

Freedonia

# US & China: Tariff Impact Report

August 2018



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## Introduction

### The \$500 Billion Question

In July 2018, the Trump administration announced a proposed 10% tariff on \$200 billion worth of Chinese goods—an amount China could not match even if it wanted to (US exports to China totaled \$129.8 billion in 2017). This news came days after a 25% tariff took effect on \$34 billion worth of US imports from China. The action effectively voided all trade agreements between the countries, according to the Chinese government, with all-out trade war looking increasingly likely as tensions continue to escalate.

President Trump has since announced further intentions to levy taxes on all imports from China (\$505.5 billion in 2017) and the possibility of increasing the level of all the tariffs on Chinese goods to 25%. The International Monetary Fund warns that a trade war would cost the global economy upward of \$430 billion—or reduce annual growth by about 0.5%. Although this is a somewhat rosier forecast than the 2%–3% hit to global GDP some economists predict, the threat has companies worldwide bracing for the impact on global supply chains, as some fear trade war will lead to another global financial crisis. The US is particularly vulnerable due to the inevitable retaliations its actions would engender.

The US-imposed tariffs that are currently in effect target products central to China’s “Made in China 2025” plan to overtake the US as the global leader in high-tech industries. They have been criticized as:

- anti-competitive
- bad for business interests, both in the US and globally
- unlikely to result in significant changes to Chinese trade policies

Conversely, they have been praised for their promise to:

- countervail China’s unfair trade practices, which include intellectual property theft, forced technology transfer, government financed acquisition of foreign competitors, export tax rebates, and currency manipulation, among other things
- mitigate the US’ trade deficit with China, which stands at around \$375 billion
- promote “Made in USA” products

Meanwhile, targets of China’s retaliatory tariffs include key US exports produced by important supporters of President Trump, as well as industries located in legislative districts and states of powerful congressional leaders. They include:

- soybeans, pork products, and other agricultural items (farmers overwhelmingly supported Donald Trump for president in 2016)
- bourbon from Senate Majority Leader Mitch McConnell’s home state of Kentucky

- cheese and other dairy products from Speaker of the House Paul Ryan's native Wisconsin

While both Chinese and US companies may apply for exemptions before the tariffs take effect, the rapidly growing backlog of such requests makes it unlikely that even qualified companies will receive exemptions in time. For example, the US Department of Commerce received more than 20,000 applications through June 2018 but only completed 98. Also in late June, a coalition of almost 300 national, state, and local business and agriculture associations petitioned the US Senate to require tariffs proposed by the Trump administration be subject to congressional review before implementation.

In this white paper, analysts from the Freedonia Group contemplate the current realities and future possibilities of trade relations between the US and China, summarizing the potential impact of proposed and enacted tariffs on affected industries in both countries. The Freedonia Group has a long history of analyzing US and global industries as well as trends in international trade. In addition, corporate researchers in Freedonia's Beijing office conducted interviews with Chinese market leaders to provide a ground-level view of how impacted Chinese companies are responding to the US actions.

### Timeline of a Trade War

#### Round 1

In late March 2018, the Trump administration placed tariffs of 25% and 10%, respectively, on all steel and aluminum imports (with exemptions granted to South Korea, Brazil, Argentina, and Australia). Citing Section 232 of the Trade Expansion Act of 1962, the administration argued that such imports pose a national security threat based on:

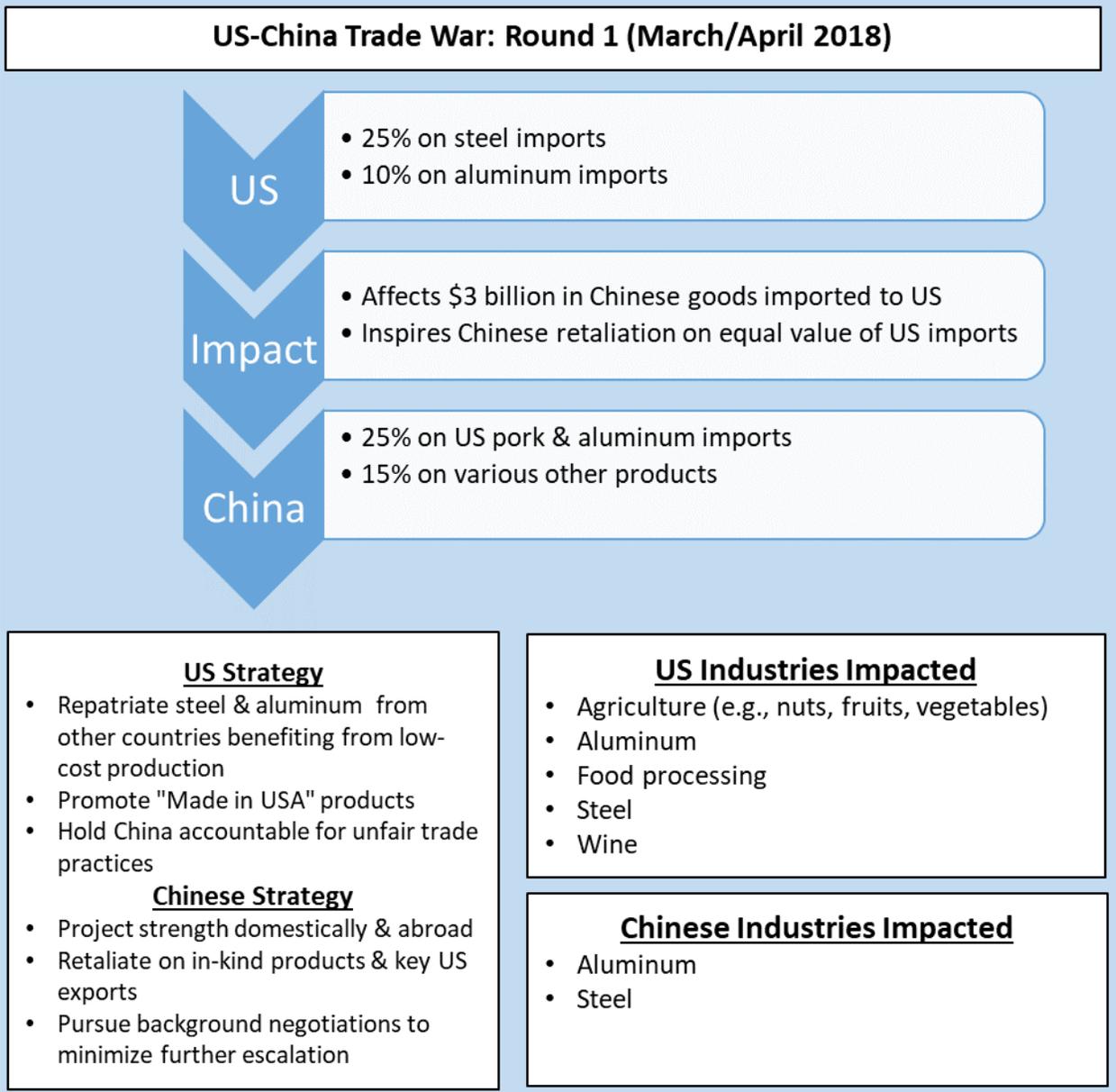
- unfairly low-priced goods causing injury to US firms (i.e., antidumping)
- competitors to US firms receiving illegal government subsidies
- surging steel imports hindering the US industry

The global response was swift and aggressive, as many governments—especially Canada and the EU, which are heavy exporters of steel to the US—confronted the US action with equal retaliations on imports of US goods to their countries. The impact on China was relatively minimal, however, because Chinese steel and aluminum imports to the US amounted to only \$3 billion in 2017. Nevertheless, China responded in kind in early April 2018, levying tariffs on \$3 billion worth of US goods, including:

- 25% on pork
- 25% on aluminum scrap
- 15% on various nuts and fruits

# Impact Report: US & China

- 15% on alcoholic products such as wine, beer, and whiskey
- 15% on steel pipe

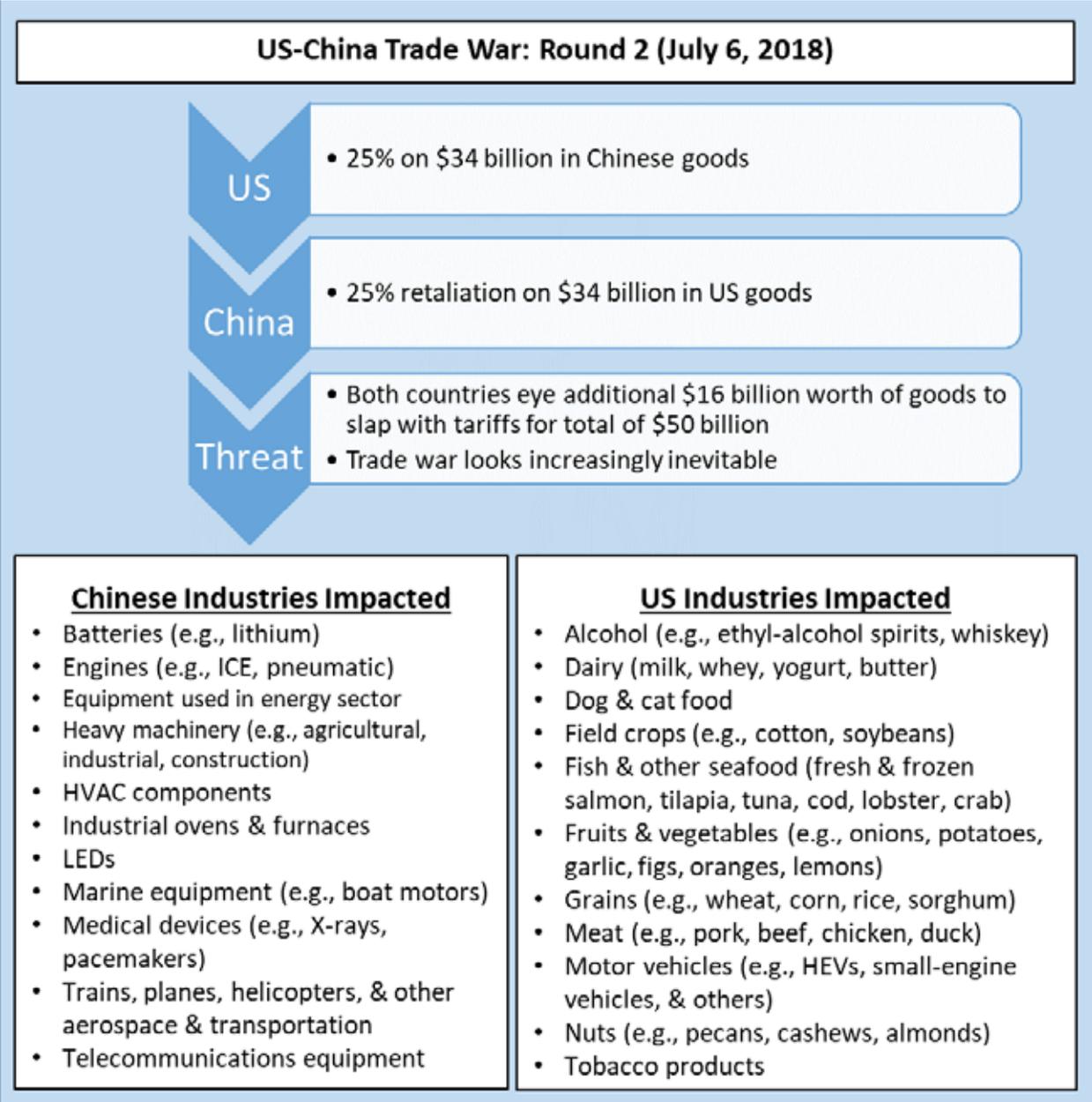


Source: The Freedonia Group.

