

#### Genoa reclaims role as birthplace of modern marine insurance



Dieter Berg, Maria Bianca Farina and IUMI secretary general Lars Lange.

By James Brewer

The pioneering role of the medieval republic of Genoa in marine insurance was highlighted when underwriters gathered in the city state's modern incarnation for the 142<sup>nd</sup> conference of the International Union of Marine Insurance.

Genoa's importance throughout the development of the international insurance market was emphasised by contemporary civic leaders and by insurance and shipping executives present at the 2016 IUMI conference.

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He told guests at a conference welcome evening at the stately Palazzo Ducale that Genoa produced the first documented hull and cargo insurance contracts in 1347, and a few years later, the first reinsurance contract, leading to the development of the first forms of modern insurance practice. "Insurance, my friends from London, took another 140 years before the first contract was issued in London," said Mr Berg.

There had been fascinating reference to this slice of history in a Gresham College lecture in London in 2014 by Dr Adrian Leonard, a journalist and researcher at the Centre for Financial History at Newnham College, Cambridge,

The earliest solid evidence of marine insurance is to be found in the archives of the city states of Italy – Genoa, Florence and Venice, in the region known as Lombardy, Dr Leonard had said. "Genuine insurance was a product of the late medieval commercial revolution, which occurred in Italy during the half century from 1275 to 1325," and "in just three weeks between 21 August and 15 September 1393, the Genoese notary Theramus de Majolo was involved in more than 80 insurance transactions… [By this time] multiple underwriters participated in each policy, assuming a proportion of the sum insured."

Dr Leonard, who has been described as the world's leading historian of marine insurance, went on: "It is in the transactions of those Italian merchants – the traders of Lombard Street – where we find the earliest evidence of marine insurance in London."

Several authorities date the rudimentary origins of marine insurance back to agreements in the 9<sup>th</sup> century BC between the shipowners of Rhodes and cargo interests to share losses in a scheme that might be considered a forerunner of what is today known as General Average. Later there were "sea loans" to cover property losses, cited in the writings of Demosthenes, an Athenian statesman of the 4<sup>th</sup> century BC.

Back to the IUMI event of Sept 18 2016: Mr Berg sketched dramatic excerpts from the history of Genoa, which today has 1.5m people living in its metropolitan area. The city went through turbulent times, including the Black Death epidemic of 1348, and the conflict with the rival republic of Venice. The Flemish painter Van Dyck (1599-1641) moved to Genoa as a young man and other great artists who spent time there included Caravaggio and Rubens.

Most of the 620 IUMI participants and 140 accompanying persons were present for the evening in the magnificently-chandeliered Palazzo Ducale. This building was central to the whole epoch of Genoa's salient status in trade and shipping. The original construction began in 1298, to serve the requirements of the governing Doges as Genoa consolidated its Mediterranean power following naval victories against Pisa and Venice. Its current architectural style dates from the 16<sup>th</sup> century. The great violinist, Genoa-born Niccolò Paganini (1782-1840) was imprisoned there briefly in 1816, and released on handing over a payment as compensation to a 20-year-old woman he admitted making pregnant. The palace is now a centre for cultural events, exhibitions and receptions.



Marco Doria, mayor of Genoa.

IUMI members and guests enjoyed an enormous spread of Genoese delicacies in the palace's Salone del Maggior Consiglio (great council hall) and the Sala del Minor Consiglio (minor council hall). These august galleries are on the main floor, known as the Piano Nobile, which are reached by an imposing double staircase. From these frescoed halls, 400 nobles once ruled their maritime empire. The building was damaged by Allied bombing in 1942 and its 38,000 sq m was fully restored in 1992.

Marco Doria, mayor of Genoa, when welcoming the visitors to his city the following day, underlined that "the sea economy is for us really crucial." He said that the conference venue, the revamped Magazzini del Cotone (cotton warehouses) once received cargoes of cotton from the US for transformation into textiles.



Dieter Berg.

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Maria Bianca Farina, president of Associazione Nazionale fra le Imprese Assicuratrici (ANIA), the Italian insurance association which led organisation of the 2016 conference, recalled that this was the second time that Genoa and its Porto Antico (the renovated ancient port) congress centre was hosting IUMI. The previous occasion, in 2001, was a dramatic moment in history, just days after the Twin Towers tragedy when many of the American delegates were unable to make the transatlantic trip because of disruption to flights and general security concerns.

Ms Farina said that in a troubled world, the IUMI maritime community was a very positive example of integration, with people from many countries aiming to grow in their knowledge, experiences, education and networking opportunities. She described Genoa as the most important centre in Italy for insurance and shipping businesses.

The other main social event of the conference was an Italian evening in the converted ship Nave Blu (including a huge tank for dolphins) which followed a walking tour of the Aquarium, Europe's largest, which occupies a prominent position at the Porto Antico. The crowd viewed seals, sharks, sea horses, coral growths, the baby penguins born at the aquarium in June 2016, and all manner of other sea creatures.

During breaks from conference business, the underwriters strolled along the quayside and enjoyed views of several huge cruise ships including the Grandi Navi Veloci (GNV) ship *La Suprema* of 49,257 gt with accommodation for 2,900 passengers, and the 139,072 gt *MSC Preziosa* (4,345 passengers), berthed in the port, in addition to more workaday cargo activities.

Although Europe will continue to play a leading role in marine insurance, the delegates recognised, as Mr Berg said, that Asia would dominate trade flows in the next five years. IUMI has asked Mike Davies head of marine and offshore energy business at XL Catlin Singapore to act as its "envoy to Asia" and work with others led by IUMI vice-chair Agnes Choi (chief distribution officer, general insurance, for AXA General Insurance Hong Kong) to foster membership in the region as part of a plan to "grow IUMI's global footprint."

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### RINA foresees big advance for 3D-printing in shipping and offshore



Ugo Salerno begins his address.

By James Brewer

Ugo Salerno, chairman and chief executive of classification society RINA, has strongly reiterated his organisation's backing for additive manufacturing, or 3D printing as it is more commonly known

Mr Salerno was speaking at the 2016 annual conference of the International Union of Marine Insurance, in Genoa, the city where RINA has its head office.

He said: "The real challenge is continuous and fast innovation. We are at the start of a real industrial revolution. All the parties of the industry must work together."

RINA is among a select group of leading businesses in marine and offshore that have advanced into research and practice of the special technique.

Mr Salerno highlighted the society's link with Rome-based Centro Sviluppo Materiali D'Appolonia. RINA in 2014 took a majority stake in CSM, with Mr Salerno at the time describing the deal as "an important step in our long-term growth strategy." CSM was founded in 1963 by Italy's major steel manufacturers and end-users with the mission of developing steel technologies and applications.

CSM is developing prototypes for "a complete new way of designing parts where there is availability of the right basic material powders." In the process, digital 3D design data from a CAD (computer-aided design) basis is used to build a component one layer after another of metallic or other substances, hence the term additive manufacturing. Although AM is well-established in the aerospace and medical sectors, it is now beginning to be rapidly adopted in the Energy and Marine sectors.

Mr Salerno said that additive manufacturing is used for example in aerospace to build high technology pieces. "If they can be used on spaceships, why cannot they be used on ships at sea?"

Hyundai Heavy Industries, the world's largest shipbuilder, is planning a larger application of 3D printing, foreseeing that implementing such manufacture into the product flow could save around \$1.8bn a year.

Among shipping companies, Maersk has 3D printers on board some of its ships. Instead of sending for spare parts to a ship, replacements can be built on the spot, avoiding voyage hold-ups, said the RINA chief. This would reduce repair time and avoid costly warehousing. There were estimates of a 40% reduction of labour costs, and 90% faster repairs.

According to the independent site <a href="www.additivemanufacturing.com">www.additivemanufacturing.com</a>, "AM application is limitless. Early use of AM in the form of Rapid Prototyping focused on preproduction visualisation models. More recently, AM is being used to fabricate end-use products in aircraft, dental restorations, medical implants, automobiles, and even fashion products".

Experts at hydrodynamics research organisation Hamburg Ship Model Basin have said that the technology is particularly useful for manufacturing appendages such as rudders and for energy-saving devices, especially important because of tighter emissions regulations.

In addition to RINA, other leading classification societies are paying close attention to developments. Lloyd's Register, in conjunction with engineering research and technology firm TWI, launched in 2015 its goal-based additive manufacturing guidance notes to industry.



RINA chief Ugo Salerno at IUMI

Mr Salerno quoted estimates that additive manufacturing worldwide would rise from Euro2.2bn in 2013 to Euro4.5bn in 2018 and Euro7.7bn in 2023.

He cited the involvement by the multi-national company GE, which a few days earlier had announced plans to acquire for \$1.4bn two suppliers of additive manufacturing equipment. GE chairman and chief executive Jeff Immelt said of the deal: "Additive manufacturing is a key part of GE's evolution into a digital industrial company." GE has invested some \$1.5bn in manufacturing and additive technologies since

2010, and has 346 patents in powder metals.

On other technological developments, Mr Salerno referred to the possibility of autonomous and unmanned oceangoing ships at sea by 2035, and he was "almost 100% sure that we will see it, but the technology will allow it." He reminded underwriters at the IUMI conference that e-navigation also meant risks, underlining the \$445bn annual cost to the global economy from cybercrime.

Mr Salerno said that RINA Group had \$540m estimated turnover for 2016 – "we are four times as big as we were 10 years ago."

#### Italian shipping is building on success story, says shipowners' chief By James Brewer



Stefano Messina of Confitarma.

Italian shipowners have shown faith in their capabilities by investing heavily in hardware over the past decade, Stefano Messina, president of Commissione Risorse Umane e Relazioni Industriali (Confitarma), the trade association for Italian shipowners and shipmanagers, has said.

He was addressing the 2016 conference of the International Union of Marine Insurance in Genoa on the theme: the Italian merchant fleet: challenges, opportunities and risks in a changing world.

He said there had been 10 years of a success story in Italian shipping: 65% more in terms of specialist employment, 75% fleet development, and nearly Euro30bn investment in material assets. "The fleet growth brings a significant increase of employees both ashore and on board ships. It is essential that the skills of seafarers are in line with the development of the technological evolution of the fleet," declared Mr Messina.

Mr Messina is chairman of Gruppo Messina, and a member of the board of the International Chamber of Shipping.

In terms of gross tons, the Italian fleet is the second in Europe, he claimed, and ranks fourth in the world, behind China, Greece and Japan. It had the leadership in some specialist sections. In 2015 Italian trade was 450m tons, of which 240m tons moved by sea.

The Italian merchant fleet had seen in the last years an important development thanks to heavy investments by shipowners, construction of new ships, introduction of technological innovations, and competitive ships on traditional and new routes.

Although the overall Italian-linked fleet size had fallen in the last year, Italian roll on-roll-off cargo, ro-ro passenger and cruise markets continue to expand. Mr Messina said that according to Confitarma processing of Clarkson Research Services data, Italy has in passenger ro-ro cargo 191 units totalling 2.35m gt; in ro-ro cargo 60 units of 2.67m gt,

The shipping leader acknowledged that alongside the opportunities were challenges.

The global economy remained at low growth levels and several recent factors undermined recovery opportunities: geopolitical tensions in many countries, the slowdown in the economy of most emerging countries, and the fall in the crude oil price. "Maritime activity has been badly hit by the economic downturn. The crisis has particularly hit the dry bulk and liquid markets in the past years, and today the containership sector is in another dramatic, volatile moment."

Shipping overcapacity had resulted from "acceleration of naval gigantism with the aim to increase capacity and cargo volume and to optimise costs and performances" Extreme competition, reduced profit margins and reduced stays in port were among challenges for the Italians.

There had been a slowdown in infrastructure investments in many developing countries and in Africa following the downward trend in crude oil quotations. An industry under financial pressure meant that mergers and acquisitions could be back on the agenda.

New technologies required increasingly skilled seafarers able to manage the developments. "Human resources are the key element to guarantee a safe, efficient and environmentally-friendly maritime transport."

In the short term, economic and financial unsustainability had been shown up by the troubles of Hanjin Shipping, and there were various cases of corporate and debt restructuring. It was significant that according to the latest forecasts, the global capacity of shipyards would decrease by 20-30% over the next five years. Many small yards were already disappearing especially in China because of lack of orders, and large yards were cutting their production and workforce. From January to August 2016 new orders amounted to 7m gt – the lowest figure in 25 years.

Mr Messina emphasised the strategic importance of the Mediterranean Sea, saying that 19% of world shipping passes through, 30% of worldwide crude oil, and 65% of world energy resources. At the same time the region was at the centre of world attention because of migration and certain incidents.

Risks of generalised instability, growing conflicts between communities, hotbeds of instability, migrant flows, Islamic 'caliphates' and piracy impacted the Mediterranean.

