Eight of the world’s top ten megacities will be in emerging markets by 2025. And, marked by rapid and unorganic growth, these sprawling conurbations will present plenty of megarisks.

INSIDE: BRIGHT LIGHTS, BIG CITIES p10
In 1984, we launched a successful mission to salvage two rogue satellites, sending a shuttle and five astronauts into orbit.

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By 2025, it is predicted that 13.6% of the world’s urban population will live in ‘megacities’, most of them in emerging markets. And with megacities come mega risks. So, what are the implications for insurers?

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### Plus: 325 YEARS OF LLOYD’S OF LONDON

From City of London Coffee House to global hub for specialist insurance and reinsurance, we bring you ten moments that ensured the market’s reputation as a pioneer on the world stage—from the San Francisco earthquake to the first cover for space satellites.
For 325 years, Lloyd’s has been a pioneer on the world stage. We’ve dealt in the most complex, unusual and extreme risks, been a powerful agent for change and an enabler of the global economy.

In this anniversary issue of Market, we celebrate that extraordinary history with ten moments that made us the world’s centre for specialist insurance and reinsurance (see insert) – from Cuthbert Heath’s unconventional new covers to kicking off the ambitious Vision 2025 programme.

Key to our vision is pursuing profitable growth in underinsured, emerging economies – not least because, in a little over a decade, they will be home to eight of the world’s top ten megacities. On p10, we look at the rapid and unorganic rise of these densely populated, infrastructure-intensive conurbations, and the megarisks they’re most vulnerable to.

We also talk to outspoken legend Robert Hiscox about why the industry should be allowed to self-regulate (p19). And, with severe hurricane activity predicted for 2013, we explore the makings of a perfect storm, plus what insurers can do to mitigate their exposure (p24).

Finally, we get to grips with a massive emerging risk issue – global food security (p30) – and investigate the audacious theft of a string of pearls in 1913 (p34).

We hope you find this issue interesting – and if you haven’t already done so, sign up to receive Market magazine or enewsletter at lloyds.com/marketmagazine

“One of the biggest threats is competition from China. They can underwrite, free of the sort of regulation we have, with strong government support.”

ROBERT HISCox
Foresight

INSIGHTS FROM THE WORLD OF LLOYD’S. BY THE MARKET, FOR THE MARKET

THE COLDEST JOURNEY: INSURING A WORLD FIRST

AS SIR RANULPH FIENNES’ TEAM CONTINUES ITS PIONEERING EXPEDITION, WE LOOK AT THE INNOVATIONS HELPING TO MITIGATE THE RISK, AND THE ROLE INSURANCE HAS PLAYED DURING THE COLDEST JOURNEY, SIR RANULPH FIENNES and his team of five explorers set off this March to conquer Antarctica in winter. Unfortunately, Fiennes had to pull out after developing frostbite, but the rest of the Ice Team has continued the arduous 2,000-mile trip. The Coldest Journey Chairman, Tony Medniuk, describes some of the technological innovations necessary for the expedition to take place – and the significance of the insurance policy, which was placed by broker JLT and 55% significant of the insurance policy, the expedition to take place – and the expertise in our Ice Team was deep and well-founded enough that they could take a hit and still be able to continue the expedition. None of us would have wanted to see that contingency invoked to ever into the mission, but it had to be.

“We required insurance as a contingent asset against two types of peril. First, we might need to invoke search and rescue costs, bearing in mind the hazardous nature of this expedition. Secondly, if for any reason there was a mishap to our kit or machinery, we had to be able to fix it and clean it all up.

“In recent times there has not been, to my knowledge, anything that contemplates an expedition of this size and scale. It has been contingent on all of the pieces coming together: getting the ship, finding the right, qualified team; finding sponsors to help us buy kit and equipment; and absolutely core to it is the insurance.

“This is the market at its best. It does this things really well. The programme is led at Lloyd’s and without a top broker and London lead, the ability to attract the co-insurance just wouldn’t have happened. They did a stellar job.”

THE JOURNEY IN NUMBERS

-89.2˚C: Antarctica boasts the lowest recorded temperature anywhere on the planet
50°C: Temperature when Sir Fiennes developed frostbite after taking off his outer gloves
6 months: How long the 2,000-mile crossing will take, mostly in complete darkness
1.5 years: “Time spent preparing for the expedition
£6.6m: How much the expedition hopes to raise for charity
Seeing is Believing

FOR MORE INFORMATION
Visit The Coldest Journey site at thecoldestjourney.org
Get regular updates on the team’s progress at facebook.com/TheColdestJourney or by following them on Twitter: @coldestjourney

LLOYD’S JAPAN GETS THE GO AHEAD ON W&I

WARRANTY AND INDEMNITY INSURANCE CAN BE AN EFFECTIVE WAY TO ‘DE-RISK’ OUTBOUND MERGERS AND ACQUISITIONS

Japanese outbound mergers and acquisitions (M&A) activity has increased steadily, in both deal volume and value, over the past three years. As indicators point to reduced domestic demand, many companies, aided by a strong yen, have attempted to derive greater revenue and profit from overseas.

Many expect this trend to continue, leading to levels of outbound M&A activity at or beyond the highs of the 1990s. In 2012, Japanese outbound M&A deals reached $110.5bn, according to Dealogic, second only to the US with $165.4bn. One of these, Japanese telecom and internet firm Softbank’s proposed takeover of US wireless company Sprint Nextel, for $21.6bn, will be the country’s largest ever overseas deal.

While many Japanese companies have learned from past experiences, for some, the different laws, culture, business environments and processes can create concern about the risk management of an international M&A deal. This is often managed through consideration, post-completion adjustments, deal warranties, escrow funds or other forms of guarantee. However, these don’t always provide reassurance that a deal can be completed within acceptable risk tolerance.

Warranty and indemnity (W&I) insurance is a way to ‘de-risk’ the transaction. It is increasingly used to identify and transfer risks to insurers, thereby giving reassurance and assisting the smooth completion of the deal.

The new W&I product license obtained by Lloyd’s Japan allows Lloyd’s underwriters to bring modern and competitive M&A insurance to Japan. Two leading underwriting teams, Beazley and Pembroke, offer significant capacity, experience and expertise in M&A. Many of their underwriters are former corporate lawyers who understand the complexity of outbound M&A transactions.
GETTING TOUGH ON FRAUD

AS THE COST OF INSURANCE CLAIMS RISES, LLOYD’S INSIGHTS INTO WHAT’S WORKING & WHAT’S NOT

FRAUD TO COUB

Insurance claims fraud has become a big issue for the industry and insurance buyers in recent years. In the UK, it is estimated to cost more than £2bn a year, up from £660m in 2000, adding an estimated £44 to each household’s general insurance costs, according to the Association of British Insurers (ABI). The impact of a tough economic climate and the involvement of organised criminal gangs – particularly in third-party motor claims – is thought to be behind the rise in fraudulent claims.

Reforms have helped to tackle the UK’s growing compensation culture, which should help deter opportunists. Recent years have seen the industry come together to fight fraud, sharing and analysing industry-wide claims data in an effort to spot suspicious patterns. Last year the ABI and City of London Police set up the Insurance Fraud Enforcement Department (IFED), which ABI members are jointly funding. Lloyd’s is soon to join. Under the agreement, managing agents will be able to refer suspected insurance fraud cases to IFED for investigation.

THE IFED’S FIRST YEAR OF OPERATION:
- Total number of arrests: 260
- Total number of cautions: 76
- Total number of convictions at court: 12
- Current number of insurers referring cases: 49
- Total value of fraud under investigation: £11m

TO READ THE FINDINGS OF THE LATEST RISK INDEX REPORT:
Download it at www.lloyds.com/riskindex

EUROPE

WHO’S WINNING THE RISK RACE?

