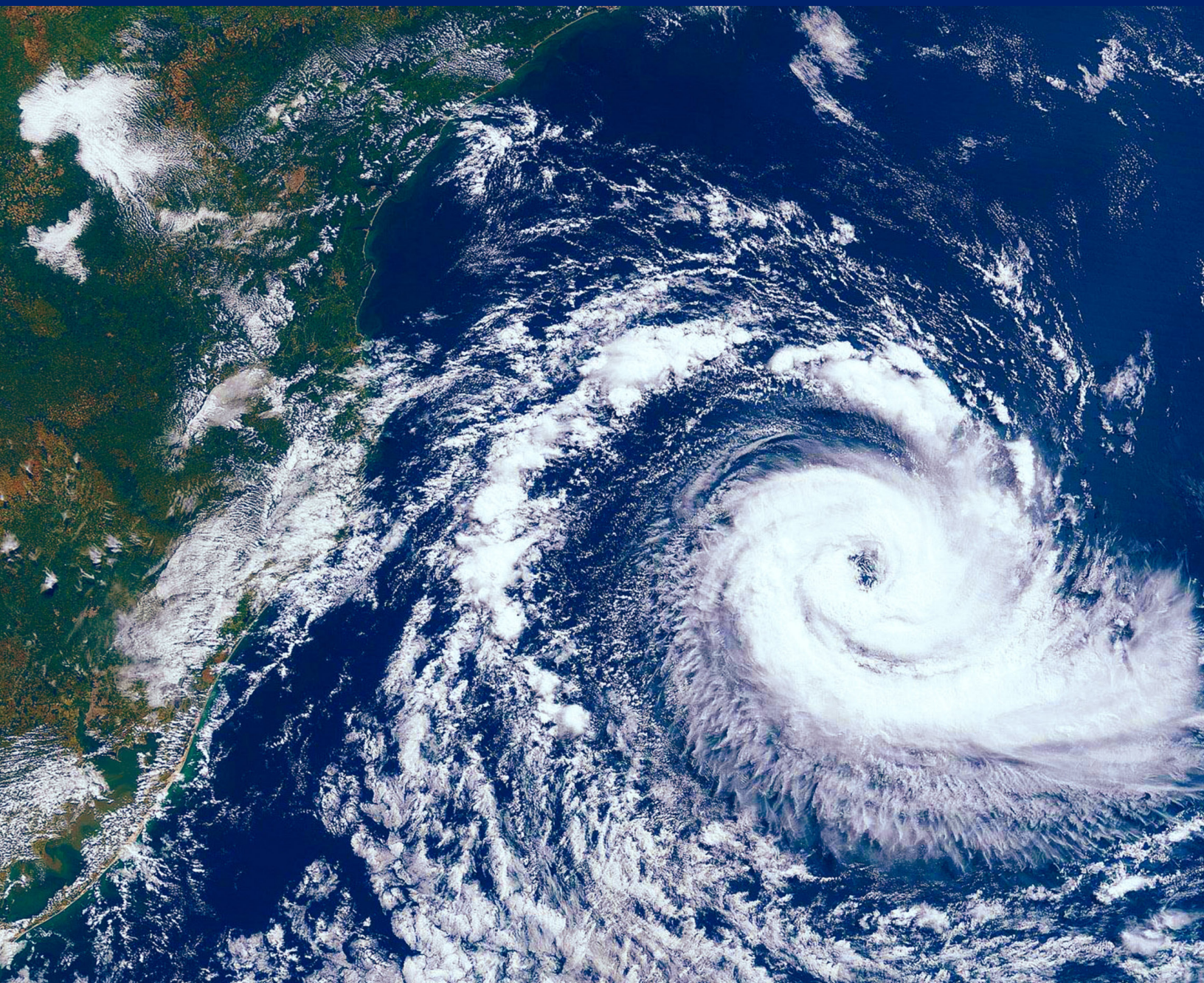


Why Commercial Property Insurance Prices are Higher ...

And What Can Be Done About It

By Derek Talbott, Bob Meyer, and Matt Booker

Westchester[®]
A Chubb Company





Introduction

As property insurance rates continue rising significantly across the country, commercial property owners and risk managers are asking questions of insurance brokers to understand the reasons why and what they can do to help moderate the challenging market conditions. This report was developed to elucidate the complex circumstances causing the pricing pressures and what all parties can do to address these challenges.

