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Surviving the storm: Optimum risk management strategies for a volatile world

WTW Energy Market Review

April 2023

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Market capacity figures

The figures quoted in this Review are obtained from individual insurers as part of an annual review conducted in January each year. They are solicited from the insurance markets on the basis of securing their maximum theoretical capacity in US$ for any one risk. Although of course this capacity is offered to all buyers and their brokers, the individual capacity figures for each insurer provided to us are confidential and remain the intellectual property of WTW.

WTW Energy Loss Database

All loss figures quoted in Part Two of the Review are from our WTW Energy Loss Database. We obtain loss figures for this database from a variety of market sources (including a range of loss adjusters), but we are unable to obtain final adjusted claims figures due to client confidentiality. The figures we therefore receive from our sources include both insured and uninsured losses in excess of US$1 million.

Style

Our Review uses a mixture of American and English spelling, depending on the nationality of the author concerned. We have used capital letters to describe various classes of insurance products and markets, but otherwise we have used lower case to describe various parts of the energy industry itself.

Abbreviations

The following abbreviations have been used throughout this Review:

BI	Business Interruption
CAR	Construction All Risks
E&P	Exploration & Production
ESG	Environmental Social Governance
LNG	Liquefied Natural Gas
LOPI	Loss of Production Income
Nat Cat	Natural Catastrophe
OEE	Operators Extra Expense
PD	Physical Damage
S&P	Standard & Poor's
WELD	WTW Energy Loss Database

Introduction

Welcome to this year's Energy Market Review. They say a week is a long time in politics, but from our perspective, six months in the energy and insurance industries feels like a lifetime. Since our last EMR Update in November 2022, we have had a very turbulent reinsurance treaty renewal season, a continuing fallout from the Russia-Ukraine conflict, more inflationary pressures around the world and yet more volatility in the prices of oil and gas. And while the hope of keeping the 1.5-degree global temperature increase by 2050 still seems to be alive following COP 27, the focus seems to have shifted from the long-term acceleration of the energy transition towards a more short-term goal of maintaining energy supply.

This in turn may well lead to a resurgence in oil & gas activity, if only on a temporary basis. It's interesting to note that only last month Rystad Energy announced that that the offshore oil and gas sector is set for the highest growth in a decade in the next two years, with US$214 billion of new project investments lined up – indeed, offshore activity is expected to account for 68% of all sanctioned conventional hydrocarbons in 2023 and 2024, up from 40% between 2015-2018[1].

All these developments have meant that looking into the future is even more challenging than usual as we seek to indicate to our customers what to expect from the energy risk landscape in the months ahead. Our theme this year is: "Surviving the storm: Optimum risk management strategies for a volatile world". As global economic stability continues to be threatened by the international situation, and as Energy insurance market pricing continues to harden for almost all customers, how best should energy companies optimise their risk management programmes, given the pressures that are currently bearing down on them?

We begin with an analysis of global energy activity in 2023 and where we can expect the industry's direction of travel to develop as the year progresses. This analysis suggests that energy activity in both the upstream and downstream arenas is likely to increase in the immediate future – good news for the industry and maybe good news for insurers as well, as it brings with it the prospect of welcome additional premium income.

We then spend the rest of Part One of the Review focusing on four important risk management issues: modern approaches to quantifying risk, an analysis of why accurate valuations matter, supply chain risk and building competence barriers. We are once again stressing the importance of submitting accurate valuations to insurers; not only will this ensure that buyers receive the correct reimbursement in the event of a loss, but it removes any excuse that insurers may seize on to inflate rating levels still further.

In these challenging insurance market conditions, we have sought to get behind the current thinking of one of the leading insurers in the Energy insurance market. Our senior London brokers were pleased to have an extended conversation with both the Upstream and Downstream specialists at Convex Insurance, and an edited transcript

[1] https://www.rystadenergy.com/news/offshore-is-back-more-than-200-billion-of-greenfield-investments-expected-by-2025

of our conversation is included as an introduction to Part Two of the Review, which as usual focuses on insurance market conditions in the various Energy sectors.

It is true that all sectors have been heavily impacted by a very challenging reinsurance treaty renewal season at January 1 2023. Not only have treaty prices risen sharply, but retention levels in many instances have also doubled for some direct insurers, which naturally has had a major effect on the prices offered to their energy industry customers. However, it's worth bearing in mind that Lloyd's has recently reported a combined ratio of 91.9% for 2022, an improvement of 1.6 percentage points compared to 2021, despite a year where Ukraine and Hurricane Ian-related claims reached £3.6bn[2]. We also make the point in our Downstream analysis that a number of major (re)insurers, as well as Lloyd's, have also reported Combined Ratios lower than 100% for 2022. With such successful overall underwriting results, is it really necessary to pass on these increased reinsurance costs in full to the end customer?

There is one other point to make here, and that is the business necessity of insurers receiving sufficient premium income each year to stay in the game. With capacity levels at least matching those of 2022, it seems clear to us that overall supply remains plentiful. But with more sophisticated risk management options open to major buyers, the market has to consider the possibility of some of the most sought-after business being withdrawn in favour of increased captive participations - or even a parametric risk transfer solution - perhaps on a permanent basis.

Furthermore, during previous hard market phases we have found that robust underwriting positions taken in the early part of the year tend to be blunted later by the need to ensure sufficient premium income - not only to meet management premium income targets but also to pay for increased reinsurance treaty costs. In very general terms, we therefore do anticipate a possible easing of these hardening pressures as the year continues, in the absence of major catastrophic losses or other force majeure events.

As ever, we hope you enjoy reading the Review and would welcome any feedback you may have.

Graham Knight is Head of Natural Resources Global Line of Business, WTW.
graham.knight@wtwco.com

[2] https://www.lloyds.com/about-lloyds/media-centre/press-releases/lloyds-reports-strong-2022-full-year-underwriting-performance

Part One: Optimum risk management strategies for a volatile world

A look into the future: Beyond "peak oil"?

Note: the views expressed by the author in this article are not necessarily those of WTW.

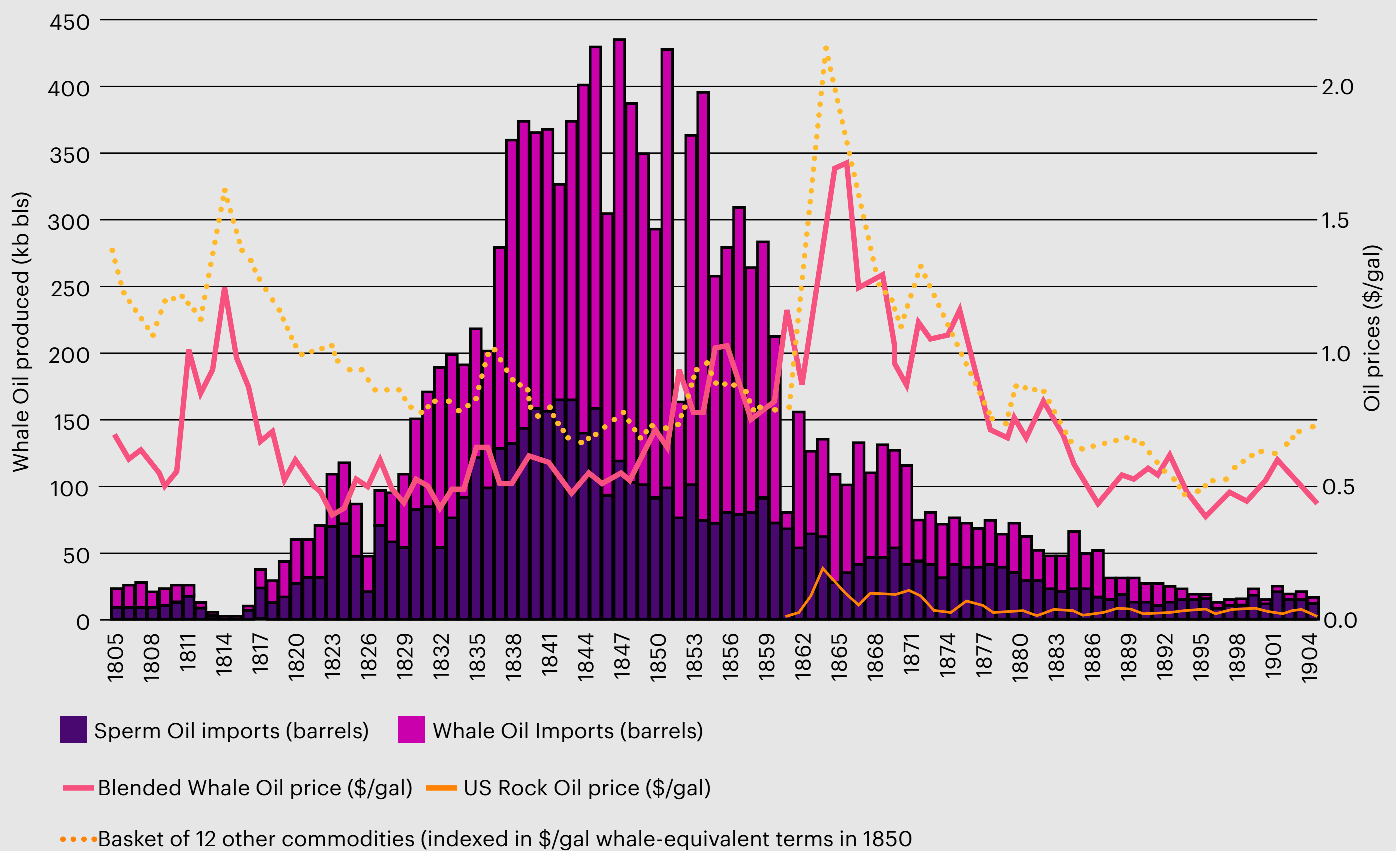
Introduction: "saving the whale"

The prevailing sentiment across the energy industry today, that we are finally approaching 'peak oil' and that the journey to Net Zero is inevitable, may put readers in mind of previous energy transitions. After all, we have been living through a dramatic energy transition in recent decades, away from coal to cleaner energy, led by natural gas, particularly in North America, the United Kingdom and Europe.

But it may be worth looking further back in history to glean some insights on the likely behaviour of commodity markets during such a transition. Before gas began to displace coal, coal displaced wood for heating and cooking, potentially saving many forests from complete destruction and driving the industrial revolution in these regions.

The birth of the oil industry in the 1850s began a perhaps less-well-known transition - and may have even saved the whales. Whale oil was a dominant lighting fuel in the 19th century, but what happened to pricing as the industry was disrupted, firstly by kerosene and ultimately by electric lighting? In recent research, Thunder Said Energy Research noted that whale oil pricing maintained a 25x premium to rock oil and outperformed other commodities, even as the whale oil market collapsed. As whaling declined, the prices of other by-products, including whale bone, also rallied very sharply as supply declined.

Figure 1: **2022 market performance, by sector**



Source: https://thundersaidenergy.com/2020/09/03/great-white-whales-the-end-of-oil-and-gas/

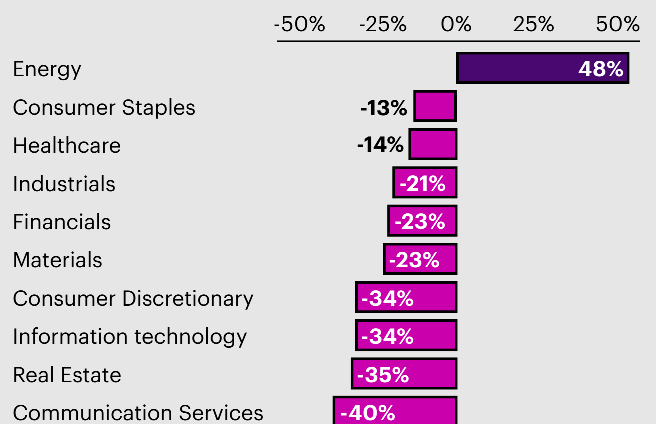
The parallel to today's oil market, the impact on its participants and on activity across all sectors, is worth some consideration, because this time it is the oil industry that is being disrupted.

In 2022 the energy sector rallied, as other industries suffered from the impact of the post COVID-19 hangover, supply chain disruptions, higher interests and global recessions. Energy companies received a significant boost as the conflict in Ukraine revealed the fragility of the global oil and gas supply situation.

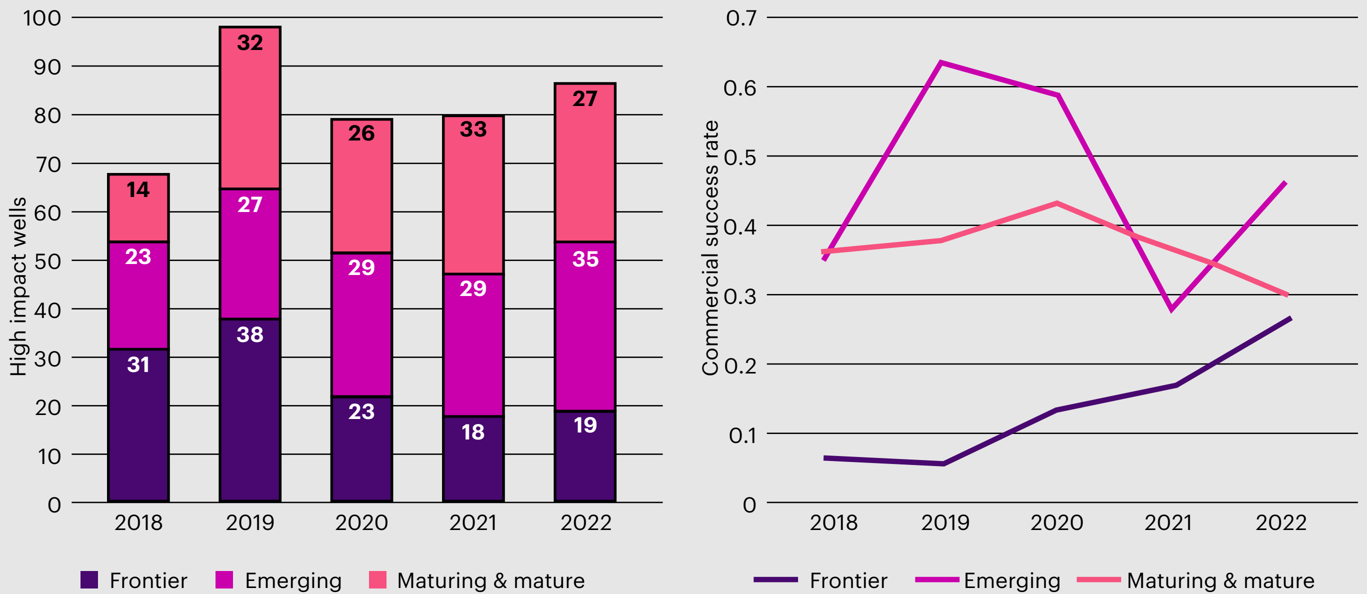
Following the oil price crash in 2015 and eight years of underinvestment, it seems that the supply overhang that has weighed so heavily on markets has gone. In the intervening time, major oil companies have refocused their efforts, away from maintaining declining oilfields and growing new production, and towards energy transition initiatives. The events of 2022 have reminded investors and operators that their core oil and gas business is still the engine of medium-term profitability.

And while demand for their core products is not yet in full retreat, until recently all the indications were that peak oil was on its way. But will a supply-side decline be accompanied by an extended period of high and volatile prices? If so, will oil companies be positioned to benefit? Perhaps the energy transition can 'save the whale' after all.

Figure 2: **2022 market performance, by sector**



Source: https://www.reuters.com/markets/europe/wall-st-week-ahead-us-markets-churn-some-stick-with-rare-2022-winner-energy-2022-10-14/

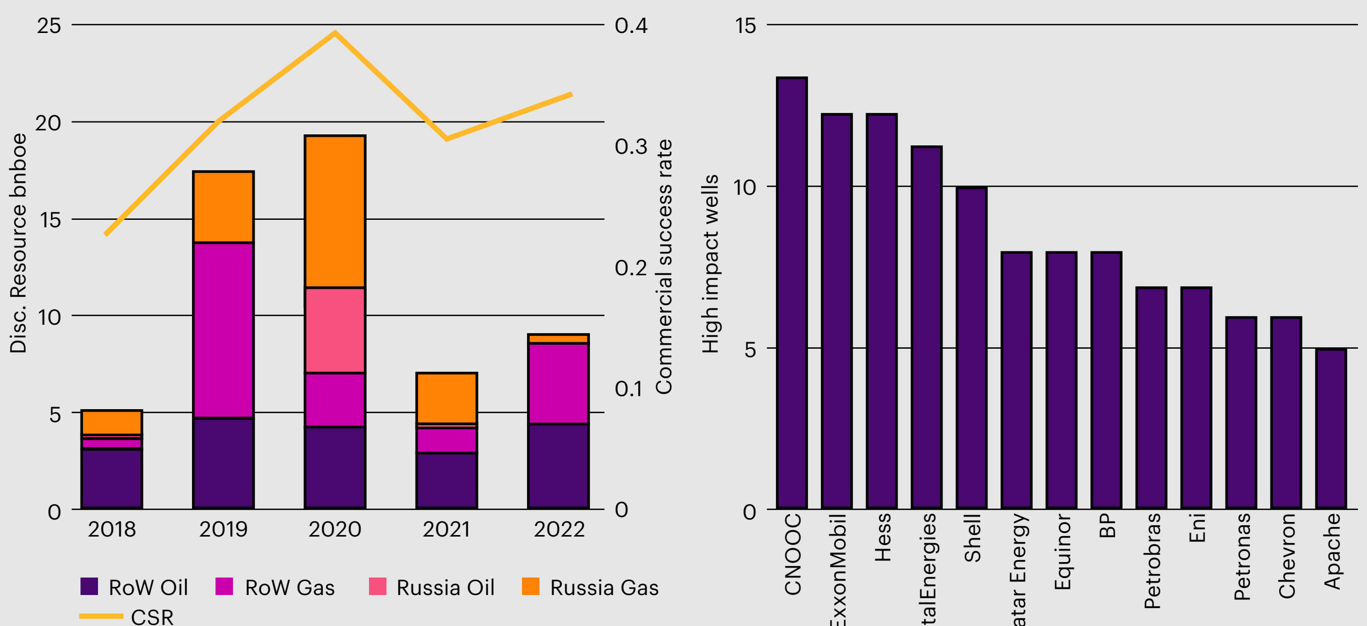


Source: https://www.westwoodenergy.com/news/westwood-insight/westwood-insight-2022-high-impact-exploration-drilling-stable-with-improved-performance-despite-a-turbulent-year

Exploration: "new frontiers"

Amid the turbulence of recent years, the oil exploration business has been remarkably resilient. Even though the overall industry spend and the number of active exploration companies may have decreased, 'high impact' exploration drilling has been steady. And while frontier drilling activity may have moderated a little, from the high point of activity in 2019, commercial success rates (CSRs) in frontier areas have almost tripled.

These increased success rates are supported by two trends. The first is that compared to 10 years ago, both frontier and emerging play exploration are now dominated once more by the majors. There is little appetite in financial markets today to back high-risk exploration-focussed small-cap companies. Secondly, explorers are making better decisions; they are spending less money, but being choosier and, as a result, are being more successful.



Source: https://www.westwoodenergy.com/news/westwood-insight/westwood-insight-2022-high-impact-exploration-drilling-stable-with-improved-performance-despite-a-turbulent-year

Discovered oil volumes have been steady at 3-4 billion barrels a year, along with some equally impressive gas volume. The ExxonMobil-led consortium (XOM, Hess, CNOOC) drilling out the prolific Stabroek block in Guyana is leading international exploration activity, measured by both success rates and volumes discovered. But other discoveries in Brazil (Alta de Cabi Frio and Puduculo), the eastern Mediterranean (Zeus and Cronos-1), Namibia (Venus, Graff and La Rona), Colombia (Uchuva-1) and the UAE (XF-002), have seen likes of Petrobras BP, Total, ENI and Shell cash in as well.

So, despite the energy transition the Exploration & Production (E&P) sector has so far maintained the high impact well count and increased its frontier success rate; whether this will continue beyond 2022 is the question. The 2022 exploration programme was dominated by commitment wells on licences acquired prior to 2020, some of which were delayed by the COVID-19 pandemic. However, continued success in these new and emerging areas could see robust activity maintained beyond 2023.

Project developments: "how to become a millionaire"

As Richard Branson is quoted as saying, "If you want to be a millionaire, start with a billion dollars and launch a new airline"[1]. The same might be said for the Engineering, Procurement & Construction (EPC) sector, where formerly great companies have been humbled over the past eight years since the oil price crash in 2015.

In recent years, several EPC companies have found themselves in financial difficulties, or mired in political and legal scandals, born of their efforts to stay competitive. EPC companies are also experiencing delays in project awards, for two reasons:

- **Inflation:** materials and labour price inflation has resulted in many 2022 bids coming in much higher than project developers expected. Furthermore, feedstock price inflation for some projects, particularly higher gas prices caused by the Ukraine conflict, has impacted project economics. Developers have in turn paused tendering for many projects to reassess commerciality or to extend negotiations with suppliers.
- **The US Inflation Reduction Act:** the relative generosity of the Act, when compared to support from other international governments, has made many developers wonder why they would bother to develop their energy transition-related projects anywhere else but the US. The impact on many international projects has been more delays.

So the EPC sector seems to be in for a turbulent year. Recent news of Apollo's offer to take over Wood Group[2] (US$1.92 billion at a 48% premium to the previously undisturbed share price) will likely not be the last this year, as a mismatch between cash-rich funds and cash-strapped EPC companies plays out.

Oilfield Services: "tightrope walk"

Oilfield Service (OFS) companies have been performing a balancing act, trying to maintain activity while avoiding competing in low-margin, commoditised markets. Overcommitting in the US shale market has hurt the top players, so focussing on margin versus volume has become a top priority.

In recent years the leading OFS companies have used their scale to secure large integrated service contracts, particularly in Norway, UK and Brazil, where the top three companies, Schlumberger (recently renamed SLB)[3], Halliburton and Baker Hughes have carved up the market between them. In the onshore space, large integrated contracts have been a feature in the Middle East. SLB has dominated in KSA, UAE, Bahrain, Qatar and Oman, while in the fastest growing market, Iraq, Halliburton and Weatherford have been more successful.

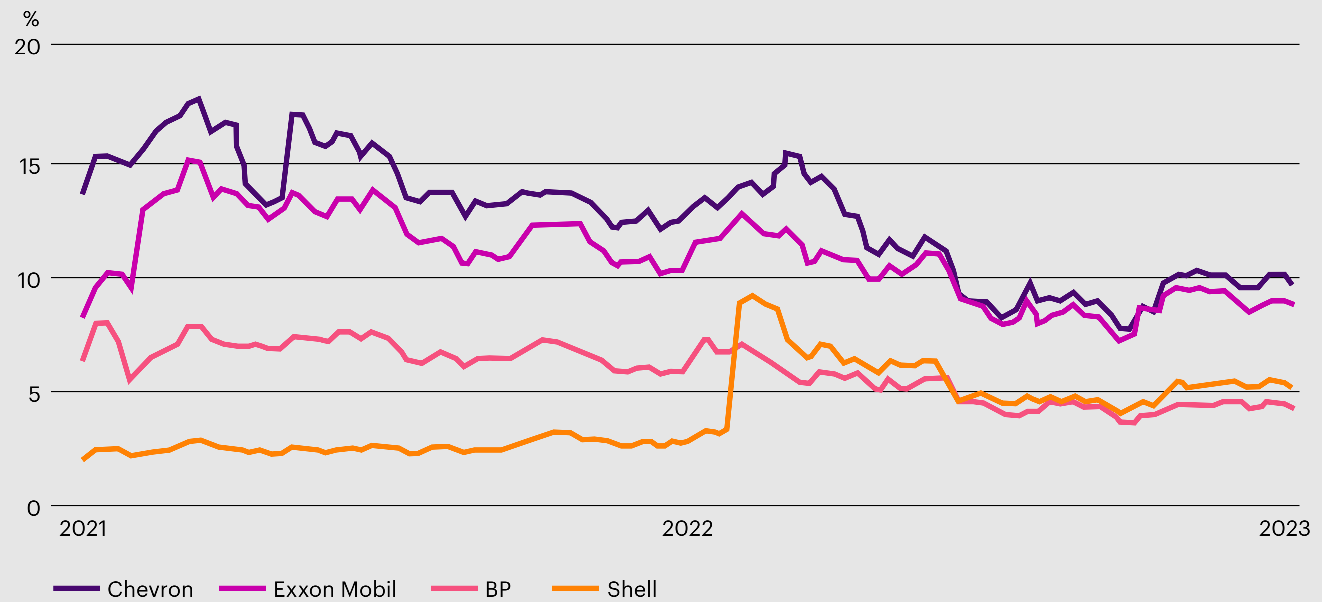
The leading companies have more recently sought to diversify into the energy transition space. SLB has created divisions specifically focussed on carbon capture and storage and has a tie-up with Linde for carbon capture. SLB and Baker Hughes have both made advances in Geothermal services, while Baker Hughes has made a number of acquisitions in carbon capture technology, acquiring two non-amine solvent systems, including a chilled ammonia process and a mixed salt process acquired form Compact Carbon Capture (3C).[4]

Whether services and products in both digital and energy transition can compete with the volumes and margin performance of their heritage oilfield portfolios is yet to be seen.

"Despite the energy transition the Exploration & Production (E&P) sector has so far maintained the high impact well count and increased its frontier success rate; whether this will continue beyond 2022 is the question."

[1] https://www.brainyquote.com/quotes/richard_branson_452106
[2] https://www.reuters.com/business/energy/britains-wood-group-rallies-apollo-globals-buyout-proposal-2023-02-23/
[3] https://www.bloomberg.com/news/articles/2022-10-24/oilfield-giant-schlumberger-revamps-name-to-slb-as-energy-transition-gains-pace
[4] https://investors.bakerhughes.com/news-releases/news-release-details/baker-hughes-signs-agreement-acquire-compact-carbon-capture

Figure 5: **Price-to-earnings ratios for major oil companies**



Source: https://www.barrons.com/articles/bp-and-shell-vs-exxon-and-chevron-the-mystery-of-big-oils-p-e-gap-51673052237

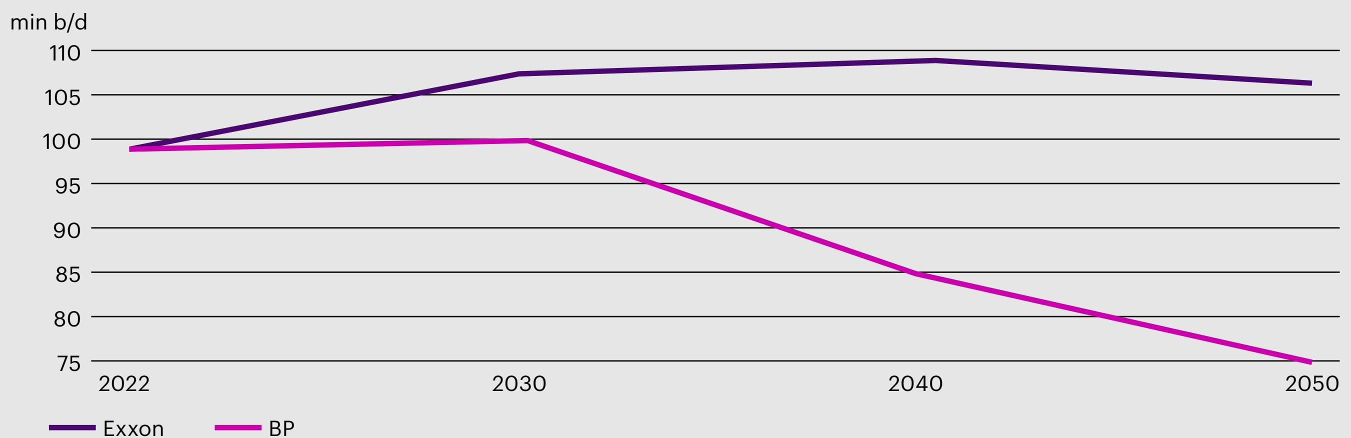
Oil majors: "sustainable discount?"
One feature of the market has been the poor rewards that the oil majors have reaped from moving away from their core oil and gas business to embrace the energy transition.

BP and Shell have trailed ExxonMobil and Chevron in terms of price-to-earnings ratios in recent years. This has mirrored the general discount of UK markets when compared to the US, but this trend has been more persistent than in the past and did not recover during 2022 when the equity UK market was one of the bright spots and closed the gap in its international rivals.

BP[5] and Shell[6] are each intending to invest about US$2-5 billion a year each in low-carbon energy and say their oil-and-gas production has peaked. However, ESG investors still appear to be avoiding BP and Shell, perhaps because they are still fossil-fuel producers.

Meanwhile, ExxonMobil and Chevron are spending less on green projects, and expect fossil-fuel output to rise. ExxonMobil in particular has doubled down on current and future oil production and has refocussed its capital investment asset with the best short-term growth potential, such as the Permian Basin and offshore Guyana. In contrast to BP, ExxonMobil sees oil production as being almost flat through 2030-2040, with a much gentler decline than predicted by BP.

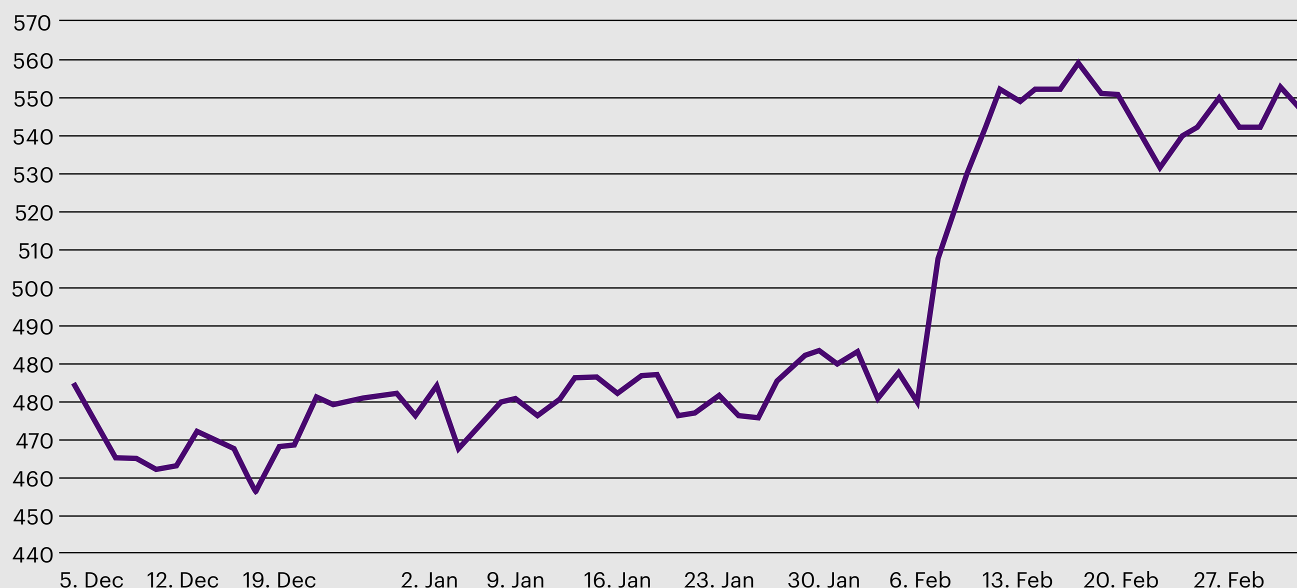
Figure 6: **BP vs. ExxonMobil oil demand projections**



Source: https://www.ft.com/content/fd1e65ab-0b8e-415f-b92b-271d0c209a73

[5] https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/investors/bp-fourth-quarter-2022-results-presentation-slides-and-script.pdf
[6] https://www.shell.com/investors/results-and-reporting/quarterly-results/2022/q4-2022.html

Figure 7: **BP share price response to Bernard Looney's 12th February speech**



Source: https://www.londonstockexchange.com/stock/BP./bp-plc/company-page

ExxonMobil and Chevron's investments in the energy transition have focussed on the decarbonisation of their core businesses. In contrast to BP and Shell, they have avoided straying into power and utilities markets.