There were 257,186 migrant arrivals by sea from January to the beginning of August 2016, with 3,120 people dead or missing. For the whole of 2015, there were 1,011,712 arrivals. In 2014-2015, voyages of 1,374 merchant ships were diverted in this connection, More than 57,000 people were saved in 270 search and rescue operations, Italian shipping had been the most called-upon with 275 ships called to embark migrants: 12,200 people, and 388 small boats were saved.

The expansion of the Suez Canal, he said, "might have enhanced the centrality of the Mediterranean." The increased centrality of the Mediterranean in the maritime economy was a trend which continued despite the political instability characterising the area and specific incidents with regard to some of these countries. Of voyages involving the Suez Canal, every day nine Italian-flag ships were in the risk area although the number of piracy cases had strongly decreased.

Returning to the opportunities, Mr Messina said that Italy is between two port hubs. One was northern Europe where there was port infrastructural expansion, investment in new terminals, dredging, and new technologies. The other was North Africa, where some ports thanks to their free zones attract investment and companies which plan to become international.

Offering an Italian point of view on marine insurance, Mr Messina said that "Italian shipowners do prefer domestic companies because of old-established backgrounds, long-lasting relationship based on continuity. They can rely on high expertise of brokers and professionals with a worldwide network ready to support clients at any time."

Among Italian operations, Generali and SIAT (Unipol Group) were in a leading position both in hull and cargo." Major international group Swiss Re, which in 2012 set up its hub for European operation in Genoa, is contributing to widen our market and to increase visibility in the international community."

Lloyd's had been successful in expanding its involvement in the cargo segment with a significant income. "Over the years Italian underwriters have been spreading their book outside Italian borders. As a matter of fact they are raising their profile abroad more than in Italy with remarkable amounts of premium written in European countries and others.

Italian owners' policy to be largely covered in Italy proved to be correct and consequently a number of international players have elected to operate in the Italian market as well."

#### Crunch time for shipyards, warns Clarksons Research director



Stephen Gordon of Clarksons Research.

By James Brewer

Ship ordering globally has slowed to a very weak pace, and pressures are building for further yard consolidation and capacity reductions.

This summary of the woes of builders struggling to win viable contracts came from Stephen Gordon, managing director of Clarksons Research, in his presentation to the 2016 conference of the International Union of Marine Insurance.

Clarkson reported 300 newbuilding contracts from January up to mid-September 2016, compared with 1,500 in the whole of 2015, in 2014 3,000, and more than 5,000 at the peak of the market.

The weakest level of ordering since the 1980s was expected for 2016, and the same pattern was anticipated in 2017, with the focus on small and niche tonnage. Delivery levels for 2018 were uncertain and "non-delivery" [delays and cancellations] continues, said Mr Gordon.

"It has been a perfect storm for the shipyards," he declared, with difficulties in finance, most of the major markets hit by depressed freight rates, and little prospect of a better market as we go through the decade.

Ship ownership consolidation, a big change in the financial landscape and increased restructuring, were limiting short term investment and orders. The market had to face up to accelerating regulation, and technology and innovation opportunities relating to commerce and data.

These were "probably some of the toughest years for shipping since the financial crisis," the leading analyst estimated. Oversupply continued after the over-ordering of 2010 and 2013.

Ocean shipping throughout 2016 was carrying 11bn tonnes of goods (an average of one and a half tonnes for every person on the planet!) which amounted to 85% of world trade. We have added 2.7bn tonnes since the financial crisis of 2008, and "there is still underlying growth in the shipping industry."

The world fleet was 90,000 ships totalling 1.2bn gt. Value of the fleet was around \$650bn, and the order book \$190bn. The fleet had expanded substantially since the financial crisis, but the growth is slowing and has fallen to a rate of 2.3%. Better markets were seen in some niches – notably cruise, ferry, and roll-on roll-off.

Higher demolition was recorded in the first half of 2016 with 22.1m dwt of dry bulk carriers scrapped.

The ClarkSea index (a weighted average index of earnings for the main vessel types) was \$9,359 per day in 2016 up to the mid-September dates of the IUMI conference, compared with \$14,410 in 2015 and \$32,654 in 2008.

In the last 12 months, tanker values were down 21% and dry bulkers 24%.

Despite the gloom, "we do not feel this market is quite as bad as the 1980s: for example only about 1% of the bulk carrier fleet is genuinely laid up."

Mr Gordon provided some intriguing statistics about fleet control. Some 51% of tonnage on the water is owned by private companies; and the average owner owns five ships, he said.

The leading nations by control of tonnage were respectively Greece, Japan, China, Germany and the US. In 2010 the league table was topped by Japan, followed by Greece, then China and Germany about equal, and then the US. The Clarkson Research chief highlighted Greece's active position in the sale and purchase market.

Largest city conurbations (on the basis of a 40 km radius) for fleet control were: owners based in Athens 4,554 vessels of 171m gt; and Tokyo, with 97m gt. Hamburg has the largest liner fleet of any city, at 48m gt, accounting for 70% of the cities' total for that type. Germany has reduced its market share quite significantly in the last four or five years.

As to smart technology, "it does seem shipping is behind other industries, but hopefully is catching up."

Turning to the energy sector, Mr Gordon said that in 2015, offshore operations produced 26m barrels of oil per day, a 17% contribution to the global energy mix. Offshore exploration and production spending was down 20% in 2015, and 25% in 2016. There was a 20% reduction in the operating expenditure in the costs of running drill rigs and jack-ups.

The offshore order book currently consisted of 170 units, of which 50-60% were deliverable or waiting to deliver from yards: "these assets might hang around in the shipyards for several years to come."

Offshore was facing the most challenged market since the 1986 oil price collapse when the market was rocked by overproduction from Saudi Arabia and some others in an effort to increase their market share.

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#### Mega-trends that give hull underwriters headaches



By James Brewer

How do hull and machinery underwriters feel about their challenging speciality? "Approach with caution, migraine in progress," advises Mark Edmondson, chairman of the ocean hull committee of the International Union of Marine Insurance.

Mark Edmondson

A shrinking premium base has come at a time of changing risk profile, Mr Edmondson reported in his chairman's address to the IUMI 2016 annual conference, this year in Genoa.

Mr Edmondson, who is head of Lloyd's marine syndicate 2488/1882, Chubb Global Markets, said that overall in the market, pricing was under pressure. Increased volatility in the risk environment is "a given," he underlined.

"I would suggest that underwriting discipline is cracking as many carriers seek to maintain top line [volume of business]," he said.

Price differentiation was in decline. Verticalisation [brokers looking for lower rates for a slip than those offered by the leader] and re-marketing were increasingly commonplace, as the soft market continued.

A skill and experience gap was accentuating soft market conditions – underwriting and broking standards have declined, Mr Edmondson contended.

Global gross written premium was down by 8.5% from 2014 to 2015 Some underwriters were modifying their appetite, and there were attempts to introduce more spread, diversification and specialism; but size,

scale and complexity of exposures were outrunning rating levels. In the area of malicious cyber coverage, there was so far limited momentum to write coverage back.

As far as capacity was concerned, there was a limited number of withdrawals, and notable start-up activity, specifically at Lloyd's; some carriers were seeking wider distribution by "giving their pen away" in effect a covert increase in capacity.

Streamlining of business – particularly through facilities operated by large broking houses – was adding to pressure, significant company merger and acquisition had taken place, and there was increased appetite for international business from traditionally indigenous carriers

The centre of market gravity continued to move eastwards, with significant latent capacity in the Far East. There was record capacity for international business estimated by many people \$2.25bn.

In claims, 2015 experienced an uptick in loss frequency and another spike in total loss and major casualties. Some markets were reporting a reduction in both frequency and average claim cost during 2016 to date. Heavy weather and grounding had become of much higher frequency since 2011.

Mr Edmondson quoted ratings agency Moody's from its March 2016 report: "Moody's has changed its outlook on the global shipping sector to negative as it expects growth to outpace demand growth in 2016."

Vessel size was increasing, particularly in the container, cruise and dry bulker sectors.

He instanced the casualty when the ultra-large *CSCL Indian Ocean* of around 19,000 teu grounded in the River Elbe in February 2016 on a voyage from Felixstowe to Hamburg. After several failed attempts, the China Shipping Line boxship was refloated on a high spring tide by 13 tugs, aided by dredging around the ship.

There was rising interest in Arctic transit. The cruiseship *Crystal Serenity* of 68,870 gt, with 1,070 passengers and 655 crew members made a 32-day transit of the Northwest Passage starting in August 2016. The 2003-built ship was accompanied by the *RRS Ernest Shackleton*, an ICE 05 classed icebreaker. This was by far the largest ship to sail the route. [Crystal Cruises has announced that the luxury ship will repeat the cruise in 2017].

Mr Edmondson referred to the lack of salvage assets immediately available when the 3,351 teu *Rena* went aground in 2011 on a reef in the Bay of Plenty off New Zealand.

Meanwhile, there were increasingly difficult market conditions in the container sector. The rate for an 8,500 teu containership had fallen in 10 months from \$35,000 a day to \$10,000.

The sharply lower oil price had a crippling impact on exploration and production support services.

Mr Edmondson cited a recent BIMCO statement: "The shipyards become the next victim of the deteriorating conditions in the dry bulk, container and offshore markets as 2016 looks to set the record for the lowest newbuilding contracts in more than 20 years."

Underwriters needed to monitor technological and operational developments in propulsion where novel systems would be required; the development of advanced materials; increased use of robotics, sensor technology and autonomous system design; smart ship technology; and the extended navigating range of ships.

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#### Catalogue of risks endangers laid-up ships, IUMI is told



By James Brewer

Companies that put their ships into lay-up need to adopt clear and detailed planning, an adviser on such operations told the 2016 conference of the International Union of Marine Insurance.

Paul Hill of Braemar

As a growing volume tonnage is expected to be made idle, Paul Hill, chief surveyor, Western Europe, for Braemar SA, listed a series of risks to be addressed

"A ship is your pride and joy, so PLAN," he urged shipowners and their underwriters, many of whom will provide cover for de-activated tonnage.

London-based Mr Hill reminded the conference, in Genoa, that offshore vessels were being put to one side because of the weak oil market, and containerships because of low freight rates. Dry bulk carriers were being hit by the slowdown in the world economy.

The Norwegian Shipowners' Association reported that in February 2016, 101 of its members' offshore vessels were in lay-up – a figure expected to rise.

In late February 2016 a reported 346 containerships were idle, according to Alphaliner. Lloyd's List Intelligence said in September 2016 that 55 bulk carriers were officially laid up, with many more idle. This amounted to only 1-2% of the world fleet, but it was significant.

Practical risks included mooring failure: "Your ship could 'play dominoes' with other vessels, and the losses could be massive," said Mr Hill.

Other perils included a ship losing watertight integrity, personal injury, fire, and cargo system concerns such as problems with hatch covers.

Those responsible for the ship needed to be on guard against piracy, theft and kidnapping. Once a ship was immobile, "it is an easy target."

Mr Hill outlined a planning checklist to ensure that a proposed layup was safe, and risk mitigated.

Essentials were a mooring plan including a seabed analysis; appropriate manning arrangements; precautions against fire and flooding; power arrangements; emergency contingency plan; preservation and maintenance procedure for machinery; preservation and maintenance procedure for all safety equipment; preservation of hull; statistical weather analysis; and anti-pollution measures.

Extra care was needed on reactivation: "this is the risky part of the layup. That is where it could all go horribly wrong," with, for example, major machinery failure.

Mark Edmondson, chairman of IUMI ocean hull committee, agreed that understanding the nuances of the risks associated with lay-up was becoming increasingly important.

#### China is set to leap ahead in cruise market says Euroyards chief Corrado Antonini



One of the world's most experienced executives in cruiseship construction has emphasised the growing role that China will play in the market.

By James Brewer

Dr Corrado Antonini

Dr Corrado Antonini, president of the Euroyards consortium and former executive chairman of Italian shipbuilder Fincantieri, cited informed opinion

that "at the end of the decade, China will be the most important market in the world." The Dragon might well turn its energies to building the tonnage, too, he surmised.

Dr Antonini, head of Fincantieri until the end of 2012, was addressing the International Union of Marine Insurance in Genoa.

He pointed to the role of new markets for cruise passengers, including China, Australia and Vietnam.

He said: "There are initiatives to move the construction of certain ships to China. It is such a huge market they might very well think of producing ships for their own market."

There were different demands for leisure cruising from China. Whereas the standard cruise in the west was seven days, in China it is three to four days. Western passengers looked upon cruses for exotic destinations and sunshine, while Chinese passengers did not care so much about sunshine, Gambling was popular in with some western customers, less so in Europe, but extremely popular in China.

In 2010-13 there was a gradual overcoming of the crisis. From 2014-2016 together with the recovery in the US and to some extent in Europe, demand for cruising had increased.

The whole ocean cruise market in the world was 24m passengers, and there were estimates that soon we would reach a target of 30m passengers. The most expensive new cruise ships in the order book cost Euro1bn.