Three factors simultaneously in play at the present time are affecting the underwriting and pricing of commercial property exposures: climate change-related natural disasters producing more frequent and severe insured water, rainfall and flood losses; a historic supply chain crisis triggering higher costs for construction materials like lumber, steel and gypsum; and high inflation,¹ reaching nearly 7 percent in December 2021 from the prior year's period, representing the biggest one-year increase in inflation in the past 40 years.²

In this report, we elaborate on these factors and their respective and combined impacts on property insurance underwriting and pricing. Chubb's property insurance rates, for example, were up 12 percent year-over-year in Q3 2021. We also cite the difficulties inherent in accurately and comprehensively valuing the replacement cost of a commercial structure for insurance purposes, a process that is critical to ensuring that insureds are paid accurately and quickly in the event of losses.

Most importantly, we point out the collision of these factors with the trend of undervaluing the true cost of asset replacement for property insurance purposes. Asset replacement undervaluation affects underwriting modeling outputs, leading to less informed insurance decisions and inadequate rates. More accurate valuations would generate improved modeling, enhanced risk management of assets and business continuity, and more precise pricing of property risks, among other benefits.



Unpredictable Weather Events

In November 2021, leaders from across the world traveled to Glasgow, Scotland, to attend the 2021 United Nations Climate Change Conference, commonly referred to as COP26. The timing was propitious: the summit occurred during a two-week period when accumulated atmospheric greenhouse gas reached record concentrations, with far-reaching implications for present and future generations.³

From January through September 2021, rising global temperatures appeared to have contributed to 18 weather-related disasters with losses exceeding \$1 billion each in the United States, a record high, according to NOAA National Centers for Environmental Information. The average number of billion-dollar disasters per year between 1980 and 2020 was 7. Among the 18 events exceeding \$1 billion in losses over the nine-month period in 2021 were 9 severe storms, 4 tropical cyclones, and one drought, wildfire, and winter storm each. The NOAA report was issued on October 8, meaning more than three and one-half months are yet to elapse before year-end final figures are tallied.⁴

In the first half of 2021, an estimated \$42 billion in insured property losses was recorded by the insurance industry—a 10-year high, reports suggest.⁵ The report cautioned that second-half property loss figures typically are higher than losses in the first half of the year, as these months historically are most prone to catastrophe losses. At press time, third quarter 2021 insured property losses were estimated by Guy Carpenter at an above-average \$48.5 billion, affirming Swiss Re's projections in a big way, greatly exceeding the first-half loss figures.⁶

Three unusual catastrophic weather events in 2021 stand out. In mid-February, Winter Storm Uri, an extratropical cyclone, resulted in the delivery of winter weather alerts across several states to more than 170 million Americans, an unprecedented number of people. In Texas alone, the severe cold wave caused by Uri resulted in the failure of the state's aging electricity grid, causing the country's largest power outage in nearly 20 years.

More than 4.5 million homes and businesses were without power for several days, producing a record volume of property claims across the state filed for burst pipes, collapsed roofs, spoiled produce, damaged equipment, and business income interruptions, reported to be "enormous." Altogether, insurers will likely pay an estimated \$18 billion in damages, with half the claim costs originating in Texas, according to catastrophe modeling company Karen Clark & Co.⁸

The second atypical catastrophic weather event, Hurricane Ida in late-August and early-September, was the second-most damaging and intense hurricane in terms of rainfall volume to make landfall in Louisiana. The Category 4 hurricane subsequently traveled up the eastern coastline to produce extreme wind and rainfall levels resulting in tornadoes, flash flooding and multiple deaths in Pennsylvania, New York and New Jersey.

