

**BIAFD BRIEFING**  
**BACKGROUND TO RISING FASTENER COSTS**  
**June 2018**



**OVERVIEW**

- **Fastener costs are increasing from all sources and are set to continue to do so.**
- **Improving global economic conditions are driving demand and hence prices for fasteners and for steel, commodities and energy.**
- **World steel prices have increased sharply, with fastener manufacturers in all regions impacted by substantial increases in wire rod costs.**
- **Fastener manufacturing capacity is under pressure from demand, resulting in longer lead times and higher prices.**
- **Sustained increases in Nickel prices are driving up the cost of stainless steel fasteners.**
- **Other fastener production costs, notably labour costs in major Asian fastener producing countries, have increased significantly.**
- **Higher oil prices are impacting sea and road freight costs.**

## **GLOBAL DEMAND STRENGTH DRIVING COSTS UP**

In April the IMF reported world GDP had grown 3.8% in 2017, driven by investment recovery in advanced economies, continued strong growth in emerging Asia and a notable upswing in emerging Europe. The IMF forecast global growth to improve by a further 3.9% in 2018. In March the OECD said: *“The global economic expansion is strengthening, as robust investment growth, an associated rebound in trade and higher employment drive an increasingly broad-based recovery.”* While noting tensions that could threaten strong and sustainable medium-term growth it forecast the global economy would grow by 3.9% in both 2018 and 2019.

The World Steel Association expects the next two years to remain favourable for its members, based on high confidence and strengthening recovery of investment levels in advanced economies. Steel demand in both developed and developing economies is expected to show sustained growth momentum with relatively limited downside risks. The association does, however, express caution about the potential for rising trade tensions to erode the current momentum.

First quarter financial reports from quoted fastener corporations have indicated strong organic demand growth building on positive 2017 results.

### **Demand putting pressure on fastener manufacturing capacity**

EU anti-dumping measures on fasteners from 2009 to 2016 eroded production capacity in China, which has not recovered. Chinese government action to clampdown on environmental pollution has also impacted production capacity of wire rod and fasteners.

Conversely the repeal of the anti-dumping measures has made other fastener manufacturing countries cautious about expanding capacity for European markets.

Worldwide, the fastener manufacturing sector faces a skills crisis, with an aging workforce not being replaced by younger qualified and skilled entrants. Investment in more sophisticated and automated production machinery is strong, especially in Europe, Turkey and Taiwan, but limited by the capacity of the equipment manufacturers, generally working to lead times in excess of one year. More advanced machinery is primarily dedicated to increasing production and productivity for high added value components or to obtain access to the market for them – as opposed to increasing capacity of standard fasteners where returns are significantly lower.

This demand and supply imbalance is supporting inflation in fastener costs.

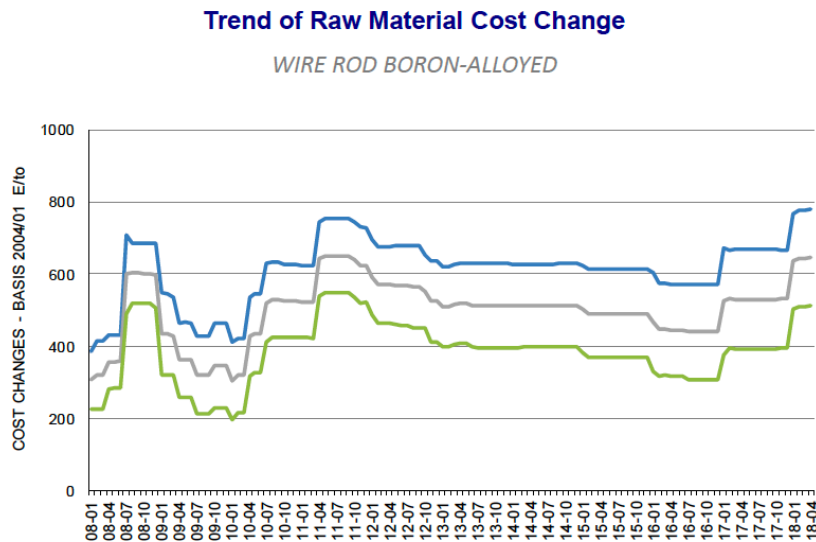
## **GLOBAL RAW MATERIAL COSTS INCREASED**

Steel wire rod, the primary material for most fasteners, has increased in cost across the globe. In China cold heading wire prices (CHQ) increased sharply at the end of 2017 impacting fasteners arriving in Europe now. Taiwanese CHQ costs have increased by the equivalent of EUR 100/tonne over the last year. European CHQ prices surged in Q1 2018 by at least EUR 100/tonne.

## Europe:

European wire rod costs increased sharply in Quarter 1 2018, with fastener manufacturers reporting non-negotiable increases of EUR 100 per tonne or higher.

