June, 2020

U.S. Construction Industry Risk Outlook

In this Issue

Welcome from the Aon Construction Services Group Leadership Team

As we move throughout 2020, we see several important macro-level industry trends combining to create new challenges for contractors navigating the insurance marketplace – not the least of which is the continuing COVID-19 outbreak which has cast a long shadow on almost every industry in the United States, including construction. We believe COVID-19's effects will accelerate existing structural trends that we noted in the risk transfer marketplace since Q2 2019.

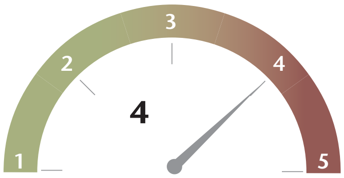
Clearly COVID-19 and the effects of a nearly-national shutdown to slow the spread of the virus will impact memories of 2020 for years to come. A recent Dodge Data & Analytics presentation forecasted a 16% drop in U.S. construction starts, with even sharper downward effects on discretionary sectors including retail, hospitality, tourism and aviation. Associated economic volatility and claims activity has impacted both investment returns and carrier combined ratios with unfavorable effects to clients, continuing a broader trend in our industry. In fact, recent discussion of a hard market was impacting the construction insurance marketplace – and the industry more generally – well before COVID-19's effects. Catastrophic losses of $62 billion in 2019 were below the ten-year industry average of $81 billion; but pressure on carrier combined ratios continue from recent years and organizations are looking to capture rate; especially in the construction space.

Vivid imagery from wood-frame builders risk losses, professional liability claims arising from complex design issues, and losses piercing high-excess towers create challenges for all entrants to the marketplace emanating from the construction industry. "Social Inflation", the macro-economic driver of the above, is a term often-referenced by underwriters across all industry segments.

While several factors are converging to make matters more complex for industry participants, we find it important to note that for every challenge and tale of rate increase, there is a commensurate story of flat (or better) renewal – and certain classes of business which still rank as buyer's markets. Despite high-profile losses in the space, we see a flight of carriers offering new cyber marketplace capacity, with the construction industry's profile serving to attract these new underwriting entrants. We also see competitive insurer approaches for certain mid-market contractor practice programs nationally, as well as continued capacity in the excess and wholesale markets for general-liability-only wrap-up programs.

This divergent marketplace emphasizes the importance of advisory based on the best set of data and analytics in the industry. Aon is investing broadly in data and analytics, and specifically in the construction industry. Our Construction Risk Analytics team, founded in 2014, is the result of an eight-figure investment in ensuring contractors, owners and others benefit from our scale and expertise. It also emphasizes the importance of incorporating proactive strategy into program placements. Beyond being favored by geography and class of business, our clients experiencing the best results begin early, are open to incorporating alternative solutions, engage the C-suite in telling their story, and bring creativity and a willingness to explore all options to the marketing process.

Aon is excited to work with all our clients across the construction industry to develop solutions to facilitate continued growth, expansion and success – even in light of COVID-19 and related marketplace impacts. We trust you'll find the information contained within this report valuable, and we look forward to discussing with each of you throughout the year.



1 Highly Favorable
2 Favorable
3 Fair/Average
4 Mildly Unfavorable
5 Unfavorable

State of the Market Update

CASUALTY

Primary & Excess Casualty

Broadly, the domestic market for primary casualty is firming slightly, but not as dramatically as excess casualty. We saw rates for workers' compensation, general liability and auto liability rise slightly in Q4 of 2019 and that has continued more affirmatively into Q1, 2020. Excess rates began to rise moderately in the second half of 2019, while they rose sharply in Q1, 2020, particularly in the first $25m umbrella layer, above primary casualty insurance.

Aon is observing excess casualty underwriters reducing capacity they offer on individual risks in almost all areas of the country largely driven by frequency in severity of auto losses, wildfire risk, New York Labor Law Risk and Construction Defect, all contributing to larger jury awards and the overarching pall of "social inflation". We also note a fast growing aversion by casualty underwriters to Street/Road, bridges/tunnel risk, which is a more recent trend.

There are very few instances where one underwriter will offer a lead $25m umbrella above the primary casualty insurance (annual practice or wrap-up/project specific). The norm today is a lead $10m or $15m umbrella and a second carrier above to fill out the first $25m. In our estimation, across the entirety of casualty excess, the total available excess capacity available in the domestic, London and Bermuda markets combined is some $300m to $400m lower in 2020 vs. 2019, to less than $1b in limit available. Underwriting companies are simply seeking to minimize their downside risk and the impact to performance of their overall portfolios. We see umbrella markets requiring higher general liability and auto liability minimum attachment points. And, overall we are seeing a higher degree of necessary information being requested by underwriters, particularly for items such as excess of wrap-up coverage in the excess liability towers. For clients with poor loss history and/or challenging exposures, carriers are increasing retention/deductible levels on the primary casualty.

Current Events and Impact

Broadly, rates for both lead and high excess layer have continued to increase in 2020 and we expect this trend to continue throughout the year. All carriers are carefully monitoring aggregate exposure by insisting on complete project information when providing Excess of Wrap limits.

Lead layer underwriters continue to require higher attachment points to avoid increasing frequency of severity. A few selective markets are cautiously increasingly interested in creating Integrated programs, characterized by multiple first and third-party coverage programs and significant fronting of primary and excess layers. Aon has significant experience in working with clients to structure and place these programs.

Current Events

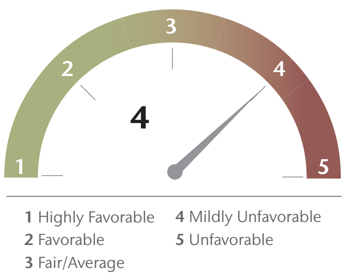
Some major events which impacted the market in 2019 will continue to have ripple effects in 2020 and beyond.

