

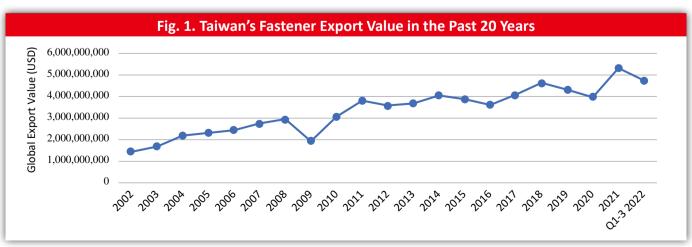
## Data + Top Events + Grand Perspective

The world market and economy slipped down a bumpy road in the last 5 years. A string of political and economic strikes sufficed to impact the structure of the global supply chain, ending up smashing multiple economic entities to the ground during 2020 and 2021. Taiwan stepped out of the depth of the tunnel into light starting from the second half of last year, but the lingering supply chain disruption and concerns over escalating interest rates remain a huge burden to Taiwan. We have sources from in and outside of Taiwan pointing out that next year could be worse with more uncertainties—could the Russia-Ukraine war truly end at the time as expected, or could a near-boiling political tension in Asia Pacific trigger another supply chain disruption? To that, there are some who predict the critical manufacturing sector will take the brunt of the impact. However, does that also apply to Taiwanese fastener industry, which is part of the critical manufacturing sector, and does it hold true that Taiwanese fastener industry will take a huge impact next year? This is a big question that raises concern among Taiwanese fastener companies and leaves them on tenterhooks.

To set the ball rolling, Fastener World went through the past 20 years of data on Taiwan's global fastener export and volume. More importantly, we are going to combine the data with the big events of the world in chronological order, those critical events that had an influence on the global economy and suppliers. With a cross check, we may be able to sort out a pattern or trend, and monitor the level of potential impact on Taiwan fastener industry in the future.

Let's first look at **Table 1** for the export statistics over the past 20 years, and compare with global big events. <u>In **Table 1**</u>, the growth rates of volumes and values for Q1-Q3 2022 are in comparison to Q1-Q3 2021. Taiwan's global fastener export volumes and values are illustrated in line charts in **Figures 1** and **2**.

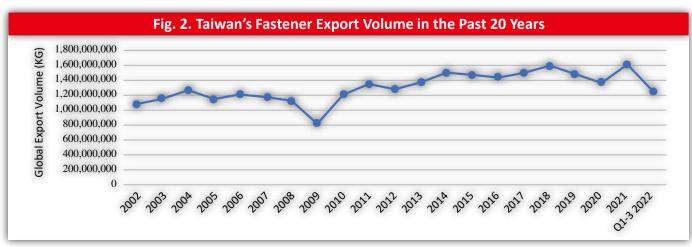
In Figure 1, we found that from a broad perspective, the export value was steadily growing along a 20-degree forward slash trajectory in the last 20 years. A similar trajectory is observed in Figure 2. This alone suffices to highlight critical characteristics of Taiwan fastener industry—resilience and stability. Back to Table 1, despite the global economic recession from 2007 to 2005, Taiwan's



## **Industry Focus**

Table 1. Ta	Table 1. Taiwan's Fastener Export and Global Top Historic Events over the Past 2 Decades					(Value in USD, Weight in KG	
Year	2002	2003	2004	2005	2006	2007	2008
Volume	1,081,053,010	1,148,896,509	1,266,224,387	1,148,305,845	1,208,756,429	1,174,269,915	1,125,513,687
Volume Growth	<b>▲</b> 7.53%	▲ 6.28%	▲ 10.21%	▼ 9.31%	▲ 5.26%	▼ 2.85%	▼ 4.15%
Value	1,437,441,040	1,682,714,604	2,191,895,688	2,316,331,654	2,438,393,759	2,755,747,624	2,954,669,915
Value Growth	<b>4</b> .96%	<b>1</b> 7.06%	▲ 30.26%	▲ 5.68%	▲ 5.27%	<b>▲</b> 13.01%	<b>▲</b> 7.22%
Big Events	Euros in circulation as fiat currency	Iraq war; SARS epidemic; EU eastward expansion	Indian Ocean tsunami	U.S. Subprime mortgage crisis brewing, precursor to global financial crisis	Inflation due to high oil price; Monetary tightening policy in multiple countries	U.S. Subprime mortgage crisis outbreak; Economic recession	Financial crisis; U.S. and Japan quantitative easing
Year	2009	2010	2011	2012	2013	2014	2015
Volume	816,653,088	1,206,369,710	1,347,746,764	1,278,585,161	1,371,098,506	1,501,697,033	1,470,992,279
Volume Growth	<b>▼</b> 27.44%	<b>▲</b> 47.72%	<b>▲</b> 11.72%	▼ 5.13%	<b>▲</b> 7.24%	<b>▲</b> 9.53%	▼ 2.04%
Value	1,927,175,716	3,066,814,297	3,808,037,696	3,586,618,369	3,679,741,858	4,048,948,068	3,880,596,255
Value Growth	▼ 34.78%	▲ 59.14%	<b>4</b> 24.17%	▼ 5.81%	<b>▲</b> 2.60%	▲ 10.03%	<b>V</b> 4.16%
Big Events	UK quantitative easing; European debt crisis	U.S. 2nd quantitative easing; Arab Spring	Large USD depreciation vs. appreciation of other currencies; 2011 Japan earthquake and ceased supply of Japanese cars and electronics	U.S. 3nd quantitative easing	Japan quantitative and qualitative easing	Annexation of Crimea by Russia; Negative deposit rates (-0.1%) adoption in euros zone to save European economy	Euros zone quantitative easing; China stock market crisis and consequent emerging market crisis causing 2-digit export drop in Asian countries
Year	2016	2017	2018	2019	2020	2021	Q1-Q3, 2022
Volume	1,435,750,086	1,498,070,256	1,595,705,450	1,479,292,223	1,363,249,857	1,610,697,606	1,248,941,656
Volume Growth	▼ 2.40%	<b>▲</b> 4.34%	▲ 6.52%	▼ 7.30%	▼ 7.84%	▲ 18.15%	<b>▲</b> 4.37%
Value	3,610,883,236	4,090,303,303	4,638,685,129	4,316,380,032	3,969,114,428	5,319,398,407	4,744,636,991
Value Growth	▼ 6.95%	<b>▲</b> 13.28%	<b>▲</b> 13.41%	▼ 6.95%	▼ 8.05%	<b>▲</b> 34.02%	▲ 23.81%
Big Events	BREXIT referendum and negotiation with EU	Trump regime and tax reform in effect	U.SChina trade war upping tariff by 25%	COVID outbreak	Wuhan lockdown; COVID defined as a pandemic by WHO; BREXIT in effect; Dow Jones Index plunge	Biden assumed office; EU's Import registration policy on China's fasteners and consequent purchase order redirection to Taiwan	EU's AD tax up to 86.5% on China's fasteners; China's zero-COVID policy; U.S. opening up market; Russia- Ukraine war; European energy crisis

