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Insurance Valuation TODAY

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INSIDE

EXECUTIVE SUMMARY

In this issue of *Insurance Valuation TODAY*, we cover topics of interest for insurance professionals, risk managers and others who need to determine insurable values and replacement costs for real and personal property. We are excited to bring you other featured articles that discuss the insurance appraisal challenges for transportation systems and hubs and ransomware landscape for risk managers.

Included in this issue is a cost trend update providing construction and equipment cost indices for the U.S., UK, Italy, Brazil, Canada and Spain that can be applied to building and equipment historical costs to determine indicators of replacement costs. These indices are monitored, gathered, and analyzed in a retrospective manner. Given the current economic environment, the impacts on both construction and equipment costs are unknown. We will continue to monitor the indices and expect to include new indicators in upcoming cost trend updates.

We hope you find this newsletter useful, and we encourage you to contact us if you require additional support.

We are also delighted to inform you that Duff & Phelps has rebranded as Kroll. This marks the beginning of a new chapter for Kroll that reflects our market leadership across borders and disciplines, and embraces our proprietary data, technology and insights to create value and impact for our clients and communities.

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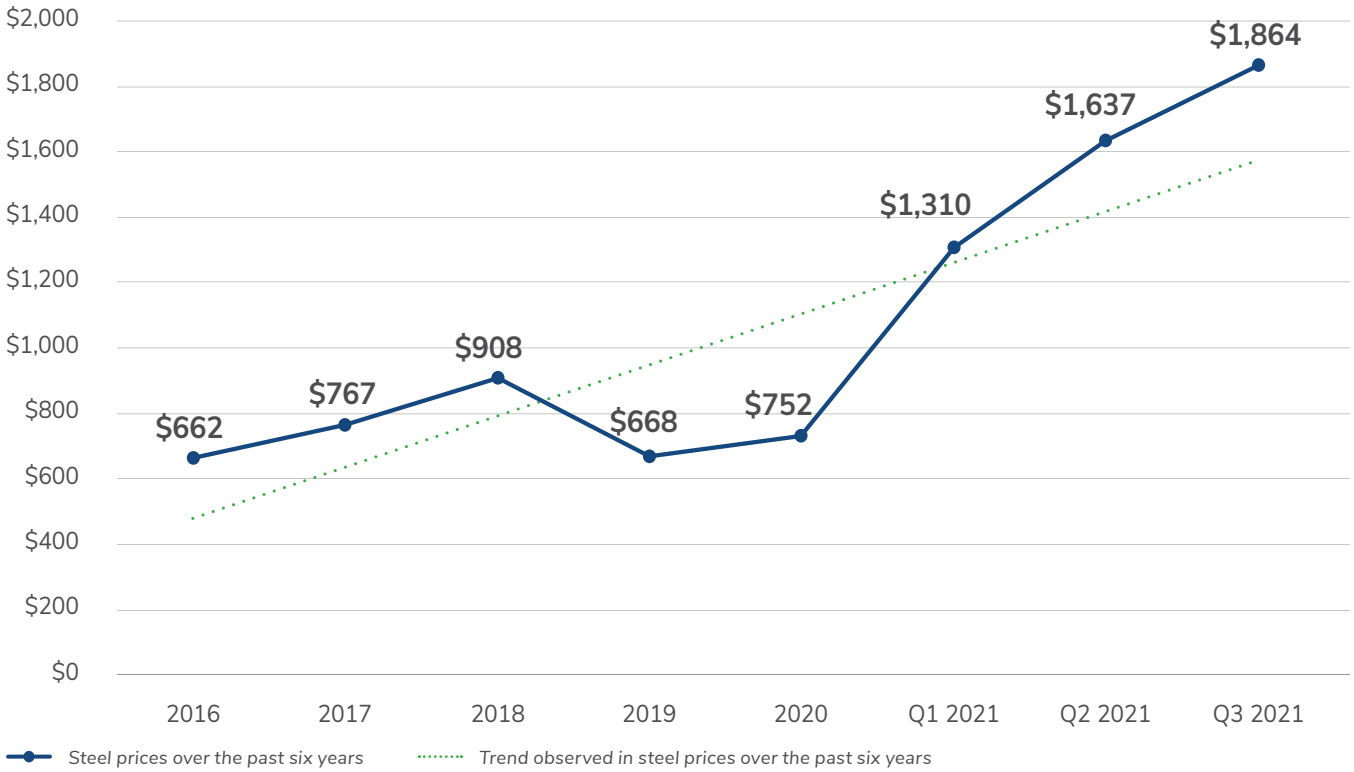
U.S. Cost Trend Update—December 2021