- **COVID-19**: The true impact of the Pandemic will not be fully understood until late 2020 and into 2021. Some carriers have moved quickly to impose Disease Exclusions on current policies - in some cases attempting to make exclusions retroactive to the current inception date. We have already seen the introduction of pandemic exclusions from markets in the builder's risk and liability lines, and expect that trend to continue as markets assess the risk and the legislative environment.
- **AXA/XL:** XL Construction, already a strong competitor in the Construction Market, gained an even stronger presence when it was acquired by AXA. While the combined AXA/XL organization maintains a strong presence in construction, we are beginning to see some underwriting pullback as the organization (along with its peers) manages the impact of the loss environment coupled with COVID-19.
- **AIG:** Leadership announced in early 2019 the decision to withdraw from the North American general liability market, with only fronted general liability being offered and excess attaching above $25m. And, they stopped writing new primary casualty wrap-ups. In the risk management arena, they remain interested in workers' compensation only, with limited appetite.
- **Liberty Mutual/Ironshore:** With the acquisition of Ironshore completed, Liberty Mutual has consolidated its Excess Casualty resources and has created a one stop, direct access underwriting unit (excluding residential) that is expected to compete in 2020.

- **General Liability-Only Wraps:** The very aggressive non-admitted market has continued to compete on both rate and coverage,though there are indications of moderation. Selected admitted markets have created GL Wrap programs in response to an increasing demand by general contractors for programs that do not include the labor-intensive administration of Workers' Compensation wraps.

Casualty	Commentary	Rating
Overall Market	While market competition and capacity remain abundant, the deterioration of underwriting results is evident in certain general liability and auto portfolios.	**Fair/Average**
Capacity and Pricing	Market competition and capacity remain abundant, however, the deterioration of the Auto Market and New York's vertical construction environment, continue to challenge underwriting results.	**Mildly Unfavorable**
Losses	Due to a frequency of high severity in the automobile line, insurers are focusing on carefully underwriting large fleets and may put pressure on insureds to raise attachment points.	**Mildly Unfavorable**

BUILDER'S RISK/PROPERTY



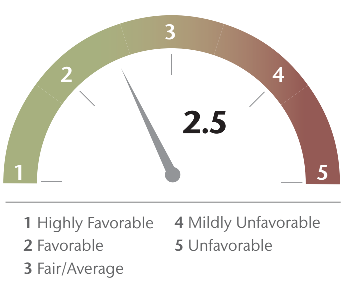
The commercial market for Builder's Risk continues to evolve into 2020. The market continues to secure rate lift and limit the broad wordings, extensions, and other favorable conditions that have been available over the past several years. Carriers are imposing renewed efforts to manage their exposure to Cat Perils (i.e., Flood, Earthquake, and Named Windstorm). This is being accomplished through more detailed underwriting on individual risks and exposures, while paying closer attention to aggregations of values on their construction risks and operating property exposures.

The impact of COVID-19 is just now coming into focus and the impact on the market. Carriers are imposing exclusions to clarify the intent of coverage (or lack thereof) due to the virus. The expected slow-down of construction will impact the market and how this will manifest is still to be determined.

Property / BR	Commentary	Rating
Overall Market	The London market continues to reduce its available capacity. There is a trend to increase rates and deductibles, especially for long-term projects. Cat exposed risks, especially Named Windstorm and Earthquake continue to be a challenge and are seeing increases in rate and deductibles.	**Unfavorable**
Capacity and Pricing	Several markets in the London market have ceased underwriting construction risks several months ago. While not material in the overall market, we are seeing a trend of carriers managing their capacity and limiting their exposures especially with respect to Cat perils.	**Unfavorable**
Losses	The Named Windstorm season in 2019 was fairly low activity. Projections for 2020 are a high number with 5+major named storms striking the US. California are still an issue and treaty R/I driven	**Favorable**

The reinsurance treaties for many carriers do not renew until later in 2020. The terms of these treaties for 2020 will be an important impact for the market for the balance on 2020 and into 2021.

PROJECT-SPECIFIC UPDATE



Utilization of project-specific placements remained strong through 2019. GL-Only Controlled Insurance Programs continue to gain momentum in the commercial space while remaining the go-to option, or sometimes the only option, for a clear majority of residential projects.

Two-line Workers' Compensation and General Liability programs are still being utilized heavily by Contractors and Owners. Due to the increased popularity of GL-Only programs, some contractors are choosing to implement Workers' Compensation-only on projects where the Owner is controlling the GL. In addition, many contractors are looking into rolling GL-Only CCIP programs to replace or supplement their existing two-line Rolling CCIPs.

Rolling programs remain popular for those with the volume to do so but continue to be a challenge on residential projects; especially on any frame construction or "for sale" units. Additionally, we are seeing restrictions in the amount of per project limits underwriters are willing to provide. Treaty restrictions in the Excess layers continue to present challenges on extensions and projects that are longer than five years and, in some cases, four years. Enrollment periods are becoming shorter, indicating underwriters are less willing to hold pricing long term.

For commercial construction, pricing and terms remain aggressive. However, some underwriters are looking at hotels and hospitals through the same lens as residential exposures. This is especially true for projects located in states with poor construction defect experience. Higher deductibles or outright declinations are impacting the healthcare, hotel, and apartment classes more so than in the past, with the rationale that insurers want to avoid a repetitive construction defect event over multiple "units'.

Environmental	Commentary	Rating
Overall Market	The Controlled Insurance Program (CIP) marketplace remains a valuable resource for a variety of project types.	**Fair/Average**
Capacity and Pricing	Ample capacity is available on both a domestic and global scale, with most domestic markets willing to provide integrated solutions for complex delivery models.	**Favorable**
Losses	A higher focus around risk mitigation practices, operational philosophes and safety for most markets. In addition to Auto results, New York construction continue to experience significant unfavorable development for Workers Compensation and General Liability losses.	**Fair/Average**

As it relates to residential, "for sale" continues to be the most challenging area. The market has restricted extensively over the last twelve months for rolling programs. Those with poor loss experiences are faced with buying a project specific policy which puts pressure on smaller project budgets. Third party QA/QC programs and higher retentions have become the standard.

The New York marketplace continues to harden with London-based insurers exiting the marketplace. Project specific Owner/GC placements continue to increase in popularity, but with the small number of insurers currently quoting these programs, competition is limited. Two-line Workers' Compensation and General Liability programs are still viable, but deductible obligations continue to increase to where a primary front may be the only cost-effective option. Higher limits on primary programs, combined with the aggregate reinstatements needed for excess support have driven overall cost into double digit percentages of construction value.

GL-Only controlled insurance programs have emerged as an option in the New York marketplace as an alternative to traditional two-line programs. This is mainly a result of collateral obligations and assumed risk by project owners and contractors to the point where this alternative option can make sense. The excess marketplace continues to be challenging as buffer layers have become standard practice and carrier attachment points are increased.

