GREAT AMERICAN GROUP



# Monitor Chemicals & Plastics

**Inventory & Equipment** 



## TRADE TURMOIL ROCKS THE MARKET

# WILL TARIFFS IMPACT PROFITABILITY?

Chemicals and plastics manufacturers face stiff tariffs on imports and exports

# OIL PRICES PLUMMET IN 2019

Crude oil prices fell sharply in early 2019 due to large stockpiles in the U.S.

# DOMESTIC EQUIPMENT VERSUS IMPORTS

U.S. equipment manufacturers face increased competition from imports

## In This Issue

MONITOR CHEMICALS & PLASTICS
GREATAMERICAN.COM
MARCH 2019
800-45-GREAT

**293** 

03	Trend Tracker	10	Reference Sheet
04	<b>Overview</b>	11	Monitor Information
05	Feedstocks	12	Experience
06	Chemicals	13	Appraisal & Valuation Team
07	Plastic Resins and Polymers	14	About Great American Group
09	Plastic Processing Equipment		



Deals are a moving target. A constantly shifting mix of people, numbers and timing. We're here to simplify this process for you. Our experts are dedicated to tracking down and flushing out the values you need even on the most complex deals, so you can leverage our hard-won knowledge to close the deal.

## **Trend Tracker**



MACHINERY & EQUIPMENT				
Used Pricing	Consistent —			
Used Trade Movement	Consistent —			
0EM Pricing	Consistent —			
Technology Advancement	Consistent —			
Auction Activity	Decreasing ▼			

- NOLVs: NOLVs increased or decreased up to two percentage points versus the prior year. Although trends were largely Company- and timing-specific, gains were largely driven by more favorable inventory mixes, while decreases were due to lower gross margins and less favorable cost to market price variances for raw materials.
- **Sales Trends:** Sales trends varied between engagements based on a number of factors, including fluctuating pricing, demand, the sales mix, competitive market conditions, and the cost of alternative products.
- **Gross Margins:** Gross margins decreased due to higher input costs paired with difficulties in passing those increased costs along to customers.
- **Inventory:** Generally speaking, inventory levels increased to support stronger demand. In some instances, inventory levels also increased on a dollar basis due to higher market prices.
- **Selling Prices:** While selling prices for chemicals varied, selling prices for plastics increased in many engagements due to market conditions.
- Market Prices: Market prices for crude oil increased through much of 2018 before dropping sharply in November and December. Natural gas prices spiked in the fall of 2018, but dropped in early 2019.

- Used Pricing: Although downstream demand for plastic processing equipment remains strong, used equipment pricing has been fairly consistent.
- **Used Trade:** Used equipment has been trading well, though not at the same highs as witnessed in 2016. Older equipment from the 2000s and 1990s is in lower demand, while newer equipment is more desirable.
- **OEM Pricing:** OEMs are meeting demand, while lead times are shortening on larger tonnage machines. Some U.S. OEMs are offering discounts to compensate for a decline in revenue since 2016 and competition from manufacturers in China.
- **Technology Advancement:** Electric drive injection molding machines continue to make headway into the marketplace for their efficiencies and reduced maintenance. Automation and data exchange between devices and humans will continue to be at the forefront. improving efficiencies, self-diagnosis, and self-correction.
- **Auction Activity:** GA has observed less plastics industry auction activity over the past year, primarily due to increased demand from downstream industries as a result of better overall economic conditions.

## **Overview**

Despite a 2018 fraught with global trade turmoil, fluctuating raw material costs, and economic uncertainty, most indicators point to ongoing strength in the domestic chemicals and plastics sectors. While industry experts continue to monitor the impacts of tariffs implemented by both the U.S. and its trade partners, downstream demand from major markets, such as construction and automotive production, remained fairly healthy.

In regards to trade, two major developments began in 2018 and continue into 2019. According to Ed Brzytwa, Director of International Trade for the American Chemistry Council ("ACC"), in 2018 the U.S. government implemented tariffs on 1,517 chemical and plastic products from China with a value of \$15.4 billion. In retaliation, China enacted tariffs on over 1,000 chemical and plastic products from the U.S. with a value of approximately \$10.8 billion. The ACC believes that these tariffs hinder international trade and result in higher costs for manufacturers.

