State Of the Markets: The Coming Economic War Between the US and China

September 2018 Alan Brazil

State Of the Markets: The Coming Economic War Between the US and China

• Step 1: Macro Theme: The Coming Economic War Between the US and China

- The Trump administration is determined to engage in an economic war with China
- They believe that China has been actively engaged already in this war, which goes far beyond trade
- The question is how far will the US go to win this war, and how will China respond?

• Step 2: Fundamental Economic Framework

- The US trade balance with China is growing
- China is escalating their acquisition of intellectual capital both directly and indirectly
- China has put barriers to US technology companies entering into China

• Step 3: Find Potential Repricing Events

- The Trump administration now has the power to impose unlimited tariffs on a range of China imports
 - They followed the protocol of section 301of the 1974 Trade Expansion Pact
- Trump's aggressive stance towards China was one of the main components of his contract with America during the 2016 campaign
 - · He has delivered on pretty much every other component of this contract
 - Mandate from 2016 partly driven by impact of Chinese imports on voting patterns in the rust belt
- China may retaliated through a variety of channels beyond increasing tariffs on US imports
 - Imposing tariffs is a losing strategy for China given the current trade imbalance
 - · Constrain access to US markets for US technology companies
 - Use their demand for oil to disrupt US foreign policy

• Step 4: Find Asymmetric Trade

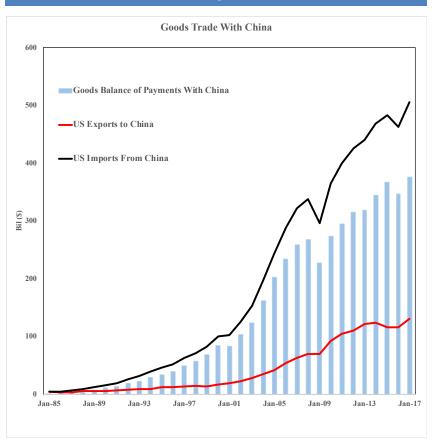
- Trade 1: Receive USD and Sell CNH on a forward basis
- Trade 2: Buy puts on USD based EM equities
- Trade 3. Buy tail protection on highly rated corporate credit

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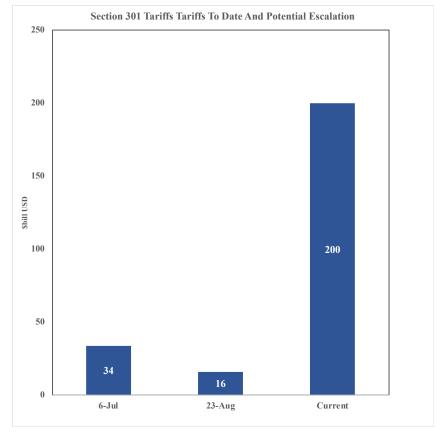
Step 1: Find Macro Theme

Will Trump Tariffs Start A Trade War With China?¹

Trade Deficit with China is Growing To Unstainable Levels...So



The US Is Raising Tariffs That Could Start A Trade War With China

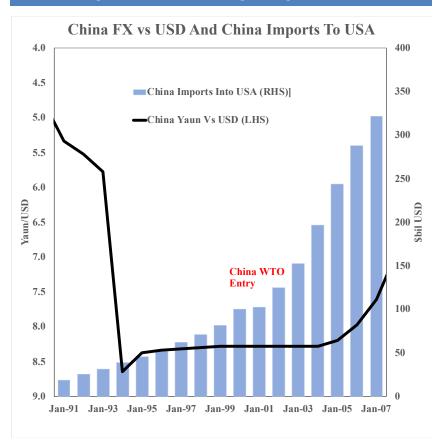


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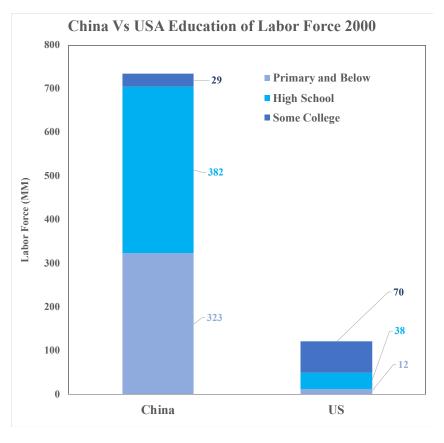
Step 2: Fundamental Economic Framework

China's Supply of Cheap Labor Dwarfed That Of The US^{1,2}

China's Cheap Labor/FX Drove A Surge of Imports Into The US^{3,4}



Step 2: Fundamental Economic Framework



[.] BES

Chi na NBS

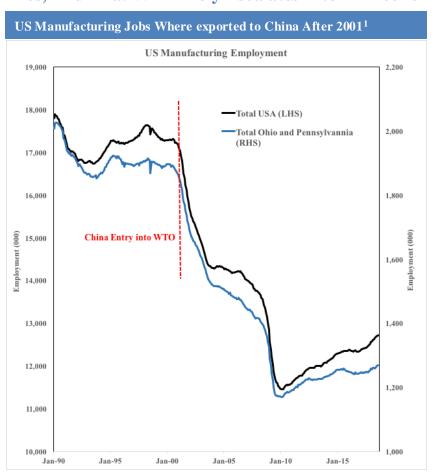
[.] IMF, Direction of Trade Data Base

IMF, Direction of Trade Data Base
 Federal Reserve Bank of St. Louis, Fred Data Base

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Step 2: Fundamental Economic Framework

Yes, And That Will Likely Escalates Into An Economic War Because Of What Happened in 2001



Sector Never Recovered Even With A Robust Growth in The US² **US Employement Index to 1991** 250 230 210 190 **Bachelor Degree** or Higher 170 150 **Total** 130 110 Maufacturing 90 70 50 Jan-91 Jan-96 Jan-01 Jan-06 Jan-11 Jan-16 Jan-21 ■ Maufacturing Total Bachelor Degree or Higher

^{1.} Federal Reserve Bank of St. Louis, FRED data

^{2.} Acemoglu, Autor, Dom, Hanson, and Price," Import Competition and the Great US Employment Sag of the 2000s", Journal of Labor Economics, Vol. 34, No. S1 (Part 2, January 2016)

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Step 2: Fundamental Economic Framework

China's Entry In WTO Started The Process That Turned The Rust Belt Into A Welfare State

