Seas*) emphasized, merchant marine manpower issues are particularly vexing. At the 2010 Manila Conference, IMO member governments unanimously adopted a resolution, expressing deep appreciation and gratitude for seafarers for their contributions to the international seaborne trade, the world economy, and society as a whole. An important set of Amendments (2010 Manila Amendments) were added to the STCW (Standardization of Training, Certification and Watchkeeping) Convention and Code. We have thus elevated the international benchmark for training and educating seafarers. June 25, the day the Manila Amendments were adopted, has been declared the Day of the Seafarer.

Efforts by the International Labor Organization to update 80 years of international labor standards relating to seafarers is getting closer to full ratification. The revised Maritime Labor Convention (MLC), specifying comprehensive rights and protection for all seafarers, is expected in April 2012. The elimination of innocent transit privileges for seamen in US ports, an oft-criticized Maritime Transportation Security Act (2002) provision, was amended in 2010. The Coast Guard Authorization Act (2010) requires facility security plans to include a mechanism for seamen and their representatives in welfare and labor organizations to board and depart ships in a timely manner at no cost to the individual.

The findings of the 2010 BIMCO/ISF Manpower Study, deemed most reliable and accurate to date, were released in late 2010. It documents current supply of 624,000 merchant marine officers versus a demand for 637,00 and a balanced market of 747,000 ratings. Accordingly, there is a 2 percent global shortage of officers. Assuming *ceteris paribus* conditions (2.3 percent annual fleet growth, and recruitment and wastage at assumed levels), the shortage will rise to 5 percent by 2015 and then decline. The most sensitive assumption is the assumed fleet growth; for example, a 3.2 percent fleet growth will result in an 11 percent officer shortage (or 60,000 officers) by 2015. As noted in the December issue, recruitment and retention remain crucial to maintain a healthy supply of officers for the growing world shipping fleet. As per 2010 U.K. statistics, there was a 26 percent decline in certified officers in that country alone compared to their 1997 figures and two out of every three British officer is aged over forty. Officer supply may also be constrained through legal actions such as the recent EU retraction of (the country of) Georgia's STCW compliance; this impacts the certification and future employability of all Georgian seafarers.

Past several years, I have included vignettes highlighting wanton criminalization of innocent mariners. My case this year is that of an innocent Indian seaman wrongfully blamed for the death of a stowaway. Thanks to the unyielding persistence of his employer (Mediterranean Shipping Company), the seafarer labor unions and manning agents involved, the wronged seaman was finally released on November 2, 2010 after two long years in an Algerian jail. Do we need more reasons as to why seafaring is losing its appeal, and why crew cost is still the fastest growing component of ship operating cost?

The P&O Cruises, the 173 year old, much revered British cruise line, appointed its first female captain in 2010. Out of the 11,300 certified officers in the UK, the number of female captains is just 36. I could not find such information for US-licensed female captains but the fact remains that there are very slim chances of women at sea becoming a master or a chief engineer which is a true irony. There are several steps that the industry can easily adopt to promote better career opportunities for women at sea. Presently, women remain a vastly untapped market for resolving the global merchant marine officer deficit.

Outlook

To summarize, it has been an extra-ordinary year since I wrote the 2010 Annual Review. The global economy is recovering and the maritime sector has benefited. Shipping fortunes are back again on an upward trajectory although adverse conditions may persist in certain markets as discussed thanks to questionable investment decisions of some. More importantly, I want to sign off endorsing the immortal words of Paul Valery, the renowned twentieth century French poet, philosopher, and essayist, *"the future is not what it used to be."* While I make humble observations and educated guesses on what might or might not happen in my realm of expertise based on rational logic and scientific thinking, there are far more powerful forces at play that keeps us at bay, and reconfigure our world in unimaginable ways. At times, it is manifested in man's inhumanity toward man and at other times, it is the sheer fury of nature, whether on the beaches of Benghazi or the shores of Japan. *Au revoire!*

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