Hurricane Ida was the third tropical storm to hit the New York and New Jersey area in as many weeks, deeply saturating already water-logged soil. Drainage systems were overwhelmed across the region, forcing New York City to shut down much of its transportation system.⁹ Reports suggest that the hurricane contributed losses of more than \$26 billion to overall third quarter 2021 catastrophe losses of \$48.5 billion.¹⁰



The third uncommon weather event in 2021 was the extraordinary series of 34 tornadoes that tore across eight states on December 10 and 11, considered one of the largest and deadliest tornado events in U.S. history. Early estimates on total damages and economic losses were pegged at \$18 billion on December 14, making it the costliest tornado event to date, far exceeding the previous record holder, a tornado outbreak in 2011 that caused \$10.2 billion in total damage and economic loss.¹¹

Catastrophe Risk Models and the New Normal

Standard catastrophe risk models may not fully capture the potential losses attributable to unusual weather events like the December 2021 tornado outbreak, Hurricane Ida and Winter Storm Uri—what scientists refer to as the “new normal.” But while the outputs of the catastrophe models have improved, the greater frequency of severe catastrophic events over the past 5 years have redefined this “new normal” on an almost annual basis. With past as prologue, a continuing redefinition is likely in the foreseeable future.

Consequently, the catastrophe models may create a false sense of security. Model outputs like “maximum probable loss,” stated as a one-in-100-year hurricane, for example, provide an illusion of safety and security. This illusion is affirmed by the fact that Hurricane Ida was one of three major storms in a three-week period to strike New York and New Jersey.

The three storms also emphasized the need for windstorm and flood catastrophe modeling companies to gather and assess data pertaining to the hydrological, topological, and geospatial attributes indicating where water is likely to flow and collect during a cumulative series of hurricanes and other major windstorms that occur in a brief period. This data can then be compared with aggregated data on drainage systems to determine if the systems are equipped to handle the capacity of the expected water volumes.

Wildfire catastrophe models can be similarly enhanced. For commercial buildings in the wildland-urban interface—the transitional zone between unoccupied wilderness and developed land, the models generally consider the square footage of the structure and the quality grade of the building materials. The gradual accumulation of trees, shrubs and other combustible materials in proximity to a building generally is not included in wildfire risk modeling data.

Seesawing Replacement Costs

All current catastrophe models use a computerized process to gauge the estimated costs to repair or replace a damaged or destroyed building with materials of the same or comparable quality. Valuing these costs depends on accurate assessments of prices for lumber, steel, and other construction materials, in addition to the current level of wages for local contractors and personnel.

Estimating accurate valuations has long been challenging in property insurance. Because commodity prices and labor costs are never static, recent events like the supply chain crisis and rising inflation have added to these difficulties. Prices for building materials through 2021 have been unusually volatile, due in large part to supply chain disruptions.



The costs of materials and labor to rebuild residential or commercial property have gone up and continue to rise, dramatically in some cases. The costs of lumber and steel are cases in point. Between May 2020 and May 2021, the price for a standard 1,000 board feet of lumber skyrocketed from \$347 to \$1,675, and have fluctuated since.¹² From March 2020 to July 2021, the benchmark price for rolled steel rose by 215 percent.¹³ The cost of gypsum materials used in dry wall were up nearly 16 percent, year-over-year, in August 2021.¹⁴ Overall, the cost of all construction materials increased 23.1 percent in the 12-month period ending in August 2021 and are projected to rise another 5 percent to 11 percent through August 2022.¹⁵

As 2021 progressed, the sky-high prices of some building materials like lumber fell precipitously, while the prices of other materials like copper piping and tubing shot upwards.¹⁶ This dramatic change in prices over such brief durations makes it increasingly difficult for insurance markets to estimate the potential costs for underwriting and pricing purposes.

At the same time, building contractors are experiencing a pronounced shortage in available construction workers, particularly in certain trades and in regions where extremely atypical property insurance losses have occurred. Aggregate contractor labor costs increased 4.46 percent in the 12 months through August 2021, due primarily to the lack of available craft professionals. According to an analysis of construction labor supply and demand in March 2021 by the U.S. Bureau of Labor Statistics, an estimated 430,000 additional construction workers were needed in 2021 to address building demand.¹⁷ Another one million more construction workers will likely be needed in 2022 and 2023.¹⁸

Assuming demand does not slacken, it appears that building contractors will need to increase wage levels to attract the increased volume of workers required. Because commercial and residential construction is driven by regional end-market demand, the costs of building materials and personnel needed to replace a structure damaged by a catastrophic weather event must be more accurately accounted for and reflected in insurer underwriting and pricing. If an unexpected major storm hits a well-populated region, thousands of homes may need repair and replacement at the same time, pushing the cost of goods and contractors even higher.

