Escalating Material Costs, Supply Chain Disruptions and Work-Force Shortages: Coping With Construction's "New Normal"

Richard Reizen
Chair, Construction Practice
Hannah Batsche
Associate, Construction Practice
September 17, 2021

gould+ratner

Introduction to G&R Construction Group

- Gould & Ratner represents developers and owners throughout the United States in construction litigation and transactional matters involving virtually all types of projects, including:

  - High-rises
  - Hotels
  - Commercial office centers
  - Retail developments
  - Government buildings
  - Residential communities
  - Multifamily developments
  - Manufacturing and industrial facilities
  - Convention centers
  - Retirement communities
  - Hospital and healthcare facilities
  - Alternative energy projects such as wind and solar farms, and data center projects, including cryptocurrency mines.

Introduction (cont.)

- Our involvement in our clients' construction matters begins well before ground is broken
- By counseling our clients in preconstruction matters, we can help prevent problems from occurring, or minimize the consequences of any problems that can develop early in the project
- Our technical knowledge and practical construction experience also enables us to provide counsel during the construction phase of projects.

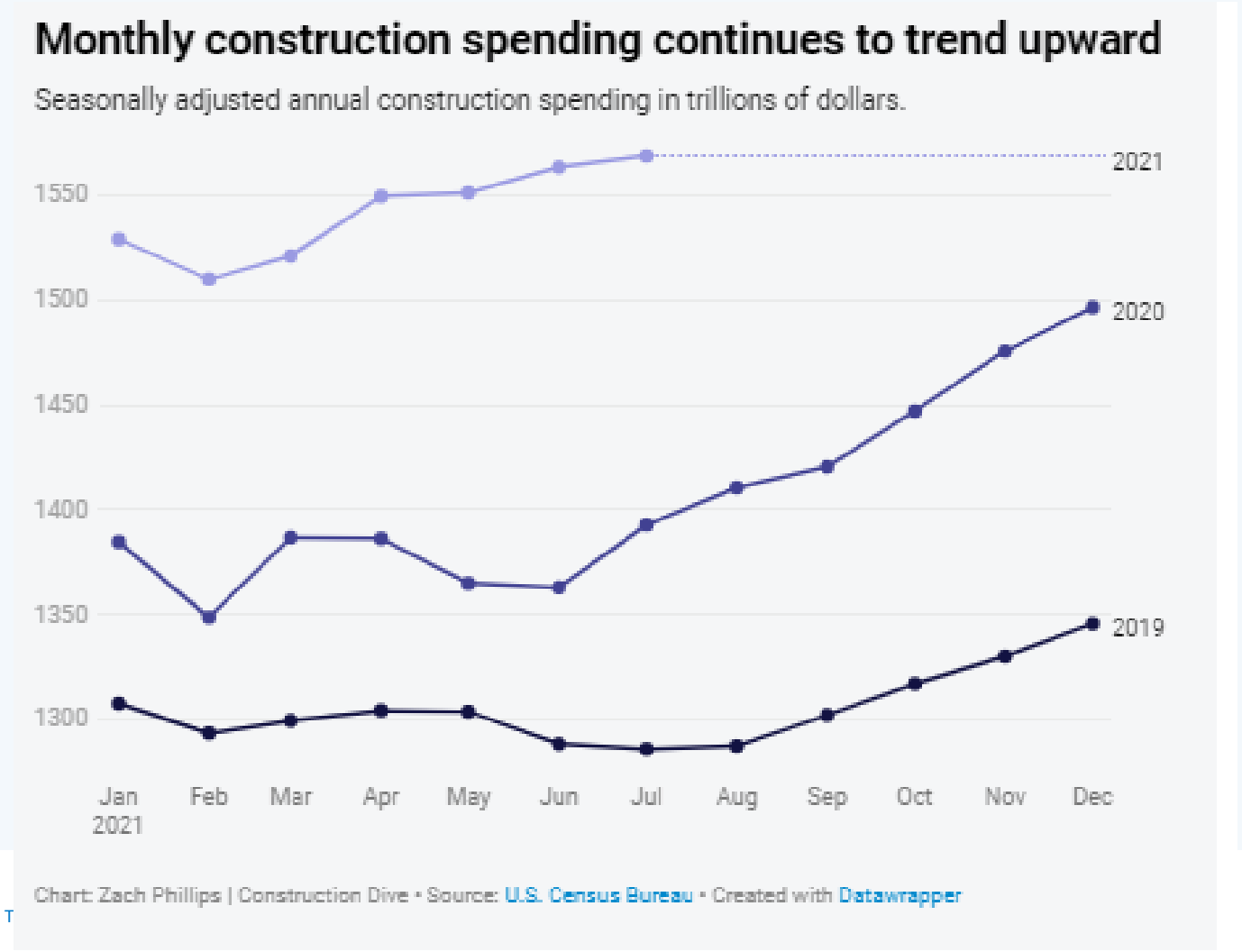
Current Key Industry Risk Factors

- Escalating construction costs due to skyrocketing prices of raw materials
- Unprecedented supply chain disruptions and material delays
- A dwindling qualified construction work force
- The new demand for climate and disease resilient spaces

Current State of Construction

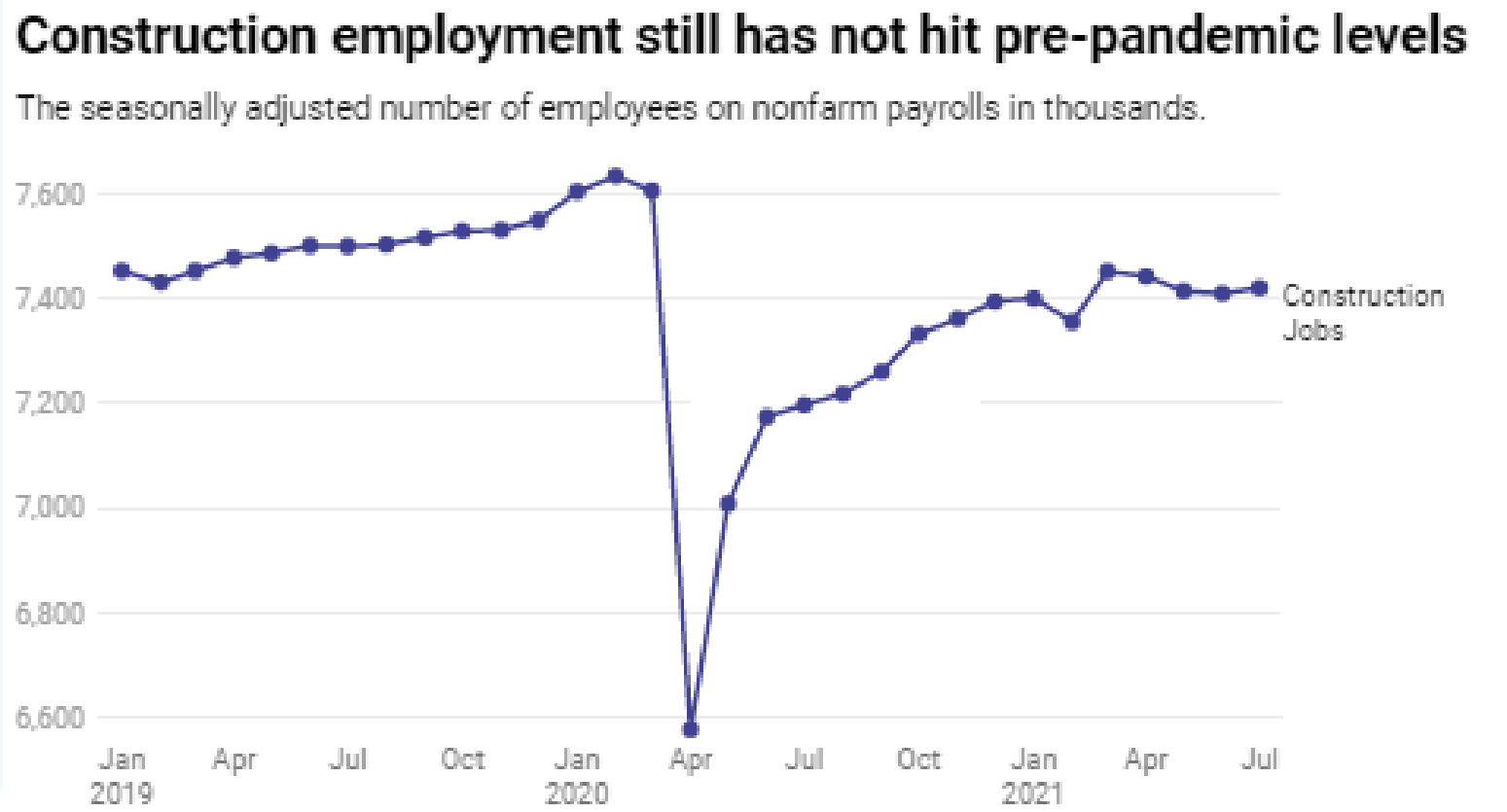
- Due to COVID-19, we saw a predictable rise in residential construction and a decline in commercial, a trend which has continued into 2021
  - Residential construction was at a seasonally adjusted annual rate of $773.0 billion in July, 0.5% above the revised June estimate of $768.9 billion.
  - Nonresidential construction was at a seasonally adjusted annual rate of $458.0 billion in July, 0.2% below the revised June estimate of $458.9 billion.
- Overall monthly construction spending continues to trend upward
  - During the first seven months of this year, construction spending amounted to $883.2 billion, 6.2% above the $831.5 billion for January to July 2020.

