Marsh

Building pandemic resilience through public-private partnership

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Foreword

In 2021, we’ve seen a remarkable change from just a year prior. The proliferation of vaccines and other developments have helped facilitate the reopening of businesses and easing of some restrictions in many countries. Once again, people are living their lives, businesses are earning revenues, and economies are recovering.

Still, challenges remain. The delta variant of the coronavirus is spreading in many regions, including parts of the US. And none of us will forget the effects — both personal and professional — of the last 18 months.

As the world’s leading insurance broker and risk advisor, our core mission is to help our clients manage risk. The value we deliver to clients — insurance policyholders — includes acting as an advocate on their behalf. In that capacity, we believe a public-private partnership is essential to containing the effects of the next pandemic or epidemic.

COVID-19 has simultaneously demonstrated the importance of insurance coverage to businesses — and to the US and global economies — and its limited ability to respond to the effects of major public health crises. While some specialty insurance policies purchased before 2020 may have included coverage for pandemic risk, most policies do not explicitly provide such coverage.

Insurers, generally, hold the position that property, casualty, and other insurance policies are designed to cover losses suffered by individual insureds, but not for the aggregate economic impacts from a pandemic, such as extended lockdowns of large communities or entire countries.

The bottom line: Existing insurance solutions — and insurers alone — cannot fully protect businesses from the potentially sizable losses they could incur during the next pandemic or epidemic. Instead, given the complex nature of pandemic risk, a strong public-private partnership is required to effectively manage it.

Although Marsh is not promoting a specific solution, we are advocating for a public-private partnership which has the financial support and backing of the United States government. Many businesses and other organizations share our view that such a partnership can help build resilience, reduce uncertainty, and accelerate economic recovery by leveraging the insurance expertise and infrastructure already in place.

From the establishment of fire brigades after the Great Fire of London of 1666 to the creation of the Terrorism Risk Insurance Program after 9/11, governments and the private sector have come together many times before to reduce risk and restore insurability. A similar venture today between the government, insurers, and businesses — backed by lessons learned to date and loss data from Marsh and others — can help facilitate pandemic coverage, align the needs of insurance buyers and insurers, and incentivize preparedness, mitigation, and resilience.

These actions can enable a more proactive and agile response to the next public health crisis. And it can help make pandemic risk more manageable and enable our economy to build the resilience it needs for the future.

John Doyle
President and CEO, Marsh

Executive summary

COVID-19 is far from the first infectious disease to become a pandemic. But many of the effects of 2020 and 2021 have been unprecedented. More than 4.4 million people have died worldwide as a result of COVID-19, and more than 200 million cases have been confirmed. In addition, much of the economic progress made in the years since the 2008 financial crisis has been reversed in just 18 months.

Although the US and global economies are growing again, output in many countries is expected to remain below pre-COVID-19 levels for some time. The pandemic has contributed to substantial revenue drops for businesses, and will likely have long-term implications for several industries.

Among the pandemic's various economic effects has been a sizable impact on insurance markets and coverage. Despite what ultimately may turn out to be substantial COVID-19 claims payouts from insurers, policyholders have often found little comfort in property and liability policies.

Insurers are ready and willing to provide coverage in property, casualty, and other policies for losses suffered by individual insureds. But most policies do not provide explicit coverage for pandemic risk. And insurers have asserted in discussions with policyholders — and, at times, in litigation — that these policies are not designed to protect against the broader economic implications of pandemics.

Across many insurance lines, capacity is shrinking, terms and conditions are narrowing, and underwriting scrutiny is intensifying. Going forward, insurers are expected to continue to broadly exclude coverage for pandemic risk.

These far-reaching impacts have made clear that commercial insurers alone cannot fully protect businesses from a pandemic's effects. Pandemic risk, however, can be insured through a strong, government-backed framework.

A public-private partnership to establish a pandemic reinsurance program can offer substantial benefits, including helping to limit private sector risk. It can also take many forms and draw on valuable lessons learned from the creation of various existing risk pooling mechanisms designed to insure flooding, extreme weather, terrorism, and other previously difficult-to-insure risks.

Such a solution will be crucial to containing the financial effects of a future pandemic. But it's also vital that insurers, the private sector, and the government learn lessons from COVID-19 and work together to improve resilience and bend the pandemic risk curve.

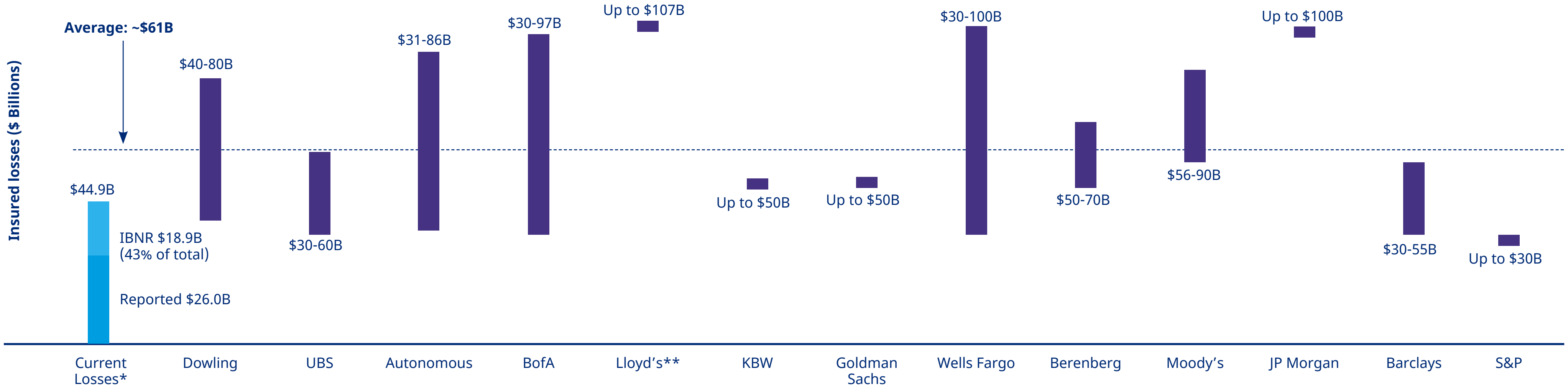
Still, it's especially crucial that we take action on a pandemic risk framework now. By working together, the public and private sectors can facilitate an efficient and effective insurance program that will accelerate recovery and build resilience amid the next pandemic.

The pandemic's insurance implications

Commercial insurance coverage typically responds to losses caused by natural catastrophes, such as earthquakes and hurricanes, and a range of business risks, from employee injuries to product liability and more. Although pandemics have occurred before, the economic impact of COVID-19 has been of a different magnitude, in part due to how interconnected people, businesses, and economies have become in the past few decades.

While insurers' losses from COVID-19 totaled less than $50 billion as of August 2021, according to a Guy Carpenter analysis, projections on the pandemic's ultimate cost have varied significantly. Some estimates have topped $100 billion, which would exceed total losses from Hurricane Katrina (see Figure 1).

01| Estimates of insured COVID-19 losses have varied significantly.