Construction cost indices

Over the last 18 months, the U.S. and global economies have witnessed drastic changes. For a period, there was minimal production, which led to an increased backlog of orders for goods and services. This had a long-lasting impact on the overall supply chain of goods, particularly given the long-term need for qualified workers. Following the shutdowns, we have seen an increase in demand, especially due to the significant backlogs. More recently, we have also observed larger than typical inflation, rising energy costs and numerous other factors impacting the economy. All these pressures have led to significant increases in construction costs and volatility when compared to increases in recent years.

These various influences are heavily impacting both materials and labor. The four major national construction cost indices we monitor are ENR, Marshall & Swift, RSMeans and FM Global. Because of the lagging nature of indices (they represent actual costs at a point in time versus projections of costs), they are always based on data from trailing months. When utilizing indices, it is important to not jump between different sources year-to-year. Each index utilizes its own basket of goods for materials and labor, and may include data from different periods of time. While each index will generally proceed in the same direction over time, in the short term some indices will see larger increases than others and will catch up at later points in time. Steel prices, which are leading indicators of construction costs over time, saw an increase of approximately 148% over the past year.[1]

NORTH AMERICA STEEL PRICES



Sources

1. MEPS (International), Ltd. All Carbon Steel Products Composite Price and Indices

Lumber has increased much more modestly in the last 12 months, at a rate of 34%. However, during that period, it also peaked at an increase of 99% during May 2021 (compared to May 2020) before coming back down to current levels.[2] This means that, for a good portion of time in late 2020 and into 2021, lumber prices were quite high and had an impact on construction costs; more recently, they began creeping back up. Additionally, for year-to-date in 2021, general inflation is estimated at 5.74%, and overall energy prices have risen 30% in the trailing 12-month period.[3] These various factors have had a significant impact on materials (and labor) costs, which are utilized in every construction project.

Index	2017	2018	2019	2020	2021 Q3	2021 ANNUALIZED
ENR–Building Cost Index[4]	3.30%	3.30%	1.74%	3.96%	12.15%	13.94%*
FM Global–U.S. Industrial Buildings Average[5]	1.20%	5.20%	1.73%	1.42%	5.11%	18.4%*
RSMeans–30-City Average[6]	4.00%	5.50%	2.05%	1.71%	11.88%	15.83%
Marshall & Swift–U.S. Average[7]	+2.7 to +3.7%	+3.2 to +6.0%	+0.0 to +1.3%	+3.0 to +6.1%	+12.0% to +18.4%	+16% to +24.53%

Note: The range of change shown by Marshall & Swift represents different classes of construction.

Sources

2. https://tradingeconomics.com/commodity/lumber

3. *U.S. Bureau of Labor Statistics, Employment Cost Index, Wages and Salaries for Private Industry Workers in Construction, 12-Month Percent Change*

4. *Engineering News-Record, Monthly Construction Economics Report*

5. *FM Global, Industrial Cost Trends*

6. *RSMeans, Construction Cost Indices, 30-City Average*

7. *Marshall & Swift/Boeckh, Marshall Valuation Service, Quarterly Cost Indices*

** This is the actual full-year trend for 2021.*

Equipment Cost Indices

While the construction cost indices had similar results among the various sources, the equipment cost indices had a much wider spread. In particular, Marshall & Swift/Boeckh represents an increase almost three to four times the next closest source.