An Unraveling Supply Chain and Inflation

In effect, the sharp uptick in more frequent catastrophic weather events is colliding with the higher costs to rebuild damaged or destroyed buildings. A key factor in the construction sector's volatile price environment is the enduring supply chain crisis.

When consumer and business demand for products dramatically fell during the first months of the pandemic, original equipment manufacturers sharply curtailed production, as did their tiers of suppliers. When demand returned almost as quickly as it plummeted in early 2021, the so-called "bullwhip effect" occurred.¹⁹ The massive upsurge in strong end-market demand made it impossible for suppliers, container ships, railcars, and trucks to serve everyone's needs simultaneously, causing shipment delays and transportation disruptions.²⁰



The supply chain challenges are taking longer than expected to normalize, a September report by Fitch Rating stated.²¹ In November, the historic logjam of giant containerships stranded at the ports of Los Angeles and Long Beach for more than half a year's time persisted. This suggests that the availability of commodities and building materials may remain a problem well into 2022, contributing to further price increases ahead.

Both property and casualty insurance underwriters also are grappling with the effects of current inflation and worries over higher interest rates. Both factors are concerning: The high inflation of the 1970s and early 1980s, for example, adversely affected the industry, resulting in weaker underwriting performance and reserve levels.²² Rising interest rates, on the other hand, deteriorated the value of fixed income assets. If history repeats, Fitch Ratings said the industry will be "challenged" to maintain insurance pricing on pace with more volatile loss trends.²³

Undervaluation of Assets

Rising costs of construction materials and labor at a time of higher inflation strongly suggests that asset replacement costs are presently undervalued in property underwriting models, resulting in inadequate rates. Inadequate consideration of asset replacement costs has an adverse effect on insurer modeling, pricing, business continuity plans, and the duration of claims adjustment and payments.

While undervaluation of assets has long been a challenge during the underwriting process, deepening the impact are current events like the increasing frequency of more severe windstorms, wildfires and floods, along with the supply chain crisis and inflation. Other factors adding to the undervaluing of asset replacement costs include demographic shifts to higher risk geographies along coastlines and in the wildland-urban interface; an aging building stock; and rising GDP in the United States, which has increased property exposure values. In November 2021, it was estimated that commercial properties were undervalued for insurance underwriting purposes by more than 30 percent.²⁴

One part of the problem is that insureds often misunderstand valuation on a replacement cost basis. The replacement value of a building, for example, is not its market value, meaning the price the building may command in the current real estate market. It also isn't the property's book value, meaning the carrying value on the balance sheet for accounting purposes. Rather, it is the cost the insured will incur to rebuild or replace the building with materials of like kind and quality.

The building's contents, including furniture, fixtures, machinery, inventory, and other items that are not physically part of the building, also require more diligent valuations and proper reporting by insureds and brokers during the underwriting process to ensure there is sufficient coverage in the event of an insurance claim.



The insured is responsible for reporting their property and its value to their insurance broker or agent. As the insured's expert consultant, the broker or agent must ensure that the values reported represent the accurate present cost to repair and/or replace the building and its contents with materials of like kind and quality. To determine proper replacement cost valuations, cost indexes that compare property and content costs across several quarters or years are available from various firms in the market.

While it is always important for insureds to report accurate property values to their insurers, due to the supply chain crisis, it is imperative for insureds to also communicate their current inventory fluctuations to their insurers, as well as each building's characteristics like square footage, number of stories, and whether it comprises a parking garage.

These varied considerations also are important for the smaller percentage of insureds that purchase commercial property coverage which utilizes valuation on an actual cash value basis, as opposed to a replacement cost basis. In the context of commercial property insurance, "actual cash value" is the cost to repair or replace property on the date of loss with like kind and quality materials minus depreciation. In all cases, brokers should collaborate with their clients to determine accurate values.

Added up, these complex issues are an obstacle to the ability of catastrophe models to produce optimally accurate loss projections. While the use of advanced AI and machine learning technologies has improved the estimations of property insurance losses from natural disasters, the models' forward-looking projections strain to account for the increased frequency in nonconforming weather events, seesawing damage repair costs, and longer-duration business interruptions caused by both widescale and prolonged power outages, evident in the severity of claims produced by Winter Storm Uri in Texas.