Dr Antonini said that the market was requiring new prototypes because new regulations had been introduced including probability damage stability. The latter involves a revision of SOLAS chapter II-1 to harmonise provisions for passenger and cargo ships based on the "probabilistic" method of determining damage stability.

Dr Antonini has previously said that one in four deliveries is based on a completely new and innovative design or prototype – high tech, advanced vessels.

The average size of cruiseships ordered was 130,000 to 150,000 gt and more and more ships of 200,000 gt would be built, with a total of 5,000 or 6,000 passengers and crew.

At the same time, there was interest for smaller ships, more sophisticated, more expensive than previously and which have a special attractiveness in terms of destination. In luxury and niche segments a ship becomes a destination in itself.

Bottlenecks in the supply chain needed to be addressed, and very often the suppliers were very small. Many aspects of the suppliers were becoming part of the internal production of the shipyards.

Dr Antonini went on: "We did not know that a sea could shrink, but the Mediterranean is a sea that is shrinking when you consider what is happening [with security concerns about destinations] in North Africa, the Middle East and Turkey."

Individual cruise lines and associations of cruise lines were seeking new places attractive to passengers. To guard against terrorism, cruise lines were operating the same screening as did airlines. Piracy was less of a direct threat, as cruise ships sailed very high above the water unlike bulk carriers. There were three, four or five decks before you get to open space and no attack had succeeded in recent times on that type of ship.

"Cruise ships are the most regulated objects on earth," he added.

Euroyards, which Dr Antonini leads, brings together the main shipbuilding industries of France, Germany, Spain and Italy in what is known as a European Economic Interest Group. The consortium was set up in the early 1990s. Together with the European Commission and others, it aims to tackle competitive pressures from the Far East, and develops joint programmes in research and common purchasing.

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#### Accumulation management: does it matter to a marine insurer?



By James Brewer

Accumulation concerns in insurance are building for the future, Richard Turner, global marine director of RSA, told the 2016 conference of the International Union of Marine Insurance.

Richard Turner.

The phenomenon is about more than the major elemental and man-made losses that grab the media headlines, Mr Turner said in his presentation during the IUMI president's workshop, which focused heavily on the lessons of the August 2015 Tianjin port explosion which cost many lives and caused extensive damage to property and automobiles and containers in storage.

In the face of such challenges to the way their portfolios of business are built, insurers can make a real difference to their accumulation experience, insisted Mr Turner.

Risk models were getting better and better, and insurers had the opportunity to go much further with them. Models were a key part of the answer, "but they are not the only tool. The world is changing around us – that means the nature of marine accumulation is changing too."



Mikkel Andersen

The RSA marine director cited the definition of accumulation as stated by the International Risk Management Institute: "the total combined risks that could be involved in a single loss event (involving one or more insured perils)."

Why should accumulation management matter to a marine insurer? Mr Turner listed 10 reasons. Accuracy of technical price; better risk selection; reducing 'underwriting leakage'; avoiding under-priced 'property' business; improving

customer service (for instance, event planning); optimising how much capacity you want to sell; influencing the reinsurance programme and costs; working within reinsurance capacity; regulatory oversight; and capital management.

Data remained one of the biggest challenges in cargo modelling, "The capability of tools and models are arguably ahead of the data available."

He questioned whether the marine market lagged behind the wider property market. He said that some progress had been made in port exposure distribution, and the 'electronification' of data meant there was huge potential for future product development.

"Models are a tool to aid underwriting; blending the 'art' and the 'science' is key. Risk models are only as good as the information you receive (or require...)," said Mr Turner.

He presented some big questions. Are the types of accumulation risk changing? What about crewless ships? Who buys the insurance cover? What happens if there is a fault or other problem across common ships?

With respect to cyber risk, Mr Turner quoted Aron Sørensen, chief maritime technical officer of BIMCO, as saying: "Ships are vulnerable to cyber-attack... What happens if a common cyber issue affects a multitude of ships?" The RSA executive warned: "Cyber risk can turn out to be one of the biggest aggregation issues of all."

IUMI president Dieter Berg commented: "Portfolio transparency is vital for our business. We have to know the exposure and to capture data. We have to co-operate more closely with our clients to figure out what cargo is in transit and where it is stored. The use of specific marine models will help us in getting a much better grip."

Mr Berg said that climate change would result in increasing catastrophe losses [in mid-November 2016, the World Meteorological Organization said that man-made climate change was contributing to an increase in extreme weather, and 2016 was on course to be the hottest year on record], and globalisation meant an increase in the quality of the goods being stored.

The market had been hit hard by accumulation typified by Tianjin. "If these financial losses grow, there is a real threat for the financial stability of insurance companies. That will be a surprise, and our bosses hate surprises."

Mr Berg was nevertheless confident: "We can use big data very efficiently in the future."

In a short address, Mikkel Andersen, senior assessor and analyst with Survey Association, Copenhagen, considered whether big data could be "a deception or a leverage in decision making."

Mr Andersen, a master mariner, said that volume was exemplified by the thousands of sensors in an aircraft. Velocity – how quickly is data changing – in some industries it is changing per millisecond. Variety refers to the formats in which it is stored. Veracity – the trustworthiness of the data.

Behind the Pokemon Go game was "big data, big time."

"It is not about getting big insight. You may get big insight but you need to know the data. You should be sceptical about the information on the data you have: the leverage all depends on your knowledge about your data."

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### Tianjin multi-billion dollar cargo loss: an aberration or the new normal?



Peter Ulrich of RMS

By James Brewer

Containerisation has greatly increased cargo catastrophe risk. This challenges the insurance industry to change the way it captures data to solve the problem of how to manage port-based accumulations of risk, such as hit insurers when a huge area of the Chinese port of Tianjin was devastated by explosions in August 2015.

This was the message from Peter Ulrich, senior vice-president of Risk Management Solutions, when he addressed a session of the International Union of Marine Insurance at its 2016 conference, in Genoa. Silicon Valley-headquartered RMS describes itself as the world's leading catastrophe risk modelling company.

Mr Ulrich warned that "cargo cat" losses will continue to grow along with the development of shipping, increasingly risky port locations and rises in sea level.

Average daily exposure to cargo in transit in major global ports could be massive, and exposure in "free ports" was a great unknown.

Current industry data practices do not support detailed quantification of port exposure – but some unwelcome outsiders are on the job: Mr Ulrich cited a *Business Insider* article which began: "High tech pirates hacked a shipping company to figure out the perfect ship to plunder, and located specific high value containers."

Mr Ulrich entitled his talk **Tianjin multi-billion dollar cargo loss: an aberration or the new normal?** 

Cargo accumulation risk in ports must be actively managed, he stressed, and his company was working on appropriate risk modelling.

Mr Ulrich said ports had evolved geographically – for instance, the Roman port of Londinium was 30 miles from the sea, and so was relatively safe. Later the port of London had thousands of individual warehouses and the many locations diversified the risk.

Formerly there were numerous key river ports with manual labour to load and discharge cargo from ships with 600ft by 60ft beam, to non-contiguous warehouse areas. Nowadays of course you cannot get a 18,000 teu ship (1,300ft by 194 ft) up the Thames, exemplifying that ports are moving closer to the sea coast for automated loading and unloading into vast container parks.

Superstorm Sandy which hit the east coast of the US in 2012 was "a wake-up call." The storm caused a record for the time of \$3bn-plus marine loss and \$19bn property losses a part of which was borne by the marine market. Effective risk management enabled the Port of New York and New Jersey to return to action quickly, but while marine mitigation had focused on windstorm, the marine losses were driven by surge.

Tianjin, the third largest port in the world, in August 2015 suffered numerous explosions equivalent to 21 tons of TNT (twice the size of a large bomb) and fire at a hazardous chemicals storage facility. Total damage at the Chinese port could reach between \$3bn and \$5bn. Involved were large quantities of cargo containers, 70,000 cars, 176 deaths, 800 injuries – the loss estimate continues to grow.

Of the exposures, Mr Ulrich said that in general terms the most vulnerable cargo type was cars in open lots. "The most vulnerable is almost the most valuable thing. If you take one thing home today [from this conference workshop] it is that accumulations of cars are going to cause problems. Earthquake,

flood, winds, hale – cars are extremely susceptible to these." Automobiles in the open were twice as risky as autos in a container.

Of the Kobe 1995 earthquake, Mr Ulrich said that the Japanese port was built on two artificial islands of landfill, which meant disaster caused the sinking of buildings and flooding of cargo, also damaged by liquefaction. Amplified shaking destroyed piers and cranes: "it is as though you are on a trampoline, and everything gets shaken further." He said that the disaster rendered 90% of Kobe berths inoperable, and other ports could not handle Kobe traffic, meaning that the shipping cost increased significantly. Most roads, railroads and lifelines connecting the port suffered severe damage. It took infrastructure longer to recover than the port.

In Japan's Tohoku earthquake, tsunami and nuclear plant scare of 2011, many adjacent ports were impacted. Operational risk planning at ports needed to incorporate risk to adjacent ports and connecting infrastructure.

In response to those who said the costs of the Sandy event "could not happen anywhere else," Mr Ulrich's company looked at 100 ports around the world. Of these, 13 came up with potential losses higher than hit the Port of New York and New Jersey.

Until a short time ago, catastrophe modelling had never addressed the cargo fall-out. "This year, we have built a specific cargo model," said Mr Ulrich, showing that under certain circumstances there could be similar losses to Tianjin.

Current industry "best practice" was to model cargo and specie as "warehouse contents." In fact, vulnerability varied widely depending on the type of goods (auto, iPad, food, fine art etc), and on the way it is stored (container, warehouse, open lot, tank etc. The solution was to develop cargo-type specific vulnerability curves, and implement secondary modifiers to fine tune the curve, to give underwriters the ability to account for their specific knowledge, and account for different storage facilities. Cargo and specie exposures change over time, in location and value, and the type of catastrophe peril as a ship takes items across the world.

Current data capture practices were "sub-optimal," Mr Ulrich asserted. The solution involved developing "hi-res port exposure databases" and performing detailed market share analyses of key ports.

Ports should incorporate risk information into their planning, such as avoiding storing high value items in high risk locations (for example no autos in low elevation open storage lots, and preparation for an approaching wind or surge event.

Catastrophe risk could constitute a material portion of the cargo risk for underwriters, and cargo data capture can enable accurate risk assessments: insurers will do the work to track more data on their cargo exposure (cargo type, storage, etc). "The benefits outweigh the extra effort - increased transparency and more accurate modelling of catastrophe load and thus improved risk selection."

Typically a lower catastrophe risk led to better reinsurance decisions, and a more efficient use of capital.



Matthew Cocchiaro

In a presentation at an earlier conference session, Matthew Cocchiaro, director for product management global trade at IHS Markit gave some examples of daily throughput in terms of value for districts in China. This sort of statistic helped in understanding the potential accumulation of cargo in case of a disaster. Noteworthy ports included Tianjin at \$477m a day, Shanghai at \$1.6bn, and Guangzhou at \$311m.

"Looking specifically at Tianjin, we can see their top 10 commodities make up almost \$200m of daily throughput," said Mr Cocchiaro. In the event of another disaster, sectors that would be hardest hit were: vessels other than railway or tram stock, and parts \$74m; nuclear reactors and machinery \$59m; iron and steel \$46m; mineral fuels, oils and products \$34m; electrical machinery and

equipment \$30m; and iron or steel articles \$25m.

Mr Cocchiaro said: "Global trade data allows us to understand cargo values and volumes across different trade lanes. The ranges in cargo value differ greatly based on different factors including geography, vessel size, shipper mix, etc."

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#### Claims handling challenge of Tianjin explosion



Ringo Ho of Cunningham Lindsey China

By James Brewer

Factors behind the deadly explosion at Tianjin, serving Beijing and one of the busiest ports of the world, were spelled out by Ringo Ho, technical director in China for loss adjusting firm Cunningham Lindsey, when he addressed the 2016 conference of the International Union of Marine Insurance.

Mr Ho said that the tragedy could be compared to the September 11 2001 attack on the Twin Towers, by reason of the shock delivered to the insurance industry.

In the August 12 2015 incident, casualties according to official figures were 165 persons dead, including 99 firefighters, 11 police officers, and 55 others, including residents living nearby. There were 798 persons injured of whom 58 were severely hurt. Property damage included 12,428 brand new vehicles in storage, 304 buildings; and 7,533 boxes in the container sectors.

The cars in the area were very expensive: 50,000 high-end vehicles valued at Euro3bn – the claim could be for half of that amount.

Outlining to the Genoa conference the train of events, Mr Ho said that at 10.50pm a fire in one of the warehouses caused a first explosion at about 11.30pm, and there was a second blast within seconds affecting four huge container yards.

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#### Humidity Management in Cargo Transport



By James Brewer

Waterborne cargo can contain too much of something that can ruin it – and that is, water. Close attention must be paid to the humidity thresholds that are crucial for the high-quality transport of goods.