The impact of the tariffs is multifaceted. Many raw materials imported from China are now more expensive, increasing domestic production costs. While these costs can often be passed along to downstream buyers or consumers, that is not always the case, which may result in margin erosion for manufacturers. At the same time, U.S.-produced goods that are subject to tariffs by trade partners may become less desirable due to the sudden increase in cost, impacting export demand for chemicals and plastics manufacturers.

On the opposite side of the argument, many believe that the tariffs will promote increased manufacturing activity and trade within the U.S. as manufacturers seek domestic suppliers.

The second major trade development - the U.S.-Mexico-Canada Agreement ("USMCA") - was announced in the fall of 2018. This plan is meant to replace the North American Free Trade Agreement ("NAFTA"). The ACC reports that the domestic chemicals sector has benefited from tax-free trade under NAFTA since 1994, resulting in strong growth in chemical exports to Canada and Mexico over the past few decades. If ratified, the current USMCA will offer trade policies similar to those offered under NAFTA.

However, at the time of this writing, the USMCA deal had not yet been ratified, with many analysts pointing at Section 232 steel and aluminum tariffs as a sticking point, as both Canada and Mexico are subject to the tariffs. In the event that the USMCA deal is not agreed upon by all three countries, NAFTA would remain in place.

The long-term impact of these policies has not yet been seen, and further developments, such as a heightening or lessening of tariffs, could significantly alter the domestic and international marketplace for chemical and plastic products. Both of these trade developments bear watching in the coming months as they continue to unfold.

## **Feedstocks**

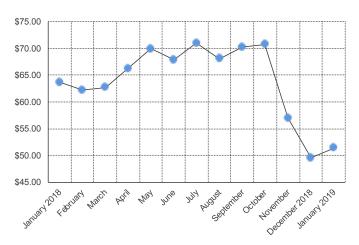
#### FEEDSTOCKS OVERVIEW

A majority of chemicals and plastics are derived from petroleum or natural gas. Any fluctuations in the prices of these commodities impact the downstream chemicals and plastics sectors.

#### **PETROLEUM**

In the spring of 2018, WTI crude oil prices slowly increased, reaching \$70 per barrel in May, which is the first time oil prices had reached that mark since late 2014. Prices hovered on either side of that mark for the duration of the summer and into the fall, before plummeting dramatically in November and December 2018. The decrease was primarily due to a large stockpile of crude in the U.S. In the first few months of 2019, oil prices appear to have found some stability, remaining in the \$50 per barrel range. For the week ended February 15, 2019, crude oil prices averaged \$53.88 per barrel.

## Crude Oil Cushing, Oklahoma WTI Spot Price January 2018 through January 2019 (\$ per barrel)



According to the EIA, U.S. commercial crude oil inventory for the week ended February 22, 2019 totaled 445.9 million barrels, a decrease of 8.6 million barrels from the previous week. The EIA notes that inventory levels are slightly above the five-year average for this time of year.

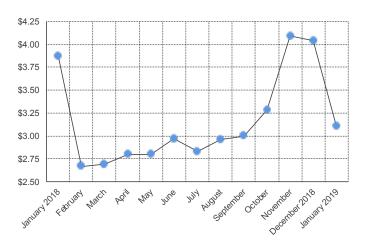
#### **NATURAL GAS**

According to estimates from the EIA, working gas in underground storage totaled 1,705 billion cubic feet ("Bcf") for the week ended February 15, 2019, which represents a 4.1% decrease from the previous year. The following table illustrates working gas in underground storage in the lower 48 states (units in Bcf):

Region	2/15/19	2/15/18	% Change
East	395	407	(2.9%)
Midwest	436	434	0.5%
Mountain	87	113	(23.0%)
Pacific	138	205	(32.7%)
South Central	649	619	4.8%
Total	1,705	1,778	(4.1%)

Through most of 2018, Henry Hub natural gas prices exhibited a slow increasing trend, culminating in a sharp spike in prices in November 2018, with prices climbing above \$4.00 per million BTUs ("MBTU") for the first time since 2014. The EIA attributed the spike to a cold November, coupled with relatively low supplies of natural gas. Since then, prices have fallen back to historical levels, averaging \$2.65 per MBTU for the week ended February 15, 2019.