fastener export remained on a growth track. Although the growth went down from the double-digit 13% to a single-digit 7%, Taiwan was able to hold its growth trend. Interestingly, in 2009 a debt crisis broke out in Europe which was one of Taiwan's top export markets and the export that year dropped 34%, but Taiwan fastener industry was highly resilient and made a comeback with a rebound of nearly 60% growth in 2010. The loss and gain added up to an additional growth of 30% and Taiwan literally regained what was lost from 2009.



## See the Value in Taiwan Fastener Industry

The next crisis that followed was when many Asian countries experienced a double-digit export drop in 2015. The impact on Taiwan's fastener export value was relatively small with a drop of 4%. In 2018 when U.S. imposed a high tariff on China, Taiwan's fastener export value made a double-digit growth of 13%. Next came the pandemic and everyone knows and has experienced it inside out. In other words, "resilience" is the protective shield already existing in Taiwan fastener industry. Taiwanese fastener people ought to clearly recognize their definitive competitive edges, which are their unity, division of work, and helping each other. These 3 pillars build up a strong fastener supply chain in Taiwan. This is the "industry value" that needs to be seen clearly and guarded persistently.

Commercial profits and competition in the industry is temporary. In the face of a cross-nation challenge and disruption of supply chain that is serious enough to shake up the industry structure, the said industry value is the shared profit and goal for Taiwan fastener industry. In every drastic change, Taiwan's fastener and related business owners could always forge collaboration and redeploy capacity as appropriate to weather Taiwan through each crisis, even setting a high record of export in 2021. This is invaluable and Taiwanese fastener people should feel proud of it.

There is no need for them to envy the IT industry which is now dubbed as Taiwan's silicon shield. They already have an invisible soft power that serves as a protective shield and they should already come to sense it.

Look for the Pattern, Peep into the Future

Next, we are going to look into "patterns". Judging from Table 1, in the last 20

The fluctuation in fact reflects the adjustments of capacity by Taiwanese fastener industry in accordance with economic demand. This echoes with the aforementioned 3 pillars in Taiwan's supply chain.

Taiwan fastener industry is an indispensable critical industry, so it is not like smart phones, PCs, semiconductors, automobiles and

years Taiwan's fastener export fluctuated up and down roughly within an average margin of 10% which is relatively stable and not like what is said to be a sharp plunge.

machines that are more subject to the changes on the international market. As a suggestion, the fluctuations of fastener exports can be evaluated based on respective countries' GDP performance.

The past 20 years saw over 100 Taiwanese companies invest and set up plants in China and Southeast Asia. Their purchase makes a big influence on Taiwan's fastener production and supply. Issues of population, land, market and tax are among the factors that push many Taiwanese fastener companies to make investment abroad. The most impactful factor is wire rod cost.

Fortunately, in the 2018 trade war, the U.S. imposed an additional 25% tax on China, and Europe imposed a tax up to 86.5% on China's fasteners since the beginning of 2022. Taiwan benefits from this and has achieved explosive overseas sales over the last 2 years, thanks to heaven's blessing.

Furthermore, from Figures 1 and 2 we observed Taiwan's fastener export takes around tow years to finish one cycle of fluctuation. This is important because we can use it to predict the next time Taiwanese fastener industry warms up. We combined this pattern with our discussion and the conclusion we had with Taiwan CSC and related Taiwanese fastener companies. The current consensus is that the next big swarm of purchase orders is expected to arrive in Q1 or Q2 2023, and the reasons include the end of Russia-Ukraine war and a halt of U.S. interest rate hike by that time. The pandemic may come to an end as well so it will speed up economic recovery.

In the past global recession, the U.S., Europe and Japan resorted to quantitative easing to save their economy, by smashing down interest rates and providing financial support to help businesses with their cash flow and operation, thereby spurring investment and revitalizing the economy. However, the current global recession is an opposite story. The U.S. continues to raise the interest rate and the Russia-Ukraine War is causing material price hike that forms an ever greater stress on companies.

It means challenges will not stop coming to Taiwan, but this country has 40 years of proven experience and resilience to pick itself up and come out of a whirlpool. Taiwan has steadily come out of the pandemic and will stick to their industry value to get through next year's challenges.