These increases were confirmed by the Deutscher Schraubenverband Raw Material report, which shows Q1 2018 increases of more than 21%, taking the reading to the highest in a decade.



Source:  
[www.schraubenverband.de](http://www.schraubenverband.de)  
The three lines indicate the maximum, median and minimum values from the DSV research.

## Turkey:

Many Turkish fastener manufacturers source wire rod from European mills, so are impacted by the trend above. Turkish steel production relies primarily on scrap metal, costs of which have increased, driving up domestic wire rod prices.

## Asia

Taiwan and China account for 68% of EU 28 import volumes from Asia. Vietnam, number three at 8%, is largely dependent for wire rod supply on these two countries. Raw material costs for most other South East Asia fastener production countries are influenced by trends from the prime steel makers - China, Taiwan, Japan and Korea.

### Taiwan:

Taiwan's main wire rod supplier, China Steel Corporation, has increased its base price to domestic fastener customers for four consecutive quarters through to Q3 2018, with a total increment equating to EUR 100 per tonne. CSC says its domestic increases continue to lag behind global steel price trends.

### China:

The Chinese wire rod market has been persistently volatile for more than a year due not only to economic and cyclical factors but also Government clampdowns on the environmental impact of heavy industries.

Wire rod prices surged in December 2017, increasing by around 11% in just over two weeks. Costs eased ahead of the Chinese New Year but since March have steadily increased again, driven by the return of domestic construction activity.

Fastener lead times from Asia can easily be six months, so raw material costs incurred in late 2017 are only now coming through on fastener shipments to Europe.

Chinese fastener manufacturers generally source wire rod only when they have a customer order. On several occasions during 2017 rapidly rising material costs 'caught out' fastener manufacturers, which incurred substantial losses and has made them more cautious.

### **United States:**

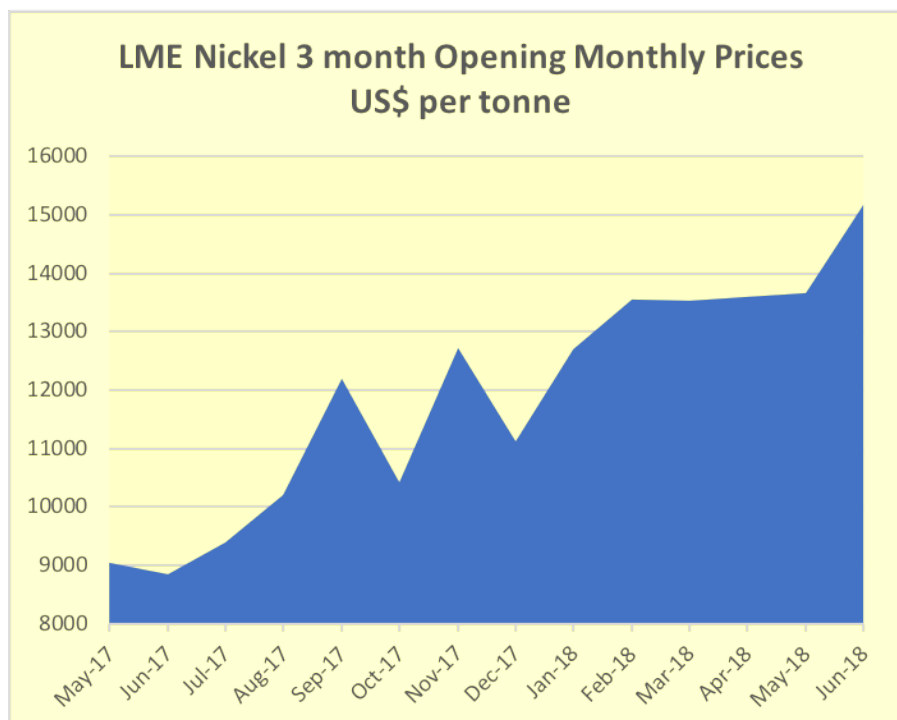
U.S. steel prices are being driven up by buoyant domestic demand and the Trump Administration's application of Section 232 tariffs on imported steel. US authorities are also expected to apply specific anti-dumping and countervailing duties on wire rod from five countries.

The effect of these measures has been to extend lead times from domestic steel mills, which are pushing up their prices. Import restrictions in exchange for exemption from Section 232 tariffs combined with higher domestic market prices means import prices will also trend higher.

### **Stainless Steel driven higher by rising Nickel costs**

The main grades of stainless steel fasteners contain at least 8% Nickel by weight – more for higher grade corrosion resistant fasteners. Because of its substantially higher cost per tonne than carbon steel, Nickel has a disproportionate effect on the cost of stainless steel fasteners and may constitute more than 60% of their material cost.