Henry Hub Gulf Coast Natural Gas Spot Price January 2018 through January 2019 (\$ per MBTU)



## **Chemicals**

## **CHEMICALS OVERVIEW**

According to a recent report by the ACC, chemical production increased 0.3% globally in December 2018 versus the prior month, but declined 0.3% versus December 2017.

Within the U.S., figures are more positive, with the ACC reporting that chemical production increased 2.6% in December 2018 versus 2017, while overall production in 2018 increased 3.7% over the prior year. In 2018, chemical demand benefited from relatively strong downstream demand, particularly from the automotive and construction markets, as well as healthy demand for specialty chemicals from a broad range of downstream sectors.

The outlook for 2019 is also positive, as ongoing strength is anticipated in the U.S. economy, though a cyclical slowdown is expected in the automotive sector.

## **PROPYLENE**

A large portion of domestic propylene is derived from the processing of naphtha in ethylene steam crackers, while the refinement of petroleum into gasoline also yields propylene. The chemical is largely consumed in production of polypropylene resin.

According to ICIS, propylene market prices fell for the third consecutive month in January 2019. The decline is due to growing stocks of propylene, with ICIS reporting that supplies recently stood at the highest level in seven years.

## **ETHYLENE**

According to ICIS, ethylene spot prices increased in the second half of 2018 due to tight supplies. However, spot prices reversed course and declined at the beginning of 2019 due to lower upstream ethane input costs, as well as the promise of new capacity coming online. A number of new crackers are scheduled to begin production in 2019, which should increase ethane supplies.



## **Plastic Resins and Polymers**

## **PLASTICS OVERVIEW**

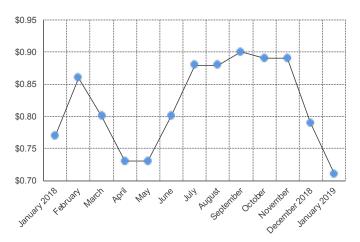
According to a recent press release by the ACC, the U.S. produced 86.2 billion pounds of plastic resins in 2018, an increase of 7.6% from 2017. Much like chemicals, demand for plastics is heavily reliant on the overall economy and downstream production levels.

## **POLYPROPYLENE ("PP")**

According to data from *PlasticsNews*, PP prices continued to display volatility over the past 12 months. Market prices for PP began 2018 between \$0.75 and \$0.80 per pound in January. before increasing nearly \$0.10 in February. Market prices then fell, bottoming out under \$0.75 per pound in April and May.

Prices reversed course once more in the summer and fall, climbing to a 12-month peak of \$0.90 per pound in September 2018. The rally was fairly short lived, as PP prices soon began a precipitous slide, dropping to nearly \$0.70 per pound by January 2019, the lowest point over the previous 13 months. PlasticsNews attributed the sharp decline in pricing in recent months to lower input costs for feedstock propylene.

Polypropylene Monthly Spot Bulk Price January 2018 through January 2019 (\$ per Pound)

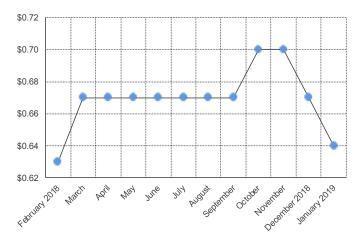


## **POLYETHYLENE ("PE")**

According to data from *PlasticsNews*, high density polyethylene ("HDPE") prices were relatively static through much of 2018, hovering around \$0.67 per pound from March through September. Market prices increased slightly in the fall before falling to the \$0.64 range in early 2019. The recent declines in prices are due to lower oil prices and sluggish demand for all grades of PE. Low density polyethylene and linear low density polyethylene followed very similar trends.

