CIT
CAPTIVEINSURANCETIMES

ISSUE056
17.09.2014 WEDNESDAY
captiveinsurancetimes.com

Bad news for captives from FHFA

The Federal Housing Finance Agency (FHFA) has proposed a rule that will exclude captive insurers from membership of any one of the 12 Federal Home Loan Banks (FHLBs).

This rule, if adopted, would prevent entities not eligible for membership from gaining access to bank advances and the benefits of membership through a captive insurer.

The definition of 'insurance company', under the proposed rule, would mean a company that has as its primary business the underwriting of insurance for non-affiliated persons.

This would continue to include traditional insurance companies but not captive insurers. As a result, existing membership of captive insurers would be 'sunset' over five years with defined limits on advances.

The standards by which an insurance company's "principal place of business" is identified is to be clarified under the proposed rule, so as to determine the appropriate FHLB district for membership.

The proposed rule would also establish a new quantitative test requiring all members to hold one percent of their assets in home mortgage loans (HML) and to do so on an ongoing basis.

Currently, applicants for membership need only demonstrate a nominal amount of HML on their balance sheet at the time of their application, but not thereafter.

Speaking in 8 September during the North Carolina Bankers Association's American Mortgage Conference, FHFA director Mel Watt commented: "While captive insurers may, in some cases, be involved in housing finance, their access to the [FHLB System] raises a

readmore p2

Landmark year for ILS sector, says Aon

Annual catastrophe bond issuance reached a record $9.4 billion—an increase of 41 percent over the prior year period, according to the latest insurance-linked securities (ILS) sector report by Aon Benfield Securities.

The high volume of catastrophe bonds coupled with 11 sidecar transactions totaling $1.4 billion, and collateralised reinsurance vehicles, allowed alternative capital to capture approximately 20 percent market share of property catastrophe reinsurance volume during the 12 months to 30 June 2014.

Several records were set during the period, including the highest ever Q2 catastrophe bond issuance of $4.5 billion across 12 transactions.

H1 issuance also reached new heights with $5.9 billion of transactions brought to market, exceeding the prior year period by almost 50 percent.

readmore p2

Industrial claims on the up

Industrial insurance claims are reaching increasingly high values according to a report from Allianz Global Corporate & Specialty (AGCS).

In its Global Claims Review 2014, AGCS has identified the top causes of loss and emerging trends from over 11,000 major business claims in 148 countries, each of above €100,000, with which it has been involved between 2009 and 2013.

In 2013, incidents from the oil and gas industry dominate the major losses, at 40 percent of the total, while fire and/or explosion was responsible for eight of the top 20 losses or, at approximately €2.9 billion—nearly half of the total loss bill.

readmore p2

Bad news for captives from FHFA

Continued from page 1

number of concerns that are discussed in the proposed rule. We look forward to receiving your comments on both of these topics."

Interested parties have been invited to submit comments on this proposed rule within 60 days after it is published in the Federal Register.

Concerns over captives' membership of the FHLB System arose when Redwood Trust's special purpose captive insurance subsidiary, RWT Financial, received approval as a member of the FHLB of Chicago on 6 June.

This led all 12 banks of the FHLB System to agree on a three-month moratorium on admitting captive insurers as members, following the mounting concerns of the FHFA regarding the risks of such memberships.

In May, Watt described a number of issues, including ensuring that the banks "remain focused on their housing finance mission".

Landmark year for ILS sector, says Aon

Continued from page 1

As at 30 June 2014, total catastrophe bonds outstanding remained at a record high, with $22.4 billion of bonds on-risk, an increase of $4.6 billion from the previous year.

A total of 24 catastrophe bonds covering US perils, and five with Europe exposures were issued.

Four catastrophe bonds covering Japan perils were brought to market, compared to none in the prior year, proving the strong and increased interest in the use of capital markets from Japanese sponsors.

Seventy percent of property catastrophe bonds used indemnity triggers covering regions such as Australia, Europe, Japan and North America.

An estimated $5 to $6 billion of new capital flowed into the sector during the 12 months, bringing total capital inflows to more than $10 billion over the past two years.

Meanwhile, market pricing conditions for ILS products continued to decline to attain historic lows, with sponsors benefitting from reductions of 20 percent or higher as investor demand kept pace with supply, allowing sponsors to expand coverage at competitive rates.

Paul Schultz, CEO of Aon Benfield Securities, said: "The 12-month period under review was one of the strongest ever for the ILS and wider alternative capital markets."

"Sponsors received improved terms including increases in catastrophe bond maturity periods and a continued decrease in interest spreads to historical lows. Improvements in both pricing and terms and conditions also brought a record number of new sponsors to the market."

On an annual basis, through 30 June 2014, all Aon Benfield ILS Indices posted gains. The Aon Benfield All Bond and BB-rated Bond Indices posted returns of 7.74 percent and 4.99 percent, respectively. The US Hurricane and US Earthquake Bond Indices returned 8.94 percent and 4.33 percent, respectively.

Each of the Aon Benfield ILS Indices outperformed most of the comparable fixed income benchmarks; the 3-5 Year BB High Yield Index and the S&P 500 index, however, produced superior returns.