**Uwe-Peter Schieder** 

This is the message from Capt Uwe-Peter Schieder, loss prevention manager at the Gesamtverband der Deutschen Versicherungswirtschaft

(GDV), the Berlin-based German Insurance Association. The GDV is the federation of private insurers in Germany and has some 460 member companies.

Humidity management is so important that Capt Schieder devoted the whole of his 25-minute presentation to the topic at the 2016 annual meeting in Genoa of the International Union of Marine Insurance.

He said: "I am always surprised to see how much water is transported in one voyage. The less water that is in the cargo, the easier water management will be."

As an example, Capt Schieder posed a quiz question to the underwriter delegates. How much water is contained in 24 tonnes of green coffee beans that are in a suitable condition for transport? The answer, in graphic terms, is 13 bath-tubs full.

In one instance, 80 litres of water was ascertained from 20 tonnes of cocoa in a shipping container. "A few bags of desiccants are not going to solve the problem of humidity. The result was mouldy cocoa," said Capt Schieder.

He said that the variation between day and night temperatures produced the danger of condensation. Ships passed through different climate zones, and air and water temperature could change quickly, affecting the microclimate in the container.

The objective should be "container-dry" a term included in the IMO/ILO/UNECE Code of Practice for Packing Cargo in Transport Units (CTU Code2014/2015). This is a non-mandatory code of practice for the handling and packing of cargo transport units for transport by sea and land. Container-dry refers to the specific water content at which transport of goods can be considered safe depending on the route and the time of year.

"You cannot dry cargo in the hold like laundry in a breeze. The container is a closed space which has its own climate," said Capt Schieder, who is a member of the IUMI loss prevention committee.

The use of desiccants outside sealed packaging made little sense. It required specialist skill and must be done properly. "If you pull off the packaging you will have condensation immediately." Active ventilation helped to prevent condensation, but had its limitations.

Damage from excess moisture could be avoided. "The water content of the cargo is the key to success. If no moisture has come from the outside, then internal moisture has caused the damage. The correct water content is a quality characteristic of the cargo."

The factor regulating moisture in a container is the water content of the goods. Mould could grow at a relative humidity of 75% or more. Consequently, the water content must be chosen in such a way that the relative humidity cannot rise above 75%, the most important humidity threshold for the purpose of container transport.

"Mould and so on do not generally represent transport damage. Rather they are a problem with the cargo itself. Using the CTU Code, insurers can help their clients to achieve loss-free transport," said Capt Schieder.

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### Electronic T-shirt aims to improve truck driver safety



Chiara Bersani.

By James Brewer

Truckies are trying out the latest in wearable technology: a T-shirt. Experiments are being carried out in Italy to monitor the bodily behaviour of goods drivers by means of a smart (in the electronic as opposed to the fashion sense) shirt.

The special garment is equipped with two kinds of sensors fully integrated into the fabric. One sensor tracks breathing (a strain gauge) and two piezoelectric sensors collect electrocardiography (ECG) data. The word piezoelectric , from the Greek words for pressure and electricity, refers to the generation of AC voltage by stress.

Chiara Bersani, of the Department of Computer Science, Bioengineering, Robotics and System Engineering (Dibris) University of Genoa, explained the concept in a presentation to the International Union of Marine Insurance. She said the intention is to identify abnormalities that could increase the risk of accidents.

She described the project during the loss prevention session of the IUMI 2016 conference in the Italian city. It comes under the heading of "enhancing safety of transport by road by online monitoring of driver emotions."

Dr Bersani said that the wearable system could be useful in road, rail and maritime settings. The physiological data acquired could be used to alert the driver by mobile phone of any problems.

A device known as a SEW3 for the acquisition, pre-processing, storage, and transmission of data is inserted into the pocket of the garment.

Dr Bersani reviewed developments in her talk entitled "Big Data, Smart Analytics, the Future Now" in what is known as the Intelligent Transport System (ITS) and risk applications to the transport of dangerous goods.

She said that Delab, a joint laboratory between her department at Genoa University, and ENI, the large Italian oil company, focuses on integrating intelligent systems into dangerous goods transport in order to prevent accidents to people or infrastructure and damage to the environment.

The main product is a big data analytics and optimisation platform for the transport and logistics industries.

New technologies could enable the use of big data in the carriage of freight, particularly dangerous goods, to provide safer, cleaner and more efficient transport systems, said the Genoa University expert.

The proposed platform had already been integrated into the information and communications technology (ICT) systems of ENI, enabling the capture of vast amounts of data and the use of analytics for generating decision-support information.

Big data was already being used for example to improve road traffic management and the planning of public transit services.

Since 2002 a transmission system known as TIP between trucks and remote servers had been in place. TIP (Transport Integrated Platform) is a web portal, with secure and selective access, accessible via the internet by both internal users (in this case ENI) and external parties such as transport suppliers.



David Taylor, IUMI loss prevention chairman

Continuous improvements had led to this being acknowledge as an Italian communication standard. At present the system involved more than 400 vehicles in Italy and involvement from foreign countries was increasing. TIP helped ENI to provide a high quality service, to improve loss prevention strategies, respect laws and rules of safety and the environment and protect the health of workers and the public. "Because transport services are almost completely outsourced, it is necessary to develop instruments for continuous monitoring of processes and performance, and to ensure an adequate level of control of this important aspect of the supply chain," said Dr Bersani.

The use of big data created by the mobile network could provide information based on millions of mobile "events" round the clock throughout the year. The data could be extrapolated to provide a value in real time in relation to the total population in a specific area.

David Taylor, RSA Europe marine director, who chairs the IUMI loss prevention committee, said that analytics could be difficult to grasp, but "I applaud Chiara for giving us a glimpse of how it is working in logistics."

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## Surviving in a Changing Environment – challenge for both the oil industry and its insurers



**IUMI** offshore energy committee workshop

came back."

By James Brewer

It was a worrying start. Underwriters in the offshore energy sector who were present at a debate at the International Union of Marine Insurance 2016 conference saw that the panel discussion was given the heading "We're all doomed!"

Were things really so bad? Simon Williams, chairman of the IUMI offshore energy committee said after the session had offered unnerving market insights but some glimmers of rising oil demand: "We were almost doomed... I am so glad we

A series of presentations was given under the more prosaically-worded title Surviving in a Changing Environment.



Stewart Williams of Wood Mackenzie.

Stewart Williams, a senior research vice-president at Wood Mackenzie, set the tone by exclaiming: "It has been brutal out there. The response of oil companies [to the downturn] has been very quick. When oil prices were high, oil companies basically got fat and lazy."

Most oil companies have cut dividends, and spending in 2015 fell 25% compared with the previous year. There was a big squeeze on rig rates paid to contractors, and a big increase in borrowing – some companies were even borrowing to pay the dividend. There was a stark drop in mergers and acquisitions, following Shell's takeover of BG in 2015. Distressed companies are holding on, borrowing as much money as they can to sustain their debt, said Stewart Williams.

The first thing that took the brunt of cost cutting was exploration, the Wood Mackenzie man continued, and in 2016 this was continuing. Upstream investment had fallen 40%. He had lived in Scotland for 20 years and never seen rigs before in the Firth of Forth; the Cromarty Firth was full, and "now rigs are stacked further south."

Svein Bergstad, vice-president for risk and insurance at Seadrill Management, London, was a little more upbeat, saying that offshore will drive future supply growth. "Offshore drilling is still worthwhile!" he declared.



Svein Bergstad of Seadrill Management.

Seadrill is one of the largest companies of its type, with renowned marine entrepreneur John Fredriksen as chairman and major shareholder. Seadrill operates in more than 18 countries, and had earnings before interest, tax, depreciation and amortisation in 2015 of \$3.6bn.

The oil price at the time of Mr Bergstad speaking was \$49 per barrel, down 57% from its peak at \$114 in 2014 [the oil price rose slightly after Opec and Russia proposed production cuts totalling 700,000 bpd in a deal due to be confirmed at the end of November 2016, but in early November fell back a little to around \$47]. The exploration and production spend was down 23% in 2015, with a further 15% cut forecast for 2016. "We have had it too good

for too long. We just have to admit it," said Mr Bergstad.

Despite this, he said, the fundamentals were that "the world needs more energy, and it has to come from oil and gas. Offshore is competitive and sustainable."

He said: "We know that a lot of Opec countries are producing oil at a price which is not sustainable. This has to change." If the oil price reached \$54, it would challenge American shale oil. "Sooner or later, the market will come back." More than half of production growth through 2020 is expected to come from the offshore segment.

Morgan Stanley Research had made a base case forecast of demand rising from 80.2m barrels per day to 84.2m from 2015 to 2020. The marginal cost of extraction suggested prices must rise.

As the downturn continued, though, customer discussions had become more and more difficult. Demands to re-negotiate contracts and simply cut day rates were increasing. Some oil companies were willing to terminate high dayrate contracts and pay penalties, because they had no work, or could sign up another rig and still pay less overall.

"Traditional" drilling contracts were being challenged and "new" solutions introduced.

Seadrill had made 2,500 people redundant and unfortunately would probably have to make another 1,000 redundancies, said Mr Bergstad. The group had been aiming to have 12,000 people, but by September 2017 would probably be at only 5,000.

The group had 16 of its 54 rigs laid up. Delivering on four priorities "will help us through the challenges of 2016/17: safe and efficient operations; savings and cost competitiveness; refinancing plan; and customers and backlog."

[In the UK oil and gas industry, the workforce has been reduced by 120,000 in the past two years. Clarksons Research said in October 2016 that 177 rigs were "cold stacked" a rise of 88% since the start of 2014.]

In answer to a question during a panel discussion about dismissals of staff causing a looming skills gap, Mr Bergstad admitted: "They do come back, but we have lost a lot of competent people who will never come back to the industry."



Andrew Jackson of Willis Towers Watson

Andrew Jackson, head of energy claims at WillisTowers Watson, London, presented statistical tables, a speciality in which he is an industry leader. Mr Jackson said that 2011 – the underwriting year following the semi-submersible *Deepwater Horizon* explosion in the Gulf of Mexico – was a spectacularly bad one for market losses: the worst on record for downstream and natural catastrophe insured and uninsured losses.

It was too early to have an accurate claims overview for 2015 (but it was "creeping up there") and far too early for 2016, although there were reports of a big loss in the Jubilee field offshore Ghana. According to the Willis Energy Loss Database of upstream energy losses (incidents in excess of \$1m)

if the 2016 loss record matched 2015, underwriting losses would almost certainly result.

In April 2016, in its first Energy Market Review under the merged title WillisTowers Watson, the firm had said that the industry is facing possibly its greatest challenge for 50 years, as oil prices plunged and inventories reached record levels. It said that reduced risk management budgets brought about primarily by the collapse in oil prices were having an increasing impact in 2016, as programme limits reduced and self-insured retentions increased. As a result, the available premium income pool continued to be eroded, particularly in the upstream sector where the lack of new projects and the scaling back of major drilling operations contributed to a significant overall reduction in premium.



Simon Williams, IUMI offshore energy chairman.

It is noted that many of the leading corporations use captive rather than commercial insurance, and mutuals also have a big slice of offshore insurance business.

Earlier, Simon Williams (who is head of marine and energy at Hiscox, London) had spoken of another relentless rise in insurance capacity, a factor which makes it difficult for underwriters to defend individual premium levels. Upstream operating insurer capacity in 2016 was estimated at \$7.5bn. Ten years previously, it had been somewhat above \$2bn.

"Rating levels are now moving into late 1990s territory. Sooner or later the market will have to turn – but when?" asked Simon Williams.

#### Hackers geared for new attacks on shipping, says class society expert



Mr Le Gonidec: hacking is weapon

By James Brewer

Maritime interests must step up their defences against the threat of serious cyber attacks, an expert associated with classification society Bureau Veritas has urged.

Yohan Le Gonidec, head of the shipowner support department at Tecnitas, a subsidiary of Bureau Veritas, said that the number of known cases was low – a check of the internet turned up only five – but there were serious concerns.

Mr Le Gonidec was addressing practical issues in the wake of the publication of BIMCO guidelines on cyber security, which he said would help decrease vulnerability in the maritime world through assessment and mitigation of risk. Speaking at the 2016 conference of IUMI, he sounded the dangers: "Ships and shipping companies are highly vulnerable today and will be more and more vulnerable if cyber-security risks are not properly addressed."

Significant holes had been found, said Mr Le Gonidec, in the three key technologies seafarers use to navigate – GPS, Marine Automatic Identification System (AIS), and Electronic Chart Display and Information System (Ecdis).

Hacking AIS data is possible, he asserted. Installed in an estimated 400,000 vessels, AIS is currently the best system for collision avoidance, maritime security, aiding navigation and accident investigations. Somali pirates had used AIS data as "a shopping list."

Mr Le Gonidec referred to the tilting of an oil rig in 2014 to the point where it had been forced to shut down. In another case, onshore systems were hacked to facilitate the transport of drugs. Elsewhere, a yacht had been forced to change course because of a hacked GPS signal.