ExxonMobil's renewable energy plans are mainly based on low-carbon solutions, carbon capture, and lower-emission fuels. ExxonMobil has said it is "advancing a broad portfolio of competitively advantaged hydrogen, CCS, and lower-emissions fuels projects" and say they have plans "to invest US$17 billion from 2022 to 2027, with portfolio returns in excess of 10%."[7] This contrasts with the low expected returns forecast by BP and Shell for their energy transition efforts.

BP: "a change of tack?"

BP CEO Bernard Looney recently reassured investors that BP was going to continue to invest in its oil and gas portfolio alongside more-sustainable investments. BP committed an extra US$1 billion (£830 million) a year until 2030 to its "transition growth engines", meaning biofuels, electric charging points, wind, solar and hydrogen, but also committed an equivalent extra sum to new oil and gas investments.

The ambition of reducing hydrocarbon output by 40% by 2030 has been moderated in favour of a 25% figure. With BP relying on returns on investment of 15% from prospective oil and gas investments but just 6%-8% for its transition investment portfolio, perhaps this is understandable.[8]

Some might suggest that BP and other major oil companies have no business investing in adjacent power and utilities sector, given that previous attempts have been unsuccessful and that if investors wanted exposure to offshore wind, they could invest in Orsted or any number of other sector specialists. Trying to please the many different shades of investors will therefore continue to be a challenge for BP and its peers.

Be that as it may, the head of BP's US business has recently insisted that the company is sticking with its promised transition away from fossil fuels era[9].

"
Trying to please the many different shades of investors will continue to be a challenge for BP and its peers."
"

[7] https://corporate.exxonmobil.com/news/newsroom/news-releases/2022/1208_exxonmobil-announces-corporate-plan-to-double-earnings-and-cashflow-potential-by-2027
[8] https://www.bp.com/en/global/corporate/news-and-insights/reimagining-energy/bp-sets-net-zero-ambition-outlining-reinvention.html
[9] https://www.ft.com/content/02facf98-e7c3-4973-beda-b1cc6e125d54

The energy transition: "flying the plane while building it"

And it's not just BP that is undergoing an existential crisis; all areas of the industry are impacted in a similar way by the energy transition. The most problematic issues for companies are the uncertainties around emerging technologies and the expected pace at which they will be implemented.

It's clear that many of the technologies expected to be the foundation of the energy transition are simply not ready. Many proposed technologies have not been demonstrated at commercial scale, and a large proportion do not yet resemble industrial technologies at all. The background to this is that many technologies have emerged in the past 5-10 years from academic laboratories and national institutes, where governments had channelled the larger part of their energy transition-related funding.

The result is that the job of scaling up and commercialising these technologies is, in many cases, in the hands of 'first timers'. ITM Power, the UK's leading electrolyser manufacturer, encountered some challenges last year and replaced its long-time chief executive Graham Cooley in December. Sir Roger Bone, the chair of ITM Power, said it had "underestimated the competencies and capabilities required to scale up and to transition from an R&D company to a volume manufacturer."[10]

This may be a theme we return to. It would be no surprise to see a slew of similar bankruptcies in technology companies who have spent too much money on prototypes and scale-up efforts and are not close enough to positive cashflow to keep investors happy.

Project Financing: "a game of chicken (and egg)"

Project economics is also an issue. From carbon capture to green hydrogen to synthetic fuels, the break-even price requirement of new projects is, in some cases, many times greater than that of similar, conventional projects. Governments must help bridge the gap to commerciality. However, governments have competing priorities and show every sign of foot dragging on funding decisions. Project developers are playing a game of 'chicken' with governments, coming to market with proposed developments and daring governments not to help fund them.

In the meantime, project financiers are seeking more certainty. A survey by Boston Consulting Group (BGC)[11] found that while commercial banks are keen to finance hydrogen and CCUS projects, they are holding back because of the perceived risks involved. And because most banks aren't prepared to be more flexible with their project-finance risk criteria, many projects are not going ahead. Some 80% of announced low-carbon hydrogen projects worldwide are still in the planning stage, while only about 7% of CCS projects have reached the final investment decision (FID) stage to date.

According to BCG, commercial banks are waiting for these projects to meet the same standards and provide the same levels of risk as more developed green projects, such as solar photovoltaic (PV) parks and wind farms.

To move forward, more certainty is needed in four key areas:

- Offtake risk
- Technology risk
- Policy risk
- Merchant risk

The commercial banks want projects to have long-term offtake agreements with good quality counterparties, to use mature technologies, to operate under clear regulations and industry standards and to be able to sell into established markets. We are currently a long way from this objective.

This lack of certainty in development funding and approvals is making it hard to 'time the market' and is a headache for companies looking to commercialise new technologies. Securing firm sales contracts with project developers, who themselves cannot secure financing, is proving difficult. One thing must come before the other, which means that, for the moment, many technology companies are stuck.

[10] https://www.ft.com/content/31c5fea6-8995-4242-87bf-2734909b1d87
[11] https://www.bcg.com/publications/2023/breaking-the-barriers-in-financing-hydrogen-and-carbon-capture

US Inflation Reduction Act: "mind your V's and Q's"

The US Government has done more than its international peers to help provide some certainty for the industry. In August 2022, the Biden Administration passed the Inflation Reduction Act[12] which contained a raft of legislation to support both renewable technologies and American business.

For renewable power, the legislation rolls-over and increases existing tax credits. For example, the investment tax credits for solar projects will increase from 26% to 30%, including projects started in 2022, dependent on meeting various commitments to apprenticeships. However, an additional 30% tax credit is now available for projects that meet various criteria around the domestic production of input materials, locations in 'former energy communities' and if the power is sold to low-income individuals.

The relevant legislation for hydrogen and carbon capture are the 45V and 45Q tax credits, respectively:

- **For hydrogen**, the 45V legislation provides support of up to US$3/kg for hydrogen production. This is likely to be enough to cover the requirements of both blue and turquoise hydrogen projects, depending on the particular energy intensity (T CO_2/T H2). For green hydrogen projects, which produce hydrogen form the electrolysis of water, the economics will depend mainly on the price of electrical power and the hope that the capital costs of electrolyser units will fall over time.
- **For carbon capture**, the $85/T$CO_2$ price offered for carbon capture and storage will be enough to kick start the industry, a particularly where high-pressure streams of highly concentrated CO_2 can by captured, close to existing infrastructure.

The US Inflation Reduction Act democratises the energy transition sector by not discriminating against technology choice, developer or financing routes. Any qualifying project can receive tax credits. In contrast, government initiatives elsewhere focus more on carbon pricing and fiscal pressure, and direct subsidies for preferred development consortia. This results in a system of patronage, where chosen consortia that heavily favour national champions are more likely to secure government backing.

The outcome is likely to be stark. If we were to come back in 10 years' time, the difference will very likely be that, while both the US and other regions will have developed a handful of larger projects, the US will have encouraged a multiplicity of small to medium-sized projects, of varying technologies, developers and financing models, whereas in Europe and other regions, the numbers of small to medium sized projects will likely be much smaller.

Bernard Looney's apparent damascene conversion may prove to be a watershed. Shell may also be coming around to the point of view that its Net Zero ambitions are too aggressive, and that the energy transition will be realised over a much longer period of time.

Shell's incoming CEO Wael Sawan indicated that Shell will proceed with more caution from now on. In an interview with The Times, he noted that "I am of a firm view that the world will need oil and gas for a long time to come. As such, cutting oil and gas production is not healthy. We've seen, of course, through 2022 the fragility of the energy system. To see prices start to skyrocket, that's not healthy for anyone, particularly consumers."[13]

Echoing BP's intention to slow the planned decline in its oil and gas production in order to guarantee the reliability of energy supply brings the UK majors more in line with their American and European counterparts. Whether BP and Shell will change course to focus more on the decarbonisation of their own operations and the fuels value chain remains to be seen. Their adventures in the renewables and power markets seem to have been bruising experiences.

Oilfield services companies will be banking on the continuation of high development activity, supported by higher prices. The wider contracting sector must wait for major projects to move forward and to see whether anticipated energy transition projects materialise, or whether technology maturity and financing problems slow progress.

Technology companies and project developers will look to focus on low-hanging fruit in the US, and unless Europe and other regional governments can come up with an adequate response to Bidens' enticing tax credit system, progress in those regions will be more modest.

Security of supply will remain a top priority for governments. The US government is responding to higher prices and striding ahead in all areas of energy production - if international governments follow suit, then both operators and contractors are set to benefit.

Michael Blakemore is an independent business consultant with 25+ years of experience in the Energy, Resources, Chemicals and Infrastructure Sectors.

[12] https://www.whitehouse.gov/briefing-room/statements-releases/2022/08/19/fact-sheet-the-inflation-reduction-act-supports-workers-and-families/
[13] https://www.bloomberg.com/news/articles/2023-03-03/shell-ceo-says-cutting-oil-and-gas-production-is-not-healthy

Optimising risk: Strategies for a looming recession

Introduction: the era of great volatility

Energy companies have been on a rollercoaster the last few years, from demand cratering during the pandemic to record profits reported in 2022. And the volatility looks set to continue, with the very real possibility of a recession during the course of the year which will likely be compounded by the need to navigate tense domestic environments due to the ongoing high inflation. Treasurers and Finance Directors will be unlikely to rest on their laurels and will be keen to ensure that their powder is dry to deal with the economic, geopolitical and climate risks that are on the horizon. Efficiency will be key once more, as budgets are cut or maintained across the organisation. When this happens with risk budgets, the result usually has been a trade-off with risk. For example, reducing insurance premium spend usually results in lower insurance purchases and more risk being taken onto the balance sheet.

But what if savings could be achieved without increasing the risk?

What's the challenge?

CFOs and Treasurers are happy enough to limit the spend on premiums as a recession looms, but in the event of a loss the focus is always on the cover provided and seldom on the premium paid. In addition, communicating this to a senior audience that is unfamiliar with insurance at renewal time (especially when there hasn't been a large loss) can also pose problems. How do you clearly show this trade-off between cost and risk without becoming embroiled in the detail of individual covers across different businesses and individual countries?

What is needed is an approach that allows insurance managers to fully understand what the key drivers of risk are, how they may be mitigated, and how different strategies balance the need for protection against losses at an affordable cost. Yet at the same time, all this detail needs to be summarised in an easily recognised format and should connect adequately to the broader environment in which the organisation operates, thereby providing sufficient context and clarity for key stakeholders.

How it works in practice: energy company case study

The insurance manager of a large energy company with interests in refining, construction and chemicals was concerned that they were no longer purchasing the 'right' insurance programme. From the effect of acquisitions and divestitures to the impact of inflation on the adequacy of limits, it was not clear whether the insurance being purchased was still appropriate for the business. In addition, the hardening market had meant that their predecessor had purchased less insurance than in previous years, which they feared had resulted in more risk being retained than senior management had realised. Added to the mix was the prospect of a recession with its own diverse effects on the business, which meant that any review of the programme not only needed to allow for the changes to date but also what was likely to happen in the future.

Figure 1: **Energy loss forecasts, by country and type of year**

Forecast Energy Losses in next Policy Year				
Type of Year	Country A $m	Country B $m	Country C $m	Country D $m
Good	0	1	5	10
Average	1	5	12	100
Bad	5	100	250	1,000
Catastrophic	15	500	750	6,000

Source: WTW

In discussions with them, it became clear that there were three key questions that needed to be addressed:

1. What are the key loss drivers?
2. What is the likely quantum of insurable risk arising from these businesses and how volatile is this risk?
3. How effective is the current insurance programme, as well as any alternative programme under different economic circumstances?

Quantifying risk

By combining their company's own data with industry data, detailed and up-to-date knowledge of the available risk transfer markets and modern analytics, we quickly developed a better understanding of the company's risk exposures and their variability under different economic scenarios.

Figure 1 above shows both the quantum of the company's energy risks in each country as well as how volatile these risks can be under an "as is" economic scenario. From this, we were able to show where the risk in a particular country exceeds the risk appetite (shown in purple shading in Figure 1 above) indicating where insurance was required to keep the risk within appetite.

Furthermore, we were also able to show how these risks varied by activity as shown in Figure 2 below, which helped to ensure these businesses were buying the optimal insurance cover in relation to the risk exposure within each business.

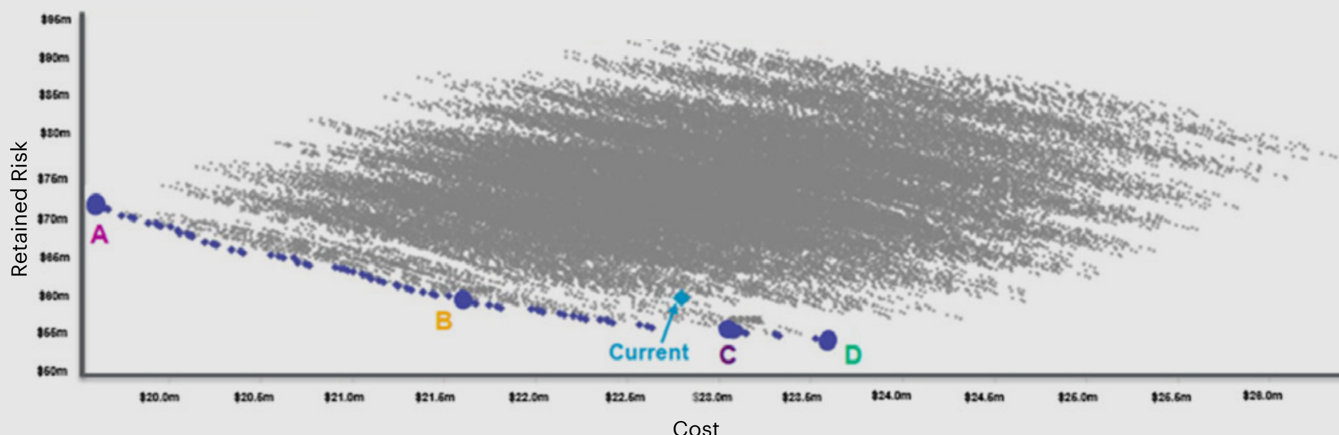
The same results can also be generated under different forecast economic scenarios where inflation or growth differs from the base scenario.

Figure 2: **Forecast Energy Losses in next Policy Year**

Forecast Energy Losses in next Policy Year				
Type of Year	Downstream $m	Midstream $m	Generating $m	Upstream $m
Good	6	9	0	0
Average	94	22	1	1
Bad	915	400	25	15
Catastrophic	4,500	2,100	325	340

Source: WTW

Figure 3: **Range of possible efficient insurance structures, with associated retained risks and costs**



Risk: Retained Losses (Total at 95th Percentile using TVaR risk measure
Cost: Premium plus Median retained Losses

Source: WTW

The final question was addressed with our Connected Risk Intelligence approach, which shows the impact of different insurance strategies on the company's cost budget and risk appetite. By considering all the energy risks in a single portfolio view, we were able to show how effective the current insurance program was, as well as compare the merits of alternative structures. Figure 3 above shows the range of different insurance strategies (each dot represents a different strategy) that are possible for this company. A different "cloud" of such dots is generated for each economic scenario that the company wants to consider; for example, they could look at the results under a scenario where revenues are down 5% during a recession.

- The horizontal axis shows the **expected annual cost** of the insurance strategy, which is made up of the premium spend and the cost of the retained losses.
- The vertical axis shows the **amount of retained risk in a 'bad year'**, which here was defined as a 1-in-20-year event.

The objective was to reduce the amount of retained risk and at the same time reduce the expected annual cost and move to a more efficient programme, closer to the edge of the "cloud" in the above diagram.

The purple dots show the suitable efficient insurance structures — that is those structures have the lowest cost for a given level of retained risk. The first conclusion we could draw was that the current structure was inefficient and that there was money left on the table that could be put to better use. There were four alternative strategies, each with its own merits that we then considered:

- **Option A** offered the lowest cost but had the highest retained risk. This retention was not in line with the company's new and more prudent view of risk and was rejected.
- **Option B** offered the lowest cost, without taking on any more risk, and whilst attractive, was also rejected on the grounds of the continuing high level of retained risk.
- **Option C** had a slightly higher cost than the existing programme, but with lower risk.
- **Option D** had the highest cost of all the 4 alternatives, but with the lowest level of risk.

Option C was selected, as it offered the lowest risk within the budgetary constraints imposed by the CFO.

The Insurance Managers found this process extremely helpful as it enabled them to:

- Better understand their risks and their associated volatility — not just at present but also under different future scenarios
- Explain the benefits of insurance easily and clearly to senior management
- Highlight the key differences in risk and cost between the various insurance programmes

The approach was also highly valued by the Treasurer and CFO since they were familiar with risk transfer and risk hedging, but less familiar with insurance - our results provided them with a clear audit trail of objective decision making.

Andy Smyth leads the WTW GB Risk & Analytics team in London.
andy.smyth@wtwco.com

Reviewing insured values: How to maximize return on capital

Statement of values are not just a mechanism for calculating insurance premiums. Here a WTW expert shows how they can drive optimal business, insurance, and risk management decisions for energy companies.

Introduction

Supply chain disruption is inflating insured values and lengthening restoration periods, due to specialized equipment requiring lead times often exceeding a year. It's also significantly increasing the cost of materials and labor, thereby driving up the values that energy companies should report at renewal.

If an energy company faces a business interruption event, it will want to avoid further pain in its recovery. Today, this means ensuring that policy terms and conditions reflect longer timeframes and increased costs. And when insurers are regularly suggesting buyers increase their stated property values for building and equipment values by 15%-20% (compared to the typical 1%-5% year-over-year increases the sector has experienced historically) the hunt is on for better value.

But in the pursuit of the precise cover required at an appropriate price, energy companies can also uncover further strategic advantages and ways of upping their return on capital. In this insight, we look at how to assess insured values to identify optimization opportunities in the current market conditions.

Avoiding over or understated values

Avoiding overstated values means energy companies won't pay increased insurance premiums and deploy business resources inefficiently. To achieve this, they will want to avoid some common mistakes, such as starting the values worksheet completed as part of the renewal process based on gross sales versus net sales. Net sales accounts for any discounts, freight and royalty expenses that would be considered variable in nature when presenting Business Interruption values. This means that a company's values will be overstated if it is not properly accounting for the saved selling expenses, and so the overstated values may result in an increased insurance expense.

On the flipside, if an energy company reports understated values, it could encounter significant issues following a loss, resulting in uncovered losses for amounts exceeding stated limits. Furthermore, insurers often include average or co-insurance clauses when lacking confidence in the reported values. A common mistake here that results in understated values is where policyholders report gross profit as per the profit and loss statement. Policyholders cost of sales may include continuing expenses or fixed expenses such as labor and depreciation, which should be included to ensure

the accuracy of the value and protect the business properly in the event of a claim. The financial impact of under-reporting a company's values can be devasting if a catastrophic loss occurs and the recovery is limited to the reported value.

Understand the assets' context

Insured values are the starting point in the property insurance purchasing process, meaning that accurately measuring and presenting these values is key.

During the renewal process it's critical to understand the company's energy industry locations, building construction types, and the location where the equipment is originating from. Increases in construction cost inflation rates vary widely between countries and regions.

Presenting the specifics of an energy company's business and articulating its operations and the risk mitigation and controls in place is the first step to seeking improved value.

Analyzing values comprehensively

Historically, from our experience many energy companies may not have spent significant time and resources on the valuation process, perhaps only inputting the basic information into an insurer's statement of values worksheets at renewal.

However, the current economic conditions mean that it is crucial a more comprehensive analysis of values is performed. This should consider all the key factors that can impact the company's renewal, including the current market trends for structure and equipment repair, replacement costs and timelines, which could all leave the business facing significant shortfalls in reported values if not handled appropriately.

For example, suppose an energy company has total reported values on property, plant and equipment at US$900 million in 2020 and this was increased by the traditional 1-2% in subsequent years; the values are therefore up by US$18 million to US$918 million in 2021, then up by US$18.36 million to US$936.36 million in 2022. Let's also say that the company increases total reported values this year by 2% to US$955 million in 2023. Given the current conditions and an inflation rate of roughly 12%, a more accurate total reported value might be US$1,055 million so the company's property plant and equipment values could be understated by around US$100 million.

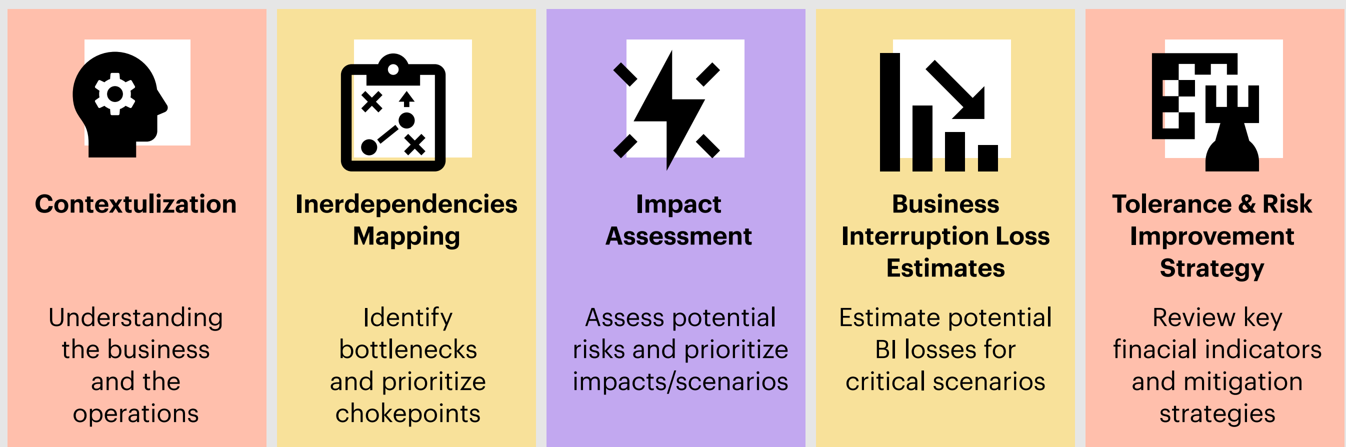
> **"The current economic conditions mean that it is crucial a more comprehensive analysis of values is performed."**

Other factors to analyze at renewals

Assessing the following factors will also help energy companies build up a more accurate picture at renewals and therefore prevent their business from either facing deficiencies in the event of a claim or paying too much for cover:

- Replacement cost versus actual cost value in the policy terms and conditions
- Historical results versus current plans for projected volume, grade, and yield
- Capacity at key production stages and any production bottlenecks
- Contractual price obligations and future spot market or commodity pricing, including potential currency fluctuation impacts
- Matching ordinary payroll coverage to labor agreements/union contracts
- Scheduled major maintenance outages that would impact operating income
- Any planned equipment upgrades impacting production levels
- Potential mitigating expenses:
  - Meeting contractual obligations
  - Increased labor/overtime
  - Increased travel including room and board) expenses.

Figure 1: **mapping interdependencies**



Source: WTW

Interdependencies mapping

The process of generating accurate insured values can lead energy companies into exploring their broader vulnerabilities and where resources can be deployed most efficiently. In preparation for renewal, energy companies need to produce answers to the following questions:

- Does the company have a deep understanding of the interdependencies that would impact our operations and its ability to recover in the event of severe disruption?
- Where are the chokepoints?
- Is the company prioritizing the resiliencies around its chokepoints?
- Can the company present how it mitigates the risk of severe disruption more compellingly?

After understanding the interdependencies, the next step is to undertake impact assessments around the potential risks and impact scenarios, then estimate the potential Business Interruption losses under critical scenarios.

These exercises will not only mean that the company enters into renewal negotiations with accurate information, but could have broader, strategic advantages. The insight could lead to the company to review the key financial indicators and mitigation strategies and resetting the organization's risk tolerance approach and risk improvement strategy.

Conclusion: why specialists for reliable assessments may be needed

Accurately reflecting insured values and seeking broader optimization opportunities is not always straightforward. Energy companies may need to call on experts to ensure that the pre-loss valuation process is a fully comprehensive, accurate, and reliable assessment of loss exposures and values, such as:

- **Engineers and appraisers,** to assist with building and equipment replacement cost or actual cash values measurement
- **Forensic accountants,** who are able to quantity Business Interruption values and values at risk precisely
- **Risk engineers,** to perform risk assessments and maximum foreseeable loss (MFL) scenarios.

Justin Paglio is Senior Director – Risk, Forensic Accounting & Complex Claims, WTW New Jersey.
justin.paglio@wtwco.com

Supply chain risk: Key findings of our recent survey

Introduction: supply chain risk increasingly an issue for energy risk managers

The supply of energy has never been as critical, or as contested, as it is today. The question of how we heat and light our homes and run our transportation – and how much it costs – is at the centre of economic, political and social discussions.

Urgent action is needed to guarantee affordable supplies today and power the transition to clean energy tomorrow. But the supply chains that underpin both these objectives are struggling to meet demand. Project times are lengthening and costs spiralling, as companies compete to get the raw materials and equipment they need on time, putting future plans at risk.

How are energy businesses adapting? To find out how the sector is navigating this challenging landscape, we commissioned both our WTW Global Supply Chain Risk Report and our 2023 Energy Supply Chain Risk Report, both of which were published in March 2023[1]. For the latter, we surveyed 100 risk and supply chain leaders in sub-sectors including upstream oil and gas, downstream power generation and renewable energy. We asked them how they saw the supply chain landscape, the nature of the main challenges and risks they face, what they are doing to overcome obstacles in trying to build resilience and finally what they think the supply chains of the future may look like.

Five key findings from our Report

The five most interesting findings from our Report were:

- 83% cited a lack of insurance solutions to be among the greatest challenges in addressing their supply chain risks.
- 67% of businesses said that losses related to the supply chain had been higher or much higher than expected over the last two years.
- 39% named shortage of raw materials are among the biggest supply chain factors expected to impact their businesses over the next two years, topping the list of concerns.
- 84% said they have made at least some improvements in their approach to supply chain management in response to the pandemic.
- 65% said developing a detailed understanding of their supply chain would have the greatest impact of supply chain challenges could impede the energy transition.

Around the world, countries and governments face the same energy challenges – how do they keep the lights on while also meeting their climate targets and accelerating the transition to clean energy? With the conflict in Ukraine, these challenges have become starker and costlier.

[1] https://www.wtwco.com/en-gb/insights/2023/03/2023-energy-supply-chain-risk-report

Less discussed, but no less critical, is whether energy supply chains can deliver the infrastructure and operational capacity needed to meet these aims. Lead times have been lengthening for both upstream and downstream projects, due to shortages of critical components and squeezed contractor capacity.

Many companies are heavily reliant on single-source contractors, suppliers and logistics providers, who themselves face problems sourcing raw materials and finding the experienced staff needed to service projects.

Critical minerals needed for clean transition technologies are in short supply, while the cost of all these inputs has been spiralling. Growing demand in 2023 and beyond could exacerbate bottlenecks and delays, further extending project timelines.

Counting the cost of disruption

These underlying challenges may explain why, at a time of record profits for many energy companies, more than two-thirds of respondents (67%) said that their losses specifically related to supply chain risk were higher or much higher than expected over the last two years. A large proportion (43%) agreed or strongly agreed that supply chains risks had been increasing before the pandemic.

However, experiences and learnings from the last few years have motivated businesses to increase robustness and resilience. A majority in this survey (59%) said they have made some improvements in their approach to supply chain management following the pandemic. A further 25% said they have completely transformed their approach.

Collaborating to reduce risks and losses

When asked about the greatest opportunities to improve supply chain management, increased collaboration with customers (61%) came top of the list, followed by strategic planning within their organization (59%) and increased collaboration with suppliers (51%).

These results underline the need to work closer with key partners to optimize current supply chains where switching suppliers is often not an option. Almost three-quarters (71%) agreed or strongly agreed that a lack of alternative suppliers impeded their ability to implement an effective dual or multi-source strategy in managing supply chain risks.

Supply chains showing the strain of rapid growth and change

A huge amount is being asked of the energy sector, from finding alternative sources of hydrocarbons to reduce western dependence on Russian oil and gas, to securing the green energy transition. All of this takes huge investment and project capacity, as well as the creation of new supply chains for emerging technologies such as hydrogen, renewable energy, and carbon capture and storage.

In a time of rapid change and growth, the suppliers and contractors needed to deliver this capacity face their own challenges, including shortages of materials and skilled workers. The result is that lead times for delivering key equipment have doubled in some cases. The cost of many projects has spiralled far in excess of original budgets, while the cost of insuring them has also increased as values and possible losses are higher and longer indemnity periods are needed to cover them.

With demand outstripping supply, there is little spare capacity available elsewhere if companies look for alternative suppliers. To manage these gaps, some companies are making part-sharing agreements, or dismantling older equipment in an effort to keep existing rigs and infrastructure up and running.

Companies are also looking to use digital technologies to improve condition monitoring to inform supply chain needs in advance. Some are carrying out reviews with suppliers to improve the resilience and security of the supply chain. That can mean improving and clarifying the terms of framework agreements, obtaining full visibility of how and where raw materials and equipment are being produced at pre-agreed costs, and taking a complete holistic view of all the supply chain factors that could impact their critical assets.

Risks and uncertainty are growing

The risks that energy and power companies are concerned about in their supply chain reflect uncertainly and volatility in the sector as a whole. Shortages, delays, price inflation and geopolitical instability were all top of mind for respondents to our survey. Wider external factors such as cyber security and supply chain sustainability were also leading concerns.