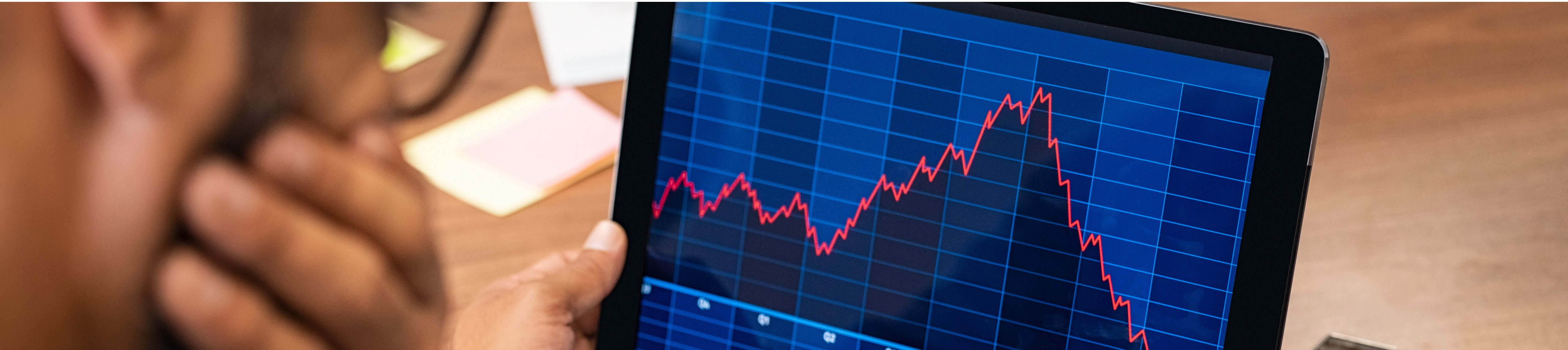


***Source:** Guy Carpenter analysis, Dowling, Autonomous Research, Barclays, Bank of America, KBW, UBS, Lloyd's, Wells Fargo, Goldman Sachs, Berenberg, Moody's, and JP Morgan; updated as of August 17, 2021.*
**Represents consolidated COVID-19 losses tracked by Guy Carpenter's Business Intelligence team as of August 17, 2021, accounting for end of period foreign exchange rates.*
***Lloyd's estimate is for underwriting losses from COVID-19, including claims and anticipated lower profits due to lower premiums.*

These losses, however, represent only a fraction of the enormous economic loss caused by the pandemic — a fact which has already posed recovery and resilience challenges for businesses, governments, and insurers, and will be of chief concern in the event of a future pandemic or epidemic. Moreover, it's become apparent since the start of 2020 that property and liability policies are severely limited in their ability to respond to pandemic-related losses.

Although some specialty policies purchased prior to 2020 may include coverage for pandemic risk, it is not explicitly covered under the vast majority of policies. Insurers have generally taken the position that property, casualty, and other policies are designed to respond to losses suffered by individual insureds — but not to the aggregate economic impacts that a pandemic can present, including extended lockdowns of large communities or even entire countries.

Given the specific and extensive effects of COVID-19 to date, insurers have begun to broadly exclude pandemic risk from many policy types, and are expected to continue to do so going forward. The sheer magnitude of simultaneous losses around the world, difficulty in predicting governments' actions aimed at containing infectious disease, and possibility of drastic changes in consumer demand — potentially overnight — make pandemic risk impossible for insurers and reinsurers to assume by themselves.



PROPERTY/BUSINESS INTERRUPTION

Generally, property insurance policies are triggered by insured physical loss or damage. Many policies include business interruption (BI) or other time element coverage with various extensions, including for interruption by civil authority, ingress/egress, attraction or leader property, or contingent business interruption/extra expense. The language in these policies and extensions can vary significantly.

Since the pandemic began, a number of first-party property and BI claims have been filed by companies seeking coverage under these provisions — most notably, the interruption by civil authority extension. Policyholders have argued that such an extension should respond to the shutdowns and closures as mandated by several states and municipalities.

The results of these claims filings have varied:

- A relatively small number of claims — typically submitted by companies seeking recovery under specific sublimited coverage extensions — have been adjusted and paid.
- In some cases, insurers have issued reservation of rights letters, made requests for information to aid in their investigations, and proceeded with the measurement of claims.
- Insurers have denied claims, citing a variety of reasons. These include the asserted absence of a physical damage trigger and the invocation of pollution/contamination and virus exclusions and other policy language.

Through July 26, 2021, nearly 2,000 COVID-19 coverage lawsuits had been filed in state and federal courts, according to the University of Pennsylvania's Covid Coverage Litigation Tracker. Many of these suits remain unresolved.

Broadly speaking, decisions to date address policyholders' allegations that the virus that causes COVID-19 — or related government shutdown orders on their own — constitutes "direct physical loss of or damage to property." Some courts have ruled that applicable laws require tangible or structural damage to property and that the actual or suspected presence of the virus that causes COVID-19 cannot satisfy that requirement.

Other courts, however, have indicated that allegations of "loss of use" of the property may be sufficient to trigger coverage. Some rulings have also relied on the presence or absence of a virus exclusion in the policy.

Overall property capacity has rebounded to some degree in recent months from the initial shock of COVID-19 — and the cumulative effects of mounting natural catastrophe losses since 2017. Still, communicable disease coverage remains restricted.

Although such coverage is available in some rare cases, most property and BI insurers have added communicable disease exclusions to policies they have written over the last 12 months. Insurers are expected to continue to push for the exclusion of communicable disease coverage in property and BI policies even after the threat of COVID-19 recedes.

> **The bottom line: Existing insurance solutions — and insurers alone — cannot fully protect business from the potentially sizeable losses they could incur during the next pandemic or epidemic.**

GENERAL LIABILITY AND UMBRELLA/EXCESS

To date, general liability (GL) and umbrella/excess claims related to the pandemic — for example, alleging that a customer, client, or other third party was exposed to COVID-19 on an insured company's premises — have not been overly prevalent.

That said, insurers have expressed some concern that casualty claims could develop in the future. Depending on the jurisdiction and whether a policy is written on an occurrence basis — meaning that the policy responds to any damage or injury that takes place during the policy period, regardless of when the claim is made — litigation could be filed well after the alleged exposure or injury.

As a result, some insurers have sought to add COVID-19 or communicable disease exclusions to their policies, particularly for insureds in hospitality and other select industries. Insureds and their brokers have, at times, been able to negotiate removal of such exclusions, albeit sometimes at a price. Such exclusions have been more difficult to avoid in the excess and surplus lines market.

In some industries — for example, restaurants — policyholders have been concerned that language proposed by insurers has been overly broad, and could be interpreted as restricting essential coverage for foodborne illnesses and other perils that would not have the widespread impact of a pandemic or epidemic. In some instances, policyholders and their advisors have been able to amend such language.

In the absence of another pandemic in the next several years, insurers' worries may be eased before communicable disease restrictions become a more common feature within casualty policies. This would be especially true if buyers and brokers continue to push back on potential restrictions.

The scientific community, however, has warned that pandemics and epidemics are likely to occur with greater frequency in the future. Another public health crisis not long after COVID-19 could prompt a firmer stance on exclusionary policy wording, significant reductions in capacity, and other harsh responses from underwriters. An important factor in determining market capacity will be how reinsurers react to future health crises.

For now, underwriters are applying greater scrutiny to all GL and umbrella/excess risks, both in the context of the pandemic and more broadly. During the extended soft market period that existed until early 2019, insureds would often be able to secure favorable pricing and terms even without detailed responses to underwriting questionnaires.

In the current market, which already began to firm well in advance of COVID-19, that is no longer the case. Even those companies that provide highly detailed responses can still face challenging renewals given insurers' focus on long-term profitability and market conditions.

WORKERS' COMPENSATION

In March 2020, as the coronavirus was rapidly spreading, many insurers were concerned about its potential impact on workers' compensation. The expectation was that the virus would lead to an increase in communicable disease claims costs and a decline in "core" workers' compensation claims costs, especially as many employees shifted to remote work and others stopped working completely.

More than a year into the pandemic, insurers' initial fears have proven to be overstated. The reality is that the average COVID-19 claim is lower than the typical "core" workers' compensation claim. Moreover, COVID-19 claims have generally been clustered in a handful of industries, such as healthcare and food and beverage manufacturing.

COVID-19, meanwhile, has highlighted how difficult it can be to determine compensability amid a public health crisis — mainly because individuals can be exposed both in and out of the workplace.