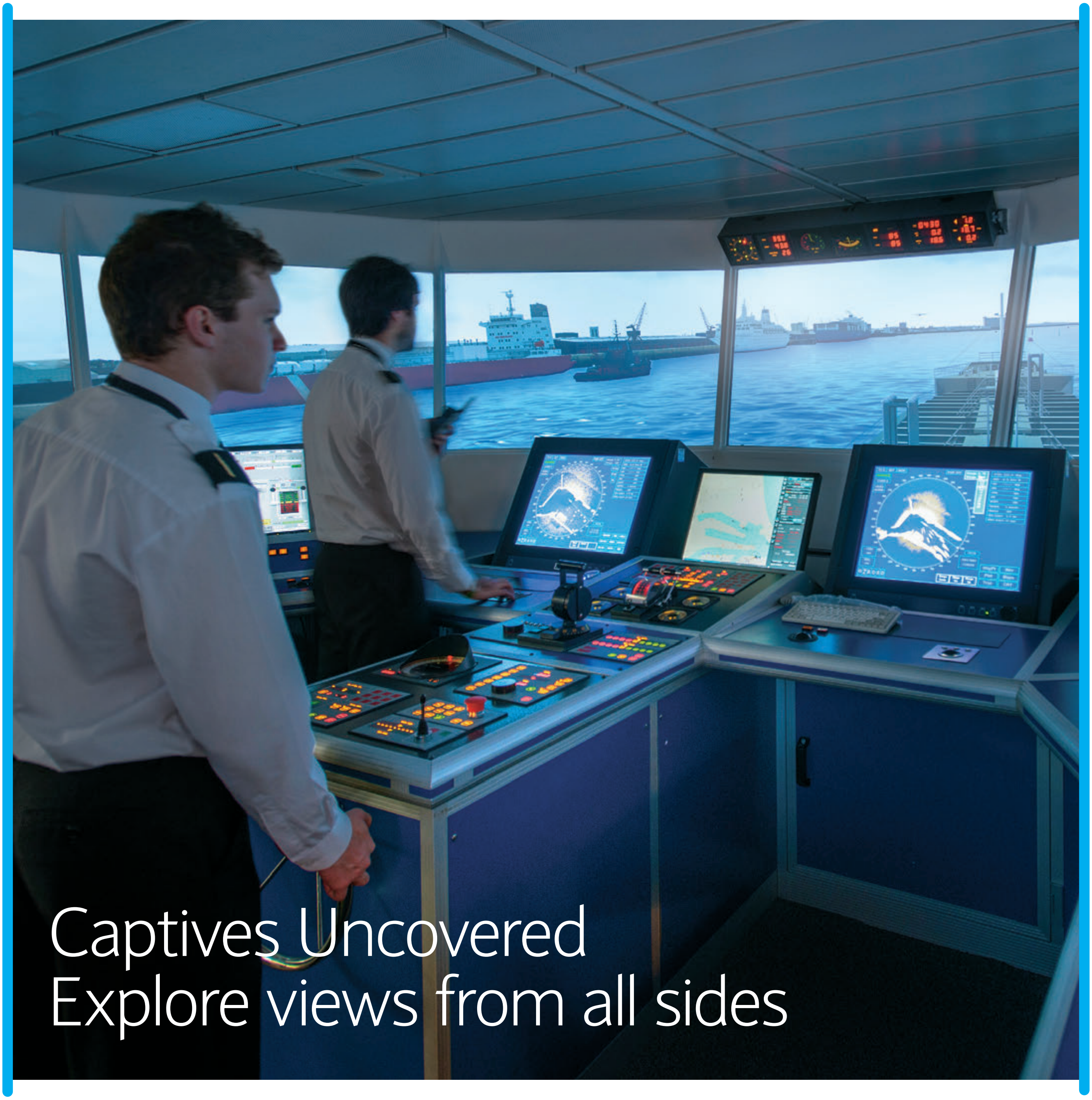
Industrial claims on the up

Continued from page 1

The analysis shows that nearly 70 percent of financial losses arose from 10 causes of loss, with the largest single identified cause being ship groundings, reflecting the high values of modern shipping risks, followed by fires and aviation crashes.

So far in 2014, 80 percent of the major reported losses have come from aviation incidents or

CITINBRIEF


Captives Uncovered
Explore views from all sides

fires, particularly in the energy sector. The largest loss, a fire at a Siberian refinery complex in June, was reported to be around €586 million.

The growing relevance of business interruption (BI) as a consequence of losses in property insurance, heightened by lean supply chains and globalised manufacturing, is shown with average losses from BI at €997,602—32 percent higher than those from direct property damage €755,198.

AGCS's chief claims officer, Alexander Mack, commented: "AGCS's diversified global business gives us unique insights into the sharp end of industrial insurance in terms of current claims experience and future trends—such as the growing importance of [BI] losses."

"By sharing this analysis, we hope to demonstrate the key role that effective claims service plays in getting businesses back on track when disaster strikes."

Reinsurance remains stable despite negative outlook

Capital continues to be drawn to the reinsurance industry despite fundamentals trending in the wrong direction, according to A.M. Best's annual segment review.

The report explores whether the traditional underwriting cycle has grown distorted and notes that the flurry of convergence capital has triggered behavioural changes by the market's traditional players, with more company names appearing on reinsurance programmes in unusual locations for the first time.

A.M. Best recently revised its ratings outlook on the global reinsurance industry to negative from stable.

Investors continue to turn toward catastrophe bonds to improve investment performance, despite risking the entire principal over a relatively short-term period.

The report notes a pattern in the catastrophe bond market: the increasing value of certain bond issues and declining coupon payments.

Of catastrophe bonds issued in 2013, 51.2 percent had a coupon payment of 500 basis points or better. That number has dropped to about 42.2 percent so far in 2014.

Most traditional reinsurers maintained their market share, according to A.M. Best's annual top 50 ranking of global reinsurance groups in 2013. The majority of movement occurred among the ranking's bottom two-thirds.

The top three companies in the ranking are Munich Reinsurance Co, Swiss Re and Hannover Rueckversicherung AG.

Cash not always king, says London & Capital

Captives should look towards other asset classes than cash for healthier returns, according to London & Capital.

In the first edition of London & Capital's Captive Indices, the firm said that, while gravitating towards very large cash holdings is the safe bet, low interest rates mean that captives can easily find themselves watching their cash wealth being eroded by inflation, as their discounted liabilities grow.

High-grade corporate bonds, high-yield bonds and US equities all significantly outperformed cash over the past decade, found London & Capital, making them an attractive alternative.