- **Critical shortages:** shortage of raw materials (39%) was named as the biggest supply chain factor expected to impact businesses over the next two years. Construction delays, which are linked to shortages, were also near the top of the list. As we've discussed, the loss of one source of raw materials or equipment can delay work and hold back activity, which is costly at a time when the energy business is generally highly profitable.
- **Economic risks:** economic uncertainty emerged along with inflation and rising costs as the leading factors underlying supply chain risks, ranked by 32% to be among their top concerns. This may reflect escalating project costs, which in some cases have increased by up to 40% against budget even before the work starts. Rising costs and volatile energy prices can influence projections of income and growth, potentially reducing the scope for future investment.
- **Geopolitical risk:** this risk was among the factors thought to have the greatest impact on supply chain risks, rated by 56% as medium and 23% as high impact. Along with the massive disruption to oil and gas supplies, the Ukraine conflict has also cut off a major source of lithium needed for transition technologies. Other potential sources of minerals in African countries are compromised by conflicts and human rights abuses. China produces up to 60% of mass-manufactured clean energy technologies, so tensions between that country and the west could pose a risk to supplies of critical equipment and components.
- **Cyber risks:** contractors, suppliers and equipment manufacturers in the energy sector are increasingly digitalizing and automating their processes. On major projects, they may all share the same systems, adding potential entry points for malware into sensitive equipment. These trends may explain why cyber risks were believed to have the most profound effect on supply chains, rated by 62% as medium and 29% high impact.
- **Climate change:** more than half (56%) placed climate change and environment among the top global trends affecting supply chain risks. This may reflect concerns over the impact of extreme weather and drought on the resilience of energy infrastructure and supply chain, the need to decarbonise operations and production processes, as well as concerns about progress towards a low carbon future. The supply chain needs to deliver with greater speed and innovation if the world is to make a successful transition towards clean energy.
- **ESG:** like other sectors, the energy industry is under mounting regulatory and public pressure to source responsibly and sustainably. Much more effort is going in to make sure that activities such as oil extraction and raw materials mining are not tainted by exploitation or abuse. In our survey 87% said that ESG is a specific selection criteria when selecting new supply chain vendors, while 82% said sustainability was a key goal for their supply chain. Almost half (46%) named ESG among the top global trends with the greatest influence on supply chain risk.
- **Pandemics:** though we may be past the acute disruptive impacts of COVID-19, the risk of a new strain of the virus, or a new unforeseen pandemic, seems to be still front of mind, topping the list of global trends with the greatest influence on supply chain risks at 58%.

Building supply chain resilience through knowledge

Supply chains are going to be even more critical to success in the coming years, given the demands and expectations on the sector to deliver a future of clean and secure energy. However, as we've seen, suppliers and contractors are facing a range of challenges which could impede this progress.

Our survey suggests these is a growing awareness of supply chain risks and a renewed focus on improving resilience. More than a third (37%) say the investments they've already made to strengthen their supply chain have greatly improved its robustness – higher than any other sector in our Global Supply Chain Survey – while a further 56% said robustness has somewhat improved as a result. The vast majority (89%) say they have either a strategic or proactive approach to supply chain management.

Gaining transparency and visibility

As energy supply chains become more critical and complex, there's a greater focus on increasing knowledge and achieving end-to-end visibility. When asked what factor would have the greatest impact in terms of managing their risks, 65% said developing a detailed understanding of our supply chain, 60% said a detailed understanding of supplier networks and 51% said improving relationships with suppliers and customers.

> **Shortages, delays, price inflation and geopolitical instability were all top of mind for respondents to our survey.**

Lack of data and insurance are roadblocks

But businesses face considerable obstacles getting hold of all the data they need to achieve full visibility. Almost three-quarters (74%) said they lacked the data and knowledge to understand their risks. A larger number (81%) agreed or strongly agreed that supplier concerns about protecting intellectual property and trade secrets made it difficult to achieve full transparency through the supply chain.

More than four-fifths (83%) said a lack of insurance solutions was among the greatest challenges to addressing their supply chain risks. This may reflect the lack of cover for many supply chain losses experienced during the pandemic, which were often unrelated to physical loss or damage and so not covered - even where clients had purchased Contingent Business Interruption cover.

Mapping and visualizing the supply chain

Using tools that map the supply chain can help businesses start to understand where they have gaps in information and data and begin to fill them. A total of 40% of our respondents said using supply chain mapping software was among the measures that would have an impact in managing risks.

Diagnostic tools, such as WTW's Supply Chain Risk Diagnostic, enable companies to map the location of all the links and assets in the chain and assess how they connect and interact with each other. This transparency can give organizations a panoramic overview of dependencies and risk factors to enable better decision making.

Impact on insurance cover

Supply chain issues have a major impact on energy companies' cover. Because energy is so dependent on high value infrastructure, materials and equipment, insurers want to know about who will be supplying, building, replacing or repairing the relevant items.

At WTW we are regularly seeing insurers asking for more detailed information. Even where suppliers are well-established, we're getting questions around where they are manufacturing equipment, availability of critical spares, rising costs of spares, and the skills, availability and experience of their contractors and workforce. There's a broad expectation that it will take longer to reinstate physical loss or damage than it has done in the past, which increases the pressure for longer indemnity periods. There are also the escalating costs of global transportation to consider, due to fuel and commodity price fluctuations.

Most energy companies risk manage their exposures to supply chain delays and disruption very well internally, and buying insurance is a back-stop. Some of the ways they've traditionally done this is by holding critical spares or entering agreements with suppliers and Original Equipment Manufacturers (OEMs).

There is a renewed focus from client companies on Contingent Business Interruption to cover some of the potential losses, both on a damage and non-damage basis. However for non-damage cover, this can be expensive and limited in scope.

One of the best ways to mitigate supply chain risks is to work with manufacturers, contractors and suppliers that have a proven track record. They are not only more likely to deliver what they promise, but also have the resources needed to speed things up and work with the client to mitigate the business risk.

Conclusion: six steps to building your supply chain resilience

Our survey has shown some fascinating insights into how the energy industry views the supply chain issue. We would conclude by offering energy companies these six steps to improving your supply chain resilience:

1. **Make resilience a boardroom priority:** embed it in the strategic planning and execution process, with structured governance to ensure that decisions are made and acted on at the correct level and the right time. This can be associated with existing business risk assessments.
2. **Reduce reliance on single suppliers and locations:** relying on a single source for critical components and raw materials creates vulnerability - so can using multiple suppliers in the same geographic area. Wherever possible, expand your network of suppliers and locations.
3. **Develop closer working relationships:** working more closely with suppliers, especially at Tier 1, can help you gain a better understanding of the wider supply chain and increase resilience. Being a partner rather than just a client can help overcome barriers to disclosing proprietary data.
4. **Reconsider just-in-time models:** firms should develop a balance between just-in-time and just-in-case inventory levels to build contingency and strengthen physical assets to withstand climate events, and to provide support to distressed essential suppliers.
5. **Aim for end-to-end visibility and transparency:** supply chain mapping software tools allow businesses to obtain a more complete picture of all the relationships and flows in the supply chain, with live event-tracking to support proactive risk assessment and decision making.
6. **Stress-test your response:** use scenario planning and simulation modelling, such as digital twinning, to quantify the impacts and mitigate the effects of risks. Also consider 'red teaming' to obtain an outside challenger view on policies and processes.

The energy sector is highly reliant on its supply chain to build, install and operate the critical equipment and infrastructure needed to power the world into the future. Those dependencies will only increase, as the business of hydrocarbons and thermal power transitions to renewables over the coming decades.

On that journey, the industry faces difficult supply chain challenges, from shortages of raw materials and critical minerals shortages to capacity constraints and a lack of alternative sources and suppliers. Our survey shows that businesses are working to overcome these problems and considering a range of strategies to increase resilience. However they're hampered by an inability to get hold of enough accurate data on the supply chain to manage their risks.

Working more closely with suppliers as partners can help companies understand their supply chains better and address these risks. Diagnostic mapping and monitoring tools, together with analytics, can help to visualize, quantify and assess risks across the supply and in specific locations.

Carlos Wilkinson is GB Head of Power & Utilities, Natural Resources Global Line of Business, WTW London.
carlos.wilkinson@wtwco.com

Michael Buckle is London Head of Downstream, Natural Resources Global Line of Business, WTW.
michael.buckle@wtwco.com

> **"The industry faces difficult supply chain challenges, from shortages of raw materials and critical minerals shortages to capacity constraints and a lack ofc alternative sources and suppliers."**

The competence ‘barrier’: Why it matters

Introduction: performing to a recognised standard

Presenting a company’s new Competence Management and Assurance Scheme to its Offshore Installation Manager and their installation management team may have its challenges. When it comes to assessing competency, there can be negative connotations and it may even raise some difficult initial reactions, particularly for long-serving employees, such as:

- “What good will all of this do?”
- “When will we have time to do all of this?”
- “How are we going to get the operators and techs to do this?”
- “Some of the guys have been doing the job for 20 years, they’ll be insulted!”
- “Of course they are competent, they’ve been here for years!”

But what exactly is competence? In fact, competence is more than training and qualifications. Competence is really about the ability to undertake responsibilities and to perform activities to a recognised standard on a regular basis. Competence is actually a combination of practical and thinking skills, experience and knowledge.[1]

Effect on major losses

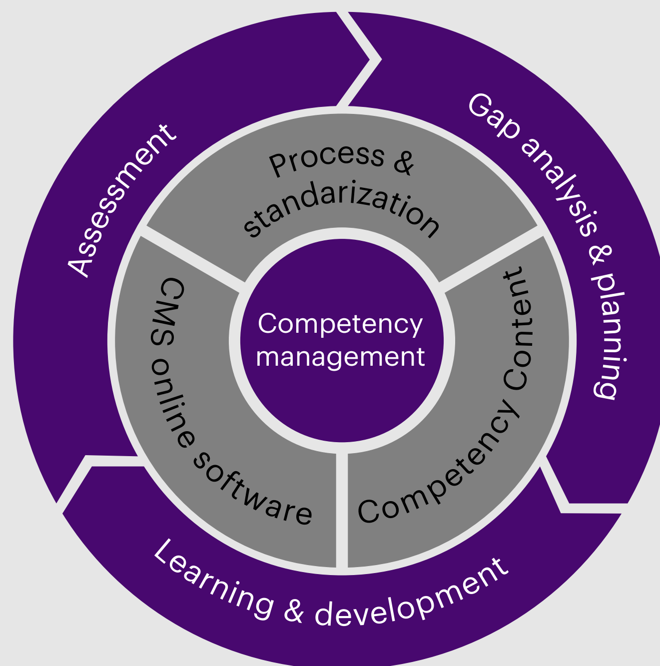
Inadequate competence management has contributed to disasters such as ESSO Longford[2] in 1998 where two people were killed and property damage losses at the time totalling US$443 million (a calculated value of US$865 million as at the end of 2019). The gas outage affected 1.4 million users in Australia’s Victoria state and forced small and large businesses to temporarily shut down. The estimated insurance pay-out for this incident is estimated at US$590 million. It is further estimated that the shutdown cost the Australian energy industry up to US$745 million in lost production. In this incident there was a failure to identify hazards and properly train operators; insufficient understanding then led to a critical incorrect valve operation.

Other major losses which have a lack of competency sited as a contributory factor include:

- **Flixborough (UK, 1974):** This was an explosion due to release from a temporary bypass assembly of inadequate design operated by insufficiently competent people (Health and Safety Executive 1975)[3]
- **Piper Alpha (UK, 1988):** the public enquiry into the Piper Alpha explosion in 1998 concluded that the operating company failed to ensure that a key supervisor was sufficiently competent in the operation of the PTW [Permit to Work] system[4]

[1] Developing and maintaining Staff Competence. HSE (2002), ISBN 0 7176 17327 - https://www.hse.gov.uk/humanfactors/topics/competence.htm
[2] The report of the Longford Royal Commission - https://www.parliament.vic.gov.au/papers/govpub/VPARL1998-99No61.pdf
[3] Health and Safety Executive, 1975. The Flixborough Disaster: Report of the Court of Inquiry. Formal investigation into accident on 1st June 1974 at the Nypro Factory at Flixborough. HMSO 1975. ISBN 011 361075 0 - https://www.hse.gov.uk/comah/sragtech/caseflixboroug74.htm
[4] Piper Alpha Public Enquiry - https://www.hse.gov.uk/offshore/piper-alpha-disaster-public-inquiry.htm

Figure 1: **The Competency Management framework**



Source: WTW

- **BP Texas City (USA, 2005):** 1.5 Key Technical Findings: *"A lack of supervisory oversight and technically trained personnel during the start-up, an especially hazardous period. The operator training program was inadequate."*[5]
- **Buncefield (UK, 2005):** There should be a clear understanding of major accident risks and the safety critical equipment and systems designed to control them. *"At the core of managing a major hazard business should be clear and positive process safety leadership with board-level involvement and competence to ensure that major hazard risks are being properly managed."*[6]

The Competency Management framework: What's involved

Much has been written[7] and many very good competence assurance and management systems are available off the shelf, so further analysis in this article is unnecessary here; suffice it to say that a well-developed Competency Management System, once implemented, includes the full cycle of assessment, gap analysis and planning, learning and development and finally, reassessment. Employees can use this well-defined process to ensure their long-term development is matched to job standards for their current job and those they aspire to in the future. Employers, insurers and regulators can be assured that staff have the appropriate skills, training and attitudes to do the job safely.

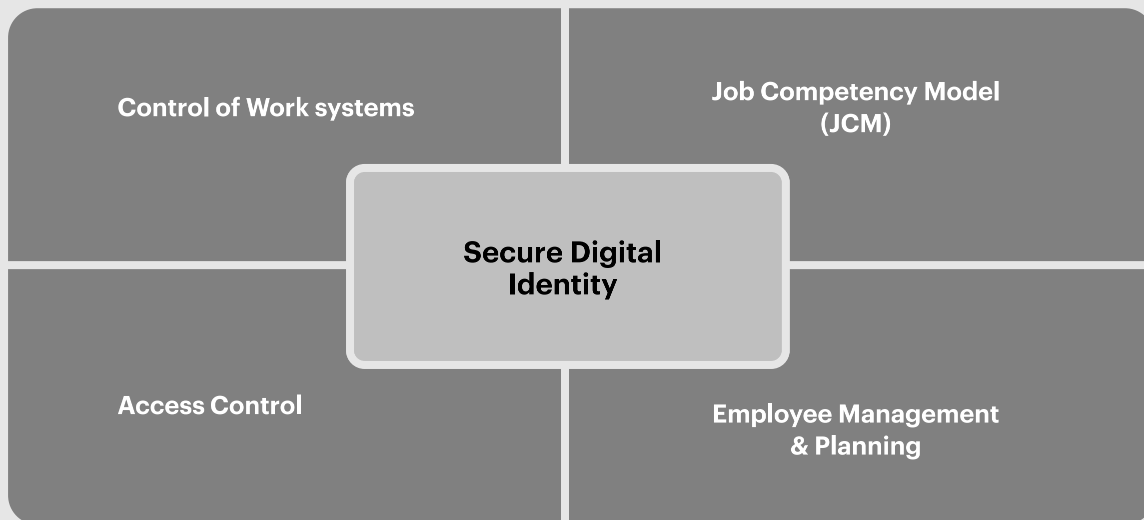
For me, the competence management and assurance process from that time was quite a tiresome and onerous experience; it consisted of a paper-based competency management system based on an Excel spread sheet and limited interaction with assessors and verifiers, involving a great deal of paperwork and big thick folders. Digitisation in the form of Web based systems would certainly make this a far more interesting efficient and time/cost efficient process.

Areas of concern

Where this process falls down in terms of stopping incidents is that it does not actually stop the not yet competent person issuing the permit or doing the job. In a sense it's not a real "barrier", or at the best it's a barrier which requires periodic intervention and management. Back in 1993 whilst working offshore, I stopped a mechanic about to remove a flange on a live crude oil export line which was exporting oil at 110,000 barrels per day. As far as he was concerned, he had a permit, so it was OK — even though there was no isolation in place, or even specified. Competence management, as we currently know it, did not really exist in those days, but nevertheless his reaction is hardly the attitude of a competent person.

[5] U.S. Chemical Safety and Hazard Investigation Board, Investigation Report No 2005-04-I-TX Refinery Explosion and Fire, March 2007 - https://www.csb.gov/bp-america-refinery-explosion/
[6] http://www.hse.gov.uk/press/2011/hse-buncefieldreport.htm
[7] The UK HSE Research Report 086, Competence assessment for the hazardous industries is a good place to start along with HSE Human Factors Briefing Note No. 2-Competence - https://www.hse.gov.uk/research/rrhtm/rr086.htm

Figure 2: **Possible systems integration model**



Source: WTW

Addressing failures: the systems integration model

Unless someone in authority checks the competency records just before permit issue, there is therefore no actual way to ensure the barrier of competency is in place. So, how can such failures be prevented in this digital era?

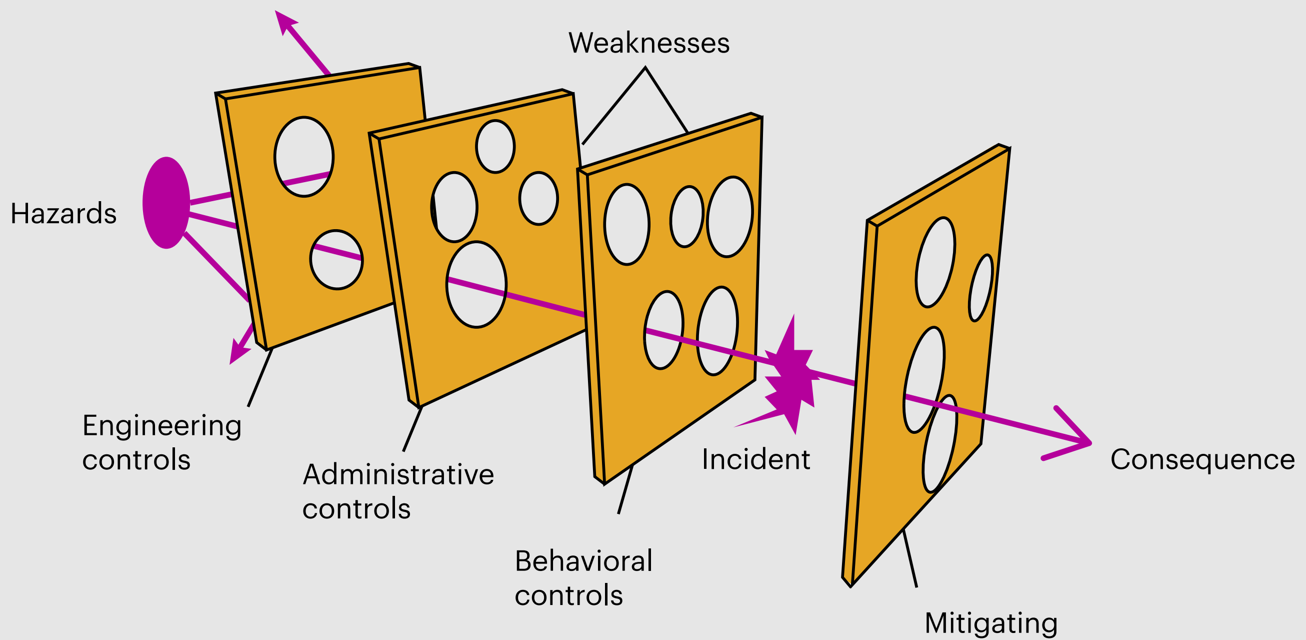
A possible systems integration model is shown in Figure 2 above.

Today, most offices and sites have a Smart Card or Radio Frequency Identification (RFID) access system to allow personnel to come onsite and to control access to sensitive areas such as computer or High Voltage switch gear rooms. RFID cards are used for applications where tracking or identifying personnel is important, or where access control is required; credentials can be programmed to work immediately for opening doors and accessing databases and management systems. All personnel working onsite must therefore have a Secure Digital Identity.

It is possible to have digital Control of Work processes where data in the system can be used to instantly authorise or prevent a task being carried out and the use of mobile wireless devices is used to facilitate tasks safely in the field. If a candidate tries to accept a permit, the system takes the digital identity into the Control of Work Database. It checks the appropriate level of competency has been achieved by the person assigned to carry out this task, it also checks that the person authorising or endorsing the permit is qualified and suitably competent to issue the permit. Similarly, the Energy Isolation Module can check an isolation authorities' credentials before approval of the permit; on this basis two critical barriers which were lost for the Piper Alpha incident would actually have been maintained, preventing that sad and costly tragedy.

The integrated system can also check the candidate's Job Competency Model to ensure that the pre-requisite technical skills, qualifications and competencies to carry out the task are in place. If the job model indicates that the required competence is not achieved or that refresher training is required, the permit will not be issued and the job will not go ahead, proving the effectiveness of the digital barriers in place.

Figure 3: **Effect of Employee Management and Planning Module competency barriers**



Source: WTW

Delivering barriers

Accessing the Employee Management and Planning Module could deliver several "barriers". Duty rosters can be consulted and competency cross checked, so management could be alerted - automatically and well in advance - to gaps in competency for planned critical operations such as start-ups and turnarounds. If, for example, a critical control room operator is due refresher training or a supervisor is on vacation or due to be absent for the operation, the planning module can be configured to alert the appropriate manager. Would the Texas City loss have occurred if management had been alerted to the lack of competency on shift at a crucial time, or that the control room operator had done 30 straight 12-hour shifts without a day off? Perhaps it still might have done, but it would have been one less hole in the "Swiss cheese" (see Figure 3 above).

Conclusion: avoid yet another paper exercise!

The key message of this article is that personnel competency, if implemented well, can help to either prevent or mitigate losses. However, it could easily end up as just another paper exercise that doesn't help.

However, if a competency framework and records are linked to other electronic systems, such as e-PTW and energy isolations, then a system can be put in place that could strengthen the competency "barrier", making it highly effective.

Jim Walker is Risk Control Engineer, Natural Resources Global Line of Business, WTW.
jim.walker@wtwco.com

Part Two: The Energy insurance markets in 2023

Convex: why taking the long-term view works best for the energy insurance buyer

Conditions in the Energy insurance markets have hardened in the aftermath of the January 1 reinsurance market renewal season. What can buyers expect from the market as we move further into 2023, and what are insurers looking for when reviewing underwriting information and providing optimum terms? WTW's Richard Burge (RB) and Adam Barber-Murray (ABM) recently spoke to Convex's Tom Houston (TH), Deputy Head of Energy and Head of Upstream, and Paul Sankey (PS), Head of Downstream Energy & Power, at their office in London. The following is an edited transcript of their conversation.

RB: Gentlemen, may I start by asking you about the extent to which the January 1 2023 reinsurance treaty renewal season has affected your overall underwriting strategy at Convex?

TH: Fundamentally, our energy strategy remains the same – to establish ourselves as a market-leading insurer, a high performing energy division that clients and brokers want to do business with. The treaty renewal season was certainly challenging for everyone in the market; as a result, we are retaining more risk and at a higher cost. Our underwriting strategy has to make sense on a gross basis, and that is how our management looks to measure our performance, but reinsurance remains an essential tool to enable us to deploy our capital, despite the significant cost. These costs have had to be addressed, both in terms of our rating levels and how we deploy our capital going forward, to ensure that we can still generate profit going forward.

PS: From my perspective, the treaty reinsurance negotiations were particularly difficult this year – in fact, they were the most difficult that I can remember in all my time in the business. Our reinsurance partners had a lot to contend with, from the events in the Ukraine to the significant Property losses that were experienced following hurricane Ian, plus of course the obvious challenges that we faced in the Downstream Energy sector after another year of heavy loss activity. So the obvious impact was that we have to pay more for our protections and retain more net exposure on everything that we now write. This in turn means that we have to think seriously about our pricing strategy for the year ahead and make sure that our line size and exposure calculations keep us within our overall risk appetite.

ABM: Has the allocation of your treaty reinsurance costs between the various divisions within Convex been decided yet?

TH: We are a single Energy Profit and Loss (P&L) centre, so one of our advantages, as far as Convex's brokers and clients are concerned, is that we take a holistic energy industry view. Some parts of the energy industry will do well, others not so well at times but we remain one family and we ask our reinsurers to take the same approach when supporting us. It's important to reiterate that at Convex, we are judged at a gross level; as such, reinsurance costs aren't allocated down to the minutiae. We work closely with our ceded reinsurance team and are aware of the increased costs that were passed on to us as a business at January 1.

RB: At a time when the market is hardening again, are you concerned that your most favoured clients may elect to retain more risk in future?

TH: This dynamic has always involved a fine balancing act. Fundamentally, we want to encourage the insurance of high quality, well-managed assets where buyers are happy to retain material levels of risk. If that isn't the case and if buyers reject retaining meaningful risk themselves, then we may ask some more questions. So it is down to us and our peers in the market to offer an attractive risk transfer proposition where buyers see the value in purchasing insurance.

PS: This question comes up every time the market moves to push for increased rates, and it is slightly frustrating because we need improved rates to generate an acceptable margin, which is something that has been pretty difficult to do in the Downstream sector in four out of the last six years. I do recognise that buyers need to budget for a reasonable premium and that may mean them retaining more risk if rates do continue to harden, but to be honest we don't see that as a problem. We like to deal with buyers who have a reasonable appetite for risk themselves rather than just transferring everything over to us. What we must do is maintain that balance whilst still recognising that we need an acceptable margin to ensure that Convex can continue to provide capacity in the long term in what remains a pretty volatile sector.

ABM: I guess you would still prefer it if these valued buyers preferred to transfer risk further down the risk spectrum, given the potential premium available.

PS: That's always something to think about, but it depends on individual cases - we have to think about all aspects of the exposure, whether it's Nat Cat-exposed, the degree of BI volatility and the nature of the risk that they are trying to remove from the market.

RB: Downstream buyers must be aware of the losses that have materialised over the last 12 months. It would be interesting to know why they would want to take increased retentions, unless the premiums became unaffordable? I guess it's not the same for Upstream, because there have not been so many losses. Offshore Wind might be an exception - Tom, do you think we will see fewer energy companies buying this product if prices rise too steeply?

TH: Every energy company is different and the reason for purchasing Gulf of Mexico Wind varies; some are required to by lenders, whilst others view it as an attractive risk transfer. Prices are rising in this area due to our increased cost of capital and there are minimum premium levels that must be achieved; if clients cannot or do not want to pay these, then so be it.

ABM: What do you see as the key underwriting challenges that you currently face when managing your individual portfolios?

TH: There are two key issues that Upstream underwriters are focusing on at the moment; one is inflation, and the other is heightened reinsurance costs. Dealing with inflation is more nuanced than just ensuring that values declared on policies are appropriate; it's ensuring that premiums keep pace with inflation, understanding the impact on OEE exposures with increasing Authorisations for Expenditure (AFEs) and the impact of tail risk on longer-tail exposures such as Construction, to name some examples. Reinsurance costs have already been discussed, so given the emergence of these two critical factors, we have to ensure that the minimum margin that we have in the portfolio is not eroded.

PS: I would add something more specific for Downstream, which is the key challenge of managing the inherent volatility within this portfolio. If you look at the profit margins that are being made by the industry at the moment, on the one hand that's a good thing in that they have money to pay for new investments and maintenance, but on the other it does generate some very significant loss potentials, the like of which we haven't seen across our portfolio before. And if we add on to that the effect of inflation and supply chain issues on potential loss costs, then in reality the key challenge for Downstream is about managing the exposure and ensuring we receive the premium that more closely matches that exposure.

ABM: Now that we are in a "new normal" with the Russia-Ukraine conflict seemingly ongoing, will the current volatility begin to stabilise? It seems that fossil fuels prices have hit their peak.

PS: We are certainly seeing a stabilising of margins, but this is happening at pretty high levels. We are not seeing a massive drop-off; there may be a slight downward trend but in reality, until inflation begins to have an effect on economic demand and prices for certain commodities start to go down, we won't see BI values start to drop off significantly. At the moment, the impact of the Russia-Ukraine conflict extends to the ban on a number of refined products which has a direct impact on the refining business margins, particularly in Europe. So the volatility is still there at the moment - it's maybe not quite as significant as it was a year ago, but it's still pretty heavy.

ABM: Regarding recent losses, during the pandemic years loss adjusters were generally not able to be on site – do you think that some of the loss deterioration has been down to this factor?

PS: I don't think this was really a particular issue. In reality last year we were lucky in that we had a lot of loss potential on the portfolio; although we were hit by two very significant losses, we didn't receive a lot of losses from programmes with very high BI values. If these programmes had had a relatively small property loss, the BI portion of the claim could easily have been enormous. So we have to be aware that we are sitting on very high loss potentials in our portfolio – some markets may not have recognised how high they really are. This is what everyone needs to come to terms with.

ABM: Do you think that the imposition of a volatility clause applied to property programmes in addition to BI programmes would help smooth the volatility challenge that you face?

PS: Not really. The impact of inflation is not going to disappear, but it will ease during the course of the next 24 months. We are more concerned about the massive variation we can get on BI values. Some energy companies are better at re-stating their values than others, so some can be a long way off, but I don't think the same thing applies to Property values. Obviously, we need to keep them up to date as much as possible but it's mostly just a matter of a few small percentage points away. In contrast, BI volatility can sometimes be close to a factor of 150% or higher in terms of what is declared at inception and what is actually sustained in the event of a loss.

RB: It's safe to say that not every buyer has recently utilised a third party to conduct an independent, up-to-date and accurate valuation exercise for them to show their insurers. How are you going to ensure that you are provided with sufficiently accurate valuations to enable you to charge a premium commensurate with the risk?

TH: If an energy company is insuring on a replacement cost basis, and we don't see a material uplift in values, or we don't think the values that have been declared are appropriate, we have three separate tools: rate, retention and terms and conditions. Let's say, on average, values are going up by 15% in a flat rating environment. If a company presents its values as static, or even slightly less than in the past, most underwriters will seek to redress that situation via a rate increase unless there is a compelling reason as to why they haven't changed. Thankfully we haven't seen too much of that over the last couple of quarters, as buyers have generally taken inflation into account in the values they are declaring.

PS: We can't pretend to be valuation experts, that is not our role. All we can do is investigate the submission and the story they are putting forward as to how they have got to that particular valuation, and we must remember that valuations do differ from territory to territory and from occupancy to occupancy. There is no one hard and fast rule, but we are expecting there to be an inflationary rise and if there isn't one, we would ask why not. In some cases there may be an argument supporting it, but in the end all we can do is trust the buyer, particularly if they have been a good client historically.

RB: Are you seeing signs of claims inflation at the moment in the amounts you are currently being asked to settle?

PS: Yes, replacement costs have surged for certain items. Some companies are being quite open with us and have admitted that some items are expected to cost significantly more than was originally estimated, and we have seen that on a number of losses. It's not just a theoretical issue, it's a real practical problem.

TH: I would also encourage buyers and insurers to look at retentions. A lot of them haven't moved in 20 years – the value of these retentions is of course now much lower than 20 years ago. So there is a "double whammy" if you like – values are going up, but retention levels remain where they have always been.

ABM: Underwriters are trying to drive rating increases, and at the same time you are saying that buyers need to retain more. However, if the buyer retains more, they are going to want a price break. Meanwhile you have reinsurance treaties to feed – this is still a market with plenty of capacity, so how far can you drive these changes in practice?

PS: You are right in that we have to balance what we want to achieve. We do of course acknowledge that we operate in a market, and we have to understand what buyers will be willing to pay. However, I don't think we should be embarrassed about pushing for more premium – we are in a very high inflationary environment and energy companies are declaring significantly higher margins, which means there is an increased risk of significant events hitting our portfolio. We are the ones that are taking the risk onto our book, and we need to obtain a commensurate premium for that. Of course we don't want to drive clients away, but if you look at a US$1 million deductible today, we have to ask: what is it worth compared to what it was 4-5 years ago? We need to think about that as a market.

ABM: So if you are pushing hard on both rate and retentions, what do you feel about major energy companies that no longer have a PD/BI insurance programme for their Downstream assets? Surely there must be some concern that if they can now afford to do so, some buyers will remove increasingly significant amounts of premium from the market.

PS: I would simply point out that this market has not made a profit for four of the last six years and we have to do more to reverse the current trend. As I said earlier, we don't mind energy companies retaining more risk; it's about getting the balance right. Most companies accept that they are looking to buy a product with strong capital behind it across the whole insurance cycle, and not one that just reacts to one particular part of that cycle.

RB: Turning now to the crisis in Ukraine, has the conflict had a major effect on your underwriting outlook? It seems that the market has had to forego a significant percentage of its premium income, particularly for Upstream.