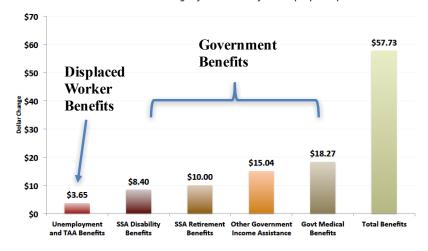
The Rust Belt Is Still In Their China Driven Great Depression¹

Wage Income Was Replaced By Government Transfer Payments²

Real Median Household Income

City	1970	2015	Change
Pittsburgh	41.3	40.7	-1%
Cleveland	45.9	26.2	-43%
Buffalo	42.3	31.9	-25%
Detroit	51.1	25.7	-50%
USA	41.3	51.4	24%

Effect of an \$1000 Per Worker Increase in Imports from China during 1990-2007 on Dollar Change of Annual Transfer Receipts per Capita



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Step 2: Fundamental Economic Framework

Before "American First", There Was "China First"

China's Economic Policy Is A Zero Sum Game¹

Protect China's Home Market From Imports and Competition

 This category features high tariffs, non-tariff barriers, and other regulatory hurdles

Expand China's Share of Global Markets

- Uses policy tools that includes financial support to boost exports and the consolidation of State-Owned Enterprises into "national champions" that can compete with foreign companies in both the domestic and global markets.
- Chinese enterprises also benefit from preferential policies that lead to subsidized overcapacity in China's domestic market, which then depresses world prices and pushes foreign rivals out of the global market.

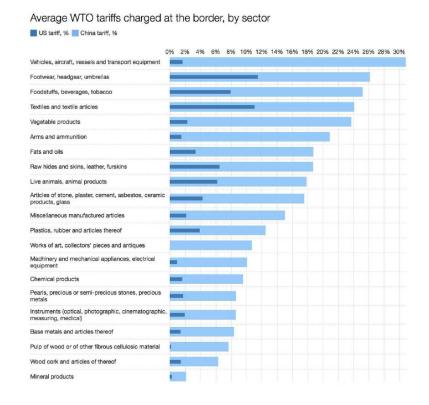
Secure and Control Core Natural Resources Globally

 China uses a predatory "debt trap" model of economic development and finance that proffers substantial financing to developing countries in exchange for an encumbrance on their natural resources and access to markets

Dominate Traditional Manufacturing Industries

 China has achieved a leading position in many traditional manufacturing industries. It has done so in part through preferential loans and belowmarket utility rates as well as lax and weakly enforced environmental and health and safety standards.

Even After WTO, China Tariffs Were Much Higher Than The US²



 [&]quot;How China's Economic Aggression Threatens the Technologies and Intellectual Property of the United States and The World" OTMP, June 2018
 "import tariffs charged by China at the border (in comparison to U.S. tariffs), Trade News Analysis, December 2016

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Step 2: Fundamental Economic Framework

China Policy Has Created Substantial Barriers For US Companies To Invest or Export to China¹

E-Commerce and Logistic Access Barriers

E-Commerce Barrier Description Licensing Although as of 2015, foreign investors are allowed to establish wholly foreign-owned e-commerce companies in China, to date only one foreign company has been awarded the value-added telecommunications services permit for online data processing and transaction processing business necessary to operate an e-commerce company. Data localization China's draft e-commerce law mandates local storage of Chinese consumer data. Under the draft law, foreign platforms allowing Chinese companies to sell on them and companies operating outside of China but targeting Chinese consumers would be subject to the requirement. China's new cybersecurity law may also mandate data localization for companies in the e-commerce sector if e-commerce is deemed "critical information infrastructure." Logistics Barrier Description Ownership ban Foreign companies are blocked from operating in the document segment of China's domestic express delivery market, where China Post maintains a monopoly. While both domestic and foreign firms have to apply for Licensing business licenses to operate in the express delivery sector, foreign companies experience longer waiting periods than domestic companies for getting their business licenses approved.

Access Barriers to US Companies Producing or Selling in China

Sector	Summary of Requirements
Selection and cultivation of new varieties of crops and production of seeds	Chinese party must be the controlling shareholder.
Exploration and development of oil and natural gas	Limited to CJV or EJV
Manufacturing whole automobiles	Chinese party's investment cannot be lower than 50 percent, and the same foreign investor may establish no more than two JVs in China for the same kind of automobiles, subject to certain exceptions.
Manufacturing commercial aircraft	Chinese party must be the controlling shareholder.
Construction and operation of nuclear power plants	Chinese party must be the controlling shareholder.
Value-added Telecommunications Services	Foreign investment cannot exceed 50 percent, excluding e-commerce, and is limited to WTO commitments. Note that China classifies a broad range of internet and technology-related services under this sector.
Basic telecommunications services	Chinese party must be the controlling shareholder and foreign investment is limited to WTO commitments.
Banks	Foreign financial institution investment cannot exceed 20 percent or 25 percent depending on how the investment is structured.
Medical institutions	Limited to CJV or EJV.
Surveying and mapping companies	Chinese party must be the controlling shareholder.

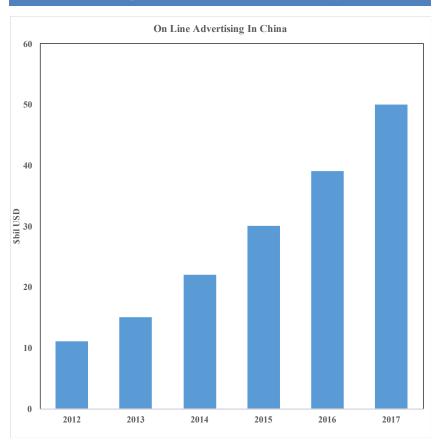
Source: Foreign Investment Catalogue (2017 Amendment).