As mentioned at the beginning, each aggregator of data utilizes different baskets of goods and different timeframes for indexing. These numbers should align much closer over time, but in short periods of time, particularly times of significant volatility, we see variances such as these:

Index	2017	2018	2019	2020	2021 Q3	2021 ANNUALIZED
Marshall & Swift/Boeckh–Industrial Equipment Avg.[7]	2.60%	4.80%	0.77%	2.54%	16.71%	19.61%*
U.S. Bureau of Labor Statistics–Producer Price Index for Finished Goods, Capital Equipment[8]	0.90%	2.70%	1.13%	0.95%	4.92%	6.56%
FM Global–Industrial Equipment Composite[5]	1.20%	2.80%	1.93%	1.52%	2.24%	6.72%*

Take care when selecting an index to track the rate of cost change for your company's capital equipment. The three indices in the table above all track average capital equipment cost change percentages and indicate the differences that have occurred over the past four years. Developers—as well as insurance brokers, underwriters and valuation consultants—can all recommend appropriate indices for your facilities. Select one that represents your capital equipment as closely as possible; there are significant differences between the average indices shown here and specific industrial-sector indices.

Always remember that cost indices are just average indicators of change; they are not absolutes, and there is no average building or average assemblage of equipment. After five to seven years, you should establish a new replacement-cost basis with a qualified valuation consultant.

Sources

5. FM Global, Industrial Cost Trends

7. Marshall & Swift/Boeckh, Marshall Valuation Service, Quarterly Cost Indices

8. U.S. Bureau of Labor Statistics, Producer Price Index for Finished Goods—Capital Equipment

** This is the actual full-year trend for 2021.*

International Cost Trend Update

United Kingdom

Building costs increased this year by 4.1% due largely to the current cost of building materials, which show provisional increases of 19.9% as of October 2021. Tender prices for general building work have also risen by 6.7% since this time last year. While building costs are expected to rise, we forecast the increment to decline going into 2022. However, with significant uncertainty still present due to COVID-19, these indexes are likely to be volatile and should be treated with caution.

Machinery and equipment across all sectors have seen an average increase of 5.7% when annualized for 2021. High demand coupled with raw material shortages have led to extremely high increases in metal forming machinery and machine tools, which are estimated to equate at a 24.1% increase through 2021. Food, beverage and tobacco processing has been more stable with an increase between 2.25% to 3% over the year.

Index	Source	2017	2018	2019	2020	2021 Q3	2021 ANNUALIZED
BUILDINGS							
Building Cost Index	BCIS Indices Tables	4.0%	3.3%	1.6%	1.8%	1.4%	4.1%
Tender Price Index	BCIS Indices Tables	8.9%	4.1%	0.9%	-1.5%	6.7%	6.7%
M&E							
Machinery & Equipment	ONS Producer price inflation time series	1.3%	1.0%	1.3%	0.3%	4.2%	5.7%
Metal Forming Machinery & Machine Tools	ONS Producer price inflation time series	5.7%	3.6%	-0.8%	4.9%	17.6%	24.1%
Food, Beverage & Tobacco Processing	ONS Producer price inflation time series	5.4%	0.0%	0.7%	1.3%	2.2%	3.0%

Italy

In the last part of 2021, the strong growth of producer prices in industry continued, spread to almost all sectors, and was more intense on the domestic market. On an annual basis, as noted by the Italian National Institute of Statistics, prices continued to accelerate (+ 13.3% in September, from + 11.6% in August), driven above all by persistent increases in energy and intermediate goods. In September, trend increases were recorded for all manufacturing sectors on all three reference markets (domestic market, euro area, non-euro area), except for pharmaceuticals. The most marked trend increases concern coke and refined petroleum products (+ 37.3% domestic market, +57.2% non-euro area); metallurgy and manufacturing of metal products (+ 21.9% domestic market, +32.8% euro area, + 24.3% non-euro area); chemical products (+ 11.9% domestic market, + 11.8% euro area, +10.5% non-euro area); wood, paper and printing (+ 9.6% domestic market); and manufacturing of computers, electronics and optics products (+9.5% non-euro area). In September, construction producer prices for residential and non-residential buildings showed zero change on a monthly basis and grew by 4.9% on an annual basis. The prices of roads and railways decreased by 0.1% in economic terms while they grew by 4.7% in trend terms.[1]