GA notes that *PlasticsNews* made a non-market correction to its PE pricing in February 2018 in order to more accurately capture selling prices and to account for price rebates. GA therefore excluded January 2018 pricing from its figure below and adjusted February 2018 pricing.

HDPE Monthly Spot Bulk Price February 2018 through January 2019 (\$ per Pound)



## **Plastic Resins and Polymers**

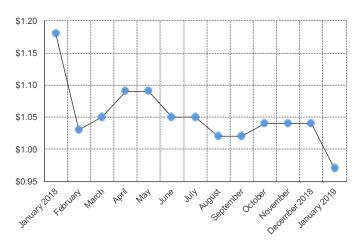
## POLYVINYL CHLORIDE ("PVC")

At the beginning of 2018, PVC resin exhibited some upward pricing momentum, climbing from the \$0.85 per pound range to \$0.90 per pound between February and April. According to data from *PlasticsNews*, market prices fell by \$0.02 in May and have remained relatively consistent since that point.

## **POLYSTYRENE ("PS")**

PS market prices dropped sharply at the beginning of 2018, falling from the \$1.17 per pound range in January to approximately \$1.03 in February. Following a brief rally in March and April, prices began a long slide through the remainder of the year and into 2019. According to data from PlasticsNews, market prices for PS dropped below \$1.00 per pound in January 2019, with the declines attributed to soft demand and lower input costs for feedstock benzene.

PS Monthly Spot Bulk Price January 2018 through January 2019 (\$ per Pound)



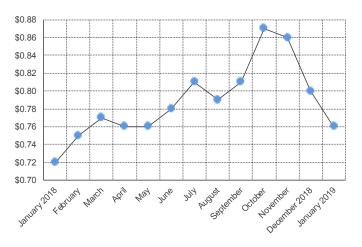
### POLYETHYLENE TEREPHTHALATE ("PET")

Market prices for PET bottle resin climbed fairly consistently throughout 2018, ultimately cresting at a high of \$0.87 per pound in October. However, PlasticsNews reports that market prices then changed direction, falling fairly rapidly through the end of the year and into 2019.

The decline in market prices for PET in recent months is due to a number of factors, including weak bottle resin demand in colder months, as well as plentiful stocks of input materials.

According to a recent study conducted by the ACC and Association of Plastic Recyclers, plastic bottle recycling rates increased 0.1% annually from 2012 through 2017. The report notes that PET and HDPE bottles collectively represent 97% of plastic bottles in the U.S.

PET Monthly Spot Bulk Price January 2018 through January 2019 (\$ per Pound)





## **Plastic Processing Equipment**

The plastics processing industry relies heavily on downstream demand for plastic products ranging from food packaging to automotive components. Plastics manufacturing is expected to strengthen to 2023 from improvement of the U.S. economy. This should spur demand from downstream industries, despite the forecasted decline in exports. Consolidation of plastic manufacturers has tempered over the previous five years and industry revenues are stable at present, though down from the highs in 2016. Downstream markets expected to increase demand in the plastics industry include construction, food and beverage, medical, and automotive, over the coming years to 2023.

Technology and automation will continue to be at the forefront for plastic processing manufacturers. Buzz words like the Internet of Things ("IoT") and Industry 4.0 ("I4") are very loud right now in the plastics industry. These terms are about the automation and exchange of data between devices and humans to provide a more efficient, self-diagnosing, self-correcting, and leaner manufacturing landscape. Plastics equipment will not only speak with each other, but with the advancement of more complex sensors, cameras, and digital data, the equipment will become more predictive in its ability to not only report an error, but predict when an error is imminent and either fix it or report it before it happens. These notifications will ultimately reduce downtime. Efficiency gains will be very important as demand for plastic products becomes increasingly varied. Product runs have shortened and mold changes have increased. The ability to meet increasing demand variations with this new technology will require properly trained and educated equipment operators for the next generation.