TH: We were a writer of some Russian Upstream business, which generally had performed well over the last 15 years or so. Most underwriters have to focus on the bottom line rather than the top line – we could go out and fill the gap left by our Russian premium income pretty easily, but probably not achieve the same loss ratio. We are both fortunate to be working for an organisation where there is not so much focus on the top line - it's about delivering market leading performance. It's a challenge - in the Upstream market we have seen an uptick in values, particularly in respect of BI, and there has also been more construction activity that has come in over the last 12 months. But is this the sort of premium that everyone wants? Probably not. In terms of the effect of the conflict on our overall outlook, we certainly think the world is a more volatile place now than it was a few years ago, and that needs to be factored into our underwriting decisions across all our lines of business. It has also highlighted how small the world is – a lack of resources in one area, whether that's due to the Ukraine conflict or a natural disaster, can have a significant impact on the global supply chain. So there are two sides to the inflation dynamic exacerbated by the Ukraine conflict – the cost of the raw materials such as steel and concrete affecting the Property values and the increased BI risk; there is no doubt that the global supply chains are not as efficient as they once were. Originally, the pandemic had a big impact, but that has been compounded by the situation in Ukraine, meaning our BI exposures across all lines of business have increased significantly since 2018.

PS: The real impact that we see is the changing face of the energy industry and its impact on the global economy - for example, we see it in the way that Europe has turned away from Russian oil towards LNG imports. In the short term the world is focusing on energy security, and that shift alone makes the energy industry different, while other factors such as energy sustainability and energy affordability are also going to change it in the long term. As economies move away from their dependence on Russian natural resources, I think these changes are inevitable.

ABM: In terms of ESG, how important is it to you that your clients can demonstrate progress in transitioning to greener energy operations?

TH: The majority of our Upstream clients are sophisticated companies who have various stakeholders who demand that an ESG strategy is in place. Even if a buyer's role is primarily in oil and gas production, most still want to improve their Scope 1 emissions with 2030/2050 Net Zero targets in mind, and a lot of them have made significant progress over the last couple of years in working towards that. We want to work with energy companies who will be there for many years to come – I would argue that those companies that embrace the transition to greener operations will fare far better than those that do not.

> **Most companies accept that they are looking to buy a product with strong capital behind it across the whole insurance cycle, and not one that just reacts to one particular part of that cycle.**

PS: It's a fundamental issue for us because we are looking at the long-term future of the energy industry. In terms of assessing our clients, that involves listening to the plans that they have, and digging deeper into those plans to see what financial commitments have been made in terms of building new alternative technologies and then monitoring the progress of those plans against time. This will take time, it's not something that happens overnight. There's also a big variation between companies that really are committed to the transition and those who are not.

RB: It's interesting to see major energy companies announcing record profits due to the recent spike in oil & gas prices, some of whom have been less enthusiastic about the transition than others. Are you happy to deal with companies that are well managed and well-engineered, but are not as far down the transition journey as others?

PS: It does make a difference to us as to where they are on the transition journey. Naturally over time we will shift capacity towards those who have Net Zero plans that are believable and properly thought out, with detailed capital expenditure allocated to them. Just today I was on a call with a client that is aiming to build the first Net Zero ethylene cracker in Canada, so we are seeing actual real initiatives going on that we can support and believe that they are heading in the right direction. So we will be allocating capacity in that direction doing forward, but this will happen over a period of time - we have to consider what we are insuring now as well as what we hope to be insuring in 5-10-years' time. We will take a long look at the new technologies involving, for example, carbon capture, hydrogen and ammonia, all of which need new engineering reviews and methodologies as well as fresh underwriting strategies and coverage requirements.

TH: We want to get our own house in order and understand the data we will need to be able to record and measure our clients effectively. What we don't want to do is to rush out there, ask a multitude of questions and not know what to do with the responses.

> **Naturally over time we will shift capacity towards those who have Net Zero plans that are believable and properly thought out, with detailed capital expenditure allocated to them.**

RB: It's interesting that some of our clients are starting to offer much more detailed ESG information that would be gleaned from a questionnaire, and ESG is certainly beginning to form part of client roadshows and presentations. So as long as you sense that your clients are providing you with an updated story of their own transition, then presumably that gives you the confidence to provide them with long term risk transfer capacity?

TH: Absolutely. Oil & Gas is going to make up a major part of the energy mix for many decades to come, according to the most sustainable of outlooks. The Convex Energy portfolio will likely reflect global energy demand; we can see where that's going, and we want to be part of that journey as long as we can make an adequate return for shareholders.

ABM: What other qualities are you looking for in terms of developing long term relationships with the energy industry?

TH: We want to partner with companies that are experts in what they do, that run a safe and productive operation that hopefully is profitable, because that will mean they are in it for the long term. It's also important that they have a viable long-term outlook, as we have just discussed. To take an extreme example to make the point, a company that just has a few oil wells and says, well, we are just going to manage these few wells until they dry up, is not a long-term proposition for us. So this is the risk element, and then there is the question of how much they value the insurance product and the partnership that we at Convex can offer. We want to work with clients that value their insurer and see the benefit of the product and relationship that can be built. So it's a combination of having an attractive business to insure and an appreciation of us as a product provider and risk partner.

PS: From my perspective, it's a simple request: we are looking for clients who are open and honest, who can communicate directly with us and actively engage with us in everything relating to insurance. Obviously, our focus is always on risk quality, but what we do understand is that every company is different, their business never stands still and so we are looking to clients who seek to continuously improve and who believe that they can always do things better. We don't want to trade with companies that are complacent or who believe that they always know best. That outlook covers the way they present information to the market, the way they look at property and BI values, their interaction with the market's risk engineers, how they respond to their surveys and how they are looking to achieve best practice in the way they manage their facilities. All of these factors together lead to the type of client that we want to partner up with for the long term.

RB: There's always been a contrast between the company that values long-term risk partner relationships compared to those more opportunistic companies, for whom bottom line price remains the key driver. What would be your message to those companies who fall into the latter category? Is this group as robust as it was ten years ago?

PS: I think there are less of these buyers around then there were. There are still some companies that operate in that way and I'm sure they get the same response from other parts of the market. In reality, there are many more sophisticated buyers around nowadays who know how to interact with the market - they know the type of things we are looking for and they know how to communicate them to us, whether it be their ESG story or their response to risk recommendations from surveys and the like, there is a lot more of that kind of engagement than there ever was. Obviously, we would prefer it if clients could stay in the same sort of arrangement as they have been in terms of brokers and markets over the long term, but we equally understand that there are some legislative requirements that mean they have to tender their programmes at certain points in time. We will look to support those clients that are treating the market in the way that we would expect them to treat us.

TH: The "proof of the pudding" is when you have a claim. We insure a complex industry, and we all try to make sure that we produce a solid policy wording with no grey areas. But because of the complexities of industry that we insure, there can still be grey areas in the event of a claim. When we see these claims materialise, we would like to think that those companies with whom we have a long-term relationship, where the rapport has been built up and everyone understands why the event may have happened and how things are going to be rectified, will probably get a better outcome than a company that chops and changes its leader and broker every single year. We operate in a low frequency/high volatility market, so hopefully a lot of buyers can go five or ten years without experiencing such a claim, so it can be hard not to be able to touch and feel the product we offer, but that is where the real "proof of the pudding" is.

ABM: Finally gentlemen, what are you at Convex doing in order to differentiate yourselves from the rest of your competitors in the market?

PS: We are very service-orientated, our team can respond to buyers in a professional way because they understand the industry. We also have experienced people within the team that know how to handle claims and other difficult technical issues. Furthermore, we not only provide a very responsive service, but we also communicate well with brokers in a knowledgeable way. We can put ourselves in front of clients and really prove that we know the business, which we think stands for quite a lot — I think our clients appreciate that and that's why we have managed to generate excellent relationships within a pretty short timeframe. They believe in us, and they believe they will receive the service they need in a responsive and flexible way that maybe others in the market are unable to.

RB: Do you think sometimes the quality of service provided to clients is overlooked in the quest for the best price?

PS: Yes, it probably is overlooked sometimes. Brokers generally hope that we will respond quickly, and they do have good memories - when we have done something to support them and responded quickly, this has largely not been forgotten. What helps us to do that is our single office model — it means that we don't have a lot of bureaucracy and administration to go through and we can respond because we are empowered to.

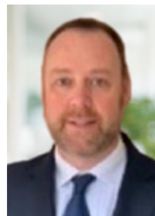
TH: Having a single Energy team means that our Upstream and Downstream segments — as well as our Power and Renewables teams — are very closely connected. We all sit and work together, and this is how we are viewed by our management. We are deliberately set up as one office to access business via London brokers; brokers can come to us knowing that we will look at any piece of business globally, because we are not competing with another Convex office elsewhere in the world.

RB: Gentlemen, thanks very much for your time.

> **Brokers generally hope that we will respond quickly, and they do have good memories - when we have done something to support them and responded quickly, this has largely not been forgotten.**

Tom Houston is Deputy Head of Energy and Head of Upstream at Convex insurance.

Paul Sankey is Head of Downstream Energy & Power at Convex Insurance.



Richard Burge is Chief Broking Officer GB, Natural Resources Global Line of Business, WTW.
richard.burge@wtwco.com

Adam Barber-Murray is head of Downstream Broking GB, Natural Resources Global Line of Business, WTW.
adam.barber-murray@wtwco.com

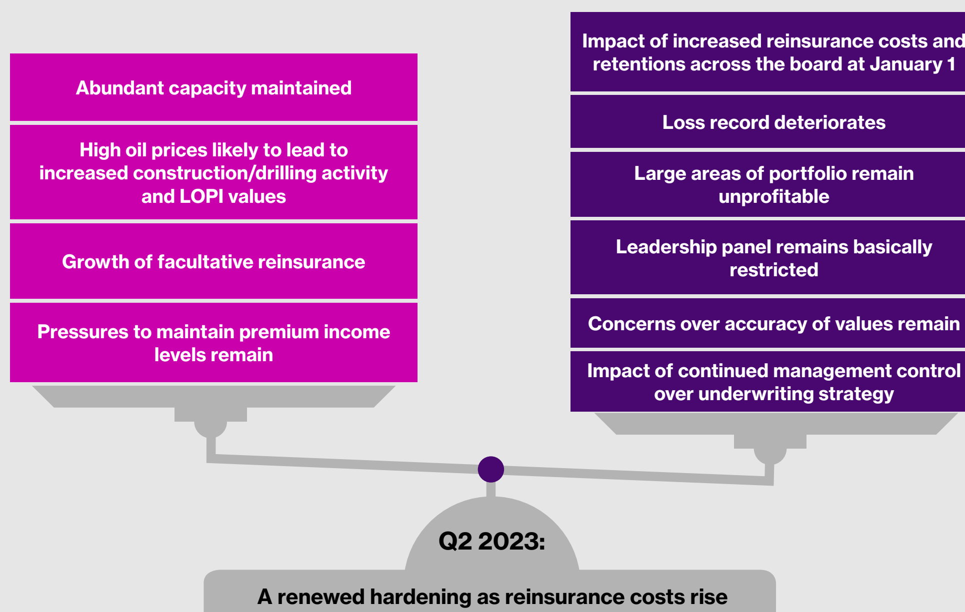
Global Upstream: An uncertain outlook as reinsurance costs bite

Introduction: confusing dynamics

As is so often the case in the global Upstream market, a lot can happen within a very short space of time. In November 2022, when we published our Energy Market Review Update, we predicted a renewed market appetite for those programmes that promised the best returns for insurers in 2023. And although we looked forward to the reinsurance renewal season at January 1 with some trepidation, not many in this market could have foreseen the ferocious nature of this season, nor indeed the lateness with which some direct insurers were able to finalise their reinsurance treaty protections.

As a result, we must now report a confusing set of dynamics operating in this market, which we have outlined in Figure 1 below. As ever, there are some trends which pertain to the advantage of the buyer (in pink) and others that do so for the insurer (in purple). However, astute readers of our Review will have spotted that the balance of these "kitchen scales" has changed again - this time, once more in favour of the insurance market. While we had hoped to be able to comment on a brighter picture from a buyer's perspective, we must instead focus on the reasons for this renewed market hardening and what buyers can do to avoid its worst effects. Let us first focus on these negative factors before offering some reasons why we don't think market conditions will be quite as dire as some insurers may be suggesting.

Figure 1: **Confusing dynamics — the Upstream underwriting environment, March 2023**



Increased reinsurance costs and higher retention levels have resulted in a renewed hardening of market conditions

Source: WTW

Negative factors

The impact of the January 1 reinsurance market season

The reinsurance market renewal season has impacted the Upstream portfolio in three ways:

- **Pricing:** it is important to note that reinsurance treaty costs are generally between 30-50% of Upstream insurers' overall costs. In general terms, January 1 reinsurance treaty prices across all lines of business have increased across the board, by a minimum of 10% for the best regarded business but by considerably more - upwards of 30% - for Nat Cat-exposed business. This is clearly going to have a knock-on effect on sub-sectors of the Upstream market such as Gulf of Mexico Windstorm, which will doubtless also feel the recent withdrawal of the MRS Syndicate from this line of business. We believe that most Upstream underwriters need an increase on their portfolio just to stand still (especially given the recent increased inflation levels), but much will depend on how reinsurance costs will be allocated within each underwriting operation, as well as the degree to which individual insurers have bought "specific" Upstream "towers" of reinsurance protection as opposed to an overall "whole account" reinsurance purchase (where the Upstream portfolio contributes to a common reinsurance treaty cost together with harder-hit areas of an insurer's overall portfolio, such as Political Violence, Aviation and Construction). Those insurers that have adopted the latter approach will almost certainly find that their reinsurance costs have been even steeper. There have also been some significant regional differences in pricing structures, with locations such as the Middle East achieving much more modest increases than Nat Cat-exposed areas such as the US.
- **Retention levels:** of even greater significance than the price increases have been the dramatic increase in retention levels - sometimes to double those of 2022. This is going to have a profound effect on pricing levels for small to medium sized business which will now fall entirely within most insurers' retentions, although as we will explain later there is the potential for this effect to be lessened by the purchase of facultative reinsurance. In the meantime, Upstream insurers have been faced with a stark choice – either increase retention levels significantly or have a substantial rise imposed on treaty reinsurance costs. Most have had no option but to elect the former, or a combination of the two.

> **It is important to note that reinsurance treaty costs are generally between 30-50% of Upstream insurers' overall costs.**

- **Difference in Conditions:** a final challenge for Upstream insurers has been the imposition of more restrictive policy clauses imposed by their reinsurers, which has left several of them wondering if some aspects of their direct business written in 2022 are no longer covered by their reinsurance treaties. These include obvious targets such as Russian and Belarussian located assets, but also state-sponsored Terrorism, which has been a matter of intense debate within the Upstream market in recent months (see separate breakout box below). Should this prove to be the case, it is possible that they are currently running a net portfolio for some exposures on programmes incepting before January 1 but where losses occur after the same date. The only silver lining from the direct market's perspective is that fears that Russian overseas interests would also be excluded have receded.

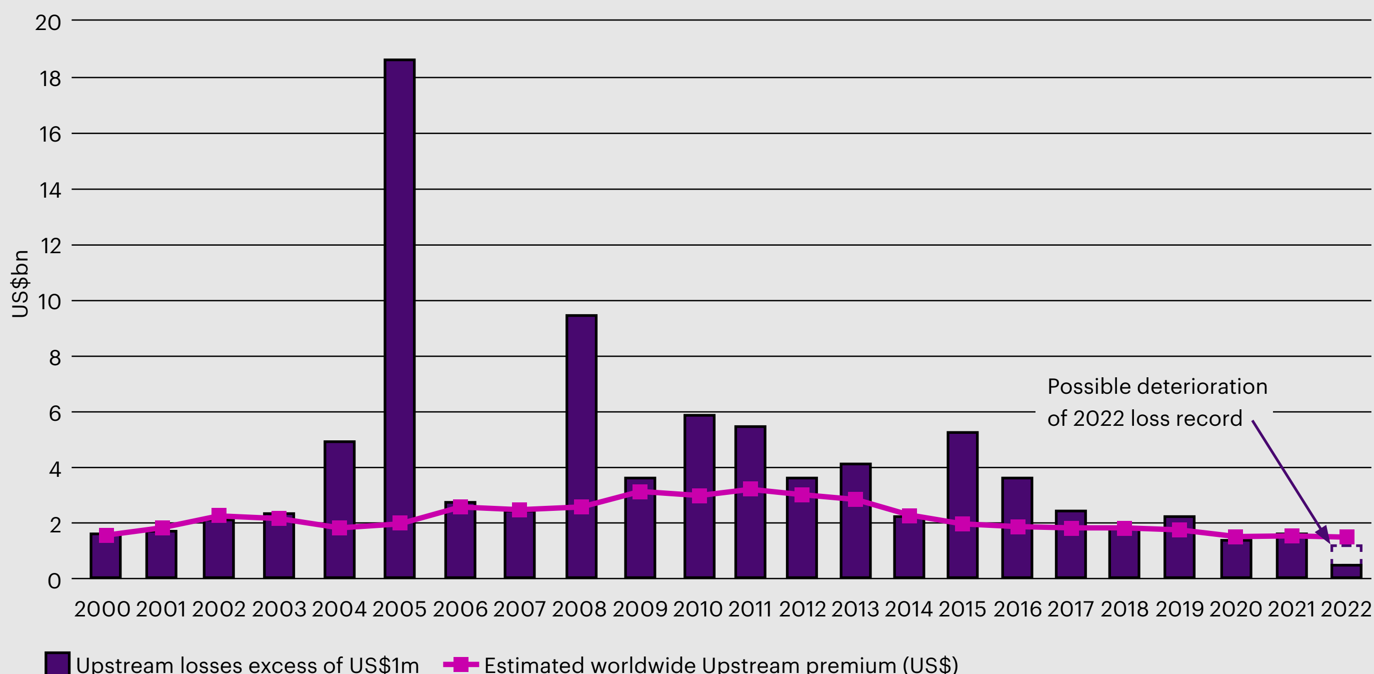
The reinsurance market Terrorism exclusion debate

Following the recent explosions relating to the Nordstream pipeline, and the potential Ukraine Political Violence losses, there has been a complete review of London market underwriters' portfolios as to how they are exposed to Terrorism and War. Primarily they reviewed assets located in Russian waters but with a focus on European infrastructure in the North Sea, the Black Sea and other offshore European locations. The reason for this review was twofold: one, because of management pressures and two, because a number of direct underwriters had already engaged with their reinsurers quite early in their treaty renewal process at the end of October. They found that they were being asked a significant number of questions from their reinsurers about their exposure to the Nordstream incident, so felt that they needed to be more pro-active on this issue. As a result some insurers decided to review their Terrorism policy wording and concluded that the established Addendum 42 b buyback and amended War clauses were no longer fit for purpose, given the perceived exposure to state-sponsored Terrorism.

Having appreciated that the existing Reinsurance market Terrorism clauses allowed reinsurers on average 14 days to cancel the policy, they were concerned that they might not have any reinsurance for War and Terrorism from January 1, and so realised that they in turn needed to be able to cancel their own policies a lot quicker.

The Joint Natural Resources Committee has now issued a new clause which makes it clear that state-sponsored Terrorism would no longer be covered. Again, there has been some pushback from brokers as there are challenges relating to such issues as cargo and contractor risks. As this Review went to press, discussions were ongoing regarding the issuance of an amended version of the original clause.

Figure 2: **WELD Upstream Energy losses 2000–2022 (excess of US$1m) versus estimated Upstream premium income**



How many losses below US$1 million are affecting the portfolio in 2022?

Source: WTW/WTW Energy Loss Database as of March 14 , 2023 (figures include both insured and uninsured losses)

The impact of these developments on the Upstream market is not difficult to imagine. What has made the situation even more challenging from a broker's perspective is that it is still very uncertain as to how this is all going to play out in terms of rating rises on direct business. Much will depend on what type of reinsurance has been purchased, and even more critically, how reinsurance costs have been allocated across the various lines of business within each insurer.

The deterioration of the Upstream loss record as premium income levels stall

Compounding the effect of the hardening reinsurance market has been the deterioration of the Upstream loss record — at a time when premium income is also faltering. Figure 2 above shows how the 2021 loss record in particular has recently developed; in last year's Review we commented on how benign 2021 had been looking, but our database now reveals several 2021 losses in excess of US$100 million which had not been advised to the database this time last year (see Figure 3 overleaf).

Furthermore, Figure 2 also shows how premium income estimates — which we had originally thought would be increasing in the aftermath of the COVID-19 pandemic — have actually decreased for 2022. Some of this can be put down to the removal of a significant amount of premium following the onset of the Russia-Ukraine conflict, some from the adoption of increased self-insured retentions and some from the reduced CAPEX budgets of many companies as they transition towards other sustainable forms of energy. Whatever the reason, the effect has been to reduce overall global Upstream premium levels to approximately US$1.5 billion. Readers will appreciate that it would only take a medium sized loss, let alone a major loss along the lines of the Deepwater Horizon, Enchova or Piper Alpha tragedies, to obliterate the entire Upstream global premium income pool, so perhaps it is not surprising that this is increasing the market's apprehension as more losses are reported.

Figure 3: **Upstream losses excess of US$10 million, 2021**

Type	Cause	Region	PD US$	OEE US$	BI US$	Total US$
Platform	Blowout + fire	Asia Pacific	66,000,000	163,000,000	0	229,000,000
Jackup	Leg punch through	Asia Pacific	136,000,000	0	0	136,000,000
Rig	Windstorm	South Asia	118,000,000	0	0	118,000,000
FPU	Mechanical failure	Asia Pacific	102,000,000	0	0	102,000,000
Well	Blowout no fire	North America	0	70,000,000	0	70,000,000
Well	Blowout no fire	North America	0	70,000,000	0	70,000,000
Well	Blowout no fire	Africa	0	59,250,000	0	59,250,000
Platform	Windstorm	North America	54,000,000	0	0	54,000,000
Platform	Windstorm	North America	38,000,000	0	0	38,000,000
Well	Blowout no fire	North America	0	36,500,000	0	36,500,000
FPSO	Unknown	Europe	24,554,560	0	11,000,000	35,554,560
FPSO	Unknown	Latin America	31,000,000	0	0	31,000,000
Pipeline	Anchor/jacking/trawl	Asia Pacific	29,000,000	0	0	29,000,000
Well	Fire + explosion/VCE	North America	28,000,000	0	0	28,000,000
Drillship	Windstorm	North America	27,000,000	0	0	27,000,000
Pipeline	Faulty work/op error	Asia Pacific	23,000,000	0	0	23,000,000
Well	Blowout no fire	Asia Pacific	0	22,000,000	0	22,000,000
SSCS	Impact	Europe	21,433,000	0	0	21,433,000
Pipeline	Corrosion	North America	21,300,000	0	0	21,300,000
Platform	Faulty work/op error	Middle East	19,500,000	0	0	19,500,000
Platform	Supply interruption	Europe	0	0	16,400,000	16,400,000
Well	Mechanical failure	Asia Pacific	16,000,000	0	0	16,000,000
Land rig	Collapse	Eurasia	15,000,000	0	760,000	15,760,000
FPSO	Unknown	Europe	15,500,000	0	0	15,500,000
Equipment	Mechanical failure	North America	15,200,000	0	0	15,200,000
FSU	Unknown	South Asia	4,500,000	0	10,300,000	14,800,000
Well	Blowout + fire	Norht America	0	14,000,000	0	14,000,000
SSCS	Heavy weather	Europe	13,500,000	0	0	13,500,000
Pipeline	Unknown	Middle East	12,500,000	0	0	12,500,000
FPSO	Unknown	Latin America	12,000,000	0	0	12,000,000
Pipeline	Unknown	Europe	11,500,000	0	0	11,500,000
Well	Blowout + fire	North America	0	11,500,000	0	11,500,000
FPSO	Unknown	Europe	11,200,000	0	0	11,200,000
Platform	Windstorm	North America	11,200,000	0	0	11,200,000
Pipeline	Unknown	Asia Pacific	10,000,000	0	0	10,000,000
Pipeline	Anchor/jacking/trawl	Asia Pacific	10,000,000	0	0	10,000,000
Well	Blowout no fire	North America	0	10,000,000	0	10,000,000

The 2021 loss record has deteriorated recently – at a time of decreasing premium income

Source: WTW Energy Loss Database as of March 13, 2023 (figures include both insured and uninsured losses)

Moreover, it looks as if the loss record for 2022 might also be heading in the same direction. Although Figure 4 overleaf shows only one loss in excess of US$50 million to date, we are aware of at least one major Offshore Construction loss in the Black Sea which we understood could be as high as US$400 million, and two sizable well control incidents in North America, and inevitably (at least to some extent) the overall figure will deteriorate in the same way as 2021 has done. It should also be pointed out that our database only records losses in excess of US$1 million; it is very possible that losses beneath this figure will add to the overall detriment of insurer's own figures.

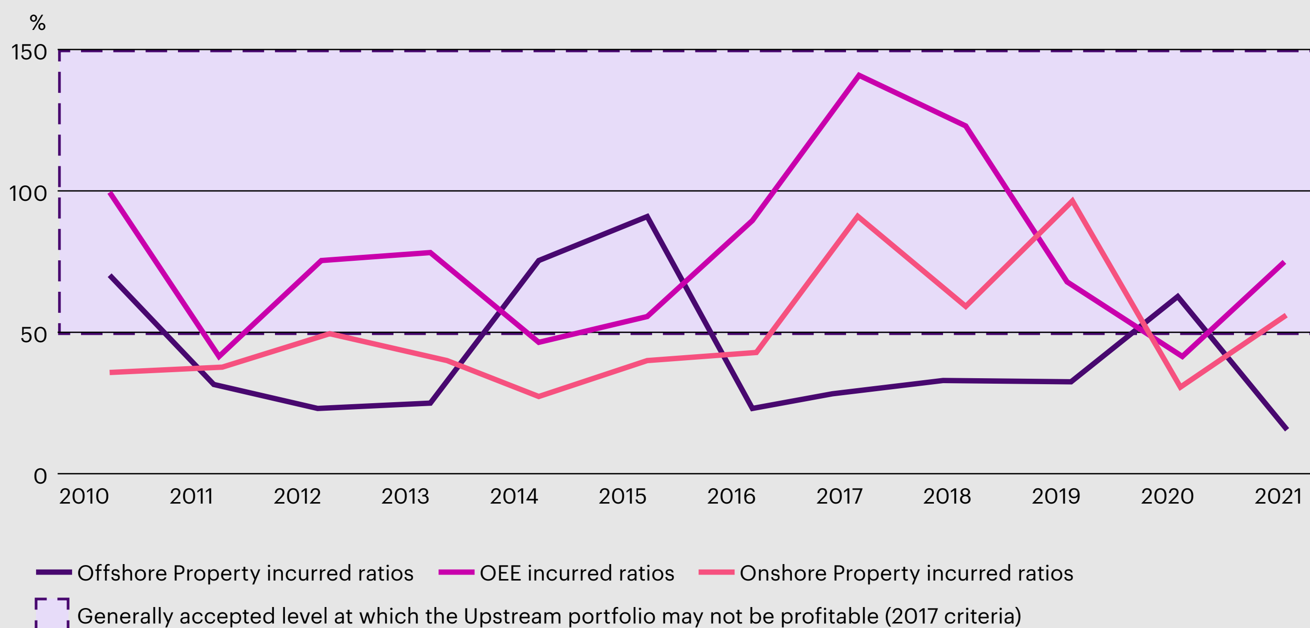
Figure 4: **Upstream losses excess of US$10 million, 2022 (to date)**

Type	Cause	Region	PD US$	OEE US$	BI US$	Total US$
Well	Unknown	Africa	60,000,000	0	0	60,000,000
Crane/pipe barge	Mechanical failure	Europe	47,000,000	0	0	47,000,000
SSCS	Anchor/jacking/trawl	Middle East	40,000,000	0	0	40,000,000
SSCS	Unknown	Europe	17,000,000	0	20,500,000	37,500,000
Platform	Mechanical failure	Europe	14,500,000	0	20,000,000	34,500,000
Well	Blowout no fire	Latin America	0	29,000,000	0	29,000,000
Well	Blowout + fire	North America	6,000,000	20,000,000	0	26,000,000
Equipment	Fire no explosion	North America	19,000,000	0	0	19,000,000
Platform	Unknown	Asia Pacific	15,000,000	0	0	15,000,000
Well	Blowout no fire	North America	0	14,500,000	0	14,500,000
Well	Blowout no fire	North America	0	11,000,000	0	11,000,000
FLNG	Mechanical failure	Asia Pacific	10,000,000	0	0	10,000,000
Pipeline	Pipelaying/trenching	Asia Pacific	10,000,000	0	0	10,000,000
Platform rig	Impact	Asia Pacific	10,000,000	0	0	10,000,000

No losses above US$100m have been reported to date in 2022, but we expect at least another US$500 million of losses to be added to the database later in the year

Source: WTW Energy Loss Database as of March 14, 2023 (figures include both insured and uninsured losses)

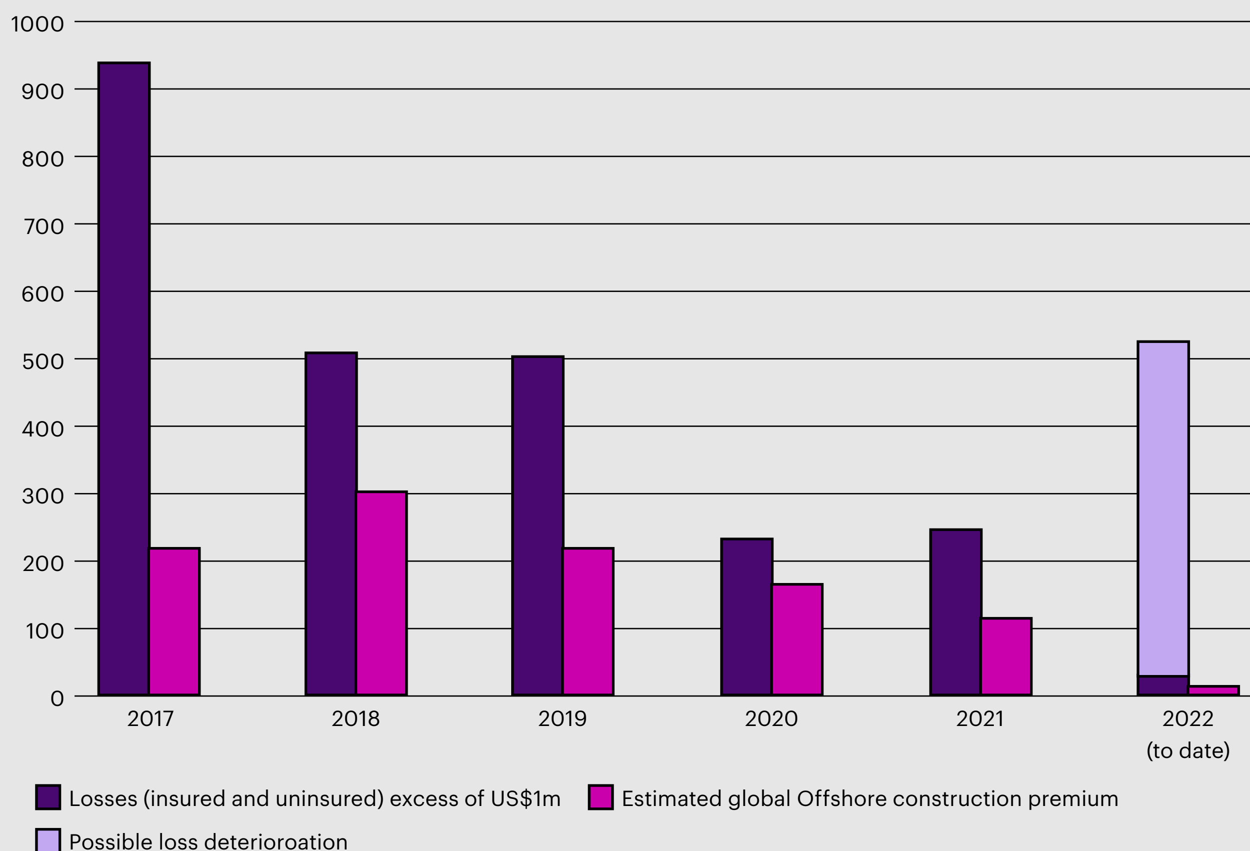
Figure 5: **Lloyd's Upstream Incurred Ratios, 2010-21**



Lloyd's OEE and Onshore Property Incurred Ratios have moved further into unprofitable territory

Source: Lloyd's Market Association Quarterly Loss Report Q4 2022. "Offshore Property" – combination of ET/EC/EM/EN Audit Codes "OEE" – combination of EW, EY and EZ Audit Codes. "Onshore Property" - EF audit code.