"In a low interest rate (and possibly inflationary) environment, the case for relying solely on cash will likely be damaging to returns. Nor is a large investment grade bond allocation likely to truly maximise returns."

"These may have been more stable during crisis periods—such as the eurozone debt crisis of May/June 2010—yet in the longer term their returns were lacklustre compared to assets with higher intrinsic volatility."

Looking forwards, London & Capital believes that markets are in the latter stages of recov-

Iberis gibraltarica –
Gibraltar Candytuft

Gibraltar embraced captive insurance in the 1980’s and in 2001 became the first EU jurisdiction to offer Protected Cell Company (PCC) legislation – widely used within insurance company structures writing both general and life insurance business.

In 2012, captive insurers achieved total gross premium income of nearly £800m. Three are PCCs managing over 30 cell companiwes. One insurance manager has created 50 cells with its PCC being the largest in the EU providing solutions for cell captives and fronting cells.

Gibraltar’s vibrant insurance sector has almost 60 insurance companies currently writing new business and in 2012 wrote over £3.8bn of gross premium income – with Gibraltar motor insurers accounting for 16% of the UK market.

Gibraltar offers bespoke insurance solutions for companies not currently domiciled with the European Union.

For more information visit the Gibraltar Finance website::
gibraltarfinance.gi

GIBRALTAR FINANCE
HM Government of Gibraltar

Within the European Union Single Market

ery, with consumer and business confidence rising off the back of improved economic activity and investors anticipating a reduction in monetary accommodation by policymakers.

The firm has predicted that improving profitability and large cash reserves will continue to support high-grade corporate debt, although volatility in government bond markets may result in some sporadic periods of volatility in investment grade corporate bonds.

Reduced credit risk, falling defaults and attractive yields will also boost high-yield bonds, while equities will also enjoy the tailwind of improving company earnings and greater pricing power, according to London & Capital.

European insurance investments are booming

The European insurance industry had more than €8.5 trillion of assets under management at the end of 2013, representing a 3.2 percent growth over the previous year, according to Insurance Europe.

But concerns remain over how Solvency II will be implemented and how it will affect future investments in Europe.

Michaela Koller, director general of Insurance Europe, commented: "While the industry welcomes the move to a risk-based regulatory regime and recognises that the final version of Solvency II was improved to avoid a huge negative impact on long-term investments, aspects of the directive and how it is implemented will still require insurers to hold inappropriately high amounts of capital against their long-term investments."

"This will make it more expensive for insurers to invest in long-term government and corporate bonds, as well as growth-stimulating activities, such as infrastructure projects."

"This could discourage insurers from making these vital investments, which would have a significantly negative effect on the European economy at a time when boosting growth is an overall policy objective."

Developments in the total investment portfolio were mainly driven by the life business, since the investment holdings of the life insurance industry account for more than 80 percent of the total portfolio.

Bermuda continues to bounce back, finds Axco

After four years of falling premium income, Bermudian insurers and reinsurers saw their premiums written in 2012 increase to $120.49 billion compared to $107.60 billion in 2011, according to Axco Insurance Information Services.

The situation continued to improve in 2013, with the Bermuda Monetary Authority (BMA) registering 91 new insurers in 2013 compared to 53 in 2012.

Axco's Bermuda country report also revealed a dramatic increase in the issuance of insurance-linked securities (ILS).

Fifty one special purpose insurers were set up in 2013 compared to 27 in 2012. Out of the $21 billion ILS issuance worldwide, $9.2 billion was introduced into Bermudian entities.

The current market situation has also led to significant expectation of another wave of mergers and acquisitions as small- and medium-sized players compete in an increasingly challenging marketplace, added Axco.

Tim Yeates, business development director at Axco, commented: "Although excellent news for the region, the overall growth in premium income is mainly due to the formation of new sidecars and [catastrophe] bonds, which reached pre-crisis levels in 2012 and masks the continuing soft market in almost all classes."

"However, the ongoing sluggish global economic recovery as well as a low interest environment has done nothing to dampen the speculation that another wave of mergers and acquisitions for is on the way for small- to medium- sized—a true sign of an increasingly challenging marketplace."

Bitcoin vault is safe with captive protection

Bitcoin wallet company Xapo has confirmed it is insuring users' crypto-currency through a captive domiciled in Bermuda.

Xapo subsidiary Meridian Global Insurance, which is managed by Willis, insures the Xapo Vault against hacking, theft by an employee, a break-in at the physical vault and bankruptcy, at no extra cost to users.

In a statement, it said: "Xapo formed Meridian to add an extra layer of protection for our customers and their bitcoins."

"By putting our money and bitcoins into a separate insurance entity, Meridian provides protection against certain events that may happen to Xapo. This would not be the case if we simply kept our assets within Xapo and self-insured the Vault."

Xapo's move to insure its users, crypto-currency follows the bankruptcy of Mt. Gox in February, which cited debts of $64 million. It also misplaced almost one million bitcoins.

Triton moves into US market

Triton Audit has partnered with Magellan Consultancy Services to create a US domiciled audit service, with Kesh Sharma leading the new offering.

Triton will offer new audit and inspection services to the US insurance market.

Sharma will be based in the Chicago office of Triton where he will develop the US proposition in addition to performing and overseeing audits in the US and Canada.

Sharma previously served as a consultant at Lloyds Agencies and has consulted at XL Group and Zurich.

Alec MacMillan, UK Triton Audit manager, said: "Sharma will work alongside our claim and legal professionals within our Chicago office, in line with the Lloyd's 2014 coverholder audit scope."

JLT expands into Turkey

Jardine Lloyd Thompson (JLT) Group has established a new entry in Turkey.

The new venture, to be based in Istanbul, will be headed by CEO Servet Gürkan.