Workers in industries deemed "essential" — including healthcare, public safety, retail, food service, transportation, and hospitality — are among those with a higher likelihood of exposure. But healthcare professionals, for example, can be infected via exposure not only to patients but to coworkers, family members, neighbors, and strangers. In turn, these workers can infect other members of these groups.

Amid this challenging environment, a number of states have taken action. To date, roughly half of all states have introduced laws and regulations dictating how workers' compensation coverage will respond to COVID-19 cases, according to Oliver Wyman research. A number of these actions create "rebuttable presumptions" that employees in certain professions — for example, first responders — who contract COVID-19 have been infected while working.

Whether a specific case is compensable will be determined by the facts established during an investigation of the claim, as well as the governing law in the jurisdiction where the claim is reported. Additionally, since there is no single "test" that can prove whether an illness or disease is compensable, it may ultimately come down to a decision by a court or state workers' compensation board.

Employers are required in nearly all states to purchase workers' compensation insurance. But unlike other forms of coverage, insurers cannot explicitly exclude occupational illnesses as a result of communicable diseases from their workers' compensation policies.

Insurers, however, have sought to limit their exposure — notably, by eliminating "same communicable disease" endorsements. These endorsements, which were widely available prior to the pandemic, provided financial protection to employers by aggregating or batching individual claims with the same underlying cause.

Insurers can also choose not to underwrite certain employers if they perceive their communicable disease coverage as being too significant. At the height of the pandemic, for example, many insurers shied away from writing workers' compensation for healthcare organizations.

Workers' compensation capacity may be limited going forward for some types of employers — chiefly, healthcare organizations and first responders. Employers in industries where employees often work in close quarters — for example, hospitality and food and beverage manufacturing — may face challenges without properly documenting their protocols for providing safe work environments.

EVENT CANCELLATION

Capacity for event cancellation continues to decline amid the pandemic. By Marsh estimates, capacity has fallen more than 30% compared to its size prior to COVID-19 as a number of large underwriters have exited the market. Some insurers have entered the market during that time period, but the capacity they have added does not come close to replacing what has left — and it appears that market capacity will not return to pre-pandemic levels anytime soon.

Deductibles and pricing are also on the rise. Although deductibles were not required to write coverage for small to midsize outdoor events prior to the pandemic, deductibles of 10% to 20% of insured sums are now standard. Coverage for indoor events is available without such deductibles, but pricing for such events has, in most cases, doubled.

Moreover, while communicable disease coverage was generally available and affordable prior to the pandemic, it is currently widely unavailable and is expected to be extremely difficult to include in event cancellation policies going forward. That said, some select insurers have been able to craft limited communicable disease coverage for film productions where all cast and crew members have been vaccinated and sequestered in "bubbles" to limit COVID-19 exposure.

MANAGEMENT LIABILITY

COVID-19 has compounded the numerous challenges already mounting for management liability lines prior to the pandemic. These challenges included increases in claims frequency and severity stemming from the #MeToo movement, an uptick over historical levels in event-driven litigation brought by public company shareholders, and lawsuits in both federal and state courts against companies engaging in initial public offerings.

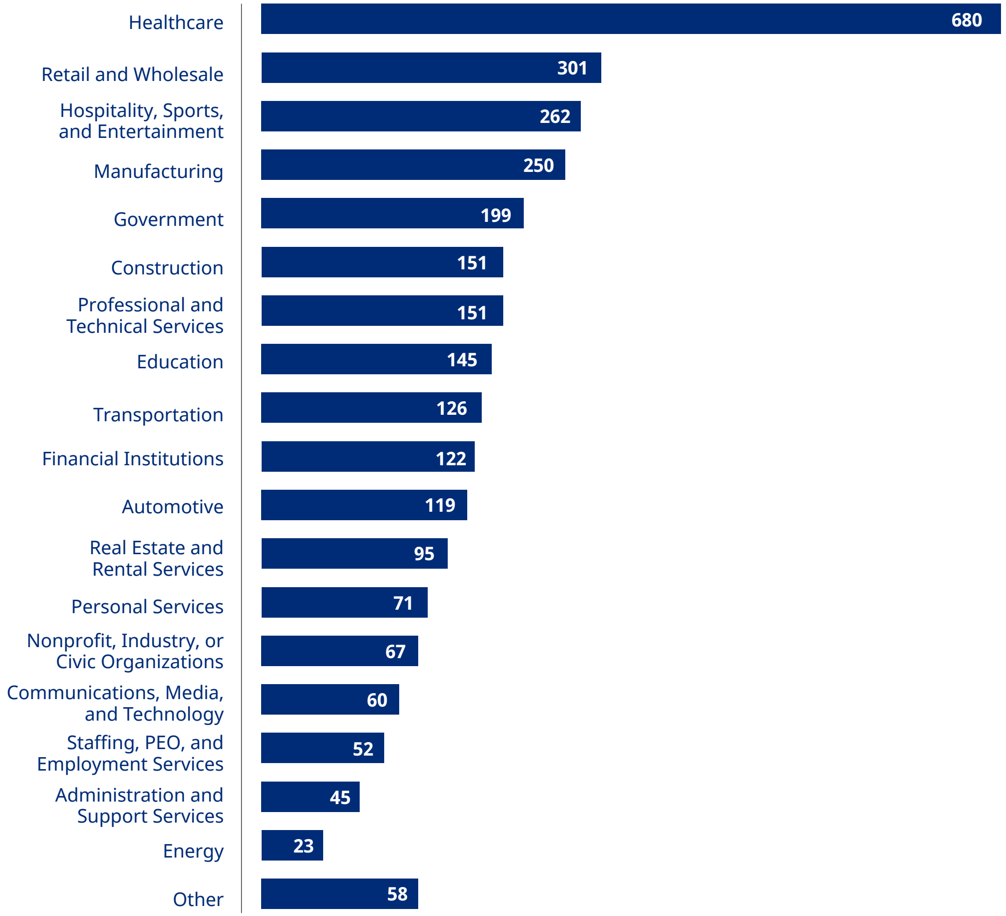
Financial pressures on insurers have only been exacerbated by the pandemic, resulting in many buyers seeing significant increases in pricing and retentions over the last 24 months, particularly for directors and officers liability (D&O) — and, more recently, employment practices liability (EPL).

D&O underwriters have been concerned about the potential effect of COVID-19 on distressed companies and those in industries that have faced significant challenges amid the pandemic. Those concerns, however, have moderated somewhat since the early days of the pandemic.

The pandemic has sparked a limited number of securities claims, including some related to its economic impact — primarily targeting consumer-reliant industries, such as hospitality and tourism — and an alleged failure of company leadership to adequately address workplace safety concerns. Life sciences companies developing vaccines, testing technologies, and personal protective equipment (PPE) have also been susceptible to claims.

As of August 19, 2021, workers had filed more than 3,000 COVID-19-related employment lawsuits in federal and state courts, according to Fisher Phillips' COVID-19 Employment Litigation Tracker. Healthcare entities were the most frequent targets in these cases, accounting for more than one-fifth of all suits (see Figure 2).

02| Healthcare organizatons have been the most frequent target of COVID-19 employment suits filed to date.



***Source:** Fisher Phillips; data as of August 19, 2021*

Among other claims, these suits have often alleged that employers:

- Retaliated — in the form of wrongful terminations, demotions, and other adverse employment actions — against employees who have made leave requests or spoken up about their employers' failure to promote safe and healthy working environments.
- Discriminated against employees in protected classes in decisions regarding layoffs, furloughs, and resumption of work.
- Failed to properly track time amid the transition to remote working models.

To date, however, pandemic-related coverage restrictions on D&O and EPL policies have not been commonplace. Although some insurers have added COVID-19 and reduction in force exclusions to their EPL policies for certain insureds, coverage has generally not been eroded during the pandemic.

