CHINA'S GROWTH IN CASE OF A FULL-SCALE TRADE WAR

Know thy self, know thy enemy. A thousand battles, a thousand victories.

Sun Tzu

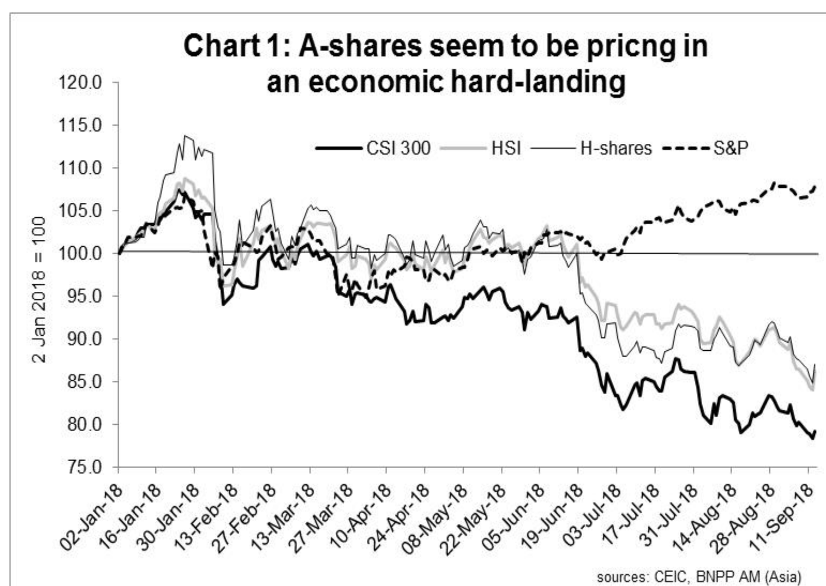
The US announced on 17 September new tariffs on USD200 billion of imports from China, starting with an initial rate of 10% on 24 September and rising to 25% in January 2019. The move came two months after the implementation of the 25% tariffs on USD50 billion of imports from China. Mr. Trump also threatened to impose more tariffs on another USD267 billion of Chinese exports to the US if China retaliates. That would put all Chinese exports to the US under punitive tariffs.

In the worst-case scenario of a fill-scale trade war, where the US levies hefty (say 25%) tariffs on all Chinese exports to the US[1] and China retaliates, how bad would it be for China's growth? The Chinese stock market seems to be pricing in an economic hard-landing since June 2018 when the trade war fear intensified (Chart 1). But what do economic theory and evidence tell us?

Gauging the tariffs impact on China

We can use two key economic parameters to gauge the direct impact of US tariffs on China: the tariff pass-through rate and the price elasticity of demand. The former measures the possible effect of tariffs on the price of the traded goods, and the latter estimates the change in demand due to the tariff-induced price changes.

[1] IMF data shows total Chinese imports by the US was USD505 billion in 2017, while Chinese data shows total exports to the US amounted to only USD433 billion.



Under a tariff shock, an exporter may or may not fully pass through the tariff-induced price increase to the local price. In case of a partial pass-through, a Chinese exporter will absorb part of the tariff through lower profit. In the US, when Chinese import price increases because of the tariff, the resultant decrease in US consumer demand for the product will depend on the price elasticity. An elasticity coefficient that is bigger than minus one means a one-percent increase in price will lead to a more-than-one-percent drop in demand.

Empirical studies show that the tariff pass-through rate ranges between 10% and 30% and the price elasticity of demand coefficient ranges between -2 and -7 (Table 1). Let us take the mid-points of these estimates, i.e. 20% for tariff pass-through and -4.5 for price elasticity, for our analysis of the full-scale trade war scenario.

	Table 1:	
Parameter	**Source of research**	**Estmates**
Tariff pass-through rate	Hayakawa, Kazunobu and Tadashi Ito (2015), "Tariff pass-through of the World-Wide Trade: Empirical Evidence at Tariff-Line Level", ERIA Discussion Paper Series, ERIA-DP-2015-34	20% - 30%
	Ludema, Rodney D. and Zhi Yu (2016), "Tariff Pass-Through, Firm Heterogeneity and Product Quality", Journal of International Economics, vol. 103, pp. 234-249	13%
Price elasticity of demand	Baier, Scott and Jeffrey Bergstrand (2001), "The Growth of World Trade: Tariffs, Transport Costs, and Income Similarity", Journal of International Economics, vol.53, pp. 1-27	-2 to -4
	Basa, Maria, Thierry Mayerb and Mathias Thoengic (2018), "From Micro to Macro: Demand, Supply and Heterogeneity in the Trade Elasticity", Journal of International Economics, vol. 108, pp. 1-19	-4 to -6
	Head, Keith and John Ries (2001), "Increasing Returns versus National Product Differentiation as an Explanation for the Pattern of US-Canada Trade", American Economic Review, vol. 91(4), pp. 858-876	-6.9

The 20% tariff pass-through rate would imply a 5% price increase in the Chinese imports by the US (= 20% of 25% tariffs), and the -4.5 price elasticity would imply a 22.5% fall in the US demand for Chinese imports (= 5% x -4.5). Total value of US imports of Chinese goods would thus fall by 17.5% (22.5% decline in volume minus 5% rise in price).