The secondary marketplace for plastics equipment has remained stable. Equipment vintages of 10 years or less are the most desirable and trading well. Demand for plastics equipment from the late 1990s to early 2000s has fallen sharply in part due to its age, but also due to the surplus of older equipment in the secondary marketplace. While the automotive market has improved over the last several years, it is forecast to decline to 2023. This will slow purchases of higher-tonnage, higher-dollar plastic equipment until a better

forecast is seen. Machines of this size are expensive to remove and transport, and the resale market is smaller. Conversely, improvement in the housing and construction market promotes the production of PVC trim, pipe, conduit, composite decking, and similar materials and elevates demand for mid-range injection molding and extrusion machines. As disposable income rises and the demand for consumer goods increases, so does the demand for smaller plastic products, extruded plastic films, and plastic packaging. A rise in consumer goods helps to support the sales of plastic extrusion along with small- to mid-range injection molding machines.

Injection molding machines from China have had an impact on the U.S. resale market, which has lacked quality late-model used injection molding machines. The lower cost, higher energy efficiencies, better uptime, and strong manufacturers' warranties have swayed buyers to accept both new and used machines from China. These machines are available at the price point of a five- to seven-year-old tier-one brand (i.e. Milacron (U.S.), Krauss Maffei (Germany), Engel (Austria) or Nissei (Japan). These machines come equipped with energy saving servo pump technology, name brand controls, and better warranties. However, China is currently battling steel tariffs and may have to begin raising prices.

Sales of new injection molding machines in the U.S. peaked in 2016, and while sales remain strong, some domestic equipment manufacturers have discounted new machines to combat the drops from 2016. Currently, Japan's injection molding machines have made a better foothold than those from China due to quality, but parts from China or Japan can still take six to eight weeks to arrive. Furthermore, the large and fluctuating number of equipment builders in China can make purchasing confusing, as buyers do not know which builders will be able to supply the needed part support. U.S. manufacturers still have the advantage of better quality and service, but the gap is closing.

## **Chemicals and Plastics Reference Sheet**

Chemicals and plastics pricing trends for January 2019 versus 2018 are as follows:

	% Change			
Commodity Plastic Resins				
Polypropylene	(10%)			
Linear Low-Density Polyethylene(1)	(5%)			
Low-Density Polyethylene(1)	(5%)			
High-Density Polyethylene(1)	0%			
Polystyrene	(20%)			
PVC	5%			
PET	5%			
Feedstocks				
Oil	(20%)			
Natural Gas	(20%)			

Note:

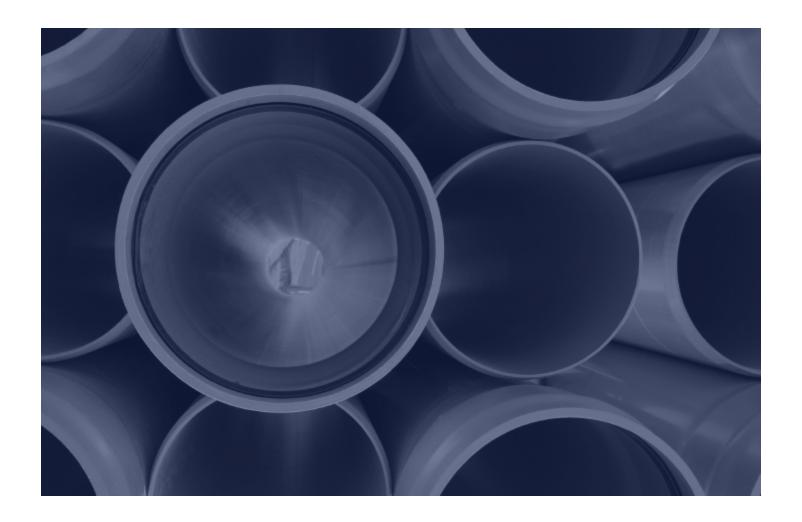
(1) Represents January 2019 versus February 2018 due to non-market price adjustments made by *PlasticsNews* in February 2018.