Index	Source	2017	2018	2019	2020	2021 Q3	2021 ANNUALIZED
BUILDINGS							
Building Cost Index - Residential Building	Italian National Institute of Statistics Producer and Construction Cost Indices	0.6%	1.9%	0.0%	1.1%	3.7%	6.5%
Building Cost Index - Industrial Building	Italian National Institute of Statistics Producer and Construction Cost Indices	2.5%	2.3%	-1.3%	1.5%	8.9%	15.8%
M&E							
Machinery & Equipment	EuroStat Producer prices in industry, domestic market, Monthly	0.8%	2.4%	0.3%	0.7%	2.2%	3.8%
Metal Forming Machinery & Machine Tools	EuroStat Producer prices in industry, domestic market, Monthly	1.8%	0.0%	1.1%	-0.6%	2.1%	3.7%
Electrical Machines & Materials	EuroStat Producer prices in industry, domestic market, Monthly	0.3%	0.6%	-0.1%	1.3%	4.5%	7.9%

Sources

1. *ISTAT, Italian National Institute of Statistics*

Brazil

The macroeconomic scenario in Brazil is quite challenging for the growth of civil construction in the country. Both inflation and the economy's basic interest, the Selic rate, remained on the rise. The first projections indicate an increase of 8.35% by the end of 2021—that is, 3.10 percentage points above the upper limit of the 3.75% target set for the year. The Selic rate on its turn—and to compensate for inflationary pressure—has already reached 6.25% per year, with an uptrend for the coming months. The projections draw a Selic scenario at 8.25% at the end of 2021.

However, the construction industry sees a horizon with a very positive bias ahead, reflected in the apparent control of the pandemic, measures of relaxed restrictions and reactivation of the economy, demands in the construction area (real estate and renovation) and greater credit incentives from banks. The main player in the real estate financing market, Caixa Econômica Federal, took a stand against the increase in the Selic rate and announced a reduction in its interest rates for financing. As a result, as of October 18, Caixa's minimum rate for granting real estate credit will be 2.95% per year plus savings income (SBPE). Bear in mind that, in August 2021, the minimum rate that Caixa charged was 6.25%.

Nevertheless, it is important to keep an eye out for something that can be both positive and negative for the industry. During the pandemic, the chain of products, inputs and equipment for civil construction suffered, and still suffers greatly, from the lack of materials. If the demand heretofore held is released at once, material shortages could be one of the consequences, pushing prices even higher.

We can add that many of the raw materials used are imported from and directly influenced by the international market of commodities. According to Instituto Aço Brasil, almost all inputs in the sector increased in price, causing a strong impact on production costs in the steel industry, especially ore of iron and scrap—strategic raw materials that increased in price from January 2020 to June 2021 by 172.7% and 157.7%, respectively. The entire political-economic scenario of uncertainties generated by the insecurity of the upcoming presidential elections in 2022 and non-approval of the Tax Reform contribute to the financial market's great volatility and speculation, reflecting the escalation of the dollar rate.

Finally, the Brazilian Chamber of Construction Industry's study Economic Performance of the Construction Industry for the 2nd Quarter of 2021 projects the sector's growth this year from 2.5% to 4%, the largest growth in the sector in eight years.

In addition, the political and economic uncertainties linked to the pandemic period, specifically the scenario of general elections that will take place in 2022—together with increases in the costs of iron, steel and raw materials in general and devaluation of Brazilian currency in the last year—directly impacted economic indices related to machinery and equipment.

Index	Source	2017	2018	2019	2020	2021 Q3	2021 ANNUALIZED
BUILDINGS							
Building Cost Index	Brazilian Institute of Geography and Statistics, Producer Prices	4.3%	3.8%	4.2%	8.8%	11.7%	16.0%
M&E							
General Price Index	Brazilian Institute of Geography and Statistics, Producer Prices	-0.5%	7.5%	7.3%	23.1%	16.0%	21.9%
BR_IBGE_ME	Brazilian Institute of Geography and Statistics, Producer Prices	4.2%	8.7%	4.5%	13.5%	17.9%	39.0%
BR_IBGE_CI	Brazilian Institute of Geography and Statistics, Producer Prices	5.0%	6.7%	3.9%	21.6%	13.3%	28.5%
Mineral Coal	Brazilian Institute of Geography and Statistics, Producer Prices	2.4%	2.2%	5.8%	3.7%	9.5%	71.9%
Metallic Minerals	Brazilian Institute of Geography and Statistics, Producer Prices	-10.5%	17.6%	26.7%	101.1%	16.8%	154.0%

Spain

After a 14.5% contraction in 2020, Spanish construction output is forecast to grow only about 0.5% in 2021, but to rebound strongly by 13% in 2022. Residential building and civil engineering are expected to drive the recovery. However, after increments over the past 12 months, businesses' profit margins have started to deteriorate due to higher commodity, transportation and energy prices.