Still, insurers are scrutinizing their risks and probing prospective insureds about their responses to COVID-19. EPL insurers, in particular, are asking employers about reductions in force during the pandemic — which could give rise to future claims — and expect insureds to consult with outside counsel in making these critical business decisions. Insurers are also closely monitoring potential vaccine mandates and employers' plans to return employees to workplaces in 2021 and beyond.

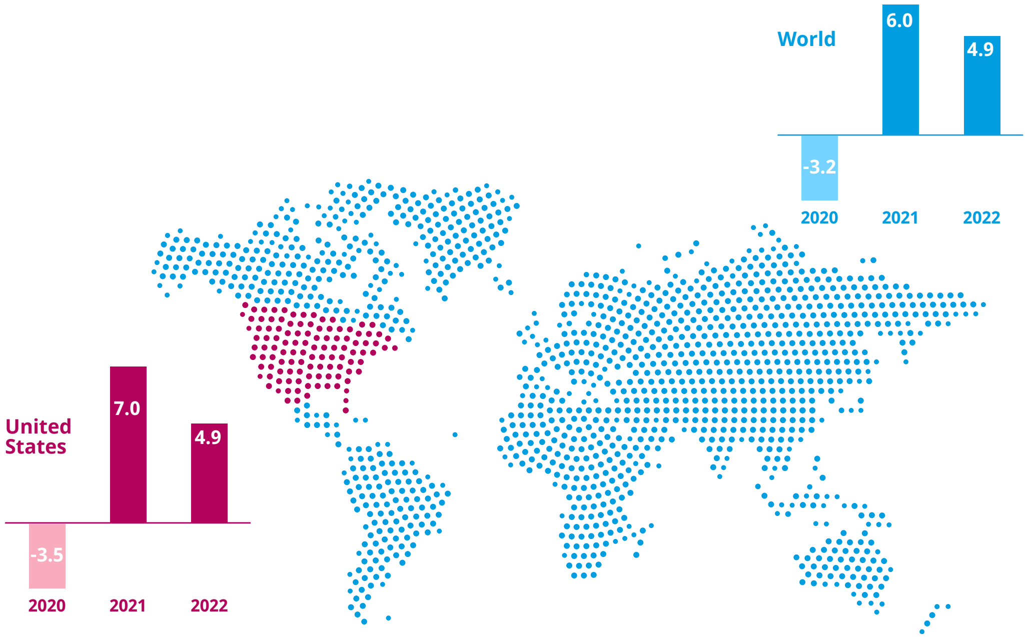
COVID-19's economic and industry effects

Although the development and distribution of vaccines in recent months has been a cause for optimism, the COVID-19 pandemic's effects on people and economies remain severe. As of August 23, 2021, more than 200 million COVID-19 cases had been confirmed globally, resulting in 4.4 million deaths, including more than 600,000 in the US, according to the World Health Organization (WHO). The pandemic has also reversed much of the economic progress made in the years since the 2008 financial crisis.

In 2020, GDP is estimated to have fallen by 3.2% globally and 3.5% in the US, according to International Monetary Fund's (IMF) World Economic Outlook for July 2021. The IMF projects that growth will rebound in 2021 and 2022 (see Figure 3), but output in many countries is expected to remain below pre-COVID-19 projections through at least 2022, according to the Organization for Economic Cooperation and Development (OECD).

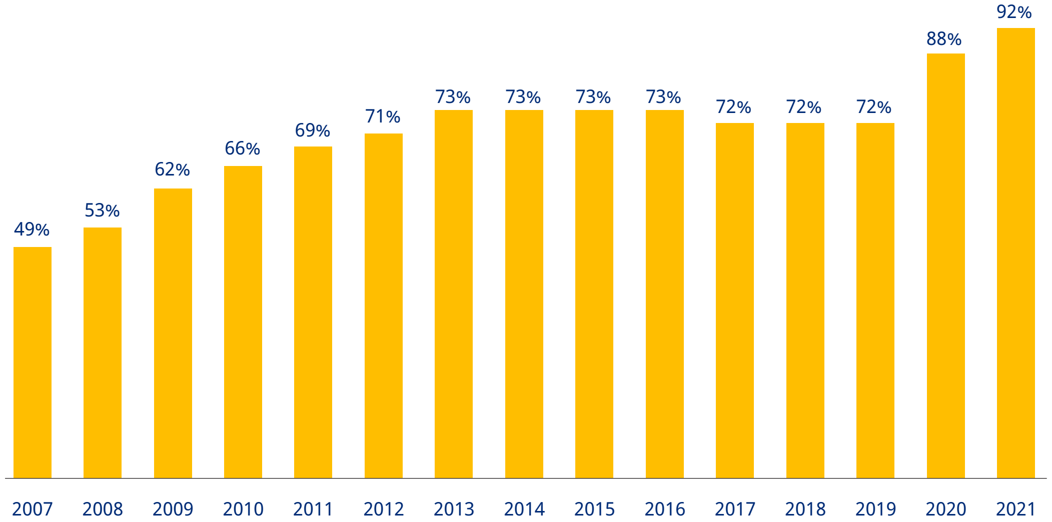
Amid the pandemic, nearly 100 million people globally have been thrust into extreme poverty, according to the World Bank; food insecurity is also growing. This represents the undoing of three decades of progress in poverty reduction and equality.

03| **The global economy is expected to rebound in 2021 and 2022, but contracted significantly in 2020.**



Source: *International Monetary Fund World Economic Outlook, July 2021; percent changes*

04| The pandemic has contributed to a sharp rise in debt-to-GDP ratios in OECD countries.



Source: *Organization for Economic Cooperation and Development*

While governments in many countries — including the US — have offered unprecedented financial support to businesses and their employees through wage subsidies, tax deferrals, and guarantees, it has come at a heavy cost. Debt-to-GDP ratios in OECD countries are projected to have risen 23% in 2020 and are forecast to rise an additional 5% in 2021 (see Figure 4). In many countries, debt levels have reached their highest level in decades, and the pandemic's impact on government debt has surpassed even that of the 2008 financial crisis.

Moreover, despite this assistance, the cumulative effects of government lockdowns, social distancing requirements, and changes in consumer behavior have led to significant declines in revenue for businesses across multiple sectors. And while some parts of the economy have done well, there will be long-term implications for many industries, whether they have innovated to overcome the pandemic's challenges or are still encumbered by them.

RETAIL AND RESTAURANTS

COVID-19 brought significant pain to the retail and restaurant industries. In 2020, more retailers declared bankruptcy than in any year since 2009, according to financial advisory firm BDO. The National Restaurant Association, meanwhile, reported in December 2020 that more than 110,000 establishments were closed permanently or long-term as a result of the pandemic.

The industry, however, is poised to bounce back as pandemic restrictions are lifted and consumer confidence grows. The National Retail Federation now forecasts that retail sales will grow by double digits in 2021.

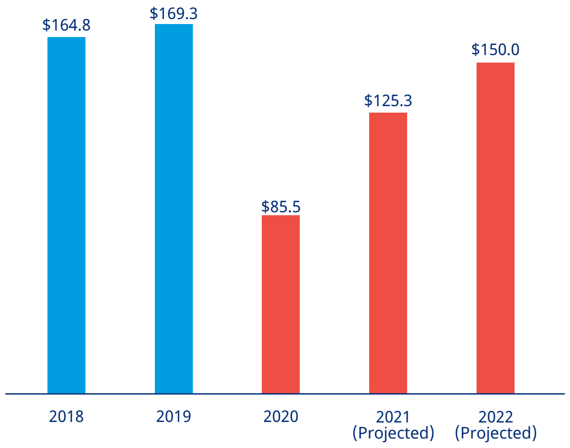
Still, COVID-19 will have a long reach for retailers and restaurants. And like its impact on other sectors, the pandemic accelerated a number of already developing trends.

