Global Macro Research

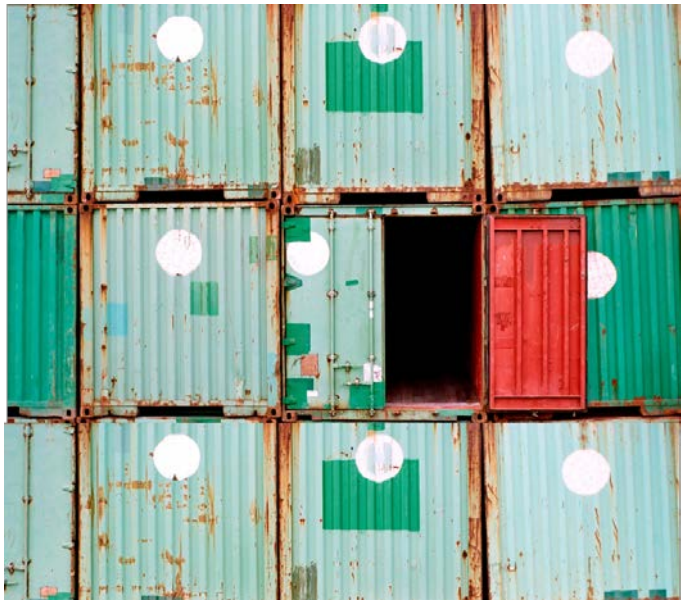
Top of Mind

September 29, 2016

Issue 49

Trade Trends

From the editor: Years of global trade stagnation, coupled with rising protectionist sentiment in the US election cycle and beyond, have raised questions about the outlook for trade and broader economic activity. What's really going on with trade, both economically and politically, is Top of Mind. Our economists share different takes on what's driving the slowdown, leaving some of them more optimistic than others. We interview Lord William Hague, who warns that protectionism could strip us of one of the best remaining tools for boosting growth; Parag Khanna, who thinks protectionism accomplishes little in the face of relentless globalization; and Dean Baker, who believes that most of the gains from free trade—but also the losses to US manufacturing—are behind us. We assess the impact of the US election on trade deals (likely a tough road ahead no matter who wins) and identify a likely winner should trade recover: Maersk.



Source: www.istockphoto.com.

Inside

> "I'm less concerned about any further impact [from trade deals] on employment or on the wages of manufacturing workers because we mostly have an open door already with so many developing countries…But we also don't have a lot more to gain."
> **Dean Baker**

> "Globally, most of the levers to maintain or increase growth today are not working…In the absence of other levers to pull, what is the best way to mitigate [the risk of a global recession]? The answer is continuing to expand trade."
> **William Hague**

> "The conventional wisdom that global trade has stagnated is based on a very narrow measure…Our methodologies for measuring trade are a decade behind the reality of today's technology and economic activity."
> **Parag Khanna**

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Macro news and views

We provide a brief snapshot on the most important economies for the global markets

US

Latest GS proprietary datapoints/major changes in views

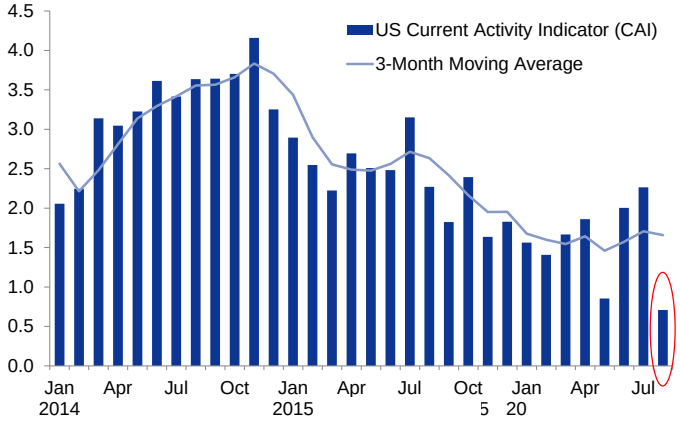
- Following the September FOMC meeting, we continue to see the odds of a rate increase this year at 65%—10% for November and 55% for December. However, we note that the FOMC's focus on risk management will make it inclined to stay on hold if faced with conflicting signals.

Datapoints/trends we're focused on

- Softer data in recent weeks—most notably the large decline in August's non-manufacturing ISM—though indicators such as consumer confidence and jobless claims look solid.

Another growth pothole

US CAI and 3-month moving average, % change, annual rate



Source: Goldman Sachs Global Investment Research.

Japan

Latest GS proprietary datapoints/major changes in views

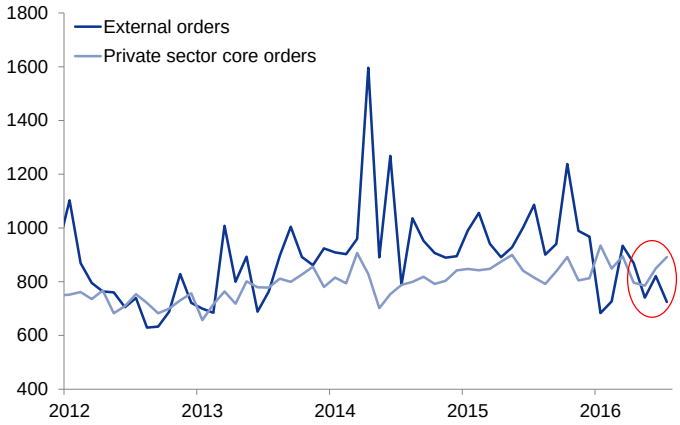
- Following its September policy meeting, we think the BOJ has made its easing program more sustainable, but may have set the stage for an eventual tapering of asset purchases; we now expect no easing at the December meeting or over the medium term, barring a significant appreciation of the yen.

Datapoints/trends we're focused on

- Lackluster external demand weighing on external machinery orders, a leading indicator of capital goods exports.
- Weak consumption data worsened by August's bad weather.

Wrestling with weak external demand

Japan machinery orders, ¥bn



Source: Cabinet Office, Haver Analytics.