Gürkan is one of the most experienced and respected brokers in the Turkish market and previously held the position of head of the Turkey Broker Association.

The establishment of JLT Turkey is in line with JLT's strategy of expanding its capabilities in markets where long-term growth is supported by fundamental macro-economic trends.

Under Gürkan's chairmanship both JLT Turkey and GrECo JLT, an existing retail venture in Turkey established in 2013 by GrECo, will provide clients with access to global markets and JLT's specialist expertise in areas such as agriculture, aviation, construction, energy, financial lines, marine, mining and treaty reinsurance.

Gürkan said: "The establishment of JLT Turkey will provide clients with a distinctive and compelling alternative.

"I am delighted to be joining JLT, with its strong client first culture and emphasis on expertise and entrepreneurialism."

"I am very confident that the combination of our local insights and relationships with JLT's brand, geographic reach and deep specialty knowledge, will rapidly enable us to win clients and attract the best talent."

The establishment of JLT Turkey is subject to regulatory approval and finalisation of contracts.

Ratings round-up

A.M. Best and Demotech get their rates on

A.M. Best

A.M. Best has affirmed the financial strength of Inpex Insurance (IIL) to "A- (Excellent)" and a credit rating of "a-".

The ratings are a reflection of IIL's reinsurance credit risk stemming from the large size of gross risks relative to its low retention level.

According to A.M. Best, the ratings are a testament to IIL's robust risk-adjusted capitalisation, conservative operating strategy and parental support.

IIL is an insurer domiciled in Bermuda and the single-parent captive of Inpex in Japan. As the captive insurer for its parent company, IIL provides insurance for Inpex and its affiliates.

A.M. Best considers IIL to be well positioned for its current rating level, but warns that negative ratings could occur if there is a significant loss of surplus, or significant change in IIL's risk profile.

The agency has also affirmed the financial strength rating of "A- (Excellent)" and the issuer credit rating of "a-" of PrismaLife AG. The outlook for both ratings remains stable.

The ratings of PrismaLife reflect its strong risk-adjusted capitalisation and stable financial performance.

An offsetting rating factor is the company's concentrated underwriting portfolio, which makes premium volumes dependent on demand for unit-linked products.

This is partially mitigated by PrismaLife's extensive distribution network and the company's track record of marketing flexible and innovative product offerings.

PrismaLife's risk-adjusted capitalisation remains strong despite modest dividend payments in 2013 and 2014.

In 2014, moderate growth in new business is unlikely to put pressure on risk-adjusted capitalisation, as the capital strain will be restricted by limited guarantees on the products underwritten, as well as the low level of investment risk retained.

The company's financial leverage remains within the tolerance levels for the ratings.

Overall pre-tax earnings deteriorated marginally to €4.97 million in 2013, driven by a reduction in premium income, as well as initial costs associated with new biometric products.

PrismaLife's underlying margin remains good and is supported by stable fee income and low administrative expenses stemming from its lean organisational structure.

The impact of new business strain on earnings is marginal as the company has adopted a regular commission payment system with many of its distributors.

Premium income is volatile and largely subject to demand for unit-linked insurance products in Germany, the company's core market.

In 2013, gross written premiums declined by 18.2 percent to €168 million, following a significant fall in single premium income.

However, regular premium income continued to increase.

PrismaLife maintains a good business position in this market supported by its flexible and innovative product offerings, as well as its strong distribution network.

Premium volumes are expected to increase to approximately €200 million by 2015, supported by the company's large and increasingly diversified distribution network and the recent introduction of new products.

Demotech

Demotech has affirmed the financial stability rating (FSR) of "A, Exceptional", previously assigned to Premier Physicians Insurance Company, a risk retention group (RRG).

This level of FSR is assigned to insurers who possess exceptional financial stability related to maintaining positive surplus as regards policyholders, liquidity of invested assets, an acceptable level of financial leverage, reasonable loss and loss adjustment expense reserves and realistic pricing.

The RRG was formed in 2006 as a physician owned and controlled alternative for physicians.

Demotech uses FSRs to summarise the financial stability of an insurer regardless of general economic conditions or the phase of the underwriting cycle.

FSRs utilise statutory financial data based on insurance accounting principles prescribed or permitted by the National Association of Insurance Commissioners (NAIC).

Since 1989, FSRs of "A" or better have been accepted by the major participants in the secondary mortgage marketplace.

Demotech has also affirmed the FSR of "A, Exceptional" assigned to Omega Insurance Company.

Omega Insurance Company is a property and casualty insurer organised under the laws of Florida.

Omega writes homeowners' and mobile homeowners' insurance coverage exclusively in Florida and is a member of the Tower Hill Insurance Group family of companies.

Four other members of the Tower Hill group (Tower Hill Preferred Insurance Company, Tower Hill Prime Insurance Company, Tower Hill Select Insurance Company and Tower Hill Signature Insurance Company) also had their previously awarded FSRs of "A, Exceptional" affirmed by Demotech.

Has your captive been rated? Let us know:

stephendurham@captiveinsurancetimes.com

Dealing with the complexities of risk transfer issues

Insuring risks via a captive programme offers many benefits for companies, but insurance accounting for captive programmes can sometimes be challenging. Richard Plano of AIG Global Risk Solutions explains how working with experienced providers can help

In a common captive situation, a fronting insurance carrier issues a policy or policies to the captive's parent company and reinsures some or all of the risk to the captive. While the structure is quite straightforward, the rules for determining whether the policy qualifies as reinsurance for accounting purposes can be complex and difficult to apply.

For example, under US GAAP, specifically FASB Statement 113, a contract must transfer significant insurance risk (both underwriting and timing risk) and the contract must subject the insurer to the reasonable possibility of a significant loss in order to qualify as insurance or reinsurance. In a similar vein, the National Association of Insurance Commissioners's (NAIC) Chapter 22 and some international accounting standards have comparable ideas but use slightly different language. From an actuarial perspective, the concepts are similar as they relate to distinguishing strictly financial deals from insurance contracts.