THE THIRD LLOYD’S RISK INDEX WAS LAUNCHED EARLIER THIS MONTH AT A LONDON EVENT HOSTED BY BUSINESS AND FINANCIAL NEWS SERVICE, BLOOMBERG

In 2011, when Lloyd’s last surveyed global business leaders, their top risk was loss of customers and cancelled orders. More surprising, given the climbing levels of middle and senior management unemployment, was that in second place they put lack of available talent and skills shortages.

This year, the filtering of the much-maligned ‘two-speed’ recovery has hit business confidence in all areas of the world, with Latin America in particular taking a hit. But the new number one risk across the world? High taxation.

The Lloyd’s Risk Index 2013 discusses how the recent mood music and climate and the involvement of organised criminal gangs – particularly in third-party claims – is thought to be behind the rise in fraudulent claims. The cost of insurance claims fraud has become a big issue for the industry and insurance buyers in recent years. In the UK, it is estimated to cost more than £2bn a year, up from £660m in 2000, adding an estimated £44 to each household’s general insurance costs, according to the Association of British Insurers (ABI). The impact of a tough economic climate and the involvement of organised criminal gangs – particularly in third-party motor claims – is thought to be behind the rise in fraudulent claims.

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EUROPE

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EUROPE

ON A TALENT OFFENSIVE

BRINGING TOMORROW’S SPECIALIST UNDERWRITERS INTO THE MARKET

In his speech marking the centenary of the Chartered Insurance Institute’s Royal Charter last year, CII President Julian James acknowledged the need to boost talent in the industry and urged the market to get to grips with the recruitment challenge.

And Lloyd’s is doing just that. In support of its Vision 2025 initiative, which has a key aim of retaining, attracting and developing the best candidates from the widest talent pool, it is introducing a new apprenticeship programme for school leavers this autumn.

The programme will see 12 exceptional recruits spend 18 months working in the market, while acquiring a professional qualification. The successful applicants will undertake placements in different areas of insurance, such as claims handling, broking and underwriting in certain classes of business.

Another talent-expansion initiative for the Corporation and the market is the year-long Lloyd’s Market Professional Mentoring Network, which will see participants tailor matched according to their experience level, allowing them to develop a network of relationships, enhance skills and build their careers.

TO FIND OUT MORE:
Check out www.lloyds.com/careers

ASIA

TRUSTEES IN THE DOCK

A NEW PRODUCT COVERS DIRECTORS OF ASIAN CHARITIES AND NOT-FOR-PROFITS WHO ARE EXPOSED TO LITIGATION

The high-profile trial of six senior religious leaders in Singapore began in May, the latest in a spate of cases involving the directors of not-for-profit and charitable organisations. The six City Harvest Church leaders are accused of embezzling more than $40m to fund the pop music career of the wife of the religious organisation’s founder.

“In Singapore there has been a spate of regulatory investigations against non-profit organisations including government agencies and statutory bodies as well as charitable organisations,” says Marsh and Catlin’s Asia Pacific D&O Practice Leader, Chuan Chua. “We are seeing more of that, and in particular we are seeing this being focused on the areas of improper behaviour committed by key officers in these organisations.”

Marsh and Catlin Singapore have launched a product that tackles exposures for charities and other non-profit groups. It gives up to $40m for legal defence costs in respect of any claim alleging fraud and dishonesty – which is typically excluded under normal D&O policies. In Singapore there are more than 2,500 registered charities. Their exposure mirrors an uptick in D&O litigation in general across Asia. “I would put it down to competition for foreign investment and foreign capital that continues to flow into this part of the world,” says Chua.

“In that process, the whole notion of legal liability and corporate responsibility to various stakeholders has now been increased compared to before.”

Asia
MEGACITIES:
WITH BIG OPPORTUNITIES COME BIG RISKS
They’re attractive prospects for specialist insurers, not least in terms of large-scale infrastructure investment. But while megacities in emerging markets are poised for substantial premium growth, they’re also very vulnerable to diverse macro risks—from earthquakes to industrial accidents.

In 2007, a milestone was reached in history: for the first time there were more people living in cities than in the country. This mass migration, coupled with rapid urbanisation and explosive population growth, is a mega trend for our time—and one that’s gathering pace.

Recent United Nations (UN) research reveals that between 2011 and 2050 the world population should jump by 2.3bn to 9.3bn, with two-thirds (6.3bn) calling cities home. Populations won’t be evenly dispersed between metropolitan centres, though—they’ll be concentrated in a few sprawling conurbations.

“What we are seeing,” says Jomo Kwame Sundaram, Assistant Secretary-General for Economic Development at the UN’s Department of Economic and Social Affairs (DESA), “is the very rapid growth of megacities.”

Predictions include some 6.30 billion people, or 13.6% of the world’s urban population, living in megacities by 2025—in contrast to 3.59 billion in 2011, and just 39 million in 1970.

But what constitutes a megacity? Is it the agglomeration of a population? Population density? In the 1970s, it used to be defined as eight million inhabitants. Today, it’s ten million.

There are megacities we don’t know about yet. In China, satellite images show urban areas coming together that amount to a type of city when you look at them—but they’re not conceived of as such, because there’s not a political body overseeing them. Look at the Ruhr area in Germany, or Switzerland, which some see as one large city. Whatever your definition (here, it’s a city with more than ten million people), experts agree the real growth in megacities over the next few decades will come from dynamic emerging economies.

Swiss Re’s figures indicate that, within 12 years, eight of the world’s top ten megacities will be in emerging markets. And the UN’s DESA concurs, anticipating the biggest increases in countries such as India, China, Nigeria and Indonesia: over the next 40 years, India alone will add half a billion to its urban population. Meanwhile, in Urban World: Cities and the Rise of the Consuming Class, McKinsey suggests that by 2025, 20 megacities in emerging markets will collectively contribute $5.8tn to global growth. The majority of these—from Tokyo, Mumbai, Shanghai and Beijing, to Delhi, Calcutta and Dhaka—will be in Asia.

**INFRASTRUCTURE INVESTMENT**

The market should be buoyed by these findings, given the potential for supporting large-scale risk in the region. Indeed, the prospects in the medium term in the Asia-Pacific look bullish, with demand set to increase off the back of significant infrastructure investment.

According to McKinsey, annual infrastructure investment in cities will rise from $10tn to $20tn by 2025, with the lion’s share in emerging economies. The resulting building boom would require $80tn of construction.

Says Daniel Chan, Head of Property and Engineering Facultative for Munich Re Southeast Asia: “We see quite a few big infrastructure projects in power and energy. For example, there’s the huge metro project in Indonesia, which is technically very challenging and caters to our risk appetite really well.”

Port developments, like that of Boom Baru in Indonesian Sumatra (see panel, p15), present a lucrative prospect too. McKinsey anticipates that cities of the near future will require two- and-a-half times the level of today’s port infrastructure.

Rainer Egloff, Emerging Risks Manager at Swiss Re, also flags up opportunities through the supply chain, for political, terrorism and business interruption covers, and for broader co-operation and innovation. “In the future, it’s possible to think of having a risk manager for a city analogous to a country risk manager. There are so many single risk transfer and purchase risk transfer mechanisms in play. I see cities banding together on a global level for knowledge solutions such as water management plans. And insurers and reinsurers can be very important in these alliances.”

In fact, this is already happening: in the wake of Superstorm Sandy.