## Round 2

Then, in June 2018, the US Trade Representative identified further transgressions of the Chinese government under Section 301 of the Trade Act of 1964, finding that Chinese trade practices related to technology transfer, intellectual property, and innovation undermine US commerce. As a result, the Trump administration ordered 25% tariffs on \$34 billion worth of Chinese goods. When the tariffs were enacted on July 6, the Chinese government

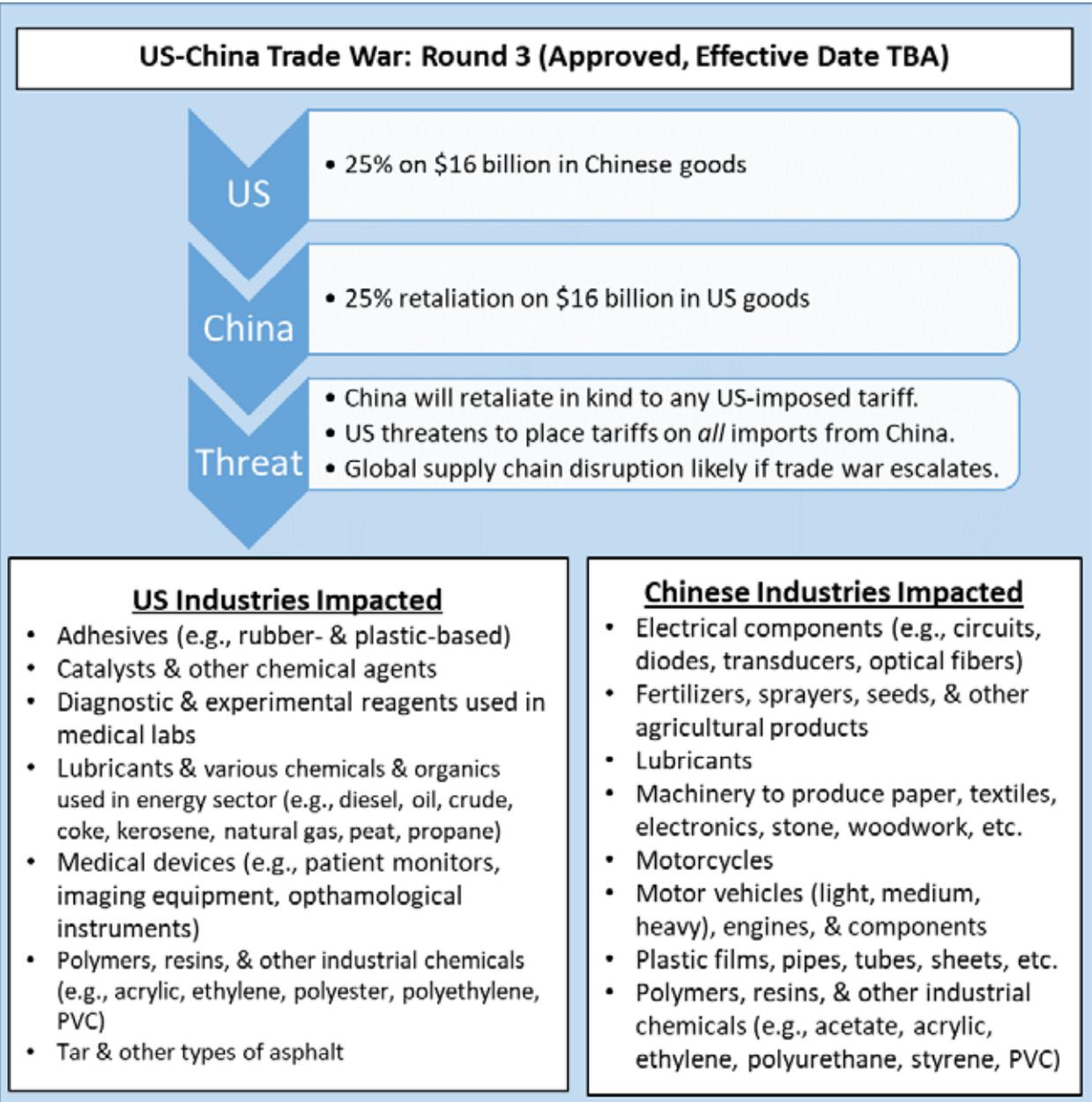
immediately retaliated dollar for dollar. The tariffs set by both countries affect a wide range of products, including Chinese-made machinery, robotics, and various transportation products; and US-produced food items (e.g., pork, soybeans, pecans, seafood), hybrid and electric vehicles (HEVs), tobacco, and alcohol.



Source: The Freedonia Group.

**Round 3**

When the US enacts a 25% tariff on an additional \$16 billion in Chinese goods—which is expected to be by August 2018—China has promised to once again match the amount dollar-for-dollar. The US tariffs target Chinese-made HEVs; lubricants; various additional industrial and agricultural machinery and related parts; and a range of rare earths, polymers, and other raw materials. The Chinese tariffs target US-made chemicals, medical equipment, and energy products, such as natural gas.



Source: The Freedonia Group.

### Pending Actions

The additional tariffs covered in this white paper are still pending review and thus subject to change—if they are not discarded altogether. The US' final decision on the threatened tariff on \$200 billion worth of Chinese goods is expected in September 2018. This new tariff would focus on those products and materials that China targeted in earlier retaliations because they comprise a significant share of the country's imports from the US. They include:

- adhesives (e.g., rubber-, plastic-, and animal-based glues)
- alcoholic beverages
- asphalt
- fertilizers
- field crops and produce ranging from grains, nuts, and legumes to soybeans, cotton, and an array of seeds
- materials used in the energy sector, such as coal, peat, and natural gases including butane, propane, and liquefied ethylene
- meat products, including fish, pork, and poultry
- medical devices (e.g., X-ray plates)

In addition, the US list includes various other products, the most concerning of which certain rare earths such as scandium and yttrium, which are sourced almost entirely from China and are key production inputs for many US manufacturers, especially those of advanced technologies. The move has many economists scratching their heads since it will most certainly yield losses for US interests. For example, with no viable alternative supply option, the tariff will raise manufacturing costs for myriad consumer electronic devices ranging from smartphones to HEVs, and those additional costs will almost certainly be reflected in retail prices.

Also targeted by the US tariffs are:

- cleaning and various industrial chemicals
- cork
- paints, dyes, and coatings
- fruit and vegetable juices, jams, and purees
- pasta and other wheat-based food products
- pesticides
- refractory materials
- sanitaryware (e.g., toilets, bidets) and other ceramics
- silk
- soy sauce
- various packaging materials ranging from sacks and flasks to lids and closures
- wood and paper products, including wood pulp and newsprint

### Looking Ahead

Given the US' rapid escalation of the trade dispute—and the peculiarity of certain products in its most recent list, such as rare earths—it may be that the Trump administration is bluffing and will not follow through with the latest proposal, especially as pressures mount from domestic business and political leaders who oppose the measures. It is also possible that President Trump's strong-armed approach will provide the US with greater leverage for trade deal negotiations with China. Nevertheless, in late July, the president doubled down on his willingness to impose tariffs on all Chinese imports, which totaled \$505.5 billion in 2017, stating in a press conference, "I'm ready to go to 500."

Whether the US will carry out these actions to the full extent threatened remains unknown. China challenged the US' proposed tariff on \$200 billion worth of Chinese goods via the World Trade Organization (WTO). A day later, the US also lodged complaints with the WTO against each country that retaliated to US tariffs, including China. Depending on the outcome of the WTO's investigations—as well as myriad other factors—the trade war between the US and China may intensify, wiping out years of progress in trade talks, or it may cease altogether.

Business leaders in the US and in China hope the tariffs are a temporary strategy for a new trade deal, not a permanent solution. For example, in testimony regarding Section 301 tariffs, US-China Business Council president John Frisbie urged the US and Chinese governments to stop threatening each other and instead start negotiations to improve intellectual property protection and market access for US companies in China. "The business community wants to see solutions to the issues, not sanctions that would harm families and jobs in each country," said Frisbie.

Furthermore, the Trump administration announced a \$12 billion aid package to farmers affected by the Chinese tariffs in late July. Provisions include:

- subsidies to impacted farms
- buybacks of surplus stock and redistribution via food banks and other avenues

However, critics on both ends of the political spectrum question the wisdom in allocating federal funds to farms impacted by federally imposed trade sanctions. As Ohio state governor John Kasich put it, "Ohio farmers want trade, not aid."

In addition, the US and EU have agreed to discuss potentially eliminating tariffs they have imposed on one another and the possibility that the EU may significantly ramp up its imports of US soybeans to mitigate losses incurred by the trade war with China.

Because of the US' trade deficit with China, it is not possible for China to retaliate against an equal value of US goods if the US follows through with the proposed tariffs on \$200 billion or \$500

billion in Chinese goods. In August, for example, the Trump administration proposed raising the threatened tariff on \$200 billion in Chinese products from 10% to 25%; in response, China threatened tariffs on only \$60 billion in unspecified US goods. In order to close the impact gap, US business leaders worry that China will seek additional means of retaliation, including:

- more frequent regulatory inspections of and fines against US-based concerns
- increased & more stringent customs inspections
- greater limitations of US investment in Chinese businesses
- delayed merger reviews
- currency devaluation

Regardless of the ultimate outcome, impacts of the tariffs are already playing out in the US and China, roiling financial markets and forcing companies to rethink growth strategies and to make major decisions in the near-term that will yield profound effects over time.

### US: Winners & Losers

#### Winners

The largest near-term beneficiaries of the tariffs the Trump administration has imposed on China (and other countries) are domestic steel and aluminum companies (e.g., Alcoa, Century Aluminum) and, particularly, the mining companies that supply them with iron ore. For example:

- Following enactment of the initial steel and aluminum tariffs in June 2018, Acero Junction, a once dormant steel plant in Mingo Junction, Ohio, received a \$500 million investment from Indian concern JSW Steel.
- In the Iron Range region of northern Minnesota, mines are expanding production capacity to meet growing iron ore demand.
- US steel industry leader Nucor credits tariffs with rapidly rising investment.

All told, the tariffs are forecast to generate more than 25,000 new jobs in the US domestic steel and aluminum industries over the next three years. However, net US job losses over that period are expected to near 400,000 and retail prices are anticipated to increase on a wide range of consumer products (e.g., appliances, motor vehicles, windows and doors) that rely on metal imports from China to keep production costs low.

Other potential winners include US-based producers of:

- clothing, footwear, and textiles
- electrical and electronic components
- nonferrous metals
- primary energy (e.g., butane, propane, and other natural gases)

### Losers

US farmers, automakers, and producers of consumer products such as electronic devices could be the hardest hit by the trade war, although this depends to some extent on whether the Trump administration provides aid packages to offset any losses.

Tariffs China placed on US agriculture and meat products corresponded with rapid price drops (e.g., US soybean prices have fallen 14% since April) and a record 2.5 billion pounds of meat piling up in domestic warehouses due to canceled export orders and insufficient domestic demand. As a result, the Trump administration has ordered a \$12 billion aid package for farmers, which may mitigate the short-term damage the tariffs have on agriculture. Furthermore, on July 25, the EU and the US agreed to discuss the possibility of lifting all tariffs they have placed on one another and ramping up US soybean exports to the EU to mitigate losses incurred by the US due to its trade war with China.