We are starting to see more OPPI policies being placed along with the core casualty lines. Design professionals and their subconsultants continue to push for lower limitations of liability in their contracts.

Additionally, due to the overall hardening of the property market we are starting to see more Master Builder's Risk Programs and Project Specific Builder's Risk policies being put in place to isolate corporate property programs from any construction related exposures.

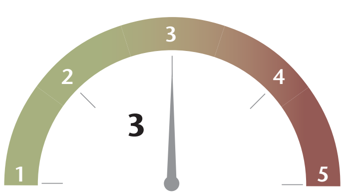
Project-Specific Update: COVID-19 Events

As construction projects nationwide continue to be impacted by the broad economic shutdown because of COVID-19, many contractors and owners are looking to their insurance programs to assist with project delays, disruptions, and third-party claims. As these projects get further delayed, we expect to see an increase in arbitration and litigation between contactors and owners over contract terms such as delay clauses, force majeure provisions, and liquidated damages.

As more of these claims come to fruition, specifically for insurable risks, we expect a material impact on available capacity, resulting in more unfavorable pricing and/or terms and conditions in the insurance marketplace. To minimize its exposure to large losses, many carriers are implementing certain exclusions such as the "Exclusion for Loss Due to Virus or Bacteria" on GL policies.

As the market was already hardening prior to the COVID-19 shutdown, we expect to see further contraction of the market as national construction projects are put on hold longer, and as the cost associated with these project delays increases.

PROFESSIONAL LIABILITY



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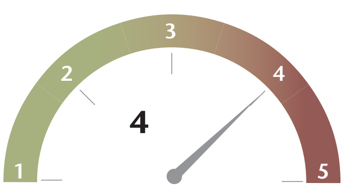
Over the past twelve months, the insurance market for professional liability has solidified for the first time in fifteen years. The extent and duration of the hardening market are unknown, but based on the results from the first quarter of 2020, there has been limited financial relief to those seeking to renew their corporate annual programs or those seeking coverage for professional liability on a project specific basis. Most contractors performing work in North America have been asked to take modest increases in their SIRs . Rates for professional liability has increased only 0-5% (on 'clean' risks), and capacity has remained fairly stable - though carriers are starting to restrict capacity deployed on a single risk, both for corporate and project specific risks. For the foreseeable future we believe that the market will continue to examine risks very carefully, with the availability of project policies being reduced (one insurer has stated that they are working towards an adjustment of their portfolio so that premium from project policies represents less than 15% of their total).

The inevitable claims are now maturing, and the collected past premiums are far short of what many insurers believe to be necessary to sustain an ongoing market. Professional liability rates are also likely rising due to peer pressure within insurance carriers. As many of the other classes of insurance (e.g. Property, Auto, Excess Casualty) have suffered significant rate and SIR increases, the probability that the professional liability lines would be left alone by a multi-line insurance carrier is unlikely.

Professional Indemnity	Commentary	Rating
Overall Market	The professional liability market for contractors and construction risks remains generally stable, though there are some early signs of a potential, unfavorable shift. With Design-Build delivery becoming increasingly favored by Owners, Contractors are now assuming design risks which have historically fallen directly to Designers. With the continued claims activity related to design, these issues are now hitting the contractor's policies (Rectificaiton and Protective claims).	**Fair/Average**
Capacity and Pricing	While capacity remains consistent, more recently, carriers are showing a tendency to limit the amount they will deploy on a single risk. In the project space, carriers are starting to cap limits on a primary basis to $10M-$15M. With respect to rate increases, carriers are seeking modest increase (0-5%) on 'clean' risks, but market competition has tempered the ability to drive larger increases.	**Fair/Average**
Losses	The frequency of large severity claims continues to be a trend in the professional liability claim space. The frequency of large severity claims continues to be a trend in the professional liability claim space. We continue to see a disproportionate number of claims related to the late delivery due of designs and quantity estimate errors made at the time of bid. Allegations of 'late notice' continue to persist as one of the most common causes for the denial of professional liability claims by carriers, particularly claims seeking coverage under Rectification or Protective provisions of the policy.	**Mildly Unfavorable**

The global pandemic has created a great deal of uncertainty for everyone. The true effects of the pandemic for contractors remain to be seen, but at present, the professional liability market appears to be reasonably stable. Carriers do not anticipate claims to be advanced against professional liability policies resulting directly from COVID-19. However, there could be long term construction implication evolving from the pandemic that impact the market. Supply chain issues, skilled labor shortages and potential acceleration and sequencing issues when the economy restarts, could all have potential negative consequences directly impacting professional liability. Carriers continue to closely monitor the situation, particularly on project policies and the impact the inevitable delays could have upon the availability (and cost) of extending coverage.

SUBCONTRACTOR DEFAULT INSURANCE (SDI)



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With the entry of Liberty Mutual into the SDI marketplace in 2020, the number of carriers offering the product, as well as the breadth and capacity of offering has greatly increased. After the constricting retraction of Zurich's offering starting in 2015, the SDI marketplace has never been as buoyant as it is in 2020; with seven carriers writing the product.

However, the SDI product continues to be an exclusive coverage aimed only at qualifying contractors and is not easily obtained. The differences in coverage offered and the nuances of policy language continue to be limiting, and it is important for contractors to understand, not only the specific nuances of their policies, but also of the options available to them in the marketplace. Meeting coverage and operational needs with an appropriate SDI policy continues to be a function of investing pre-underwriting time with a qualified and knowledgeable broker and allowing ample time to arrange coverage.

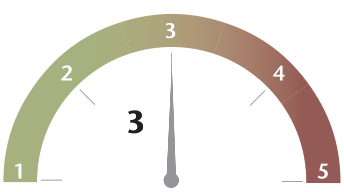
Furthermore, the COVID-19 pandemic and its resulting impact on construction and the broader economy has led to severe reverberations in the SDI marketplace. While different in their approaches, all carriers have indicated that capacity will tighten, terms will harden, and longer-term commitments will be difficult to make. Carrier concerns extend to the ability of insureds to continue projects and availability of labor, subcontractors lacking the liquidity to continue operating, longer term disruptions to supply chain and the general recessionary pressure on the construction sector. Construction and infrastructure are also sectors typically targeted for stimulus spending, and this combined with pent up demand leads to rapid expansion that leaves many firms stretched thin, and results in contractual defaults.