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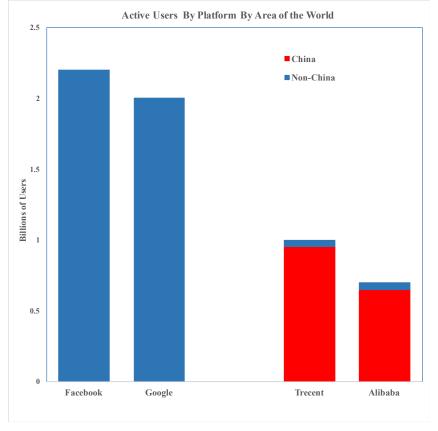
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Example of On Line Ads: Google and Facebook Banned Allowing Trecent and Alibaba to Dominate¹

On Line Advertising Has Increased Five Fold in Last 5-years



However, US Companies Were Banned From This Market



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Step 2: Fundamental Economic Framework

US Financial Services Are One of the Major Exports To the World....Except to China¹

US Financial Exports Are Growing But Not So Much To China

4.5
4.0
3.5
3.0
2.5
2.0
0.0
2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016

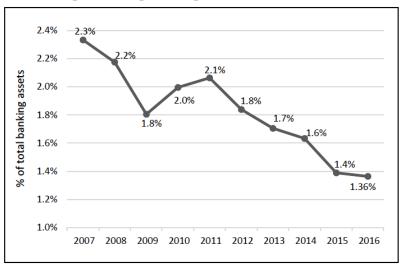
Insurance services

Financial services

Source: U.S. Department of Commerce, Bureau of Economic Analysis

US Banks Are Leaving China Not Trying To Grow Their Footprint

Figure 6: Foreign Banking Assets in China, 2011-2016



Source: China Banking Regulatory Commission via CEIC database.

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Step 2: Fundamental Economic Framework

Example of Bank Card Payments: Visa/MC Blocked From China, Allowing UnionPay to Dominate¹

Bank Card Payments Experienced Exponential Growth In China

China Created Barriers To US Companies Even With The WTO

Source: People's Bank of China via CEIC database.

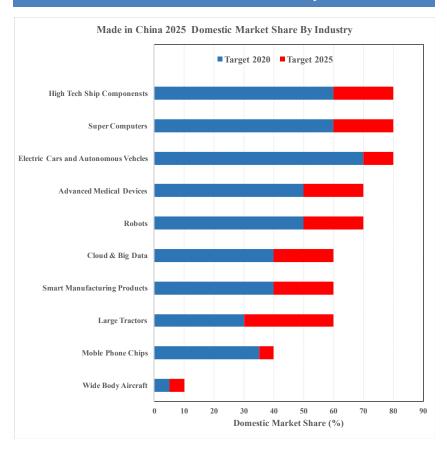
Year	Event	Bank Card Transaction Data In China
2001	China entered the WTO and made commitments to open up there electronic payment system to foreign electronic payment providers	Less than \$100 billion USD
2010	US requests a consultation with WTO	\$1.5 Trillion USD UnionPay (Chinese Company) 100% market share
2012	WTO ruling determined that China violated it agreement on entering The WTO with polices governing access to payment unfairly discriminates against foreign payment card companies	\$3.1 Trillion USD UnionPay 100% market share
2014	China announced new technical standard that all payment processes must meet the PBOC 3.0 standard. This standard is incompatible with the global industry standard EMV. Only Union Pay follows it. completely	\$6.3 Trillion USD UnionPay 100% market share
2015	China allows qualified Foreign companies to clear payments if they must follow PBOC 3 standard, so they would need to redesign their cards at a prohibit expense	\$8.1 Trillion USD UnionPay 100% market share

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Step 2: Fundamental Economic Framework

The "Made in China 2025" Policy Is an Escalation of China's Economic War On The US 1

Goal: 70% of Core Materials Produced in China by 2025



Made In China Will Be Supported By A Every Area of Their Society

- Reaffirms the Chinese government's central role in economic planning
- Calls on all facets of society to mobilize behind the plan
- Seeks technological breakthroughs in key areas for economic and security purposes
- Promotes further civil-military integration and the two-way transfer and conversion of military and civilian technologies
- Leverages state resources, policy support and regulatory systems
- Continues to promote import substitution and rely on indigenous products to meet growing demand in China
- Reaffirms the leading role of backbone enterprises in technology development
- Promotes Chinese enterprises to become dominant in the domestic market and internationally competitive in key industries

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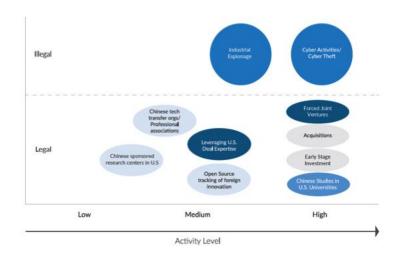
Step 2: Fundamental Economic Framework

As is The Past, China Will Use Legal and Illegal Means, And That Could Mean More Rust Belts Globally

Many Channels Through Which China Can Acquire Tech1

Some Of Those Legal, Some Not So Much²

Non-Traditional Collectors	China uses individuals for whom science or business is their primary profession to target and acquire US technology.
Joint Ventures (JV)	China uses JVs to acquire technology and technical know-how.
Research partnerships	China actively seeks partnerships with government laboratories-such as the Department of Energy labs-to learn about and acquire specific technology, and the soft skills necessary to run such facilities
Academic Collaborations	China uses collaborations and relationships with universities to acquire specific research and gain access to high-end research equipment. Its policies state it should exploit the openness of academia to fill China's strategic gaps.
S&T Investments	China has sustained, long-term state investments in its S&T infrastructure.
M&A	China seeks to buy companies that have technology, facilities and people. These sometimes end up as Committee on Foreign Investment in the United States (CFIUS) cases.
Front Companies	China uses front companies to obscure the hand of the Chinese government and acquire export controlled technology.
Talent Recruitment Programs	China uses its talent recruitment programs to find foreign experts to return to China and work on key strategic programs.
Intelligence Services	The Ministry of State Security (MSS), and military intelligence offices are used in China's technology acquisition efforts.
Legal and Regulatory Environment	China uses its laws and regulations to disadvantage foreign companies and advantage its own companies.