**MEGACITIES AND BEYOND: GLOBAL URBAN GIANTS—PRESENT AND FUTURE**

(Population in millions)

<table>
<thead>
<tr>
<th>2011</th>
<th>2025</th>
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<tbody>
<tr>
<td>Tokyo, Japan</td>
<td>34.2</td>
</tr>
<tr>
<td>Delhi, India</td>
<td>21.9</td>
</tr>
<tr>
<td>Mexico City, Mexico</td>
<td>20.4</td>
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<td>Dhaka, Bangladesh</td>
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<td>Kolkata, India</td>
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**PREMIUM PROSPECTS**

A number of countries offer distinct encouragement for the international (re)insurance market, with Indonesia’s property casualty primary insurance volume set to more than double in size from almost €3bn in 2012 to €7.3bn in 2020. Average growth rates of other emerging countries—such as Vietnam, the Philippines, Malaysia and Thailand—range between 6% and 8%. Overall, premium income for the insurance industry in the Asia-Pacific will double by 2020, according to a study by Munich Re’s Economic Research Department. Unsurprisingly, the reinsurer expects China to evidence the highest increase in primary insurance premiums worldwide until 2020, with an additional €425bn.

**SOURCE: UNITED NATIONS**
Rainer Egloff, Emerging Risks Manager, Swiss Re, says: “In these explosively growing urban centres, the planning is usually behind the growth process, with a lot of crowding and congestion, poor air quality, pollution and other issues.”

This is largely attributable to the high concentrations of people, value and infrastructure in confined areas. But it’s also because many of these mega-urban regions have grown rapidly and unorganically, leaving them more vulnerable. Explains Egloff: “In these explosively growing urban centres, the planning is usually behind the growth process, with a lot of crowding and congestion, poor air quality, pollution and other issues.”

As attractive as all of this is for the international (re)insurance industry, the loss potential in these megacities can be enormous — whether from natural catastrophes, epidemics, or, say, accidents in the industrial sector.

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The main risk associated with megacities, though, is one of accumulation. Because of the close interdependence between waves of goods, finance and information in today’s global cities, a single loss occurrence can have far-reaching negative consequences across numerous economic sectors.

Says Bernd Kohn, CEO of Munich Re, Southeast Asia: “For us as a risk carrier, the accumulation of value is of huge interest, and we invest a lot in our pricing models to manage it.”

Munich Re’s report, Megacities – Megarisks, cites Tokyo as an example of a peak accumulation scenario: “Today, a severe earthquake in the Tokyo-Yokohama conurbation would result in hundreds of thousands of fatalities, damage running into trillions of dollars, and global economic repercussions.”

Earthquakes can be particularly devastating to megacities because of their intensity and the geographical extent of damage they inflict. The Kobe quake of 1995 caused economic losses of well over $100bn, and more recently the Great Tohoku earthquake of 2011 in Tokyo resulted in insured losses of some $25bn.

Transport structures are especially vulnerable here: according to reports, the earthquake forced the suspension of trains in the Tohoku and Tokyo areas, including bullet train services. Although most services resumed again soon after the quake, the volume of trains was reduced for some time due to electricity shortages. A further, stark example was the East Japan Railway (JR East) property programme’s $1bn yen ($910m) loss following the Tohoku earthquake — from property damage and disruption (the programme covered both property damage and business interruption).

Temblor Troubles

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Other Nat Cats

Their very location means megacities are virtually predestined to suffer some form of natural catastrophe. Says Swiss Re’s Egloff: “A large number of these agglomerations are conveniently situated near good transport links – on the coast, for example – and if there is a rise in sea levels, they will be directly impacted.”

Kohn picks up on the point, using Indonesia as an example: “Property cat programmes are a huge feature, and reinsurers are assessing what is being done by the government in terms of physical risk and flood management. Jakarta, like Bangkok, is sinking every year and becoming more prone to flooding. It’s being modelled as a major potential catastrophe risk.”

Another observed climate effect is that megacities are heat islands, with the mean temperature at the centre up to several degrees Celsius higher than in the surrounding countryside. This is most pronounced when there are heat waves, because the normal counterbalancing night-time cooling is less effective. During the European summer heatwave of 2003, the number of people who died in cities was vastly disproportionate to the population as a whole — despite the greater availability of healthcare services in urban areas.

Palembang, Indonesia: Refining Risk

Often cited as one of the future megacities to watch, Palembang is the capital city of the South Sumatra province in Indonesia. Located on the Musi River banks on the east coast of southern Sumatra island, it has an area of just over 400 sq km and is currently the second-largest city in Sumatra after Medan, and the seventh-largest city in Indonesia — though this position could be set to change dramatically.

According to Gan Kwue Lin, Client Portfolio Manager for Munich Re in Indonesia: “There are currently policy discussions ongoing in Indonesia about spreading the economy of the country more evenly, shifting it across the country from Jakarta to Sumatra. And Palembang is the capital of Sumatra, so the potential for it to become an economic powerhouse is there. And there are some exciting projects which will help facilitate this, such as the Surumandra Bridge, which is more than 2,000 km long and connects Jakarta and Sumatra.”

Some of the greatest potential for underwriters relates to Boom Baru, Palembang’s largest port and a deep water port situated on the banks of the Musi River. Boom Baru has been a major driver of the economic growth of the province by attracting large oil refineries, rubber plants, textile mills, fertiliser factories, and food-processing plants, making it an extremely attractive prospect for industrial property players in particular. In the long term, however, the hope is that this emerging megacity can offer a broader appeal. Gan Kwue Lin notes: “We’re hoping to see casualty develop but at the moment it’s not that developed as it’s still not really in people’s minds. It’s a cultural issue: it’s very much part of the mind-set in Indonesia not to buy casualty products.”
SANTIAGO, CHILE: CONSTRUCTION OPPORTUNITIES

Founded in 1541, Santiago has been the capital city of Chile since colonial times, and is also its industrial and financial centre, generating 45% of the country’s GDP. Santiago is considered a mature megacity given its 2 million population, its large and complex public utility network and its size. The city’s large and complex public utility network is believed to have exacerbated the risk significantly.

Other weather-related risks include hurricanes and high-intensity storms, which, even when mild, can lead to severe losses. Thus, when Typhoon Nari passed over Taipei in September 2001, albeit with relatively low wind speeds, it caused insured damage of around $500m. Heavy rains left the city’s underground railway stations flooded after the pumping system failed, paralysing its most important traffic artery for weeks. The Port Authority of New York and New Jersey, meanwhile, said 25% of trucks servicing its ports, and as many as 2,000 containers, were damaged by Superstorm Sandy when, in 2012, 146 storm surges and 90 mph winds toppled stacks onto each other. Rail tracks were also washed out, and cranes and cargo-handling equipment broken. Insured losses from Sandy stand at $22bn.

INDUSTRIAL ACCIDENTS

Conurbations in emerging markets are prone to industrial hazards too. The biggest civil industrial tragedy ever occurred in 1984, when a toxic gas leak from a pesticide plant in the Bhopal district of India killed up to 20,000 people. A settlement of $470m was agreed, $200m of which was insured – but the consequences could have been higher had Bhopal been a megacity. Also in 1984, a fire ripped through a propane and butane storage facility within the municipal area of Mexico City. Since the early 1960s, 40,000 people had moved into the originally uninhabited area surrounding the plant – with the consequence that more than 500 died. A decade later, Mexico would again grab headlines after explosive substances spread through the sewers of Guadalajara, eventually destroying entire streets.

Yet even here – a megacity in stasis – the (re)insurance market, and Lloyd’s in particular, has been able to help mitigate risk. As civil unrest has increased in recent years, there has been an increase in demand for insurance against damage to property, and business interruption from social perils such as riots, strikes, insurrections and coups d’état.

Michael Burke, Liberty Syndicates’ Class Underwriter for War and Terrorism, Fine Art and Specie, comments on this uptick in political violence enquires in the past two years: “The loss occurrences for clients that didn’t necessarily have the cover from their property all risks insurers forced them down the line of buying a comprehensive political violence policy. And that’s from individual clients, such as a single hotel owner in Cairo, to the major manufacturers with worldwide assets. It’s across the whole spectrum.”