Europe

Latest GS proprietary datapoints/major changes in views

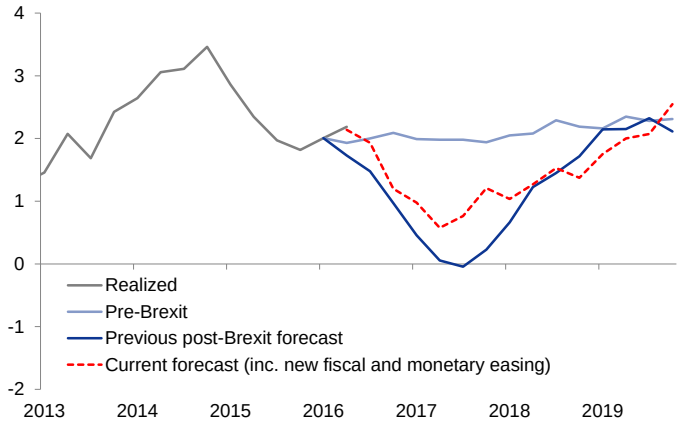
- We raised our 2016 and 2017 UK GDP forecasts to 1.8% and 0.9%, respectively, from 1.5% and 0.2% on expectations for greater policy stimulus. In parallel, we raised our Euro area forecast to 1.5% and 1.3% from 1.3% and 1.2%.

Datapoints/trends we're focused on

- Questions about the ECB's next steps; we continue to expect the bank to shift away from its capital key in conjunction with an extension of purchases to end-2017.
- Volatility in UK data post-June, which we interpret cautiously.

A quicker rebound than expected

Real UK GDP and comparison of forecasts, % yoy



Source: UK ONS, Goldman Sachs Global Investment Research.

Emerging Markets (EM)

Latest GS proprietary datapoints/major changes in views

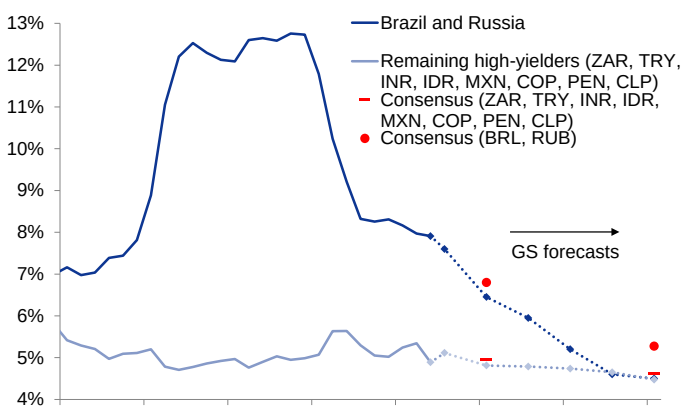
- We lowered our 2016 and 2017 Russia growth forecasts to 0.0% and 2.6%, respectively, from 0.5% and 3.0%.

Datapoints/trends we're focused on

- Pressure on Mexico's central bank amid peso depreciation (related in part to the US election) and accelerating inflation.
- Downside risks to September activity growth in China following a rebound in August; further policy support is likely.
- Disinflation in mid/high-yielding EMs that will likely continue into 2017, providing a dovish impulse to central banks.

More disinflation to come

Average CPI, % yoy



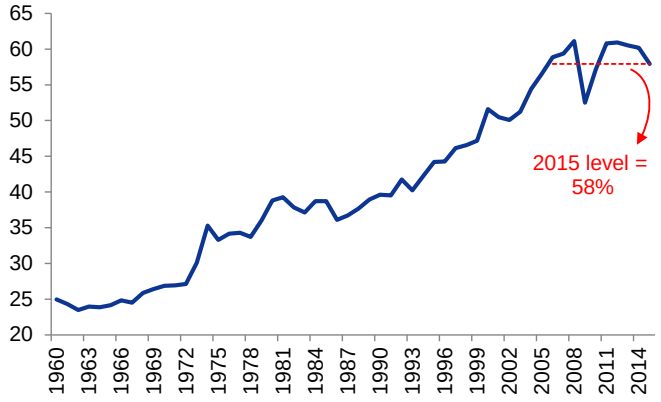
Source: Haver Analytics, Consensus Economics, GS Global Investment Research.

Trade trends

Global trade seems to be yet another victim of the painfully slow economic recovery, having stagnated over the last five years. Following decades of near-relentless trade expansion—and the investment, production, and other activity that came with it—this trend has raised concerns about the outlook for trade and overall growth. At the same time, rising protectionist leanings in key developed economies, demonstrated by the anti-trade rhetoric of the US presidential campaigns, appear to be threatening further trade liberalization, long considered an important source of economic gains. What's really going on with trade, both economically and politically, is Top of Mind.

Trade past its peak?

Global trade, % of GDP



See also an annotated version of this chart on pg. 6. Source: World Bank, OECD.

To start, GS Asia Economists Goohoon Kwon and Irene Choi observe what many consider the most concerning aspect of the global trade slowdown: a collapse in the sensitivity of trade to growth, which has been most acute in Asia. They explore the potential drivers behind this shift, finding that rebalancing of the Chinese economy is likely playing a key role, although other structural factors—think technology reducing the need for offshoring—could also be at work. The implication: even if economic growth picks up, trade may not follow, which in turn could hold back economic activity. Kwon and Choi see limited hope of meaningfully overcoming the structural impediments to trade, leaving them relatively pessimistic on the trade outlook, particularly in Asia, which could prove especially damaging to smaller exported-oriented economies like Korea and Taiwan.

GS Emerging Market (EM) Macro Strategists Ian Tomb and Kamakshya Trivedi are relatively more upbeat about global trade prospects. While they acknowledge the importance of structural drivers to the exceptional trade stagnation in Asia, their analysis of nearly 400,000 trade flows over the 1995-2014 period finds less evidence of structural shifts globally. Rather, their work suggests that weakness in external demand—particularly in Europe—led trade to slow sharply in 2011, reversing a decade-long boom driven by China and bringing trade growth back in line with the long-run trend. In their view, while the measured sensitivity of trade to growth is volatile, the underlying impact of growth on trade has likely been more stable over the last two decades, meaning there is little reason to believe that trade trends won't eventually improve, or that we are simply past the point of "peak trade."

But even if the economics do not preclude an improvement in trade, what about the politics? Political and public backlash against trade is nothing new, but it feels elevated relative to recent years. Lord William Hague, former UK Foreign Secretary, expresses concern about the increasing protectionist leanings in Europe and in the US, though he clarifies that the Brexit vote was about migration, not trade. In Hague's view, trade is unfairly blamed for problems like income inequality, which he attributes mainly to technological change. He welcomes the fact that politicians are beginning to focus more on these ills, but maintains that limiting free trade is not the answer and will only make the economically disenfranchised worse off. In a low-growth environment with few policy levers to pull, he believes further trade liberalization is the world's best hope of mitigating the risk of another global recession.

Parag Khanna, a global strategist and the author of *Connectography: Mapping the Future of Global Civilization*, agrees that the gains from further global integration through trade, data, and other flows far outweigh any costs. Perhaps more importantly, he argues that political intervention can do little to stop these forces. Countries can choose to "make mistakes" by turning protectionist, he says, but they can only dent the process of globalization, not halt it or reverse it.