Current State of Construction



Current State of Construction

- The workforce is still recovering from COVID-19



How Do These Issues Impact The Surety Bond Industry?

- Consider how these industry problems will affect the project for which the bond is being procured
- What should you be asking contractors as a result of the industry risk factors?
- What are some solutions or alternatives to cope with the new normal?

Factor 1: Escalating Material Costs

- U.S. Bureau of Labor Statistics from
- April 2020 to April 2021:
  - Copper and brass prices rose 49%
  - Aluminum mill shapes increased 20%
  - Plastics jumped 14%
- January 2020 to July 2021:
  - Softwood lumber prices have risen 71.9%
  - Steel mill product prices jumped 87.6%
  - Gypsum prices up 21.7%

Escalating Material Costs (continued)

- According to a study by Colliers:
  - Price of drywall increased between 20-50% since February (June 2021)
  - Wood materials saw increases of 56%
  - Plumbing copper prices went up 30%
  - HVAC sheet metal increased 40%

Escalating Material Costs (continued)

- National Multifamily Housing Counsel says 30% of developers report apartment projects being delayed due to cost concerns
- All three energy subcategories registered significant year-over-year price increases
  - Crude petroleum has risen 187%
  - Unprocessed energy materials has risen 100%
  - Natural gas prices have gone up 90%
- Softwood lumber has increased 154% over the past year
  - This adds an average of $35, 872 to new single family home prices

Escalating Materials Cost (cont.)

- Increase in cost of general liability insurance, and dramatic rise in cost of excess insurance (also complete lack of availability in certain regions experiencing high losses or found in high-risk areas)

Factor 2: Supply Chain Disruptions

- Certain materials that were harder to get pre-COVID 19 are even harder to acquire now
- Critical supplies including steel, HVAC equipment, elevator cables are running short
- Substantial lead times on items even if you can acquire them

Supply Chain Disruptions (cont.)