US automakers ranging from Ford to Tesla face added costs stemming from duties both the US and China have placed on steel, aluminum, and certain motor vehicles and various parts—with the US contemplating the enactment of an additional 25% duty on all motor vehicle imports to the US. Given the global nature of the auto industry's supply chains, the ripple effect would be far-reaching. According to the National Automobile Dealers Association, all told the proposed tariffs would add:

- \$2,270 to the cost of US-made cars
- \$6,875 to imported cars and trucks

Such price increases would correspond with significant sales losses and widespread layoffs.

Manufacturers of consumer products ranging from commodity hand tools to air conditioners and vacuum cleaners also face price hikes due to the crimp the US-imposed steel and aluminum tariffs have put in their supply chains. Illinois Tool Works, Lennox International, and Whirlpool, for example, all attribute higher raw material costs to the tariffs, which will correspond with higher retail prices. Packaging producer Sonoco is also planning to hike prices because of the steel and aluminum tariffs. And leading US nail and fastener supplier Mid Continent Nail (subsidiary of Mid-Continent Steel & Wire) has already laid off 60 employees and expects to close completely if the tariffs continue.

Advanced technology firms like Apple, Facebook, and Google—which use Chinese-made components to manufacture many of their consumer products, including smartphones and tablets—will also face hardship from the tariffs even though the industry is a victim of the Chinese intellectual property theft that the tariffs were levied to countervail. In addition to general price increases—roughly half of all information technology (IT) component imports to the US in 2017 came from China—these companies would face

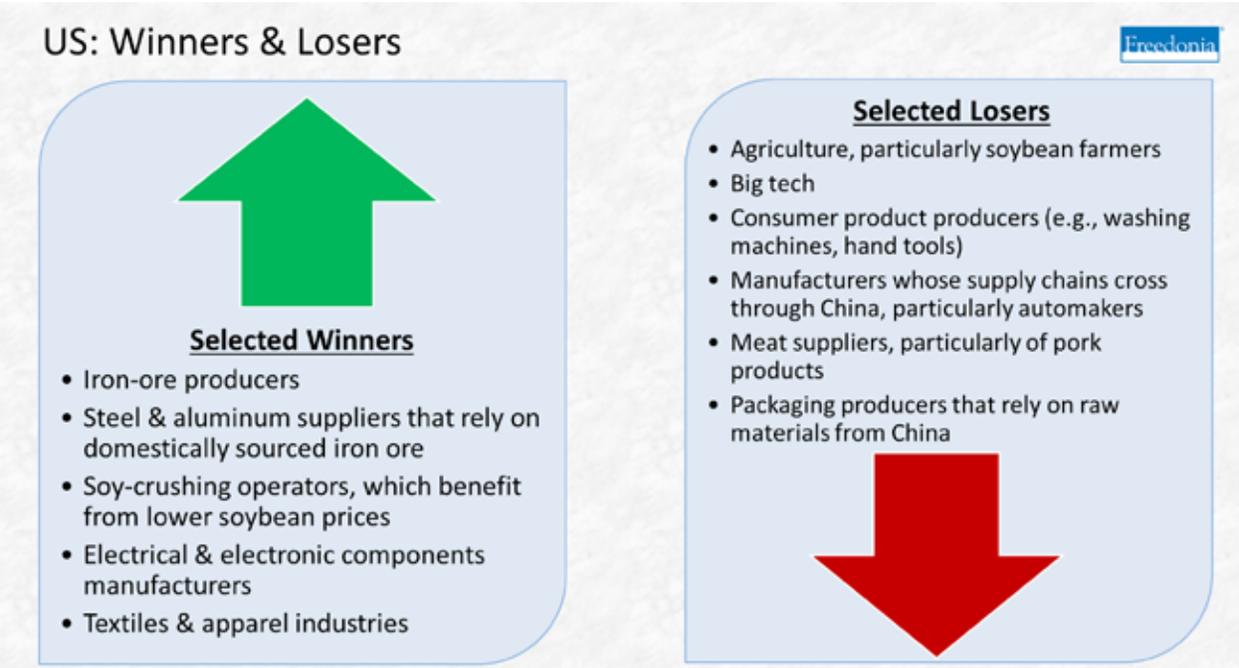
tariffs on best-selling products like the iPhone, which is assembled in China.

US concerns such as QUALCOMM and Intel, which make chips and other components for electronics in China and distribute them to the US, are also bracing for the US enactment of a 25% tariff on roughly \$3 billion in Chinese semiconductors, which is scheduled for August 2018.

Due to the roughly \$375 billion trade deficit between the countries, China cannot retaliate dollar-for-dollar against the Trump administration's recently proposed duties. Therefore, Beijing is expected to target US companies whose supply chains cross through China, as well as borderless service providers, including financial services and cloud computing operations.

Other US industries adversely impacted by the US-China trade war include:

- alcoholic beverages and tobacco
- coatings and paint
- communications
- construction
- food processing
- petroleum and coal
- rubber and plastics
- trade and distribution
- wood and paper



Source: The Freedonia Group.

## China: Winners & Losers

### Winners

Given the scale and scope of the Chinese economy, plenty of market opportunities exist both domestically and abroad for Chinese manufacturers to circumvent the impact of US-imposed tariffs. For example, a representative at Jialing Honda Motors (a China-based joint venture between Honda and China Jialing Industrial specializing in consumer machinery such as lawnmowers) told The Freedonia Group that the new tariff policy has little impact on business due to abundant export opportunities outside of the US, such as Africa and the Middle East, Southeast Asia, and Central and South America.

As China is the industry leader in the global electric motorcycle and e-bike markets, the impact of US-imposed tariffs on these products will depend on the ability of the US to replace Chinese imports with affordable alternatives sourced from the US or other countries, supply of which is currently insufficient. Multiple Chinese motorcycle and e-bike manufacturers report that the impact of the tariffs on their businesses will be negligible, including:

- Aucma
- China South Industries
- Guangzhou Haojin Motorcycle
- Haojue Holdings
- Yadea Group

In fact, according to a representative from Yadea Group, it will be US consumers—not Chinese manufacturers—who will have to absorb the 25% price increase if they want access to these products due to the limited number of suppliers throughout the world.

In addition, Chinese companies with US operations will be able to avoid the tariffs. For example, SANY Heavy Industry—a Chinese producer of heavy machinery—says there will be no impact on its business because its US plant makes export to that country unnecessary.

### Losers

Chinese producers of commodity products—such as batteries, filters, fasteners, packaging materials (e.g., glass, paper), and plastics—are likely to feel the biggest impact of US-imposed tariffs. For example, Bengbu Jinwei Filters predicts a major disruption to its business due to the price-sensitive nature of the commodity air and water filters it supplies, for which consumers are typically unwilling to pay 25% more.

Even though many companies already saw a decrease in exports to the US in 2018, Chinese suppliers of commodity products anticipate further, if still unpredictable, losses going forward. For example, Huapeng Glass, a major exporter of wine bottles, has not shipped packaging to the US since July 6 but anticipates that US winemakers will absorb the 25% added cost, which would likely be passed on to consumers.

Other industries adversely affected include:

- appliances (e.g., air conditioners, dishwashers)
- engines (e.g., ICE, pneumatic; motor vehicle, marine)
- heavy machinery (e.g., agricultural, construction, industrial)
- HEVs and other motor vehicles, including heavy-duty buses
- HVAC equipment
- IT components
- LEDs
- outdoor furniture
- power tools
- textiles, clothing, footwear, handbags, and other apparel and accessories

Companies in these industries will be affected in a variety of ways. A representative from Shantui Construction Machinery says the company has not exported products to the US since July 6, which has affected business. The company reports that it is working with other construction companies to erase the tariffs and will apply for an exemption via US customs. For Lovol Heavy Industry, the outlook is somewhat more optimistic. Though the third round of US-imposed tariffs are expected to impact the company, it expects its products to remain competitive in the global market.

The tariffs will also have differing impacts on the Chinese HEV industry. A major Chinese machinery supplier, which also exports electric vehicles, motorcycles, and e-bikes to the US, says the tariffs have a negative impact on its business. Chinese producers of HEVs will also suffer, in part due to the availability in the US of these vehicles and related components that have been manufactured domestically or in countries not subject to these tariffs. A representative from a major China-based exporter of HEV parts and components to the US market says the additional 25% costs caused by the tariff will be passed on to US consumers, which may lead to sales declines.

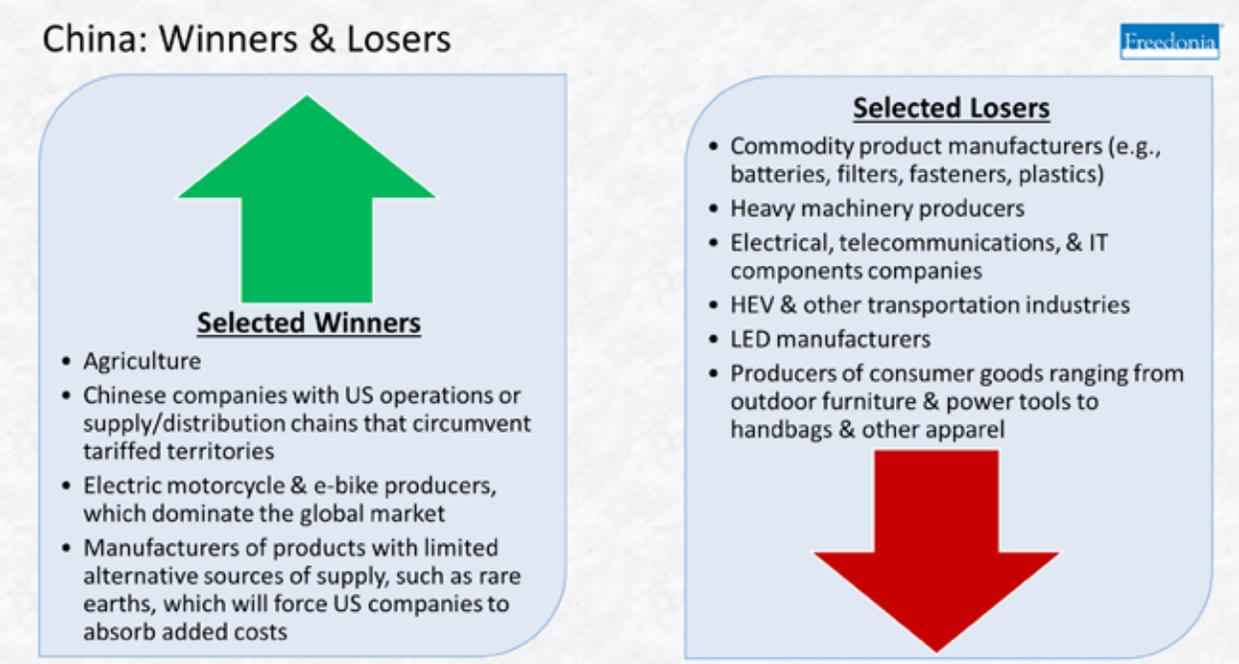
Nevertheless, other Chinese manufacturers operating in the global HEV market—including Zhengzhou Yutong Group and ZHIDOU Electric Vehicle—will likely see a minimal impact to their businesses due to abundant export opportunities elsewhere.