To explore some of the reasons for today's anti-trade sentiment, we also sit down with Dean Baker, co-founder and co-director of the Center for Economic Policy Research. Baker points out that economists are increasingly linking the loss of US manufacturing jobs to foreign trade (for more on this, see pgs. 12-13 and 21), though he thinks the worst damage is likely behind us. As for new trade deals such as the Trans-Pacific Partnership (TPP), Baker believes they have little to do with trade per se and focus primarily on regulation, governance, and intellectual property protections, which in his view could do more harm than good, especially to those who have been hit hardest by the consequences of free trade. Baker recommends forgoing most aspects of the TPP and thinks breaking down barriers to trade in highly protected professional services such as medicine would be a more productive use of trade policy.

GS Senior Political Economist Alec Phillips then looks at the intersection of public opinion, political rhetoric, and trade policy in the US, finding that a sharp decline in Republican support for more open trade suggests a tough road ahead for the TPP no matter who wins the presidential contest. The macro implications of "deal or no deal" would be modest, he writes, but there will be winners and losers (for more, see pgs. 14-15).

Finally, few industries have their fortunes tied to the future of trade growth more closely than container (i.e., manufactured goods) shipping. We tap GS European Transportation and Logistics Equity Analyst Patrick Creuset for an update: After overcapacity took freight rates to historic lows in 1H16, the shipping industry is finally moving toward meaningful, albeit overdue, consolidation and supply discipline. However, trade growth at least in line with global GDP growth (3%+) remains crucial to the industry's nascent rebalancing. The most likely winner from this market repair scenario? Maersk.

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Trade stagnation: Back to an old normal?

Goohoon Kwon and Irene Choi discuss structural reasons for the apparent trade stagnation in EM Asia and beyond

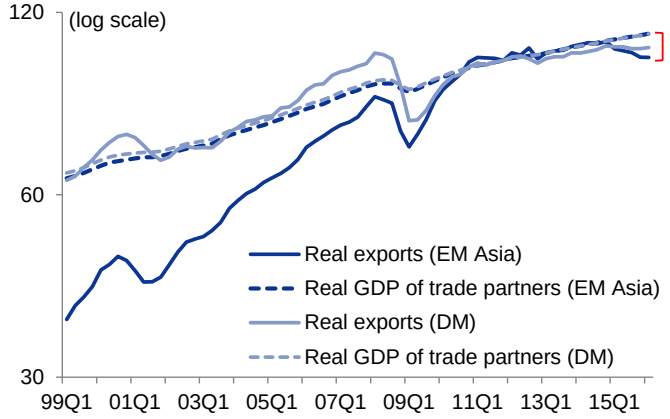
Trade has long been a major driver of growth. Globally, exports have grown 2-3 times faster than trade partners' GDP since the 1990s, boosting investment and the imports needed to produce export goods, which in turn amplified trade and economic activity. However, global trade volumes declined sharply in 2009 amid the global financial crisis and, following a strong rebound in 2010, have remained stagnant since 2012.

While slower global growth is a factor in the trade stagnation, the main driver is a sharp decline in the sensitivity of trade to GDP. Global real GDP growth slowed marginally after the crisis, from 3.2% on average (CAGR) over the decade before the crisis to 2.8% since 2012. In comparison, global trade growth in real terms slowed from 6.3% per annum over the decade preceding the crisis to just 2.1% afterwards.

Put differently, the sensitivity of global trade to economic growth—the "trade beta"—fell from around 2 before the crisis to slightly below 1 recently, when measured on a 4-year rolling basis. The decline has been especially acute in Asia, where the aggregate trade beta has fallen to an estimated 0.5 since 2012 from 2.5 over the 10 years before the crisis, a far more drastic shift than the decline to 0.7 from 1.6 for the US, EU, and Japan.

Exports have slowed relative to growth, especially in Asia

Real exports of DM and EM Asia; real GDP of their trade partners



Source: Haver, OECD, Goldman Sachs Global Investment Research.

The last time the global trade beta was sustained around 1 was in the early 1950s, pointing to potentially structural factors behind the current stagnation. The rebalancing of the Chinese economy and the labor impact of new technologies appear to be playing a part, while aging—another possible explanation—seems to be a less important driver. Looking at the recent history of trade, however, suggests that the current stagnation may simply be a return to an "old normal."

Factor #1: China rebalancing—a major driver in Asia

Macro rebalancing by China is a key factor behind the current trade stagnation, particularly in Asia. China's real annual GDP growth has slowed to around 6.5% recently from above 10% before the crisis, but declines in import volumes have been far more drastic, from double-digit growth before to outright contraction in 2015. Two aspects of China's rebalancing are likely responsible for this decline. The first is the rotation of domestic demand from investment to consumption, which reduces net imports as the former has higher import intensity (29%) than the latter (18%). By our estimates, this rebalancing, together with the cascading effects on the region's supply chains, has reduced the trade beta of Asian economies by some 20%—nearly half of the overall decline in 2013 and 2014. A second aspect is China's policy-driven switch to onshore production of parts and components and away from imports, which seems to be primarily responsible for the decline of Chinese imports in 2015 and their sustained weakness in 2016.

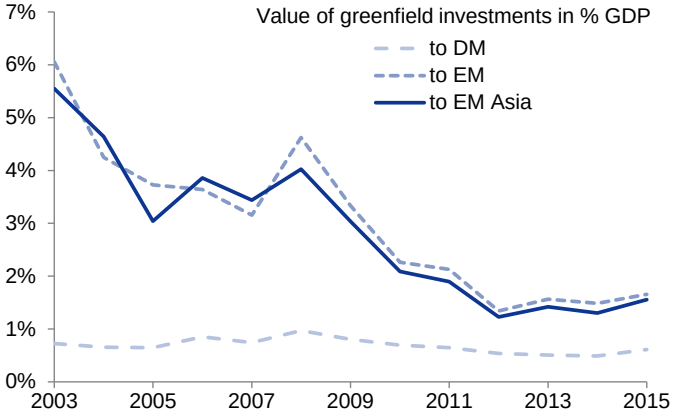
Factor #2: Technology—likely also weighing on trade

Labor-saving technologies might also play an important role in the decline of the trade beta. Personal computers and the internet initially boosted global trade as easier communication and coordination enabled more firms to expand supply chains abroad. As offshoring became popular in the late 1980s, many emerging markets (EM) benefitted through FDI and related trade flows. New machines and software also affected labor markets, especially in developed markets (DM), substituting routine manual and office jobs and reducing labor income shares the most in those areas. This has opened the door for "reshoring"—replacing foreign labor with domestic capital, as technological progress has made labor costs incrementally less important in choosing locations for manufacturing bases.