## **Monitor Information**

The Chemicals and Plastics Monitor relates information covering many chemicals and plastics, including industry trends, market pricing, and their relation to our valuation process. Due to the commodity nature of certain chemicals and plastic resins, timely reporting is necessary to understand an ever-changing marketplace. In addition, pricing trends are impacted by a number of macroeconomic indicators that should be monitored, and GA strives to contextualize these indicators in order to provide a more in-depth perspective of the market as a whole. Please feel free to utilize our contact information shown in this and all Chemicals & Plastics Monitor issues.

The information contained herein is based on a composite of GA's industry expertise, contact with industry personnel, liquidation and appraisal experience, and data compiled from a variety of wellrespected sources believed to be reliable. We do not guarantee the completeness of such information or make any representation as to its accuracy. GA does not make any representation or warranty, expressed or implied, as to the accuracy or completeness of the information contained in this issue. Neither GA nor any of its representatives shall be liable for use of any of the information in this issue or any errors therein or omissions therefrom.



## **Experience**

GA has worked with and appraised numerous companies within the chemicals and plastics industries. While our clients remain confidential, they include well-known and significant global, national, and regional producers and distributors of commodity and specialty chemicals, chemical intermediates, plastics, and resins for uses throughout the construction, automotive, oil and gas, food and beverage, manufacturing, and agricultural industries.

GA has appraised companies such as the following:

- A global manufacturer of chemicals and plastics, a refiner of crude oil, and a significant manufacturer of fuel products, with annual sales of nearly \$20 billion;
- One of the largest global manufacturers and distributors of high-performance polymer resins and resin-based products, with locations throughout the world and sales exceeding \$3.5 billion annually;
- A manufacturer and distributor of plastic packaging such as containers, closures, tubes, and bottles, with revenue of \$3.5 billion annually:
- Two of the world's largest producers of integrated fibers and polymers, with annual sales of \$1.4 billion and \$3 billion, respectively;
- One of the nation's leading specialty chemical producers, with annual revenue of over \$1.5 billion;
- A distributor of crop input products to customers in the mid-southern regions of the U.S., including herbicides, various agricultural chemicals, insecticides, defoliant, surfactant, fertilizer, seed, and similar goods;

- One of Europe's leading specialty chemical producers;
- A producer of specialty chemicals derived from renewable resources serving the pharmaceutical, rubber production, and agricultural markets, among other industries.

GA also maintains extensive appraisal experience with a variety of plastic bottle and plastic container manufacturers, as well as foam and foam product manufacturers. GA has also appraised a variety of small and middle market commodity and specialty chemical manufacturers and distributors. GA has been involved in the asset disposition and valuation of many plastics processing facilities involving injection molding, blow molding, extrusion, thermoforming, and more. Recent transactions include: Cincinnati Milacron, Collins & Aikman, Essel Propack America, Fortis Plastics, Home Products International, Hunjan Group, ILPEA Industries, Interbath, Jodee Plastics, Kamco Plastics, MedPlast, Mullinix Packages, Packaging Plus, Rantoul Products, Royal Dynamics, Thomas Plastics, and United Plastics Group.

Given our experience in both the valuation and disposition of chemicals and plastics processing equipment, GA is uniquely qualified to not only render value opinions, but to also serve your liquidity needs through the sales of surplus and/or idle chemicals and plastics processing assets. In addition to our vast liquidation and appraisal experience, GA maintains contacts within the chemicals/plastics industry that we utilize for insight and perspective on recovery values.

# **Appraisal & Valuation Team**

## **BUSINESS DEVELOPMENT**



**Drew Jakubek** National Marketing Manager Managing Director Southwest Region (214) 455-7081 djakubek@greatamerican.com



Jennie Kim Managing Director Western Region (818) 746-9370 jkim@greatamerican.com



Ryan Mulcunry **Executive Vice President** Northeast Region (617) 692-8310 rmulcunry@greatamerican.com