“Jakarta, like Bangkok, is sinking every year and becoming more and more prone to flooding. It is being modelled as a major potential catastrophe risk”

BERND KONH, CEO, MUNCH RE SOUTHEAST ASIA

THE FINAL ANALYSIS

Despite substantial premium growth expectations across various classes of business, emerging markets megacities are likely to be under-insured – especially when it comes to natural catastrophes. But there are plenty more risks for which to deliver bespoke products. A cautionary word, though, because the hazards that go hand in hand with these drivers of future economic growth aren’t ordinary risks – they’re megarisks. And their complexities pose a challenge – not only for insurers, but aid agencies too.

Most humanitarianists are not trained to respond efficiently to disasters in built-up, densely populated areas, explains international disaster relief charity, RedR. Which is why Lloyd’s Charities Trust is supporting RedR’s three-year project that aims to fill the gaps in specialist knowledge, skills and systems required by aid agencies to deal with large-scale urban emergencies. ■

CAIRO, EGYPT: POLITICAL VIOLENCE POTENTIAL

The capital of Egypt and a cultural centre of the Arab world, Cairo is the largest city in the Middle East and Africa, and host to several key companies. These include engineering multinational Orascom and the Tobalet Moesta Group, one of the largest conglomerates in the region. Yet Cairo remains one of the greatest examples of untapped potential among the world’s megacities. That said, if it manages to negotiate its recent political and economic stagnation, the possibilities for growth in one of the powerhouse regions of the region are impressive. An indication of what could be achieved was the surge in industrial and commercial activity from 2004 to 2008, when the country adopted an aggressive policy of economic reform intended to attract foreign investment and facilitate GDP growth. Despite such economic acceleration, Cairo’s recent history has been more troubled, however. After unrest erupted in January 2011 as the first wave of the ‘Arab Spring’, the Egyptian Government drastically increased social spending to address public dissatisfaction, with political uncertainty reducing the government’s revenues. Tourism, manufacturing and construction have been among the hardest-hit sectors of the Egyptian economy.

Yet even here – a megacity in stagnation – the insurance market, and Lloyd’s in particular, has been able to help mitigate risk. As civil unrest has increased in recent years, there has been an increase in demand for insurance against damage to property, and business interruption from social perils such as riots, strikes, insurrections and coups d’état.
On 15 February, a meteor exploded over the Russian city of Chelyabinsk. The resulting shockwave injured more than 1,000 people and reports suggest losses will top $30m. However, according to Lloyd’s managing agent QBE, this event was ‘relatively small’. So how concerned about meteors should the insurance world be?

Simon Webber, Head of Exposure and Catastrophe Management at QBE, says that there are three categories of meteor strike. One is the micro category, where space debris enters the atmosphere and either burns up or hits the ground with minimal impact. The second is the mid-range category. Chelyabinsk is at the small end of this. At the larger end is the Tunguska incident of 1908, when the air burst of a large meteor over central Siberia created a blast equivalent to 1,000 times that of the nuclear bomb dropped on Hiroshima in 1945. A third-category event would be comparable to the one that wiped out the dinosaurs 65 million years ago.

With the first level being too small to cause serious damage and what Webber describes as the ‘dinosaurs killer’ too big for the planet to survive, insurance can only concern itself with the mid-range level. RMS has found that a Tunguska-sized event probably had a 500-year or 1,000-year return period worldwide. Chelyabinsk, meanwhile, may have a 100-year return period. As for losses, Mair-Wood says: “A Chelyabinsk-size impact might have a 1% chance of causing $1bn of economic loss worldwide and the Tunguska-size impact might have a 10% chance of causing $1bn, and 5% chance of $100bn.” That would be a $500-year return period loss of $1bn and 20,000-year return period loss of $100bn worldwide. He adds that these are economic losses, of which about 20% might be insured.

Dorian Blake, Head of Underwriting Review at QBE, concludes that while severe meteor strikes are extremely rare, their potential severity means we can’t ignore them. “They should form part of any insurer’s general risk management strategy,” he says. “Insurers must be aware the risk exists, assess and quantify it, and then think about whether it is tolerable.”

Blake adds that insurers can mitigate exposure through reinsurance or other forms of cover. However, he admits that, “if we are talking about a single insurer facing an $80bn loss, it almost certainly would not survive.” Then again, “if that’s only going to happen once every few thousand years, is it worth preparing for? The truth is that insurance is generally not geared up or capitalised for 1,000-year plus events.”

Hélène Galy, Head of Proprietary Modelling at Willis, says: “These incidents are considered so rare that there has been no real demand for modelling. Ironically, we know more about the bigger ones that could wipe us out.”

Robert Mair-Wood, Chief Risk Officer, says: “There are no particular reasons why any one location is more or less likely than another to have an impact. So the modelling is fairly straightforward in terms of probability and size of impacts.”
Robert Hiscox’s relaxed demeanor contrasts starkly with the news he delivers as soon as we meet in the atrium of the Lloyd’s building. He has been in Accident & Emergency all weekend following a hunting injury sustained by a relative. Thankfully, it emerges, the accident was a minor one.

It certainly took resolve and a willingness to break the mould when, as Deputy Chairman of Lloyd’s from 1993 to 1995, he helped shepherd the organisation through a challenging reconstruction and renewal period – championing the introduction of corporate capital that continues to reinforce the market’s strong financial footing.

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Clearly, Hiscox is a man who knows how to grow a business in tough conditions. Which is why – in risk-averse and economically depressed times – we asked the sprightly 70-year-old former Chairman of the eponymous insurer what the biggest issue for the sector will be in coming years.

And he is typically unequivocal: regulation, and in particular regulation that prevents insurers from taking risks.

REGULATION STIFLES RISK-TAKING

“Regulators are obsessed with taking the risk out of insurance, which is a risk-taking business,” says Hiscox. “In the old days, if there was trouble somewhere in the world – say a war or terrorism – we were there. We were creative and wrote policies on the spot. I felt like a buccaneer and I could insure anything, thanks to being backed up by Lloyd’s.”

In today’s more tightly regulated environment, he says, the London market is different: “What I love about Lloyd’s is its bravery in underwriting. But now, due to regulation, I question whether there is that scope for creativity.”

The main regulatory offenders for Hiscox all emanate from the European Union: the Solvency II directive, EU employment regulations and the proposed financial transactions tax. In fact, Hiscox says he wants the UK to leave the EU and has added his name to a list of 500 business leaders behind the Business for Britain campaign. The group is urging the government to repatriate powers from Brussels.

Hiscox’s main gripe with the UK’s membership of the EU is what he sees as the country’s resulting lack of control over its own destiny. “I believe you should never get into a situation where you can be brought down by others. If you’re a business doing well, why tie yourself to other companies that aren’t?”

In the UK, Hiscox believes supervision of the insurance industry will be equally challenging for the sector in the years ahead. “At Hiscox we’ve spent our lives assessing risk. But then the [former] Financial Services Authority (FSA) told us we should have a risk officer. They said: ‘If your business is risk, why don’t you have a risk structure?’ Our whole life is risk; we know what we’re doing.”

Indeed, Hiscox’s decision to choose an insider – former Chief Underwriting Officer Robert Childs – as his successor was thought by some to run counter to the FSA’s preference for firms to bring in fresh talent. “The FSA liked you to appoint outsiders,” he says. “But it’s not true to say I defied them.” The very fact that Childs has been with the firm for more than 20 years, Hiscox says, makes him ideal to take the helm.

Hiscox would like to see the UK’s various organisations, such as the Association of British Insurers and the Chartered Insurance Institute, come together to form a self-regulatory body. But with little hope of this anytime soon, insurers in the West face a growing challenge from the developing world. “One of the biggest threats is competition from China,” says Hiscox. “They can underwrite, free of the sort of regulation we have, with strong government support.”