The estimated annual inflation of the Consumer Price Index (CPI) in November 2021 was 5.6% according to the flash indicator that the Instituto Nacional de Estadística prepared.

This indicator provides a preview of the CPI which, if confirmed, would mean an increase of two-tenths in its annual rate since this variation was 5.4% in October. The advanced figure for November, 5.6%, would be the highest level of CPI since September 1992.

In this behavior, the increase in food prices stands out, and to a lesser extent fuels and oil prices for personal vehicles and gas compared to the decreases recorded in November of last year.

For its part, the estimated annual variation rate of underlying inflation (general index, excluding non-processed food and energy products) increases three-tenths to 1.7%, which is almost four points below that of the general CPI.

Index	Source	2017	2018	2019	2020	2021 Q3	2021 ANNUALIZED
BUILDINGS							
Building Cost Index	Spain National Statistics Institute, Producer Price Index, Construction Cost Index monthly bulletin	1.9%	2.7%	-0.9%	1.4%	3.5%	7.1%
M&E							
General Price Index	Spain National Statistics Institute, Producer Price Index	1.3%	2.6%	0.3%	-0.9%	9.4%	12.7%
Energy	Spain National Statistics Institute, Producer Price Index	1.5%	8.2%	-8.8%	-2.0%	51.2%	73.6%
Industrial Consumer Goods	Spain National Statistics Institute, Producer Price Index	1.3%	2.0%	2.0%	-1.3%	1.0%	1.4%

Canada

"Wood, plastics, and composites continued to be the largest contributor to the price change for residential building construction. Increases in the price of plastic resin attributed to manufacturing capacity disruptions from severe weather events earlier in 2021, also contributed to the increase of residential building construction costs. The next largest contribution was the increased cost of concrete and its associated components, including reinforcing steel. The cities with the largest year-over-year change in residential building construction prices in Q3-2021 were Calgary (+34.4%), Ottawa (+28.8%) and Edmonton (+24.7%).

Concrete, followed by metal fabrication products, contributed the most to the change in the cost of construction of non-residential buildings. Contractors cited that for both types of products, recent increases in raw steel prices are attributable to supply constraints that include longer delivery times and shorter price guarantees. Increases in labour costs, attributed to the skilled trade shortages across the sector, were also noted by contractors. The cities with the largest year-over-year change in non-residential construction building costs in Q3-2021 were Ottawa (+13.6%), Toronto (+11.6%) and Montréal (+9.7%).

Primary ferrous metal products (+72.7%) and energy and petroleum products (+72.6%), followed by the fabricated metal products and construction materials (+33.4%) led the year-over-year gain in the IPPI in October 2021. After record gains in 2020, the prices for lumber and other wood products were 0.2% lower compared with the last year. Motorized and recreational vehicles, mainly driven by aircraft, aircraft engines, parts and other aerospace equipment did not post any year-over-year change that was partially influenced by the depreciation of the US dollar against the Canadian dollar."

Index	Source	2017	2018	2019	2020	2021 Q3	2021 ANNUALIZED
BUILDINGS							
Residential (apartment, house, townhouse)	Statistics Canada, Building construction price indexes		5.2%	2.3%	6.4%	17.1%	19.2%
Non-residential (commercial, industrial, institutional)	Statistics Canada, Building construction price indexes	2.7%	4.9%	2.2%	1.2%	8.2%	9.2%
Industrial buildings	FM Global Cost Trends - Industrial Buildings	1.0%	2.6%	4.5%	1.0%		
MACHINERY & EQUIPMENT							
Industrial product price index (IPPI), Total	Statistics Canada, Industrial product price index	2.4%	2.1%	0.5%	2.1%	13.4%	18.3%
Industrial product price index (IPPI), excl. energy and petroleum products	Statistics Canada, Industrial product price index	1.0%	3.0%	-0.2%	5.0%	10.9%	14.8%
Machinery & equipment price index (MEPI), domestic	Statistics Canada, Machinery and equipment price index	-0.2%	2.0%	0.5%	0.6%	-0.8%	-1.3%
Machinery & equipment price index (MEPI), imported	Statistics Canada, Machinery and equipment price index	-3.4%	3.6%	0.9%	-0.7%	-3.8%	-6.2%