In the practical application of determining risk transfer, disagreement or lack of consensus among the parties responsible for determining ultimate loss and risk transfer may arise. In these situations, an actuary may be called in to offer a more technical viewpoint.

So how can there be disagreement about something as fundamental as whether or not an insurance contract contains enough ultimate loss and risk transfer to be treated as an insurance policy? Who makes the final decision?

Officers and accountants of the captive insurance company must sign statements attesting to the accuracy of financial reporting. A large part of that financial reporting relates to the correct recording of premium and loss for the insurance operations of a captive. In essence, those individuals attesting to the accuracy of financial reporting should make the final decision on risk transfer.

All of the guidance included in SFAS 113 and its cousins are principle-based guidance. There are no 'bright-line' boundaries or prescribed rules for determining whether or not a contract contains enough risk transfer to be eligible for insurance accounting.

A direct result of this principles-based guidance is that preparers, auditors, and regulators may reach dissimilar conclusions regarding risk transfer given the identical facts on a contract. If we examine some of the wording in the financial guidance, we can see how this uncertainty can arise.

For ease of reference, Paragraph 9 of SFAS 113 is reproduced below:

"Indemnification of the ceding enterprise against loss or liability relating to insurance risk in reinsurance of short-duration contracts requires both of the following, unless the condition in Paragraph 11 is met: (a) The reinsurer assumes significant insurance risk under the reinsured portions of the underlying insurance contracts. (b) It is reasonably possible that the reinsurer may realise a significant loss from the transaction."

"A reinsurer shall not be considered to have assumed significant insurance risk under the reinsured contracts if the probability of a significant variation in either the amount or timing of payments by the reinsurer is remote. Contractual provisions that delay timely reimbursement to the ceding enterprise would prevent this condition from being met."

Despite all of the words, the concept seems clear—there must be sufficient uncertainty in the amount of payments for losses and how these payments will occur over time.

But if we read the guidelines closely, there are words which are not 'precise' or defined. Examples of such words are "significant", "timely", "reasonably possible", and the central phrase "probability of a significant variation".

This is the crux of the potential disagreements. Differences in interpretation of the words can lead to the differences in risk transfer conclusions. Similarly, the concepts of probability of significant variation bring to bear concepts of the probability and variability of loss, which are usually handled by actuaries.

In order to get more clarity, a historically referenced 'rule of thumb' is the '10-10 rule', that there is risk transfer if there is at least a 10 percent probability of at least a 10 percent loss. As with most rules, there are plenty of times when it leads to further questions.

Consider traditional insurance in areas of very low claim frequency, but extremely high severity of loss, should one occur. For some catastrophe covers, there may be a loss event only one in a hundred years or even one in a thousand. But when a loss does happen, it can cost a tremendous amount.

For example, if the limit of coverage is $1 million for an infrequent event, where the expected loss frequency is one in 20 years, the expected loss would be $50,000. However, 95 percent of the time, there would be no loss.

This coverage would not pass the '10-10 rule'. yet if you were the reinsurer you would probably be concerned about the uncertainty in the widely divergent outcomes. If the premium charged was just enough for expected loss, expenses and a reasonable profit, many observers would agree that this coverage has enough uncertainty to qualify as transferring risk.

At the opposite end of the spectrum, the quota share reinsurance of a personal auto liability book of business may be large and stable enough so that this reinsurance would not pass the '10-10 rule'. It makes little sense, however, that this arrangement should receive other than insurance accounting treatment.

One of the central problems in the '10-10 rule' is that it looks at essentially one point in the distribution of possible results—the point being that at which there is a 10 percent chance of loss. What about all the other possibilities where there might be a loss?

Weaknesses of the '10-10 rule' were analysed in an actuarial paper, Risk Transfer Testing of Reinsurance Contracts: Analysis and Recommendations, published by the Casualty Actuarial Society back in 2006. Contributors to the paper went so far as to subject then recent S&P 500 results to the '10-10 rule' and found that "a quota share reinsurance that has the same volatility characteristics ascribed to the S&P 500 by the options market over the period since 1990 would have been considered risky only about half the time". No rational person would suggest investing is a risk free activity.

That same paper suggested a straightforward and understandable solution to the many problems of the '10-10 rule'. Why not use all information about the loss potential of a contract, not just those above the 90th percentile or loss greater than 10 percent of income?

The paper suggested a measure called the expected reinsurer deficit (ERD). Simply stated, it is the expected cost of all present value underwriting loss scenarios. The measure incorporates information about both the frequency and severity of a contract's downside to the reinsurer over all loss scenarios.

The threshold for risk transfer suggested by the paper is for an ERD greater than or equal to 1 percent of premium. One of the beauties of this measure is that if a contract passes the '10-10 rule', it will pass the ERD test. Frequency of loss equal to at least 10 percent multiplied by severity of loss equal to at least 10 percent yields an ERD of at least 10 percent x 10 percent or 1 percent.

In many instances when the management of a captive wants such probabilities determined as an aid to decision making about risk transfer, they seek an actuarial analysis of the contract's loss probabilities.

The first step in the actuarial analysis will be the estimation of what the ultimate losses could be under the contract. This process will typically require historical unlimited loss and exposure information from the insured and may reference outside data to which the actuary has access.

Unless the insured's loss experience is substantial, there is often a great deal of variability, and hence uncertainty, in the insured's own loss history.

In order to compensate for this lack of predictable experience, 'industry data' is often referenced in actuarial analysis. The 'industry' could be insurance industry data, governmental data, proprietary data collected by the actuary or the firm engaged in the work, or other sources.

Using this history, the actuary will typically analyse how losses have emerged historically and, from this emergence pattern, estimate ultimate claim counts and loss amounts. The actuary will try to find probability distributions that fit well with the estimated ultimate historic loss frequency and severity data.