The most notable of these shifts has been the adoption of omnichannel marketing models. Online ordering coupled with delivery and in-store pickup options that were once value-adds are now absolute essentials, and have been embraced by consumers. Even as shoppers and diners continue to physically return to stores and restaurants, they will likely expect these options to remain available long after the pandemic ends.

Going forward, organizations will need to contend with potential demographic changes brought about by the pandemic, including an anticipated move by many people away from large cities. Although cities will remain population hubs, retailers and restaurants will need to consider the effects of exurban population growth on their employees, customers, and operations. Effective fleet optimization plans will be crucial.

Meanwhile, the pandemic and other recent events that have had an outsize effect on the sector have highlighted the need to build greater resilience to a number of threats, including civil unrest, natural catastrophes, and ransomware and other cyber threats. In many organizations, these events have elevated the role of risk management and demonstrated its value.

05| Hotel room revenue has fallen sharply amid the pandemic and is projected to still be below pre-pandemic levels in 2022.



Source: *American Hotel & Lodging Association; billions of dollars*

REAL ESTATE AND HOSPITALITY

Even before the pandemic, the real estate industry was in the midst of massive change. Commercial tenants were exploring smaller footprints as they moved to remote and hybrid working models. E-commerce was threatening brick-and-mortal retail stores, calling into question the viability of traditional shopping centers. And homeowners and residential tenants were increasingly seeking multifamily properties that offered amenities and value-added features.

COVID-19 has accelerated many of these shifts, but tempered others. While there may have been opportunities in the short- and long-term for some — including investments in industrial properties and warehouses — revenue for the sector has been down since early 2020. And significant uncertainty remains for the industry overall.

Hospitality, meanwhile, has suffered from a profound drop in occupancy rates over the last year. Although leisure travel is slowly picking up, business travel is not expected to return to 2019 levels until 2023 at the earliest, according to the American Hotel & Lodging Association (AHLA). Many employers now recognize the value of teleconferencing tools and employees' desire to reduce the time they spend commuting and traveling. Some industry observers have suggested that business travel activity may never return to pre-pandemic levels.

Moreover, overall hotel occupancy for 2021 is projected to be 10% below 2019 levels, according to the AHLA. While this a smaller drop in occupancy rates than earlier projections, the AHLA noted in a recent report that "the hotel industry's road to recovery is long and uneven, with urban markets disproportionately impacted."

Meanwhile, US hotels are expected to generate $125.3 in room revenue in 2021, according to the AHLA. Although this is a substantial improvement from 2020, it is still more than $40 billion below 2019 levels (see Figure 5).

Labor shortages also represent a challenge for the industry. In June 2021, the unemployment rate for the hotel industry was 17.6%, according to the US Bureau of Labor Statistics; by comparison, the restaurant industry's unemployment rate for the same period was 10.1%. In the early days of the pandemic, hotels were forced to conduct mass layoffs; while some workers have returned as occupancy has slowly picked up, many have sought more stable employment in other sectors. Hotel chains, meanwhile, have historically recruited seasonal employees from other countries via temporary worker visas, but the pandemic has made finding such workers difficult. The AHLA estimates that one in five hotel jobs will not return by the end of 2021.

CONSTRUCTION

COVID-19 has posed numerous challenges for the construction industry. Globally, projects have been delayed or cancelled and many regions have experienced extended shutdowns, often because of the inability to easily move foreign workers or deliver critical path components. For contractors, pressures on liquidity have also been increasingly common. Supply chains have been disrupted, and companies have faced often severe shortages, delays, and inflated costs for materials, labor, and equipment.

Generally, the construction industry has proven resilient amid the disruption caused by the pandemic. Companies reacted quickly during the early days of the crisis, with those that were able to redirect resources and rely on stronger cash positions faring the best. In many regions, construction sites have remained open, with contractors showing agility and innovation in managing safety, and pragmatism in working with owners to best manage the various pandemic-related effects.

While COVID-19 alone has not yet had a significant impact on the commercial insurance market for construction companies, broader factors continue to affect capacity, pricing, and the availability of cover. It is, however, still too early to predict the pandemic's wider effect on reinsurers, which may cause disruption for primary insurers and insurance buyers.

Overall claims volume as a result of the pandemic has been limited, with some companies filing delay in startup claims, most notably out of the UK. For COVID-19 — and the lockdowns imposed by governments to combat it — to trigger cover under insurance policies, construction companies must typically demonstrate physical damage, which has proven challenging. As is becoming increasingly common across many insurance lines, construction insurers are looking to incorporate exclusionary language related to communicable disease in many policies.

The pandemic will likely drive some lasting changes for the industry, both good and bad. Post-pandemic, many companies are likely to focus more on supply chain resilience and contractual risk allocation. Many safety enhancements introduced over the last 18 months are expected to become best practices for the industry. Labor trends will shift, with offsite personnel increasingly working from home and the shortage of skilled workers potentially driving greater diversity in the future construction workforce.

While less impacted than some industries, COVID-19 has had serious consequences for construction. The industry has proven adaptable and learned many valuable lessons that will help it become even more resilient amid the next pandemic, although significant risk will undoubtedly remain.

HIGHER EDUCATION

Most colleges and universities have resumed on-campus learning, with hybrid teaching models remaining in effect in many cases. But a number of institutions are wary of emerging COVID-19 variants. With the possibility of new lockdown orders looming, many schools are reevaluating their approach to opening classrooms in the fall.

Vaccination questions have been especially pressing for schools. Some institutions are mandating that students and/or faculty are vaccinated before returning to campus, while others have chosen not to; several schools' choices have been limited by the laws in their jurisdictions. In some cases, students or faculty have questioned or pushed back on varying standards and requirements for the two populations.

Meanwhile, the technology challenges for faculty and students, along with an increase in ransomware attacks, have heightened cyber risks for schools and created new expectations around cyber hygiene controls. In addition, some students and parents have sued, claiming that online learning represented a denial of the education they were promised. While many institutions are mindful of these challenges, remote learning appears likely to continue in some form even after the pandemic.

Institutions continue to feel the effect of economic losses as tuition, housing, sporting events, summer programs, and other sources of revenue have been depressed. The lack of property and business interruption coverage for communicable disease has had significant financial effects on schools, some of which have total insured values that reach into the hundreds of millions of dollars.

Although some travel bans have been lifted, American schools' access to foreign students remains limited — notably, from China. The reported plans of the Biden administration to require that foreign visitors be fully vaccinated could further complicate schools' efforts to attract foreign students.

Amid the rise of variants, many colleges and universities are concerned that state and federal governments will again take over their campuses for various pandemic mitigation purposes. These include establishing mass testing and vaccination centers and housing patients who cannot be accommodated by hospitals.

Legislation and funding measures have provided some relief to higher education institutions. But the economic pain from COVID-19 will not immediately dissipate. It may be years before students from China and elsewhere — who have been welcomed by schools in Canada, Australia, and Europe even amid the pandemic — return to the US in large numbers. Many schools have already been forced to pursue mergers and acquisitions in order to survive.

HEALTHCARE

Perhaps no industry felt the brunt of the pandemic to the extent that healthcare did. Hospitals and other providers — particularly in the early days of the pandemic — were overwhelmed by the rapid spread of COVID-19 across the country and a surge of patients as a result.

In many communities, COVID-19 patient numbers have since subsided in a meaningful way. But providers are still feeling the effects of that initial surge and, more recently, the emergence of COVID-19 variants.

The onset of the pandemic led to the deferral of many elective procedures, including some that are necessary to treat serious conditions. According to Strata Decision Technology, 55% fewer Americans sought care in hospitals in March and April 2020 than in the same period in 2019.