He feared that some shipowners had shown little concern about cyber-security, but awareness had increased during recent years. Some businesses might have been reluctant to report.

Cyber risk was specific to the company, the ship, the operation or the trade. Shipboard systems offered vulnerabilities – Mr Le Gonidec calculated there were around 30 on a typical ship.

The BIMCO guidelines set out measures to raise awareness of the safety, security and commercial risks for shipping companies; protect shipboard operational technology and information technology infrastructure and connected equipment; manage users, ensuring appropriate access to necessary information; protect data used on ships, according to its level of sensitivity; authorise administrator privileges for users, including during maintenance and support on board or via remote link; and protect data communicated between ship and shore.

Specific vulnerabilities should be identified, said the Tecnitas executive, and these included the human factors, and the policies and procedures governing the use of the system.

High risk and very high risk consequences could be that commercial operations of the ship were disrupted, cargo lost, the ship lost through grounding for instance, and passengers die.

Main efforts are to identify which weakness could lead to such catastrophic scenarios. A lower level of protection could be accepted for more limited risk.

The whole question should be discussed by top management, insisted Mr Le Gonidec, adding an interesting acronym: the risk is evaluated considering the impact on Confidentiality, Integrity and Availability (CIA).



IUMI legal and liability chairman Frédéric Denèfle.

Improving cyber-security meant performing risk assessment studies at design level (shipbuilder), and for existing vessels (shipowner) which could be through the use of assessment software.

Class societies were building their solutions to increase the safety of ships such as specific second party audit for the account of the builder or shipowner. They were moving to define rules to obtain a cyber-security additional notation, which currently is on a voluntary basis. The Idea is to perform checks and approval for all the system, including the whole chain of suppliers.

Aron Sørensen, chief marine technical officer at BIMCO, cited the 2016 cyber security survey carried out by IHS Markit in association with BIMCO. Of 300 respondents, 65 had been victim of a cyber attack. Malware was used in 77% of the attacks, and phishing in 57%. In 48% of cases, there was loss of corporate data; in 21%, financial loss; in 67%, IT system functionality was hit; and in 4% shipboard systems.

Professional hackers had been hired to go on board ships to test defences, and found cases where there were no passwords on the computer or to the network; anti-virus systems needed updating.

BIMCO was close to finalising an e-learning programme, with a survey out asking members what they wanted to see. A panel established in 2015 by the International Association of Classification Societies would be helpful. It was important that ships were built with cyber secure networks and components, and used contemporary software. "The entire industry needs to work together," declared Mr Sørensen.

The discussion at IUMI's legal and liability committee workshop turned to the question of the future possibility of unmanned ships, and the absence of personnel on board in the event of a casualty, obligations under search and rescue, and humanitarian responsibilities. One comment was that aviation is highly automated but has pilots on board.



Aron Sørensen of BIMCO

One of the panel members, Robert Veal, a barrister and a research fellow at Southampton University who had earlier given a presentation on the extent to which autonomous ships would conformed to current regulation, said that the analogy with aviation was a good one. "In studies at Southampton, we drew on this a lot. In the short term, even if there is great confidence in the technology, at least at the outset you will always have people on board to intervene if something does go wrong. This is very much a work in progress." There could be equal capacity on board for conventional operation.

The international obligation to render assistance is limited to the capabilities of the relevant vessel, said Mr Veal. "It is the specification of the autonomous ship that is going to dictate its obligations in search and rescue." It would be in the interest of those promoting unmanned ships to see if they can contribute to search and rescue operations, but "it is in no way going to hinder [the development of] unmanned ships."

A member of the audience asked the panel: "Do you think there could be a malware event affecting a number of ships?" Mr Le Gonidec replied: "It could happen, but I do not think it would be simultaneous."

Mr Sørensen said that the shipping industry could be attacked on a broader scale, but criminals could go for systems ashore, for instance erasing certificates of seafarers rather than the capabilities of ships themselves. If they 'took out' the GPS for example, there were always back-up systems that would allow the ship to navigate.

Frédéric Denèfle, the IUMI committee chairman, asked whether shipowners were prepared to spend money to prepare their people to face cyber attacks. Mr Sørensen replied that some of the defensive measures did cost a lot, but much could be achieved by people "purely acting sensibly." Mr Sørensen added: "I think we should aim for the future and put these efforts into newbuildings, and that would be a small amount of money."

Mr Denèfle said that unmanned vessels represented both an opportunity and potential straightforward safety and security challenge for shipping activities..."but developing a legal framework is not impossible."

Highlighting the globally perceived threats, at the beginning of November 2016, the UK Government announced a new £1.9bn five-year National Cyber Security Strategy, This aims to ensure that the UK remains "at the vanguard of the digital revolution" while protecting the national interest and the UK economy. The government will work with regulators, insurers and investors to compel businesses to manage cyber risk.

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#### What the 2016 York-Antwerp Rules means for insurers



Ben Browne of Thomas Cooper LLP

By James Brewer

Casualty costs could be noticeably reduced in the near term under the newly agreed York-Antwerp Rules 2016, the annual conference of the International Union of Marine Insurance heard in Genoa in September.

While the revised rules, the product of 20 years of negotiations, could trim the liabilities of insurers, delegates were warned against over-optimism about the effect of the changes.

Caution was voiced by Ben Browne, who represents IUMI on the General Average Guidelines standing committee of the Comité Maritime International, comprising national and international maritime law associations. The CMI remit is to contribute to the unification of maritime law.

Mr Browne, a partner at law firm Thomas Cooper LLP and a specialist in the topic for many years, presented a notional example of a casualty which under the widely-used 1994 York-Antwerp Rules might produce a total cost of \$3.2m. Readjusted under the 2016 formula, the cost would be some \$2.7m. The saving of \$491,000 stemmed from of the reduction of interest and adjusters' fees and the exclusion of commission.

The London lawyer said that the gains embodied in the 2016 agreement were a modest improvement on the 1994 rules, but he was anxious not to exaggerate them.

IUMI had relatively little bargaining power in this context. The 2016 result was an improvement on the 1994 and 1974 rule sets "and are the best insurers will get."

A substantial rise in commercial bank interest rates could nullify the gains. He underscored that shipowners, who are firmly against significant reductions in the scope of General Average, control which set of rules are incorporated into their contract of carriage.

The insurers' body has long argued that the York-Antwerp Rules greatly increase the cost of handling casualties. The 2004 version of the Rules was a compromise that could have reduced the cost of adjusting casualties by between 13% and 17%, but was seldom used.

IUMI had set out to reduce the extra cost of casualties caused by General Average, speed up the adjustment process which can take years, and secure rules which would be acceptable to shipowners. (The origins of General Average are said to lie in ancient Greece. General Average in modern days refers to the apportionment, between representatives of a ship, cargo and other interests, of extraordinary and voluntary sacrifice or expenditure made to preserve property in a marine casualty).

The CMI in 2012 established an international working group to review the rules from scratch, and adopted the latest edition and guidelines in May 2016. BIMCO has approved this initiative for incorporation into standard contracts of carriage, and all future standard form agreements, although "in practice it is unlikely that we are going to come across any 2016 contracts any time soon," said Mr Browne.

Salvage was probably the most important element, he assessed. Under the 1994 parameters, salvage was always reapportioned in General Average. The 2016 wording introduces a compromise under which salvage is not covered in General Average unless one party paid another's proportion of salvage; or there was a subsequent accident affecting values; or there was a "significant" General Average sacrifice; or the salved values were "manifestly incorrect.".

Mr Browne criticised the "very time-consuming and costly process" set out in the 1994 and 2004 rules over the deduction of extra charges to arrive at a General Average contributory value. Lloyd's Open Form salvage payments are deducted from the property value to ensure that property interests do not pay more than 100% of its arrived value in salvage and General Average payments combined.

He asked: "How can contributory values be fairly assessed quickly and at least cost while preventing any realistic prospect that underwriters might have to pay more than 100% of insured values in salvage and General Average payments?"

A new rule provides that where salvage is not re-apportioned in General Average, salvage contributions will be deducted from the contributory value, but not the costs of defending the salvage claim, which he said usually takes a significant time to collect. Low value cargo may be excluded from contributing if the adjuster considers the cost exceeds the contribution.

Meanwhile, the 1994 version allows in General Average the wages and maintenance of the master, officers and crew while the vessel is detained at a place of refuge. The 2004 set excluded this allowance, and the 2016 edition restores the 1994 position.

On the cost of temporary repairs of accidental damage at a port of refuge, the 2016 position reverts to the wording of 1994 which occasionally gives hull insurers a windfall profit at the expense of cargo insurers. IUMI favoured the 2004 stipulation where recovery in General Average is limited to the amount by which the estimated cost of the permanent repairs at the port exceeds the sum of the temporary repairs plus the permanent repairs carried out; or, if none, the depreciation in value of the vessel.

The 2016 provision does away with a commission set down in the 1994 rules of 2% on disbursements except crew wages and maintenance and fuel and stores not replaced during the voyage. This decision confirmed the 2004 position.

In the 1974 and 1994 editions, interest is allowed at 7% on General Average disbursements, sacrifices and allowances. Under the 2004 terms the interest rate is fixed annually by the CMI Assembly "based upon a reasonable estimate of ... the rate of interest charged by a first class commercial bank to a shipowner of good credit rating," and 2016 followed up on this.

Between January 2005 and December 2016 the average rate of interest on disbursements, sacrifices and allowances has been 3.8636% and the current rate (in mid-September 2016) was 2.5%. York-Antwerp 2016 calculates interest at ICE Libor (a benchmark rate for five currencies) on the first banking day of each year in the currency of the adjustment plus 4% (producing a total rate of 5.17% for 2016). The new interest rate will rise and fall with ICE Libor so could exceed the 7% allowable under the 1994 terms, said Mr Browne.



Helle Hammer.

Helle Hammer, chair of the IUMI political forum, praised Mr Browne and others at IUMI for the progress achieved. "Tremendous effort has gone into this," she said.

In a separate presentation to IUMI, Richard Cornah, chairman of Richards Hogg Lindley, and a former chairman of the Association of Average Adjusters, said that the CMI guidelines did not form part of the York-Antwerp Rules and were not binding. They were not intended to override the provisions of the rules, the

contracts of carriage or any governing jurisdictions.

Mr Cornah pointed out that in the majority of jurisdictions the findings of an average adjuster regarding amounts payable by the parties were not legally binding, as would be the case with an arbitration award.

In rare cases an adjustment might be enforced by the courts, but the majority of adjustments were accepted by the parties (subject to any Rule D defences) on the basis of the professional standing and expertise of the adjuster, a member of a profession that prided itself on its impartiality and independence. Rule D recognises that General Average exists irrespective of fault or breach of contract by any of the parties.

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#### Unmanned ships and navigation: regulatory framework largely fits the bill



Robert Veal of Southampton University.

By James Brewer

National and international authorities should be pressed to take a unified approach to governance of remotely-controlled oceangoing ships, the 2016 conference of the International Union of Marine Insurance was told.

Robert Veal, a barrister and Research Fellow at the Institute of Maritime Law, Southampton University, said autonomous technology is here today, and the challenge was to develop the right practices in unmanned operations.

He gave comfort to advocates of the looming transport revolution by saying that such vessels were covered by much of the existing regulatory framework, while conceding that there were difficulties with autonomous operation. Modest amendments would be required to make remote controlled operation legal.

His conclusions came against a background of forecasts by technology experts that crewless operation can be achieved by the end of the decade.

There is much excitement in some quarters over the claimed efficiency gains of fully automated ships that will be operated via supercomputers from shore. Other experts warn of the huge costs needed to create and build a new generation of crewless ships, and that ironically they may call for considerable manpower in their reconfigured production and guidance.

Mr Veal listed a series of important conventions and laws against which the proposed operation of unmanned vessels would be tested: the UN Law of the Sea Convention (Unclos) 1982; the Convention on the Safety of Life at Sea (Solas) 1974; Standards of Training, Certification and Watchkeeping; Marpol; International Regulations to Prevent Collisions at Sea (Colregs) 1972; Salvage Convention 1989; Limitation of Liability for Maritime Claims Convention 1976; Nairobi Wreck Removal Convention; International Convention on Civil Liability for Oil Pollution Damage; and domestic legislation such as the UK's Merchant Shipping Act 1995.

Do unmanned craft come within the framework? Mr Veal's answer was yes in terms of navigational rights, limitation of liability, uniform standards, and certification for port access. There were questions though over Unclos freedoms and protections, unlimited liability, lack of uniform standards, and national regulatory and safety systems.

Existing regulations were generally applicable to 'ships' and this posed the question whether an unmanned craft could be termed a ship. "Can there be a 'ship' without seafarers? Seemingly, yes," said Mr Veal, citing the Merchant Shipping Act 1995 (England and Wales), Code des Transports (France), Burgerlijk Wetboek (Netherlands); and the US Code – Rules of Construction Act).