As expected, the focus of all carriers is increased due diligence and an emphasis on continuous prequalification of subcontractors. Some carriers have moved to a per-project enrollment evaluation and referral model, while others have used the pandemic as an opportunity to take larger retentions, limit the value of subcontractor enrollment thresholds and increase rates.

Prior to the pandemic, contractors trended towards self-insurance through higher retentions, which had also created higher pressure on rates. In response to carrier moves to increase rates and retentions, an accelerated trend towards alternative risk solutions via captives is expected to help manage the impact of the pandemic on SDI as well as other lines of cover. Contractors should also evaluate the emergence of new technologies which will assist with continuous prequalification and allow SDI insureds a better view into managing risks in real time

SDI	Commentary	Rating
Overall Market	While the responses are evolving rapidly, the COVID-19 pandemic will have severe impacts on the SDI marketplace in the near and longer term. Despite the buoyant capacity and high number of carriers offering the product, underwriting will continue to be highly selective and policies available to only the most disciplined and well managed Insureds. Appetite for new users will remain low, and Insureds will be expected to increase their retentions while increasing diligence in real-time prequalification of subtrades. Certainty of pricing will also be affected with carriers showing signs of a reluctance to lock in long term pricing.	**Poor**
Capacity and Pricing	Additional capacity has helped in the diversification of underwriting approaches, however, the pandemic and its effects on the construction and overall economy have dampened off any real growth in capacity. Anticipated losses have caused upward pressure on both retention and rates, by significant margins. Insureds can be expected to evaluate alternative risk financing options to help alleviate the pressure of rapidly changing terms on their operational pricing models.	**Poor**
Losses	While losses are a lagging indicator of SDI coverage performance, there is a reasonable anticipation that losses will significantly increase as a result of short term shocks of project shut-downs and supply chain disruption, mid-term recessionary pressure, and longer-term impact of a stimulus driven overheated construction economy. Insureds can expect increased risk engineering attention to their operations as projects resume and subcontractors backlogs begin to fill up.	**Fair**

ENVIRONMENTAL



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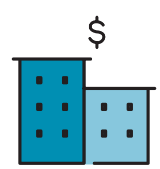
The environmental insurance market is estimated to be more than $3 billion in premium annually. While every business can potentially be impacted by environmental risk, it is estimated that less than 20% of commercial insurance buyers purchase specialized environmental risk transfer policies to protect them from financial loss arising from environmental exposures.

Environmental insurance policies today close many gaps left by traditional property and casualty policies.

General Liability Program

Transportation Coverage

Professional Liability



Property Coverages

Directors and Officers

Environmental Insurance can also provide added security and complement other specialty coverages such as Directors & Officers (D&O) where in general, a company's directors and officers are not covered in relation to claims made against them by third parties that may have suffered bodily injury or loss and damage to property as a result of pollution caused by the company or where the environment may have been polluted or damaged.

Though overall market capacity and appetite has steadily increased over the past decade for environmental coverages, higher risk industries such as mining, chemical manufacturing, real estate development, and oil & gas operations are experiencing tightening capacity, increased premium rates, and shorter policy term lengths for site based environmental coverages. Construction projects are also scrutinized more closely by markets, particularly for programs offering coverage for development properties impacted by historic industrial operations or urban sites where uncharacterized fill is common. Large portfolio programs including commercial and residential properties may also see more restrictive coverage conditions when they include higher risk operations, especially for sale residential properties and condominium conversions. Such scrutiny is resulting in increases in pricing and coverage restrictions with some carriers declining to offer any proposals and/or renewal terms.

Particularly related to site-based pollution coverage, Aon clients are beginning to see the environmental insurance market behave erratically at times. Established site pollution carriers are looking for rate increases of up to 10%, and imposing coverage restrictions from the emerging hazardous constituents described below. Some of the established markets are no longer willing to offer coverage or are providing restrictive terms and higher premiums for habitational and healthcare risk due to loss experience for indoor air quality issues, including but not limited to mold and legionella pneumophila.

The environmental insurance market is rich in capacity, with more than $700 million in limit available domestically. New markets which have entered the space since 2008, including those moving into the retail brokerage space from prior wholesale only activities, are acting as disruptors by sometimes providing terms, conditions, and pricing that are more favorable than those offered by the established environmental underwriters. Use of new market participants may allow Aon clients to benefit from favorable conditions in the environmental marketplace with the availability of broader forms of coverage and more competitive pricing from the widest possible use of the underwriters active in this specialized market segment.

In geographies with robust enforcement and more mature environmental legislation - particularly in the USA, The European Union, Canada, Australia, and Japan – a focus has popped up around "emerging contaminants." These emerging contaminants include chemicals and compounds that, while not necessarily new, are identified as having a perceived, potential, or real threat to human health and the environment. These contaminants include, but are not limited to; Lead, per-and polyfluoroalkyl substances (PFAS and PFOS), 1,4-Dioxane, Glyphosate, Polychlorinated biphenyls (PCBs), and Perchlorate.

Per- and polyfluoroalkyl substances (PFAS and PFOS) are an emerging pollution risks at manufacturing sites that produce non-stick cookware, fireproofing, soil repellant fabrics and carpeting, protectants for paper and cardboard packaging, and firefighting foam. These materials are commonly found in groundwater at fire training facilities and are problematic for public entity risks, landfills, large industrial sites, airports, and military bases. While federal and state maximum contaminant levels have not yet been established, substantial research efforts are underway for their development and actions levels as low as 70 parts per trillion (PPT) in groundwater are being discussed by the U.S. EPA. PFAS/PFOS are a widely used class of more than 3000 chemical compounds which have been linked to adverse health effects for humans and harm to the environment.

Carriers have begun to implement PFAS/PFOS exclusions for sites where these materials were used in historic operations – particularly at landfills, airports, and military bases. We anticipate further market restrictions for PFAS/PFOS coverage as these materials continue to capture the attention of mainstream media. We are working with both clients and carriers to maintain full coverage where PFA/PFOS exposures have not been affirmatively identified.