Despite substantial anecdotal evidence of the technological impact on trade, comprehensive evidence is not easy to find in EM; however, Korea and India have seen labor income shares decline more in routine-task sectors, consistent with the technological impact in DM. In addition, the steady decline in foreign green-field investment in EM since the early 2000s and its sustained low levels in recent years could reflect EMs' decreasing attractiveness as offshore manufacturing bases, in part due to new technologies. More importantly, the nature of evolving new technologies, such as the internet of things, 3D printing, artificial intelligence and collaborative robots, suggests that technology will likely further reduce the attractiveness of low-labor-cost locations in the future.

Falling FDI to EM might reflect impact of new technologies

Value of greenfield investment, % of GDP



Source: UNCTAD, Goldman Sachs Global Investment Research.

Factor #3: Aging—only a marginal influence, for now

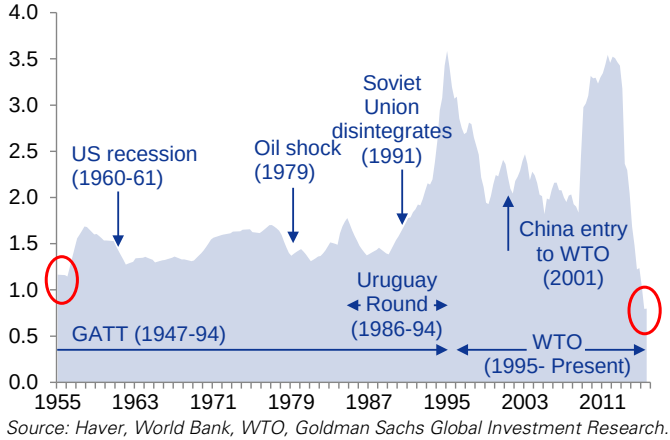
A third factor that could weigh on trade is demographics. The median age of the DM population has risen to 42 years today from 32 years in the late 1970s. To the extent that aging populations spend more on services than goods and trade is still mostly in the latter, DM aging would reduce demand for trade. Indeed, the share of services in global trade has continued to rise gradually (albeit slightly) over the last three decades. The level of services trade, however, has recently declined along with the level of goods trade, given that most tradable services including transportation, advertising, and other business services are related to merchandise trade. Besides, aging progresses slowly and, since services remain mostly non-tradable, the bulk of aging effects should fall on the composition of domestic demand, rather than international trade. Hence, aging does not seem to be a major factor in trade stagnation, although it will become more important over time.

Another explanation: A low trade beta may be normal

Finally, another explanation for the trade slowdown is that it simply represents a return to normal. Historical trade data show that the global trade beta was slightly higher than 1 in the early 1950s before rising gradually due to a series of extraordinary events. In the 1960s-1980s, it rose to around 1.5, boosted by multilateral efforts for trade reforms, which reduced average tariffs from 35% in 1947 to 6.4% at the start of the of the Uruguay Round (1986-94) of global trade negotiations. Thereafter, the breakup of the Soviet Union enabled global trade to expand rapidly in the 1990s, and the WTO entry of China in 2001 helped sustain the trade beta at around 2 in the 2000s. There is therefore an argument that a series of largely one-off factors drove the trade beta to unusually high levels.

Global trade beta: Back to a very old normal

4-year rolling sensitivity (elasticity) of global real trade growth to global real GDP growth



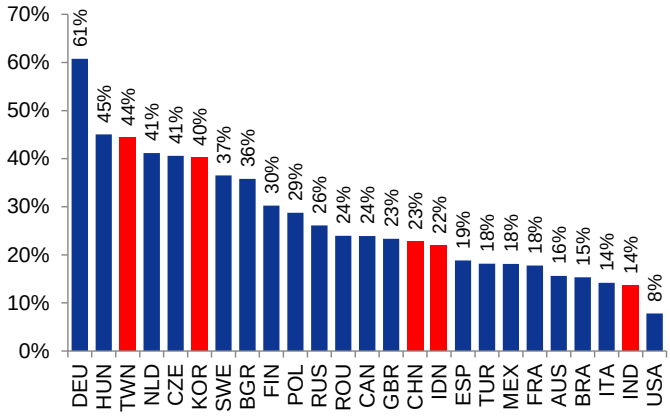
Source: Haver, World Bank, WTO, Goldman Sachs Global Investment Research.

Growth impact in Asia most severe in Taiwan and Korea

The current trade stagnation has been a major headwind to the Asian economies, which rely significantly on external demand for their growth. The Taiwanese economy, the most exposed in Asia to international trade, has grown only 2.2% on average since 2012, mainly due to weak exports, down from the average 5.0% growth for the decade before the global financial crisis. Similarly, Korean growth has slowed to 2.9% per year since 2012, compared with 4.8% before. Since 2012, Taiwan, Korea, China, Indonesia, and India have decelerated by a combined 1.8pp compared with growth over the decade before the crisis, pulled down by exports slowing by 13.5pp. By our estimates, weak external demand (exports net of imported inputs for exports) has contributed to nearly two-thirds of the growth slowdown in these economies.

Asian growth depends heavily on external demand

Contributions from external demand to real GDP growth (1995-09)



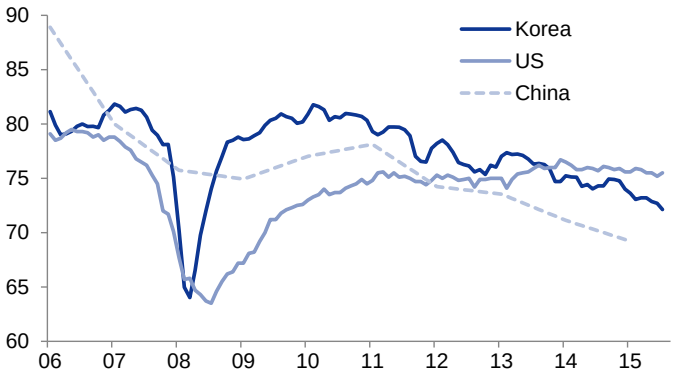
Source: World Input-Output Data, Haver, Goldman Sachs Global Investment Research.

Limited upside to global trade

Given these structural forces, the outlook for global trade remains weak in our view, though it might rebound somewhat in the short term. Asian trade is likely to recover moderately in coming years, helped by the eventual dissipation of capacity overhangs in China and reductions in internal imbalances in the economy. And further trade liberalization, including in services, presents upside for global trade. However, the restructuring of overcapacity sectors seems to be proceeding slowly so far in Asia, as reflected in low and still-falling capacity utilization in China and Korea. Moreover, the current political backdrops in the major economies suggest that another major push for trade liberalization might be off the table, at least for now.