Often a Poisson distribution is used to model claim frequency whereas a log normal or other skew distribution is used to fit claim severity. Skewed distributions are most likely to be used for severity because most claims will be small or near the average, but some claims that are very costly and cause the distribution to be stretched out or skewed toward the high end of costs. After appropriate distributions are mathematically fit to the data, the actuary may be able to solve for the ERD algebraically.

In most cases, it is much easier to estimate the interaction between frequency and severity by constructing a stochastic model, usually referred to as a 'Monte Carlo' model. With this type of model, an actuary uses the mathematical formulations of the frequency and severity distributions to produce 10,000, 100,000 or one million random events, run these events through the structure of the insurance contract, and then reproduce thousands of randomly simulated years of experience to see how much loss is passed to the insurer.

All of the premium and loss flows are discounted back to inception of the contract using a risk-free rate. As stated in the accounting guidance, all cash flows are to be present valued, but interest rate risk is not a part of the insurance risk calculation. Hence, a current treasury rate or sovereign rate of appropriate duration is often used.

Even after such analysis through various models there can still be differences in opinion. One decision that might cause differences involves the data used in the analysis. Was external (eg, industry or insurer) data used and was it appropriate? Were enough years of data used to give a reliable answer? Other points that may give rise to differences in opinion may concern what threshold to use in the risk transfer test, and which policies to consider. The derived ERD should be treated as one element of the process in helping to determine risk transfer.

It is ultimately up to the management of the captive to decide on what degree of risk transfer is contained within any contract. A detailed actuarial analysis can provide management with guidance on how much risk transfer exists in the contract, at least from a quantitative basis.

There are many professions weighing in on insurance and captive management issues: legal, tax, accounting, underwriting, claims, and actuarial. At AIG Global Risk Solutions, we believe it is essential to have all disciplines represented and available to help resolve any issues that may arise. Working with an experienced team of captive managers and other insurance professionals can help companies make better decisions in this complex area. **CIT**

Richard Plano
Senior vice president and chief actuary
AIG Global Risk Solutions

AIG does not provide legal, credit, tax, accounting or other professional advice, and the reader and its advisors should perform their own independent review with respect to such matters as they relate to any particular circumstances and reach an independent conclusion regarding the benefits and risks of any proposed transaction or business relationship.

Big data: he who owns the past controls the future

Nigel Feetham of Gibraltar law firm Hassans plots the history of information, and what it could do for insurance in the future

Throughout the ages, humans have felt a compelling need to record information about themselves or the world around them. From the prehistoric cave paintings depicting humans hunting, to early Egyptian stone-carved hieroglyphics and ancient painted pottery, our ancestors left information for posterity even before a sophisticated writing system was developed. We know a great deal about the past from the information that has been passed on over thousands of years.

Unfortunately, valuable records have also not survived man's propensity for mindless destruction and much knowledge has been lost to history, such as the libraries at Alexandria, Antioch, Granada and Baghdad. Still, where gaps in historical knowledge existed, scholars have attempted to chronicle the past with whatever fragments were available; unsurprisingly, not without subjectivity but no less admirably.

Indeed, when one considers that some ancient sources were written hundreds of years after the event, it would be impossible to record historical information without conjecture.

Brave new world

Enter the age of digital data. We live in an age where the spread of information is not only global and instantaneous through internet news and social media channels (including Facebook, Google, Twitter and LinkedIn), but where the number of devices connected to the internet now surpasses the size of the human population.

Our ability to predict an unknown future event (which, by definition, may never happen) can be enriched by the historical data available. The more data that exists, the higher the level of confidence we would have about the range of possible future outcomes and their impact. There is already a vast amount of digital information about every aspect of life. This includes granular data about how we live, think and behave.

Although we have yet to harness the full power of data, we are in the throes of the greatest technological revolution the world has ever seen. In the not too distant future, self-learning machines will be able to capture all the information connected to computer systems around the world and dive deep into data for multiple purposes—social, business, legal, medical and much more. Companies that lead the way will establish dominance in their respective fields for years to come, while those that fail to keep abreast with new technology will face an uncertain future.

In this new age, businesses that invest in technology and human capital will grow beyond anything they could have expected to achieve otherwise. Similarly, the most successful businessmen of the future might have no less entrepreneurial flair but they are more likely to put technology at the heart of strategic decision-making than at any time in the past.

It is not difficult to see why those that use computer models to obtain a better understanding of historical data will achieve a competitive advantage over those that do not. Data experience gives a lender insight into the likelihood of default and they can price lending accordingly. It can better inform an insurer about how to assess risk, where to underwrite profitably and what segments of the market to avoid. Companies trading in the international financial markets can granulate data to spot a price arbitrage that the rest of the market does not see. Retailers, car manufacturers, healthcare providers and local authorities will all be able to learn more from data than was previously thought possible.

The opportunities are boundless and the richest multinationals of the future will warehouse the largest amount of data in existence. To put it into context, a database that held as much data about the past 200 years as we now have about the last 20 would be the most valuable commodity in the world.

Governments and companies of the future will employ data scientists to analyse data like scholars would study an archaeological site. Of course, no data is infallible. Data, like fragments from the ancient world, is a record of the past that is open to the same subjectivity and no less conjecture. But the difference is that the data scientists of tomorrow will have far more data at their disposal than historians have ever had from which to analyse the past and make confident predictions about the future.

So too will we see considerable economic development opportunities for relatively small countries and cities that embrace high-tech centres of excellence and digital industries in much the same way as financial services and gaming have in the past helped to transform economies around the world and generated thousands of local jobs. Digital industries will grow rapidly in importance as other areas of economic activity decline.

Big data and insurance

Although the big data revolution will affect all businesses, I can see some of the greatest opportunities in the insurance sector (especially in personal lines, life and medical insurance).