Producers of thermoplastic elastomers in China will face higher raw material costs as

a result of the tariffs, as some of these materials are imported from the US. However, companies like Dongguan Top Polymer Enterprise will see minimal impact, as the US is not a significant export market for them. Instead they will likely seek out other export opportunities to compensate for any potential losses incurred by US-imposed tariffs.

Additionally, in order to continue serving US tech firms such as Apple and Google, which rely on Chinese IT components and rare earths for production, some Chinese suppliers may relocate from China to Vietnam or Malaysia to avoid the need to raise their prices to compensate for the tariff.

As a result of the US-imposed tariffs, Chinese equity markets are down over 20% from January highs, a trend that is expected to continue if the Trump administration follows through with threats to place tariffs on all imports from China.



Source: The Freedonia Group.

### US Tariffs On Chinese Goods

#### Agricultural Chemicals

In July 2018, the US announced that it would be imposing tariffs on certain pesticide and fertilizer products imported from China. When they are enacted, these tariffs will likely have a negative impact on the US agriculture industry, which has already been battling falling prices for corn, soybeans, and other major farm commodities. The tariffs would

impose a 10% surtax on impacted pesticide and fertilizer products, which would increase crop production costs and cut into already slim profit margins for many farmers.

In 2017, imports satisfied approximately 10% of US pesticide demand. Imports of affected pesticide products from China in 2017 totaled \$321 million, or 27% of total imports. As such, the pesticide tariff would likely have a major impact on US pesticide producers, including:

- BASF
- Bayer
- DowDuPont (the leading US-based supplier of pesticides)

Numerous smaller pesticide producers would also be affected, as they all import at least some of the active ingredients they use to formulate their pesticides from facilities in China.

The fourth major supplier of pesticides to the US, Syngenta, is owned by ChemChina, and many of its products are manufactured in facilities in China. Going forward, these products would all be subject to the 10% duty, raising production prices.

Major suppliers of pesticide active ingredients in China derive a significant amount of their business from US-based pesticide formulators. They include:

- Fuhua Tongda Agro-Chemical Technology
- Jiangsu Yangnong Chemical Group
- Jingma Chemicals
- Wynca

Major pesticide active ingredients such as 2,4-D and glyphosate are produced in China and purchased by formulators of off-brand or low-cost pesticides in the US. Because approximately 20% of the products formulated in the US are exported to other countries, the tariffs on US imports of pesticides from China could have a significant impact on pesticide prices around the globe if they go into effect.

Trade with China is somewhat less significant in the US fertilizer market. In 2017, imports accounted for over half of the US market for fertilizers, but—with imports worth \$172 million—China only supplied 3% of those. However, price volatility in the fertilizer market keeps many agrochemical suppliers and farmers wary of any action that may contribute to further increases in fertilizer prices.

## US: 10% on Chinese agrochemicals, threatened

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### Key Factors

- Tariff will correspond with higher prices for pesticide active ingredients sourced from China, and therefore pesticides themselves.
- As a result, US agriculture will suffer from higher production costs compounded by lower prices due to reduced exports to China.
- Impact on US fertilizer market to be less significant.



### Selected Companies Impacted

- BASF
- Bayer
- DowDupont
- Fuhua Tongda Agro-Chemical Technology Company
- Jiangsu Yangnong Chemical Group
- JingMa Chemicals
- Syngenta (ChemChina)
- Zhejian Wynca Chemical Group

Source: The Freedonia Group.

## Batteries

The 25% tariff the Trump administration placed on Chinese imports of primary and secondary battery products, including lithium batteries used in electric vehicles (such as those manufactured by BYD) and commodity types, on July 6, 2018, will most likely result in a combination of:

- decreased US imports of batteries from China
- increased US imports of batteries from other Asian nations
- increased US battery production

China is the leading source of US imports of both single-use and rechargeable batteries, traditionally comprising about 40% of all US imports. However, there is also a sizable amount of US battery manufacturing. The tariffs will result in batteries manufactured in China being less cost-competitive with domestically manufactured batteries, which could provide a boost to US battery manufacturing.

Because the tariff exclusively targets China, however, the US could also look to source more battery imports from other Asian nations that manufacture low-cost battery products, such as Indonesia, Taiwan, and Singapore. It is unlikely that these nations will be able to supply the same amount of batteries as China, but the US could increase imports from these countries to source more affordable batteries whose prices will not be impacted by the tariffs.

Regardless of how US battery demand requirements are met, the 25% tariff will cause average battery prices to increase in the US. Most batteries have a low per unit cost and businesses will be unable to absorb the added cost of the tariff, which will cause the final price to the consumer to rise.

### US: 25% on Chinese battery imports, enacted July 6

**Potential Outcomes**

| China   | US   | Other Nations   |
|---|--|---|
| <ul style="list-style-type: none"><li>Decreased exports</li></ul> | <ul style="list-style-type: none"><li>Increased production</li></ul> | <ul style="list-style-type: none"><li>Increased exports to US</li></ul> |



**Selected Chinese Companies Impacted**

- BYD
- Camel Group
- Chaozhou Zhenglong Battery
- China Power
- Fujian Nanping Nanfu Battery
- Guangzhou Tiger Head Battery
- Shenzhen Desay Battery Technology
- Shoto Group
- TianJin Lishen Battery
- Tianneng Power
- Xiamen Three Circles
- Zhejiang Mustang Battery

Source: The Freedonia Group.

## Flooring

The US is considering whether to levy a 10% duty on \$200 billion worth of Chinese goods, including a wide range of hard- and soft-surface flooring materials. Chinese imports of such products to the US totaled more than \$2.5 billion in 2017 and accounted for about 28% of the country’s flooring imports. Affected flooring types would include:

- bamboo
- carpets and rugs
- cork
- decorative tile
- hardwood lumber
- laminate
- linoleum
- rubber
- vinyl flooring

As most flooring manufactured in China and imported to the US consists of low-cost products marketed to value-conscious consumers, the tariffs would likely lead to:

- reduced Chinese imports to the US
- higher prices and reduced sales

In many cases, price increases on imported Chinese flooring would cause US consumers to seek out alternative products. In some cases, though, consumers may feel that the total cost of a flooring installation project exceeds the amount they had budgeted, leading them to decide not to replace flooring and perhaps opt for another type of improvement or repair project instead.

However, the effect of these tariffs might not be as drastic as in other product categories. US production of flooring has risen over the past few years as building construction activity—especially in the residential market—has advanced. US manufacturers could continue to expand production activity at domestic plants if—as expected—tariffs cause the price of Chinese-made flooring to rise to a level equal to that of US-made products.

The vinyl flooring segment—which represented about 75% of total Chinese flooring imports to the US in 2017—would be most affected by the imposition of tariffs. Price increases on many of these products (such as luxury vinyl tile, or LVT) would erode the advantages previously held by low-cost Chinese suppliers. Manufacturers of LVT based in other countries (especially South Korea) or in the US would be able to capitalize, possibly capturing market share.

Other product segments would see relatively muted effects. US imports of Chinese-made hardwood and laminate flooring products, for example, dropped precipitously following news that some Chinese products contain levels of formaldehyde—a known carcinogen—that greatly exceed US safety guidelines. As a result, many US consumers have opted for US-made hardwood flooring or US- and European-produced laminate flooring. While tariff-related price hikes would have a negative impact on US sales of Chinese-made hardwood and laminate flooring, imports are already much lower than they were prior to this revelation.

On the other hand, the US imports a significant quantity of carpet tile from China, so the imposition of tariffs would affect some US consumers. However, as US demand for carpet has risen rapidly over the past few years, domestic manufacturers have worked to boost output. Thus, tariffs could encourage US producers to further accelerate plant expansions as Chinese products could lose much of the pricing advantage they had before.

The US carpet and rug market would also be affected, as the vast majority of carpets and rugs sold in the US are inexpensive products made elsewhere. While Chinese products

account for a sizable share of US sales, so do carpets and rugs made in countries unaffected by tariffs, such as India and Vietnam. Therefore, imported carpets and rugs from other nations with low costs of production are expected to replace Chinese-made products in the US if the proposed tariff goes into effect.

For example, in a recent earnings call, leading US flooring retailer Tile Shop Holdings commented on the trade dispute, laying out three solutions the company may pursue in the event the US follows through with the 10% tariff on \$200 billion worth of Chinese goods:

- seek supply sources outside of China
- pass added costs on to customers
- absorb the extra cost and hope increased sales offset losses

**US: 10% on Chinese flooring, threatened** 

| <u>Potential Outcomes</u>  | <u>Key Factors</u>   |
|--|--|
| <ul style="list-style-type: none"> <li>• Reduced imports from China</li> <li>• Higher prices for businesses &amp; consumers</li> <li>• US companies seeking out low-cost supply sources outside of China (e.g., South Korea, Vietnam)</li> <li>• Key product segments affected include vinyl, carpet tile, &amp; carpets &amp; rugs</li> </ul> | <ul style="list-style-type: none"> <li>• US imports of Chinese-made flooring were more than \$2.5 billion in 2017.</li> <li>• China imports accounted for more than a quarter of all US flooring imports in 2017.</li> </ul> |
| <b><u>US Companies Affected</u></b>  |  |
| <ul style="list-style-type: none"> <li>• Armstrong Flooring</li> <li>• Mannington Mills</li> <li>• Tarkett</li> <li>• Lumber Liquidators</li> <li>• Mohawk Industries</li> <li>• Shaw Floors</li> </ul>  |  |




Source: The Freedonia Group.

**Hand Tools**

In July 2018, the Trump administration proposed new 10% tariffs on products imported from China, including hand tools such as axes, handsaws, pliers, wrenches, hammers, and screwdrivers. The US International Trade Commission could decide to implement these tariffs after a comment period that ends in August. If enacted, these tariffs would increase the cost of importing hand tools from China.

In 2017, China accounted for about half of US hand tool imports, which satisfy about 25% of US demand. If the tariffs are enforced, the US will likely import more hand tools from

Taiwan, currently the second leading source of US imports of these products. Although Taiwanese hand tools are currently more expensive than those made in China, the tariffs would reduce that difference in cost and make hand tools sourced from Taiwan more competitive. In the US, this would lead to price increases of all hand tools. However, because China accounts for such a significant share of US hand tool demand, it could be difficult for US concerns to quickly switch suppliers, making it likely that some Chinese hand tools would still be imported, further boosting prices.

US manufacturers producing hand tools solely in the US will be impacted positively, as their products will become more cost-competitive with Chinese hand tools if the tariffs are implemented.

However, many US manufacturers also have operations in China. These suppliers will be negatively affected because their Chinese-produced goods will cost more to import to the US. Possible long-term solutions to this challenge include:

- invest in opening more production plants in the US
- shift production of certain goods from China to the US, and vice versa, to avoid tariffs

However, smaller US-based companies that rely on Chinese manufacturing could struggle to adapt to the tariffs, as they are less likely to have the capital to eat the new costs or to invest in domestic manufacturing.

Many lower income consumers look to purchase items available at the lowest cost and do not need tools with advanced features. Thus, they tend to be major purchasers of lower priced, basic design hand tools imported from China. If the tariffs are implemented and manufacturers pass on increased costs to buyers, these consumers could choose to purchase fewer products.

Chinese manufacturers would have to adapt to lessen the effects of the tariffs on their bottom line. Because many supply hand tools throughout the world, they would likely be able to find other buyers for their products if they lose some business in the US, even if sales are not fully restored. Additionally, many Chinese manufacturers are contract manufacturers. If hand tool contract manufacturers get less business from companies marketing products to the US, they will shift to production of other products.