Reducing overcapacity could help the trade recovery

Manufacturing capacity utilization rates (%) in China, Korea and US



Source: KOSTAT, Department of Labor, CEIC, Haver, GS Global Investment Research.

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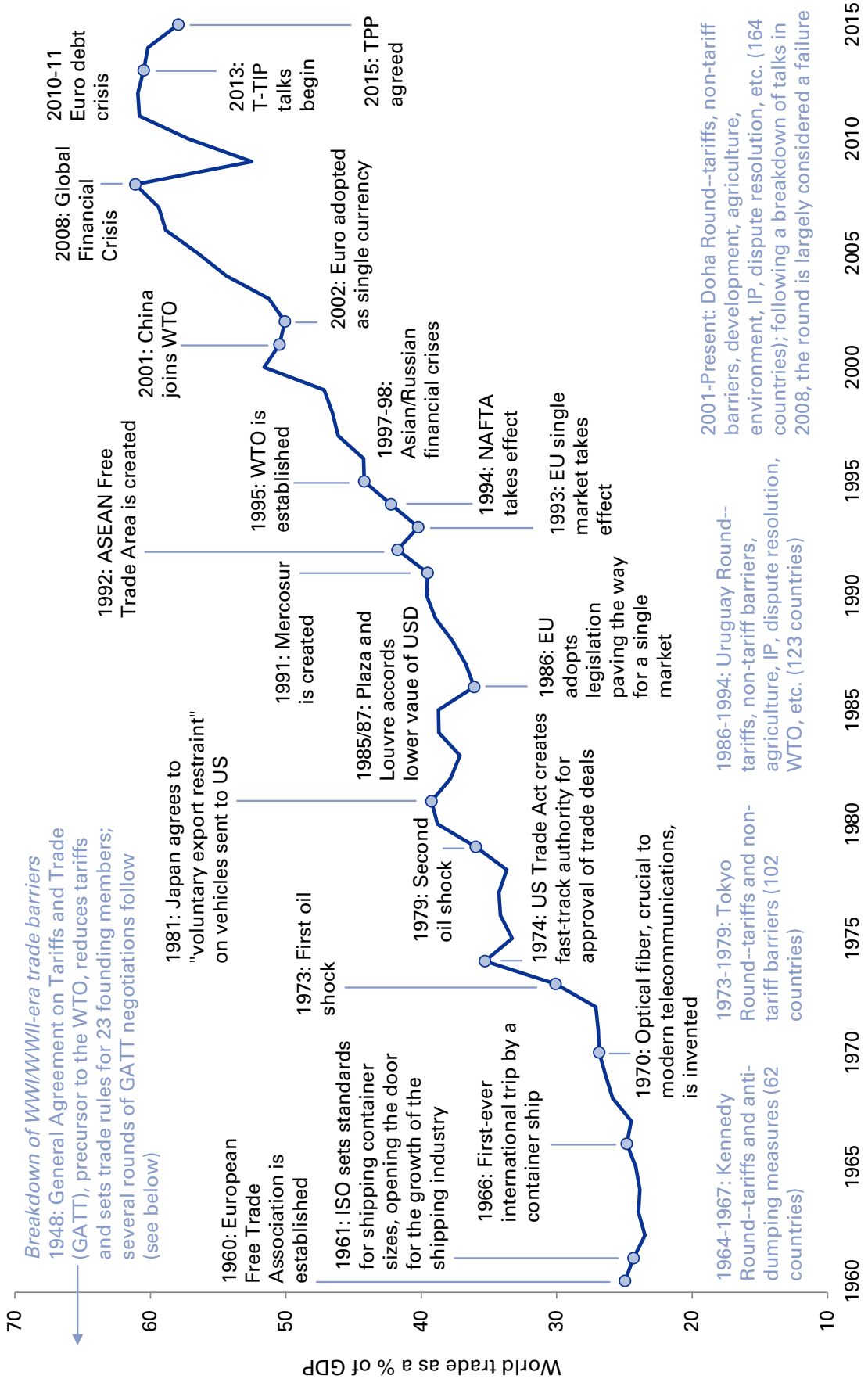
A long history of trade expansion

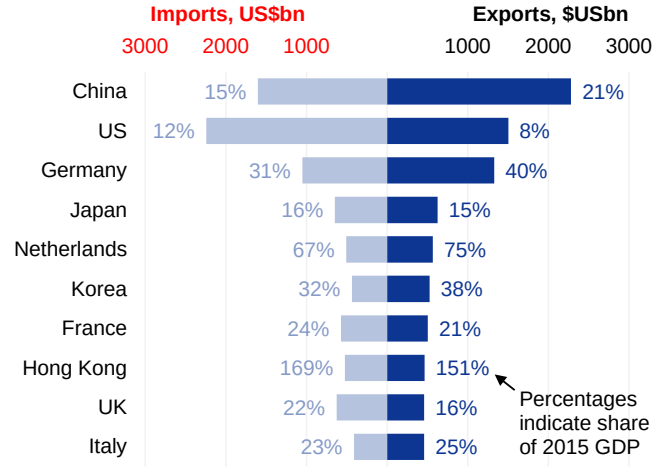


Source: World Bank, OECD, WTO, WorldShipping.org, various news sources, Goldman Sachs Global Investment Research.

Global trade basics

The biggest players

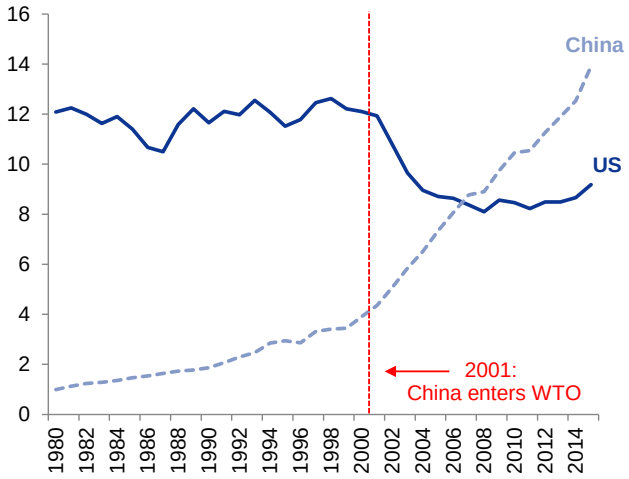
2015 exports and imports by major trade partner and shares of GDP



Source: IMF, Haver Analytics, Goldman Sachs Global Investment Research.