^{1.} Brown and Singh, "China's Technology Transfer Strategy: How Chinese Investments in Emerging Technology Enable a Strategic Competitor to Access the Crown Jewels of U.S. Innovations", DIUx, January 2018 2. "Made In China 2025, The making of a high-tech superpower and consequences for industrial countries", MERIC Papers on China, December 2016

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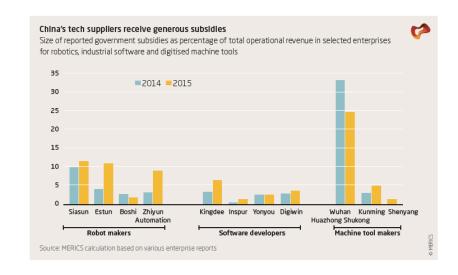
China State Financial Support Will Create Substantial Advantages Vs US Companies

Selected Government Funds to Support Strategic Sectors¹

Fund	Date Announced	Amount (billions)
National Integrated Circuit Fund	June 2014	\$107.5 (RMB 720)
Emerging Industries Investment Fund	January 2015	\$6 (RMB 40)
Advanced Manufacturing Fund	June 2016	\$3 (RMB 20)
Venture capital fund for state-owned enterprise innovative technology and industrial upgrading fund	August 2016	\$30 (RMB 200)
China Development Bank support for Made in China 2025	November 2016	\$44.8 (RMB 300)
China Internet Investment Fund	January 2017	\$14.9 (RMB 100)
Credit lines for China Internet Investment Fund participants	January 2017	\$22.4 (RMB 150)
State-owned enterprise fund for strategic sectors	May 2017	\$22.4 (RMB 150)
TOTAL		\$250.7 (RMB 1,680)

Source: Various.35

State Funding For Chinese Tech Suppliers is Substantial²



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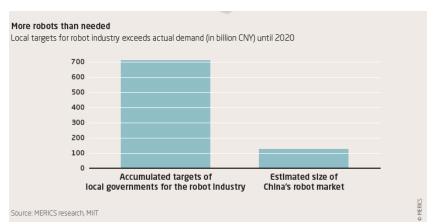
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One Outcome of the "Made in China 2025" Could Be China Exporting Excess Capacity to The World¹

Robotics Production Capacity In China Will Grow Substantially

Planed Capacity Growth Dwarfs Growth in Chinese Demand





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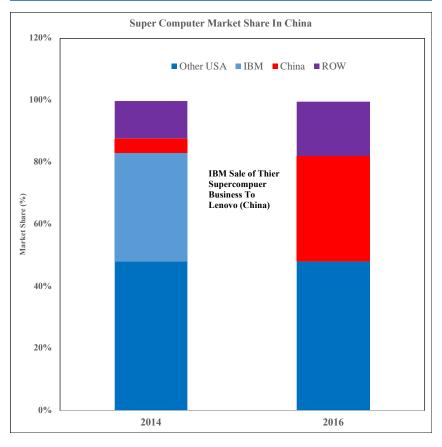
Step 2: Fundamental Economic Framework

China is Also Buying High End Developed Market Technology

China Also Buying Cutting Edge Tech Companies¹

Growing number of acquisitions of foreign tech suppliers Investment by Chinese enterprises in foreign companies specialising in automation and digitisation of industrial production Chinese Investor Foreign Target Share Date Country AVIC* KHD Humboldz Wedag Germany 79% Dec 2013 Jun 2014 Preh (Subsidiary of Joyson IMA Automation Germany 100% Electronics) Dec 2014 Wolong Electric SIR Solutions Industriali Italy 89% Huachangda Intelligent Equip. Jan 2015 Shanghai DEMC/ Dearborn 100% Mid-West Company (DMW) States ChemChina* Jan 2016 KraussMaffei machine tools Germany 100% Siasun* 100% Mar 2016 Germany Apr 2016 Wanfeng Paslin United 100% States 95% Apr 2016 Aritex Spain Apr 2016 Wuxi Lead Intelligent Equipment JOT Automation 100% (announced) May 2016 Shanghai Electric* Germany 19,67% EDF EUROPE S.R.L. May 2016 Dongfang Precision 100% Agic Capital N/A Jun 2016 Gimatic Italy Shanggong Group H. Stoll 26% Aug 2016 Germany Aug 2016 Midea Kuka Germany 94,5% Oct 2016 Shanghai Electric* Broetje Automation 100% Germany Withdrawn FGC Investment Aixtron N/A Germany Notes: * = State-owned enterprises (share of state institutions >50%) Source: MERICS research

As Well as Forcing US Tech to Sell To Chinese Companies²



 [&]quot;Made In China 2025, The making of a high-tech superpower and consequences for industrial countries", MERIC Papers on China, December 2016
 "U.S. – China Economic And Security Review Commission", 2017 Report To Congress

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They Are Also Forcing Transfer Of US Intellectual Property Through Coercion¹

Types of Requests

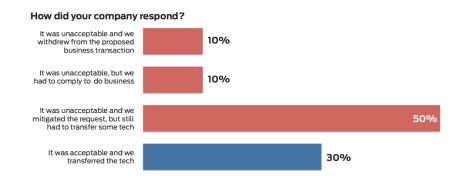
Most Companies Transferred Some Technology

Who asked for your technology to be transferred?



33% Central government entity

25% Local government entity



17

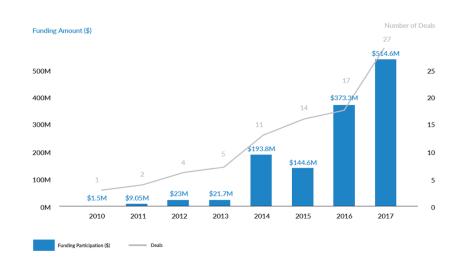
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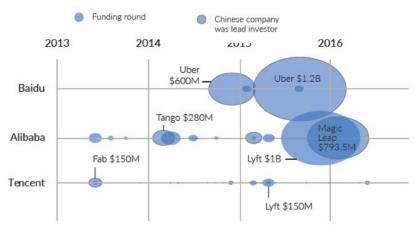
Step 2: Fundamental Economic Framework

China is Also Buying Access To New Technology With Venture Capital Funding¹

Chinese Venture Funding For US Artificial Intelligence Start Ups

Chinese E-commerce Company Funding of US Startups





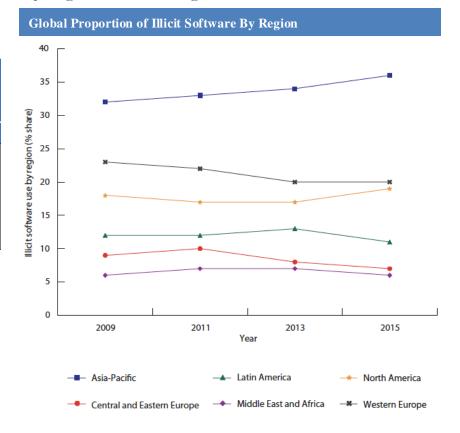
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Scale of Theft of US IP Is Substantial, While Theft of Military High Tech Is Putting The US At Risk¹