Affected companies include:

- Techtronic Industries (based in Hong Kong, although the company is a leading supplier to the US market and has extensive operations in the US) makes some Milwaukee tools in the US, but the company also has operations in China.

- Stanley Black & Decker has stepped up its production of Craftsman tools in the US after acquiring the brand from Sears, but it still has production overseas (including in China).
- Channellock, a US-based company, manufactures all of its tools in the US and its products would become relatively less expensive than competing imports from China if the tariffs are implemented
- Great Neck Saw (based in the US) manufactures some tools in the US, but many of its tools are sourced from China.

In sum, US-based companies that make some of their hand tools in China would be harmed by the prices of these tools rising in the US, but Chinese tools will continue to be bought and sold globally and in the US. Some US-based companies may be enticed to bring

**US: 10% on Chinese hand tools, threatened** Freedonia

| Potential Outcomes  |  |   |
|---|--|---|
| China   | US   | Other Nations   |
| <ul style="list-style-type: none"> <li>• Decreased exports</li> </ul> | <ul style="list-style-type: none"> <li>• Increased production</li> </ul> | <ul style="list-style-type: none"> <li>• Increased exports</li> </ul> |



**Key Factors**

- China accounted for half of all hand tool imports to the US in 2017.
- Taiwan was second largest exporter to the US market in 2017.
- US-based hand tool manufacturers with operations in China will be negatively impacted or invest in facility relocation.
- “Made in USA” companies, such as Channellock, will benefit from higher-cost Chinese imports.

Source: The Freedonia Group.

back some of their manufacturing to the US to avoid tariffs, but much of the movement of production overseas is complete and likely to remain that way, regardless of new tariffs.

**LEDs**

On July 6, 2018, the US placed a 25% tariff on \$34 billion worth of Chinese goods, including LEDs, and the country has also proposed an additional 10% surtax on backlighting of LCDs and a number of end-use products that contain LEDs. US imports of LEDs from China amounted to \$637 million in 2017—seemingly a sizable sum, but really a drop in the bucket when considering the size of the overall US LED market.

Most Chinese-made LEDs are used in Chinese manufacturing and enter the US as parts of end-use products such as:

- electronics
- light bulbs and fixtures
- motor vehicle parts

The 25% tariff largely targets imports of LEDs themselves rather than LED-based end-use products—although the proposed 10% tariff on \$200 billion worth of Chinese goods would hit some end-use products, such as LED indicator panels and lighting fixtures—so the impact will be somewhat limited at this point.

Where the tariff does have an effect—mostly among smaller manufacturers with products that already tend to be more expensive—prices of end-use products could rise. For example, some companies (e.g., Cree) begin their LED manufacturing in the US in order to protect the intellectual property contained in certain components, but they then ship components to China for further assembly before bringing them back into the US for integration into end-use products.

In the long run, these tariffs may prevent Chinese manufacturers from splitting their production of end-use products between China (i.e., production of LEDs) and the US (e.g., putting LEDs into lighting products), which may slow their encroachment into higher-value markets where US-based LED manufacturing is more significant.

Given Chinese producers' dominance in LED production, there is little chance that US companies currently relying on LEDs made in China can source these products from other countries, let alone be able to produce them themselves, for the same low cost. Therefore, some companies that produce LED-based end-use products in the US might find it harder to compete going forward. The big companies that account for most sales of LED-based end-use products will not be encouraged to move production into the US—unless new tariffs targeting end-use products are instated as well.

Affected companies include:

- Cree
- Feit Electric
- Global Value Lighting (GVL)
- LEDVANCE
- TCP International

Cree appealed to the Trump administration for an exemption for its LED products. Cree manufactures some LED components in the US, ships them to Huizhou, China, for further

assembly, and then sends these packages back to the US for integration into lighting products. Representatives of Cree have stated that the enacted 24% tariff will:

- constrict the company's budgets for both research and development and manufacturing expansions
- give a sourcing advantage to its non-US rivals (e.g., OSRAM Licht, Nichia)

Feit Electric is a provider of higher-end lighting that has some of its goods produced in Xiamen and Zhangzhou in the Fujian province of China through a production agreement with Hi-Light Lighting. Depending on how Feit controls its supply chain, it could easily face some of the same challenges as Cree.

GVL is a US-based joint venture between Lighting Science Group and MLS (China) that almost certainly gets its LEDs from MLS, a global leader in LED manufacturing, so it will likely face higher sourcing costs going forward.

LEDVANCE, which produces SYLVANIA branded LED lighting, was acquired by a Chinese consortium in March 2017 and came under sole ownership of China's MLS Company in April 2018. LEDVANCE maintains distribution facilities in the US but does its manufacturing outside of the US, so it imports finished lighting products—rather than LEDs themselves—from China. Therefore, it will not be immediately affected by the tariff. However, the tariff may prevent MLS from moving part of its lighting assembly operations into the US under LEDVANCE because that would require the company to import LEDs from its Chinese facilities, making those products subject to the tariffs.

TCP manufactures its lighting components—presumably including its LEDs—in China and assembles its lamp and light fixtures at its US headquarters site in Aurora, Ohio, so the company will likely face higher sourcing costs as well.

## US: 25% on Chinese LEDs (July 6), 10% on products containing LEDs (proposed)



### Potential Outcomes

- Higher prices for LEDs themselves, as well as end-use products containing LEDs, will be absorbed by producers or passed on to consumers.
- China's dominance of LED market makes it unlikely that US companies will be able to find alternate sources of supply elsewhere.



### Key Factors

- Most Chinese-made LEDs enter the US as parts of end-use products.
- US imports of LEDs from China amounted to \$637 million in 2017.

### US Companies Affected

- Cree
- Feit Electric
- Global Value Lighting (GVL)
- LEDVANCE
- TCP International

Source: The Freedonia Group.

## Lubricants

Among the \$16 billion worth of Chinese goods the Trump administration plans to slap with a 25% tariff are a number of chemical products, including:

- lubricating oils
- polymers
- resins
- other industrial chemicals

Although no date has been given for the implementation of these tariffs, it is anticipated that they will go into effect in the near future. Additionally, China has stated its intent to retaliate with tariffs of its own—including duties on a similar group of chemical products—although the extent of the proposed surtax is unclear at the moment.

Both the US and China are intensive users of lubricants. Each accounts for about 20% of the global market, with the US boasting a slightly larger share of demand for industrial lubricants and China a larger share for automotive lubricants. In 2017, the US imported \$5.8 million of finished lubricants from China, equivalent to less than 1% of the all lubricants the country imported for domestic consumption. Meanwhile, exports of lubricants from the US to China accounted for nearly \$360 million, or around 5%, of US exports of lubricants in that year.

US-based users of lubricants—such as automobile manufacturers, farmers, power generation companies, food and beverage producers, and other manufacturers—would not be greatly impacted by tariffs on products made in China. Many of the world’s largest lubricant suppliers are either based in the US or have extensive production facilities in that country. Such companies include:

- BP
- Chevron
- Exxon Mobil
- Shell
- Valvoline

These companies have a strong position in the US and North America, where they account for around half of the regional market. Additionally, many specialty lubricants producers are based in the US, further reducing reliance of US-based lubricant users on products made in China. The impact on US-based lubricant manufacturers (such as those noted previously) would also be minimal, due to their global reach and relatively small involvement in the Chinese lubricants market.

The tariffs would also have only minor effects on lubricant users in China. The US currently satisfies a small fraction of lubricant demand in China, and a number of globally significant producers are located in the Asia/Pacific region, including:

- Idemitsu Kosan
- JX Nippon Oil & Energy
- PetroChina
- Sinopec

China-based lubricant producers such as Sinopec could be more affected by the imposition of tariffs on lubricants entering the US if they look to widen their presence in the global market. Although mature, the US lubricants market is lucrative due to its size.

US: 25% on Chinese lubricants, effective date TBA, imminent



Key Factors

- The US and China each represent about 20% of the global lubricants market.
- In 2017, the US imported \$5.8 million of finished lubricants from China, equivalent to less than 1% of the lubricants imported for domestic consumption.
- That year, exports of lubricants from the US to China amounted to nearly \$360 million, or around 5% of US domestic exports of lubricants.

Impact

- US-based end users of lubricants will not be significantly affected.
- Their global reach and relatively small involvement in China will also limit effects on US lubricant producers.
- Minimal impact is anticipated for Chinese lubricant suppliers as well, except for those seeking to penetrate new markets.



Source: The Freedonia Group.

Machinery

On July 6, 2018, the US enacted a 25% tariff on industrial, construction, and agricultural machinery imports from China. The US is a significant manufacturer of agriculture, construction, and industrial machinery. Many of the world’s leading equipment suppliers operate production facilities in the US because of the large size of its domestic market. Nonetheless, the US still imports a significant amount of industrial, construction, and agricultural machinery to satisfy domestic needs, and China is a leading source of supply.

The primary impact of the tariff will be a reduction in imports of finished machinery from China. Most types of industrial, construction, and agricultural equipment are quite expensive, and the 25% tariff on finished equipment will make Chinese products much less competitive in the US, forcing end users to turn to machinery sourced locally or from other foreign producers.

The tariff’s impact on spare parts and attachments will be even more pronounced. In addition to causing the price of spare parts and attachments to rise, it could potentially disrupt supply chains manufacturers that make these products in China, including those based in the US and in other countries. However, because China has few major competitors in the global industry for machinery spare parts and attachments, products made in China may still be price competitive with attachments and spare parts made elsewhere.

The longer-term impact of the tariff will be a shift in the source of US imports away from

China in favor of other sources of supply, as well as an increase in sales of machinery manufactured in the US. The Chinese machinery manufacturing operations of suppliers based in the US, Europe, Japan, and China will also be harmed by the 25% tariff, forcing these countries to reorganize their supply chains. Finally, US end users of industrial, construction, and agricultural machinery will be hurt by the rising cost of these products.

Some benefit from the tariff will be seen in the US construction and agriculture machinery industries, particularly for:

- AGCO
- Caterpillar
- John Deere

A more diverse set of US and Chinese companies in the more generic industrial machinery industry will be impacted due to the large number of firms that manufacture purpose-built machinery for a specific industry. Affected Chinese suppliers include:

- Agricultural Machinery: Lovol Heavy Industries, Shandong Shifeng Group, Sinomach, World Group
- Construction Machinery: Xuzhou Construction Machinery, Zoomlion Heavy Industry

Nevertheless, Chinese companies with US operations will be able to avoid the tariffs. For example, Sany Heavy Industry says there will be no impact on its machinery business because its US plant makes export unnecessary.

**US: 25% on Chinese machinery, enacted July 6**

**Potential Outcomes**

- US**
  - Higher prices
  - Shift in import sourcing
  - Supply chain reorganization
- China**
  - Less price-competitive with US-made products
  - Reduced exports

**Impact**

- US-based firms, such as Caterpillar and Deere, will benefit from higher-cost imports somewhat.
- However, prices for products those companies make in Chinese facilities will also rise.
- As a result, supply chain reorganization is expected as price sensitivity is acute in this industry.
- China-based companies will see fewer export opportunities.

The infographic includes two small images at the bottom: one of construction cranes and another of a yellow excavator working on a site.

Source: The Freedonia Group.

### Natural & Imitation Stone

Among the \$200 billion worth of products the Trump administration is eyeing to hit with additional 10% tariffs are various natural and imitation stone products. The new tariffs would be additions to current surtaxes, which range from 2% to 6%. The proposed 10% tariff will be discussed at public hearings in August 2018, and could be implemented later in the year.