Figure 6: **Offshore Construction losses compared to estimated Offshore Construction premium income, 2017-22**



This sub-class has been thrown into turmoil by the advice of a major pipeline loss offshore Turkey

Source: WTW/WTW Energy Loss Database as at February 13, 2023

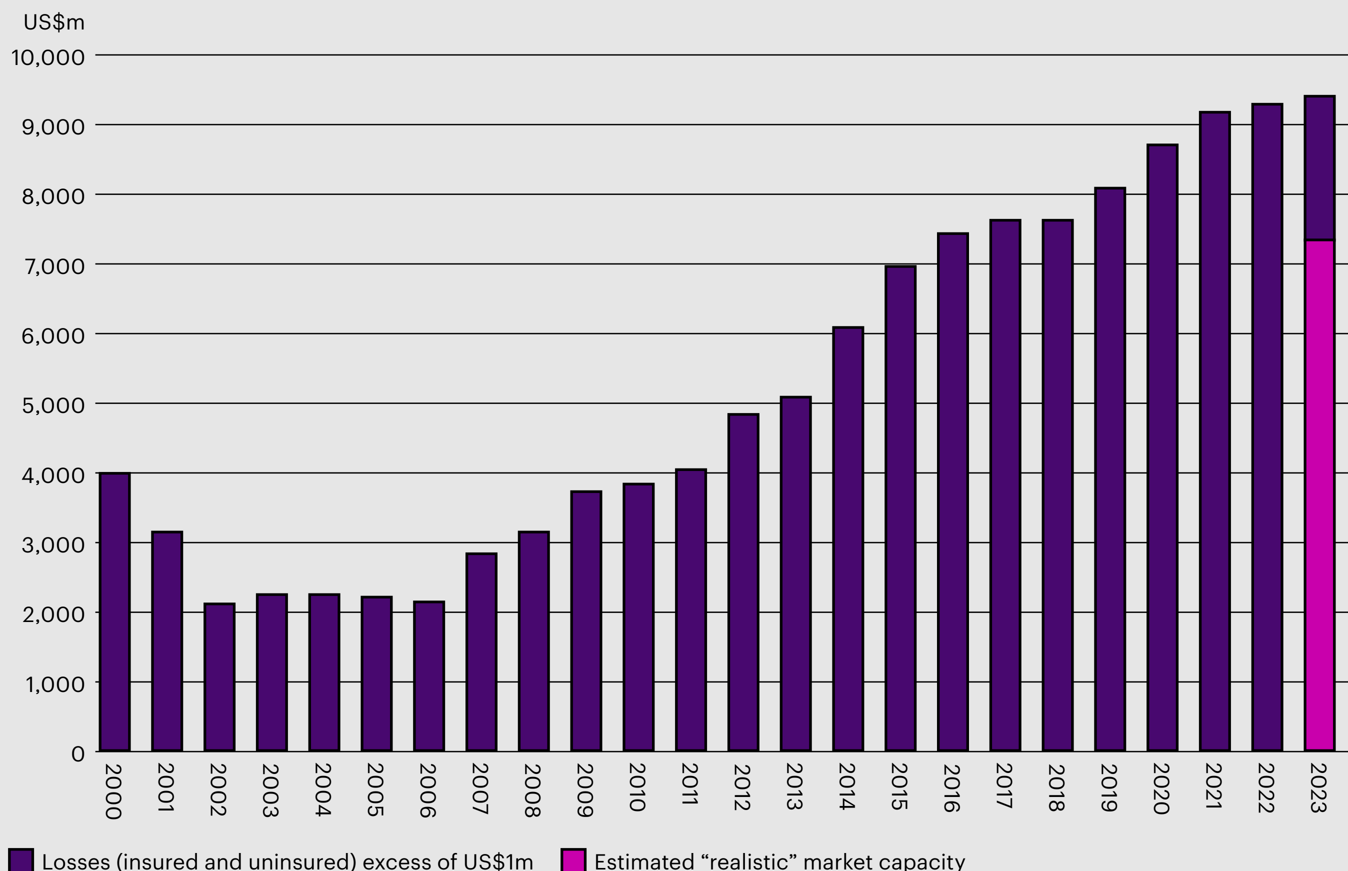
Large areas of the portfolio remain unprofitable

What effect have these losses had on recent profitability levels? To obtain an impartial view, Figure 5 on the previous page shows the latest Incurred Ratios (net premiums versus paid and outstanding claims) as reported to Lloyd's for the fourth quarter of 2022 (which of course do not include individual reinsurance costs). The shaded area above 50% represents potentially unprofitable underwriting results, given the increasing costs of reinsurance and other operating costs. It can be seen that while the Offshore Property portfolio potentially strayed into unprofitable territory with a 63% Incurred Ratio during 2020, the figure for 2021 (now mature) shows a heathy return to an Incurred Ratio of 18% for this well-regarded sub-sector. However, the same can hardly be said for OEE and Onshore Property business, which have moved into +50% territory for 2021. And if the last 12 years are reviewed as a whole, it can be seen that Onshore Property (which includes Midstream assets such as pipelines and LNG plants) has hardly ever slipped below the 50% figure, whereas apart form a brief spell in the middle of the previous decade the Offshore portfolio has consistently made money, apart from 2021.

These statistics do much to explain the continuing polarisation of the overall Upstream portfolio, with the choicest offshore operating programmes attracting far greater interest than lower value, onshore based drilling and midstream operations.

However, what this chart does not show is the continued unprofitability of the Offshore Construction portfolio (which is wrapped into the overall Offshore Property figures). Figure 6 above shows the current relationship between the Offshore Construction losses recorded by our database and the estimated premium income for this sub-sector of the Upstream portfolio. If the Black Sea loss recently reported to the market is factored into the 2022 figures already on our database (although this loss may fall into a prior year of account), it clearly indicates that this sub-sector remains inherently unprofitable — especially as the quantum of the loss falls within Upstream insurers' retention levels. Smaller projects will also become increasingly difficult to place due to the lack of premium income. However, not all Upstream insurers will be affected by this; many of them essentially do not write Offshore Construction and their involvement is often limited to small lines only.

Figure 7: **Upstream Operating insurer capacities 2000-2023 (excluding Gulf of Mexico Windstorm)**



Both theoretical and realistic capacity levels have increased in recent years – thwarting the efforts of insurers to accelerate the hardening process

Source: WTW

Leadership panel remains basically restricted

Despite the recent turmoil in the reinsurance market, and the differing levels of reinsurance cost allocations which have yet to work their way through to direct insurer underwriting strategies, the Upstream market remains a subscription market; in other words, the market coalesces around a given leader's terms and will either follow them in their entirety or decline to participate. In previous underwriting eras, a period of profitability has often been accompanied by the injection of fresh capital and new insurers have sought to provide fresh competition for the established market leaders. As we have alluded in previous Reviews, in this underwriting era this dynamic has yet to materialise; indeed, the withdrawal of the MRS Syndicate last year has only served to restrict the choices of leader even further. With no new entrants, the existing leaders have no incentive to offer more competitive terms or a different underwriting strategy; a much simpler option for them is simply to increase their line on the choicest business and take advantage of the continuing upturn in rating levels.

Furthermore, should an experienced underwriter elect to move to a new insurer and begin to build a new book of business — as has often happened in the past — the likelihood is that it will be much easier for that individual to take advantage of the rising rates and adopt a moderate strategy rather than incur the wrath of fellow underwriters (and probably their senior management as well) by adopting a more aggressive approach.

Concerns over accuracy of values remain

A further concern for the market, especially given its reducing premium income pool, is the accuracy of the values that are being presented to them in this renewed inflationary era. Although we have mentioned this last year in our November 2022 update, it is worth re-emphasising that insurers are very focused on this issue and the feedback we have received suggests that only a handful of buyers have employed a third party to conduct an independent valuation exercise in the last 12 months or so. Indeed, we understand that some buyers are even submitting a reduced set of values to insurers without an adequate explanation or justification for such a reduction. Insurers could potentially respond to this by applying more punitive rating increases to those programmes; it is fair to say that these increases are almost always resulting in even more premium being

charged to the buyer than would have been the case had a more accurate submission been made to the market. We would therefore suggest that arbitrarily reducing or maintaining existing values in this economic climate is likely to be counterproductive in two ways; first, it may mean a higher rating increase than normal and two, should a loss materialise, it is equally likely that insurers will apply average (if such a provision exists), meaning that the buyer may not receive a full indemnity from the market.

Impact of continued management control over underwriting strategy

A final reason for the continued market hardening in this sector is the maintenance of managerial scrutiny over individual Upstream underwriters. A good illustration of this trend was made clear in recent weeks in the aftermath of the advice of the Black Sea Offshore Construction loss referred to earlier. We understand that the loss had only been made public for a short time before individual Upstream underwriters across the market were being contacted by their senior management, enquiring firstly as to whether the insurer was on the programme in question and secondly if so, why the underwriter had decided to write such a risk. It seems to increasingly be the case that underwriters do not have the same flexibility and ability to make individual underwriting decisions that many in the market have become accustomed to, making the possibility of further competitive pressures in this market even more remote.

Positive factors

These, then, are the reasons why the Upstream market is continuing to harden, albeit at different rates depending on the sub-sector and insurer in question. But are there any other factors in play which are restraining the extent of the hardening process and offering any hope for the buyer? Interestingly enough, there are quite a few.

Abundant capacity maintained

The basic laws of supply and demand are still doing something to ease the overall hardening dynamic in this market. Figure 7 on the previous page shows capacity levels at a continuing record high, with just over

US$7 billion of "realistic" market capacity still available for the most attractive programmes. The implications for those programmes are clear — there is still a marked underwriter appetite for those offshore programmes featuring significant premium income, spread of risk and clean loss records. Despite the withdrawal of the MRS syndicate last year, there is still plenty of capacity available and, given the pressure on signings that the market experienced towards the end of 2022, we do expect the best business to be over-subscribed once again during the remainder of 2023, which should minimise any further rating increases.

High oil prices likely to lead to increased construction/drilling activity and LOPI values

Since the beginning of the Russia-Ukraine conflict, it has become increasingly apparent that western economies have had to step up their own fossil fuel production levels in order to offset the termination of supplies from Russia and meet domestic demand. This in turn has led to an acceleration of fossil fuel prices (although in recent weeks this has somewhat been scaled back) and an increase in drilling activity, for example in the Permian basin in Texas and Arizona. Logic suggests that this is going to result in further increases in Loss of Production Income (LOPI) values and additional premium generation as a result of increased drilling and exploration activity. Should this additional premium income materialise still further in 2023, this may go some way to mitigating the need to increase rates more significantly during the remainder of the year.

Growth of facultative reinsurance market

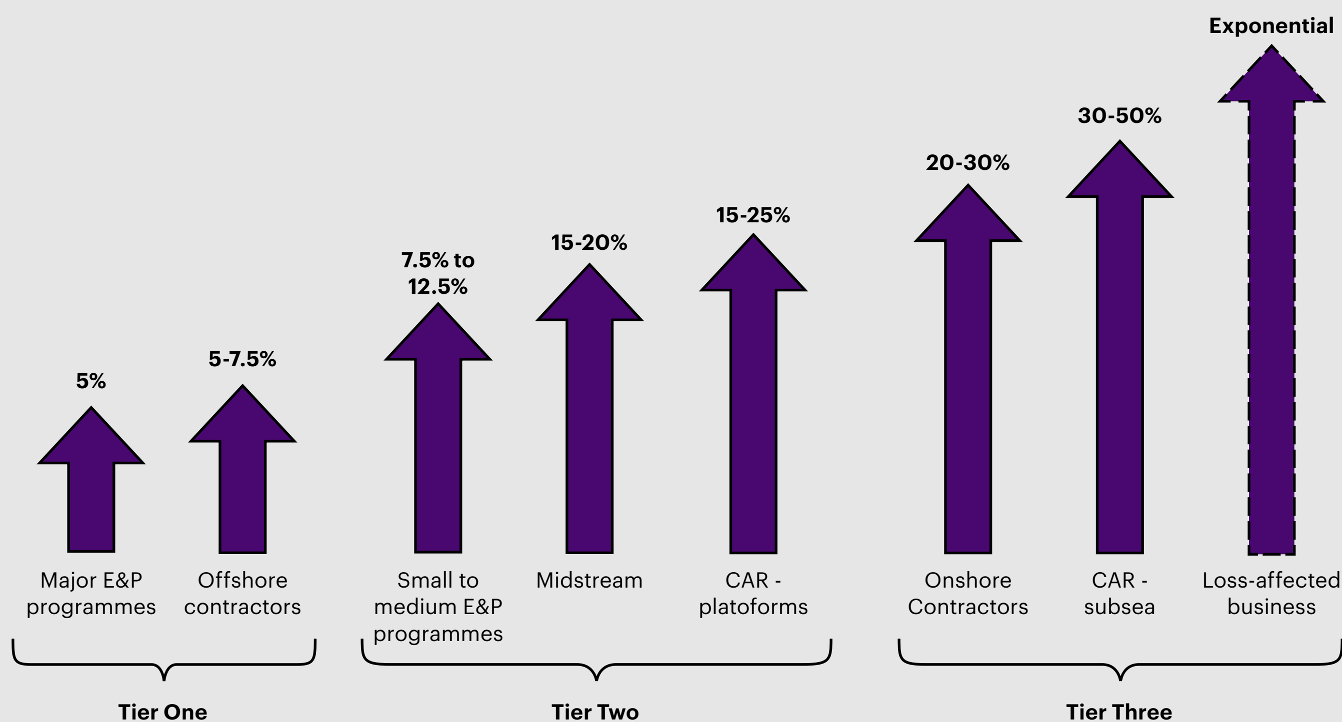
During the recent reinsurance renewal season, the largest reinsurers sought to maximise their positions in a hardening market by insisting on minimum signed lines in exchange for their terms. This in turn has led to several smaller reinsurers being left off some major reinsurance treaties and therefore short of much needed premium income. At exactly the same time, the direct Upstream market is facing much larger retentions, potentially leaving themselves dangerously over-exposed on certain programmes. We believe that this will result in a potential growth of the facultative reinsurance market which may contribute to offsetting some of the increase in the hardening dynamic brought about by the increased treaty retention levels discussed earlier.

Pressures to maintain premium income levels will remain

A final positive factor for buyers to consider is a somewhat obvious one – the need for insurers to secure sufficient premium income to pay for their reinsurance costs, not only in terms of their treaties but also in terms of any facultative reinsurance purchases. As a result, it is quite possible that the market may become more competitive later in the year, when the full impact of the reinsurance treaty season has played out and the need to pay for reinsurance costs becomes clearer.

> **"There is still a marked underwriter appetite for those offshore programmes featuring significant premium income, spread of risk and clean loss records."**

Figure 8: **Three-tier market differentials: Average rating increases, April 2023**



The recent market bifurcation has now morphed into a trifurcation, given evident the range of rating increases now being offered by insurers

Source: WTW

Current rating increases

Where have all these competing factors left the Upstream insurance market? In our November 2022 Update we pointed to an increased bifurcation in this market, whereby the most sought-after business was attracting a markedly different underwriter response from the rest of the portfolio. 6 months on, this bifurcation seems to have morphed into a trifurcation, with three readily identifiable tiers within it:

- **Tier one** continues to represent the most sought-after business, including major offshore assets, offshore contractor business and other offshore E&P companies. This tier is where almost every insurer is wanting to participate in more heavily, not only because the business is seen to be inherently profitable but because it offers an opportunity to make up for lost Russian premium income.
- **Tier two** consists of smaller E&P programmes, Midstream business and conventional Offshore Construction business. Conditions in these sub-classes are a hardening more intensely, with insurers apprehensive about the possibility of increased loss activity in during 2023.
- **Tier three** consists of the least attractive areas of the Upstream portfolio – subsea construction, land rigs and other onshore drilling operations (especially "one shot wells") and other loss-impacted business. With the demise of certain underwriting facilities for this business becoming apparent during the last 12 months, it seems difficult to imagine anything but more punitive rating increases for traditional onshore E&P business, while the Offshore Construction market continues to reel from the impact of the recent Black Sea loss.

It should always be remembered that these rating increase should be taken as a general guide only. Not every large Upstream programme will be regarded as Tier One business and not every loss-impacted programme will necessarily fall into Tier Three. As ever, much will depend on individual underwriting submissions and the state of buyers' long-term relationships with key market leaders.

Figure 9: **Upstream Capacity versus rating levels, 1993–2023 (excluding Gulf of Mexico Windstorm)**

Capacity has flattened out, while rates are still well below where they were 10 years ago

Source: WTW

Conclusion: the outlook for the remainder of 2023

What can buyers expect from the remainder of 2023? Our 31-year-old chart in Figure 9 above, depicting the relationship between market capacity and overall price increases and decreases year on year, shows that rating levels in this market are still nowhere near those enjoyed by the market some ten years ago — despite a gradual hardening process since 2016. However, despite capacity remaining plentiful, overall levels have flattened out after a sustained period of increases since 2006 and the aftermath of hurricanes Katrina, Rita and Wilma. This somewhat rudimentary analysis suggests that Upstream insurers will continue to push for rating increases; given the lack of competition for leadership of this class, it is quite possible that this hardening process may continue for some time yet.

However, we have shown that this is a market which is increasingly differentiating in favour of the most sought-after business. It is entirely possible that later in the year the pressure to meet premium income targets — if only to pay for expensive reinsurance programmes — may allow some buyers and their brokers to drive improved terms from the market in return for increased line sizes and positions on the best programmes. Furthermore, the potential expansion of the facultative reinsurance market may allow for more attractive terms from a buyer perspective as 2023 unfolds.

How can buyers ensure that they derive optimum terms from this market? As ever, we encourage upstream energy companies to:

- start the renewal process early
- develop and communicate effective underwriting submissions to the market
- answer the questions posed by the JNRC ESG questionnaire as comprehensively as possible
- obtain more than one indication and support any "leader-only" terms, as placements are likely to require more than one insurer to generate sufficient support
- ensure that insurers have every possible ammunition to convince their senior management that preferential terms should be offered - if necessary, for an increased participation in the programme

Paul Braddock is Head of Upstream GB, Global Natural Resources, WTW.
paul.braddock@wtwco.com

Richard Burge is Chief Broking Officer GB, Natural Resources Global Line of Business, WTW.
richard.burge@wtwco.com

Global Downstream: Hardening re-intensifies — for now

Introduction: January is always such a gloomy month!

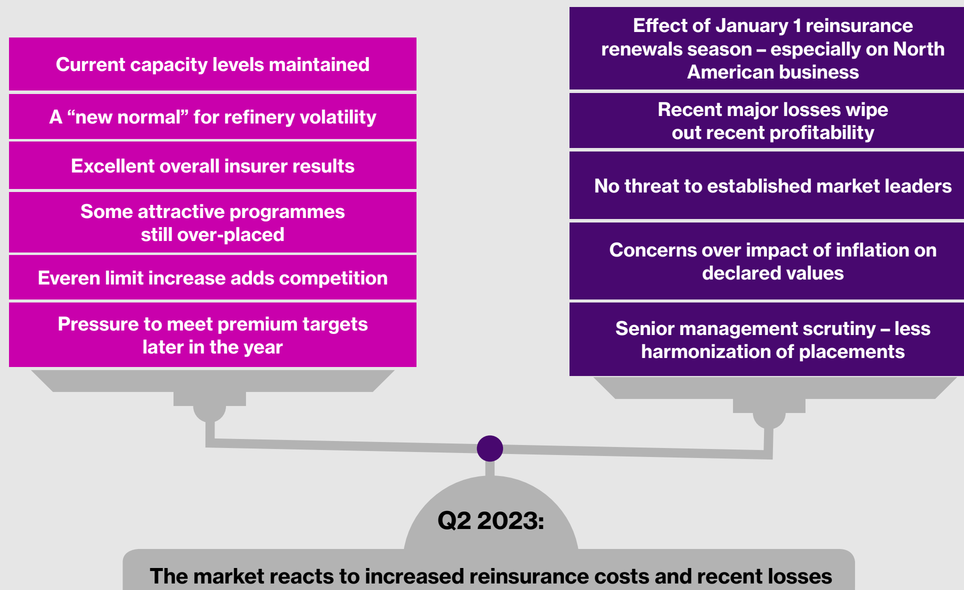
In our November 2022 Update to last year's Energy Market Review, we did our best to remain upbeat about the prospects for Downstream buyers as the January 1 reinsurance market renewals season approached. January is always a gloomy month in London but this year it was made much worse for Downstream insurers by an extremely late and punitive reinsurance market renewal season. Most had realised quite early on in proceedings that matters were not going to be straightforward, and the Christmas break arrived with many reinsurance deals not yet over the line. Even as this Review was going to press in March, it was still not clear as to the full impact of the reinsurance treaty rate rises, nor indeed how the increased treaty costs would be allocated within individual insurer operations.

One thing, however, has been clear: this has been one of the toughest reinsurance renewal seasons on record. We therefore have little alternative but to advise Downstream buyers of a re-hardening of this market for all but the most sought-after business — just when buyers had hoped that the turning point of the old market cycle had been reached last year. It must be said that this is an unusual phenomenon in this market; history shows that after a period on rating increases, new capacity usually floods into the market and the next phase of the underwriting cycle begins. Instead, nothing of the kind has happened; in essence, we are left with a very similar market to the one buyers have had to cope with for the past four years or so.

But is this all bad news for the buyer? In the short term yes, but in the long term, perhaps not. As ever in this complicated and diverse market, things are never quite what they seem, and it may be that some chinks of light will appear for buyers before the year is out.

Let's first tun to our "kitchen scales" graphic in Figure 1 overleaf to identify the various positive and negative factors affecting this market. We'll take the negative factors first, and then show why some of the positive factors may change existing market conditions later in the year.

Figure 1: **The Downstream underwriting environment, Q2 2023**



The initiative has swung once again in the market's favour - but for how long?

Source: WTW

Negative factors

Effect of January 1 reinsurance renewals season

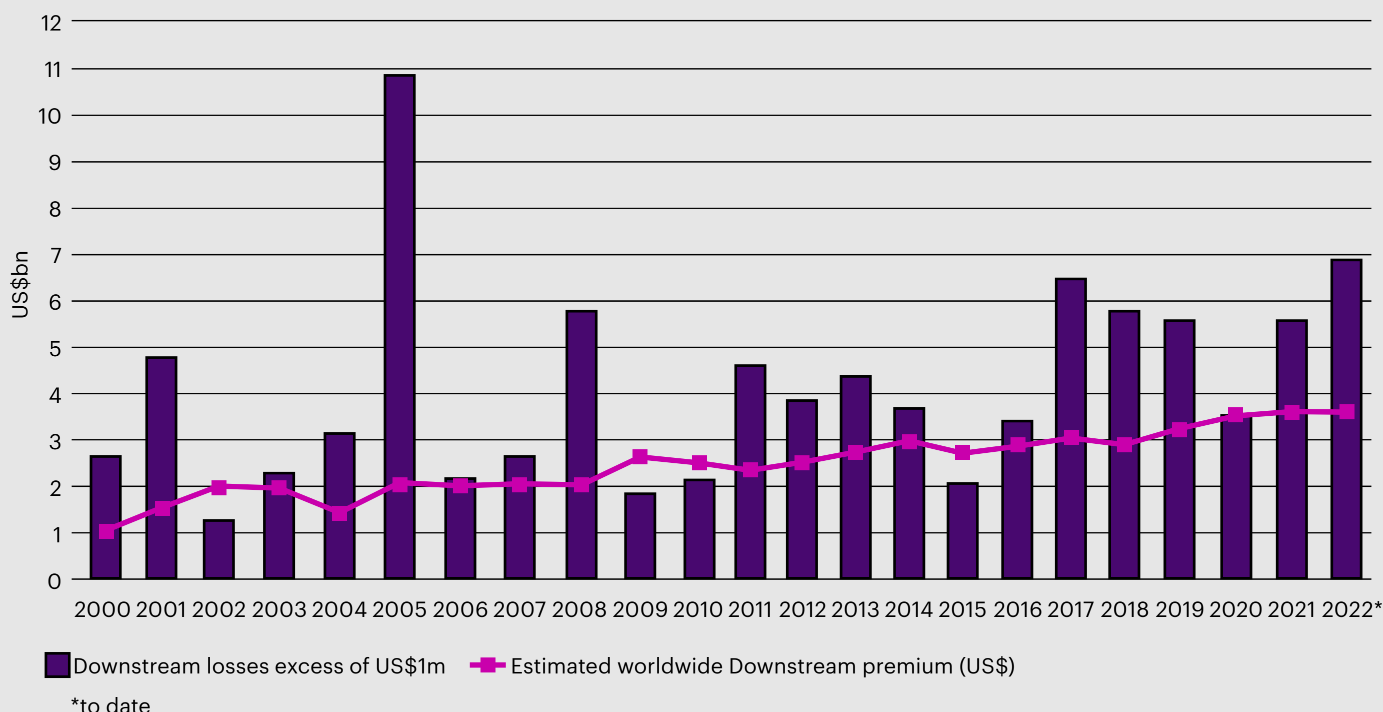
Even at the end of the first quarter of 2023, there is still a degree of confusion as to the full ramifications of this year's reinsurance renewal season. Depending on who one speaks to in the market, reinsurance costs have risen by as much as 70% for some buyers but by only 10% for others. However, it was not simply the range of rate increases which caused some consternation in the Downstream market, but also the scale of the retention increases — for some, up to double the same figure for the previous year — together with the uncertainties relating to the actual allocation of reinsurance costs across the full range of individual insurers' Property & Casualty portfolio. In effect, some members of the Downstream market are currently underwriting without knowing exactly how much they will be contributing to overall reinsurance treaty costs. Furthermore, the decreases in reinsurance capacity for Natural Catastrophe (Nat Cat) have meant costs increasing even further for this sought-after protection — particularly for North American risks.

No wonder the reaction in the market since January 1 has been a heady mix of unease and apprehension. Reinsurance costs are generally between 30-50% of all insurer costs and with the rating increases these figures may well be even more for this year. As a result, insurers have insisted that they have had little choice but to pass these increased costs on to the buyer in most instances; what is less clear is how many are taking advantage of the current confusion in the market to insist on the same increases in rate as those whose costs have increased the most. What we have seen is a significant part of the market taking a bold approach as the year began, insisting on minimum rating increases and pointing to the conditions in the reinsurance market as a rationale.

We have also seen reinsurers imposing more restrictive conditions on their treaty policy wordings. For example, it is now much more challenging to include Strikes, Riots and Civil Commotion (SRCC) cover for reinsurance programmes, although most Downstream insurers' portfolios would suggest that they are not significantly exposed for this risk above their retentions. Reinsurers have also imposed the more restrictive Cyber exclusion clause LMA 5400 (which excludes the malicious event) as opposed to the NMA 2195, which buys the malicious event back on all placements, whereas in the past the NMA 2195 had been able to be used for the most attractive business. Logic suggests that the direct market will be forced to mirror the terms of their reinsurance treaties and impose the same exclusions on their direct business.

In such a market, where the full effects of the reinsurance renewal season have yet to be made manifest, brokers have had to keep a very close eye on individual insurers and know exactly who to approach to secure the most favourable terms. What will also be critical as 2023 progresses is whether regional capacity that has been vital to placement structures for buyers in some parts of the world (especially the Middle East) will still be in play for the remainder of 2023.

Figure 2: **WELD Downstream losses 2000 – 2022 (excess of US$1m) versus estimated global Downstream premium income**



Recent loss record destroying portfolio profitability as premium income levels flatten

Source: Willis Towers Watson/WTW Energy Loss Database as of March 13, 2023 (figures include both insured and uninsured losses)

Recent major losses wipe out recent profitability

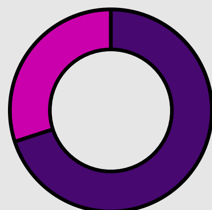
It is not just the punitive reinsurance terms that are concerning Downstream insurers; the recent loss record has also taken a significant turn for the worse. In recent Reviews we have spoken of a possible improvement in the loss record for this line of business; however, one glance at our updated database shows a distinct deterioration, particularly for 2022 (see Figure 2 above).

It can be seen from Figure 2 that the optimism generated by the 2020 loss result has now evaporated, as our overall database total now stands at nearly US$7 billion, a record for this century with the exception of 2005, the year of the record hurricane season (Katrina, Rita and Wilma). However, this does not mean that 100% of these losses have been paid by the insurance market; these loss totals reflect gross losses (both insured and uninsured) supplied to our database by various loss adjusters. Some of these losses will be retained, some will be paid by the industry mutual Everen and some of them may well end up being settled for a smaller amount once the claims process has been finalised. Be that as it may, insurers are almost certainly going to be paying out significantly more in claims than they will be receiving in premiums, as our latest global estimate suggests a small decline in the overall premium pot to US$3.4 billion.

We have itemised the major losses for both 2021 and 2022 in Figures 4 and 5 on pages 51 and 52 for reference purposes, but a simple listing of the losses does not in itself tell the full story of why the loss record has deteriorated to this extent. However Figure 3 overleaf shows three reasons that we think are mainly responsible for the figures for the last two years.