Estimated Cost of Chinese Theft of US IP

				tal
	Per Year (\$bil) 2012-2017 (17 (\$bil)	
	Low	High	Low	High
Pirated Software	20	50	100	250
Counterfeit Goods	30	140	150	700
Theft of Trade				
Secrets	200	500	1000	2500



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Step 2: Fundamental Economic Framework

Chinese State Sponsored Entities Are Conducting A Large Scale Cyber War Against the US

Examples of Chinese Cyber Attracts Against The US Military¹

- Breach of more than two dozen major weapons system designs in February, 2012 from the military and defense contractors including
 - Patriot missile system (PAC-3)
 - an Army system for shooting down ballistic missiles
 - the Navy's Aegis ballistic-missile defense system,
 - the F-35 Joint Strike Fighter,
- "Titan Rain" a series of coordinated attacks for multiple years since at least 2003 which compromised hundreds of government computers stealing sensitive information
 - In 2004, an analyst traced the origins of a massive cyber espionage ring back to a team of government sponsored researchers in Guangdong Province in China. The hackers, code named by the FBI "Titan Rain" others."
- PLA Unit 61398 (a cyber force within the Chinese military) which penetrated the networks of >141 blue chip companies across 20 strategically targeted industries identified in China's 12th Five Year Plan for 2011-2015
 - Source code was stolen from some of the most prominent U.S. technology companies such as Google, Adobe and others;
 - According to Mandiant, PLA Unit 61398 is just one of more than 20 cyber attack groups within China
- "Hidden Lynx" which according to Symantec has a long history of attacking the defense industrial sector of Western countries with some of the most sophisticated techniques has successfully attacked the tech sector, financial services, defense contractors and government agencies since at least 2009

And Examples Of Cyber Attacks Against The US Private Sector²

YEAR	TARGET	SECTOR	DETAILS
2015	Trimble	Software	Chinese nationals allegedly stole 275 megabytes of data from Trimble between December 2015 and March 2016. The Department of Justice noted that the data could assist in the development of competing global navigation systems. ¹⁷⁷
2015	United Airlines	Aviation	United Airlines detected intrusions in its network possibly carried out by the same Chinese hackers responsible for the Anthem attack and other intrusions. 178
2016	Various	Semiconductors	In 2016, three groups based in China compromised the networks of four companies involved in semiconductor manufacturing, according to a FireEye report. 79
2016	Various	Information Technology	In "Operation Cloud Hopper," APT10 conducted a sustained cyber campaign against managed IT service providers, accessing intellectual property and sensitive company and customer data. 180
2017	Medrobotics Corporation	Robotics	A dual Canadian and Chinese citizen gained physical access to the offices of Medrobotics Corporation and attempted to steal information using a variety of computers and other network equipment. ³⁸¹ The individual had previously attempted to connect digitally with a number of employees at the firm.
2017	Multiple	Public policy	Chinese actors conducted cyber espionage against at least six non-governmental organizations. In at least one case, after the intrusion failed, the actor conducted a DDoS attack against the think tank's website. ¹⁸²
2018	Unnamed Contractor	Defense	Chinese government hackers stole sensitive data about a missile project known as Sea Dragon, as well as signals and sensor data and information related to cryptography systems, from a private company working on undersea warfare. ¹⁸⁵

Cooper, 'Understanding the Chinese Communist Party's Approach to Cyber-Enabled Economic Warfare", FDD press, September 2018

^{1.} Brown and Singh, "China's Technology Trans fer Strategy: How Chinese Investments in Emerging Technology Enable a Strategic Competitor to Access the Crown Jewels of U.S. Innovations", DIUx, January 2018

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Step 3: Find Potential Repricing Events

The First Salvo In The Coming Economic War With China Is The 301 Tariffs¹

The 301 Tariffs Are Focused on Protecting Our Intellectual Property

- · Protect China's Home Market From Imports and Competition
 - This category features high tariffs, non-tariff barriers, and other regulatory hurdles
- Expand China's Share of Global Markets
 - Uses policy tools that includes financial support to boost exports and the consolidation of State-Owned Enterprises into "national champions" that can compete with foreign companies in both the domestic and global markets.
 - Chinese enterprises also benefit from preferential policies that lead to subsidized overcapacity in
 China's domestic market, which then depresses world prices and pushes foreign rivals out of the
 global market.
- Secure and Control Core Natural Resources Globally
 - China uses a predatory "debt trap" model of economic development and finance that proffers substantial financing to developing countries in exchange for an encumbrance on their natural resources and access to markets
- Dominate Traditional Manufacturing Industries
 - China has achieved a leading position in many traditional manufacturing industries. It has done so
 in part through preferential loans and below-market utility rates as well as lax and weakly enforced
 environmental and health and safety standards.
- Acquire Key Technologies and Intellectual Property From Other Countries, Including the United States
- Capture the Emerging High-Technology Industries That Will Drive Future Economic Growth and Many Advancements in the Defense Industry

The US Has Proven That China Are After Our Tech

Under Section 301 of the Trade Act of 1974, USTR initiated an investigation to determine whether China's acts, policies, and practices related to technology transfer, intellectual property, and innovation are unreasonable or discriminatory, and burden or restrict U.S. commerce.

Following a thorough analysis of available evidence, USTR determined that numerous acts, policies, and practices of the government of China related to technology transfer, intellectual property, and innovation are unreasonable or discriminatory, and burden or restrict U.S. commerce. Specifically, USTR found that:

- China uses joint venture requirements, foreign investment restrictions, and administrative review and licensing processes to require or pressure technology transfer from U.S. companies.
- China deprives U.S. companies of the ability to set market-based terms in licensing and other technology-related negotiations.
- China directs and unfairly facilitates the systematic investment in, and acquisition of, U.S. companies and assets to generate largescale technology transfer.
- China conducts and supports cyber intrusions into U.S. commercial computer networks to gain unauthorized access to commerciallyvaluable business information.