If Trump were to impose 25% tariffs on another USD267 billion of Chinese imports, as he threatened recently though he did not say at what tariff rate, this would mean that Chinese exports to the US would drop by 17.5%, or USD46.7 billion (USD267 billion x 17.5%), or about 0.4% of China's GDP[2].

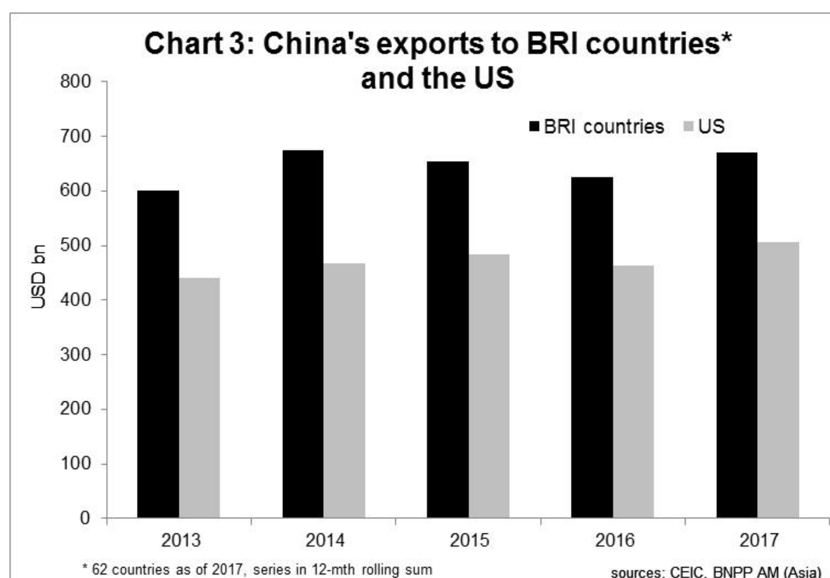
By the same token, in a full-scale trade war scenario, Chinese exports to the US would drop by USD88.4 billion (= USD505 billion x 17.5%) based on 2017 data. This would amount to 0.73% of China GDP. Any tariff rates lower than 25% would obviously lessen the impact on China.

Such a negative impact should be quite manageable. But this is only the estimated direct impact on China. If we take into account the secondary effects via a negative shock on local confidence and asset prices (which will affect domestic demand) and on regional/global demand growth (due to rising protectionism or the trade-war impact on global trade), the ultimate impact on China's growth could be larger with the market estimating between 1% and 1.5% of GDP a year.

A countervailing factor

There is an important counteracting factor that conventional wisdom has overlooked: China can expand exports to other markets to offset the fall in exports to the US. One obvious expansion is to the Belt and Road Initiative (BRI) countries, where China's exports have been rising (Chart 2). Crucially, China's total exports to the region have been larger than its exports to the US since inception of the Initiative in 2013 (Chart 3). The number of BRI countries is increasing over time, as China's influence grows. Anecdotal evidence also shows that China has been expanding its trade relationship with the existing BRI countries.

[2] China's GDP was USD12 trillion in 2017.



Why is the market so bearish on China?

If the direct tariff impact on China's growth is limited even under a full-scale trade war scenario and China can lessen the impact by rerouting trade through other countries, why is the market so bearish on Chinese growth?

As I argued earlier[3], the sharp drop in China's A-share market in June this year was mostly sentiment driven, due to fears about a trade-war. Meanwhile, a recent market study[4] estimated that the Sino-US trade tension might have dragged down the Chinese CSI300 index by 12%, EM equities by 9%, European equities by 8% and the S&P500 by 3%. The real worry here is about escalating trade tension leading to a large second round effect on China (and also the global system).

Fundamentally, the asymmetric market response between China and its peers reflects the concern that the US is using the trade war to contain China's economic ascent by targeting China's future. This makes investors in both China and abroad nervous about the US's blockage of Chinese trade and investment in the future, thus hurting China's long-term outlook. Beyond trade, further US restrictions on Chinese investment and probably a technology arm race between the two countries would bring more uncertainties.

The bottom lines

Since the direct impact of the tariffs on China is small, this may embolden China's tough stance in the trade conflict. But the US is also unlikely to back down. This heightens the risk of moving them towards a full-scale trade war with rising market volatility.

It also means that, given the current divergence in the impact of the trade shock on Chinese and other assets, there is potentially more downside risk in those markets that have not priced in as much trade-war risk as China has in the case of a full-scale trade war breaking out. Investors can buy VIX as a hedge against market volatility and stay with domestic-oriented stocks to minimise the trade-war exposure.

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[3] See *"Chi Time: A-Shares Tanked. What's Next?"* 11 July 2018.
[4] *"How Much Risk from Trade is priced into Equities?"* UBS Global Macro Strategy, 12 September 2018.

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