Mr Veal turned to the quandary over official requirements for crewing.

Article 94 of the Unclos requires that "each ship [must be] in the charge of a master ...who possesses appropriate qualifications, in particular in seamanship, navigation, communications and marine engineering..." Could this be the remote controller or pre-programmer of an unmanned ship? The definition of a master in the Merchant Shipping Act 1995 was "every person (except a pilot) having command or charge of a ship."

Regulation 14 of Solas chapter five states that "contracting governments undertake each for its national ships to maintain/adopt measures to ensure that from the point of view of safety of life at sea, all ships shall be sufficiently and efficiently manned." The chapter continues, insisting that "for every ship ... the administration shall... establish appropriate minimum safe manning following a transparent procedure, [and] issue an appropriate safe manning document as evidence of the minimum safe manning considered necessary."

The Solas regulation did not explicitly state that every ship must have at least one person on board. This posed something of a puzzle for the shipping community. If no people are on board, that ship falls foul of any requirement of manning adequacy, but "I do not think this itself prohibits unmanned ships." Administrations will have to be absolutely convinced of the safety of operations, which is going to be an incredibly difficult task.

The Colregs said that nothing should exonerate any vessel or master...from the consequences of any neglect to comply with [the] Rules or ... any precaution required by the ordinary practice of seaman or by ... special circumstances..."

Under the Colregs, every vessel shall at all times maintain a proper lookout by sight as well as by hearing, as well as by all available appropriate means. "Does it require people?" was the question. It required human perception and judgment, but sophisticated technology could present a highly accurate picture of vessels in the vicinity.

"Does it require seafarers? Were cameras and sound receptacles for shore streaming an adequate substitute? The rules do not really solve these problems. There is a fairly long maritime history of using both technological advancement and shoreside personnel in particular," Mr Veal went on.

"It seems they require experienced seamen in real time: whether this can be provided remotely is a moot point."

The question of remote control had to be an absolute priority for the industry to develop standards and certification requirements and to press national and international authorities for a unified regime. "Without that, insuring these applications is perhaps going to be insurmountably difficult. "Unmanned ships are on the immediate technology horizon. Many regulations will need to be clarified or amended." Development of standards and practices would give maritime authorities the competence to certify safety." Only then will unmanned ships be insurable."

Frédéric Denèfle, chairman of the IUMI legal and liability committee, commended Mr Veal for the detail of his analysis and said: "We will have to follow up closely these subjects."

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#### Fine art black market is booming, IUMI is warned



Massimo Spadoni of Siat Assicurazioni.

By James Brewer

Underworld traffic in stolen fine art and antiquities is growing at a frightening rate, an Italian insurance expert has warned.

Massimo Spadoni, business development manager of Siat Assicurazioni, delivered the message at the 2016 annual conference in Genoa of the International Union of Marine Insurance.

He said: "The black market in works of art is becoming as lucrative as the one in weapons and drugs." In particular, over the past decade there was an increasing trend of illicit trade from countries in the Middle East affected by armed conflict.

His conference presentation on the fine art market was said to be the first in the long history of IUMI, underlining the importance of specialist provision in today's market by a select group of experienced insurers.

Siat is part of Unipol Group, which says it ranks first in non-life in Italy and fifth in Europe. It was established in 1967 devoted to marine insurance. Within Siat, fine art comes within the cargo division, where clients include museum and fine art institutions and collectors. Total written premium income in 2015 in cargo at Siat was €46m, and in marine hull €76m.



One of Mr Spadoni's slides.

After warning of the use of stolen art to satisfy unscrupulous collectors and in money laundering, Mr Spadoni, a member of the IUMI cargo committee, highlighted the huge values involved in some of the most notorious robberies.

Among the crimes, Leonardo da Vinci's *Madonna dei Fusi* (which translates as Madonna of the Yarnwinder) valued at Euro35m was stolen from a Scottish castle and later found in the office of a law firm in Glasgow.

In May 1998 two works by van Gogh, *Le Jardinier* and *L'Arlésienne*, and a Cézanne, *Le Cabanon de Jourdan* were seized by armed men from the Galleria Nazionale d'Arte Moderna in Rome. Those by the Dutch painter were the only oil paintings of his held in Italy. They were recovered seven weeks later.

Rembrandt 's *Young Girl at a Window* was among eight masterworks stolen from Dulwich Picture Gallery in London in 1966 but recovered within a few days after an investigation led by one of Britain's top policemen, Detective Superintendent Charles Hewett.

Nine paintings including *Impression, Sunrise* by Claude Monet were grabbed by five masked raiders in broad daylight in 1985 from the Musée Marmottan Monet in Paris. The thieves ordered the gallery security chief and nearby visitors to lie while they carried out the deed. Total value of the heist, which included Renoir's *Bathers sitting on a Rock* and *Portrait of Monet* and Berthe Morisot's *Young Lady at the Ball* was more than \$ 12.5m. It was five years before the Impressionist paintings were recovered, in Corsica.

Another huge haul consisted of 19 pieces, including *Lady Writing a Letter, with her Maid*, by Jan Vermeer, and works by Goya and Velázquez, stolen from Russborough House, County Wicklow, by IRA dissidents in 1974 in an effort to secure the release of a comrade from prison. All the paintings were recovered in the Republic, but in 1986 Russborough House was again the subject of an assault, this time by Dublin underworld boss Martin Cahill and 12 accomplices who ran off with 16 paintings after crashing a jeep into the front door.

In 1971, thieves scaled a high wall and used a sledgehammer to smash through the metal bars of a window at Kenwood House, north London, and made off with *The Guitar Player* by Vermeer.

Vermeer has long been a popular target. In March 1990, two thieves stole a dozen works of art estimated to be worth \$500m from Isabella Stewart Gardner Museum in Boston, Massachusetts, including the Dutch master's work *The Concert*. Among other precious items taken were one by Manet, three by Rembrandt, and five drawings by Degas. Although the thieves were identified, their loot has never been recovered, said Mr Spadoni. This was despite a \$5m reward offered for information.



Artists Marcel
Duchamp and Andy
Warhol in full flow

One of the most remarkable stories recounted by the Siat executive involved a Gaugin, *Fruits on a Table*. It was more than 40 years after being stolen from the Regent's Park, London, apartment of a wealthy heiress that the painting came to light. Three men had bluffed their way into the flat, one of them posing as a policeman and the others as burglar-alarm technicians.

Painted in 1889 and estimated to be worth up to €30m, the Gaugin still life was recovered together with a work by another French artist, Pierre Bonnard, entitled *Woman With Two Armchairs*, thought to be worth €600,000. It emerged that the thieves smuggled the paintings by rail through France and into Italy but for unknown reasons left them on a train heading for Turin.

Railway workers found the pictures and gave them to a lost and found office where they remained for years before being put up for auction by the Italian state railway authority. A Fiat factory worker successfully bid Lire45,000 − equivalent to €23 in today's money − who hung them on his kitchen wall

in Turin and, when he retired, in his home town in Sicily. He realised there was something wrong after his son showed him works by Gauguin in book on art.

The Scream, the best known painting of Edvard Munch, has also had an extraordinary and anguished history. It was taken from the museum bearing the artist's name in Oslo, in August 2004. Armed men walked into the building and ripped off the wall Munch's famed picture together with another titled *Madonna*. The two paintings were missing for just over two years. The Scream, which was painted on cardboard, suffered water damage and flaking, while *Madonna* was torn.



Olympics of 1994 in Lillehammer but had been recovered.

Another version of *The Scream* had been stolen before the Winter

A few days after the IUMI meeting, on September 30 2016, it was announced that two missing paintings by van Gogh had been recovered in good condition after 14 years. These were *Seascape at Scheveningen* (1882) and *Congregation leaving the Reformed Church in Nuenen* (1884-85), taken from Amsterdam's Van Gogh Museum in 2002. It was a success for an investigation conducted by police on behalf of the Italian Public Prosecutions Department.

Mr Spadoni said that an FBI crime team had special training in the field of art crime. Over the years, Interpol, the FBI and other police agencies have compiled comprehensive lists of stolen works.

In 2005, the FBI began to compile what it calls it Top Ten Art Crimes. One of the oldest crimes on the international list is Caravaggio's *Nativity with San Lorenzo*, a \$20m work which was in 1969 prised from its frame above the altar at the Oratory of San Lorenzo in Palermo, Sicily.

Between 7,000 and 10,000 Iraqi artefacts from cultural institutions and archaeological sites remain missing after widespread looting in March and April 2003. One of the most impressive, a statue of King Entemena of Lagash, was recovered in 2006 and returned to the Iraqi government.

A \$3m Stradivari violin made in 1727 was stolen from violinist Erica Morini's New York apartment in 1995. A violin made by the same craftsman was stolen from concert artist Min-Jin in 2010 but recovered three years later.

Valued at more than \$3m, Cézanne's *View of Auvers-sur-Oise* was lifted from the Ashmolean Museum, Oxford, in 1999. From the Museu Chácara Do Céu in Rio de Janeiro four armed men stole four works by Salvador Dalí, Henri Matisse, Pablo Picasso and Claude Monet in 2006 while the city was in the midst of Carnival celebrations.

Mr Spadoni said that in many markets, fine art risks are underwritten under the cargo category because they involve transit of property. A subject moving from one location to another increased its value in the art market. Risks are written under the term "from nail to nail."

He asked his audience to consider how many times a piece of art moves in a normal shipment, and the fact that there were not many specialist carriers. "It is not easy to find a reliable one." He recommended the involvement in risk assessment of a surveyor, not a cargo surveyor but a property surveyor. In a museum, the surveyor has to identify any concerns about the entrance, fire precautions, and windows. The gallery visitor "is the most important player, but also the most devastating." Conditions had to be such that visitors cannot move, touch or handle works of art.

### Collective strength of Italian law firms on show



Elena Dell'Utri Vizzini and Lara Sandrone of TDP Avvocati.

By James Brewer

Maritime law firms based in Italy are enjoying an enhanced profile, thanks to their initiative in publishing a widely-supported periodical that surveys their entire specialist realm. Their global reach was intensified when many of the leading lawyers supported the staging in Genoa in September of the 2016 conference of the International Union of Marine Insurance.

Practitioners are demonstrating their zeal to advance awareness of and dialogue on key topics by means of the publication *LexTrasporti*, which they describe as "the first Italian online free magazine" of international

and national transport law.

A special "Welcome IUMI 2016" edition contained 15 detailed articles by lawyers on subjects ranging from the UK's Insurance Act 2015 to an overview of the Italian freight forwarding system.

The publication, launched in 2013, has some 2,000 subscribers. It is aimed at shipowners, shippers, insurers, forwarders, shipping agents, multimodal operators, adjusters and others. It sets out to be written in an accessible manner without over-simplifying or descending to the banal.

While it goes out online, a batch of copies were printed for distribution during the IUMI meetings in the Italian port city.

Among those closely observing the IUMI conference were *LexTrasporti* director and editor Dr Luca Florenzano, and Daniela D'Alauro, Simona Coppola and Barbara Pozzolo from the editorial team of lawyers.

Law firm sponsors of IUMI 2016 included Studio Legale Camera Vernetti, Studio Navale Canepa, TDP Avvocati, and Siccardi Bregante & C.

TDP Avvocati was introduced early to visiting journalists as the firm sponsored the lunch (at the conference venue Magazzini del Cotone) which was the forum for the opening press briefing by IUMI committee chairmen. TDP representatives at the lunch were partner Elena Dell'Utri Vizzini and paralegal Lara Sandrone.



Established at the start of 2009, TDP takes its name from the initials of partners Andrea Tracci, Ms Dell'Utri Vizzini and Margherita Pace. It operates from Genoa, Milan and London.

The firm specialises in areas such as third party liability, national and international marine insurance claims, cargo and hull-related matters, and advice to logistics operators, lending institutions and members of the insurance market. Shipbuilding loans and intellectual property are among fields covered.

TDP advises on intermodal issues, from the wording of commercial contracts, to terms and conditions of engagement and insurance policy drafting. The partners are consulted by governmental institutions, especially over contractual and administrative issues arising from the carriage of goods and of dangerous waste.

Mr Tracci is an expert in insurance law, freight and logistics, a regular lecturer at Ministry of Transport courses, and a mediator in marine insurance disputes.

Ms Dell'Utri Vizzini graduated in law with honours at Genoa University and took a postgraduate degree in International Law at UCL London. A qualified solicitor for England and Wales admitted by The Law Society, she assists insurers, Lloyd's agents and others often in matters relating to the London market. Ms Dell'Utri Vizzini is a member of Wista Italia.



Mr Tracci and Ms Dell'Utri Vizzini contributed to the IUMI special edition of *LexTrasport*i an article on carriage and limitation of liability under Italian law

Margherita Pace of TDP advises on insurance coverage in areas such as third party liability, intellectual property and large risks policies.