How they have changed

US and Chinese share of world exports, %



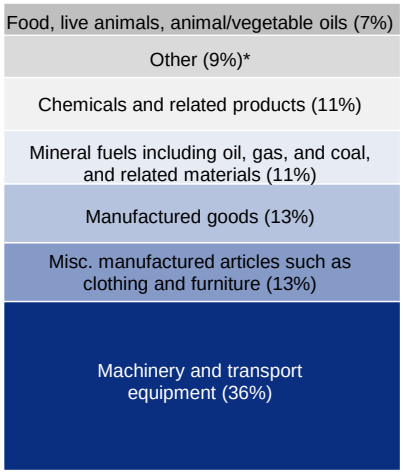
Source: IMF, Haver Analytics.

What's being traded: goods

Breakdown of 2015 global merchandise exports by product group

$16.5 tn

Value of global merchandise trade in 2015



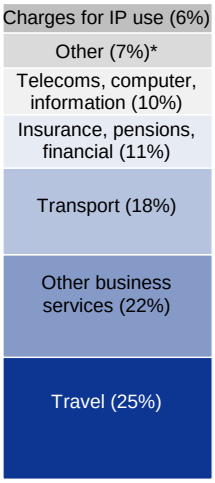
**Includes beverage and tobacco, other commodities transactions, and other non-fuel, inedible crude materials. Source: UNCTAD.*

What's being traded: services

Breakdown of 2015 global service exports by service category

$4.8 tn

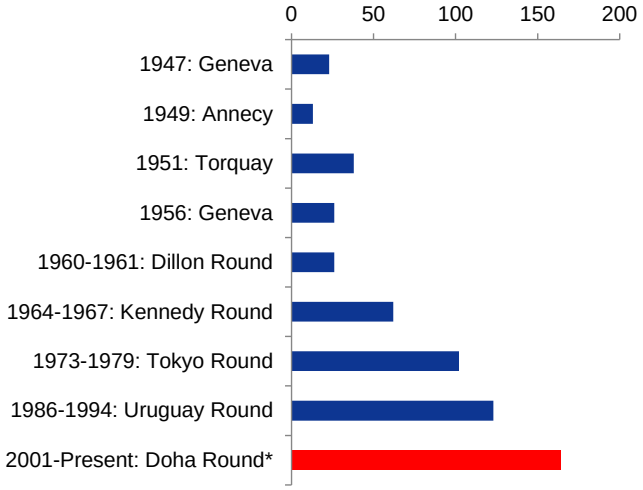
Value of global services trade in 2015



**Includes construction, goods-related services, and government services. Source: UNCTAD, WTO.*

164 WTO members

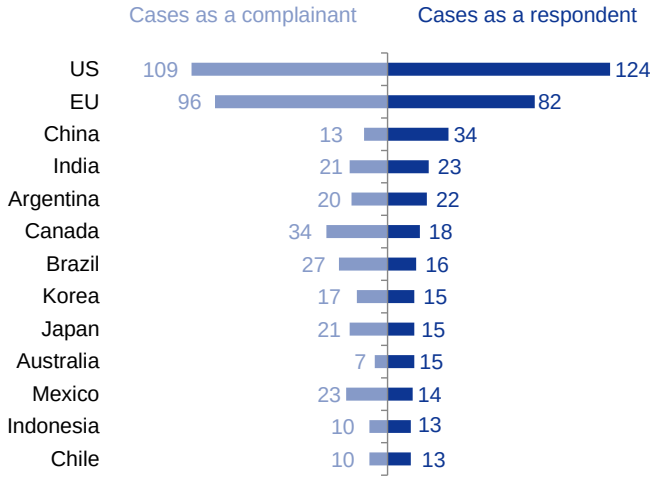
Number of countries in each round of GATT/WTO negotiations



**Shows all 164 current WTO members. Source: WTO.*

Dispute sources and targets

Countries most frequently involved in WTO cases shown by no. of cases in which the country was a complainant/respondent, 1995-2015



Source: WTO.

Interview with Lord William Hague

William Hague is a British politician who has served as leader of the House of Commons (2014-2015), UK Foreign Secretary (2010-2014), and leader of the Conservative Party (1997-2001), among other posts. He first became a Member of Parliament in 1989 and was subsequently reelected five times. His current activities include chairing ICE Futures Europe, the International Advisory Group of Linklaters LLP, a global law firm, and the Royal United Services Institute, the security and defense think tank. Below, Hague argues that continued trade liberalization is the world's best safeguard against a future economic downturn, and points out that Brexit may ultimately leave the UK more open to free trade than it is today.

The views stated herein are those of the interviewee and do not necessarily reflect those of Goldman Sachs.

Allison Nathan: How concerned are you about the increasing protectionist leanings in Europe and in the US?

William Hague: I am very concerned about these protectionist leanings and the status of major trade agreements, which appear to have stalled. Most people alive today cannot remember the last period of intense protectionism, which was before WWII, and the depressing effect it had on economic activity and prosperity. Today, protectionist leanings take different forms. In the US, there is substantial concern about the effect of imports from China and other developing economies on jobs and wages, which has been a key focus of the presidential election. In Europe, concerns have tended to center on product and environmental standards, which are, for example, an important factor in German public opinion on the Transatlantic Trade and Investment Partnership (TTIP). But while the manifestation may be different, the fact is that these increasingly protectionist leanings are visible across most of the Western world.

Allison Nathan: Has the UK referendum outcome increased your concerns about rising protectionism?

William Hague: I do not see the outcome of the referendum as a sign of protectionism. The vote to leave the European Union (EU) rejected aspects of globalization. But voters' greatest concern was migration, which should not be confused with hostility to free trade expressed in the form of tariffs, product requirements, customs controls and the like. Indeed, even most Brexit supporters acknowledged that maintaining access to the single market and the EU's trade deals with the rest of the world was a compelling reason to remain in the EU.

Post Brexit, the UK is likely to remain one of the most open economies in the world when it comes to trade, and one of the easiest to sign a trade deal with. Indeed, it is quite possible that the UK will end up with more free-trade agreements (FTAs), under more liberal terms, after leaving the EU than it has today as an EU member.

Allison Nathan: You argued in an op-ed earlier this year that "trade deals are the world's best hope of avoiding the new recession." Tell us why.

William Hague: Globally, most of the levers to maintain or increase growth today are not working and, in my view, are not going to work. There is little evidence of any significant benefits from ever-lower interest rates and more quantitative easing. Indeed, the experience of Japan shows that there is no guarantee of positive results from monetary policy. And many governments do not have room to employ fiscal policy, or cannot do so for political reasons. Yet there is always another recession on the way—it is just a matter of time before the next one occurs. In the absence of other levers to pull, what is the best way to mitigate that risk? The answer is continuing to expand trade, which will raise incomes by increasing countries' specialization, making new technologies and products available globally, and so on. That is why the protectionist leanings we discussed are so alarming—they are targeting one of the world economy's best hopes of success.