Inaccurate asset valuations provided by insureds compound these modeling challenges, because the setting of deductibles and sub-limits are based on the replacement values. In effect, asset undervaluation may result in unintended risk to the insured organization's balance sheet. Unaware of the true extent of the risk, senior management may fail to set aside enough capital to cover the organization's retained risks or may procure property insurance with insufficient coverage limits. These risks underline the importance of having proper and accurate valuations to ensure carriers are appropriately paid for the exposures they assume, assisting insurers to effectively manage their portfolio of property catastrophe risks.



What Can Be Done

While these challenges appear unique, the property insurance industry enjoys a long record of successfully addressing prior crises. For example, Hurricane Andrew in 1992, the costliest (\$15.5 billion) natural disaster in U.S. history at the time, prompted the development of the catastrophe modeling industry.²⁵ Subsequent natural disasters like hurricanes Katrina in 2005, Ike in 2008, Sandy in 2012, and Harvey, Irma and Maria in 2017 caused hundreds of billions of dollars in insured property losses.²⁶ The industry is now at a crossroad, where crucial decisions must be made. In making these determinations, the following considerations may be useful:

- Increasingly volatile and difficult to predict loss costs associated with the greater frequency of severe catastrophic weather events require the entire insurance ecosystem—insurers, reinsurers, catastrophe modeling firms, brokers, and risk managers—to take a harder look at these factors.
- Each party needs to examine in depth and detail how they can in their respective roles develop more accurate and near-real-time data on building condition, local drainage systems, real estate and housing development trends, access to available construction materials and local construction personnel, and other loss exposure information.
- Due to the heightened possibility of a supply and labor crunch in the aftermath of a natural disaster that causes widespread property damage in a region, risk managers and property owners may consider the value of entering into agreements with building contractors in advance to ensure the availability of construction materials and services at that time.
- To assure more comprehensive underwriting of a building's replacement value, more frequent and in-depth property damage risk appraisals from qualified sources are needed.
- Such appraisals should occur on an annual basis at a minimum and consider the impact of more frequent catastrophic weather events, potential supply chain disruptions and rising inflation in valuing replacement costs. In turn, this information gives risk managers and property owners a clearer sense of the risk their organizations can bear and how much should be transferred to property insurers and reinsurers.
- In analyzing property values, an insurer's loss control staff can be a resource. In this regard, the industry should consider upgrading loss prevention services provided to commercial property owners.
- In light of a future with more frequent and severe catastrophic weather events and related insured losses, the property insurance industry should consider providing policyholders greater support for taking certain risk mitigation measures. That support may include potential premium discounts or credits for protective measures such as improving the insulation of buildings and pipes, retrofitting storm drainage systems, and installing electrical generators for unexpected electrical outages.



- The industry also may benefit by cultivating data-sharing relationships with other industry sectors, such as energy companies, construction material providers, and technology firms offering geospatial mapping and satellite imagery services. Using data and analytics tools, insurers can assess this data to derive more accurate and real-time insights into the changing nature of commercial property insurance risks.
- Lastly, the property insurance industry needs to price for today's "new normal" in volatility to achieve an accurate, fair and adequate pricing of risk.

We're confident an industry-led approach to these myriad challenges will be to the betterment of all parties.

Bob Meyer is Executive Vice President, North America Property.

Matt Booker is Executive Vice President, Westchester Property.

Derek Talbott is Senior Vice President, Chubb Group Division President North America Property.