How best to respond, then? “Lloyd’s must maintain its distinctiveness,” he says. “Its uniqueness is what keeps people coming here. It is also essential for Lloyd’s to have hubs in different timezones to compete with burgeoning competitors. To tackle the regulatory burden, he advises more lobbying at government level. Hiscox, meanwhile, will remain with his firm as honorary President – championing the right to take risks.

“In the old days, we were creative and wrote policies on the spot. I felt like a buccaneer and I could insure anything, thanks to being backed up by Lloyd’s.”

FOUR THINGS YOU DIDN’T KNOW ABOUT ROBERT HISCOX:

He’s happy to be standing down because...

“The 90-tonne millennium arch by Andy Goldsworthy. People can’t believe how big it is.”

If he hadn’t gone into the family business he would have...

“If you’re a business doing well, why tie yourself to other companies that aren’t?”

The closest he’s come to dying is...

“Being charged by a buffalo in Africa. It was the most exciting moment of my life.”

The most surprising item in his art collection is...

“Run a construction company. I’m happy on a building site making beauty out of chaos.”

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There have been a number of high-profile marine wrecks in recent years: the Napoli in the English Channel; the Rena, run aground off New Zealand; and the Costa Concordia, which foundered off the coast of Italy in 2012. The cost of removing these wrecks is spiraling – in part due to increasing vessel sizes and growing cargo volumes, but also because of the inevitable global media coverage and environmental lobbying that accompanies them.

To find out more, download Lloyd’s report, The Challenges and Implications of Removing Ship Wrecks in the 21st Century. At www.lloydsonline.com/riskinsight
Professor Mark Saunders and Dr. Adam Lea of Tropical Storm Risk.com (TSR) at University College London have an enviable reputation for forecasting tropical storms. In April 2005, their predictions for the coming hurricane season were sent to a contact in the British Consulate in Houston, Texas. The Consulate later earned praise for its preparedness to help British citizens during Hurricane Katrina, one of the strongest storms to impact the coast of the United States during the last 100 years, and which caused devastation along the central Gulf Coast states.

This April, TSR said: “Based on climate signals, Atlantic basin tropical cyclone activity is forecast to be about 30% above the 1950-2012 long-term norm.”

Their announcements have since been followed by alerts from Weather Services International, which predicts “16 named storms, nine hurricanes and five intense hurricanes” for 2013, consistent with TSR predictions.

Warmer Oceans, Stormier Conditions
Sea surface temperatures in the North Atlantic are also on the rise. Research published in Nature Geoscience in 2012 by Professor Rowan Sutton, Director of Climate Research at the UK’s National Centre for Atmospheric Science, suggests that the UK’s recent run of record rainfall is influenced by a major warming of the North Atlantic Ocean, which started in around 1996. It may be significant that the TSR forecast for 2013 is for increased Atlantic cyclone activity but near-normal Northwest Pacific typhoon activity.

A warmer ocean is well known to contribute to stormier conditions. The last time the Atlantic was this warm (1931-1960), it produced a run of wet summers and severe storms, in particular the 1953 storm, which caused nearly 500 deaths in the UK and over 1,800 in Holland. The question is whether the current spell will also last 30 years.

Many reports suggest the climate is changing, with the most detailed findings for the second half of the 21st century emerging out of the PRUDENCE Project, completed in 2004 and involving universities from across Europe and Scandinavia. The main predictions, all of which have since occurred, include:

- Increases in winter rainfall in Central and Northern Europe and decreases in the South.
- Major increases in summer rainfall in North-East Europe and decreases in the South.
- Longer summer droughts in Mediterranean countries.
- Winter storms: extreme wind speed increases between 45°N and 55°N.

Risk Factors
One thing all researchers seem to agree on is that windstorm hazard is likely to become more severe. So, what about the risk of damage? When assessing any type of physical risk, it’s crucial to remember that hazard is just one component. The others—exposure and vulnerability—are as important. The Crichton Risk Triangle (“Crichton, 1999) has been used by insurance catastrophe modellers for many years and suggests that the amount of risk...
The Braer storm, by contrast, struck unpopulated areas in Scotland, so exposure was low. Compare Shetland with Shanghai in China. The construction of the Three Gorges Dam has meant a reduction in silt flowing down the Yangtze River, which had previously been deposited at its mouth. The silt had helped to protect Shanghai from storm surges, but is now gradually disappearing. Also, the area to the north of the city, which is ultra-exposed to hurricane damage and was previously undeveloped, has now been built on with high-density, high-value properties – so exposure has grown massively in just 20 years.

After Hurricane Hazel in 1954, major reductions in exposure were introduced in Ontario, Canada. Properties in flood hazard areas were bought by the government and demolished, with the land returned to its natural state. The flood defence on one bank of the Thames River in the centre of London, Ontario, is no longer needed while the opposite bank is now an attractive city-centre park.

Flooding is often a major factor in the damage resulting from hurricanes. Swiss Re estimates that only half of the damage caused by Superstorm Sandy was wind damage. Huge storm surges can occur too – for example, Hurricane Gilbert in 1988 produced 100mph winds and a 5.8 metre storm surge. It killed 318 people and devastated Jamaica. Flooding caused by typhoons is a problem in countries such as Japan, where government figures show that, after the Naka River and Kokubu River floods of 1998 and the Fukushoka floods of 1999, half of the cost of the floods consisted of repairing the flood defences themselves.

Even where exposure remains high, risk can be reduced by reducing vulnerability.

VULNERABILITY

Hurricane Andrew in 1992 generated a sea change in attitudes to vulnerability in the US. In its day, it was the costliest storm ever, but it is now ranked fourth. Thanks to an effective warning system, the death rate was low at 43 people, but so many houses lay in its path that a sustained wind speed of 145mph and a 5-metre storm surge caused more than $26bn in losses at 2012 prices. The record surge from Superstorm Sandy affected expensive real estate in Manhattan, New Jersey and Long Island.

If more storms track south of 55°, as predicted, this could mean big increases in damage because of the exposure of vulnerable property in continental Europe.

depends on the interaction of all three factors. If any one factor can be reduced, then risk can be reduced.

HAZARD

The power of windstorms is impressive. The University of the Highlands and Islands (UHI) in Stornoway, Western Isles, has been operating wave measurement buoys for two years off the west coast of Scotland. During a storm this February, record wave heights of 23m were achieved.

If wave power machines had been installed at the time, UHI calculates the electricity generated that day could have exceeded that of 120 modern nuclear power stations. In general, the lower the pressure, the more severe the windstorm. The wind was so fierce during the Braer storm of January 1993 that the Lerwick coastguard’s Land Rover, fully laden, was blown over a cliff. We don’t know how fast the wind was because both the harbourmaster’s and the coastguard’s anemometers were blown away. However, it can be deduced that it was more than 170mph – the most powerful storm previously recorded in Shetland. Losses were trivial, though. Even though it may have been far more severe than Sandy or Katrina, the Braer storm caused little damage. The answer lies in the other sides of the risk triangle: exposure and vulnerability.

EXPOSURE

Both Sandy and Katrina affected areas with high exposure in terms of population density and property value. Sandy affected nearly 1,000 miles of coastline, a bigger area than any previously recorded hurricane in the US. Not only that, but it produced a record storm surge of 4.2 metres in central Manhattan. The surge also affected expensive real estate in New Jersey and Long Island – not to mention the disruption caused by the closure of a major airport. As with Katrina, much of the damage was due to flooding in the low-lying coastal zones.