As would be expected, insurers hold a great deal of information on all aspects of their insurance business including about claims, policyholders, renewals, underwriting performance and more. In the future, the most successful underwriters in direct business will be those with the deepest understanding of data and not just able to respond the fastest to market trends and pricing, but proactively lead the market.

Insurers will no longer simply talk about rating factors (which indeed are common to all insurers in one form or another), they must also be able to granulate data to include an assessment of all individual perils within a single risk. That is the future of underwriting.

Moreover, in a challenging environment where low interest rates will continue for several years still, insurers are likely to focus more on investment performance (and not just underwriting) and here investment modelling and analytics that use data to a greater degree than at any time in the past will play an increasingly important role in the business.

The market leaders of tomorrow are insurers with the ambition to grasp the big data opportunity with both hands. The smaller (but only in terms of their share of the market in which they operate) insurance companies that remain flexible and able to innovate will benefit the most.

At the same time, Solvency II will raise the barrier to entry for anyone looking at the insurance market that is not already involved in the sector in some way (at least as a provider of capital or as part of a group with an insurance business).

The largest international insurers clearly have an interest in keeping abreast of these technological developments if they are to replicate the successes of the past and those that fail to reposition themselves will soon see any historical commercial advantage challenged by their smaller and more agile competitors.

The past: a crossroad to the future

We may be witnessing one of the greatest advancements in the field of human endeavour. Greek advances in knowledge could well be the only parallel in human history. Whether conquering hero or blood-thirsty tyrant, whatever one's view of Alexander the Great might be, it is an indisputable fact that Greek became the language of scholars across the Hellenic world, spreading Greek ideas and accelerating learning in the sciences, maths, engineering, philosophy, arts and medicine.

But valuable knowledge was lost with the fall of the Roman Empire and much of what survived was not seen again until the Italian Renaissance more than a thousand years later.

It makes you wonder what the world would be like today if Greek civilisation, as it spread east and west to the outer edges of the known world, had developed technology for the storage and reproduction of information on a large scale, not just the great library at Alexandria with its stored papyrus manuscripts.

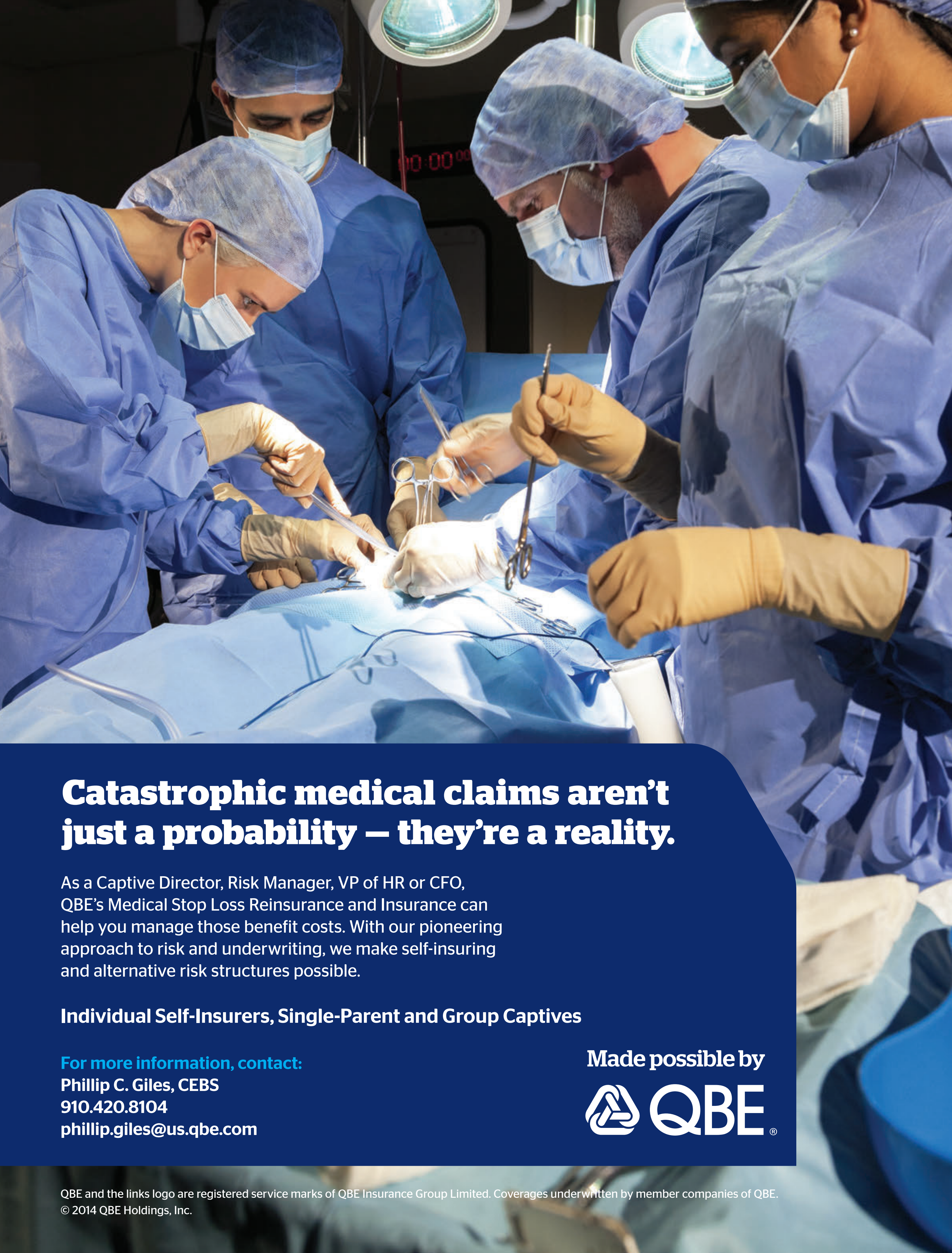
The closest thing we know of is the Greek invention of a highly sophisticated mechanical machine. With astrological knowledge built into it, the machine was capable of predicting past and future planetary positions.