In contrast to the site pollution market, which is hardening slightly particularly around development risk, emerging contaminants, and mold risks; the Contractors' Pollution Liability Market remains competitive. Many carriers offer reasonable rates for occurrence-based contractors’ pollution liability coverage addressing liability arising from general and trade contracting operations to participation in large infrastructure projects being delivered through public-private partnership and integrated delivery programs.

Environmental & General Liability Coverage:
In 2020, the environmental insurance market includes more than $250 million in combined general liability (GL) and pollution capacity. Environmental combined forms provide ISO based GL coverage including pollution enhancements such as site pollution, occurrence products liability pollution, and contractors’ pollution coverage. Underwriters offering Environmental Combined forms target manufacturing operations risks and environmental contractors and consultants. Ancillary lines, including workers’ compensation and auto may be offered to support this product offering. Carriers offering combined GL/pollution coverage have not exhibited the same volatility pricing. In general, the environmental market provides stability for casualty pricing at both the primary and excess levels.

Environmental	Commentary	Rating
Overall Market	Capacity & appetite has steadily increased, however higher risk industries such as mining, chemical real estate development and oil & gas are experiencing tightening, increased premium and shorter policy term lengths in the site pollution market.	**Fair/Average**
Capacity and Pricing	In contrast to the site pollution market, which is hardening slightly particularly around development risk, emerging contaminants and mold risks, the contractors pollution liability market remains competitive. Many carriers offer reasonable rates for broad occurrence based contractor’s pollution liability coverage addressing liability arising from general and trade contracting operations to participation in large infrastructure projects being delivered through public-private partner- ship and integrated delivery programs.	**Favorable**
Losses	Rates and policy terms are tightening for site-specific environmental products, particularly development properties with sites impacted by historical industrial operations. Construction projects are also scrutinized more closely by markets, particularly for programs offering coverage for development properties impacted by historic industrial operations or urban sites where uncharacterized fill is common.	**Fair/Average**

COVID-19 Developments:

The unusual exposures associated with COVID-19 present challenges on all insurance policies including those placed covering environmental risk. Like property and casualty policies, the coverage available for losses arising from COVID-19 is limited at best and likely uncovered. Pollution policies are not designed to cover pandemic risk and generally:

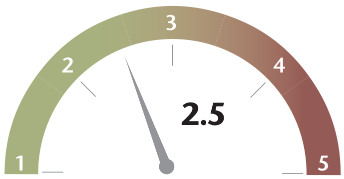
- do not include virus in the definition of pollution conditions;
- are not intended to defend or indemnify third-party bodily injury & property damage, remediation or business interruption arising from this exposure; and
- often include a specific exclusion for communicable diseases or for infection via person to person contact.

Those carriers that do not already have these limitations in their policy forms are adding exclusions particularly for communicable diseases. Carriers specializing in habitational and healthcare risks are considering modifications to coverage that allow for disinfection coverage.

Conclusion:

Aon clients may consider environmental insurance coverage for many reasons. The market offers a diverse group of products to address elements of environmental risk including development, contractual, transactional, or operational exposures. In 2020, the Site Pollution Market is hardening slightly; however, other elements of the market remain stable and compete with the standard casualty market with the Combined General Liability and Pollution Form. Aon brokers are focused on providing the broad coverage at competitive rates for all clients across our portfolio.

CYBER



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Terms, conditions, and pricing in the cyber marketplace for the construction industry continue to be highly competitive, even as more and more construction firms take up cyber coverage based on the evolving threat environment.

Appetite from carriers remains broad, as 75 unique markets write cyber coverage; offering more than $1 billion in theoretical capacity. While rates and pricing remain competitive, we do see some signs of firming due to claims activity. Regardless, we believe now is a very good time for contractors to purchase cyber coverage and lock in comparatively low baseline rates and pricing in advance of future renewals.

We also recommend the review of cyber coverage, given the adoption of new technology in the construction space, as well as carriers which are increasingly applying absolute cyber exclusions on traditional lines, which may have afforded coverage previously (e.g. property).

The cyber threat environment is never static. Emerging risks we continue to review and consider include the following:

- Cyber Extortion / Ransomware – increasing demands (often seven figures)
- Bricking – and associated increased Computer Hardware Replacement Costs
- System Failure / Business Interruption
- Iran Cyber Threats resulting in a thorough review of War Exclusion/Cyber Terrorism language

From a claims standpoint, the most common losses are associated with factors including cyber extortion, ransomware and related data loss, social engineering, bricking/computer hardware challenges, and costs associated with data breach restoration and forensics. Costs with all of these are increasing given cyber marketplace dynamics and frequency of incidents.

Ultimately, we recommend that all construction clients obtain cyber quotes and coverage, review limits in light of their full base of exposures and potential threats, and remain cognizant of emerging risks to business continuity, given the increasing reliance on and prominence of, technology in the infrastructure space.

Cyber	Commentary	Rating
Overall Market	The cyber market, in the construction industry, is competitive and certainly a buyers' market currently. Many construction related entities are purchasing an initial cyber policy because: 1) they're implementing technology (e.g. BIMS) to stay competitive and drive revenue 2) they're contractually obligated to have coverage in place 3) their Board of Directors are mandating to purchase coverage 4) of an uptick in industry peers experiencing cyber-related incidents/breaches.	**Favorable**
Capacity and Pricing	With over 75 unique insurers in the cyber global marketplace, capacity is continuing to grow across geographies, with a growing number of insurers developing appetites for complex risks and over $1B in theoretical capacity available in the Cyber marketplace. Pricing for initial placements is competitive as carriers are hitting minimum premiums from a price per million perspective, although some firming is expected over the next year driven by ransomware claims. Clients are leveraging the competitive market by purchasing an initial policy as well as increasing overall capacity at renewal.	**Fair/Average**
Losses	There's been a continous acceleration of both frequency and severity in ransomeware claims--most significantly impacting the middle market space--which has been leading to network business interruption concerns. Some primary carriers are reporting a nearly 500% increase in these ransomware claims. Complexity of breaches has driven an increase in incident response expenses incurred by Insureds. Claims and loss data has expanded coverage offerings and improved actuarial data for loss modeling purposes.	**Fair/Average**

Achieving the Best Placement Outcome

Preparing for Broader Marketplace Challenges

As we move forward in 2020, the only certainty would appear to be continued uncertainty. The effects of COVID-19 followed by significant protests and demonstrations in major U.S. cities only add to the volatility created through traditional catastrophes including recent active hurricane and wildfire seasons. Further, the legal and business environment continues to be plagued by runaway jury verdicts, event-driven litigation, cyber breaches, and class action lawsuits, driving “social inflation” in the price of insurance coverage.