Potentially affected stone products include:

- boulders, blocks, and other finished products
- columbariums and other funeral products
- curbs and sett stones
- cut slabs
- monuments

If enacted, the impact of these tariffs on the US construction industry would be immense. The tariffs would increase material costs for businesses that work with Chinese stone, and those costs would likely to be passed on to US consumers, resulting in more expensive stone products. Natural and imitation stone is used as a building material in a variety of applications, including:

- countertops
- fencing
- floor and wall tile
- flooring
- moulding and trim
- siding

Stone products are generally chosen as a building material because:

- Their durability and minimal maintenance requirements make them popular in commercial building applications.
- Their attractive appearance leads homeowners to specify them despite their higher cost.

Should these tariffs be implemented, more consumers will opt for alternative building materials, such as fiber cement or vinyl, which cost less and can mimic the appearance of stone. However, because stone is often used in high-end applications, these products are less price-sensitive than other building materials, meaning an increase in cost may not act as an especially strong deterrent to sales.

**US: 10% on Chinese natural & imitation stone, threatened** 



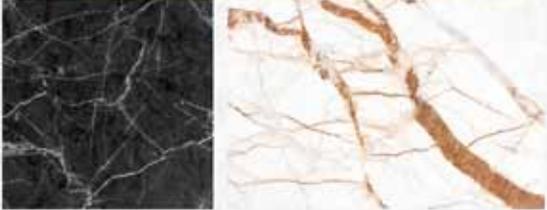
Natural & imitation stone demand could decline as prices increase as a result of tariffs.

Alternative materials that can mimic stone – e.g., fiber cement, vinyl – will benefit.

However, as stone is often used in upscale applications, higher prices may not deter purchases.

**Potentially Impacted Products**

- cut slabs
- monuments
- columbariums & other funeral products
- curbs & sett stones
- boulders, blocks, & other finished products



Source: The Freedonia Group.

**Packaging**

The ongoing and escalating tariff exchanges between China and the US directly affect several industries and indirectly impact countless others. Packaging—particularly plastic packaging—is one industry that has experienced increased levels of involvement as tensions escalate.

The initial tariffs placed on imported steel and aluminum by the US in April had little direct effect on packaging. Facing increased aluminum prices, and thus higher aluminum foil prices, US companies producing flexible packaging with foil layers for barrier protection could explore substitution to metalized films.

In July 2018, the US announced the possibility of a 25% tariff on Chinese goods related to the “Made in China 2025” industrial policy, which include plastic resins and other packaging inputs such as plastic film and sheet. However, if enacted, these tariffs are unlikely to have a substantial effect on the packaging industry. Since the US has ample resin production capacity and imports from China are minor, tariffs on plastic resins imported from China would provide only marginal disruptions to the US packaging industry.

An additional 10% duty on \$200 billion in Chinese imports has also been proposed by the US but not implemented as of yet. These surtaxes take aim at plastic packaging materials

produced in China—and would be the first targeting of finished packaging products since the trade dispute began. These materials include plastic:

- bags
- bottles
- closures
- lids

China is either the leading or second largest supplier of the targeted packaging materials to the US market. The US imported \$2.5 billion of these particular plastic packaging items from China in 2017, equivalent to about one-third of all US imports in this industry. In turn, the US exported only \$100 million of these products to China, resulting in a significant trade deficit.

If implemented, these tariffs could induce users to source more plastic packaging from other packaging exporters, such as Canada, Mexico, and various European countries. US importers of these packaging materials are vulnerable to supply disruption if the countries have limited spare capacity or are hit with similar tariffs.

**US: 10% on Chinese plastic packaging, threatened** 

| <u>Key Plastic Products Targeted</u>  | <u>Key Factors</u>   |
|---|--|
| <ul style="list-style-type: none"> <li>• Bags</li> <li>• Bottles</li> <li>• Lids</li> <li>• Closures</li> </ul> | <ul style="list-style-type: none"> <li>• Plastic resins and other inputs from China could be taxed at 25%, but the impact on US packaging industry would be minor.</li> <li>• China is a top US supplier of the finished packaging products targeted for a 10% tariff, representing a third of all imports of these products in 2017.</li> <li>• Supply chain disruption possible for US importers.</li> </ul> |



Source: The Freedonia Group.

**Plastic Pipe, Tube, Hose, & Related Fittings**

Plastic pipe, tube, hose, and related fittings imported to the US from China face an imminent 25% tariff, which is expected to be enacted by August 2018. Additional related components (along with numerous other Chinese goods valued at a total \$200 billion) may also be hit with a 10% tariff.

Chinese exports of plastic pipe, tube, hose, and related fittings to the US totaled nearly \$310 million in 2017 and accounted for about 45% of all US imports of such products that year.

End uses for these products include:

- automobiles
- heating, ventilation, and air conditioning (HVAC) systems
- plumbing systems

Price is a key consideration for construction professionals and specifiers when selecting pipe and related components for plumbing and HVAC jobs. Many consumers—faced with a 25% price increase—would look for less costly alternatives, such as domestically made pipe or products from Mexico (which accounted for 13% of US flexible plastic pipe imports in 2017). Indeed, Chinese suppliers of flexible plastic pipe—in response to Freedonia Group queries—stated they anticipate sales to US customers to decline as a result of these tariffs.

US production of plastic pipe and fittings has been on a slight upswing in recent years due in large part to increasing domestic demand for these products. In particular, elevated levels of kitchen and bathroom renovation activity have boosted demand for pipe and fittings made from cross-linked polyethylene, or PEX, which offers construction professionals an inexpensive yet durable alternative to metal pipe. US-based manufacturers have worked to expand domestic production capacity:

- Reliance Worldwide expanded a plant in Cullman, Alabama, that is devoted to the production of PEX pipe fittings for plumbing applications in May 2016.
- Uponor expanded its PEX-pipe manufacturing site in Apple Valley, Minnesota, in January 2018.

Going forward, this combination of continuing high demand for plastic (especially PEX) pipe and fittings and prospective tariffs on Chinese-made flexible pipe and fittings may spur US manufacturers to further boost production capacity. With domestically produced pipe selling at prices comparable to that of foreign-made materials, US firms will have a powerful incentive to expand US output and sales efforts, especially because contractors tend to remain loyal to a brand for many years.

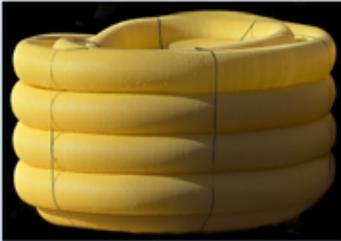
While a decline in Chinese plastic pipe imports will lead to higher plumbing and HVAC product prices, prices are not expected to rise as rapidly as they have for other construction products, such as lumber, because the products are not used as intensively. In the average plumbing or HVAC project, flexible plastic pipe and hose account for a much smaller share of total job expenses than lumber does when building a home.

For example, a newly built single-family home in the US might include 1,000 feet of flexible plastic pipe, and a plumber who purchases pipe to outfit will seldom pay more than \$1 per foot. Therefore, even if the price of flexible plastic pipe went up 25% in response to the proposed tariffs, the total additional cost of installation would only be \$250—in contrast to the many thousands of dollars that lumber tariffs add to construction costs.

Metal pipe, tube, hose, and related fittings would be similarly affected by tariff, though metal is used less frequently in plumbing applications, and while larger-diameter pipes are more often imported and thus would face price increase, most small-diameter pipes used in the US are domestically sourced.

**US: 25% on plastic & rigid pipe, effective date TBA, imminent** 

| <u>Potential Outcomes</u>   | <u>Key Factors</u>   |
|---|--|
| <ul style="list-style-type: none"> <li>• China faces losses if tariffs reduce its pricing advantage.</li> <li>• Mexico, a leading supplier of plastic tubing for US automotive applications, would benefit (unless it becomes subject to tariffs, too).</li> <li>• US manufacturers are expanding plastic pipe operations.</li> </ul> | <ul style="list-style-type: none"> <li>• Chinese exports of plastic pipe, tube, hose, and related fittings to the US totaled nearly \$310 million in 2017.</li> <li>• China accounted for about 45% of all such US imports that year.</li> </ul> |
| <u>Selected Companies Affected</u>  |  |
| <ul style="list-style-type: none"> <li>• JM Eagle (US)</li> <li>• Rifeng (China)</li> <li>• Uponor (US)</li> <li>• Viega (US)</li> <li>• Westlake Chemical (US)</li> </ul>  |  |

Source: The Freedonia Group.

**Recreational Boats**

The recreational boating industry faces tariffs both on the materials used to construct boats and boat parts as well as on the boat and related parts themselves.

First, the US industry is already feeling the effects of US tariffs on steel and aluminum, as well as countervailing duties on US aluminum sheet enacted by China. Although US manufacturers get a majority of their aluminum from domestic sources, the price of all aluminum has increased substantially in the US and consequently raised the cost of boats made with the material.

Then, on July 6, 2018, the US enacted tariffs of 25% on nearly 300 marine-related products—including marine components, propulsion systems, and navigational equipment—in

response to China’s retaliatory tariffs on US goods following the US aluminum and steel duties. It has also threatened to put a 10% duty on Chinese imports of a range of vessels and additional products. This tariff is currently pending review.

The enacted and proposed tariffs will raise costs and increase uncertainty in the market, especially in the US industry, which has posted a strong recovery since the significant downturn that followed the Great Recession.

Unless US manufacturers are able to obtain an exemption from the US government, these tariffs will increase the costs of manufacturing boats, which are likely to be passed on to the consumer. Long term, these additional costs could result in decreased boat sales, prompting manufacturers to slow production and cut jobs.

Although the majority of boats sold in the US are produced domestically, imported components and materials are commonly used in the manufacturing process. Moreover, as there is a large lead-time when ordering vessels, US boat manufacturers might have priced boats orders based on pre-tariff costs for components and materials. As a result, manufacturers may be stuck with additional costs until the market adjusts.

**US: 25% enacted & 10% threatened on Chinese marine products** 

| <u>Potential Outcomes</u>  | <u>Key Factors</u>   |
|--|--|
| <ul style="list-style-type: none"><li>• Impact on US recreational boating market is expected to be immense, because even domestically assembled boats typically contain imported components.</li><li>• Additional costs of up to \$2,000 to be passed on to consumers.</li><li>• Demand will decline accordingly, potentially resulting in production and job cuts</li></ul> | <ul style="list-style-type: none"><li>• July 6: 25% enacted on marine components, propulsion systems, navigational equipment, and other marine products.</li><li>• 10% threatened on range of vessels and other marine products, pending review.</li></ul> |

**Selected US Companies Affected**

- Correct Craft
- Malibu Boats
- Marine Products
- MCBC Holdings
- White River Marine Group



Source: The Freedonia Group.

### Windows & Doors

US window and door producers are paying special attention to recent tariffs affecting critical materials used in the manufacture of their products.

In April 2018, the Trump Administration released a list of tariffs to be placed on 1,300 goods imported from China that included key metal components used in the manufacture of windows and doors. Already feeling the effects of price increases due to higher duties on aluminum and steel products (especially on imports from Canada, the leading national supplier of aluminum and steel to the US window and door industry)—members of the Window and Door Manufacturers Association (WDMA) submitted requests for specific product exclusions from the list of new tariffs on Chinese imports.