Nickel costs on the London Metal Exchange have progressively increased from around US\$9000/tonne mid 2017 to above US\$15000/tonne currently, resulting in sharp increases in stainless steel fastener costs.



Nickel is influenced by market speculation but prices are ultimately influenced by fundamental supply and demand trends. Stronger global economic performance is driving

increased demand. Conversely, LME nickel inventories have fallen by around 20% in the last six months and around 7.5% in the last month. As a result, higher nickel prices are likely to sustain.

## **OTHER FASTENER PRODUCTION COSTS RISING**

### **China**

Fastener production costs in China have transformed over the last decade. In addition to higher raw material costs, exacerbated by government crackdowns on air and water pollution, Chinese labour costs have increased substantially and irreversibly. In 2015 The Economist reported that manufacturing hourly wages were increasing at 12% per annum<sup>1</sup>. In 2012 the Chinese government set a target to double per capita income by 2020. Government policy to develop western regions of the country has also drawn away the lower cost migrant labour pool from the industrialised coastal regions.

Energy costs have also risen sharply – estimates vary but average wholesale electricity costs increased by at least 45% in the decade to 2016<sup>2</sup> (More than 65% of electricity is generated from coal, another heavy air polluter under increasing government scrutiny). China's domestic demand for fasteners has also burgeoned.

As well as taking out capacity, environmental regulations have increased steel and fastener manufacturing costs – and also those of related key processes including heat treatment and anti-corrosion coatings. Plating plants were targeted hard by environmental inspectors during 2017, resulting in the closure of more than 80% of plating capacity in one region until companies were compliant.

### **Taiwan**

The Taiwanese fastener industry has also incurred increased costs through Government regulations on pollution and working hours. Following a major clampdown in 2016, Taiwanese plating plants, including those in fastener plants, were obliged to make major investments in waste water treatment.

A 2016 update of the Labor Standards Acts implemented a five-day working week in Taiwan, introduced wage calculation bases, and national holiday entitlements. While some provisions were rolled back by further amendments in 2018, more stringent employment regulations have significantly impacted Taiwanese fastener manufacturers' labour costs.

### **Europe**

Aging skilled workforces and difficulties in recruiting qualified and experienced replacements continues to drive up employment costs, only some of which can be offset by improved automation and productivity in already efficient production operations.

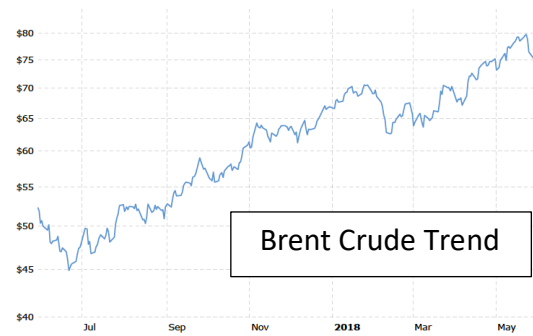
## **FREIGHT COSTS**

### **Road Freight**

European road hauliers' operating costs will further increase in 2018 on higher fuel prices, driver shortages persist and demand increases - according to the most recent quarterly Transport Market Monitor published by Capgemini and Transporeon.

TMM said March capacity had significantly reduced and first quarter 2018 transport costs increased by 7.1% year on year.

Brent crude oil prices have increased by more than 50% over the last 12 months. Intervention by OPEC could bring the price down to US\$60-70/barrel but this will still put pressure on both road and sea freight fuel costs.



## Sea Container Freight

Increasing fuel costs are also impacting sea container freight lines, with fuel reported to have increased by 30% this year and almost 70% since mid 2017. Many shipping lines reported Q1 2018 losses, despite increased volumes, primarily attributed to increased fuel costs.

Several container shipping lines including the largest, Maersk, have now announced emergency fuel surcharges coming into effect from June 2018, adding around US\$60/teu.

Shipping lines face longer term fuel related inflation as new regulations require a major reduction in sulfur emissions by 2020. Shipping lines will either have to move over to higher cost low sulfur fuel oil (LSFO) or retrofit scrubbers at a cost of several million dollars per vessel. A significant switch to LSFO will increase demand for medium distillates from oil refining - the same fraction that provides road diesel and gasoline.

Container sea freight costs have been at record lows, sustained by carriers introducing economy measures including slow steaming and tighter scheduling. Significant consolidation in the shipping market, increasingly effective control of capacity, and cost pressures indicate Asia-Europe costs will increase over the next two years.

## Currency Exchange Rates

The majority of fasteners imported from Asia are purchased in US Dollars or from suppliers calculating their prices based on US\$. In the last two months the British Pound has again fallen significantly against the US Dollar, increasing the cost of imports.



Notes:

1. "The Future of Factory Asia: A Tightening Grip" – The Economist 12.04.2015
2. 'Key China Energy Statistics 2016', Lawrence Berkeley National Laboratory 2017.