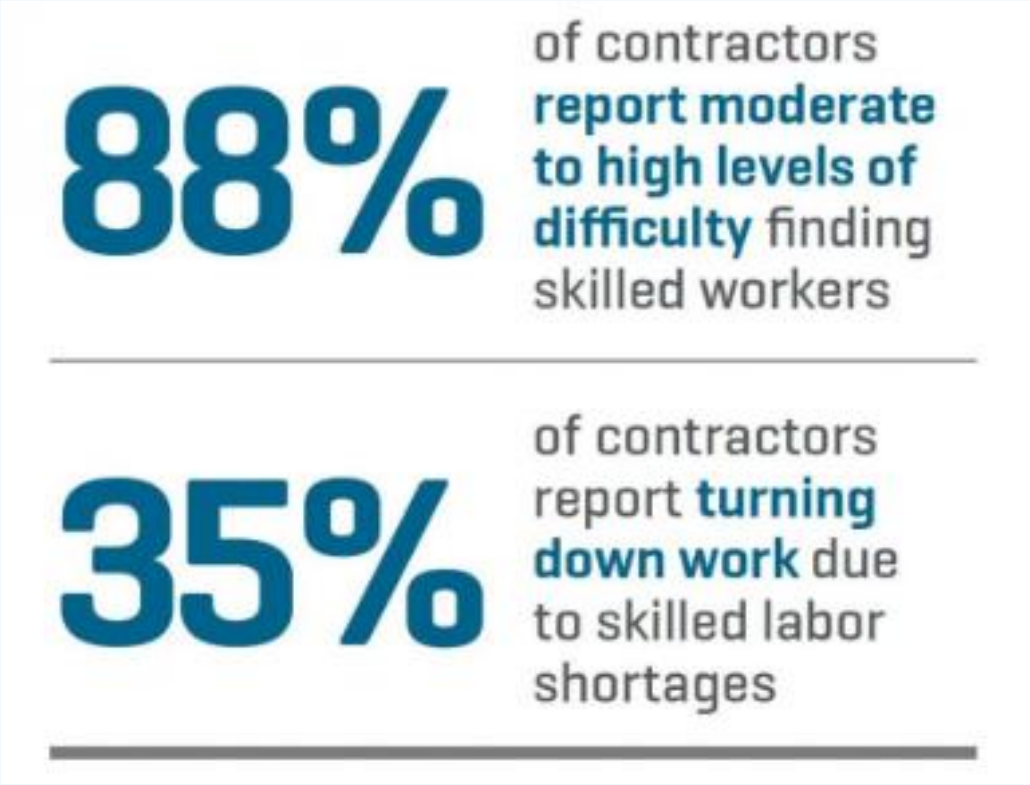
- Imperative to make sure the materials are available before construction begins or build in delays or alternative materials
  - Forcing tough decisions like which projects can be tackled now and which go on the backburner or even need to be cancelled
  - Does it make sense to start a project even with delay in materials? When should the GC buy the project?

Factor 3: Work-Force Shortages

- A survey by the National Association of Home Builders (NAHB) found that builders' top concern is labor, with 85% expecting future cost and availability problems, up from 13% in 2011.
- Even before COVID, the construction work force was getting smaller due to less people interested in going into the trades, people retiring, and a high turnover rate for the industry (a monthly turnover rate of 5.2% compared with 3.6% over all industries)
- Now additional issues of workers quitting, or refusing to comply with vaccine or mask mandates

Work-Force Shortages

- The U.S. Chamber of Commerce reports that this quarter,



Factor 4: The Demand for Climate and Disease Resilient Projects

- Will the design be incorporating climate and disease resilient materials and design characteristics (and how will that impact pricing and availability of materials)
- Has accelerated climate change and the pandemic impacted the need for that type of project
- Where and how is the project being built (in or near area of fires, flooding or hurricanes)

The Demand for Climate and Disease Resilient Projects (cont.)

- Is there an ability to insure the project and at what cost (also FEMA changes)
- Has insurance underwriting made construction suggestions as a condition to coverage and are those suggestions being followed

How Do This Risk Factors Impact The Particular Project Or Contractor?

- Analyze the type of project and how it is impacted by current trends
- Analyze the geographic location of the project—Is it in an area that may experience governmental shutdowns or delays; the impact of climate issues in the area; the availability of workforce in the at area
- Is the GC involved deep and fiscally strong enough to handle delays and maintain its workforce through shutdowns and delays

General Ways To Mitigate The Risks

- Get a pre-construction team in place early
- Develop strong strategic budgeting
- Utilize the best pricing model
- Incorporate good price escalation and force majeure clauses in the agreement
- Determine how flexible the project can be and the ability to do it in phases
- Use the best available technology
- Identify alternative materials and methods and insist on a lean budget

Is There a Pre-Construction Team in Place?