The postponement of elective procedures — which are far more lucrative than COVID-19 care — was a significant blow to fee-for-service providers. Value-based care providers, by contrast, have historically seen less volatility in their cash flows, and generally fared better amid the COVID-19 patient surge last year. That dynamic may flip in 2021 as elective procedures resume, but could be challenged as hospital beds fill up and cautious behaviors resume due to the spread of COVID-19 variants.

The pandemic is expected to drive lasting changes for the industry. Healthcare providers' interest in predictive analytics and artificial intelligence has only grown amid the pandemic. Previously skeptical consumers, meanwhile, have become accustomed to using telemedicine solutions, which are likely to become more prevalent going forward.

Then there's COVID-19's effects on the healthcare workforce, which was already aging and shrinking prior to the pandemic. The events of 2020 will likely lead to more healthcare professionals burning out. Many older practitioners have already chosen to retire in the last year, with more expected to join them in the coming months, while others have pursued career changes.

All of this provides important context as the battle against the COVID-19 pandemic continues and the threat of future pandemics remains ever-present. While healthcare providers are better prepared today for a global health crisis than they were 18 months ago, a resurgence of COVID-19 variants or a similar pandemic could bring significant economic pain — and loss of life.

AVIATION

From airlines to aerospace manufacturers, there remains an inextricable link between the aviation industry and the global economy. The pain of the pandemic has had an indelible impact on aviation companies.

After five years of growth and profitability through 2019, airlines saw a sharp reversal in 2020. Amid a dramatic drop in air passenger demand, the airline industry lost an estimated $126.4 billion in 2020, according to the International Air Transport Association (IATA). The IATA forecasts additional losses of $47.7 billion in 2021, and uncertainty for the industry is likely to last at least until 2023 as airlines seek to rebuild their customer bases.

The impact on airlines has also had downstream effects for manufacturers. As demand for air travel fell, many aircraft were placed into storage, with some passenger planes being converted to freighters. Airlines have also cancelled or deferred new plane orders, creating an inventory logjam for manufacturers. The coming years will likely see more aircraft delivered than produced — an unusual state for the manufacturing sector.

COVID-19, meanwhile, has had significant effects on the insurance marketplace. Prior to the pandemic, pricing for aviation insurance was already firming, as years of losses exceeded premiums and punctured reinsurance layers. The pandemic exacerbated pressures on insurers, contributing to additional rises in pricing. Airlines and others have faced some claims during the pandemic — notably, suits filed by airline passengers alleging exposure to COVID-19 during flights.

Over the last 18 months, some insurers have withdrawn from the class or reduced their offered capacity. As premium levels have risen, new carriers have entered the market and existing insurers have expanded their capacity again, helping to spur competition.

With insurers uncertain about depressed premium levels associated with COVID-19, a significant development amid the pandemic — particularly for airline insurance buyers — is the imposition of minimum premiums, which were not required by insurers prior to the pandemic. Some insurers have also attempted to introduce communicable disease exclusions in aviation policies, but they have met significant resistance from buyers.

In spite of these difficulties, the aviation industry has risen to the challenge of the pandemic. As they had during previous times of crisis, including the aftermath of September 11, 2001, aviation companies have demonstrated their ability to be adaptable, innovative, and resilient in the face of adversity. The industry is adjusting to new realities as it seeks to return to stable growth, and adopting new strategies to cope with uncertainties and manage the continuing effects of COVID-19.

Nevertheless, aviation companies face significant challenges and potentially lasting changes. The pandemic will force many airlines to substantially alter their fleets. Supply chains may present headaches for airlines and manufacturers alike. And a projected long-term reduction in labor supply will raise many questions for the industry.

MARINE

Maritime companies with robust operations are generally managing the pandemic well as more and more goods are being shipped. But costs and freight rates are increasing, while shipping capacity is down. And as demand for shipping services increases, access to competent and reliable employees is critical.

More broadly, the pandemic is helping to reshape the sector. In a short amount of time, the distribution of cargo has shifted from B2B to B2C. The logistics industry has expanded, and control of supply chains has become even more crucial, something that is not likely to change in the near future.

COVID-19 itself has had a limited effect on the marine insurance marketplace. While capacity in other lines has been shrinking, it has grown in marine hull and cargo, which has benefited from relatively limited claims activity. Still, exclusionary language is becoming commonplace in marine cargo policies.

The pandemic has also presented a number of other challenges for marine-based businesses. One of the most significant has been ship crew repatriation, which has been complicated by travel restrictions imposed by several countries.

Another is disruptions to supply chains as a result of port delays and limited supply of freight space. Many supply chains are fragile and lack resilience, and ship owners and cargo shippers are concerned about the industry’s vulnerability to a future large-scale shock event.

The case for a public-private partnership

COVID-19 has made clear that traditional solutions offered by the commercial insurance market alone cannot fully protect businesses from the enormous and far-reaching effects of pandemics. While pandemic insurance has long existed, its cost and the perceived low likelihood of an event has meant that it has rarely been purchased. And the number of other insurance policies that explicitly exclude pandemic risk is only growing.

The bottom line is that while insurers and reinsurers want to provide coverage for pandemic risks, some in the industry believe that they are uninsurable. But are they correct?

Our view is that they are not. Pandemic risks can be insured — but only through a strong, government-backed pandemic risk management framework.

A NEW PANDEMIC RISK SOLUTION

A public-private partnership to establish a pandemic reinsurance program can offer substantial benefits. And it's especially crucial now — before the next pandemic.

A pandemic risk insurance facility can help limit — but not eliminate — private sector risk, providing critical assurances to lenders and equity markets and helping to accelerate economic recovery. It can also absorb much of the initial shock of a future pandemic, enabling businesses to retain employees, meet financial obligations through the peak of uncertainty and continue innovating.

Amid the pandemic, lawmakers in the US and globally are exploring a number of public-private risk pooling models. These include the Pandemic Risk Insurance Act of 2020, introduced in the US House of Representatives in May 2020, which proposes to establish a pandemic risk reinsurance program within the Treasury Department, which would provide compensation to insurers that incur losses as a result of pandemic-related coverage.

More recently, the US Senate Banking Committee examined the issue during a hearing on July 22, 2021. Martin South, President of Marsh's US and Canada Division, testified that absent a public-private partnership that engages the full credit and support provided by a government backstop, the global nature of pandemics means the insurance industry cannot take on the risk.

There are many past examples of how governments and the private sector have come together to reduce risk and restore insurability. The Great Fire of London in 1666, for example, led to the creation of fire brigades. Two decades ago, Congress passed the Terrorism Risk Insurance Act and created the Department of Homeland Security to coordinate security and intelligence responses to terrorism risk in the aftermath of September 11.

"Over time, the right risk program can spur new technologies, ways of working, services, insurance products, and processes to ultimately chip away at the enormous losses associated with pandemics, which can help make pandemic risk more manageable and enable our economy to build the necessary resilience it needs for the future," South said.

Risk pooling options and precedents

A public-private insurance/reinsurance mechanism for pandemic risk can be developed in several ways, ranging from pure private partnerships to state-financed funds for non-insurable risks (see Figure 6).

06| A public-private insurance/reinsurance mechanism could be developed in several ways.

Private ← → Public

Semi-private pooling reinsurance scheme

- Joint entity created by insurers to pool risk and share knowledge.
- Participation may be voluntary or legally mandated.
- Financing primarily provided by the private sector, with limited (if any) intial government financing and typically no committed reserve.

Public-private partnership (PPP) reinsurance schemes

- Structured risk sharing model between policyholders, insurers, and government.
- Government explicitly provides backing to the private sector to cap exposure and drive affordability.
- Participation may be voluntary or legally mandated.