SOM Macro Strategies State Of the Markets: The Coming Economic War Between the US and China

Step 3: Find Potential Repricing Events

The President Is Using 301 Tariffs To Force Major Changes In a Broad Range of Chinese Behavior¹

301 Gives The President Almost Unlimited Tariff Powers

Under Section 301 of the Trade Act of 1974, USTR has broad authority for a range of possible responsive actions to meet the goal of eliminating or otherwise resolving these unfair practices, such as the imposition of duties or other restrictions on goods or services. USTR has determined that appropriate actions for addressing China's unreasonable or discriminatory acts, policies, and practices should include the following:

- 25 Percent Ad Valorem Duties: In accordance with the President's direction, USTR has determined to impose an additional 25 percent tariff on approximately \$50 billion of products from China that are strategically important to, and benefit from, the "Made in China 2025" program and other Chinese industrial policies.
- WTO Case: USTR is pursuing dispute settlement at the World Trade Organization (WTO) to address China's discriminatory licensing practices
- The Department of Treasury will address concerns about Chinese investments in certain technology-intensive sectors.

US Demands Go Far Beyond Trade

- China will cut the \$336 billion U.S.-China trade deficit by at least \$200 billion by 2020
- China will stop subsidizing tech companies
- China will cease stealing U.S. intellectual property
- China will cut its tariffs on U.S. goods by 2020
- China will not retaliate against the United States (including against U.S. farmers).
- The Chinese government will open China to more U.S. investment

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Step 3: Find Potential Repricing Events

It Would Seem That The More likely Course Of US Action is to Escalate

providing competitive advantages to companies or commercial

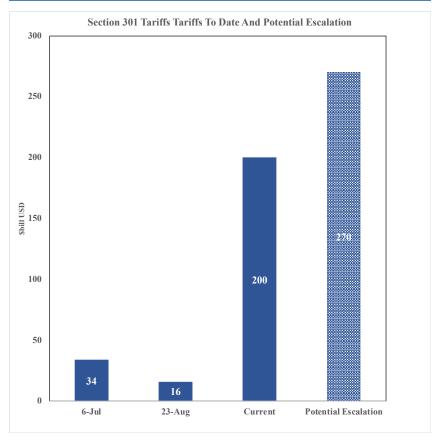
China committed not to require the transfer of intellectual property rights or technology as a condition of doing business.

Words Alone May Not Satisfy The US Given Chinese History¹

Table I.1 China's Bilateral Commitments Relating to Technology Transfer, 2010 - 2016 Year 2010 S&ED China reaffirmed that the terms and conditions of technology transfer, production processes, and other proprietary information will be determined by individual enterprises. **JCCT** China confirmed that it does not and will not maintain measures that mandate the transfer of technology in the New Energy Vehicles Sector. China further clarified that "mastery of core technology" does not require technology transfer for NEVs. 2012 S&ED China reaffirmed its commitment that technology transfer is to be decided by firms independently and not to be used by the Chinese government as a pre-condition for market access. 2012 Xi Visit Commitment China reiterated that technology transfer and technological cooperation shall be decided by businesses independently and will not be used by the Chinese government as a pre-condition 2012 **JCCT** China reaffirmed that technology transfer and technology cooperation are the autonomous decisions of enterprises. China committed that it would not make technology transfer a precondition for market access. 2014 JCCT China committed that enterprises are free to base technology transfer decisions on business and market considerations, and are free to independently negotiate and decide whether and under what circumstances to assign or license intellectual property rights to affiliated or unaffiliated enterprises. JCCT China confirmed that trade secrets submitted to the government in administrative or regulatory proceedings are to be protected from improper disclosure to the public and only disclosed to government officials in connection with their official duties in accordance with law. 2015 Xi Visit Commitment China committed not to advance generally applicable policies or practices that require the transfer of intellectual property rights or technology as a condition of doing business in the Chinese 2015 Xi Visit Commitment China committed to refrain from conducting or knowingly supporting cyber-enabled theft of intellectual property cyberenabled theft of intellectual property, including trade secrets or other confidential business information, with the intent of

Xi Visit Commitment

More Likely That The US Escalates and Puts Tariffs On All Imports²



FINDINGS OF THE INVESTIGATION INTO CHINA'S ACTS, POLICIES, AND PRACTICES RELATED TO TECHNOLOGY TRANSFER, INTELLECTUAL PROPERTY, AND INNOVATION UNDER SECTION 301 OF THE TRADE ACT OF 1974. USTR March 22, 2018

2016

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Step 3: Find Potential Repricing Events

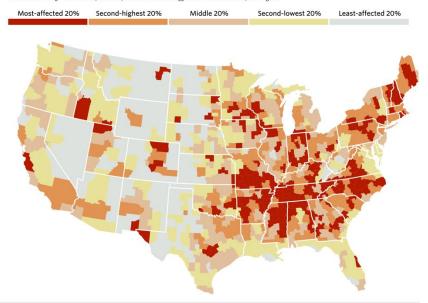
Trump Political Support For The Coming Economic War Comes the First Victim Of the War: the Rust Belt

US Areas Affected By The Growth of China Imports¹

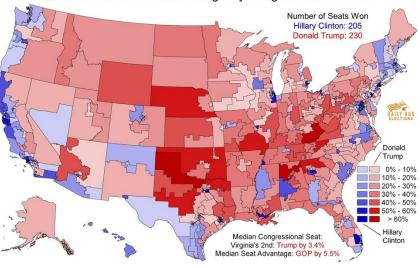
Not Surprisingly, These Areas Voted For Trump

Most-affected areas of the U.S.

Colors show which areas were most affected by China's rise, based on the increase in Chinese imports per worker in each area from 1990 to 2007. Hovering over each area on the map will show a demographic breakdown of that area, below, and its most-affected industries, at right.



2016 Presidential Election Margin by Congressional District



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Step 3: Find Potential Repricing Events

The Coming Economic War With China Is The Likely Path Given Trump and His Mandate

China Imports A Powerful Tool To Predict Voting Patterns¹

Table 2: Counterfactual Outcomes in Closely Contested States

	9	vote i	Vote Margin in Favor of Republican Candidate Chinese Import Growth						
	Actual C	Outcome	10% S	maller	25% S	maller	50% S	maller	
Georgia	215,380	(5.28%)	202,810	(4.97%)	183,956	(4.51%)	152,531	(3.74%)	
Arizona	84,904	(4.12%)	77,860	(3.78%)	67,295	(3.27%)	49,685	(2.41%)	
North Carolina	177,009	(3.78%)	141,689	(3.03%)	88,708	(1.89%)	407	(0.01%)	
Florida	119,489	(1.27%)	100,727	(1.07%)	72,584	(0.77%)	25,679	(0.27%)	
Pennsylvania	73,224	(1.24%)	52,630	(0.89%)	21,739	(0.37%)	-29,746	(-0.50%)	
Wisconsin	24,081	(0.81%)	11,067	(0.37%)	-8,455	(-0.28%)	-40,991	(-1.38%)	
Michigan	13,107	(0.27%)	-3,979	(-0.08%)	-29,608	(-0.61%)	-72,324	(-1.49%)	
New Hampshire	-2,687	(-0.37%)	-6,830	(-0.94%)	-13,045	(-1.80%)	-23,404	(-3.22%)	
Minnesota	-43,783	(-1.49%)	-54,009	(-1.84%)	-69,347	(-2.36%)	-94,911	(-3.23%)	
Electoral Votes Tru	ımp	306	29	00	28	30	20	60	
Electoral Votes Clir	nton	232	24	18	25	58	27	78	