Massimo Canepa

Ms Sandrone is taking her law degree at Genoa University with a final dissertation in environmental damage matters.

A personality long familiar to members of the international insurance market is Massimo Canepa, who welcomed IUMI delegates and visitors to the promotional stand of Studio Navale Canepa.

Mr Canepa, a doctor in mechanical engineering, is a leading marine surveyor, operating worldwide from his base in Genoa. Alongside his expertise in naval architecture and marine engineering he has a deep knowledge of claims handling, and considerable experience as an expert witness in international courts and arbitrations.

He is a member of the IUMI loss prevention committee and the steering committee of the International Marine Claims Conference.

Established in 1970, Studio Navale Canepa is an independent consultancy operating worldwide directly and through a network of correspondents. The firm says that it "has built up a multi-discipline technical structure, providing the maritime community with highly specialised expertise and experience grown through the involvement in hundreds of major marine incidents."

Through complementary skills of highly qualified hull and machinery surveyors, mechanical engineers and naval architects, "our company offers a unique package to the clients and provides expert advice to marine insurers and the shipping industry." Clients include hull and machinery insurers, P&I clubs, Admiralty law firms, average adjusters and shipowners.

Host for the IUMI conference, which returned to Genoa after 15 years, was the Italian insurance association ANIA (Associazione Nazionale fra le Imprese Assicuratrici).

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#### IUMI gets ready for 2017 conference in Tokyo



Cristina Castellini announces the handover.

By James Brewer

Planning is well underway at the General Insurance Association of Japan to host the 2017 conference of the International Union of Marine Insurance. from September 17-20 in Tokyo.

The IUMI flag was handed over to the Japanese delegation by the Italian organisers of IUMI 2016 in Genoa.

Cristina Castellini, head of the marine and aviation department at ANIA, the Italian National Association of

Insurance Companies, performed the ceremony on behalf of the Italian organising committee, which included Alessandro Morelli, Mazareno Cerni, Andrea Dalle Vedove, Massimo Gabarino, Alberto Olivari and Laura Uliana.

Ms Castellini thanked Genoa participants on behalf of "the city of Columbus" and said that the total attendance of 620 direct participants and 140 accompanying persons was a very good result.

Masayoshi Hori and Mamoru Otsubo, respectively executive director and general manager of the General Insurance Association of Japan, formally accepted the mandate.

On behalf of the Japanese association, they expressed their "heartfelt sympathy" to the victims of the year's Italian earthquakes, noting that Japan too had suffered in recent times from such tragedies.

IUMI president Dieter Berg on behalf of delegates in Genoa praised Ms Castellini and the team for their hard work as the driving force of a smoothly-organised conference.

Mr Hori and Mr Otsubo encouraged underwriters from around the globe to sign up for the 2017 conference.

They said that it will be the fifth occasion for the event to be held in Tokyo, and the year 2017 marks the 100th anniversary of the foundation of the GIAJ.



Masavoshi Hori.

The new website for IUMI 2017 adds: "Therefore, it is our great pleasure that the historic and distinguished IUMI Conference will be back in Tokyo [for the first time since 2006] on such a commemorative year for us, and we look forward to welcoming as many of our marine insurance colleagues from around the world as possible."

The site adds: "history of general insurance in Japan goes back to the 19th century. Founded in 1878, the first general insurance company in Japan began

to sell cargo insurance in 1879 and hull insurance in 1883. Therefore, one of the reasons we warmly welcome the IUMI Conference is that, historically speaking, marine insurance is the origin of the general insurance industry in Japan."

Main venue of the 2017 conference will be the Grand Nikko Tokyo Daiba Hotel, in the Daiba area of the capital. It boasts a beautiful scenery backdrop of Tokyo Bay, describing Daiba as one of the most popular spots in Tokyo.

Tokyo welcomes 9m visitors every year, and the Olympics and Paralympics Games will be hosted by the city in 2020.

On the new website, the Tokyo IUMI organising committee says: "While you are here, you will be able to see many examples of further development as Tokyo, one of the biggest cities in the world, moves towards hosting these massive events."

Although not officially confirmed at this stage, the IUMI 2017 welcome reception is expected to be at the National Museum of Emerging Science and Innovation, opened in 2001 and known as Miraikan, and the closing Japan evening at the Grand Prince Hotel, New Takanawa.

In October 2016, IUMI announced the opening of an overseas hub in Asia – the first time in the organisation's 142 year history that it has established a permanent presence outside Europe. Mr Berg said at the time: "The Asian marine insurance market accounts for almost 30% of global premium income and global trade in this region continues to grow. The opening of our new Asian hub, based in Hong Kong, recognises this significant contribution. Through this initiative, we hope to align IUMI more closely with the activities and aspirations of our colleagues in Asia and ensure that IUMI remains relevant and of service to this very important region."

Information will be updated on the IUMI 2017 Tokyo website <u>www.iumi2017.com</u>. Registration and reservation of the official hotels will start in April 2017.

## **IUMI's education programme receives boost from Hong Kong Federation of Insurers**

At the annual IUMI marine insurance conference in Genova, which got underway this morning, IUMI President Dieter Berg received a generous donation of €100,000 from the Hong Kong Federation of Insurer's (HKFI) to support IUMI's new education programme.

The education programme is a key IUMI objective and the Association believes it is vital to promote the attractiveness of the marine insurance industry and to encourage young talent to enter the sector. He comments:

"We thank the HKFI for this generous donation. It is our ambition to offer a comprehensive training and education scheme to the next generation of marine insurers and the seed money donated today allows us to make an excellent start. Our industry is facing a range of challenges and it is vital that we inspire and nurture the next generation of marine insurers to ensure professional marine underwriting continues into the future."

Making the donation, HKFI's Chief Executive, Peter Tam, said:

"IUMI's education programme was launched in 2015 and HKFI is proud to provide the seed money to kick start this valuable initiative to the industry. Attracting new talent is essential to ensure we stay relevant for the good of global trade and the world economy. IUMI has already made a great start with its successful series of webinars and we look forward to seeing an expanded programme of activities within a robust framework to continue the momentum".

Five key learning and teaching options have been identified and adopted by IUMI, they are:

- webinars on specific and topical issues of interest;
- online tutorials/distance learning;
- in-class instruction;
- improved coordination of national education initiatives;
  - development of a database to make presentations/webinars and general insurance conditions/clauses permanently accessible.

Further initiatives will be discussed by IUMI's Education Forum at the Genova conference this week.

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Dieter Berg

#### IUMI president warns of challenges of insuring billion dollar ships

By James Brewer

Insurers face huge challenges with the advent of what amounts to the billion dollar (in terms of risk exposures) cargoship, IUMI president Dieter Berg warned as he opened the organisation's 2016 conference in Genoa.

Mr Berg spoke of the vogue for ultra-large container vessels: 43 are being built with more than 17,000 teu capacity, and 18 larger than 21,000 teu.

He reminded the 142nd annual meeting of the International Union of Marine Insurance that \$800m worth of cargo could be on board a vessel of \$200m hull value, added to which in the event of a serious casualty there could be substantial costs for removal of wreck, bringing the total at stake to far beyond\$1bn.

He recalled the MOL Comfort casualty and the questions of stability raised, going on to pose the question whether there was a limit where the ships were just unable to carry more because of structural problems.

Mr Berg said that there were 12 serious accidents involving car carriers in the last 15 years, said to emanate from problems in loading cars correctly.



Porto Antico, Genoa.

Insurers had to be equally vigilant over potential accumulation of insured losses when, for instance, at the ports of Zeebrugge and Bremerhaven some 120,000 new cars were stored ready for export. There had been an increasing number of insured

losses caused by hailstorms, driven by climate change. In another disturbing instance, melting snows and saltwater had corroded the electronics of 3,000 cars in Canada.

An explosion at Tianjin port, China, in August 2015 hit 68,000 cars, while superstorm Sandy in 2012 damaged 16,000 new cars and 3,000 trucks. There had meanwhile been a tenfold increase in the number of wind farm installations: "they are going into deeper water and we will have to cope with it."

Decomissioning of oil and gas platforms was a further area for close attention: in the North Sea 140 oilfields would be decomissioned over the next five years, and each operation would take four to five months.

Several giant cruiseships were berthed in the Italian city's Porto Antico as Mr Berg delivered his address.

Mr Berg said that insurance pricing was getting "really complex," and insurers were having to come up with underwriting solutions that "we are not able to explain to our clients." Portfolio profiling was vital for control against accumulation of losses, when the value of the goods was going up and the quantity was going down, as insurers "are faced with growing cargo exposures on fewer vessels. Basically it is about staying relevant for our clients. This is a key exercise going forward."

The IUMI chief sounded an alert over the need to support the fight against maritime piracy. Off the east African coast, lobbying activities of IUMI and others had been successful in terms of attracting a deterrent naval presence, but the mandates of the European Union and Nato were due to run out at the end of 2016. With 20 naval ships involved, it had been a very expensive exercise, and other problems including Syria, Iraq and terrorism generally were calling for resources. Despite this, the importance of the piracy threat had to be emphasised. In a subsequent session of the IUMI agenda, it was revealed that global marine premium fell 10.5% in 2015 to \$29.9bn, although an element of the drop was the result of a stronger US dollar, with the German market disproportionately hit.

He referred to the technology changes being seen in mega-construction projects. Are we able to understand these complex technologies our clients use for these projects?"



Global marine underwriting premiums down by 10.5%; continued uncertainty lies ahead, warns IUMI

IUMI – the International Union of Marine Insurance – unveiling its annual statistical report on the marine insurance market at today's conference in Genova, announced global underwriting premiums for 2015 of USD 29.9bn. This is a 10.5% reduction on the 2014 figure.

Astrid Seltmann

Vice-Chairman of IUMI's Facts & Figures Committee, Astrid Seltmann explains:

"Part of the reduction can be attributed to the strong US dollar as compared with other currencies but this is not the whole picture, particularly for hull and offshore energy where much of the original business is written in USD. All business lines suffered a real reduction in premium income due, in the main, to a sluggish global economy, low commodity prices and reduced activity, specifically in the offshore sector."

The 2015 total comprised income from the following regions:

Europe	50.4%
Asia Pacific	27.1%
Latin America	9.8%
North America	5.9%
Other	6.8%
and the following business lines:	
Global hull	25%
Transport/cargo	52.9%
Marine liability	7.1%
Offshore/energy	15%

Technical insurance results for the 2014 underwriting year deteriorated strongly for cargo, hull and energy sectors compared with last year's reported data for the same period. Results always deteriorate over time due to the lag in registering and paying claims, but the deterioration in 2014 was above average. This was due to substantial, but not unexpected, increases in reported outstanding loss reserves for the 2014 underwriting year. There were a number of major claims occurring in 2015 which were attached to the 2014 underwriting year but actual amounts were not known when last year's figures were published. These major claims included Tianjin (cargo); a series of major hull losses (representing an increase in costly hull losses compared with the relative benign previous year); and a high number of costly offshore energy related losses. A proportion of these losses were attributed to the 2014 underwriting year whilst the remainder fell within the 2015 underwriting year.

#### Cargo sector

Premium income in the cargo sector reached USD 15.8 bn for 2014 which is a 9.1% reduction on the 2014 figure. However, the strong US dollar masked the real income number which made it difficult to identify any real market development.

The Tianjin disaster is the largest cargo loss ever recorded and its full effects on the 2014 and 2015 underwriting years are still unclear. The risks of costly cargo claims are expected to increase in the future with the increasing accumulation of values in ports and on single vessels, and a higher

probability for claims caused by natural catastrophes.

The 2015 underwriting year began with a cargo loss ratio that was higher than in 2014. The Chinese economic slowdown coupled with a slide in commodity prices will continue to impact negatively on world trade and, consequently, cargo insurance premiums. These uncertainties make it difficult to predict future earnings but 2016 has the potential for large claims connected with Hanjin Shipping's current difficulties and the loss of the Amos 6 satellite.

#### **Hull sector**

The hull sector achieved a premium income of USD 7.5 bn for 2014 which was a 8.4% reduction on the 2014 figure. Exchange rates are likely to have impacted this number but to a lesser degree than for cargo, due to the global nature of the portfolio. Although the world fleet continues to grow, the average insured vessel value has been reducing which has had a correspondingly negative effect on premium income.

Claims frequency continues a downward trend as does total loss frequency despite a minor uptick in 2015. Repair costs are stable or slightly reducing which is likely to be a result of a strong US dollar – premiums are collected in US dollars whereas repair costs are paid-out in local currencies. 2014 saw an exceptionally low number of major losses but that number returned to normal levels last year. So far the losses this year have been low but past performance is not a reliable indicator of future results, therefore the remainder of this year and into 2017 is not easy to predict.

#### Offshore energy

Premium income in this sector dropped a massive 20% to USD 4.5 bn in 2015. The majority of business was transacted in US dollars and so the strong dollar could not be culpable for this decrease. Income is likely to drop further as planned projects are postponed or cancelled. Hurricane/weather issues have not made any real impact in recent years but a series of high profile losses in 2015 have had a significant effect.