On June 15, the WDMA announced that its requests for the following product exclusions were successful:

- HTS Code 7318.16.00—iron or steel nuts
- HTS Code 7320.20.50—iron or steel helical springs (other than suitable for motor vehicle suspension)
- HTS Codes 720 through 760—(broadly) metal-based products in various states of added value

Successful exclusion of the above products from the new set of duties will help offset some of the price growth stemming from aluminum and steel tariffs, as well as aid US manufacturers in maintaining existing supply chains for these key components.

The WDMA released the following statement: “Imposing tariffs on these Chinese products would have curtailed the ability of manufacturers to retain responsible Chinese vendors as an option in the supply chain. We have seen the effects that other tariffs, including steel and aluminum, have had on price increases for the residential housing and commercial construction markets. Today’s win will help prevent additional increases for our manufacturers and consumers alike.”

Nonetheless, recent hikes on steel and aluminum tariffs are expected to continue raising costs for producers of residential and commercial windows and doors—potentially increasing prices for consumers as well.

**US: Impact of 25% Tariff on Chinese Steel & Aluminum on US Windows & Doors Industry** 

**Potential Outcomes**

- Prices for windows and doors are already rising as a result of the US-imposed tariffs on all steel and aluminum imports, including those from China.
- Window and door producers may begin looking for new, potentially less-reliable and higher-cost producers outside of China.



**Key Factors**

- Tariff enacted March 2017.
- WDMA secured exemptions for key components targeted in July 6 tariffs, mitigating price growth.
- Impact of Chinese tariffs less than those levied against other countries (e.g., Canada), which export more steel and aluminum to the US.

**Selected US Companies Affected**

- Pella
- Ply Gem
- Marvin Windows & Doors
- Masonite International

Source: The Freedonia Group.

## Chinese Tariffs on US Goods

### Adhesives & Sealants

In response to a proposal by the US government to impose a 25% tariff on approximately \$16 billion of Chinese goods, including chemical products, China announced its intention to implement retaliatory tariffs on US-made goods, including:

- adhesives
- asphalt
- chemical and polymer products
- lubricants

Currently, the implementation date and extent of the tariffs placed on US goods by the Chinese government is unknown.

Foreign trade of formulated, finished products is not a significant factor in the US adhesives and sealants industry. In 2017, exports accounted for around 10% of adhesive shipments from US-based manufacturers. About 10% of those exports—equivalent to approximately \$140 million, or 1% of US production—were destined for China. As a result, if China were to impose tariffs on US adhesives and sealants, there would be little effect on US-based producers, no matter the extent of the tariffs.

Larger, albeit indirect, impacts on adhesives demand may arise from tariffs placed on other, seemingly unrelated, products such as those placed on various metal products from China, including aluminum and steel, by the US government. The use of steel and aluminum in the production of motor vehicles has slowly declined, as increasingly stringent fuel efficiency standards in the US have supported the use of more expensive—and lighter—composite materials and plastics.

Unlike metal parts, which can be joined using mechanical fasteners such as rivets or welding joints, composite and plastic parts are most commonly joined using adhesives as mechanical fastening may cause cracks or defects that can potentially weaken composite materials or plastics. Tariffs placed on Chinese metal products may act to hasten the transition from metal to composite/plastic motor vehicle parts and boost growth in demand for adhesives in motor vehicle manufacturing. However, the adhesive industry may be negatively impacted by tariffs placed on motor vehicles—particularly hybrid and electric vehicles—by China in July 2018.

**China: 25% on US adhesives, effective date TBA, imminent** 

| <u>Impact</u>   | <u>Key Factors</u>  |
|---|---|
| <ul style="list-style-type: none"><li>• Tariffs will have little direct impact on the US adhesives industry.</li><li>• Indirect impacts of tariffs on other products may potentially affect US adhesives suppliers.</li></ul> | <ul style="list-style-type: none"><li>• The US exported about \$140 million of finished adhesives to China in 2017, or approximately 1% of domestic production.</li><li>• US-imposed tariffs on Chinese metal products may correspond with demand gains for adhesives in motor vehicle production.</li><li>• However, China-imposed tariffs on motor vehicles may negatively impact adhesive sales.</li></ul> |



Source: The Freedonia Group.

### Alcoholic Beverages

On July 6, 2018, China imposed a 25% tariff on a variety of US alcohol products as part of a sweeping response to US-issued tariffs on \$34 billion of Chinese products. Impacted products include:

- brewing, distilling, and winemaking byproducts (e.g., brewer's yeast, distillers grains, and grape must)
- denatured alcohol
- wine, sparkling and otherwise
- whiskey

Of US exports in 2017, China accounted for:

- 5.2% of wine, worth about \$73.9 million
- 7% of denatured alcohol (i.e., for industrial use, not human consumption), worth \$69.4 million
- 3.4% of brewing and distilling dregs, equal to \$62.2 million
- less than 1% of whiskey, worth \$5.9 million
- 52% of grape must, equivalent to \$647,000

The US features world-renowned viticultural areas, such as Napa and Sonoma Valley. Yet China represents a minor to nonexistent market for most US wine producers, including large companies such as Robert Mondavi and Ste. Michelle Wine Estates. As a result, China's tariff will largely impact high-end, premium wines. However, the tariff could pose a long-term threat if it essentially halts US participation in the Chinese mid-range market before it really begins, handing an advantage to competitors, such as wineries in Australia.

In the short term, producers of American whiskies—such as Beam Suntory (e.g., Jim Beam), Brown-Forman (e.g., Jack Daniel's), and Campari Group (e.g., Wild Turkey)—will not be significantly impacted. China's tariff is more of a symbolic move, as whiskey, particularly bourbon, is a US icon. Furthermore, bourbon production is concentrated in Kentucky, home state of US Senate Majority Leader Mitch McConnell. However, the tariff could pose a threat to long-term growth if it causes the rising consumption of US whiskey among China's developing middle class to stall. Suppliers of other whiskies, such as Scotch (e.g., Johnnie Walker, a product of Diageo, and The Glenlivet, which is manufactured by Pernod Ricard), may fill the gap. Single malt Scotch and other top-shelf Western spirits have already been recording strong growth among China's high-income individuals.

**China: 25% on US imports of alcoholic beverages** 

|   |   |
|---|---|
| <p style="text-align: center;"><u><b>Key Factors</b></u></p> <ul style="list-style-type: none"> <li>• Tariffs are more politically than economically motivated.</li> <li>• US winemakers may miss out on the emerging Chinese market as a long-term result of tariffs.</li> <li>• A generally minor impact is expected for US whiskey producers in the short term.</li> </ul> | <p style="text-align: center;"><u><b>Targeted Products</b></u></p> <ul style="list-style-type: none"> <li>• Wine, sparkling &amp; otherwise</li> <li>• Whiskey</li> <li>• Denatured alcohol</li> <li>• Brewing, distilling, &amp; winemaking byproducts (e.g., brewer’s yeast, distillers grains, &amp; grape must)</li> </ul> <p style="text-align: center;"><u><b>Selected Companies Affected</b></u></p> <ul style="list-style-type: none"> <li>• Beam Suntory</li> <li>• Brown-Forman</li> <li>• Campari Group</li> </ul> |
|---|---|




Source: The Freedonia Group.

**Dairy**

On July 6, 2018, China imposed new tariffs of 25% on US dairy products in retaliation for the various tariffs placed on Chinese products by the Trump administration. Since China already maintained tariffs ranging around 10%-20% on US dairy products, the total tariff rate now reaches about 30%-40%. According to the list of products released by the China’s Ministry of Finance, most dairy products are impacted by these tariffs, including:

- butter
- buttermilk
- dairy spreads
- fresh cheese
- grated or powdered cheese, blue cheese, and other cheese
- milk and cream
- whey and modified whey
- yogurt

Notably, ice cream and prepackaged (ready for retail sale) infant foods did not appear on the list. One of the reasons for this could be that Chinese consumers prefer brands of infant formula from the US due to that country’s higher food safety standards, and the Chinese government did not want to increase the price of such a crucial product.

In 2017, exports represented 5.0% of US dairy product shipments in value terms, but exports

to China accounted for only 0.5%. As such, the Chinese market is relatively unimportant to US dairy product manufacturers.

However, the tremendous size of the Chinese market makes it an important destination that exporters in the US dairy and other agricultural sectors want to continue to enter, learn more about, establish logistical networks and marketing in, and cultivate as it could help generate future growth.

For instance, in November 2017, China announced a decrease on tariffs for US cheese products, an action the US dairy industry had worked to facilitate as it helped expand its access to foreign markets. However, the actions taken on July 6, 2018, reversed that decrease. In addition, since the new retaliatory tariffs only apply to US goods, it could cause US suppliers to lose their foothold in the large China market to producers from other countries.

The areas of the US most impacted by China's retaliatory tariffs on US dairy products include the leading dairy producing states, which in 2016 were:

- Wisconsin, with an 18% share of US dairy product shipments in value terms
- California (14%)
- New York (6.8%)

In terms of specific products, major dairy items the US exported to China in 2017 included:

- whey and modified whey (41%)
- powdered or granulated milk and cream (12%)
- cheese (11%)
- milk albumin (10%)
- lactose (7%)
- prepackaged infant foods (6%)

Impacted US dairy product manufacturers include members of the US Dairy Export Council and members of the American Dairy Products Institute. Suppliers that export considerable amounts to China might see a negative impact on sales in the near future. As the largest US dairy product export to China is whey, leading suppliers of that product will likely be impacted most. Examples of US producers of whey and powdered milk, as well as cheese and other dairy products, include:

- Agri-Dairy Products
- Agri-Mark
- Bongards' Creameries
- Brewster Cheese Company

- Dairy Farmers of America
- Darigold
- Foremost Farms USA
- Glanbia Nutritionals
- Hilmar Ingredients (Hilmar Cheese Company)
- Hoogwegt US (Hoogwegt Group)
- Michigan Milk Producers Association
- Saputo



### China: 25% on US dairy imports

| <u>Key Factors</u>   | <u>Targeted Products</u>  |
|--|---|
| <ul style="list-style-type: none"> <li>Given the large number of US dairy producers, the impact will be far-reaching but particularly significant for whey suppliers.</li> <li>The November 2017 agreement to reduce tariffs on US cheese imports to China was reversed by China's July 6, 2018, retaliation.</li> <li>As China's retaliatory duties apply only to the US, opportunities emerge for other agriculturally rich countries to fill the supply gap.</li> </ul> | <ul style="list-style-type: none"> <li>Milk &amp; cream</li> <li>Yogurt</li> <li>Buttermilk</li> <li>Whey &amp; modified whey</li> <li>Butter</li> <li>Dairy spreads</li> <li>Fresh cheese</li> <li>Grated or powdered cheese, blue cheese, &amp; other cheese</li> </ul> |
|    |   |

Source: The Freedonia Group.

## Meat, Poultry, & Seafood

On July 6, 2018, China enacted retaliatory tariffs of 25% on US meat, poultry, and seafood products. These tariffs are on top of a longstanding 12%-20% rate and in addition to 25% tariffs established on most pork products in China's April retaliation to tariffs the US placed on Chinese steel and aluminum imports. As a result of these changes, US meat, poultry, and seafood will most likely be priced out of the Chinese market. However, US chicken farmers are unlikely to be impacted because the US is not a major exporter of chicken to the Chinese market.

The pork industry is expected to see particularly strong losses because:

- Approximately 25% of pigs raised in the US are exported.
- China is the largest single export destination for pigs raised in the US.