It was known as the Antikythera mechanism (a precursor to the first computer), and was only recovered from an ancient shipwreck in 1900.

As to what would have happened and when, we will never know, but if more information and knowledge had survived throughout the ages, it is possible (if not probable) that modern technology would have been invented hundreds of years before our time and manned space travel would no longer be a thing of the future.

Today, the internet has created the greatest depository of information the world has ever seen, without geographical boundaries. Knowledge is no longer the exclusive commodity of the wealthy or of a particular social or educated class (as was the case for most of the preceding 2500 years of our history). At the current pace of technological advancement and in the not to distant future, how we look at information will also change immeasurably. CIT

Nigel Feetham
Partner
Hassans


Catastrophic medical claims aren't just a probability — they're a reality.
As a Captive Director, Risk Manager, VP of HR or CFO, QBE's Medical Stop Loss Reinsurance and Insurance can help you manage those benefit costs. With our pioneering approach to risk and underwriting, we make self-insuring and alternative risk structures possible.
Individual Self-Insurers, Single-Parent and Group Captives
For more information, contact:
Phillip C. Giles, CEBS
910.420.8104
phillip.giles@us.qbe.com
Made possible by
QBE®
QBE and the links logo are registered service marks of QBE Insurance Group Limited. Coverages underwritten by member companies of QBE.
© 2014 QBE Holdings, Inc.

Industry appointments

Jardine Lloyd Thompson Group (JLT) has appointed **Jim Pierce** as chairman of its new US specialty business, JLT Specialty Insurance Services.

Previously, Pierce was chairman of Marsh's global industry practices, a role in which he provided leadership to Marsh's aviation, construction, energy, infrastructure, marine, mining, power and rail practices.

Prior to this, Pierce worked at JLT USA and is recognised as one of the world's leading experts in the energy insurance sector.

Pierce's appointment is subject to the fulfilment of any existing contractual obligations and follows the appointment of **Michael Rice** as CEO and **Patrick Donnelly** as president and deputy CEO of JLT's new US specialty operations.

Colin Daly, Brian Hood and Brad McDonald also all join JLT from the financial services group (FSG) at Aon. Paul Graziano and David Payne have been appointed, from Aon's risk solutions and US national sales, respectively.

Daly is the former managing principal and national practice leader of the FSG at Aon. Hood and McDonald previously served as senior vice president and western region managing director in the FSG group at Aon, respectively.

John Peterson of co-leader US national sales and **Steve Shappell**, global legal and claim practice leader of the FSG, will also join the team in the future.

JLT Group confirmed last month that it is expanding its US specialty capabilities and merging JLT Specialty with Lloyd & Partners.

The move will see "significant" expansion for the group's US activities into its specialty areas, including energy, construction, financial lines, credit, political and security, and aerospace.

In response to this, Aon Risk Solutions has made several additions to its US financial services group leadership team.

Brian Wanat will serve as CEO for the US financial services group after previously serving as co-leader, while Christine Williams will serve as COO.

Anne Corona, in addition to leading the professional risk solutions group, will assume leadership of the US financial services group for the west region, overseeing Denver, Los Angeles, Dallas, Houston and San Francisco.

Robbyn Reichman and **Jacqueline Waters Urban** will assume co-leadership of the legal and claims practice group.

Finally, **Paul Kim** will lead the US financial services group business development and product innovation.

"Our financial services group, like our entire specialty operation, is hands down the best in the business," said Tom Fitzgerald, CEO of Aon Risk Solutions's US retail operations.

"The ability to make these appointments from within our existing team is a clear example of the unmatched talent within our organisation."

The Chubb Group of Insurance Companies has appointed **Jalil Rehman** as CEO of Chubb Insurance Company of Europe.

During his 24 years with Chubb, Rehman has served in various leadership positions. For the past nine years, he has led Chubb's international claims operations.

Prior to assuming this position, Rehman was the European claims manager. Earlier, he served as the UK and Ireland claims manager. He began his career with Chubb as a graduate trainee in the London branch.

Rehman will be based in London and will report to Chris Giles, international field operations manager.

Chris Giles said: "Jalil Rehman is a highly regarded insurance practitioner and has gained extensive exposure to clients and brokers in his time in the industry, providing him with a valuable market perspective."

"He brings a unique set of skills to the European CEO position, and we are excited that Chubb Europe will be benefiting from his strong leadership."

Rehman's appointment follows the announcement that **Michael Casella** will take up the new Chubb position of global alternative markets field officer.

Casella will relocate to Chubb's global headquarters in Warren, New Jersey, the to undertake the new role.

CIT CAPTIVEINSURANCETIMES

Editor: Mark Dugdale
markdugdale@captiveinsurancetimes.com
Tel: +44 (0)20 8663 9620

Reporter: Stephen Durham
stephendurham@captiveinsurancetimes.com
Tel: +44 (0) 208 663 9622

Editorial assistant: Tammy Facey
tammyfacey@blackknightmedialtd.com
Tel: +44 (0) 208 663 9649

Account manager: Joe Farrell
joefarrell@captiveinsurancetimes.com
Tel: +44 (0)20 8663 9627

Publisher: Justin Lawson
justinlawson@captiveinsurancetimes.com
Tel: +44 (0)20 863 9628

Marketing director: Steven Lafferty

Designer: John Savage
design@captiveinsurancetimes.com
Tel: +44 (0)20 8663 9648

Published by Black Knight Media Ltd
Provident House, 6-20 Burrell Row
Beckenham, BR3 1AT, UK

Company reg: 0719464


The Bahamas Advantage
Your sense of freedom
will hold you captive