Sources:

FM Global (Canada Cost Trends, Industrial Buildings—Canadian Average)

M&S, Marshall & Swift Valuation Service (Canadian National Average—Comparative Cost Multipliers)

StatsCan, Statistics Canada (Building Construction Price Indices—Composite trends based on 11 census metropolitan areas)

StatsCan, Statistics Canada (IPPI by North American Product Classification System)

StatsCan, Statistics Canada (Machinery and Equipment Price Index [MEPI], by industry of purchase)

Insurance Appraisal Challenges for Transportation Systems and Hubs

Transportation hubs are not the "average" insurance occupancy. They evolve over time as transportation needs change with demographics. They are renovated, added to, and sometimes completely replaced or rebuilt. Thus, tracking changes for their current replacement costs can be challenging, and different types of transportation systems/hubs present different challenges.

Airport facility upgrades are typically achieved by rebuilding rather than renovating to avoid the constraints of existing rail and road infrastructure. Major projects are currently underway throughout the U.S. In fact, in 2021 the Federal Aviation Administration (FAA) identified six proposed new airports, along with 3,304 existing public-use airports, that are pushing spending estimates to an estimated $43.6 billion over the next few years, which is an increase of $8.5 billion over the previous estimate.[1]

Many grand railroad stations built in the late 19th and early 20th centuries (e.g., 30th Station in Philadelphia; the Union Stations in Washington, D.C. and Denver, Colorado; and Grand Central Station in New York) have been restored to their former glory. These hubs now act as advertising for the transportation systems they serve as well as sources of prestige for their cities. Modern facilities, such as food courts, bars, and shopping malls, further enhance today's integrated transportation hubs, many of which serve train, subway, light rail, and bus systems. Tracking insurable costs when historic buildings undergo so many renovations, restorations and additions is not possible, especially considering that renovations may not add value—they may simply cure physical depreciation. Adding the cost of renovations to the base cost of a historical structure will exaggerate its insurable value. Also, the cost to renovate a building can exceed the cost to reproduce it new when all aspects of renovation costs, including the preparation/demolition costs, are considered.

Transportation system risk managers face the same basic challenge as any other risk manager—maintaining an accurate property listing and current insurable values for buildings, contents and infrastructure. However, various unique issues affect insurance appraisals of transportation hubs/airports. Here, we address the steps in the appraisal process and some related challenges.

Determine the scope of the appraisal

The first step is determining inclusions and exclusions. Transportation hubs encompass numerous assets, including:

- Major structures—parking, terminals, and concourses
- Minor structures—maintenance, fire/police, glycol facilities, power generation, waste/storm water treatment, electrical substations, hangars, etc.
- Movable equipment
- Land improvements—lighting, fencing, signage, canopies, covered walkways, etc.
- Infrastructure—runways, aprons, roads, rail track and railbed, bridges, runway lighting, traffic lights, transformers, fuel farms, catenary, etc.

However, the insurance appraisal process does not include the research and attestation of the ownership of the assets to be appraised or the related insurance coverage. Hence, it is critical for management of the hub/airport to determine the ownership of assets, their insurance coverage, and which assets should be subject to the appraisal process. This can cover multiple entities, including:

- Federally owned property, such as:
  - FAA control tower

Source:

1. https://www.constructionbusinessowner.com/project-management/trends-air-transportation-deliver-diverse-contracting-opportunities-2021

  - Transportation Security Administration screening area/equipment
  - Customs and immigration areas/equipment
- Property owned or leased by other parties, including:
  - Amtrak/regional/local rail operators
  - Airlines
  - Interstate/local bus services
  - Federal/state/local governments
  - Restaurants/bars/retail
  - Rental car companies
  - Hotels

Request data

Once the scope of the appraisal is determined, the valuation consultant submits a requests for data, such as the following:

- Statement of insurable values
- Fixed-asset listing
- Current/planned or recently completed capital project cost data
- Access to blueprint/CAD files

Perform on-site inspection

Professionals conducting the on-site inspection will typically require security clearance and badges (which may involve U.S. Customs and Border Protection depending on access requirements), as well as fingerprinting and safety training certification to access the facilities, on both the land and air sides. Logistics for the inspection will include arranging for escorts and access to controlled areas. Due to the logistics involved with an on-site inspection, particularly at an international airport, the amount of lead time to begin a project can easily be a few months at a minimum.