In addition, Chinese customers are more likely to purchase cuts like ears and tongue that US consumers are typically unwilling to eat, drastically limiting a crucial profit center for producers. Other major global exporters of pork, including Germany, Spain, Denmark, and Canada, stand to benefit, however.

Losses for the beef industry will be less severe but still significant. The US only began shipping beef to China in June 2017 after a 13-year ban from the Chinese market (due to concerns over mad cow disease) was lifted. As a result, China was only a nascent market for US cattle exports, but it had the potential to become a massive and fast-growing source of income. Regional neighbor Australia, as well as South American countries like Brazil, will likely supply any deficiency caused by the absence of the US in Chinese markets.

Although the US possesses an overall trade deficit with China in seafood products, the country is still a major export destination for US fishing concerns. Wild caught, high-end seafood, such as lobster and salmon, have become increasingly popular in China as personal incomes in the country rise. Newly middle class consumers are more likely to raise concerns about domestically farmed fish and to purchase imported goods. Because US fish imported into China are seen as a luxury good, tariffs may have less impact than on beef and pork. Nevertheless, some drop in demand is expected.

In the short term, US producers' inability to export to China is expected to create a domestic oversupply and cause prices in the US to fall. This will in turn lead to financial losses for farmers and processors. The US Meat Export Federation (USMEF), which is against the tariff, estimates that meat losses caused by the tariff could total as much as \$1.1 billion.

In the long term, inability to absorb ongoing losses could cause both large and small independent producers to be absorbed into larger agribusiness concerns or to close altogether.

China: 25% on US meat & seafood, enacted July 6



Key Industries Impacted

- Pork
- Beef
- High-end, wild-caught seafood, such as lobster & salmon



Key Factors

- US meat, poultry, and seafood will most likely be priced out of the Chinese market.
- Other countries, such as Australia, Brazil, and European nations, will likely supply any deficiency to Chinese market.
- USMEF estimates that meat tariff losses could total up to \$1.1 billion.
- Independent producers unable to absorb added costs may be absorbed into larger agribusiness concerns or close altogether.

Source: The Freedonia Group.

**Motor Vehicles**

On July 6, 2018, China enacted an additional 25% tariff on motor vehicle imports from the US—with a focus on HEV suppliers—on top of the existing 15% tariff, which cumulatively represents a 40% duty. The action was in retaliation to a second round of tariffs imposed on \$34 billion worth of Chinese exports by the US.

Back in May 2018, China had announced that it would reduce tariffs on motor vehicles from 25% to 15% in an effort to avoid a trade dispute with the US. However, as the US continued to target Chinese suppliers with multiple rounds of tariffs, the Chinese government reversed course and levied the additional 25% tariff.

US manufacturers of HEVs, specifically Tesla, are particularly hard hit by the tariff. China is the world’s largest HEV market and home to the world’s leading HEV manufacturers. In an effort to gain a foothold in the Chinese market, Tesla originally planned to reduce the price of its vehicles to encourage sales. However, the new tariff made Tesla back out of the price reduction. Instead, the company announced plans to build a factory in Shanghai.

European automakers such as BMW and Daimler have spent billions of dollars investing in US manufacturing sites, with a primary focus being to export a larger amount of motor vehicles to China. With the new tariff enacted by China, those investments are starting to look like bad ones. If the tariff remains in place, it is unlikely that automakers will invest further in new US plants. Instead, they may seek to relocate manufacturing operations to other countries.

Companies that will be impacted most by the tariffs include:

- BMW
- Ford
- Mercedes-Benz
- Tesla

Because BMW and Mercedes-Benz have a global manufacturing presence, they should be able to increase production at some of their other manufacturing sites to avoid the tariff. However, both automakers manufacture high-end SUVs in the US that are exported to China.

Tesla and Ford, on the other hand, are less able to shift manufacturing. Both companies planned to establish manufacturing capacity in China over the next few years, but until those plants are operational, vehicles bound for China will continue to be made in the US.

However, because motor vehicle production lines are established to produce a single model, it takes a significant amount of time to set up a new production line. Thus, in the short term, all of the affected companies will continue to produce cars in the US as they determine the best way to address the 25% tariff, absorbing some of the cost while passing on the rest to Chinese consumers through increased prices.

### China: 25% on US motor vehicles



| <u>Key Factors</u>  | <u>Targeted Products</u>  |
|---|---|
| <ul style="list-style-type: none"><li>• May 2018 proposal by Beijing to reduce tariffs on US auto imports reversed with Trump administration's July 6 action.</li><li>• European automakers that have invested in US operations to access Chinese market may shut down or relocate.</li><li>• Tesla and Ford are investing in Chinese facilities, but they are not yet operational.</li></ul> | <ul style="list-style-type: none"><li>• Hybrid &amp; electric vehicles</li></ul>  |
|    | <p><u>Impacted Companies</u></p> <ul style="list-style-type: none"><li>• BMW</li><li>• Daimler</li><li>• Ford</li><li>• Mercedes-Benz</li><li>• Tesla</li></ul> |

Source: The Freedonia Group.

**Pet Food**

With its July 6, 2018, retaliation to US tariffs, China imposed a 25% surtax on US pet food exports, blocking US suppliers from a nascent \$2.0 billion export market with high growth potential. The Pet Food Institute says the Chinese retaliation creates yet another barrier to the viability of US pet food exporters in international markets. Other barriers include:

- US-imposed steel and aluminum tariffs (which affect tinplate prices for canned products)
- China-imposed tariffs on agriculture and meat products, which are key to pet food production
- trade tensions with other key export markets, including Canada and the EU, limiting other export opportunities

As a result, higher production costs for US suppliers—and thus higher prices for consumers both stateside and in China—are expected. Chinese consumers will likely to seek alternate sources of supply to evade the added cost.

Since 2003, the US pet food industry has worked to regain access to the Chinese market after concerns of mad cow disease resulted in restrictions. The trade war has indefinitely reversed that progress, to the chagrin of the Pet Food Institute, which, prior to the tariffs, had projected that China could become the US’ second largest pet food export market.

**China: 25% on US pet food, enacted July 6** 

| <u>Other Tariffs Impacting the US Pet Food Industry</u>   | <u>Key Factors</u>  |
|---|---|
| <ul style="list-style-type: none"> <li>• US-imposed tariffs on all steel &amp; aluminum imports</li> <li>• China-imposed tariffs on US agriculture &amp; meat products</li> </ul> | <ul style="list-style-type: none"> <li>• Prior to the trade war, China represented a \$2.0 billion export market for the US pet food industry.</li> <li>• Trade tensions with Canada and the EU will compound the affect of Chinese tariffs on the US pet food industry.</li> <li>• According to the Pet Food Institute, tariffs have no evident net benefit for the industry.</li> </ul> |



Source: The Freedonia Group.

### Produce

On July 6, 2018, China placed 25% retaliatory tariffs on imports of US-grown produce. Farmers, who overwhelmingly supported Donald Trump's presidential candidacy in 2016 and were thus political targets for the Chinese government, will feel the greatest impact. Although the Trump administration has proposed efforts to protect US farmers from the effects of these trade actions—for example, by creating a \$12 billion emergency farm aid package—no details have been confirmed.

Although China is a much larger market for US field crops (which will have a larger effect on large agribusiness concerns) than it is for US-grown produce, the country did import more than \$530 million in US-grown vegetables, fruits, and nuts in 2017, including:

- cherries (\$122 million)
- almonds (\$99 million)
- oranges (\$48 million)
- pistachios (\$38 million)
- walnuts (\$33 million)

Following China's July action, the cumulative tariffs on these products has increased to:

- 65% for unshelled walnuts (which are consumed in China like unshelled peanuts are in the US) and 60% for shelled walnuts
- 50% for cherries and almonds
- 51% for oranges
- 45% for pistachios

Since these agricultural commodities are mostly grown in other countries, global supply is not likely to be significantly impaired. Growers in South America and elsewhere are poised to take advantage of the opportunity created by these trade policy decisions.

China: 25% on US produce, enacted July 6



Top US Imports to China

- Cherries (\$122 million)
- Almonds (\$99 million)
- Oranges (\$48 million)
- Pistachios (\$38 million)
- Walnuts (\$33 million)



Key Factors

- US farmers were targeted more for political than for economic reasons.
- The overall economic impact to both US and Chinese markets is expected to be minimal.
- Nevertheless, China imported \$530 million in US vegetables, fruits, and nuts in 2017.
- Any trade deficiency for China will likely be covered by imports from other regions such as South America.

Source: The Freedonia Group.

**Soybeans & Other Field Crops**

In its retaliation against US-imposed tariffs, China targeted the US field crop industry for an additional 25% duty that went into effect on July 6, 2018. The tariff particularly affects soybean producers, who are major exporters to China. In fact, soybean exports alone represent more than one-third of the \$34 billion in US exports targeted by the round of tariffs implemented by China on July 6.

Other field crops included are:

- corn (maize)
- rice
- sorghum
- wheat

China’s goal appears to be an attempt to incite US consumers to put pressure on the Trump administration by causing economic difficulties one of its key voter demographics: farmers in states Trump carried in the 2016 election. These states produced 76% of the US’ soybean output in 2017. Soybeans are a major export crop of US field farmers (amounting to more than \$12 billion of the nearly \$14 billion in total US field crop exports in 2017), and they accounted for 90% of US field crop exports to China in 2017. Additionally, US sorghum exports to China were valued at \$840 million in 2017, and almost 95% of US production of this crop occurred in same states.

As a result of the tariffs, some soybean shipments to China are being canceled and prices stateside continue to decline (prior to the trade war, prices were already nearing decade lows). Current estimates of soybean supplies in China suggest that these cancellations will not cause an immediate supply crisis, but China—which is the world’s largest soybean importer by far—will eventually need to resume imports of soybeans to continue to meet demand.

As only the US and Brazil are significant exporters of soybeans, it is possible China will look to Brazil to replace US supply. In fact, Brazil’s share of the Chinese soybean market had grown even before the latest round of tariffs were implemented and raised the total Chinese surtax on US soybeans from 3% to 28%.

The long-term impact remains to be seen—both in terms of how long these tariffs will remain in place, and in terms of the severity of their effect. For example, Brazil is already stepping into the supply void created by tariffs on US soybeans. Other key but unresolved variables to consider include:

- the recent announcement by the USDA that it will issue \$12 billion in emergency aid to US farmers affected by the tariffs
- the developing trade deal between the US and EU, which has agreed to significantly ramp up its imports of US soybeans

For the most part, China typically imports soybeans and crushes them domestically. As a result, the most profound domestic impact of the new tariffs is on soybean growers. There is, however, a consequence that may have been unanticipated. While commodities like milled rice and corn flour were included in the July 6 round of tariffs, soybean meal and oil was not. This has created an opportunity for large agribusinesses such as Archer Daniels Midland and Bunge, as China may increase imports of these products, levels of which are currently low due to domestic production capacity.

### China: 25% on soybeans & other field crops, enacted July 6



#### Key Products Targeted

- corn (maize)
- wheat
- rice
- sorghum
- soybeans



#### Key Factors

- Soybean exports represent more than one-third of the \$34 billion in US exports targeted by the July 6 round of tariffs by China.
- The USDA announced \$12 billion in aid to farmers affected by the tariffs.
- A developing trade deal between the US and EU entails the EU significantly ramping up its imports of US soybeans.
- US soy growers hurt the most while US soy crushers capitalize on new market opportunities for soy meal, oil, and other soy-based products unaffected by tariffs.

Source: The Freedonia Group.



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