The strong drop in premiums is expected to continue into 2016 and current conditions dictate that a market upturn is not expected for some time. The low oil price has forced the cancellation/postponement of a number of offshore projects, particularly in deep-water and in the Arctic region. Low interest rates and stock market instability is also likely to impact negatively in the future.

#### **Outlook**

The 2016 market remains challenging for all lines of business. Although claims reported during the first six months of 2016 appear to be relatively modest, in all marine lines the potential for a major claim resulting from the increased accumulations risk is always a possibility. Patrizia Kern-Ferretti, Chairman of IUMI's Facts & Figures Committee said: "Commodity prices are weak and freight rates are low and these persistent soft market conditions are challenging for marine insurers. Uncertainty has also been driven by the increasing and unknown—risk of accumulations and a growth in M&A activity across the globe. Although we are hopeful that the continuing global economic recovery will strengthen world trade and therefore lend greater support to our sector, marine insurers must adapt to this changing environment if they are to survive and remain effective in the future" IUMI's total world-wide premium coverage has constantly improved and is now close to 95%.

It now includes data from all relevant marine insurance markets including Asia, Latin America and Africa. Care should be taken when making comparisons with earlier figures as coverage in those years was not as extensive. Similarly, "global" loss ratios for hull, energy and cargo do not encompass all regions and so are not true reflections of the USD 29.9bn marine market. Although the loss ratio data is reported from the major marine insurance markets (Belgium, France, Germany, the Netherlands, the Nordic countries, Italy, United Kingdom and the US), such information from Asia, Latin America or Africa is not yet available. Caution should be applied. The full presentation is



Mark Edmondson

Global ocean hull premiums down in 2015 and sector faces increasing volatility and risk, reports IUMI

Global premium income related to ocean hull insurance for 2015 was down by 8.4% compared with the previous year and totalled USD 7.5 bn. Although the global fleet continued to grow, average insured vessel values fell and this had impacted negatively on premium income.

Although global premiums fell, the industry was effectively insuring the same level of risk and this, according to Mark Edmondson, IUMI's Ocean Hull Committee Chairman, was adding significant volatility to the market which demanded disciplined underwriting. He explained:

"A detailed knowledge of risk, risk selection and risk management are always important, but in the current conditions of competitive pricing and volatility, they become paramount."

He went on to warn that: "the soft market is accentuating the skills and experience gap within the marine market and the underwriting sector in particular".

Edmondson described the current risk environment as "unhealthy" and detailed a number of factors that were currently challenging underwriters. These included the growing risk from cyber security and the increasing size and insured value of vessels, particularly containerships. The lack of available salvage equipment suitable for such large vessels was also a concern. Other factors included new propulsion systems, advanced mechanics, smart ships and extended navigation including Arctic operations.

"In an uncertain environment where margins are thin and volatility is rising, underwriters must take particular care to understand all the risks involved", he said.

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Helle Hammer

## **Maintain anti-piracy naval force, IUMI delegates urge** By James Brewer

A renewed call for the international community to maintain a vigorous stance against maritime piracy has been made at the 2016 annual conference of the International Union of Marine Insurance.

Helle Hammer, chair of the IUMI political forum, said that there had been progress in the last couple of years in fending off the threat in waters off Africa, where the European Union and Nato have deployed warships, and some shipping companies have contracted armed guards to sail on voyages. Ms Hammer said: "The industry is sending a very clear message: we certainly do need a naval force." A vote taken among the IUMI audience showed that many underwriters favoured continued strong deterrance. The shipowners back that position too, said Ms Hammer, who is managing director of Cefor, the Nordic marine insurance association.

The naval mandate expires at the end of 2016, and Ms Hammer said: "Withdrawing naval forces is going to invite that situation [of a series of audacious attacks some years ago] again and will send the wrong message to criminal gangs in Somalia."

Piracy and armed robbery at sea fell in 2016 to its lowest levels since 1995, despite a surge in kidnappings off West Africa, according to a report released in July by the International Chamber of Commerce's International Maritime Bureau.

The IMB global piracy report showed 98 incidents in the first half of 2016, compared with 134 for the corresponding period in 2015. When piracy was at its highest, in 2010 and 2003, IMB recorded 445 attacks a year.

In the first half of 2016, IMB recorded 72 vessels boarded, five hijackings, and a further 12 attempted attacks. Nine ships were fired upon. Sixty-four crew were taken hostage on board, down from 250 in the same period last year.

At the time, Capt Pottengal Mukundan, director of IMB, said: "Ships need to stay vigilant, maintain security and report all attacks, as the threat of piracy remains, particularly off Somalia and in the Gulf of Guinea."

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# Potential accumulation losses threatening the financial stability of insurance companies

Closing this year's IUMI 2016 marine insurance conference in Genova today, IUMI President, Dieter Berg expressed concern over the increasing number of large marine losses and their potential to put severe financial strain on insurance companies.

Dieter Berg

He cited the recent losses connected with the Chilean earthquake in 2010, the Japanese earthquake and tsunami in 2011 (US\$3.8 billion loss), Thai floods in 2011 (US\$2.5 billion loss), Hurricane Sandy in 2012 (US\$3 billion loss) and the Tianjin explosion in 2015 (US\$ 3-4 billion loss expected).

These marine losses were often coupled with associated major property losses. Berg explained:

"Our industry is concerned that natural catastrophes, due to climate change, are occurring more often and with greater severity. Coupled with this, globalisation and the unrelenting growth of global trade is driving an increase in the value of goods being transported by sea and an increase in the quantity of goods being stored on ultra-large container ships, or in port terminals. These have the potential to create extremely large losses".

"Recent marine losses have been very expensive for insurers and often an accumulation of multiple business lines occur which can include cargo losses, container losses, warehouse damage, destruction of automobiles, damage to pleasure craft and even fine art losses. At Tianjin, for example, around 68,000 cars were affected, i.e. a total loss or damaged, by a single explosion."

Berg explained that when large marine losses were combined with property and other losses, there was a real concern that this might overwhelm insurance companies. He called on the industry to understand, clearly, their aggregate positions and to manage their exposures by carefully modelling their risk positions.



Mike Roderick of Clyde & Co

## Time is running out to file claims against Hanjin Shipping, IUMI conference is told

By James Brewer

Shipowners, charterers, cargo interests, forwarders and other parties have been advised to expedite their claims against stricken Hanjin Shipping.

The warning comes as charterers alone are speculated to be facing losses totalling at least \$1.2bn after the South Korean line had to pull the plug on its services when banks lost confidence in its ability to repay debts.

A leading London lawyer who is monitoring fast-moving developments told delegates to the annual conference in Genoa of the International Union of Marine Insurance that time was of the essence. Mike Roderick, a partner with Clyde & Co and legal adviser to the London insurance market's joint cargo committee, delivered an update on the fate of the world's seventh biggest container line, emphasising that he was expressing personal assessments at a stage when clarification on many points were still needed.

Mr Roderick said that Seoul central district court on September 1 2016 granted what was termed a rehabilitation order to the shipping line following the collapse of talks with its banks. The rehabilitation process was something short of insolvency, but claims had to be registered by October 10 and filed with the receiver between October 11 and 25. Claims not filed would not be allowed in the rehabilitation. "If claims are to be filed, a number of documents have to be translated into Korean, and that takes time," warned the Clyde & Co expert.

On September 6, a ruling was issued by a court in New Jersey, United States, effectively to recognise the Korean court order. There have been parallel orders in England, Hamburg and Singapore, and Hanjin has indicated its intention to apply for similar procedures in other jurisdictions, the outcome of which is unknown at present.

Hanjin has ordered vessels to what it considers safe ports, or to stay offshore. Mr Roderick outlined many associated risks, such as demurrage for prolonged cargo storage, the risk of cargo detention or theft, and extra costs for shipping cargo to destination. The impact on insurance had many facets, including protecting the owners of leased containers with policies triggered by insolvency or financial default. London's Institute clauses contained exclusions for delay, insolvency and financial default but had continuing cover for delay Beyond the control of the assured.

He asked the underwriters present: "Do the cargo policies you write contain insolvency or default exclusions?" and two-thirds of the audience said that they did. In London, underwriters would have to extablish the insured was, or ought to have been, aware of the carrier's insolvency or financial default at the time of loading. Hanjin had moved into insolvency very quickly and many insureds would not have known of that. The exclusion did not apply where the purchaser had bought the cargo in good faith. Termination of contract of carriage applied where it was terminated short of destination owing to circumstances beyond the control of the insured.

What of extra expenses? The insured had to establish that the termination of voyage resulted from an insured risk. Insolvency alone was not an insured risk in the opinion of Mr Roderick, who conceded that others in the market disagreed with him.

"Whether extra expenses are recoverable depends on policy wording," said Mr Roderick. The Wall Street Journal meanwhile reported that it had seen a draft of Hanjin Shipping's restructuring proposals due to be published in November. The hoped-for plan would transform the company into a much

smaller intra-Asia line. Chartered tonnage would be returned to leading global charterers who would suffer upwards of \$1.2bn in losses. More immediately, the detailed repositioning of some 70 containerships is unclear.

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Nick Derrick

## Reduced income and challenges ahead for marine cargo insurance, says IUMI

At yesterday's IUMI marine insurance conference in Genova, Cargo Committee chairman Nick Derrick announced a reduction in global cargopremiums by 9% from 2014 to 2015, the total premium value being US\$15.8 billion.

He stated a combination of a strong US dollar and falling cargo values as the main reasons for the decline.

The UK continued to dominate the marine cargo market with a 13.3% market share (8.8% at Lloyds and 4.5% at the International Underwriting Association). China and Japan retained 9% and 8.7% market volume respectively. Nick Derrick commented: "The statistics show that marine cargo insurers are not making any money. World trade values and exports are down and the slow economic growth has created difficult market conditions. An increase in underwriting capacity is also causing concerns."

On misappropriation, he said: "There have been some serious misappropriation incidents in London and the US over the past 12 months which have resulted in substantial potential losses. This level of loss is not sustainable in the long term and misappropriation must be addressed." Derrick also commented on the ongoing Hanjin situation: "Hianjin Shipping Co filed for court receivership on the 31 August 2016 and there is a worry that other containership companies will follow. This is particularly a concern in Asia as a number of these operators are carrying substantial debt which could cause them a major problem. We are advising our clients to consult their freight forwarders to get the most upto-date picture".

The AMOS-6 satellite that was destroyed following the explosion of the Falcon 9 launch vehicle on 1 September this is also likely to impact the cargo market. The satellite had an insured value of US\$285 million dollars (insured in London) and the loss has the potential to affect rates, Derrick warned.

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**Dieter Berg** 

Explosive cocktail of challenges ahead for marine insurers, says IUMI president
By James Brewer

Marine insurers will have to deal with "an explosive cocktail" of challenges in the period ahead, Dieter Berg, president of the International Union of Marine Insurance, said in his address closing the 2016 conference in Genoa of IUMI.

Among these were the massive cargo values at risk in ports, the growth in size of containerships, car carriers and cruise liners, the risks associated with innovation and new Technologies, cyber risks, the prospect of unmanned ships, and the advent of big data.

Insurers and reinsurers were working in a market environment of narrow margins, falling profitability in nearly all lines of business, and even profitable niche lines feeling the impact of hungry competitors. The macro-economic background was of sluggish growth and weakening emerging market economies, with plunging commodity prices resulting in major container line Hanjin Shipping

becoming a prominent insolvent victim.

Insurance brokers were looking for new sources of income by combining risks in facilitation, especially for relatively small lines like marine, where "we are running the risk of losing expertise we need to serve our clients," said Mr Berg.

He urged marine underwriters to make the most of their intensive services and consultancy to ensure they were "staying relevan to our clients."

with increasing technological change, "everything seems to become more complex and more expensive."

The IUMI president said that the final 'workshop' session of the 2016 conference, looking at cargo accumulation in ports and terminals, had underlined the scale of exposures from both man-made and natural catastrophes.

This was about the need to take into account worst-case scenarios and he added:"Portfolio transparency is really vital for our business. We have to co-operate with our clients more closely to figure out what cargo is in transit and where it is stored." The use of specific marine catastrophe models would help get a much better grip on this.

Speakers agreed that the massive explosions at the port of Tianjin, China, in August 2015 had been a wake-up call for the insurance industry given the substantial loss of life and injuries to firefighters, police and nearby residents, and damage to more than 12,000 vehicles, 300 buildings and 7,500 containers.

Peter Ulrich of catastrophe modelling company Risk Management Services, underlined that vast quantities of automobiles stored in port areas had become one of the most vulnerable insured exposures globally.

Mr Berg said that ovr the past year IUMI had made considerable progress in areas including a clear focus on Asia, improved communications strategy and branding, and starting an education initiative. Mr Berg was re-eelected for a further two years as president. The 2017 conference will be in Tokyo.