**Bill Soncini** National Marketing Manager Managing Director Midwest Region (773) 495-4534 bsoncini@greatamerican.com



**Dan Williams** Managing Director Northwest Region (212) 409-2442 dwilliams@greatamerican.com



**David Seiden Executive Vice President** Southeast Region (404) 242-0683 dseiden@greatamerican.com

## **OPERATIONS**

Kristi Faherty Managing Director (781) 429-4060 kfaherty@greatamerican.com

Thomas Mitchell Project Manager (818) 746-9356 tmitchell@greatamerican.com

Chad P. Yutka, ASA Managing Director, CAVS Group Head (312) 909-6078 cyutka@greatamerican.com

Lee M. Danhauer, ASA VP, Senior Managing Director (336) 723-4895 Idanhauer@greatamerican.com

## **ASSET DISPOSITION TEAM**

**Scott Carpenter** President, GA Retail Solutions (818) 746-9365 scarpenter@greatamerican.com

## Adam Alexander President, GA Global Partners (818) 648-6000 aalexander@greatamerican.com

Michael Petruski Managing Director, GA Global Partners (704) 516-1492 mpetruski@greatamerican.com

# **About Great American Group**

Great American Group is a leading provider of asset disposition solutions and valuation and appraisal services to a wide range of retail, wholesale, and industrial clients, as well as lenders, capital providers, private equity investors, and professional services firms. In addition to the *Chemicals & Plastics Monitor*, GA also provides clients with industry expertise in the form of monitors for the paper and packaging, metals, food, and building products sectors, among many others. For more information, please visit <a href="https://www.greatamerican.com">www.greatamerican.com</a>.

Great American Group, LLC is a wholly-owned subsidiary of B. Riley Financial, Inc. (NASDAQ: RILY). B. Riley Financial provides collaborative financial services and solutions tailored to fit the capital raising and financial advisory needs of public and private companies and high net worth individuals.

The company operates through several wholly-owned subsidiaries, including Great American Group; B. Riley FBR, a full-service investment bank and institutional brokerage; GlassRatner, a specialty financial advisory services and consulting firm; B. Riley Wealth Management, B. Riley Asset Management and B. Riley Alternatives, which offer investment management to institutional and high net worth investors; Great American Capital Partners, which originates and underwrites senior secured loans for asset-rich companies; and B. Riley Principal Investments, which invests in or acquires companies and assets with attractive return profiles.

B. Riley Financial, Inc. is headquartered in Los Angeles with offices in major financial markets throughout the United States, Europe, and Australia. For more information on B. Riley Financial, Inc., please visit <a href="https://www.brileyfin.com">www.brileyfin.com</a>.



MONITOR CHEMICALS & PLASTICS
GREATAMERICAN.COM
MARCH 2019
800-45-GREAT

**293** 

#### LOS ANGELES (HQ)

21255 Burbank Boulevard Suite 400 Woodland Hills, CA 91367 T 818.884.3737

## HOUSTON

9 Greenway Plaza Suite 2050 Houston, TX 77046 T 713.226.4700

## NEW YORK

299 Park Avenue 21st Floor New York, NY 10171 T 212.457.3300

## CHARLOTTE

15720 Brixham Hill Avenue Suite 300 Charlotte, NC 28277 T 704.227.7161 F 704.227.7171

#### ATLANTA

1200 Abernathy Road Suite 1700 Atlanta, GA 30328 T 770.551.8115

#### MILWAUKEE

10850 West Park Place Suite 970 Milwaukee, WI 53224 T 414.831.2850

#### **BOSTON**

300 First Avenue Suite 201 Needham, MA 02494 T 781.444.1400

#### WILTON

73 Old Ridgefield Road Suite 6 Wilton, CT 06897 T 203.663.5101

#### CHICAGO

200 West Madison Street Suite 2950 Chicago, IL 60606 T 312.777.7945 F 312.368.8883

## GERMANY

Prinzregentenstr 18 Fifth Floor 80538 Munchen, Germany

#### **DALLAS**

17304 Preston Road Suite 720 Dallas, TX 75252 T 972.996.5630

#### AUSTRALIA

Level 29, Chifley Tower 2 Chifley Square Sydney, NSW 2000 Australia