> "I do not see the outcome of the [UK] referendum as a sign of protectionism... Indeed, it is quite possible that the UK will end up with more free-trade agreements, under more liberal terms, after leaving the EU than it has today as an EU member."

Allison Nathan: How much can the global economy benefit from freer trade, given that most tariffs are already so low?

William Hague: Nearly all economists agree that there are greater benefits to be had—not in reduced tariffs, but primarily in common product standards and related measures that facilitate complex global supply chains. The European Commission has cited analysis from the Centre for Economic Policy Research that estimates the benefits of TTIP on the order of €120bn for the EU, €95bn for the US, and €99bn for other countries around the world. I would also point out that trade negotiations are difficult and require sacrifices from all parties. The countries involved evidently believe that the gains are sufficient to justify their efforts, and would not embark on the arduous process if they believed the outcome would not have much impact.

Separately, in trade policy as in government more broadly, you can't sit still. If you are not making forward progress, you end up sliding backward; in the absence of momentum for freer trade, that means more protectionist measures take hold. And in recent years, there has indeed been a sharp rise in protectionist measures around the world. So forward

momentum on trade is vital, psychologically and politically, to avoid going into reverse.

Allison Nathan: Have the ills of workers displaced by trade received sufficient attention? Some argue that it is precisely these grievances that have created the backlash against globalization; do you agree?

William Hague: Rising inequality in some parts of the world is indeed fueling hostility to trade deals. However, trade is blamed all too often for the adverse effects of domestic policies or, more likely, technological change that is disrupting jobs and industries in ways that make life much harder for the average person. So limiting trade is not the solution to inequality. In fact, limiting trade would actually lower countries' incomes and raise the prices of many products, leaving the people who are already suffering worse off.

That said, I fully agree that distributional problems have not received sufficient attention. And they will only intensify as rapid technological advancement threatens a wider range of routine tasks in both manufacturing and professional services. But political leaders are increasingly recognizing the importance and magnitude of this problem. We saw evidence of this in Theresa May's first speech as Prime Minister in July, which focused on middle-income earners, and, as I mentioned, these issues have been at the center of the US election. I have little doubt that politics everywhere will soon be focused on addressing inequality and finding ways to help struggling members of society through pensions, healthcare, and re-thinking education to keep up with the pace of change.

Allison Nathan: You've said that trade is a scapegoat not only for rising inequality, but for the growth of corporate influence. Yet the ability of corporates to "write the rules" on international investment is one of the chief complaints about deals like TPP and TTIP. Is this a fair criticism?

William Hague: I don't think it is a fair criticism. Trade deals need to take into account the activity and thinking of the corporations that are actually responsible for international trade and foreign investment. How to address the problems of the world economy and overcome obstacles to international trade is not just for governments to decide. However, corporations increasingly have to win the confidence of the public—and not just their customers—in order to create long-term value for their shareholders and to avoid political problems. That means accountability—paying taxes fairly around the world, adhering to higher employment standards, and considering their impact on the environment. Constraining free trade would not facilitate this. On the contrary, TPP and TTIP include provisions to strengthen corporate governance. Using these deals to improve the behavior of corporations makes more sense than eliminating new trade agreements altogether.

Allison Nathan: From your perspective as former Foreign Secretary, how important is further trade liberalization to geopolitical interests and/or international security?

William Hague: In an interdependent and more prosperous world, there are generally fewer reasons for conflict. So pushing for freer trade is in alignment with pursuing peace and security. But I do not want to make excessive claims in this area. We should not attribute individual relations between individual states to trade alone. For example, the US and UK do not have an FTA, but they are the closest allies in the world. It is possible to have strongly aligned geopolitical interests without trade agreements.

Allison Nathan: How do you expect the UK-EU negotiations to proceed? What will the eventual trade relationship between the two look like?

William Hague: I think the withdrawal negotiations will be completed within two years. It is a tall order, but I don't think anyone will want to rely on an extension, which needs to be unanimous. The creation of a future UK-EU trade deal could take longer, and there could be a gap of indeterminate length between British withdrawal and the construction of some future trading relationship. However, there could be transitional agreements and other creative solutions to this sort of problem, which would be in the interest of all the countries involved.

It is clear that the UK will not be able to meet its objectives by joining the European Economic Area like Norway, because that arrangement would not grant the UK control over migration. It is therefore highly likely that the UK will pursue a unique solution. Within that context, I expect the British government to focus on trying to establish tariff-free trade in both directions in the industries most crucial to both the UK and the EU, perhaps in areas with the greatest supply chain integration or the greatest volume of trade, such as power, aerospace, and pharmaceuticals. Industries would need to be prioritized, and the tricky part will be deciding how long that priority list can be.

The other question will be how quickly the UK can nail down new FTAs with the rest of the world, which will hopefully be more liberal than those that exist now. As I mentioned, the UK's longer-term opportunity lies in the prospect of becoming less protectionist, and breaking down trade barriers that it wasn't able to as a member of the EU. Even for those of us who were against Brexit, as I was, that is something that we can support.

> "London has been a global financial hub for hundreds of years and through world wars. It can survive in different forms and under different circumstances."

Allison Nathan: Is there any real hope that London can maintain its status as the financial hub of Europe with the UK out of the EU?

William Hague: Yes, it can, but whether it does will depend on the decisions made along the way. London has been a global financial hub for hundreds of years and through world wars. It can survive in different forms and under different circumstances. It will be hard to avoid some change and disruption to the current way of doing business. But given London's critical mass of advantages—skills, business and financial infrastructure, law, language, geography, time zone—it is possible to write a successful strategy for it both inside and outside of the EU.

Pushing back against "peak trade"

Ian Tomb and Kamakshya Trivedi dispel key arguments for the end of globalization

Over the past five years, global trade growth has been stagnant. With protectionist sentiment intensifying across advanced economies, the UK voting to leave the European Union, and China and other emerging markets (EMs) appearing to pivot away from export-oriented growth strategies that had incentivized the creation of global supply chains in the 2000s, a hypothesis informally known as "peak trade" has become increasingly popular. According to this view, the current trade stagnation is not temporary, but instead reflects fundamental changes to the global economy that, in the coming decades, will prevent growth in global trade from outpacing growth in global GDP, as it has since World War II. If true, this idea has profound implications: it implies a stoppage, or even a rolling back, of many of the core benefits and costs that have come to define the globalized world, including increased gains from trade, cross-border financial flows and geopolitical interdependence.