- This practice minimizes risk because it prevent delays, cost overruns, or redesign. Industry sources report that proper pre-construction planning results in savings most of the time
- Best practice is to hire project manager, general contractor, and architects in the beginning so there are experts with different perspectives from the get-go who can problem solve as issues arise before too much time and money is spent
- Perhaps the engineer can offer alternative solutions to keep the project within the estimated budget range and the architect and engineer can value engineer the design
    - Making smart choices in terms of where the major vertical circulation (i.e. stairs and elevators) is placed in a ground-up project can preserve substantial budget dollars

Is There a Pre-Construction Team in Place?

- It is also a good idea to have a backup scenario plan in advance- this will allow the team to rapidly and seamlessly shift to an acceptable plan B or C and avoid delays
- Early collaboration between architect and contractor will accelerate schedules and prevent expensive, time-insensitive redesign.
- Identify and discuss the most likely problem areas—it is always easier at the start

What is the Flexibility of the Project?

- If one material has a longer lead time, is too expensive, or is not available, time and money can be saved by switching materials
- Can the project be done in phases, so that if the project is stopped or delayed, is there a good way to prevent the GC from being in too deep
- Can construction be done out of sequence to avoid complete shutdowns while waiting for materials or subcontractors in other areas of the project

What is the Flexibility of the Project?

- Can the project be re-purposed
- Every project has options:
  - Specifically, pre-cast concrete, ready-mix concrete and different wood species have become useful substitutes for traditional materials

Is Strategic Budgeting Being Implemented?

- It is a good idea to avoid building to the max budget upfront
- Less risky if there is a buffer and scheduled milestones for reassessing risk at the last responsible moment and gradually releasing reserved funds back into the project as risk diminishes
  - Ex. If the budget is $15 mil, target a spend of $14.5 mil and then systematically release the balance if economic conditions improve

Is Strategic Budgeting Being Implemented?

- Converting surplus contingency adds real value and allows for adding project wish-list items such as upgraded finish materials, appliances, technology, landscaping and more
- An option to consider is to work with your contractor to see if they can partially absorb material cost increases through adjustments in labor rates or reductions in fees. This collaboration requires give and take from owners, contractors and design professionals.

What Pricing Model is Being Used?

- Reevaluating guaranteed pricing
  - Suppliers will not want to offer and contractors might not accept guaranteed pricing 6 months prior to delivery- should they accept risk of mid-term price fluctuations because price corrections do not reliably occur on a predictable basis
- Three Main Pricing Models: What are the Pros and Cons and which poses the lease amount of risk?
  - 1. Stipulated Sum
  - 2. Cost Plus (with or without a guaranteed maximum or not-to-exceed price)
  - 3. Unit Price

Stipulated Sum

- A fixed price for the job is set and that amount is paid without regard to the actual cost of the work, including the profit and overhead of the contractor, which are included in the price

Stipulated Sim Pros and Cons

- Pros:
  - Simplicity
  - Certainty
- Cons:
  - Any savings incurred by the contractor inure solely to the contractor; lack of shared savings
  - This can also lead to lack of incentive to complete the project in a timely manner

Cost Plus

- The contractor will be paid the full price for all agreed-upon construction related costs, overhead, and a fee representing the contractor's profit. The fee may be a predetermined amount or a percentage of the total construction costs
  - This allows the owner to pay the cost of the actual work without markups for greater transparency

Cost Plus Pros and Cons

- Pros:
  - Potential for the owner to save through performance efficiencies
  - Allows the project to go forward before the detailed design documents are done
  - Open book nature of the model helps foster a good relationship between the owner and contractor and allows for a flexible and efficient building experience
- Cons:
  - High maintenance nature requires more work from both sides on tracking and reporting costs
  - The fast-tracked nature may bring increased construction costs
  - The uncapped nature opens the owner to the risk of indeterminate construction costs (which is why sometimes there is a “Guaranteed Maximum Price,” or “GMAX”

Unit Price

- The contractor sets a price for each unit of work or task to be completed
- Generally, the contractor's overhead and profit are included in the rate for each unit
- Regardless of whether the total quantity or number of units is known, the owner agrees to pay the contractor for actual units provided, installed, or constructed