The Braer storm, by contrast, struck unpopulated areas in Scotland, so exposure was low. Compare Shetland with Shanghai in China. The construction of the Three Gorges Dam has meant a reduction in silt flowing down the Yangtze River, which had previously been deposited at its mouth. The silt had helped to protect Shanghai from storm surges, but is now gradually disappearing. Also, the area to the north of the city, which is ultra-exposed to hurricane damage and was previously undeveloped, has now been built on with high-density, high-value properties – so exposure has grown massively in just 20 years.

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After Andrew, steps were taken to make Florida’s buildings more resilient to windstorm by raising standards and giving better training to building inspectors. These measures have now been extended nationally under the Fortified programme, managed by the Insurance Institute for Business & Home Safety. It has guidance for retrofitting existing residential structures, including the modification of vulnerable areas such as roofs and gable walls.

In Australia, the insurance and banking industries have gone further. When government ignored their pleas for more resilient building standards, the finance sector simply developed its own – known as ‘blue book’ standards. Banks stopped giving mortgages on residential properties that didn’t meet these standards and insurers would not insure them. Despite the government’s continued updates of its own unsatisfactory standards, these were universally disregarded by the construction industry. There is much to be said for a similar approach being taken elsewhere.

Human vulnerability can be reduced by effective early warning systems. However these are very dependent on a good communications infrastructure and this is not always available in less developed countries. For example, Hurricane Mitch struck Honduras in 1998 with very little warning to the people living there. Conservative estimates suggest that 20,000 people died, and a further two million were left homeless. Yet the hurricane is estimated to have cost only around $2bn at 1998 prices.

It has also been suggested that underwriters should beware a ‘black swan’ event, defined by Nancy Green, Executive Vice President of AON Risk solutions, as “a highly improbable occurrence with three characteristics: • It is impossible to predict. • It carries a massive impact. • Its shock value is stunning because people could never conceive of such an event occurring.”

Green’s examples include the September 11 attacks, the 2008 credit crisis, the BP Gulf oil spill in 2010 and the 2011 Japan earthquake.
THE COSTS
To predict the cost of a hurricane scenario, it is necessary to obtain data on mean loss ratios for different severities and locations. In the UK, for example, the author set up such a database at Aberdeen University in 1998 using claims data from the leading UK insurers (Loss Prevention Council report LPR 8). This database shows that in the UK, windstorm mean loss ratios depend almost entirely on the relevant building standards, which vary by location and date of construction. Thus, the most vulnerable homes in the UK are in the south of England and built after 1971. A storm in October 1987 in England was not nearly as severe as some of those experienced in Scotland. But because it tracked across the south of the country where exposure and vulnerability are high, it was the most damaging since 1953. The Building Research Establishment (Report 138) found that most of the damage was to gable walls caused by failure of prefabricated roof trusses. As more houses are built with prefabricated trusses, the costs of successive storms in England could increase.

OUTLOOK
Despite the Fortified programme, the US remains the region most vulnerable to hurricane damage. Of the 40 biggest insurance losses recorded since 1970, 20 were from hurricanes or tornadoes that struck the US. Aon’s Global Risk Management Survey currently ranks weather and natural disasters at 16 on its list of risk concerns facing companies, but projects this will jump to ninth place in the next three years. In the survey, Gail McGovern, President and CEO of the American Red Cross, points out that half of Americans live on or near the coast, where they are vulnerable to hurricanes, storm surges and other weather-related disasters – and that this figure is expected to increase to 75% by 2025. In the Far East, an increasing population density, especially near the coast, is likely to be vulnerable to storm surges. Flash floods will remain a major problem in Japan due to the topography and population densities. Japan has now changed its policies to promote sustainable flood management, which should reduce the problem over time.

In Europe, if more storms track south of 55°, as predicted, this could mean big increases in damage because of the exposure of vulnerable property in continental Europe. Indeed, a 2013 disaster scenario used by Lloyd’s predicts a potential loss of €23bn should such a storm hit England, France and Germany. Interestingly, seven European windstorms appeared in the top-40 most costly insurance losses since 1970 – all of them south of 55° latitude.

WHAT CAN INSURERS DO?

- Help build more resilient communities by working with policymakers to encourage customers to adopt risk-mitigating measures such as ‘code plus’ standards for new building and retrofits.
- Incentivize policyholders to take risk mitigation measures through reduced premiums – for example, lower premiums could be offered to homeowners who install fire-resistant, non-wood shingles in fire-prone areas. Insurers could also encourage policyholders to share a greater proportion of risk by offering policies with higher deductibles. This will provide a financial reason to implement risk mitigation measures in order to keep losses as low as possible.
- Explain to customers the advantage of retrofits in hazard-prone areas and consider offering home inspections / retrofit recommendations.
- Share findings on weather-related catastrophe risks more widely with government researchers, and advocate additional data collection and development of tools that will benefit underwriting, risk mitigation and adaptation planning.
- Work with policymakers to improve hazard mapping and data quality.

DOWNLOAD THE REPORT, HURRICANES AND LONG-TERM CLIMATE VARIABILITY, AT WWW.LLOYDS.COM/HURRICANES

WHEN THE LIGHTS GO OUT

Electricity shortfalls, solar storms, earthquakes... business interruption from blackouts can wreak havoc through the supply chain

Britain faces a looming electricity shortage and could be hit by 1970s-style blackouts if nothing is done to increase supply. Around a fifth of Britain’s power plants are set to close by 2020 as European environmental legislation curbs electricity supplies from polluting coal and oil plants. UK energy watchdog Ofgem and utility company SSE have voiced concern over future electricity shortfalls. With fewer power plants, spare capacity could tighten to as low as 4%, compared to 14% at the moment.

“The government is significantly underestimating the scale of the capacity crunch facing the UK in the next three years and there is a very real risk of the lights going out as a result,” said SSE Chief Executive, Ian Marchant.

SOLAR STORMS
Electricity networks are also vulnerable to solar storms. Swiss Re has considered a scenario of a geomagnetic storm over North America, with the potential to affect 120 million people and cost the economy $1trn.

There are plenty of historical examples of disruption to electrical transformers and grids from solar flares, according to a Lloyd’s report on the impacts of space weather on earth. The issue came to prominence in March 1989, when the power grid in Quebec failed in 92 seconds during a huge magnetic storm. It took nine hours to restore normal operations, during which time five million people had no electricity, and businesses across Quebec were disrupted.

Cyprus, meanwhile, experienced rolling blackouts in 2011 after an explosion tore through the Vassilikos power station, which provided close to half of the island’s electricity. The blast was caused by containers of nitroglycerin and gunpowder detonating after resting in the sun at a naval base. Forced to import energy, the island’s economy suffered.

BEWARE THE DARK SIDE
If blackouts are to become a feature in the future, they will have a profound impact on business. The Tohoku earthquake and tsunami in March 2011 showed how businesses and supply chains can be disrupted by power cuts. Several Japanese prefectures were hit by rolling blackouts in the aftermath of the disaster and Level 7 meltdowns at the Fukushima nuclear reactor.

A proportion of this disruption was not insured. This was because contingent business interruption (CBI) policies were not triggered if physical damage had not taken place. “There were instances where companies physically weren’t damaged at all but were effectively down, because their utility company was down, so there was no power coming,” says Tom Teixeira, a partner at the supply side, but because the utility company was down, there was no power coming,” says Tom Teixeira, a partner in the global solutions consulting group at Willis. “There was disruption because there was logistical interference. So, for instance, they couldn’t ship workers in or out of the site.

“A lot of companies would have had [insurance] protection if there had been a lack of power to their own operations, but they hadn’t really considered the scenario of the supplier not being able to produce because they weren’t getting the power.”

Only 20% to 25% of business interruptions, such as supply chain disruptions, are related to physical loss, points out a Chief Risk Officer Emerging Risks Initiative paper, Power Blackout Risks. Therefore organisations should be aware they may be exposed to significant uninsured losses, triggering demand for new risk-transfer solutions related to power blackout risks in the future.