Notes: The computation of the counterfactual is based on the estimate that a growth of import penetration by one percentage point reduces the Republican share of the two-party vote by 1.67 percentage points. Numbers in parentheses indicate the vote margin in favor of the Republican candidate as a percentage of the total vote.

Trump Has Delivered on the Other Parts of His 2016 Promises

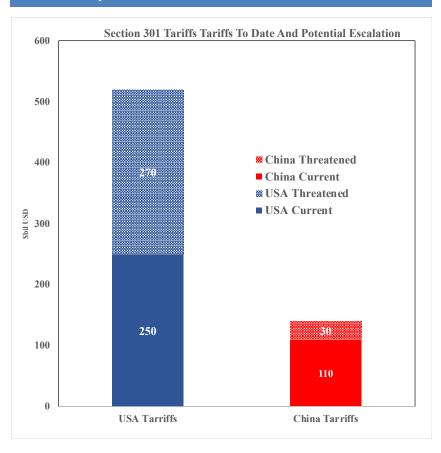
Trump Promises 2016	Action 1	Action 2	Action 3	Action 4
Financial Reform	Put a Trump appointee in every financial regulatory body	Removed DF From banks < 250 bill of assets		
Repeal Obama Care	Removed the individual mandates	Failed on full removal		
Tax Reform	Signed a \$1.5 Trillion Tax cut and reform			
Energy Reform	Approved Keystone	Opened offshore oil fields to exploration		
Infrastructure	Nothing			
Immigration Reform	Travel ban from 6 Muslim countries approved by Supreme court	Ending DACA		
Other	Moved US embassy to Jerusalem and recognized it as the capital of Israel	Removed US from Iran Accord	Bomb Syria after they used chemical weapons	Negotiating with North Korea
End of Off Shoring	Removed US from FTTP, renegotiating NAFTA	Reduced incentives to hold profits overseas	Imposed tariffs on Steel	Impose tariffs on China imports

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Step 3: Find Potential Repricing Events

China Retaliation Likely To Include Non-tariff Strategies

China Unlikely To Do Tit-for-Tat With Tariffs



But There Are Other Avenues That Risk Escalation

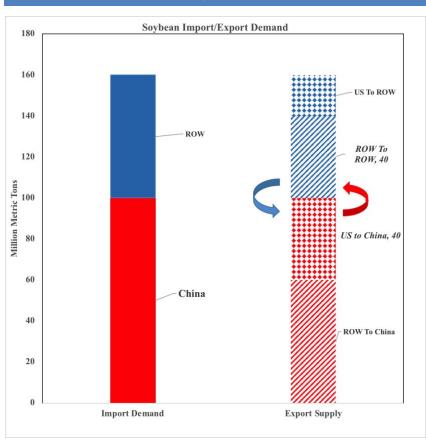
- Farm exports—Soybeans
 - China could stop buying soybeans from the US
 - China imports more than 60 million metric tons of soybeans from the US
- Airplanes—Boeing
 - China could stop buying planes from Boeing
 - Boeing sold over 200 planes to China in 2017, which generates over 13% of its revenue
 - China is projected to need over 7000 new planes in the next 20 years
- Autos—GM
 - China could stop GM from selling cars to them
 - GM sold more cars and trucks in China than in the US during 2010-17
 - China demand for cars is expected to grow from 3.9 million per year to 5 million per year by 2020
- Electronics—Apple
 - China could prevent Apple from selling their product in China
 - China represents over 22% of Apple's net income
- US Treasuries
 - China could start selling its position of \$1.2 trillion of US Treasuries
- The Yuan
 - China could depreciate their currency to offset the impact of the Tariffs
- Commodities
 - China could use their demand for oil to pressure US allies or to counter US
 policy in the middle-east and Iran
 - China could disrupt the electric battery market since it processes over 90% of cobalt processing, which is a crucial ingredient for electric car batteries

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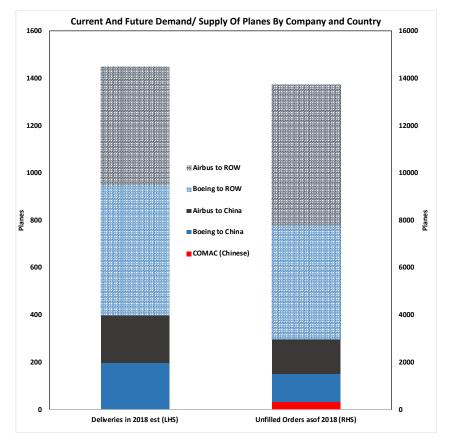
Step 3: Find Potential Repricing Events

First China Salvo Using Selective Tariffs Will Likely Not Be Effective: Fungibility of Supply and Demand

Other Sources of Demand For Soybeans Other Than China¹



Not Easy For China To Replace Boeing As A Source of Planes²



USDA

Boeing and Airbus Eamings Reports

SOM Macro Strategies State Of the Markets: The Coming Economic War Between the US and China

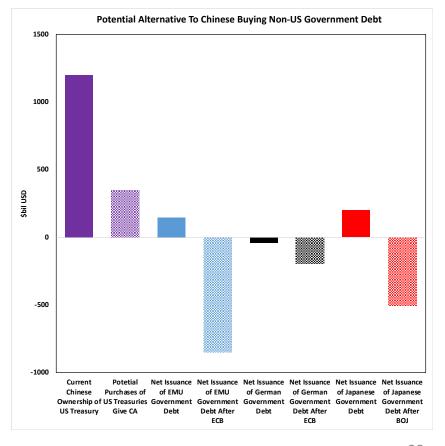
Step 3: Find Potential Repricing Events

Selling Or Not Buying US Treasuries Is A Non-Tariff Option, But What Could They Buy Instead?