Unit Price Pros and Cons

- Pros:
  - Owner will benefit because work is relatively easy to verify and the owner will only pay for actual quantities performed, supplied, or constructed on the project
  - Contractor will benefit where the anticipated quantities or units are underestimated as the contractor will be paid at the agreed-upon unit price for all units completed
- Cons:
  - During the bidding process it is difficult to determine which pay item applies to a particular activity when the work is segregated into numerous discrete line items
  - Unit price bidding can facilitate unbalanced bidding and intentional misallocation of cost and profit among the various units of work

Price Escalation Clauses

- Pricing volatility can and should be addressed directly on the front end of the project if possible
  - Also consider setting an overall guaranteed maximum price
- Should not be boilerplate- needs to be detailed to set out expectations to contemplate any event that could arise
- What types of events are beyond the control of the contract should be negotiated from the outset

Price Escalation Clauses (continued)

- A good clause should:
  1. Identify specific construction materials to which pricing adjustments will apply
  2. Any adjustments should be tied to an objective, agreed-upon measurement such as catalog prices, actual material costs, material cost indices, or established market prices
  3. Clause should be mutual
  4. Price savings should inure to the benefit of the material purchaser to a similar extent that the seller should be entitled to an equitable adjustment for price increases
  5. Subcontractor or supplier should insist on figuring this out early on to allow any upstream parties the opportunity to account for these terms in their agreements- this approach places the risk/decision on the owner
  6. These clauses NOT to protect sloppy bidding or guaranteed pricing well beyond a commercially reasonable timeframe

Force Majeure Clauses

- Seeks to address the parties' right to monetary relief for commodity price fluctuations caused by unexpected delays and events (acts of God/acts of government/strikes/war/freight embargos/natural disasters/quarantine restrictions)
- These are not for events that just make things harder; they make it impossible.
- Unavoidable/beyond contractor's control and there is a causal connection:
  - Because of the event, there is a need for more time/money/labor/material
- When these clauses are comprehensive and negotiated prior to construction, it can eliminate costly litigation

Utilize Technology

- Another option to counteract material cost increases is through the use of new technologies
  - New software, drones and 3D programs can give all parties a better understanding of the project early on
- This results in better coordination amongst trades, a fully evaluated design which contemplates potential issues before they arise and more comprehensive material estimates on the project

Utilize Technology (cont.)

- Additionally, communication technology is equally important
  - Ease of communication can allow the parties to make split second decisions on design changes
  - Keeping the project team fully informed can reduce the need for further rework issues in the future and the need for additional materials.

Plan Orders Ahead

- Because the cost of materials is on the rise as are lead times, it is important to get ahead of the curve if possible
- Projects should take advantage of scale and place bulk orders of the critical materials like drywall, even if construction isn't starting immediately
  - if you can get it now, get it now, especially if the pricing is reasonable
- Planning ahead will avoid jeopardizing the project by preventing delays and keeping it within budget

Build Lean

- Provides greater stability, reliability, efficiency, and flexibility
- A lean builder can help navigate market conditions and material shortages and will maximize ROI by conducting ongoing research, monitoring economic trends and providing counsel on lifetime costs, environmental impact, inflation and more
- Dodge Data & Analytics research demonstrated that "high Lean-intensity projects" were 3x more likely to complete ahead of schedule and 2x more likely to complete under budget
  - Of projects that did not implement Lean methods, 61% finished behind schedule and 49% completed over budget

Conclusion

- In a time when seemingly everything is unpredictable and there is more risk than ever associated with cost of materials, longer lead times, and a diminishing work-force, know what questions to ask and take into account solutions that could diminish the uncertainty when underwriting a surety bond

Questions?

Contact Us

Rich Reizen
Chair, Construction Practice
rreizen@gouldratner.com
(312) 899-1637

Hannah Batsche
Associate, Construction Practice
hbatsche@gouldratner.com
(312) 899-1653

Gould & Ratner LLP
222 North LaSalle Street
Suite 300
Chicago, Illinois 60601

Tel: (312) 236-3003

www.gouldratner.com