Public funds for noninsurable risks

- Pure government setup, without any direct private involvement (other than aligning coverage).
- Fund is created with a reserve, built up over time, that can be used to pay out claims in the event of a pandemic.
- Claims against the fund should be aimed at covering risk events that cannot be covered by existing insurance offerings.

Relevant options for managing pandemic risk
Given their global nature, pandemics are unlikely to offer insurers and reinsurers any diversification. Some form of public support will likely be required to enable viable insurance and reinsurance markets.

In creating a new pandemic risk solution, policymakers can look to existing risk pooling schemes from around the world for models. Such mechanisms — which serve to mitigate risks that are often considered difficult to insure, including flooding, extreme weather damage to crops, and terrorism — can yield valuable lessons for the public and private sectors (see Figure 7).

07| Existing public-private partnerships can offer several lessons to participants.

Significant loss events or changes in how risks are modeled can lead to market-wide capacity withdrawal.	Launched in 2016, Flood Re was developed to provide affordable flood risk cover to the approximately 3% of UK homeowners living in areas with high flood risk. Industrywide improvements in flood risk modeling had made coverage unaffordable for this cohort. In the US, the Terrorism Risk Insurance Program (TRIP) was established following a widespread withdrawal of commercial terrorism cover by reinsurers after the September 11, 2001, attacks.
Extreme risks typically require some form of government backstop.	Government treasuries are the insurer of last resort on a number of loss-sharing schemes. The US National Flood Insurance Program (NFIP) and the UK's Pool Re, for example, have unlimited guarantees; TRIP and the Australian Reinsurance Pool Corporation (ARPC) have limited guarantees.
Public-private partnerships provide credibility and can be structured to gradually shift risk to the private sector.	The US and UK governments' backing of TRIP and Pool Re, respectively, has enabled commercial insurers to access affordable terrorism reinsurance. Over time, the Pool Re fund grew and private reinsurer confidence was restored, to the point that £2.4 billion of reinsurance cover is now purchased. Federal reinsurance participation in TRIP, meanwhile, has fallen from 90% in 2002 to 80% in 2020, while insurer deductibles and retentions have increased.
Programs can be used to incentivize the adoption of preventive measures.	To be eligibility for the NFIP, communities are required to adopt and enforce strict floodplain ordinances and offers premium discounts for outstanding performance. Similarly, Flood Re's planned retirement by 2039 has prompted the UK government to commit to major investments in preventive measures. The program has also incentivized insurers to work to better understand, map, and model flood risk. The US crop insurance industry supports continued agronomic research to determine how farmers can best incorporate risk management best practices in their operations and the impact those practices may have on insured crops. The US SAFETY Act of 2002, meanwhile, was created to spur the adoption of improved security measures by limiting liability of companies providing anti-terrorism products and services for qualified vendors. Similar policies, coupled with a robust public-private insurance market, could incentivize private sector adoption of prophylactic measures to drive down exposures.

Building pandemic resilience

A public-private partnership to backstop pandemic risk will be crucial to containing the financial effects of a future pandemic. But it is by no means the only way businesses and governments can manage the risks presented by communicable diseases. Insurers, the private sector, and the government can work together to improve resilience at the organizational and national levels, and to bend the pandemic risk curve.

A SYSTEMATIC APPROACH TO RISK

Beyond their role in issuing and administering pandemic insurance policies in a new marketplace facilitated by a federally backed program and reimbursing policyholders for claims following losses, insurers can play a critical role in developing and encouraging the adoption of pandemic loss reduction measures.

The insurance industry has a strong track record of helping businesses of all sizes mitigate critical risks, including natural catastrophes, workplace hazards, cyber threats, and more. That institutional knowledge and expertise can similarly help businesses understand and manage pandemic risk.

Specifically, insurers — in concert with insurance brokers and other advisors — can help businesses:

- **Use data to better understand their critical risks.** COVID-19 has made clear that many businesses have not fully contemplated the range of effects that an outbreak, epidemic, or pandemic can have on their people and operations, critical infrastructure, and governments. Greater investment by the insurance industry in data collection and modeling tools can help insurers, brokers, and businesses to anticipate and quantify potential risks.
- **Obtain insurance coverage to meet their unique needs.** Ideally, insurers will not offer one-size-fits-all coverage solutions to prospective buyers. As with insurance coverage made available via the federal Terrorism Risk Insurance Program, buyers should be able to customize the pandemic insurance policies they purchase — for example, selecting specific infectious disease risks to insure and adjusting limits to meet their risk tolerance and other preferences.

Broad industry support for a pandemic risk solution

From construction, real estate, healthcare, finance, and manufacturing to sports, arts and entertainment, hospitality, and retail, a wide range of companies have publicly expressed support for a government-backed pandemic risk solution.

The Business Continuity Coalition (BCC), which advocates for a public-private partnership, was formed in October 2020 with the intent to "limit future economic damage from pandemics and other national emergencies that cause business interruptions." The BCC's members include Live Nation, Marriott International, the National Football League, Sony Pictures Entertainment, and a number of industry trade groups.

L. Charles Landgraf, senior counsel at the law firm Arnold & Porter, appeared on behalf of the BCC at the Senate's recent hearing on a potential pandemic risk framework. Landgraf testified that a public-private partnership "is an essential precondition to the prompt recovery of this nation's economy, and going forward will help protect jobs and reduce economic damage from further pandemics."

Other BCC members have similarly urged Congress to take action. These include:

- The National Retail Federation, which has called for a federally backed solution to "provide a mechanism for immediate and predictable economic recovery should the nation face another pandemic — even one of lesser magnitude — in the future."
- The National Restaurant Association, which notes that the "social nature" of restaurants "is making it impossible for them to find the insurance they need to protect against pandemic losses. Without this public-private insurance backstop, the nation's second largest private-sector employer will struggle to recover or grow."
- RIMS, the risk management society, whose members include 10,000 risk professionals in more than 60 countries. The pandemic, RIMS CEO Mary Roth said, "has taught business leaders many valuable lessons, most importantly, the need for insurance solutions to protect assets, employees and keep their enterprises up-and-running amidst a health crisis."

- **Enact practices to prevent pandemic-related losses.** Insurance buyers seek to mitigate critical risks through superior building techniques, workplace safety programs, cybersecurity programs, and other measures. Insurers reward policyholders that can demonstrate their commitment to such processes in the form of more favorable pricing and terms and conditions. A federally backed pandemic risk insurance program that encourages improvements in health and safety practices can yield similar benefits.

NATIONAL READINESS

While the private sector can and should learn lessons from the COVID-19 crisis to better prepare for the next pandemic event, governments at all levels can do much to help manage and mitigate current and future pandemic risk.

COVID-19 has highlighted the need for federal, state, and local governments — in conjunction with national and global health organizations — to focus on three areas in order to build economic resilience and national readiness:

- **Preparedness.** Federal, state, and local governments must stockpile more equipment, including ventilators, masks, and other types of PPE that have become incredibly valuable commodities for some communities. Crisis response plans are also key, provided they are updated now, to reflect recent lessons learned, and regularly tested through tabletop exercises and other means. Governments can also encourage and facilitate data-sharing efforts by both the private and public sectors, which can aid preparedness and response efforts.
- **Mitigation.** Mitigation steps — including social distancing, handwashing, wearing masks, and more — are largely the responsibility of individuals. Governments can support these efforts by providing guidance and education to people and businesses about how they can prevent or slow the spread of the disease. Governments can facilitate mitigation by providing guidance on how to protect essential workers during a pandemic or epidemic.
- **Insurance.** While commercial insurers excel at allowing businesses, public entities, and nonprofit organizations to transfer the risks related to natural hazards and other critical risks, a pandemic could result in virtually unlimited losses — which, today, are largely uninsured. Historically, insurance coverage for the risks related to infectious disease has been limited or available only at a high cost. And public entities have relied largely on Federal Emergency Management Agency disaster funds or ad hoc funding measures to mitigate financial losses. A federal backstop can facilitate the creation of a viable insurance market that can offer affordable coverage for businesses, public entities, and nonprofits and provide crucial peace of mind to businesses.