China And US Treasuries¹

Chinese Ownership and Potental Demand For US Treasuries 1400 1200 \$bil USD 400 200 Current Chinese Ownership of US Treasury Potetial Purchases of US Treasuries Give CA

Available Supply Of Other DM Government Debt Is Shrinking²



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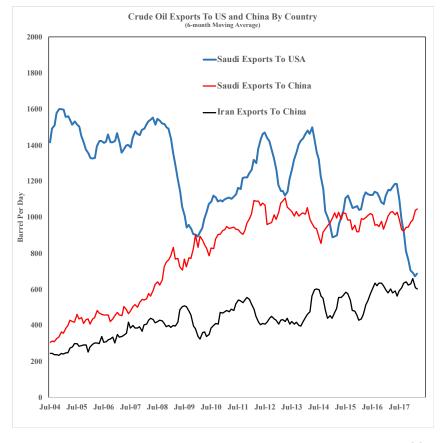
Step 3: Find Potential Repricing Events

However China's Next Move Could Result in An Escalation In The Economic War

Apple Looks Vulnerable¹

Apple's Operating Income From China 25,000 Operating Income (LHS) 20,000 -Percent of Operating Income (RHS) 25% Percent of Total (%) 10,000 15% 5,000 10% FY 2011 FY 2012 FY 2013 FY 2014 FY 2015 FY 2016 FY 2017

China Could Use Oil As A Way to Escalate The Coming Economic War²



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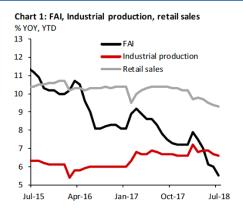
Step 4: Find Asymmetric Trades

Trade 1: Position For A Weaker RMB

Trade Thesis

- Fed policy could strengthen the USD against all currencies
 - Reversing QE
 - Raising rates
- China could weaken the RMB for a variety of reasons both directly and indirectly
 - They could weaken their currency to offset the impact of tariffs
 - They could weaken their currency by lowering policy rates to spur their economy
 - They could weaken their currency to reignite trade as an engine of growth
 - They could weaken their currency to retaliate against US tariffs
- Buy USD and sell CNH using a 1-year forward contract

US Is Raising Rates While China Is Lowering Rates¹



China Trade Engine Has Slowed As Their Currency Appreciated¹



China Has Plenty of Room to Depreciate²



³⁰

State Of the Markets: The Coming Economic War Between the US and China

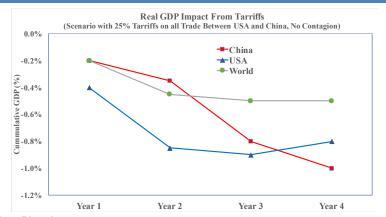
Step 4: Find Asymmetric Trades

Trade 2: Buy Puts On USD Based EM Equity Indexes

Trade Thesis

- EM equity associated with China and their currencies could sell off in an economic war between the US and China
 - US trade deficit with China is growing, as is the intensity of China's economic war with the US
 - The US could potentially put unlimited tariffs on Chinese imports
- China could retaliate against the imposition of US tariffs
 - The could put more barriers to imports from US technology companies
 - They could us oil as a political weapon against the US
- Buy puts on a broad base USD EM equity index
 - Impact of an economic war on the Chinese equity markets could be substantial
 - China and its circle of influence constitute the majority market weight of broad base EM indexes

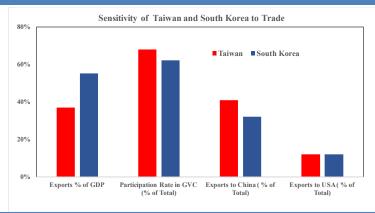
US Deficit With China is Growing¹



1. Bloomberg

2. "Trade Wars: There are no winners", KPMG, August 2018, Just US And China involved

US Technology Companies Are Vulnerable to China Retaliation²



China Could Use It Growing Demand For Oil As A Political Weapon¹

Country/Area	EM Equity Index Exposure (%)	Currecy Exposure
China	31.0	RMB
Korea (South)	14.8	KRW
Taiwan	12.1	TWD
India	8.9	IDR
South Africa	6.2	ZAR
Brazil	6.0	BRL

State Of the Markets: The Coming Economic War Between the US and China

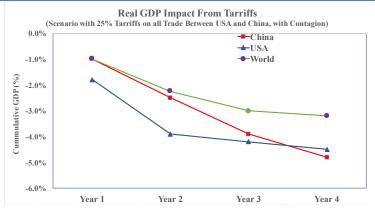
Step 4: Find Asymmetric Trades

Trade 3: Position For A Risk-Off Event From A Full Blown Global Trade War 1

Trade Thesis

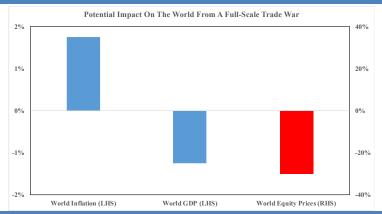
- This Economic war could escalate creating a tail event
 - The US could potentially put unlimited tariffs on all Chinese imports
 - China could escalate conflict bringing in the rest of the world using nontariff strategies
- Escalation would affect not only the US and China but also the rest
 of the world
 - GDP could fall substantially, bringing down equity markets around the world
- Buy CDS protection on highly rated US corporates
 - Cheaper protection than buying protection on US High Yield or OTM equity puts
 - 60 bp will buy a 35% OTM 1-year put on S&P500

US Deficit With China is Growing¹



- . "Trade Wars: There are no winners", KPMG, August 2018, World Contagion
- 2. Luca Paolini," A zero sum game", PICTET Asset Management, June 2018
- 3. Bloomberg

US Technology Companies Are Vulnerable to China Retaliation²



China Could Use It Growing Demand For Oil As A Political Weapon³

	_	Corporate Wide	_	
Dates	Tail Event	AAA	BBB	S&P 500
5/1998-8/1998	EM Crisis	94%	70%	-16%
9/2011-10/2001	September 2011	16%	14%	-8%
5/2002-9/2002	Telecom/Inasdaq Crash	30%	20%	-24%
5/2008-3/2009	GFC	211%	145%	-48%
5/2011-9/2011	Euro Crisis	82%	63%	-17%