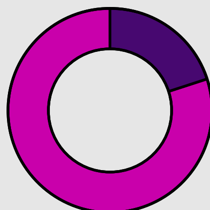
Figure 3: **Breakdown of Downstream losses by PD/BI, Mechanical Failure and region, 2021-22**

PD/BI loss split 2022



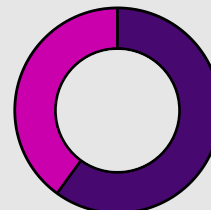
BI PD

Mechanical Failure loss split 2022



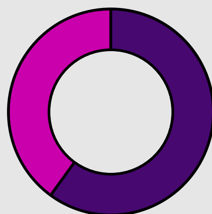
Mechanical Failure Other losses

Regional loss split 2022



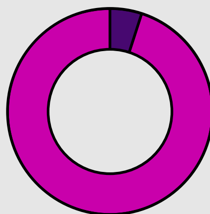
North America International

PD/BI loss split 2021



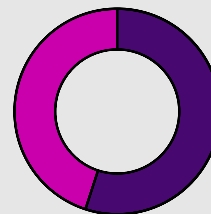
BI PD

Mechanical Failure loss split 2021



Mechanical Failure Other losses

Regional loss split 2021



North America International

Source: WTW Energy Loss Database as at March 15, 2023

Three discernible trends can be borne out from Figure 3. The first is the continuing increases in the overall share of the loss total taken by BI losses; in 2021 BI losses represented 61.58% of to the total, but that has increased to 70.94% in 2022, which may well be attributable to the rise in fossil fuel prices since the beginning of the Ukraine conflict. Secondly, there has also been a notable increase in the portion of the overall loss total taken by mechanical failure losses, from just 4.96% in 2021 to 20.50% in 2022. Without wishing to oversimplify matters, we do think there is some correlation between these statistics and the increased refinery and plant utilisation rates we have seen as the global economy emerged from the COVID-19 pandemic; it seems that the ramp up on production, from dormant or near dormant utilisation, may well have contributed to the increased loss activity. Finally the market will have noticed a continuing increase in the share of the loss total pertaining to the North American region, from 52.68% in 2021 to 59.19% in 2022. As we will discuss later, this trend is having a marked effect on the rating increases now being charged by the market for risks from this region, compared to the rest of the world.

What effect have these losses had on Downstream profitability? As ever, without access to individual insurer figures no market observer is in a position to produce definitive proof one way or another. However, Lloyd's most recent Onshore Energy figures (see Figure 6 on page 53) do suggest that this portfolio probably remains in unprofitable territory. It is generally agreed that these Incurred Ratios (net premiums versus paid and outstanding claims) need to be below 50% if overall profitability is to be achieved, if reinsurance and other operating costs are to be factored in. It can be seen from the mature years (i.e. excluding 2022) that the Ratio has never been much below 50% over the last 12 years or so; given the current WELD figures for 2022, we can expect the final figure for last year to be well in excess of 50% once again.

Figure 4: **Downstream losses excess of US$50 million, 2021**

Type	Cause	Region	PD US$	BI US$	Total US$
Olefins	Ice/snow/freeze	North America	202,328,100	621,433,621	823,761,721
Olefins	Windstorm	North America	40,000,000	341,000,000	381,000,000
Olefins	Supply interruption	Europe	81,000,000	169,000,000	250,000,000
Fertilizer/agrochemical	Fire no explosion	North America	14,000,000	188,300,000	202,300,000
Chemical	Fire no explosion	North America	160,000,000	18,000,000	178,000,000
Olefins	Unknown	Middle East	14,297,950	146,876,712	161,174,662
Pipeline	Flood	Europe	17,000,000	130,000,000	147,000,000
Petrochemical	Fire no explosion	North America	20,000,000	126,000,000	146,000,000
Gas processing	Fire + explosion/VCE	Eurasia	140,000,000	0	140,000,000
Secondary process	Unknown	Eurasia	0	130,000,000	130,000,000
Pipeline	Anchor/jacking/trawl	North America	73,300,000	30,500,000	103,800,000
Refinery	Lightning + fire	Asia Pacific	100,000,000	0	100,000,000
Olefins	Ice/snow/freeze	North America	56,595,656	41,427,000	98,022,656
Petrochemical	Ice/snow/freeze	North America	24,000,000	65,000,000	89,000,000
Fertilizer/agrochemical	Misc	Middle East	19,968,102	67,235,579	87,203,681
Olefins	Unknown	Middle East	45,000,000	42,100,000	87,100,000
Refinery	Ice/snow/freeze	North America	27,000,000	58,277,981	85,277,981
Isomerisation	Fire no explosion	North America	10,000,000	74,880,000	84,880,000
Chemical	Windstorm	North America	5,350,000	77,667,500	83,017,500
Pipeline	Flood	North America	74,990,000	7,190,000	82,180,000
Olefins	Mechanical failure	Latin America	0	80,982,000	80,982,000
LNG	Unknown	Latin America	8,515,329	72,207,578	80,722,907
Plant	Ice/snow/freeze	North America	80,000,000	0	80,000,000
GTL	Fire + explosion/VCE	Caribbean	12,500,000	62,000,000	74,500,000
Petrochemical	Fire no explosion	Middle East	17,158,775	55,073,972	72,232,747
Inorganic Chemicals	Supply interruption	North America	20,750,000	50,000,000	70,750,000
Inorganic Chemicals	Fire + explosion/VCE	Africa	2,400,000	64,440,000	66,840,000
Secondary process	Faulty design	Europe	10,000,000	56,000,000	66,000,000
Olefins	Supply interruption	Middle East	30,453,000	33,800,000	64,253,000
LNG	Unknown	Middle East	12,599,642	51,000,000	63,599,642
Chemical	Ice/snow/freeze	North America	15,535,916	46,151,621	61,687,537
Secondary process	Fire + explosion/VCE	North America	25,300,000	35,750,000	61,050,000
Olefins	Ice/snow/freeze	North America	54,000,000	0	54,000,000
LPG	Ice/snow/freeze	North America	11,000,000	42,000,000	53,000,000
Crude unit	Fire + explosion/VCE	South Asia	50,000,000	0	50,000,000

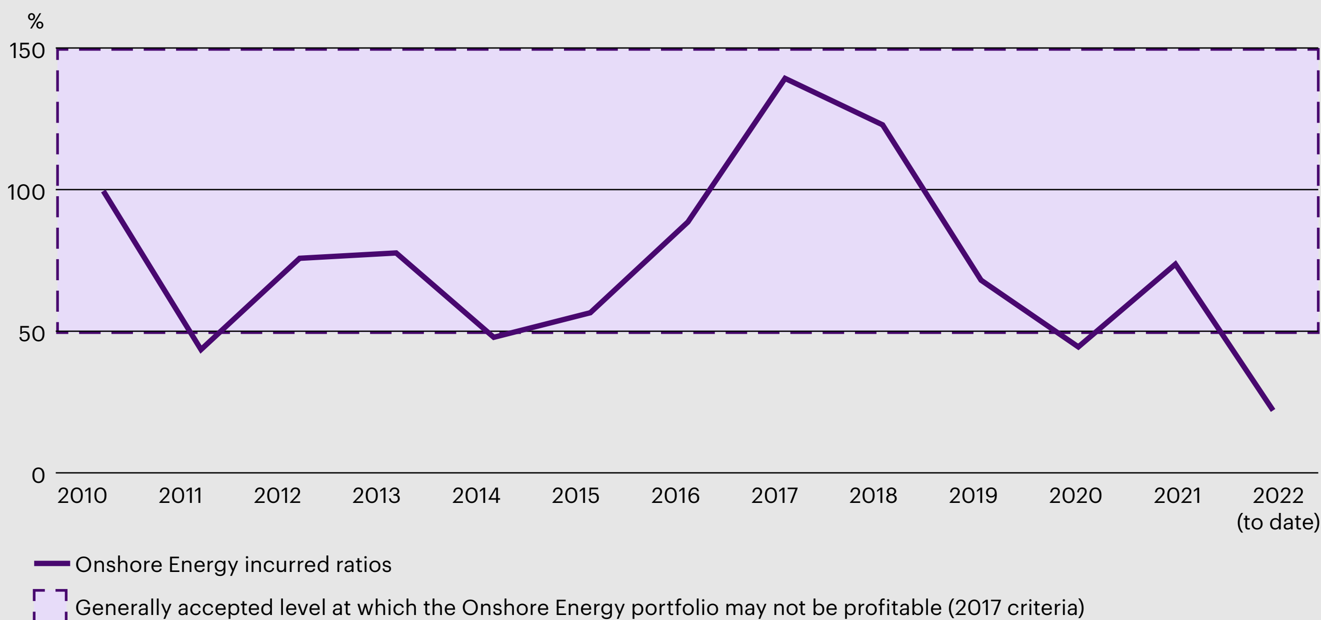
Source: WTW Energy Loss Database as of March 13 2023 (figures include both insured and uninsured losses)

Figure 5: **Downstream losses excess of US$50 million, 2022 (to date)**

Type	Cause	Region	PD US$	BI US$	Total US$
Gas plant/trans	Fire + explosion/VCE	North America	456,750,000	890,250,000	1,347,000,000
LNG	Fire + explosion/VCE	North America	175,000,000	1,012,200,000	1,187,200,000
Primary process	Mechanical failure	Europe	40,000,000	433,590,000	473,590,000
Olefins	Mechanical failure	Middle East	0	461,000,000	461,000,000
Primary process	Fire + explosion/VCE	North America	70,000,000	270,000,000	340,000,000
Gas plant/trans	Fire no explosion	Middle East	13,600,000	264,923,077	278,523,077
Secondary process	Fire + explosion/VCE	Europe	30,000,000	213,000,000	243,000,000
Gas plant/trans	Fire + explosion/VCE	North America	160,000,000	40,000,000	200,000,000
Secondary process	Fire + explosion/VCE	Asia Pacific	28,000,000	122,500,000	150,500,000
Tank farm/terminal	Unknown	Latin America	118,000,000	20,000,000	138,000,000
Tank farm/terminal	Lightning + fire	Caribbean	138,000,000	0	138,000,000
GTL	Mechanical failure	North America	50,000,000	78,558,800	128,558,800
LNG	Heavy weather	North America	8,438,835	118,000,000	126,438,835
Chemical	Fire + explosion/VCE	North America	57,820,000	45,500,000	103,320,000
Secondary process	Fire no explosion	Europe	4,238,000	90,000,000	94,238,000
Chemical	Contamination	North America	12,000,000	80,000,000	92,000,000
Olefins	Mechanical failure	Asia Pacific	35,000,000	53,900,000	88,900,000
Inorganic Chemicals	Mechanical failure	North America	13,000,000	65,000,000	78,000,000
Tank farm/terminal	Collapse	North America	15,000,000	62,500,000	77,500,000
Olefins	Supply interruption	Middle East	8,000,000	69,000,000	77,000,000
Secondary process	Mechanical failure	Europe	2,000,000	69,500,000	71,500,000
Chemical	Explosion no fire	North America	39,000,000	27,958,560	66,958,560
Inorganic Chemicals	Mechanical failure	Europe	0	55,085,000	55,085,000
Petrochemical	Unknown	North America	10,000,000	43,000,000	53,000,000
Olefins	Fire no explosion	Europe	10,000,000	42,000,000	52,000,000
Olefins	Fire + explosion/VCE	Asia Pacific	7,000,000	45,000,000	52,000,000

Source: WTW Energy Loss Database as of March 13 2023 (figures include both insured and uninsured losses)

Figure 6: **Lloyd's Onshore Energy Incurred Ratios, 2010-2022**



Lloyd's Onshore Energy Property portfolio was thought to have returned to profitability – but the 2021 figures suggest otherwise

Source: Lloyd's Market Association Quarterly Loss Report Q4 2022. ""Onshore Property" - EF audit code

No threat to established market leaders

It seems a while ago now but back in the summer of 2022, we did detect sings of competition being generated in the market as it seemed that the Downstream loss ratio had improved. However, this dynamic did not last long; as soon as two major losses from North America were reported to the market (see Figure 5 on the previous page) this competition rapidly dissolved, to be replaced with an overriding concern not to be seen to be "rocking the boat". As a result, we are seeing a retrenchment in almost every area of the Downstream portfolio, with insurers preferring to focus on negotiating increased line sizes for preferred business rather than to compete directly against the incumbent market. And although we understand that some new ventures are planned to enter the market in the near future, it is not expected that these new ventures will in any way add to the existing competitive pressures in the market.

What would it take for a completely new set of competitors to challenge the existing market orthodoxy? From our discussions in the market, nobody can be entirely sure. However, given the recent loss record it would seem to be very unlikely that any serious threat to the existing market leaders will emerge in any form in the near future.

Concerns over impact of inflation on declared values

In our November 2022 Update we highlighted the challenge of submitting accurate valuations to insurers at a time of increasing inflationary pressures. However, the reality is that to the best of our knowledge very few buyers have since elected to have independent valuations carried out on their assets to ensure that they are being insured for the correct amount. Moreover, at a time of economic volatility, it is difficult to predict where inflation levels will be in say two years' time, making the possible calculation of future BI losses in particular somewhat challenging. As always, obtaining an accurate understanding of the overall exposure is not an exact science, but those buyers who continue submit outdated value data to their insurers, in respect of both Property and Business Interruption, may be in for something of a shock.

To say that this issue is making insurers apprehensive is something of an understatement; as a result, there is now a real danger that the market may over-react to submissions that repeat existing value schedules by not only charging a disproportionate rating increase but also apply average in the event of a loss, thereby reducing the overall claim figure. This challenge for buyers has not been helped by either the maintenance of inflationary pressures around the world nor the deterioration of the Downstream loss record and provides an extra rationale for the market to impose even further rating rises across the market.

We would therefore continue to advise buyers to do all they can to ensure that the values submitted to insurers are as up-to date and accurate as possible. While it is appreciated that circumstances do not always allow this to happen overnight, in the long-term buyers are

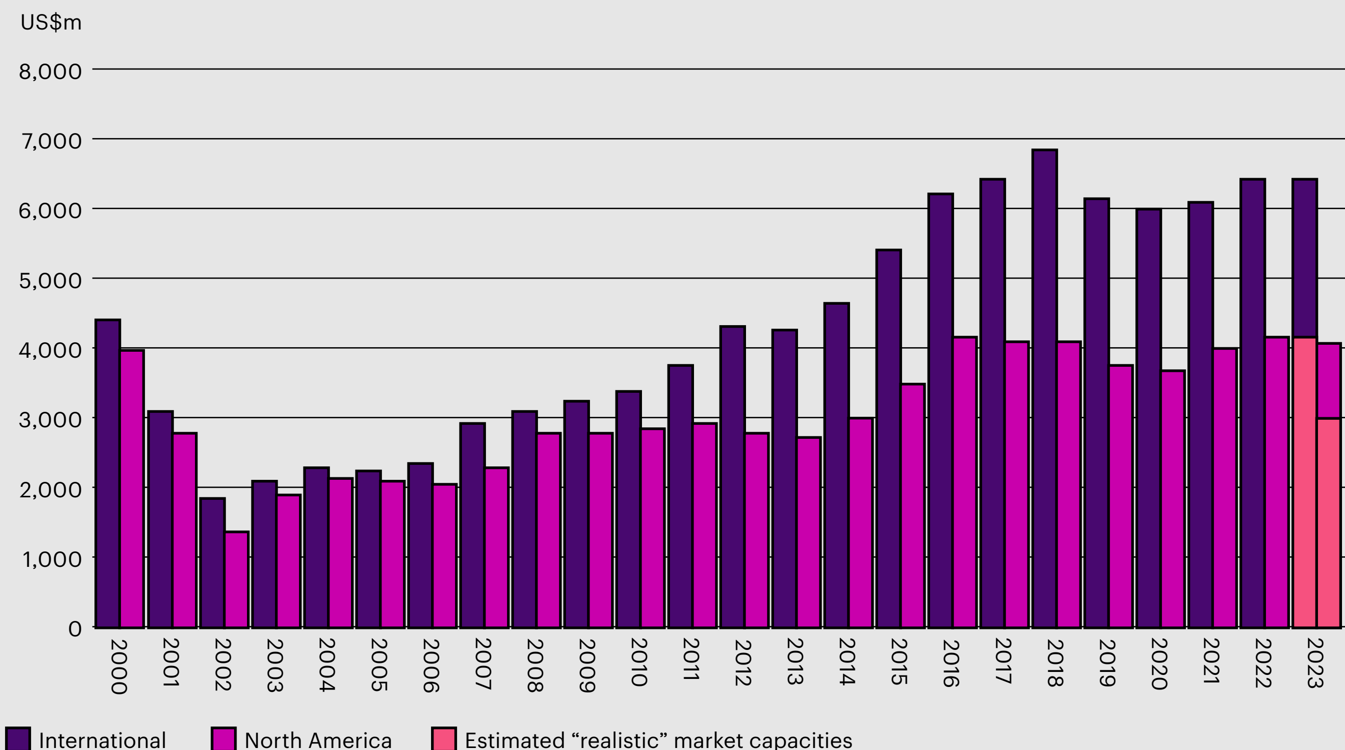


Figure 7: **Global Downstream insurer capacities, 2000-2022 (excluding Gulf of Mexico Windstorm)**

Capacity remains stable, dampening the hardening market dynamic

Source: WTW

not likely to gain from a policy of seeking to keep the values submitted as low as possible to limit any increase in rating levels. Insurers are now focusing on this issue intently and are unlikely to hesitate to apply punitive rate increases where they believe that values have not been updated.

Senior management scrutiny – less harmonization of placements

Another positive development that we reported in our November 202 Update was the increasing ease with which brokers were being able to align their programmes, enabling a much more consistent set of terms and conditions to be presented to the buyer. Following the impact of both the recent reinsurance market renewal season and the deterioration of the loss record, we have to report that this dynamic has faded significantly; instead, individual underwriters are now more concerned about "stepping out of line" and failing to adhere to management directives. As a result, brokers have found it particularly challenging to persuade underwriters to follow the terms and conditions of the market leaders; just as was the case from 2018 to 2021, the increased interest from senior management is ensuring that the hardening dynamic in the market is once more being accelerated.

Positive factors

Despite these challenging market dynamics, there are now some signs that insurers will not have everything entirely their own way in the months ahead. So what are the reasons why buyers can take some signs of encouragement from recent developments?

Current capacity levels maintained

A glance at Figure 7 above shows an interesting trend that continues to act as a break on the current hardening dynamic — the fact that capacity levels for Downstream have remain remarkably consistent over the last five years or so. Indeed, if we look back to the beginning of the century, and the dramatic collapse of capacity following the end of the old 1990s soft market and the events of 9/11, we can see that this has by no means always been the case. Even as recently as ten years ago, total capacity was only a shade over US$4 billion, and yet only eight years later a further US$2.8 billion had been added. Since then capacity levels have been relatively consistent, and for 2023 we can advise theoretical levels of US$6.2 billion for International business, with US$4 billion for North American risks. In realistic terms (i.e. what insurers will provide in practice), we still believe that US$4 billion is available for International risks and US$3 billion for North American risks.

Why does this matter? Simply because capacity needs a return on capital, and that places an obligation on insurers to ensure that there is a minimum premium flow from the deployment of this capital to make the investment worthwhile. In general terms then, insurers cannot simply walk away from the business and not provide a return on capital, and so premium income targets are likely to be maintained — or even increased. This in turn is likely to ensure that there will remain a healthy appetite within the market for the most well-regarded business at least.

A "new normal" for refinery and other plant volatility

We have shown evidence earlier in this article that some of the increased level of losses might be attributable to mechanical failures at several plants following the acceleration of utilisation rates post COVID-19 and the escalation of the conflict in Ukraine. However, as this Review went to press oil and gas prices have seemed not only to have stabilised but have found a significantly lower level than the extraordinary highs reached early last year, now that the initial shock following the beginning of the conflict. Logic would suggest that if prices continue to stabilise at this lower level, then refinery and other plant utilisation rates will also begin to follow suit, which may in turn lead to a return to more normal levels of loss frequency and severity. This in turn should encourage insurers to offer more preferential terms in exchange for increased premium income.

Excellent overall insurer results

A further factor which may come into play as the year progresses is the general positive overall underwriting results reported by major insurers in 2022. Although as we have seen the Downstream sector itself is very unlikely to produce an overall profit for 2022, the same cannot be said for the insurers who make up the market in more general terms. We have seen Combined Ratios well beneath 100% reported from a number of key (re)insurers in recent weeks, which should help prompt more aggressive premium income strategies. At the very least, it should serve to prevent more didactic management approaches from being adopted that would have served to accelerate the existing hardening dynamic still further.

> **Capacity needs a return on capital, and that places an obligation on insurers to ensure that there is a minimum premium flow from the deployment of this capital.**

Some attractive programmes still over-placed

Despite the overall hardening market conditions, it must be remembered that the very best programmes, featuring well-engineered risks, loss-free records and significant premium income, remain over-subscribed from last year. As ever, premium attracts capacity and as we pointed out in our November 2022 Update, the market continues to differentiate strongly in favour of the best business. From our own review of our current programmes, we can see that there is already some underwriting "slack" that can be taken up by brokers without materially affecting these programmes' current terms. Given the market's appetite for such business, brokers will use all their market acumen to secure insurers participation in a wider range of programmes should this business be seen to have contributed to meeting 2023's premium income targets.

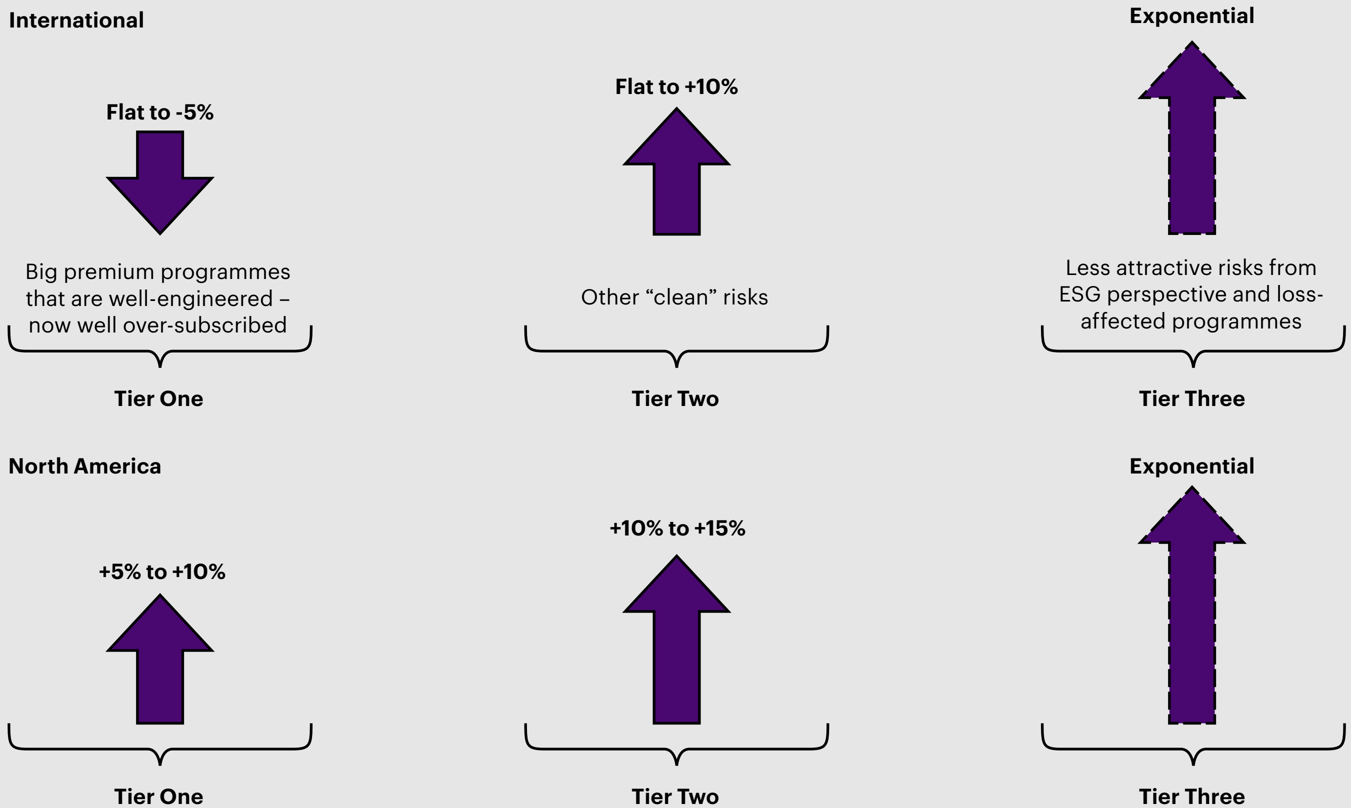
Everen limit increase may add to competitive pressures

Many readers will be aware of the increase in the Everen (formerly OIL Insurance Limited) Property limit to US$450 million from US$400 million in 2022. While it might be reasonable to assume that all members would take advantage of the increase in limit, it appears that this has not proved to be the case in at least some instances, as certain members continue to elect to declare lower limits to Everen than the US$450 million maximum. Commercial market insurers may therefore face an interesting dilemma should Everen members react to the more challenging market conditions and elect to retain more of their risk within the mutual than they do at present. At the very least, it represents an alternative that may well secure increased leverage to limit the extent of insurers' drive towards increased rating levels.

Pressure to meet premium targets later in the year

All of the above factors may help to ease the hardening process. However, a factor of even greater significance may well materialise later in the year, as the choicest business comes up for renewal and opportunities to secure increased premium income become more limited. One truism that is well appreciated by the market is that their increased reinsurance costs have to be paid for somehow; while they will be hoping this can be achieved simply by applying rate rises on their existing portfolio, history would suggest that their appetite for premium income tends to increase as the year progresses and targets still need to be met. There are therefore good reasons to suggest that, should the 2023 loss record turn out to be more benign than for the past couple of years, insurers may be prepared to soften their current underwriting stances somewhat to secure the premium income that they need.

Figure 8: **Current Downstream market rating movements, April 2023**



Only the choicest International business is now seeing premium reductions

Source: WTW

Current rating levels

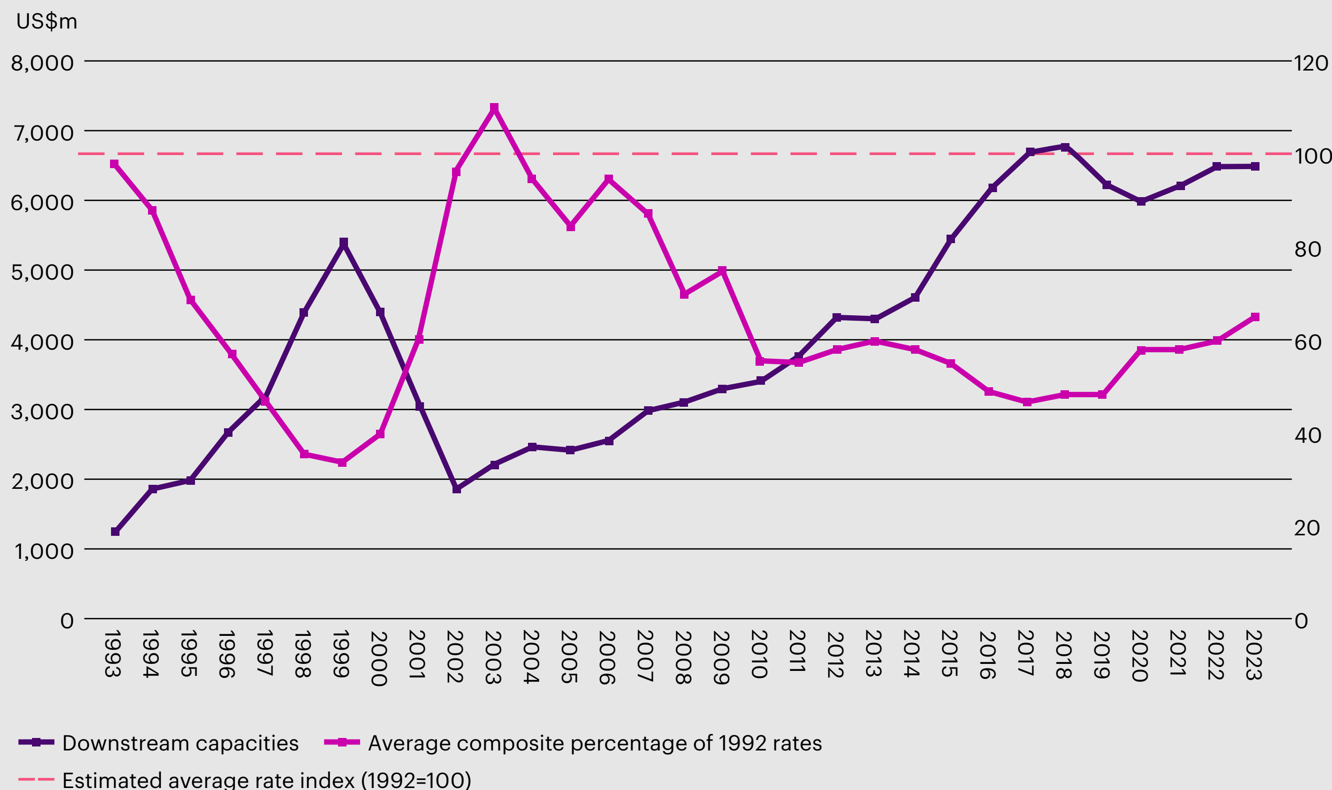
Where do all these competing factors leave current rating levels? Figure 8 above outlines, in very general terms, what buyers can expect from the market in April 2023.

For the reasons that we have already outlined, it is now important to distinguish between North American business and "International" (i.e. non-North American) business. Not only has the North American loss record been particularly disappointing over the last two years but there remains crucial domestic market capacity in certain regions such as the Middle East and Asia that allow brokers to drive more competitively priced programmes. This is the reason why the most well-regarded programmes can still be placed at improved terms from last year — despite the overall prevailing hardening market dynamic.

It can be seen that the market "trifurcation" into three tiers has been maintained. Other than the most sought-after business (Tier One) we have identified a second Tier that consists of reasonably well-regarded business that perhaps does not offer the same degree of premium income and the genuine Tier One business. This Tier will almost universally have to pay more for their programmes this year, albeit not at the kind of punitive rate rises that we have seen at the onset of the hard market in 2018-19.

For the third Tier, which includes loss-impacted programmes as well as unfavourably regarded business form an ESG perspective, we have been unable to provide a premium increase range, as so much will depend on the buyer's relationship with the market, the extent of any losses and the extent of the buyer's journey towards the energy transition. However, those buyers should expect a much tougher renewal than they may have experienced in the recent past.

Figure 9: **Global Downstream capacity versus estimated average rating levels, 1993–2023 (excluding Gulf of Mexico Windstorm)**



Capacity may have flattened out, but increased reinsurance costs are driving rating increases in the market

Source: WTW

Figure 9 above puts today's market into a comprehensive historical context. It can be seen that the most recent years (since 2010) have been characterised by much less volatility than was experienced in the heady days of the 1990s soft market, the rapid hardening after 9/11 and the equally rapid softening in the latter part of the first decade of the new century. At least today's buyers do not have to cope with such volatility, and we certainly don't expect a return to it any time soon.

However, our chart does show increased rating levels at a time when capacity is still plentiful. History suggests that this state of affairs cannot be sustained indefinitely; although insurers can point to increased reinsurance costs, heavier claims records and an unprofitable year to justify increasing rating levels, there may come a time when capacity providers require a better return, while buyers may decide that there are now other ways to manage their risk than the simple purchase of insurance.

Most insurers in the market know this all too well. They are already aware of a handful of major energy companies that have elected to retain their Downstream risk rather than to continue with a Downstream insurance programme, and as alternatives to conventional insurance become more financially realistic, there is always the possibility that others may elect to follow in their wake. Of course, should others exit the market they will almost certainly be Tier One buyers – buyers that the market usually relies on to enable then to write a worthwhile portfolio.

So will the Downstream market overplay its hand as the rest of 20023 unfolds? Insurers will be hoping that they can rely on their most coveted long-term relationships to ensure that this does not materialise, even as they seek to impose still further rating rises on their clients.