THE PRIVATE SECTOR’S JOURNEY TO RESILIENCE

The private sector was largely caught off guard by COVID-19. The immense costs dictate that in a post-COVID-19 world, governments, shareholders, lenders, and ratings agencies will request — and, in some cases, require — that businesses develop a clear view of their pandemic risk exposure and document their mitigation plans.

Results from Marsh’s recent *Risk Resilience Diagnostic* survey of nearly 1,000 businesses’ approach to six critical risk areas — including pandemic risk — indicate that traditional resilience measures are not necessarily suitable when contemplating pandemic risk management strategies and immediate response actions. Now, more than ever, organizations require a forward-thinking approach to risk management, one that will help drive preparedness and build resilience.

The path to becoming more resilient will be different for every company, but the journey involves four common steps and behaviors:

1 **Anticipating the unexpected.** During the COVID-19 pandemic, even organizations with robust business continuity plans struggled because they failed to fully anticipate the extent of its impacts. Only 25% of respondents to Marsh’s survey use scenario-based modeling across their enterprise or comprehensively to evaluate the potential impact of emerging risks.

2 **Integrating risk and strategy.** Connecting risks to long-term strategy can help organizations move forward and mitigate their financial exposure, reputational damage, business interruption, and other losses. Yet only 25% of organizations fully take this important step.

Resilient organizations typically align through a collaborative process, and seek expert help in assessing their preparedness. Without this collaboration and counsel, organizations will often struggle to anticipate risks, which will impair their ability to develop effective response plans.

3 **Avoiding misperceptions about preparedness.** An accurate perception of preparedness is vital to managing any critical risk, as a false sense of security can halt an organization in its tracks.

The consequences of not being prepared can be severe. History has shown that organizations’ fortunes can unravel quickly following a shock event. Their options to manage an event may dwindle as circumstances spiral, as they did for many banks during the 2008 financial crisis, and more recently with the hospitality and travel industry during the pandemic.

4 **Measuring what matters.** Applying metrics consistently is a stumbling block for many. For risks that survey respondents rate as important or highly important, we would expect to find organizations conducting modeling and forecasting at correspondingly high rates. But only a minority do so, and most of those perform modeling and forecasting only in select areas.

Protecting people

A vital component of any pandemic risk infrastructure going forward is protecting the health of employees, customers, and other third parties, and to help limit potential disruptions to employees' lives and accelerate and ease their return to work following future stay-at-home periods.

Among other actions, safety and risk professionals — working with health officials, HR staff, and others — should focus on:

- **Proactive local screening.** Epidemics and pandemics often start small, but can quickly grow. To mitigate risk and maximize containment, businesses must be able to detect disease patterns at the local level and on site. Techniques such as big data analytics and computational epidemiology can help organizations model, understand, and control the diffusion of disease. Analyzing trends in news reports and on social media, for example, can help spot the emergence of an epidemic before any formal declaration from the WHO or other health authorities.
- **Locating employees and contact tracing.** COVID-19 has made clear how important it is for businesses to be able to quickly locate employees and conduct rigorous contact tracing, both of which are core disease control measures and key strategies for slowing or preventing the spread of disease. While widespread monitoring will inevitably raise concerns about privacy, businesses will need to consider the tradeoffs from both a humanitarian and economic perspective.
- **Digital health and telemedicine.** If not in use already, these tools can help employers help their employees reduce their physical exposure to healthcare and hospital settings. This can support efforts to slow the spread of viruses, bacteria, and other pathogens in the workplace and the larger community.
- **Mental health and employee engagement.** Businesses need healthy, emotionally sound, and engaged employees in order to be productive. Efforts should be made to ensure connectivity — at formal and informal levels — between employees and with management if a pandemic forces social distancing. Organizations should also ensure employees have access to mental health resources and provide leaders with training to recognize and act upon mental health concerns.

A focus on data

COVID-19 will have several important legacies, including shining a spotlight on the need for organizations to become more resilient and adept at managing fast-moving events, including public health crises.

An outbreak can quickly become an epidemic, which can just as quickly become a pandemic. That means it's vital that risk professionals, senior leaders, and others have access to accurate and robust data to track the progress of a health crisis, forecast future developments, and make smarter decisions related to people and operations. And with local and country changes constantly evolving, it's just as important that they are able to weed through a glut of information and misinformation about public health threats to make smarter and more informed decisions.

Marsh is committed to helping our clients use data to better understand pandemic risk and make more informed decisions. Our COVID-19 Dashboard — designed specifically for risk professionals — provides a single place for organizations to monitor COVID-19 developments globally.

Marsh's dashboard incorporates data from a variety of leading sources around the world, including Johns Hopkins University's COVID-19 Data Repository, the Atlantic's COVID-19 Tracking Project Data Repository, Our World in Data's COVID-19 Dataset, and Healthdata.gov. Users can glean insights on both COVID-19 case trends and vaccination rates.

The dashboard enables users to track and monitor COVID-19 hotspots at varying levels — down to the county level in the US. This can provide risk professionals, senior executives, and other stakeholders with snapshots of the state of the pandemic and answer critical questions. For example:

- Are cases, hospitalizations, and deaths trending up or down in the areas where our clients, suppliers, and employees live and work?
- Where and when can our employees safely travel?
- Are regional vaccination rates high enough to send employees back to the office?

As the COVID-19 pandemic continues and businesses face the prospect of more frequent and severe public health crises post-COVID-19, access to such monitoring tools is crucial. While monitoring epidemics and pandemics has historically proven challenging, Marsh's COVID-19 Dashboard and other emerging tools can yield more accurate views of public health threats to enable more informed decisions.

Working together to manage pandemic risk

After facing enormous and often unprecedented challenges over the past 18 months, there is now hope and optimism that we have reached a turning point in the COVID-19 pandemic despite the rise of variants. Still, significant work remains to manage the crisis, and people, businesses, governments, and economies must all keep an eye on future threats.

As we contend with the possibility of more frequent — and potentially deadlier and more costly — epidemics and pandemics in the future, it is crucial that governments and organizations be ready. COVID-19 has provided a number of important lessons on how we can all better prepare and plan for such threats, and ultimately become more resilient to them.

Insurance coverage can play an important role in facilitating our recovery from the next major public health crisis. Insurers, however, cannot maintain a viable commercial market — one that can meet the needs of insurance buyers — on their own. And absent effective and competitively priced insurance coverage for pandemic risks, the demands on governments amid a future event may surpass those seen during the COVID-19 crisis.

The complexity of pandemic risk calls for close cooperation by the public and private sectors in managing its impacts. The key to building a more proactive and agile response to the next pandemic will be an insurance and risk management partnership with government that helps facilitate coverage, aligns the desires of both insurers and policyholders, and requires mitigation practices. Such an efficient and effective pandemic insurance program will accelerate recovery and build resilience.

Marsh

About Marsh

Marsh is the world's leading insurance broker and risk advisor. With around 40,000 colleagues operating in more than 130 countries, Marsh serves commercial and individual clients with data-driven risk solutions and advisory services. Marsh is a business of Marsh McLennan (NYSE: MMC), the world's leading professional services firm in the areas of risk, strategy and people. With annual revenue over $18 billion, Marsh McLennan helps clients navigate an increasingly dynamic and complex environment through four market-leading businesses: Marsh, Guy Carpenter, Mercer and Oliver Wyman. For more information, visit marsh.com, follow us on LinkedIn and Twitter or subscribe to BRINK.