About Westchester

Westchester is one of the largest and most diverse excess and surplus lines commercial property and casualty insurance underwriters in the United States. Focused on the wholesale distribution channel, Westchester provides innovative specialty products for property, specialty casualty, environmental, financial lines, inland marine, product recall, small business, and programs. The business is further distinguished by exceptional financial strength, underwriting excellence, and superior claims handling expertise. Westchester is a division of Chubb, the world's largest publicly traded property and casualty insurer. With operations in 54 countries, Chubb provides commercial and personal property and casualty insurance, personal accident and supplemental health insurance, reinsurance and life insurance to a diverse group of clients. Parent company Chubb Limited is listed on the New York Stock Exchange (NYSE: CB) and is a component of the S&P 500 index. Chubb maintains executive offices in Zurich, New York, London, Paris and other locations, and employs approximately 31,000 people worldwide. Additional information can be found at: www.chubb.com



¹The Construction Association. Prices for key construction materials continue to increase in August while contractors struggle to get those products delivered on time. Sept. 10, 2021 (<https://www.agc.org/news/2021/09/10/prices-key-construction-materials-continue-increase-august-while-contractors>)

²The Washington Post, Prices climbed 7percent in December compared with last year, largest rise in nearly four decades as inflation spreads through economy. Jan. 12, 2022

³World Meteorological Organization. State of Climate in 2021: Extreme events and major impacts. Oct. 31, 2021.

⁴NOAA National Centers for Environmental Information, Billion Dollar Weather and Climate Disasters, Oct. 8, 2021.

⁵E.g., Swiss Re, Global Catastrophe Half-Year 2021 Report.

⁶Guy Carpenter (Marsh & McLennan). Ida Drives Big Share of 3Q Insured Losses. October 8, 2021.

⁷Business Insurance. "Flurry of litigation likely in wake of Texas storm power outages. Feb. 23, 2021.

⁸Ibid.

⁹New York Times. "After the Flood, It's Not Just `About the Coming Back." Nov. 8, 2021.

¹⁰Guy Carpenter (Marsh & McLennan). Ida Drives Big Share of 3Q Insured Losses. October 8, 2021.

¹¹AccuWeather. Death toll climbs from one of the costliest tornado events in history. Dece,ber 14, 2021.

¹²The Mercury News (citing Wells Fargo analysts). "Lumber prices soar." May 17, 2021.

¹³Fortune. "Steel Prices are up 200%." July 8, 2021.

¹⁴CNBC. "Toll Brothers CEO says lumber prices coming back down to offset some other cost increases." Aug. 25, 2021.

¹⁵Commercial Property Executive (citing JLL Construction Outlook). "Construction Costs Will Keep Rising. Here's How much." Oct. 7, 2021.

¹⁶Florida Realtors. "Lumber Prices Plummet—But Other Building Costs Soar. Aug. 27, 2021.

¹⁷ABC News. "The Construction Industry Needs to Hire and Additional 430,000 Craft Professionals in 2021." March 23, 2021.

¹⁸CNN Business (citing Associated Builders and Contractors). "America desperately needs 1 million more construction workers." July 11, 2021.

¹⁹Chief Executive. How companies are taking on supply chain disruption. Sept. 13, 2021.

²⁰New York Times. "How the Supply Chain Broke, and Why It Won't be Fixed Anytime Soon." Oct. 22, 2021.

²¹Fitch Ratings. "Ongoing Supply-Chain Issues to Constrain US Building Products Sales." Sept. 17, 2021.

²²Fitch Ratings. Inflation, Rising Rates Fuel Downside Risk for US P/C Insurers. Oct. 28, 2021.

²³Ibid.

²⁴Inside P&C. Insured values in the property market still 30 percent to 50 percent undervalued: lcat CUO. Nov. 23, 2021.

²⁵Insurance Information Institute. Hurricane Andrew and Insurance: The Enduring Impact of an Historic Storm. August 2012.

²⁶Wikipedia. List of costliest Atlantic hurricanes. Dec. 21, 2021.

Insurance provided by Westchester Fire Insurance Company and its U.S.-based Chubb underwriting company affiliates. Chubb is the marketing name used to refer to subsidiaries of Chubb Limited providing insurance and related services. For a list of these subsidiaries, please visit our website at www.chubb.com. Westchester, 11575 Great Oaks Way, Alpharetta, GA 30022.

The information contained in this document is intended for general informational purposes only and is not intended to provide legal or other expert advice. You should consult knowledgeable legal counsel or other knowledgeable experts as to any legal or technical questions you may have. Neither Westchester nor its employees or agents shall be liable for the use of any information or statements made or contained in any information provided herein. The opinions and positions expressed in this report are the authors' own and not necessarily those of Westchester.

©2022 01/2022

Westchester[®]
A Chubb Company