Additionally, in spite of increasing costs for like-kind terms and conditions, carrier combined ratios are slow to improve, given expenses that continue to increase and poor core P&C loss performance (especially in areas like auto liability),. These factors are combining to make 2020 an especially challenging placement year. We take a deeper look at broad market trends and share successful strategies that Aon clients are deploying to optimize pricing and minimize the effects of these macroeconomic factors.

Insurance Market and Key Risks:
Some major events which impacted the market in 2019 will continue to have ripple effects throughout 2020.

- Overall, the marketplace continues to be divergent and volatile, with some insurers exiting or significantly changing their position on unprofitable business, and reassessing capital deployment. Limited meaningful capacity is coming into the equation. Pricing is up across virtually every line of business; treaty reinsurance rates are following suit.
- We see significant restrictions on terms and conditions, especially in builder’s risk where deductibles are increasing, sublimits are being reduced, and many markets are removing LEG 3 endorsements.
- While 2019 was a tamer wildfire season than recent years, capacity for California wildfire risk is in extremely short supply, with clients seeing double (and sometimes triple) digit rate increases even without losses on their specific projects. A dry summer and resultant active wildfire season, strong named windstorms that affect the Caribbean and Gulf Coast, or destructive seismic activity in the U.S. would have further chilling effects on available capacity.
- The underwriting process is more disciplined and generally taking longer – especially for larger placements and those with recent loss history – and client involvement is expected throughout.
- There is increased emphasis on market relationships, access to global supply, and panels and facilities. All options are being explored including risk transfer, alternative placement structures, reinsurance capacity, and captive solutions.
- From a claims environment standpoint, social inflation and related challenges are being used to justify more use of external counsel in some lines. While coverage acceptance speed is the same, coverage denial has increased. The impact of social inflation is a key talking point with insurers and is driving them to be more diligent before confirming coverage.

Preparing for Success – Key Tips for Clients:

- Overcommunicate, start early, and use data and analytics to quantify and assess risk.
- Consider any and all options such as higher deductibles, use of captives, and alternative program structures.
- Explore segmentation of, and separate strategies for, higher-risk operations.
- Engage your executive leadership to tell your company’s story to the marketplace and control the narrative.
- With this said, bear in mind that historical relationships are not having the same effect. Insurers need to make real change, and many don't value the relationship like they used to.
- Follow through on insurer risk control and mitigation recommendations.
- Understand that one year of rate increases is not going to remediate 10-15 years of rate decreases

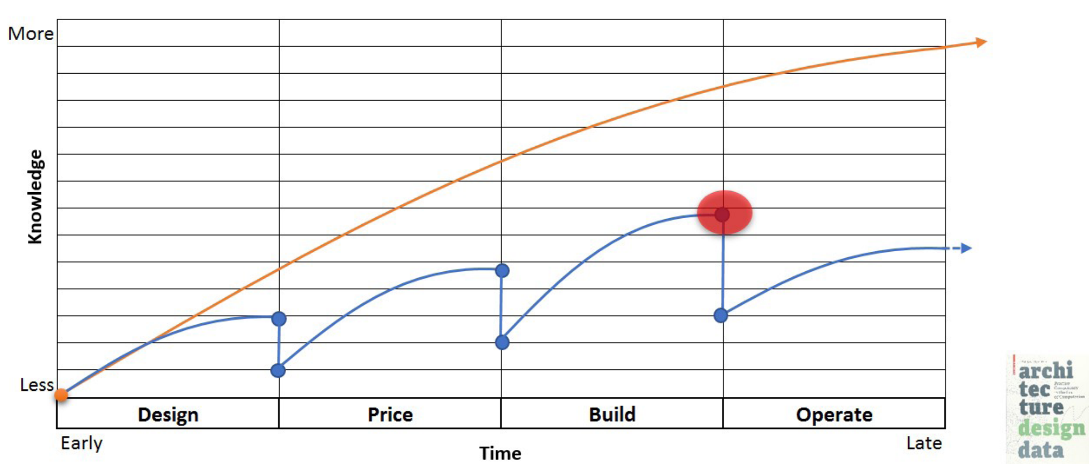
We find that clients deploying several (or all) of the strategies above optimize their renewal outcomes, and look forward to working with your teams throughout 2020 to achieve the best possible results.

Construction Technology Journey: Start Now

Whether you are an owner, a design firm, or a contractor, the construction sector will be facing several major challenges in the coming years. The below figure illustrates the results of our 2019 Global Risk Survey results for the construction sector and these represent the top risks as identified by key leaders within the global construction economy. Whether it is financial risks like economic slowdown, cash flow/liquidity risk, or capital availability/ credit risk, or it is labor risks like workforce shortages, failure to attract the best talent, worker injury or the risk of massive retirements in near term, the construction sector needs to start implementing solutions that will prevent and mitigate some of these major risk categories.

Top 10 Risks for the Industry

There are many paths that those in the construction community can go down to create solutions to mitigate these very real current and future risks, however, many believe the foundational strategy to best manage these risks is having a sound data strategy. The construction sector is lagging behind almost all other sectors of the economy when it comes to data sophistication. This lack of data sophistication is largely due to the way construction operates in its most current incarnation. The below figure (figure 1) illustrates the amount of knowledge/data that is lost in each construction project:



BERNSTEIN, PHILLIP. *ARCHITECTURE | DESIGN | DATA: Practice Competency in the Era of Computation*. BIRKHAUSER, 2018.

Figure 1

No matter what your role is within the built world environment...we must all move forward together to make construction a more efficient, productive, and less risky industry - a win for all stakeholders.

Each phase of the life of the asset being constructed is siloed and this results in significant data loss as the knowledge created in one phase is transferred to another phase. Most believe the highest level of asset knowledge is held by the contractor as they transfer the newly completed asset back to the owner to operate and maintain. This knowledge, or data loss has to end if we are going to improve the on-time, on-budget, and operational efficiency results of the construction and asset management industries.