Since the Japanese earthquake some supply chain insurance products have been developed, triggered by non-physical business interruption, and the market is growing. Limits of €25m to €100m are already available for stand-alone CBI covers and pricing is based on the scope of coverage (such as the number of first-tier suppliers covered).
The recent horsemeat scandal put food security towards the top of the news agenda. But with the world population forecast to hit nine billion by 2050, this is just one facet of a huge global risk issue. And insurers have a role to play—in helping to manage the risks facing the food-growing, processing and distribution industries through the supply chain.

**Horsegate**

Horsegate is the name given to the horsemeat-in-beef scandal that galloped through Europe’s food production and distribution sectors during the past 12 months. And it looks set to whip up the biggest shake-up in food security since the mad cow disease outbreak in 1984.

Horsegate exposed the lack of controls in supermarkets and food processing firms. “It started in Ireland and then the UK, and then we pointed the finger at Polish and Romanian suppliers,” says Professor Chris Elliott, Director of the Institute for Global Food Security at Queen’s University Belfast. “But actually it was someone in the middle of the supply chain in Holland doing it.”

Elliott believes firms face two choices: simplify the supply chain for their meat products—often with 12 or more links for a single product—or introduce new checks and testing at each and every stage. Both are expensive options.

But the consumer preference for locally sourced food means the safe money is on supermarkets shortening their supply chains. Says Elliott: “For the first time in living memory, consumers are starting to ask ‘did this come from a local farm?’. I would expect to see a blossoming of artisan food producers.”

Supermarkets are already rethinking how they sell meat. One possibility is to employ old-fashioned butchers supplying locally sourced meat, rather than the aisles of pre-cut cellophane-wrapped cuts and bags of mince.

**Supply Chain Contamination**

Elliott points out that the kind of contamination seen with Horsegate has been around for years. “Wherever there’s an opportunity to make a quick buck, the human race will take it.”

In this case, meat suppliers and food manufacturers were blamed, but it was also supermarkets squeezing prices that led to the contamination. It became impossible to provide pure beef at the prices the supermarkets had set. Even so, Tesco has said that the result of Horsegate will likely be that people pay a higher price for their food.

In Germany, meanwhile, competition from a new buyer caused significant accidental contamination in the arable sector—specifically wheat. Biodiesel producers were prepared to pay more for Bavarian wheat than the traditional food producers. With virtually all the local wheat sold at a higher price outside the food chain, dairy and livestock farmers turned instead to wheat from Serbia.

However, a warmer, drier summer—possibly the result of climate change—meant a fungus not normally found as far north as Serbia grew in the wheat, releasing a poison called aflatoxin. Untested, the contaminated wheat was mixed into animal feed and fed to cattle on 4,000 farms. They supplied milk to 35 dairies. All the farms and dairies had to be closed and quarantined, with thousands of litres of milk recalled. That recall extended to the products to which the contaminated milk was added.

There is little doubt insurers can help companies manage these growing risks by developing risk management and risk transfer solutions along the food supply chain. The winners will be those prepared to innovate and adapt. »

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**Words by Chris Wheal**

**Illustration by Angus Grieg**

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**FOOD SECURITY RISKS**

**CLIMATE CHANGE**
In Somalia and the DR Congo, already vulnerable food security has been worsened by drought and the ensuing food crisis. In 2010, Russia banned grain exports after severe drought and wildfires ruined 10m hectares of grain.

**FOOD RIOTS**
During the 2007-2008 food crisis, food riots broke out in more than 30 countries, from India and Morocco to Mexico and Argentina.

**FOOD PRICE VOLATILITY**
In 2009, the Philippines Government panic bought 1.5m tonnes of rice, equal to 8% of annual international grain trade. Coupled with export restrictions, this hoarding forced up world food prices.

**MARKET SPECULATION**
Unregulated speculation on world commodities markets can add to price volatility in agricultural commodities, with ruinous consequences for the lives of smallholder farmers, and purchasing power of those in developing countries.

**SUPPLY RISKS**
Brazil, Argentina and the US produce 90% of global corn and soybean exports. While only 3.6% of global rice exports come from China, fluctuations in its exports could have a significant impact due to the thinning world rice export market.

**PRODUCT INNOVATION**
Aquaculture provides an example of how insurers can make a splash. Paddy Secretan is Managing Director of Aquaculture Underwriting Management Services (AUMS). He first wrote an aquaculture insurance product in Lloyd’s back in 1973. He says insurance in the sector is about to go through a sea change, from insuring a species you can count – the number of fish in a lake – to something more akin to crop insurance, looking at yield. This will open up the massive international aquacultural market for shellfish production, for example.

“The role insurance is going to play is going to change in the next year or two,” says Secretan. He flags up the importance of the shrimp industry in the Far East, plus farms for mussels and oysters. “Farming shrimps is analogous to farming corn,” he says. “You put a lot of small things in and a few months later either you have a lot or you have none. You can count them like you can count salmon or trout.”

Secretan explains that traditional insurance in the sector has covered fish farms, where you can quantify the damage after an incident – water temperature change, pollution, plankton contamination and so on. The insurer can count the number of dead fish and compensate accordingly. They can also exclude certain risks. The new markets need a new way of thinking.

“We want to make crop-type insurance available to aquaculture – not counting, but insuring the output or yield,” says Secretan, who reckons this issue will dominate next year’s conference on aquaculture insurance in Istanbul. He mentions that in Turkey an agreement between the insurance industry, brokers, farmers and the government pays half the aquaculture insurance premiums for Turkish producers. It’s a model other countries are looking at.

Yet, Secretan says: “The aquaculture insurance market is highly specialised, with few people in it, and the insurance market is not growing with the aquaculture industry. It either continues in its current vein, providing specialised products for salmon and trout farmers, or it has to change.”

One Lloyd’s underwriter confirms that insurers already cover a whole range of food industry perils across the supply chain, from raw material producers to high-tech food processing firms, distributors and retailers.

“We cover events – a spillage, an explosion – for bodily injury from products or operations. There is potential to cover for gradual pollution and environmental liability. Product recall can be covered. What you see with developing markets is, the more regulation grows, the more insurance follows,” he says.

**SETTING THE AGENDA**
Regulators worldwide are already at the starting barrier. International organisations, such as the World Economic Forum, are discussing world food security. In 2011, the World Bank Group introduced the Agricultural Price Risk Management (APRM) product to enable farmers and food producers in emerging economies to access financial derivatives to hedge risks posed by price volatility.

The UN and the EU have food security issues on their agendas. Governments worldwide are stepping in. There have been agricultural insurance schemes introduced for basic crops such as rice in Vietnam and China. In other countries, microinsurance for small producers is developing and expanding. And in developed countries, regulation is veering the other way to tackle waste and obesity. Expect the pace of regulation to pick up.

Not every risk can be covered, however, and not every problem has insurance as its solution. But between 2005 and 2011, agricultural insurance premiums have almost tripled to $23.5bn, according to a recent Swiss Re report. With food production needing to grow by 60% to meet world demand by 2050, and with new markets opening up to insurance, the potential is huge. Food production risks also include perils associated with property, employment, transport and global trade, including political risk.

The potential has prompted Lloyd’s to publish a report entitled *Fear or Famine: Business and Insurance Implications of Food Safety and Security*. It highlights how food security will be one of the largest threats to global society over the next ten years, warning that there is a perfect storm of risks: “On the demand side, global population growth, demographic change, increasing affluence and migration to urban centres are leading to growth in demand for food and changing patterns of consumption. On the supply side, climate change, water scarcity, resource competition and political drivers, among other factors, influence food security.”