Adam Barber-Murray is head of Downstream Broking GB, Natural Resources Global Line of Business, WTW.
adam.barber-murray@wtwco.com

Michael Buckle is London Head of Downstream, Natural Resources Global Line of Business, WTW.
michael.buckle@wtwco.com

International Liability: Myth or logic?

Introduction: Liability drivers for 2023

What do Greek mythology and Mathematical Set Theory have in common? They both help to describe the current state of the Energy Liability market and the drivers behind it.

Six months on from our last Review and three months after the key reinsurance treaty renewal season at January1 2023, how has the Liability market fared and where is it heading directionally?

We saw in our November 2022 Update that Lloyd's of London figures for this class showed that it had sustained five years of losses since 2017 (see Figure 1 below). However, the same results from the first half of 2022 (including Liability, D&O and Financial Lines) showed that it finally returned a modest underwriting profit for this period – a trend that is expected to continue when the full year data is released at the end of Q1 2023 (see Figure 2 below).

Figure 1: **Lloyd's Results for the Casualty Sector, Full Year for past 5 years**

	Gross written premium £m	Accident year ratio %	Prior year movement %	Combined ratio %	Underwriting result £m
2017	8,464	103.7	(0.6)	103.1	(189)
2018	9,094	103.9	(1.0)	102.9	(183)
2019	9,459	103.8	1.9	105.7	(390)
2020	9,067	105.2	5.1	110.3	(688)
2021	**10,360**	**95.6**	**4.7**	**100.3**	**(17)**

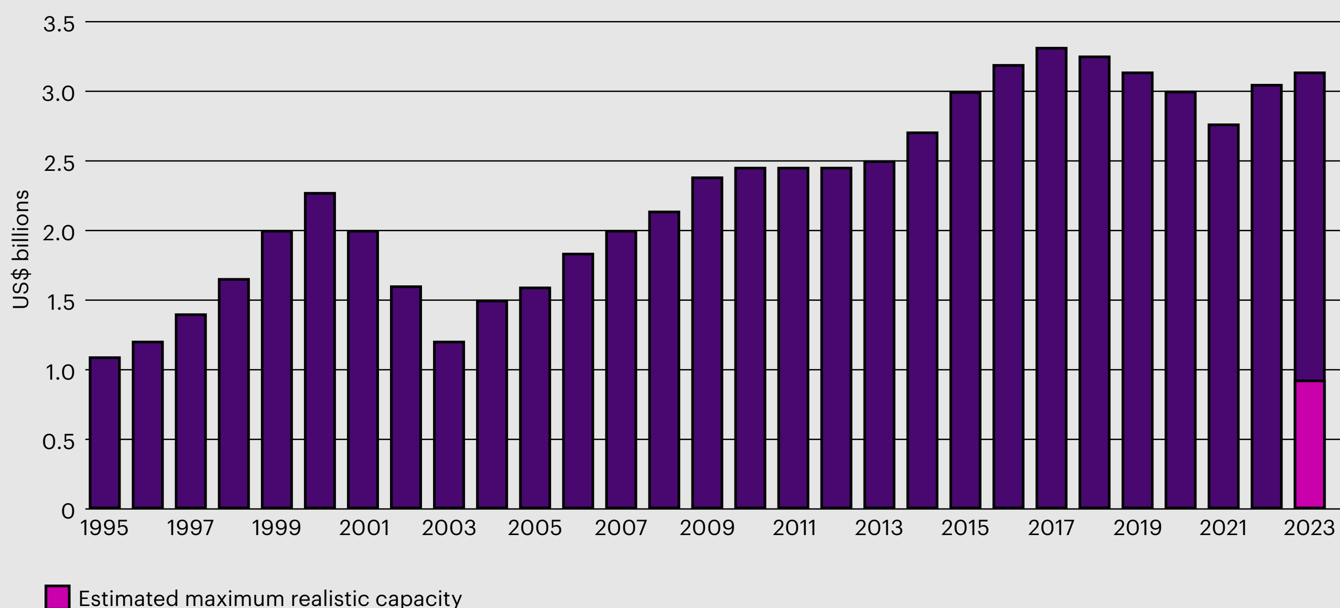
Source: https://assets.lloyds.com/media/81b1778b-e821-4424-b21e-26e0bf095f10/Lloyds_AR21_220323.pdf (page 27)

Figure 2: **Lloyd's Casualty results, 6 months ended 30 June 2022**

	Gross written premium £m	Net earned premium £m	Net incurred claims £m	Net operating expenses £m	Underwriting results £m
Casualty	6,030	3,507	(1,670)	(1,412)	425

Source: https://assets.lloyds.com/media/70dd122f-c82e-42fe-a8f5-0d3859bbcf27/Lloyd's%20Interim%20financial%20statement%20092022.pdf (page 16)

Figure 3: **International Non-Marine Liability Capacity, 1995-2023**



Source: WTW

Lloyd's Full Year 2022 Results will be released just prior to publication of our Energy Market Review, and initial indications are positive.

This changing trend towards profitability in the Lloyd's Casualty (Liability) sector is an encouraging development, which is broadly echoed across other Liability markets internationally, and is a result of tighter underwriting controls, greater risk selection and several years of compound rate increases.

The key question is: How has this impacted capacity and pricing and have any of the positive influences been derailed by the challenges of the recent reinsurance treaty renewal season?

Liability capacity

After three consecutive years of decline, total Liability capacity continues to nudge gently back upwards as a handful of new insurers and MGAs have entered the market and some existing insurers have expanded their line size.

As a result, we have seen a measured increase in both total theoretical capacity (US$3.10 billion) and actual working capacity (US$900 million plus) as illustrated in Figure 3 above.

However, the dynamics behind this chart are somewhat more complex, as the more specific "Energy Liability" market is composed of a number of different sectors or subsets, each with their own drivers and loss ratios.

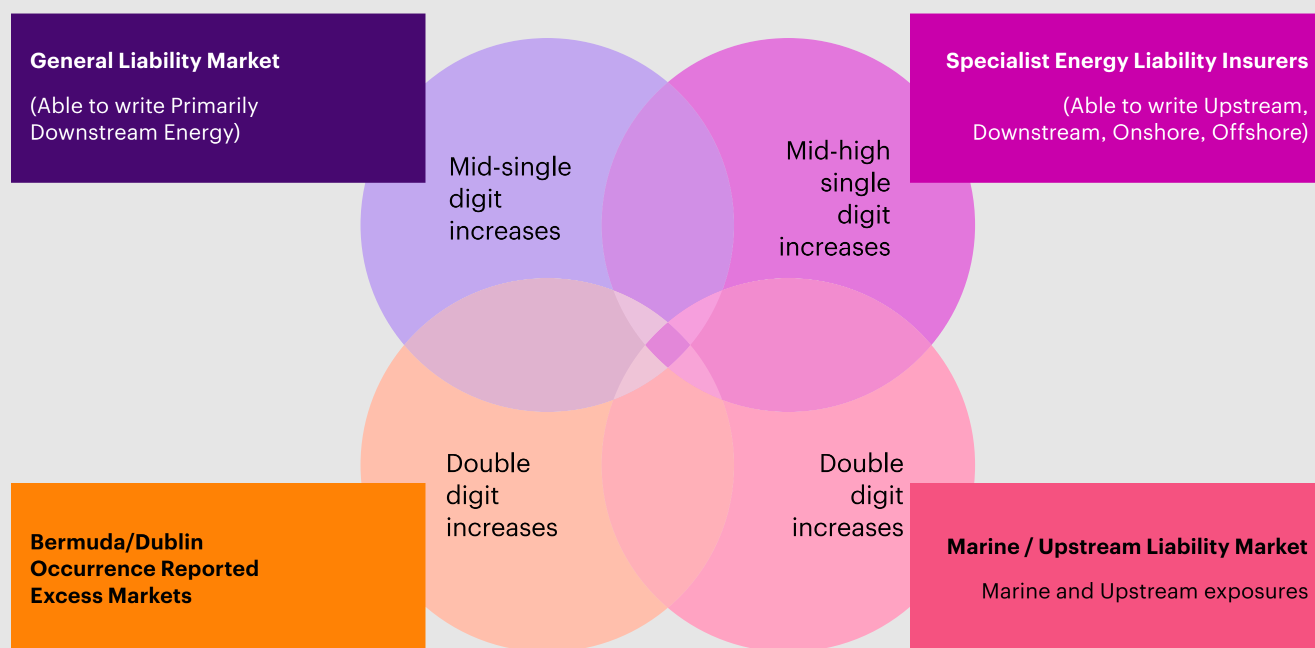
Sector detector: market segments and their characteristics

Broadly speaking, there are four generic Liability market segments an Energy insurance buyer may encounter, as illustrated in the Venn Diagram in Figure 4 overleaf. These are as follows:

- General Liability insurers (both locally and globally), that write Onshore Energy as part of their wider portfolio.
- Specialist Energy insurers, able to write the whole range of an Energy insureds activities both On and Offshore.
- Marine/Upstream insurers, focusing on Offshore E&P and Marine activities.
- Bermuda/Dublin-based Excess Capacity insurers, able to wide a wide range of activities in the basis of an Occurrences Reported policy form.

Depending on risk and activity profile (Upstream, Downstream, Fully Integrated etc) and the amount of indemnity limit required, a buyer may need to access one, two, three or a combination of all four of these Liability market sectors. Each of these market sectors have differing drivers and loss results, which inform their different approaches to renewal rating.

Figure 4: **The various International Liability markets and current average rating increases, April 2023**



Source: WTW

General Liability Market insurers share the loss experience of the Specialist Energy insurers but their broader premium income base dilutes the impact of Energy-specific losses. The availability of local regional market capacity also adds a greater element of competition and as a result, renewal pricing from this market sector typically falls in the mid-single digit area.

Specialist Energy insurers have more concentrated exposure to a wider range of Liability losses in the Energy arena, including Offshore loss activity. Their renewal rates typically fall in the mid to high single-digit area.

The Marine/Upstream market has been particularly impacted by results from their Protection & Indemnity (P&I) portfolios, which has put pressure on their own Treaty Reinsurance renewals. As a result, they are generally imposing high single-digit to double-digit increases on their direct Upstream Energy programmes. This is similarly reflected in the P&I sector, albeit with some moderation compared to the prior year. One major P&I Club renewal was completed at modest single-digit increase (down from +45% in 2022, following improved Marine Liability loss ratios); however, the "Non-Poolable" sectors (for Upstream-related craft and activities) have experienced negative loss development, with one P&I Club renewing recently at a +15% rate increase.

The Bermuda/Dublin Occurrences Reported market is commonly imposing the greatest rises, with double-digit renewal increases common, as the leveraging impact of inflation has a disproportionately greater negative impact on loss ratios for these mid/high Excess Layer insurers.

Clearly, the dynamics are varied and complex. Direct buyers will therefore have varying renewal experiences, dependent upon their risk profile, coverage requirements and market segments that they need to access.

Irrespective of market sector, there are a number of common drivers and restraints dictating Liability market behaviours more broadly.

Multi-headed market drivers for buyers to overcome

In Greek mythology, the gates to the Underworld were guarded by a multi-headed dog named Cerberus; safe passage could only be achieved by navigating past the jaws of the beast. It is similarly helpful to understand the various conflicting drivers and restraints in the Liability market, in order to best anticipate the challenges and to safely conclude a successful renewal.

The multi-headed drivers of rate pressure are:

- Increased treaty costs
- Economic inflation
- Social inflation
- Adverse prior loss development/Insufficient reserving

Restraining factors acting as a "leash" to mitigating against these pressures are:

- Increases in capacity
- Greater market choice/competition

These key factors are examined below.

Reinsurance treaty renewal season: hype or happening?

Much discussion in this Review is understandably devoted to the January 1 reinsurance treaty renewal season and its impact of current insurance market conditions.

The Liability reinsurance treaty renewals that took place at January 1 were generally considered challenging but fair; while rating increases were imposed, they were not to the same extent as those suffered by the Nat Cat-exposed Property reinsurance treaty sector. Nevertheless, single-digit to low double-digit treaty increases were the norm, with loss impacted treaty renewals paying significantly more. To mitigate increases, many Liability treaty buyers elected to retain more risk themselves. One Liability insurer, for example, doubled their retention and still received a 10% increase in their treaty reinsurance costs. Buyer experience is also being affected by Liability sector; those Liability insurers with a significant Marine Liability portfolio were more severely hit as a result of a number of recent losses and adverse loss developments in this sector.

The key question is: how much of this reinsurance treaty cost can/will the affected Liability insurers pass on to the direct buyer? In addition, many Liability insurers do not renew their treaties until later in the year; as such, they are not immediately impacted by rising treaty costs. Market commentators are therefore watching closely to see what the remainder of 2023 holds for the remaining reinsurance treaty renewal seasons.

Inflation: a "double header" for Liability

The pressures of **economic inflation** are a common denominator across most classes of insurance and Liability is no exception: All key elements of Liability exposure, including Physical Damage, Bodily Injury, Pollution, Employers Liability/Workers Compensation and Auto Liability, have recently been impacted by inflationary pressures.

As an example, one insurer cited that their average claim for a medium-sized pollution loss has risen from US$20 million to US$30 million, fuelled in part by increased legal fees and the increasing cost per hour rate of technical and remediation specialists.

From a Physical Damage perspective, average rebuild costs have increased substantially, following the significant increase in construction materials. Average Bodily Injury awards have also been impacted by increased health care costs and wage inflation in many regions has increased the compensation costs for loss of salary.

In response to the above, many insurers are applying a base inflation loading to their renewals (separate to any exposure base change calculation) of 7% to 7.5%.

More unique to Liability as a class is the additional factor of **social inflation**. Increasing litigation, broader definitions of liability, plaintiff-friendly legal decisions, the spread of "no win no fee" legal contingency fees and a significant increase in average jury awards have all contributed to the frequency and size of liability claims.

This is most pronounced in the United States, where awards for the top US jury verdicts more that tripled over a five-year period; however, the same trends are becoming increasingly manifest globally.

Balancing factors: capacity and competition

The welcome arrival of some new capacity has increased competition and choice in the market; this is most pronounced for buyers that purchase smaller indemnity limits. Buyers with larger limits still require the agreement and participation of most of the market; however, the increase in capacity has at least enabled them to fill self-insured gaps, reinstate limits that were by necessity previously reduced and deselect any opportunistic insurers.

Current market developments: other features and considerations

Leveraging effect of inflation

Interestingly, for major/catastrophe risks the dynamic of loss cost inflation can impact differently across a Liability programme. For example, with the average size of large losses increasing, a major explosion and pollution event that previously cost US$150 million may now cost in the region of US$250 million. Whilst a Primary layer will always be exposed to such an event, the upper layers of a programme become increasingly more exposed, and so the loss cost impact of inflation can have a disproportionate impact of the higher layers of cover. As a result, inflationary-factored pricing pressures can vary, depending upon the limit purchased and the layers involved.

> **"The key question is: how much of this reinsurance treaty cost can/will the affected Liability insurers pass on to the direct buyer?"**

Return of the billion-dollar programme?

A feature of recent years has been shrinking limits and increased retentions, as buyers purchasing higher overall programme limits struggled to find sufficient capacity and/or refused to be held hostage to opportunistic pricing from some quarters. Buyers who previously completed US$1 billion of limit with ease several years ago, have seen limits in the recent past reduce by several hundred million dollars. This was most pronounced for buyers exposed to Nat Cat Liability perils (e.g. Wildfire), Midstream exposures and/or with US domestic operations as part of their profile.

The recent measured expansion in capacity and insurer choice has enabled buyers to build-back their overall programme limits to amounts approaching their previous levels. However, many buyers are electing to continue with the significantly increased self-retentions that they were obliged to accept in the recent past, and then selectively top-up or infill with new/increased capacity as it becomes available at acceptable pricing levels. As a result, there has been a proliferation of captive activity in the past few years, as buyers were obliged by necessity to self-insure. Many buyers have therefore become more comfortable with including long tail exposures within their captives, which remain a more prominent feature of their Liability programme placement strategy.

Through a combination of increased average retentions and greater capacity, average programme limit sizes are now starting to return to previous levels, driven by an awareness of the continued growth in maximum liability exposures. Clearly a trade-off exists, as buyers reconcile increasing levels of liability risk with budget constraints and affordability considerations. The ability to identify and execute the most effective risk transfer approach remains a key broker requirement for all buyers.

Billion-dollar limits are therefore back on the agenda for some buyers, albeit often with significantly increased retentions. They remain a challenge for those buyers with less mainstream exposures and/or where sanctions or ESG considerations limit market availability.

Sustainable capacity?

The ever-increasing focus on ESG considerations poses both challenges and opportunities for Liability insurers and their customers.

Much debate is ongoing about the future viability of insurance coverage for the less sustainable Natural Resources activities. Capacity for thermal coal and oil sands operations is increasingly constrained, as markets respond to pressure from activist investors to decarbonise their portfolios and some buyers have elected to withdraw from or severely limit their capabilities in respect of oil & gas business. While insurers are questioning buyers about their ESG strategy and commitment to change, buyers are rightly concerned to establish their long-term commitment of insurers to the oil & gas sector. The optimum position is to establish a partnership approach with those insurers who are committed to supporting buyers over the long term that can demonstrate their own commitment to the energy transition. What is clear is that all insurers are motivated to favour buyers that have a strong climate transition plan and strong ESG credentials.

Insurers and brokers are also developing schemes to cover the emerging liability exposures from such activities and hydrogen, battery storage and carbon capture more appropriately. A particular issue that is recognised is the need to suitably address liability for loss of Carbon Credits, particularly in the field of CCS, and at least one lead insurer is making good progress in developing a suitable solution.

Coverage considerations

In addition to ESG issues and greater sanctions scrutiny, the most common coverage trends are the increasingly broad imposition of exclusions relating to PFAS (Perfluoralkyl and Perfluoralkyl Substances) and Climate Change Liability. Whilst PFAS exclusions are increasingly broad blanket, buyers that can articulate their exposures have the most success in limiting any exclusions to fire retardant activities. Climate Liability exclusions are also becoming increasingly commonly imposed. This is illustrated by the most recent JL London Umbrella form JL2022-016, which amongst other changes, includes exclusions in respect of both PFAS and Climate Change.

Where such exclusions cannot be avoided, brokers are striving to ensure that their application is clear, defined and limited, in order to prevent the law of unintended consequences. For example, a loosely defined Climate Change clause that excludes greenhouse gases could potentially exclude liability for a methane gas explosion, although clearly this is not the intent. Consistency and clarity of coverage therefore remain key concerns for brokers and clients.

Conclusion: Greek tragedy or logical progression?

We have seen through the lens of Greek mythology and Set Theory that a complex combination of conflicting market drivers and differing market segments exist within the Energy Liability space. As a result, the renewal experience of buyers will be very varied. Those buyers accessing low limits for clean closed Onshore Energy exposures will have a much easier renewal ride than those requiring high limits, with Offshore/Marine and well as Onshore exposures, and/or with a lower renewable energy mix.

The above factors, together with the broader Energy loss record (particularly in respect of Midstream, Marine/Offshore and Auto) are also the reason why renewal pricing increases for Energy buyers tends to run at a slightly higher percentage level that for those with non-Energy, General Liability exposures only.

The positive news is that the worst fears surrounding the January 1 reinsurance treaty renewal season were unfounded — at least in respect of the Liability sector. Some rate increase pressure has filtered through, combined with the continuing inflation concerns; however, the gradual increase in capacity and positive underwriting results in many quarters have moderated these drivers. The net result is that renewal increases in the mid-single digit to mid-upper single digit range are now the norm, being a slight moderation since this time in 2022, when high single-digit to low double-digit rises were more prevalent.

The big question is the pricing trajectory for the rest of the year. Much will depend upon the remaining 2023 reinsurance treaty renewal seasons - which will dictate market sentiment — as well as the supply of Liability capacity and the rate at which premium income limits are used up (being a particular consideration for Lloyd's insurers in the fourth quarter of 2023).

Our expectation is for no dramatic change, and potentially a further measured easing of market conditions throughout 2023. However, buyers are wary that with the market broadly at acceptable technical rating levels, adverse prior loss developments, combined with the erosive effect of inflation, could reverse the slow path to profitability. The future commitment of some insurers to the Energy sector also remains a concern that is being closely watched.

For the insurance buyer, a stable sustainable and predictable market benefits everyone. Whilst brokers will continue strive to ensure the best possible renewal pricing at the broadest available coverage for their clients, there is an ever-increasing realisation that a focus on sustainable partnerships with reliable insurers remains a key strategy to ensure a positive long-term outcome and avoid any future Greek coverage tragedy.

Mike Newsom Davis is Global Head of Liability, Natural Resources Global Line of Business, WTW.
mike.newsom-davis@wtwco.com

US Casualty: Capacity stable but concerns remain

Introduction: the effect of the 2023 reinsurance market renewal season

The initial feedback from insurers regarding January 1 reinsurance renewals has not been positive. Treaty renewals thus far have been impacted due to losses stemming from a combination of the events in Ukraine, overall claims inflation, increased catastrophic US nuclear verdicts and above-average global natural catastrophe losses in 2022. As a result, many insurers are expecting increases in reinsurance retentions across their respective product silos as well as potentially substantial premium increases. However, as of the time of writing many London syndicates were still awaiting their respective allocations for these increased premiums. While we do not expect "trickle down" costs to have a large impact on clean North American Energy buyers, we do expect rates to continue to trend in a positive direction for many programs in the first half of 2023.

Market outlook

2022 provided another year of overall increased Global Liability capacity, which continued a positive trend after many markets reduced offerings in 2019 and 2020. 2023 capacity thus far appears to remain mostly stable overall, though the US market has seen some reductions in capacity, with some insurers closing their Energy books. Despite this reduction in capacity (roughly US$25 million in available limit) capacity in both London and Bermuda remains relatively stable after increasing in 2022.

Upstream

The Upstream Primary Liability marketplace finds itself in a state of flux in Q2 2023. The Offshore market has been especially challenging from a Primary Liability and Lead Umbrella standpoint, as one of the larger participants in this space is undergoing changes in both limit availability and necessary pricing. While there is confidence that this may potentially be resolved as the year progresses, many offshore operators are looking for alternative options as of the time of writing. While replacement capacity remains available (much of it in the London market), retentions are under pressure; this is a segment that bears watching as the year progresses, as many insurers are seeing a large influx of submissions due to the changes in this space.

Despite the challenges faced by the offshore operator segment, the Onshore market has ample capacity and so buyers have a multitude of potential options for General Liability and Lead Umbrella policies. Capacity remains in both the US and London markets to provide options for buyers in this segment in 2023. Excess Liability (above US$25-50 million attachments) remains ample for both onshore and offshore operators.

Overall capacity in the US has been reduced by nearly US$80-100 million in 2023; however, buyers are still able to procure ample overall Excess Liability limits. London and Bermuda capacity remains fairly stable year-on-year, and we expect renewal rate increases to remain in the single digits during the first half of 2023, with the potential for smaller reductions in the second half of the year.

Oilfield Services

Capacity remains at extremely high levels for the Oilfield Services segment, despite a continued uptick in the severity of "action-over" employee injury claims and as large Auto Liability judgements continue to trend in an alarming direction in the US. We do not foresee any decreased capacity in this space in either the US or London markets and insurers appear to be seeking single digit rate increases at renewals for profitable programs. As there is ample capacity remaining in the space, many insurers are aggressively targeting profitable programs during marketing exercises, due to increased 2023 new business budgets.

Midstream & Downstream

The Midstream and Downstream segments have both experienced a few severe losses in the last 12 months; however, despite this capacity remains stable for Downstream and has increased for Midstream companies during the last 12 months, with risk-transfer attachment levels remaining consistent year-on-year. There has also been a slight uptick in capacity for middle-market Midstream business via the US market in the Excess & Surplus (E&S) space. Despite a few large losses experienced by the sector in the last 12 months, the market continues to offer single digit rate increases on profitable programs in 2023.

Market summary

Primary Liability capacity remains stable and many insurers have aggressive new business goals for the 2023 fiscal year. Buyers with clean loss records are seeing very favorable results when marketing efforts are conducted and favorable early renewal negotiations can be agreed with incumbent insurers. Auto Liability rating increases remain in the mid-to-high single-digits, while Workers Compensation rates remain flat to slightly down and General Liability for most segments remains in the single digit range.

Excess Liability capacity increased in 2022 and remains relatively stable in 2023. While there are still underlying concerns about loss severity, and challenges can remain in the Lead Umbrella space, the pricing volatility of the previous few years has subsided and we expect pricing to continue in the same manner as during 2022, with most buyers experiencing single digit rate increases.

> **Buyers with clean loss records are seeing very favorable results when marketing efforts are conducted and favorable early renewal negotiations can be agreed with incumbent insurers.**

"

Market concerns

Claims trends

While North American Energy Excess Liability pricing appears to have plateaued to an acceptable level for insurers and capacity remains stable, the underlying issues that were a direct cause of the hard market in 2020 and 2021 have not abated.

The perceived anti-corporate sentiment of juries over the last few years remains a prevalent concern for insurers and the normalization of larger awards and settlements bears monitoring. Desensitized jury pools and a highly organized plaintiffs' bar are impacting both jury awards and settlement amounts.

Large jury verdicts for Auto Liability continue to put pressure on Excess Liability pricing; without the intervention of statutory laws to limit future liability, we expect this trend to continue.

Overall loss inflation trends are also continuing to trend upwards each year, oftentimes still outpacing the overall increases in Excess Liability rating.

Continued underwriting focus on fleet safety programs

As a result of the increase in Auto Liability settlements, insurers are paying closer attention to buyers' fleet safety programs. It is strongly recommended that buyers provide details of their auto safety programs in submissions and renewal presentations to differentiate themselves from their peer companies; they should also continue to focus on driver criteria improvement and consistency in applying standards for company vehicle use and polices. Driver training, consistent Motor Vehicle Record (MVR) reviews, telemetric devices in vehicles as well as in-cabin cameras in heavy tractors can assist in differentiating risks for both primary Auto and (more importantly) Excess Liability markets. However, if buyers are not actively enforcing in-force company fleet safety procedures, plaintiffs' counsel have argued that lack of enforcement can increase the company's negligence in a lawsuit.

Focus on ESG

Much like the commercial financing sector, insurers are increasingly requesting detailed information concerning insureds' ESG initiatives and policies. While the focus on ESG seems to be declining somewhat, certain insurers are taking a harder stance on Arctic Drilling, Oil Sands and Coal risks.

Cyber

Due to headlines of a breach in the Midstream sector, insurers are also paying closer attention to buyers' cyber practices and procedures. The London market has attempted to narrow coverage for Bodily Injury and Property Damage stemming from a malicious cyber-attack and we are seeing an increased push by other insurers to draft their own limiting language. We

recommend that buyers, especially from the Midstream and Downstream sectors, educate their insurers and their management about the protocols and measures that have been put into place to protect their SCADA systems from outside cyber-attacks.

PFAS

Much like the environmental marketplace, many Excess Liability insurers have begun to focus further attention to PFAS (Perfluoroalkyl and Polyfluoroalkyl Substances), also known as “forever chemicals”. PFAS exclusions have become more prevalent in the London Excess Liability market and now becoming more common on both US and Bermuda policies. While many companies do not have any PFAS exposure, insurers have been focusing their attention on fire suppression methods and associated chemical use. Buyers should expect inquiries into PFAS exposure as they head into renewals, especially those with terminal, plant or large fixed-asset exposures.

Climate change

Insurers within the Bermuda market and London have begun to insist on Climate Change exclusions being imposed on new business as well as on renewal business if the buyer has been named in a lawsuit. London insurers have also begun to pay further attention to any potential Climate Change lawsuits and have begun to push for exclusions on certain renewal policies.

Inflation

Inflation has naturally been a headline issue throughout the last 18 months, as governments continue to implement inflation-fighting interest rate increases. We expect insurers will remain focused on three key areas of inflation: claim cost inflation, wage inflation and interest rates.

Blake Koen is Managing Director – Natural Resources and Global Client Advocate, WTW Houston.
blake.koen@wtwco.com

Environmental Impairment Liability: A key area of boardroom focus

Introduction

Environmental issues are one of the top items on the boardroom agenda. Excellent ESG performance is a key metric for a successful business and the reputational risk arising from poor environmental management can be devastating to its share price. Environmental Impairment Liability (EIL) coverage provides reassurance that environmental issues will be dealt with by providing access to a global network of emergency spill response teams, specialist environmental lawyers and crisis management teams. By having these tools to hand, we can reduce the reputational risk that the energy market faces. Environmental risks come from all different angles, whether it's a leaking pipeline, a fire, biodiversity damage, or a class action claim from third parties. It is important that the energy market understands that reliance on the limited pollution coverage within GL policies is unlikely to be sufficient in what is considered to be an industrial sector with a very high environmental risk profile.

No sign of climate change exclusions

Although climate change exclusions are finding their way onto General Liability policies, the EIL market has yet to show any signs of such exclusions. The energy industry is a significant contributor to air emissions that are contributing to climate change and the gradual release of pollutants into the atmosphere is an exposure that remains covered by EIL policies. Class action claims relating to bodily injury, biodiversity damage, and property damage arising from the gradual release of pollutants from businesses within the energy sector are on the increase. As the global population become less willing to accept pollution as a by-product of energy production, then we should expect an increased frequency of regulatory action and Third Party claims.

Biodiversity damage

ESG is becoming a very important topic and Biodiversity Loss is going to be a key measure of ESG performance. The energy industry can easily be responsible for significant impacts on biodiversity. This includes habitat loss and degradation; exploitation of natural resources; water, land and air pollution; and contributions to human-induced climate change. These impacts can be direct or indirect; regulations relating to biodiversity loss are developing quickly and it's important to consider your exposures. Coverage is available for Biodiversity Damage arising from a business's activities and this damage does not need to be triggered by a pollution event.

Gradual pollution cover increasingly in demand

The gradual pollution cover that our market offers is increasingly in demand to provide balance sheet protection. These transactional programmes surrounding mergers and acquisitions or disposals are extremely effective deal facilitators, unblocking impasses in sales negotiations where the seller wants a clean exit from an environmentally distressed business but where the buyer is reluctant to take on responsibility for unknown historic risks that are difficult to quantify financially. Venture capitalists, banks and lawyers increasingly see the deals available in the Environmental Liability market as a valuable tool to ensure that a deal moves ahead, by transferring these risks to an insurer for a one-off premium payment for a policy of 7-10 years' duration.

Growing significance of EIL as rating levels stabilise

EIL is going to be an increasingly important coverage for the energy industry in the coming years. It can be used to protect the ongoing operational risk that a business faces, as well as the historical legacy risk that the business already carries on its balance sheet. Biodiversity Damage and Natural Resource Damage perils are also covered by EIL policies; the importance of this coverage will increase rapidly as biodiversity becomes increasingly protected and regulated.

Unlike a number of other classes, the EIL market has remained relatively stable over the past year with just a small up-tick in renewal rates, averaging 5 – 10%. Depending on attachment point and exposure, some buyers are even enjoying renewals at the same rates as last year.

Evolving coverage and broad appetite for energy risks

Environmental coverage and capacity continue to evolve as a result of the market's heightened awareness of increased exposures, legal liability and regulatory risk. Biodiversity damage and complementary or compensatory remediation costs attached to rectify such damage is increasingly a big-ticket item that the market can provide protection against.

Insurers' appetite for Energy risks remains pretty broad, even to the extent of still being able to provide cover for TMFs (Tailings Management Facilities). Particularly for Energy environmental risks, London remains the main centre for underwriting outside the USA, with developing markets emerging in Australia and the EU supporting rest of the world placements.