During on-site inspection of the buildings, the appraiser will calculate each building's area and perimeter by measuring the structure or through analysis of the as-built blueprints; identify and record data of the major construction components (type of structure, walls, roof, etc.); determine the construction class; record data of major service systems (electrical, plumbing, security, elevators, heating, ventilation, cooling, etc.); photograph the building; and record the GPS coordinates as well as any requested secondary construction occupancy protection exposure (COPE) data.

The appraisal of personal property/contents is typically segregated into specific areas at hubs and airports, and can include:

- Ticket counters
- Gates
- Jetways
- Airline offices/clubs
- Baggage claim

On-site transportation systems can include:

- People movers (moving walkways)
- Elevators/escalators
- Trains/trams
  - Underground
  - Ground level
  - Elevated

The above items can also be treated as special features of buildings because they are built-in and have become "fixtures" without which the building could not perform its intended function.

Often the scope of the appraisal will include transportation system properties beyond the main hub, including:

- Stations—commuter rail stations, above- and below-ground transit system stations, and simple suburban stations (often nothing more than asphalt grade-level platforms, but may also include historic stations)
- Maintenance yards
- Administrative offices and control centers

- Parking decks
- Tunnels and bridges

Determine insurable values

Once the on-site portion of the engagement concludes, the challenge becomes the valuation of these specialized structures and their associated equipment. Factors to consider when concluding insurable values include:

- Buildings that do not fit standard software models
- Elaborate designs and specialized materials
- Working within the constraints of an operating transportation complex
- Job site security
- Logistics for confined urban locations

Most of the personal property (equipment) is also customized; transportation hubs feature high-value assets that require specialized research, including baggage handling, security systems, system control centers, training simulators, vehicle wash stations, passenger communications/annunciators, ticketing systems, signaling systems, people movers (including moving walkways and guided vehicles), and vehicle/rolling stock spare parts.

Conclusion

Transportation systems and hubs are high-value occupancies—typically in the billions of dollars. Determining their insurable values requires technical expertise and experience with similar occupancies. Our insurance valuation professionals can help you review your current values and recommend a structured property insurance appraisal program to keep your critical, high-value assets adequately insured.

The 2021 Ransomware Landscape for Risk Managers (Q&A)

David Klopp, who served as a managing director in Kroll's Cyber Risk practice from 2018 to 2022, spoke at the Pan-Asia Risk & Insurance Management Association's Confident Response Series 2021. The series aims to fine-tune incident response preparedness and help risk managers understand the latest tactics, techniques and procedures from the most successful cybercriminals, leading to deeper collaboration with business partners and mitigation of technical, legal and reputational risks.

The first session, entitled "Ransomware Untangled," dove into the realities of responding to a ransomware attack and was held in collaboration with cyber insurance expert Andrew Taylor from Chubb. Together, David and Andrew covered the ramifications of data theft and extortion schemes, the challenges of a third-party attack reaching a firm, and the efficacy of ransomware preparedness assessments.

Following are some of the crucial Q&As from the session:

Q: What are some of the most appalling mistakes that you've seen clients make after ransomware incidents and things that risk managers should look to avoid doing?

David: Right after a ransomware event happens, businesses generally think about how to restore the data immediately; by doing so, they generally lose valuable digital evidence. Incident responders should get engaged straight away to start preserving digital evidence that will help understand how the attack was executed. Evidence is often lost in the process of restoring.

The other part is when the crisis management team is unable to remain calm, they end up creating another crisis. Finally, when it comes to regulatory reporting, ensure you are reporting at the right time. If clients report too early, they unnecessarily start a very strict timeline to adhere to, which adds to the crisis.

Q: So, when you talk about remaining calm, I guess that's also incredibly important in these situations, do you think that comes down to the preparedness in the organization?