“**Innovative insurance solutions, in both the developed and developing world, have the potential to play a larger role in progress towards food security**”

The report says: “Risks can be categorised as physical, operational, financial, reputational, geopolitical, regulatory, and societal.” But it suggests that insurers have an increasing role to play: “Innovative insurance solutions, in both the developed and developing world, have the potential to play a larger role in progress towards food security.”

According to Neil Smith, Lloyd’s Manager of Emerging Risks and Research: “The report is not intended to be a compendium of all food-related issues, but it isflagging up where insurance has a role to play. There is an increasing world population and something has to change to meet the growing demand for food.”

**TEN TOP FOOD RISK COUNTRIES**

![Top ten food risk countries](source: Maplecroft food security risk index 2012)

**Afghanistan**

**Burundi**

**Somalia**

**Eritrea**

**DR Congo**

**South Sudan**

**Chad**

**Somalia**

**Comoros**

**Ethiopia**

**Haiti**

**SOURCE: MAPLECROFT FOOD SECURITY RISK INDEX 2012**

DOWNLOAD LLOYD’S REPORT, FEAST OR FAMINE: BUSINESS AND INSURANCE IMPLICATIONS OF FOOD SAFETY AND SECURITY, AT WWW.LLOYDS.COM/FEASTORFAMINE
THE GREAT PEARL ROBBERY

It was one of the most audacious thefts of its time, its resonance eclipsed only by oncoming war – and it concerned a breathtaking string of pearls, insured by Lloyd’s for £150,000.

In the summer of 1913, Hatton Garden diamond merchant Max Mayer sent a stunning necklace with 61 flawless pale pink pearls to a potential buyer in Paris. The necklace, known as ‘The Mona Lisa of Pearls’, was insured by Lloyd’s for £150,000, and was coveted by jewellers and criminals worldwide.

After choosing not to buy the pearls, the prospective buyer returned the necklace by registered post. But when Mayer broke the intact seals and opened the box, the necklace was gone, replaced with sugar lumps. Devastated, Mayer contacted his Paris agent, then Scotland Yard, who sent one investigator, Horne, to Paris.

Augustus Horne was walking to work in Highbury when he saw a man drop something in a gutter. When he investigated, Horne discovered a broken string of pearls. Assuming them to be imitation, he gave one to a street vendor, who was gone, replaced with sugar lumps. Devastated, Mayer contacted his Paris agent, then Scotland Yard, who sent one investigator, Horne, to Paris.

Just two weeks after Grizzard’s arrest, piano-maker Ali Gray was arrested in Scotland. He claimed to be Mayer’s Paris agent, but had also arranged a meeting with Grizzard in Paris. When the gang came to trial, the facts about the pearls’ disappearance became a little clearer. Mayer’s necklace, it seems, had been returned from Paris. But on the way to Mayer’s, the postman had called at the shop of dealer Simon Silverman – another of Grizzard’s gang. Silverman, who had access to forged seals, bribed the postman to let him examine the package before exchanging the pearls for sugar, resealing the parcel, and sending it on its way.

Chief Inspector Alfred Ward. Along with Mayer, several police officers and Mr Price – one of the two Lloyd’s underwriting assessors who originally valued the necklace – Ward met Mayer’s French representative, Henri Salomons, who had travelled to London from France. A special committee of Lloyd’s underwriters, headed by Montague Evans, was set up to handle the affair. After discussions that lasted all night, it was announced that Lloyd’s would pay a £10,000 reward for the necklace’s return.

Chief Inspector Ward then began his investigation – and at its centre was Joseph Grizzard, a debonair man who posed as a legitimate Hatton Garden jewel trader, but who was also known as the ‘King of Fences’. Ward’s first lead was a Paris dealer called Brandstatter, who claimed that during a recent visit to Antwerp he had been approached and asked if he would be interested in a necklace that looked very much like Mayer’s. Brandstatter and two other dealers arranged to meet the thieves at a hotel in Holborn, but while the assignation went ahead, there was no sign of Grizzard or the necklace. A second meeting, at Chancery Lane tube station, was arranged at which time the necklace was to be exchanged for 100,000 French francs. This time, though Grizzard had accepted the offer, the necklace remained elusive. However, it wasn’t to remain so for very much longer.

Just two weeks after Grizzard’s arrest, a detective named Augustus Horne was walking to work in Highbury when he saw a man drop something in a gutter. When he investigated, Horne discovered a broken string of pearls. Assuming them to be imitation, he gave one to a street vendor, who was instead offered the reward for the missing pearls. It’s thought the final suspect felt the police closing in, and disposed of them.

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CHIEF WRAP-UP

James Merrick, Chief Underwriting Officer, XL, shares his perspective:

“The former Zurich CEO of Marine has joined XL as Chief Underwriting Officer for Global Marine and Offshore Energy. He began his career at AIG before joining Zurich in 2009 as Global Marine Practice Leader. Says Neil Robertson, Chief Executive of Specialty at XL: “Lee will play a critical role in continuing to drive our presence in a range of mature and emerging markets.”

Ron Carlier, CEO, Cooper Gay Re

The well-known broker has returned to the market – this time at the Cooper Gay Swett & Crawford (CGSC) reinsurance brokerage subsidiary. Ron will be based in New York and report to Shaun Hooper, President and CEO of Swett & Crawford North America. He is responsible for the firm’s reinsurance strategy and tasked with expanding its capabilities in the US. The former CEO of RK Carvill has spent eight years out of a frontline position, after stepping down from his post in 2005.

MARKET MOVERS

Jim McCann
Non-executive Chairman, Willis

Jim succeeds Joe Plumeri when the latter retires from his post this July. Jim has served on the board since 2004 and was an independent director since 2012. “I am delighted to welcome Jim McCann as the new chairman of Willis,” says CEO Dominic CAsserly. “I am confident [we] will take Willis to the next level in the years ahead by providing our clients with an outstanding service.”

Lee Meyrick
Chief Underwriting Officer, XL

The former Zurich CEO of Marine has joined XL as Chief Underwriting Officer for Global Marine and Offshore Energy. He began his career at AIG before joining Zurich in 2009 as Global Marine Practice Leader. Says Neil Robertson, Chief Executive of Specialty at XL: “Lee will play a critical role in continuing to drive our presence in a range of mature and emerging markets.”

EVENTS

MONTE CARLO RENDEZVOUS
12-13 SEPTEMBER, MONACO

An annual gathering of more than 2,500 reinsurance professionals, marking the beginning of the annual negotiation process ahead of renewals. Lloyd’s will host a networking reception on behalf of the Lloyd’s market on Monday 9 September.

FERMA
29 SEPTEMBER-2 OCTOBER, MAASSTRICHT, NETHERLANDS

Lloyd’s will be participating in the annual conference by hosting a booth (47-48) for the duration of the event. Please come and visit us to find out more about Lloyd’s, and to meet market representatives.

CIAB
29 SEPTEMBER-2 OCTOBER, COLORADO SPRINGS, US

Lloyd’s will host a dinner and networking reception at one of the largest gatherings of Chairmen and CEOs from all the major insurance operations in the US and overseas.

MARKET PRESENTATIONS

SINGAPORE/HONGKONG 10 SEPTEMBER
SWITZERLAND 24 SEPTEMBER
FRANCE 1 OCTOBER
ITALY 8 OCTOBER
ISRAEL 8 OCTOBER
IRELAND 22 OCTOBER
GERMANY/AUSTRIA 31 OCTOBER
MEXICO 8 NOVEMBER

FOR FURTHER INFORMATION ON ANY OF THESE EVENTS, PLEASE VISIT: lloyds.com/events
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Dominic Casserly. “I am confident [we] will take Willis to the next level in the years ahead by providing our clients with an outstanding service.”

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