Dovetailing around Energy Liability policy

Generally, EIL programmes dovetail around the Energy Liability policy to provide seamless pollution protection for pollution from any cause – whether that be sudden & accidental or gradual. As the Energy Liability market hardens and contracts, we also continue to use the Environmental Liability market to provide additional sudden & accidental cover at the top end of Energy Liability programmes or occasionally to infill gaps mid-programme. Our market can write onshore and offshore risks quite comfortably and US$200million+ limits are readily available in this space.

The WTW environmental practice would welcome the opportunity to provide advice on any of the matters raised in this article.

Christopher Strong is Environmental Practice Leader, WTW GB.
christopher.strong@wtwco.com

Global Construction: Markets seek to mitigate increasing risk exposure

Introduction: hardening market dynamic continues

The hardening market dynamic in the global Construction market continues; the reductions in insurance premiums and broadening coverage experienced over the previous two decades has now made way for more restricted policy coverage, together with increased rates and deductibles/excesses, as the market seek to mitigate its increasing risk exposure.

Inflation

Increases in prices of materials have leapt from a steady 15% to 110% on projects using standard materials. This is even more extreme on bespoke projects that use specially designed materials. This huge jump in pricing, caused by inflation, dramatically increases contractors'/owners exposures.

Inflation within the construction industry will understandably have a knock-on effect for the insurance industry. Insurers will need to be watchful in the current market to ensure that policies reflect the needs of those covered. Construction All Risk policies are negotiated on an estimated contract value, and it is likely that many policies were issued during a steadier period of much lower costs.

As such, contract values may have changed substantially and may now require amendments to their limits and premiums to reflect this turbulent upswing in costs.

Overall market capacity

A hard market can be a challenging and frustrating time for any owner/contractor. If we factor in less enthusiasm from insurers for leading risks, together with decreased capacity levels across accessible global trading hubs, it is often challenging for the buyer to attract insurance partners so they can manage all their risks on a portfolio basis. Early engagement of the buyer with their broker and insurers is a key factor; effective buyers have always valued the input their specialist brokers can bring in all facets of contract negotiations. As the contracts relevant to the construction project are in essence its foundation, it's an essential but sometimes overlooked part of a successful project delivery. Early engagement as well as a proactive approach to a strategic insurance marketing plan is the key to success.

Rates and deductibles increase

In 2022 rates increased on average by 5% to 10% across the global portfolio, although higher increases were seen for risks in areas where underwriters have concerns over supply chain and risk management. Deductibles also increased, often by 10% to 15% for the critical areas of technology risks, commissioning and natural perils.

Focus on stricter coverage conditions

Insurers continue to impose stricter coverage conditions, more aligned with those seen as "standard" for many years. Each risk is being considered on its own merits and pricing influenced by project type and geography, with political risk perhaps a more recent influencing emerging factor. Changes in regulation and legislation, including trade wars, sanctions and Brexit, gave rise to concern arising from the period that large construction projects can take, sometimes being five to ten years to complete and involving contractors and suppliers from around the world; this makes them more vulnerable to trade disputes and imposing of sanctions.

Approach to Defects cover

With all market cycles, changes in terms are a gradual process. To address adverse claims experience, insurers use three main levers: premiums, deductible levels and coverage. Once the market began to harden, premiums rates rose significantly, deductibles increased (depending upon type of risk) and coverage was restricted - especially with regard to those which insurers felt left them more vulnerable in the event of a claim. For Construction insurers, this has particularly the case in respect of cover for Defects (i.e. design, faulty workmanship or defects in materials), the emphasis now being on a far stricter approach in terms of providing post-completion risks during Maintenance, Warranty or Defects Liability periods. The widest form, Guarantee Maintenance, continues to be hard to obtain and only achieved with very detailed technical information and support to demonstrate a compelling and justifiable reason coverage at this level. A few insurers believe that by providing Guarantee Maintenance cover this would replace or substitute either a Contractor's obligation to repair or a manufacturer's warranty; this is the reason for the cover being selectively provided, even in softer overall market conditions. Our current experience suggests that the same concerns apply (and will continue to do so) for coverage in respect of the widest form of Defects exclusions (commonly LEG3 or DE5). Similarly to Maintenance covers, it will only be achieved where detailed supporting evidence can be provided that this coverage is necessary.

Construction losses

Fire is the biggest cause of loss for energy/engineering claims, accounting for over a quarter of losses by value. Fire and explosion claims remain the most expensive type of loss by value, due to the high costs associated with engineering and construction projects today. The frequency of such events remains the same.

Natural catastrophes continue to be the other source of claims. For example, our experience suggests that storm damage is the second biggest cause of loss by volume and accounts for approximately one in 10 claims.

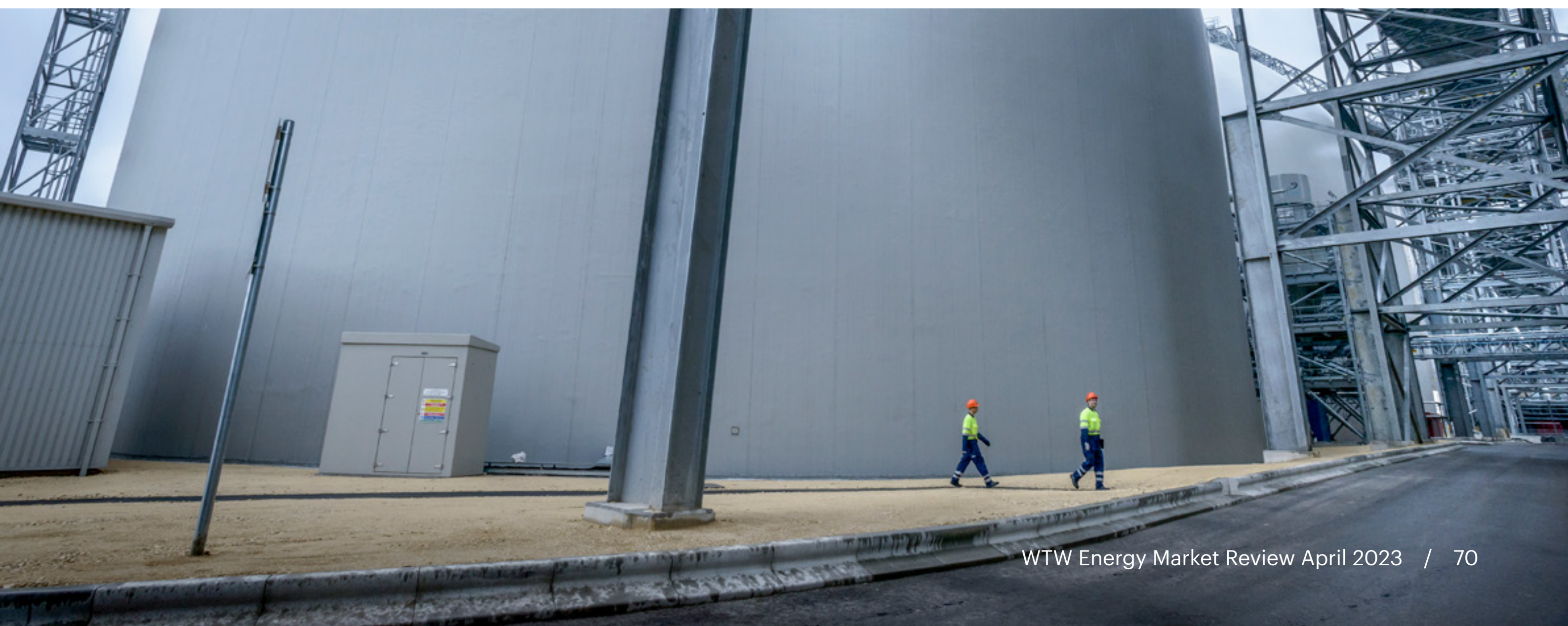
Water damage also remains a significant market concern; indeed, Escape of Water claims are currently dominating loss ratios in the residential sector. Many insurers are now encouraging buyers to follow advice to manage Escape of Water risks on construction sites, published in the guide issued by the Construction Insurance Risk Engineer Group.

A strong global appetite

Important political and business drivers, combined with the urgent need to cut greenhouse gas emissions, are resulting in a strong global appetite for renewable energy sources, including hydrogen, offshore wind, solar, and waste-to-energy projects. As the demand for green energy has increased solar and wind projects have become larger, the locations more remote and wind turbines much bigger.

Major insurers in this space have confirmed their continuing commitment to provide coverage and capacity, with continued investment and development in the key sectors in facilitating global economic growth.

Michael Venables is Executive Director, Broking Director Construction at WTW London.
michael.venables@wtwco.com



Terrorism & Political Violence: Insurers increase scrutiny of conditions

Introduction: a changing market

After many years of a generally stable yet soft market, events in the last year have seen a major shift into the first global hardening of the Terrorism & Political Violence market in over fifteen years.

After a few years of geopolitical and socioeconomic instability increasing loss ratios from major events in Chile, Hong Kong, and South Africa, as well as losses in Peru, Haiti and Saudi Arabia, the crisis in Ukraine over the last year has been the final turning point for the market. Insurers are now paying and reserving for the continuation of the largest losses in the market's history, affecting both the Political Violence market itself and other correlating War and Political classes, all of which has eroded multiple years' worth of premium.

In light of these extraordinary market conditions, treaty reinsurance costs for insurers have soared beyond our worst expectations — in part driven by the dramatic reduction in reinsurer appetite for composite treaty programmes offering economies of scale across multiple classes of business. Additionally, almost all reinsurance programmes have seen insurers face increased net retentions, either as a direct result of changing attachment points or indirectly from coverage restrictions imposed.

Risk outlook

Insurers continue to monitor and learn from recent global events, all while trying to predict how future trends may develop:

- Terrorists continue to demonstrate their technological sophistication, employing drones that are able to hit targets thousands of kilometres away - especially as seen in parts of the Middle East.
- High global inflation continues to exacerbate general discontent around social activism and the unequal distribution of wealth, which is no longer limited to developing countries.
- With some of the largest losses and reserves in Ukraine having arisen from renewable energy assets, insurers have begun intensive reviews of previous modelling of these assets for wider Political Violence perils, beyond the more traditionally lower Terrorism-based loss estimates and models, as well as the impact on other affected insurance policies down the supply chain.
- Many insurers are carefully reviewing risk intelligence sources following the variety of predictions received around the potential unfolding of events in Ukraine, even back in the early weeks of February 2022.

Insurers increase scrutiny of conditions

In conjunction with these conditions and facing reinsurance restrictions and high net retentions, the global Terrorism & Political Violence market has become hyper-focused on policy language, scrutinizing wordings and trying to reverse the "coverage creep" that the market has experienced over a number of years:

- A reduced appetite for Denial of Access, Contingent Business Interruption and Automatic or Miscellaneous Coverage extensions, as insurers push to improve exposure monitoring, strongly driven by newly imposed reinsurance treaty restrictions
- Increased deductibles in volatile territories and higher risk occupancies, as well as a return to specific Business Interruption waiting periods, rather than combined Property Damage/Business Interruption deductibles, on a greater number of risks
- The imposition of direct, indirect or blanket territorial exclusions for Russia, Belarus and Ukraine
- Valuations requiring inflationary consideration – policies without margin clauses and incorrect declaration penalties are under increased scrutiny
- Some insurers are mandating newer cyber exclusions with new "data" exclusionary language in addition to more traditionally "cyber-attack" focussed language
- A limited appetite for multi-year agreements

With the majority of the market being Lloyd's based, all syndicates also saw their business plans face dramatically increased scrutiny from Lloyd's throughout 2022. Lloyd's has requested resubmission of these business plans in Q1 2023, amending such plans to reflect the unprecedented increase in reinsurance costs faced at January 1 and the continued increase in loss quantum.

Market capacity stable - but in reality there may be a contraction

Despite all the challenges of the January 1 2023 treaty renewals, maximum theoretical capacity is generally static. However, the outlook for the year remains cautious, as some insurers are still working through their aggregate modelling exposures and may ultimately need to reduce exposure on both a per-risk and portfolio basis. There is also the potential that insurers will more heavily constrict their appetite for wider Strikes, Riots, Civil Commotion and Political Violence coverage due to their increased retentions. At this time, there are no new entrants to compensate for any potential capacity reduction.

Market appetite for certain sectors and assets has also been dramatically reduced due to individual insurer and Lloyd's ESG stances. This is most notable for new insurance cover for thermal coal-fired power plants, thermal coal mines, oil sands, but renewals of the same are also significantly capacity-challenged.

MGAs with automatic rating and binding will also become extremely limited in capacity and delegation without prior-submit provisions as they come up for renewal and insurers take back full control of their exposures.

Rates on the rise

With a fresh view on rating adequacy and return on capital exposure, insurers are increasing rates across the board. Many reportedly pushed average risk-adjusted rate increases across their portfolio of 20-25% through December 2022, which they are now viewing as still being insufficient to cover the increased cost of their own reinsurance and changing net retentions.

All insurers are conducting full 'fresh-eye' reviews against model and risk price rather than historic premiums – while average rate changes are shown in Figure 1 below, these can be misleading in certain instances. Where aggregate capacity is limited across the market or insurers deem historic pricing has not been adequate, pricing may even be adjusted by multiples of prior years as rapid correction is applied or insurers feel they are able to hold out for the best rate for capacity.

Figure 1: **Average rate changes in the Terrorism and Political Violence markets, April 2023**

Average Rate Changes	Terrorism & Sabotage	Political Violence, Strikes, Riots & Civil Commotion
Clean Programmes/ non-volatile territoy	+15% to +20%	+25% to +35%
Some volatility and/or isolated incidents	+20% to +30%	+35% to +50%
Major volatility and/or widespread risk of major incidents	+30% to +40%	+50% or more
Programmes with loss history	Case by case	

Note: Programmes with multiple territories and perils may be subject to a blend of the above applied to the respective different exposures

Conclusion: review your insurance purchase!

With a rapidly evolving risk landscape and the energy sector's particular exposure to political unrest, it is imperative that energy industry buyers consider whether their current coverage is appropriate, and whether their terms and conditions are truly fit for purpose against this backdrop of heightened global disruption. For buyers with challenges around reducing capacity and coverage versus increased pricing, it is key that a review is undertaken, and discussions held to identify the main concerns and drivers for purchasing in order to focus the programme structure into delivering as much as possible against any budget.

Despite all the treaty challenges, current hardening and increased insurer scrutiny, the Terrorism & Political Violence market is still open to finding creative solutions and seeks to resolve gaps in coverage where possible; for example, should Strikes, Riots and Civil Commotion perils start to become more widely excluded by All Risks insurers for energy sector buyers.

James Borrie is Global Head of Broking – Terrorism & Political Violence Practice, WTW.
james.borrie@wtwco.com

The latest from Everen: What's in a name?

Advertisement feature: This article is provided by Everen Ltd and includes details of Everen's position in the market. This is provided for information purposes only.

Introduction

2022 was a year of transformation around the globe. Challenges, including volatility in the global investment market and the crisis in Ukraine, were partially offset by relief as many parts of the world returned to normality following the COVID-19 pandemic. For Everen, formerly Oil Insurance Limited (OIL), change came in the form of a new name and brand as part of its 5-year strategic plan.

New year, new name and new brand

This past year has been an exciting time for the organization. 2022 marked the 50th anniversary of OIL and its continued prominence and resilience in the Energy insurance market. Although the company found success over the past 50 years as OIL, the company's 5-year strategic plan included an evaluation of its name and branding. So, in June 2022, OIL was formally renamed Everen and embarked on a robust rebranding exercise, including a new logo and visual identity.

Throughout this process, Everen's fundamental purpose of continuing to provide stable, long-term, broad, cornerstone capacity to its shareholders has not changed. This goal is highlighted in the combination of the words "forever" and "energy" to create Everen. With a new name and look, the company is proud to continue providing some of the world's largest energy insurance capacity.

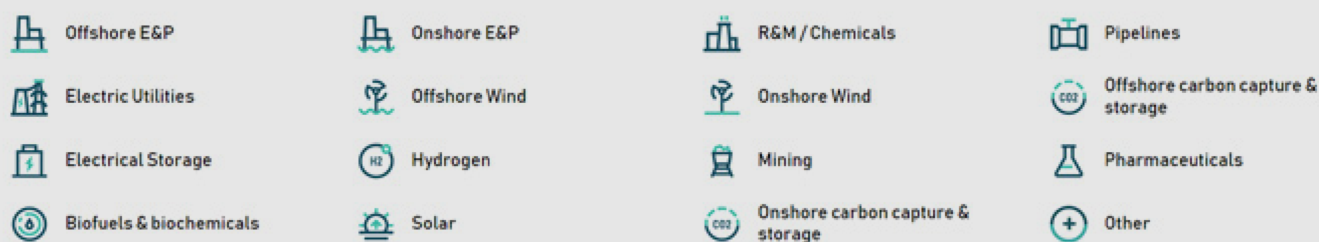
Figure 1: **the new Everen logo**

Chief Operating Officer retirement and succession plan

In January 2023, Everen announced that Senior Vice President and Chief Operating Officer, George F. Hutchings, will retire at the end of 2023. Robert J. Foskey, the company's Senior Vice President and Chief Actuary, will take over as Chief Operating Officer from 1 April 2023. Mr. Hutchings will stay on as a Special Advisor for the rest of the year.

Commenting on the retirement and succession plan, Bertil C. Olsson, President and Chief Executive Officer, "Since George joined the organization in 2005, Everen and the leadership team have grown the company's capital base from US$800 million to almost US$3.5 billion today, using a conservative investment and capital management strategy. We have also added 33 new member insureds. During that same period, Everen returned value to its members by paying close to US$3 billion in dividends. I am looking forward to working with Rob in his new role and am confident that he is the best choice for Everen's next COO, as he continues to be an invaluable member of the senior leadership team."

Figure 2: **Everen's 16 business sectors**



Source: Everen

Strategic plan continues

Everen continues to execute on its 5-year strategic plan. More specifically, the company has expanded the definition of "energy operations" to reflect Everen's broad energy remit, introduced eight new business sectors (see Figure 2 above) to better reflect the energy industry's transition into new and renewable energy technologies, and expanded coverage for nuclear reactors during the time they are de-energized when a unit is going through a major component/equipment replacement or refurbishment and "not Hot". The company also welcomed Lars Østebø into the role of Business Development Officer where he will be focused on engaging with current and prospective members as well as developing and executing on a new marketing plan.

Earnings results and dividends

Financially, Everen experienced slightly higher annual incurred losses compared to the prior five years but was most impacted by the volatility in global investment markets. Everen's net loss for the year was US$776 million, driven by investment losses of US$524 million, underwriting income losses of US$229 million and relatively flat annual expenses of approximately US$23 million. In addition, Everen declared and paid a dividend of US$350 million to its shareholders. Since 2014, Everen has returned almost US$3 billion to its shareholders through dividends, which amounts to 90% of Everen's net income or 70% of written premium over that same period.

New members

Everen welcomed two new members in 2022 and had two mergers, thereby maintaining Everen's total membership level at 64. Joining Everen this year were CEZ a.s. (based in the Czech Republic) and Colonial Pipeline (based in the US). The two mergers included HollyFrontier/Sinclair Oil and Woodside/BHP Billiton Petroleum (Americas) Inc. Over the past five years, the company has added 17 new members against zero departures, which reflects the continued global energy market interest in Everen.

Everen is a Bermuda based energy mutual that offers its members up to US$450 million in net property, control of well and sudden & accidental third-party pollution coverages. Should your company have an interest in learning more about Everen, please contact your local WTW representative or Paul Braddock on paul.braddock@wtwco.com

Robert J. Foskey is Senior Vice President & Chief Operating Officer, Everen.

International market round-up: Postcards from China, Dubai, Latin America and the Nordic region

China

Upstream

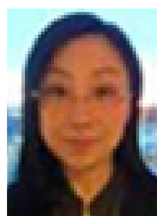
In this first year of not being restricted by COVID-19, Chinese underwriters as well as brokers are creating their own 3-year development plans. We believe everyone is becoming more ambitious than at any time the past three years; however, there has been no significant change in Upstream capacity in China during 2022 and this remains the case for the moment in 2023. Notwithstanding this, we could see stricter underwriting approaches from the majority of insurers in this market, such as PICC, CPIC and PAIC. Once again all insurers are currently showing a reduced appetite for programmes with no Chinese interests, while we are not aware of any major loss which could impact insurers' Upstream portfolios.

Downstream

The 2023 Chinese Downstream market capacity is still unchanged from the previous couple of years, being in the range of US$5-6 billion. We are not aware of any major losses to date, so we would imagine that most insurers have secured underwriting profits. As per the Chinese Upstream market, the Downstream market trend has been relatively stable since 2020. For programmes with no Chinese interests, insurers are more reluctant to participate.

MGAs in China

Meanwhile we are seeing a new dynamic regarding MGAs (Managing General Agents) in China. MGAs have long been developed in the North American and UK insurance markets, but the concept is relatively new in mainland China. Lloyd's has already played a significant role in the development of the MGA sector in Asia, where it is referred to as coverholder business, and now China's regulator has authorized Lloyd's China to run a coverholder pilot. At present, the practice of MGA in various provinces is still somewhat scattered and in the exploration stage, and the attitude of supervisors to them is also very different; for example, it is supported by regulators in Shen Zhen, Shanghai and Beijing, but not in other places. However our understanding is that the current pilot MGA is just an agent platform selling internet insurance product on behalf of insurers. In China we have a long way to go to having a true MGA that has the underwriting authority for product management, distribution management, actuarial consultancy, underwriting, claim handling etc. However it will be worth the wait as it may bring significant premium to the Chinese market.



Su Ke is Head of the Energy Department, WTW Risk and Broking China.
ke.su@wtwco.com

Dubai and the Middle East

The start of 2023 came with the increased cost of reinsurance treaties, averaging around 30% (and in some cases more), along with increased retentions for reinsurers in the region. The Middle East has not been unaffected by claims activity in 2022, but the quantum of losses is less than for other regions in the world. To compensate for last year's global claims activity, some international insurers/reinsurers are simply imposing blanket increases across the board to increase/maintain premium levels, regardless of territory; however, regional insurers can take a more measured view.

Premium income will certainly come under more scrutiny from management; perhaps less so at this point in the year but certainly as 2023 progresses. Market share for good business is still a driver in this market and this is leading to a "differentiation factor" whereby rate increases for this business are less than the overall market trend. Naturally, these lower rate offers are always subject to engineering updates/recommendations, ESG credentials, up to date asset valuations and loss record.

There is still a continuing focus on market standard clauses such as Communicable Disease and Cyber, while ESG continues to be a point of focus for many domestic and international insurers, who are requesting more in-depth information. However, Business Interruption is still the main focus point in 2023 and is coming under real scrutiny from insurers; this is because of the previous year's loss activity, in particular the magnitude of the Business Interruption element of the claims being presented. The knock on effect of this development is that there is no sign of the market softening its stance on the imposition of Business interruption volatility clauses.

What sets the Middle East market apart from other global hubs is its ability to offer true domestic capacity as well as international insurers. Even after a tough reinsurance treaty renewal season, the amount of regional market capacity has remained stable at around US$400 million of S&P 'A' Rated capacity.

Some insurers have actually looked to increase their capacity for this year; in addition to this there are three new reinsurers entering the Dubai market, bringing an additional US$70 million of S&P 'A' -rated capacity to the table. The majority of these insurers are not just limited to just writing Gulf Cooperation Council (GCC) business -they have the ability to write international business into their portfolios as well. The Middle East market shows no signs of slowing down, especially with the investment that is materialising all over the region but in Saudi Arabia in particular. Our expectation for this region is therefore that it will become more prominent going forward.

Andrew Brunero is Head of Global Downstream Broking, Natural Resources Global Line of Business, WTW
andrew.brunero@wtwco.com

Latin America

The oil & gas outlook for the Latin American (LatAm) region is no different from the rest of the world; decarbonization is a must, but the pace of it is not what has been expected. In terms of the macro environment for the energy transition, there is some variety among LatAm countries and also in government actions. As a cleaner fossil fuel, gas has generated many initiatives to allow increased production, while there are also a range of pipeline, refinery and LNG terminal projects planned so the oil & gas industry in the region will continue to grow.

Furthermore, oil & gas companies are managing the energy transition mainly by following two different paths: firstly, by investing to modify their own assets to reduce CO2 emissions and secondly by replacing or adding renewable energy sources to their operations. This has changed the conversation with Risk Managers; now it is not only about the production per barrel or cubic meters bur also about discussing how to mitigate and transfer risks relating to new exposures when considering an additional activity such as CCS or any source of renewable energy, as well as their more well-known activities.

As we have discussed in other WTW market publications, the LatAm market has no discernible split between Power and Energy underwriting (with a few exceptions for some major international insurers), probably due to the smaller scale of the market compared to Lloyd's or Europe. But this has now become an advantage, in that what might be "new" for a buyer is not new for their lead insurer, so (re)insurers continue to have discussions with the clients that they know. It may have its negative side in terms of aggregation, limiting the capacity that can be deployed from market; however, the balance is definitely on the positive side, as these new developments continue to strengthen long-term partnerships.

On the Downstream side, probably the biggest change since our 2022 Review has been in respect of Brazil. With the new government, it is most probable that the original divestiture plan will not continue because there have been announcements already from the new government showing their intention to increase refining production.

In respect of Downstream insurance market capacity, the market continues to offer unchanged capacity levels and business appetite in 2023, and this also remains the case for Midstream business. Mostly the leaders are the international insurers, some of whom have a presence in countries as insurers being able to provide a whole range of services, including retail. Miami continues to be an important hub for LatAm energy business, but for large and complex business there continues to be a shared participation in these programmes between LatAm and global markets (either London, Europe, Singapore or China, depending on the shareholders' interest).

However, while capacity remains unchanged, in terms of rating levels the message from the market is a hardening one once more, due to the Nat Cat events occurring in 2022. Rating increases range between 5%-10% for clean business, subject to the quality of risk; however, programmes exposed to Nat Cat perils could incur higher increases.

In terms of Upstream, (re)insurance market capacity in the LatAm region is very limited, with generally only two players operating in Brazil. However, this may change given the recent announcements of new offshore projects in Brazil, Argentina, Colombia, Mexico, Guyana, Ecuador, Trinidad, for 2023-27, which we hope may prompt the introduction of some fresh capacity.

Finally, we cannot forget to mention the US-Venezuelan agreement allowing the export of Venezuelan oil once more, which might lead to the re-opening of a very important energy market in the region. This is definitely a sign of progress to monitor closely.

To conclude: the oil & gas industry continues to be key for LatAm economies. However, while we don´t see insurers declining to write Oil & Gas risks, scrutiny of energy transition actions has become as crucial as risk engineering, as has the adequate valuation of assets and BI amounts declared to insurance programmes. Insurers have their own Net Zero targets to achieve, so if there no commitment to ESG initiatives from buyers it will be hard to find capacity at the right price. As a result, the renewal process is taking longer and so sufficient preparation to address insurers' information requirements is key.

Ana Maria Gómez is Latin America Energy Leader, Natural Resources Global Line of Business, WTW.
anamaria.gomez@wtwco.com

Sol Batallé is Latin America Regional Industry Leader, Natural Resources, WTW.
sol.batalle@wtwco.com

Nordic region (Upstream)

Capacity stable, few losses

The Nordic region's Upstream capacity remained stable during 2022. True Nordic capacity is provided by Gard, Norwegian Hull Club and Skuld, all writing a broad portfolio of E&P Operators and Mobile Offshore Units, the latter including various types of drilling rigs, accommodation units and FPSOs. These Mobile Offshore Units are also underwritten by the Swedish Club. This Nordic capacity is supplemented by a range of MGAs who have attracted mainly Lloyd's syndicates and Middle Eastern security to back their underwriting of Nordic located accounts. The only significant change during 2022 was IGI's purchase of their fully backed MGA Energy Insurance Oslo, after an exclusive underwriting agency arrangement that has been running since 2009. EIO has now been renamed "IGI Norway".

Modest rating increases and unaffected terms & conditions

For policy renewals on a like-for-like asset base, we saw ratings movements of between flat and +5% for clients with clean claims records. Policy conditions are not typically being amended and coverage in general is not being withdrawn or restricted.

Green transition

There is no doubt that the Nordic insurance markets are following their oil & gas clients into the world of green transition, with premium from offshore wind projects almost level with traditional oil & gas premium levels. This balance is expected to tip in offshore wind's favour during the course of 2023 – 2024.

Outlook for remainder of 2023

With a continuing benign claims environment, we do not expect any significant changes to take place during 2023 in the Upstream sector.

James Paddon is Head of Marine & Offshore Energy, Norway, Natural Resources Global line of Business, WTW.
james.paddon@wtw.com

Apart from the authors listed at the end of each article, the following WTW colleagues also contributed to this year's Energy Market Review:

Justin Costelloe

Dan Fraser

Lyall Horner

Jennifer Lord

Gerard Maginn

Kieran McVeigh

Helen MonksTakhar

Marie Reiter

George Richardson

Jeremy Samengo-Turner

Editor: Robin Somerville
robin.somerville@wtwco.com

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Beijing
18th Floor, West Tower, Twin Towers,
B-12 Jian Guo Men Wai Avenue
East Chang'an Street
Chaoyang District
Beijing 100022
China
+86 10 5657 2288

Buenos Aires
San Martin 344
Floor 25
Ciudad Autonoma de Buenos
Aires C1004AAH Argentina
+54 11 5218 2100

Calgary
308-4th Avenue SW
Jamieson Place
Suite 2900
Calgary, Alberta T2P 0H7
Canada
+1 403 261 1400

Dubai
Business Central Tower
Tower A Floor 37
Dubai Media City
PO Box 500082
Dubai
United Arab Emirates
+971 4 455 1700

Houston
811 Louisiana Street
Suite 2200
Houston, Texas 77002
United States
+1 713 754 5400

Johannesburg
Illovo Edge
1 Harries Road, Illovo
Johannesburg 2196
South Africa
+27 11 535 5400

Lima
Avenida De La Floresta 497
San Borja 602, 603, 604
Lima
Peru
+51 1 700 0202

London
51 Lime Street
London, EC3M 7DQ
United Kingdom
+44 (0)20 3124 6000

Madrid
Paseo de la Castellana 36-38
6ª Planta
28036 Madrid
Spain
+34 914 23 34 00

Miami
1450 Brickell Avenue
Suite 1600 Floor 16
Miami, Florida 33131
United States
+1 305 854 1330

New York
200 Liberty Street
Floor 3, 6, 7
New York, New York 10281
United States
+1 212 915 8888

Oslo
Drammensveien 147 A
0277 Oslo
Norway
+47 23 29 60 00

Rio de Janeiro
Edifício Palácio Austregésilo de Athayde
Av. Presidente Wilson, 231
Room 501
Rio de Janeiro 20030-021
Brazil
+55 21 2122 6700

Santiago
Avenida Andrés Bello 2457
23rd Floor
Torre Costanera Center
7510689, Providencia, Santiago
Chile
+56 2 2386 4000

Singapore
21 Collyer Quay
Floor #09-101
Singapore, 049320
+65 6591 8000

Sydney
Level 16
123 Pitt Street
Sydney, New South Wales 2000
Australia
+61 29 285 4000

Tokyo
Hibiya Park Front 13F
2-1-6 Uchisaiwai-cho
Chiyoda-ku, Tokyo 100-0011
Japan
+81 3 6833 4600

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