David: Preparing, doing simulations and tabletop exercises are extremely helpful in remaining calm. When we test policies, procedures, the escalation call tree, what we're really checking is whether it is going to work, and if the right messaging is getting across to all the parties. When an incident happens, it's not just an IT problem, it's a business problem. This then boils over to involve the executive-level team, legal team, communications team, etc. Risk managers are generally better suited to take the central lead for understanding the overall incident risk as IT or the internal cybersecurity team would primarily look at the incident with a more technical lens.

Andrew: From an insurer's perspective, we're seeing a shift in mindset among companies— from perceiving cyber incidents as only an IT issue to wanting to create a framework around cyber incidents and response[s]. Organizations that do not have a centralized response process are generally less prepared to respond, which can lead to internal chaos. It is also important to take a stance upfront about making ransom payments as it helps create a more focused and immediate mitigation response, which is typically better and more cost-efficient.

Q: Regarding attacks that gain entry through virtual private networks, if we use a third party, how do we ensure their controls are safe, or do we demand more pen testing or risk control reports?

David: If you're in the early stages of engaging a third party, require them to allow you to do a cyber risk assessment as part of your due diligence. Part of that risk assessment would be looking at their current controls. It may also involve an external vulnerability scan of the third party's environment to see if they have any glaring gaps in their security

at this point. And then, when crafting this contract with a third party, you're able to factor in the risk exposure and ensure that the third party will keep up the security controls as well as cooperate with any incident investigation.

Q: Over the last 12 months, of course, it goes without saying that pretty much everyone's been working from home and relying on more technology. So, have you seen any differences or any increase in cyber events, etc.? Have you seen a shift in any way, given obviously, the increase in reliance on technology?

Andrew: Looking at the various reports from cyber security firms, the cyber events seem to be always increasing and so is the threat. We are seeing governments changing legislation to force organizations around the world to make public when they've been breached or have lost confidential information. Even with increased legislation, there's still a sense of reluctance or embarrassment among organizations that have been compromised to disclose the incident openly and quickly.

David: And I think from an attack vector perspective, I mean, we continue to see phishing as the number one attack vector, which will mean the next part of your series about email controls is going to be very appropriate to trying to reduce that risk. But definitely within the last year, we saw a shift to focusing a lot on remote access technologies as more and more workers were forced to work from home. So, yes there was a bit of a shift there.

Q: Do you think that as an industry, whether it's risk managers, insurers, etc., we've done a better job of closing that gap over the last couple of years? Or do you think that gap is still there, and we're always just sort of trying to run towards it?

David: The attackers continue to adapt. They find new holes that aren't patched yet, and they exploit them immediately. So, it's always a moving target. A key change has been—there's a lot more attention on this now.

Andrew: I would agree. I think we've seen some very large movements towards greater cyber resilience, but we're still not seeing the shift completely for organizations to build an internal governance structure and owning this enterprise-wide issue. To David's point, we're seeing attackers constantly evolve and look for new ways to compromise networks or gain more money out of the attacks. While the industry is playing a little bit of a catch-up game, I think it's no different from many other risks that we face. As technology advances, we need to also change the way we apply risk management principles to manage those exposures. So, we're getting better, and we are slowly catching up, but sometimes it feels like we are playing whack-a-mole with threat actors as we continue to uncover new compromises and new attack strategies.

Untangling Ransomware

As threat actors continue to attack businesses with ransomware at an alarming rate, the increasing value of having a solid incident response (IR) plan that's periodically tested cannot be overstated. Companies must be ready to act swiftly and decisively to detect the threat, respond and recover while limiting business impact and reputational risk. A third-party assessment of your IR plan can ensure all necessary roles, responsibilities, protocols, communication plans and documentation have been accounted for, and regular tabletop exercises not only test if the plan works, but also give your teams the practice necessary to be comfortable during a real crisis. In addition, deploying security solutions in your environment, such as a managed detection and response (MDR) service, can greatly reduce the risk of ransomware by identifying an attack in early stages before data encryption begins.

In the unfortunate event you are faced with a ransomware incident, Kroll has outlined best practices for ransomware recovery, including details on system isolation, evidence preservation, backup restoration and law enforcement reporting.

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