Could we better organize and harness the power of data to avoid losing any data, as illustrated in the diagram by the orange line which shows 100% knowledge transfer between each phase? This loss of knowledge/data from one phase to the next is but one piece of evidence that shows why elements of the construction industry lack the necessary data sophistication to deal with the future risks facing the industry. There are a few other reasons as to why data sophistication within construction sector is lagging compared to other industries:

- **Unique Teams for Each Project** – The construction sector almost always uses new design firms, new main contractors, new subcontractors/ suppliers and new owners when they build a new asset. Much of the knowledge/ data from the previous builds is lost as each party to that build goes onto their next unique project.
- **Aging Workforce** – Currently most of the data within the construction sector is housed within the minds of the employees of each key stakeholder. These stakeholders leave the company through retirement or taking on a new job. How does the company retain this knowledge/data better and avoid losing it when a person leaves the company.
- **Slow Adoption of Technology Solutions Due to Analysis Paralysis** – Construction technology companies are popping up every day and construction stakeholders need to get familiar with all of these firms and how they can help clients on their data journey. Both platform companies that provide enterprise solutions and point solution companies that specifically target certain categories of risk are becoming rampant and continue to knock down the door of the industry, leaving some stakeholders overwhelmed and uncertain. Find partners that can provide unbiased opinions on quality of solutions and help reduce the confusion, thereby accelerating adoption.
- **The Unknown Factor** – Given the significant amount of unknowns associated with the construction sector – things like underground risk, weather risk, existing structures risk, there is skepticism around technology and data being able to create predictive results.

In the last few years there has been an increase in the motivation to improve data science sophistication, largely due to the enabling potential of new technologies coming to the construction sector. Bottomline, there is no better time for all stakeholders within the construction sector to begin their journey to an improved data sophistication state.

The Journey

No matter what your role is within the built world environment: design, construction, operations, or any derivative sector; we must all move forward together to make construction a more efficient, productive, and less risky industry – a win for all stakeholders. The road we each take down our data journey will inevitably meet on common ground where we are all truly connected and can reap the benefits of synergy through data collaboration across all phases of the asset. With the right groundwork laid out, the construction data journey can be a much easier transition. With the right team, an understanding of what's at stake, the potential for improvement and a shift in company culture the journey will lead to more predictability around schedule, budget and operational uptime. The right team can help you break through and slingshot into the Industry 4.0 built world.

Many construction stakeholders have already started hiring C-suite executives that are responsible for digital enterprise initiatives. Chief Information Officer (CIO), Chief Technology Officer (CTO), Chief Digital Officer/Chief Data Officer (CDO), Enterprise Intelligence Officer (EIO) are a few of the leadership positions that can launch a company on their data journey.

The right team not only knows where to steer down the data road, but also what vehicles to use, and how various vehicles will combine to create the best decisions. Data needs to be identified, collected, stored, cleaned, assessed and accessed using all the right tools in order to extract maximum value from the data and make the process optimally sustainable. It takes the entire company, and all project stakeholders to come on board and have at least some kind of foundational training around why it's important to have a data strategy. All employees need to take ownership of how they can help identify and aid in the transmission of all data sources including their own industry knowledge and experience. For us to truly keep up with proper data management between each phase of the asset's life, we must collect data from the furthest creeping roots of the company and the project/asset. Paper files, emails, text messages, spreadsheets, enterprise accounting, resourcing platforms, point solutions, IoT devices, insurance data, industry data, weather data and many more data sources come into play when realizing the data opportunity. Luckily, there are already a few great ConstrucTech solutions in the market that take the headache out of doing a manual data assessment to cover all the bases.

Harvesting and harnessing this data without losing data, between stakeholders and phases of the asset's life, is key to harnessing your companies' competitive advantage moving into the next generation of the industry. Once a data strategy is in place and starts down the road, you will begin to gather a clearer picture of where all your problems and risks are rooted throughout the life of the asset. Identifying the problem areas through the use of machine learning algorithms will lead to a more predictable outcome on business processes (see figure 2 below) .

There will likely be several surprises that add to the value of the data investment. Having a complete view into the data flow of the asset alongside triggers for risks ensure that the next phase of the asset can work with the best possible foundation and keep reducing the risks and increasing predictability all the way down to the operational phase.

THE DATA JOURNEY — FROM DATA TO DECISIONS

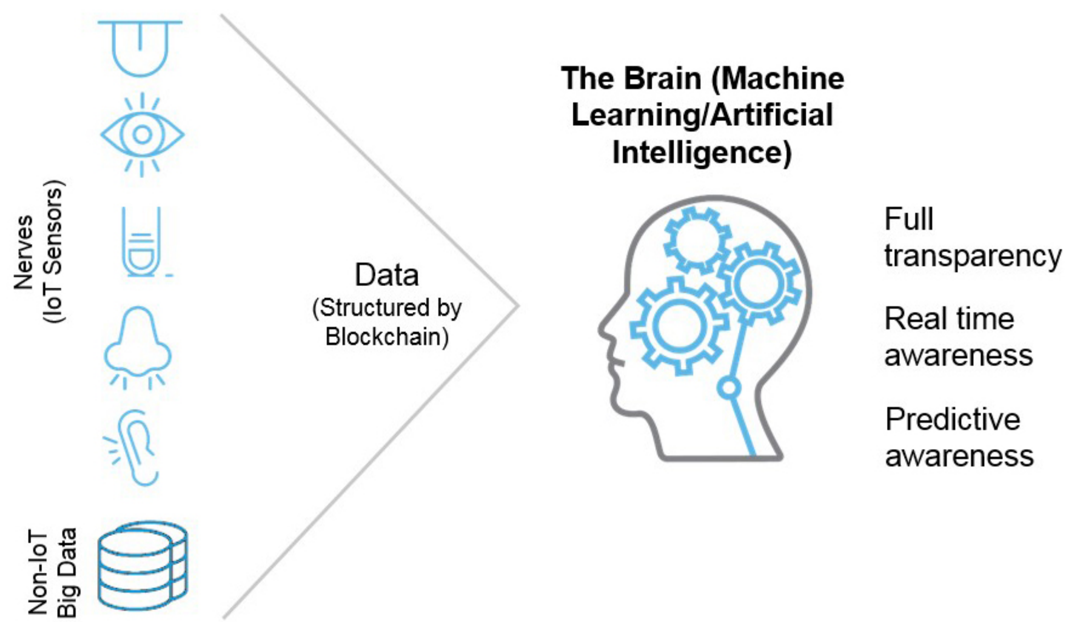


Figure 2

As you approach a mature state on your data journey, there will be a shift in company culture as the value of data will have proven itself to your entire organization. Decision making can become easier and many of the previously time consuming and monotonous tasks can now be eliminated, making room for more critical thinking and strategy. Using the data of the past, and dynamic present essentially creates a platform to investigate the future to predict failure (data from the future), improve certainty of outcome, increase margins and create a competitive advantage for your organization. This new world will create synergies between all stakeholders, throughout all phases of the asset's life, and thus create more value than the construction and asset management sectors have ever seen in the past.

Aon Spotlight Solution: Helping Contractors Manage Employment Practice Risks

Employment practices liability insurance (EPLI) provides coverage for defense costs, damages, and other associated expenses related to wrongful termination, harassment, discrimination, and retaliation in the workplace. Given the prominence of several societal trends and construction industry risk factors, we recommend contractors consider incorporating EPLI coverage and new strategies to manage this risk.

Industry statistics suggest that less than 25% of contractors deploy EPLI as a part of their insurance strategy, despite the protection this provides against claims that can be monetarily significant while damaging external brands.

While the construction industry is becoming more diverse in part due to several initiatives to expand the sector's recruiting base, its U.S. workforce is still largely populated by white males. To highlight two specific population classes, African Americans are particularly underrepresented, comprising 7.1% of the construction labor workforce, according to Data USA. Women make up under 4% of available construction labor (also per Data USA). Aon data suggests these statistics can make an employer more prone to discrimination allegations by these protected classes.

Additionally, the construction workforce continues to age at a faster rate than other industries as the industry struggles with encouraging younger workers to pursue a career in the trades. This aging workforce increases the likelihood of not only age discrimination claims but also Americans with Disabilities Act claims, and Workers' Compensation retaliation claims, since studies have shown that workers are more prone to injury as they age.

Construction companies have the added difficulty of deploying human resources best practices on job sites. Most employers have dedicated locations where on-site HR personnel support employees with concerns. In construction, worksites are temporary, widely dispersed, and often include workers from multiple employers that the construction company has limited control over, making these worksites more prone to employment issues.

Though EPLI is now a mature product purchased by most large companies in general industry, it is not widely adopted in the construction space. Industry statistics suggest that less than 25% of contractors deploy EPLI as a part of their insurance strategy, despite the protection this provides against claims that can be monetarily significant while damaging external brands.

Underwriters view EPLI as unique in the insurance space, given that the underlying exposure is constantly changing. Amendments to, and increased enforcement of, state and local laws, changes in US Supreme Court doctrine, unique new trends like the #MeToo movement, and an increased focus on gender pay disparity are just a few notable shifts that have occurred recently.

From an underwriting standpoint, the weight of cumulative historic pricing decreases has led to insufficient premium levels to support recent increased claim activity. Overall price increases have reached double digits, reflecting a typical 5% to 10% increase for clients without large employee populations or claims. Much higher increases can be expected for clients with greater risk factors.

Aon is well-positioned to work with contractors throughout the country to incorporate EPLI into a responsive, proactive risk management strategy. We've invested in a national EPLI practice which has innovated throughout the years in important areas such as Wage & Hour coverage, and frequently publishes thought leadership to keep clients abreast of the latest developments in this important line of business.

Performance Security—Market Update

As the construction industry enters new and uncharted territory given how the COVID-19 virus may impact the performance of construction projects and performance security, our Surety team is evaluating how the industry is responding to the current environment, and what our clients can expect in the coming weeks. We also look at how performance security may function in this new and unprecedented environment.

In this new COVID-19 environment, there is no shortage of challenges. The surety industry's response will evolve and flex to meet the challenges of our clients over the coming weeks and months. Aon's executive leadership team is closely collaborating with surety industry executives to understand their response to the current environment.

The immediate focus of the surety industry over the past several weeks involves sectors whose operations have been highly impacted causing immediate liquidity risk, such as retail, hospitality, aviation, travel and cruise lines. The surety industry has significant exposure to these "at risk" sectors, which may result in a negative impact to both the performance of the surety's portfolio for that sector, and the overall performance of the surety book of business.

It is important to highlight that losses in one sector of the surety book of business will likely drive more conservative underwriting in other sectors of the book of business, including potentially construction.

As a result, we expect increased underwriting scrutiny in contract surety, and an increase in the amount of information and communication required moving forward. Certain higher risk obligations may be especially impacted, including projects with longer durations, liquid "Pay on Demand" surety bonds, and alternative financial guarantee structures.

If the surety market becomes increasingly more conservative, effective communication of business operations to each market will become important. This includes status of current active projects, major disruptions to the supply chain for the delivery of material, labor disruption, subcontractor performance issues, impact of new COVID-19 safety procedures on overall project performance, deviations in expected 2020 results, and the effect of any delayed project awards and bids on financial performance.

For developers, transactions with Joint Ventures/Special Purpose Entity structures will face higher scrutiny of project fundamentals, with underwriters requiring detailed knowledge of project financing. The terms and conditions of surety support for these specific structures may also be negatively affected.

There are several risk mitigation strategies in place to navigate a more difficult surety market, emphasizing the importance of working with a strong multinational broker who understands the broad implications of the recent credit crunch on financial markets both domestically and abroad, as well as micro-level risks impacting your industry and company.

Aon's team will continue to collaborate with the executive leadership of the surety markets to develop and agree upon appropriate strategies in the current environment. Most importantly, we are committed to serving our clients in these challenging times and maintaining an open dialogue with you and your sureties to achieve the results you need to drive your business.

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Aon's Construction Services Group
The Construction Services Group is Aon's largest industry practice and the leading provider of risk management and insurance solutions to global contractors, regional trade firms, and specialty contractors. We leverage the placement volume, broking experience, and service infrastructure of Aon to provide industry-leading terms and conditions, pricing, and claims support to the infrastructure space.

Our construction insurance professionals deliver customized service, informed by our deep knowledge of local construction marketplaces and regulations across all geographies. For more information about our products and services, please visit us at www.aon.com/construction

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