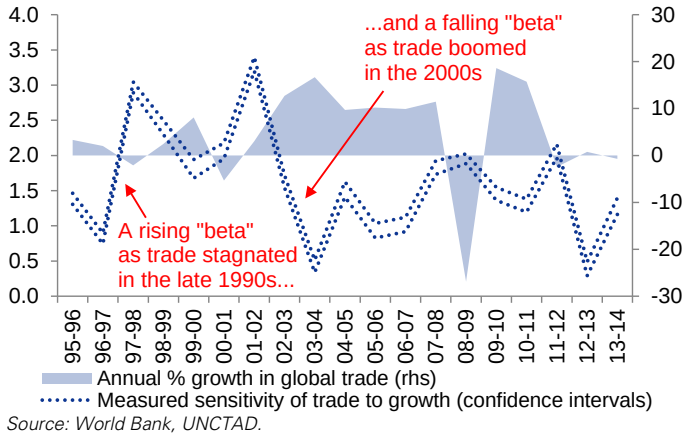
Our analysis counters this view (see "Pushing back against 'peak trade'", Global Economics Paper 230, 28 September 2016). Using a variety of approaches, together with data that allows us to track the paths of nearly 400,000 individual trade flows over the past 20 years, we push back against three primary variants of the peak trade argument.

Peak trade view #1: a falling "trade beta"

First, many economists note that the sensitivity of trade growth to income (or GDP) growth has declined. This "trade beta" has fallen from above 2 to near, and even below, 1, the value at which trade simply keeps up with income. However, our work suggests that the trade beta may not reliably represent the actual effect of income growth on trade growth. Shifts in different countries' relative GDP growth rates, for example, can distort the trade beta in standard cross-country models, creating the impression that income is having a larger or smaller influence on trade.

Hard to reconcile the "trade beta" with trade data

95% confidence intervals surrounding estimates of the sensitivity of trade to growth; annual % growth in global trade (rhs)



Source: World Bank, UNCTAD.

More generally, shifts in the trade beta sometimes sit awkwardly with the broader global trade picture; for example, the trade beta declined sharply in the early 2000s—a period of historically rapid trade growth. Moreover, estimating the trade beta with our detailed data set reveals year-to-year changes that are too volatile—including in recent years—to plausibly reflect shifts in meaningful economic relationships.

While we can't rule out the possibility that the relationship between income and trade has changed over time, we think the evidence is also consistent with a simpler explanation. In particular, the causal effect of income growth on trade growth has stayed roughly stable over time, while other forces—including shifts in the demand for tradeables, changes in trade costs and the availability of trade finance, and the ebbs and flows of protectionist trade policies—have played the starring role in driving global trade over the past two decades.

Peak trade view #2: a "structural" trade slowdown

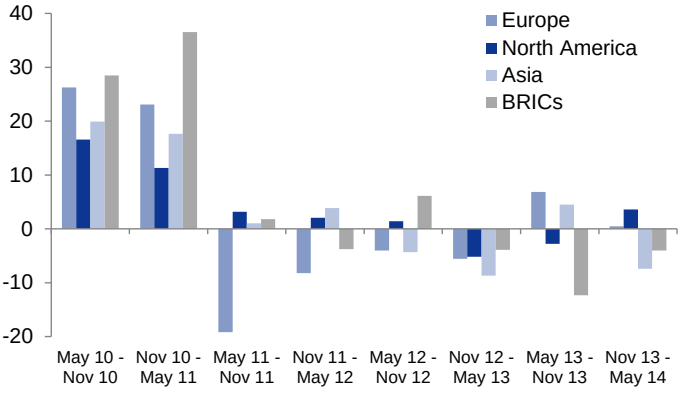
The collapse in global trade growth in 2011 is a case in point in the influence of other such factors. The slowdown in trade flows across the globe during the Euro and US debt ceiling crises that summer was far more severe than predicted by observable short-run (or "cyclical") drivers, such as a mild slowdown in global GDP growth. This prompted many observers to conclude that "structural" changes—forces operating over very long time horizons, and with the potential to drive trade growth still weaker in coming decades—were responsible. We think the facts sit better with an alternative interpretation: a return to trend. Setting aside the financial crisis years, global trade growth has undergone two major shifts over the past two decades:

(1) In the early 2000s, annual growth in the value of global trade increased from tepid, but not historically slow rates (1.6% from 1995-2002) to historic double-digits (12.5% from 2002-2008).

(2) Then, in the summer of 2011, trade value growth quickly fell to levels close to zero, where it has remained for the past five years. While clearly low, these growth rates are considerably closer to historical benchmarks than the very high levels of trade growth observed during the 2000s. Moreover, the trade slowdown has actually been over for several years: after falling to zero across the globe in 2011, global trade growth (aside from commodity price shifts) has been stagnant—but stable.

The global trade slowdown has been over for several years

Annual rates of import growth in 6-month windows, %



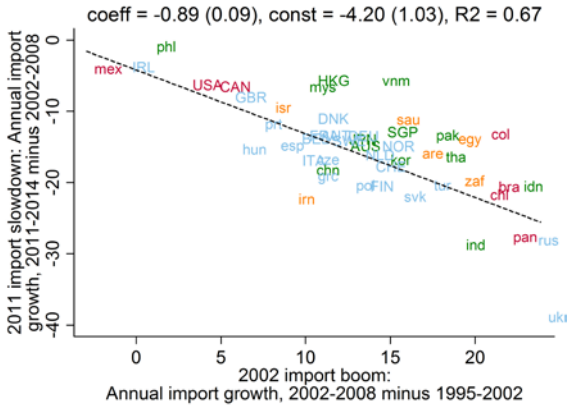
Source: World Bank.

In sum, the global trade slowdown does not appear to be the beginning (or the middle) of an ongoing, downward deviation

from a 70-year trend of globalization, but instead marks the abrupt end of a decade-long *upward* deviation from this long-run trend—the trade boom of the 2000s. This is evident not just at the aggregate level, but also when we dig deeper into individual trade flows. For example, the countries that dramatically increased their import growth in the 2000s (such as India and Russia) saw the largest import growth declines in 2011, while countries that experienced a mild acceleration in 2011 (such as Mexico and the Philippines) saw their import growth rates only mildly affected by the global trade slowdown.

The trade slowdown = the end of the 2000s trade boom

Import growth during the 2002 boom (x axis) and the 2011 slowdown (y axis) for 49 countries accounting for 95% of global imports



Colors denote continent; case denotes low- vs. high-income. Source: UNCTAD.

Peak trade view #3: a change in the EM growth model

Finally, many observers suggest that, by beginning to turn away from export-led growth models, EMs—and, especially, China—have driven the trade slowdown and may weigh on trade growth further in coming decades. We agree that declines in Chinese trade growth likely reflect important and potentially persistent changes to the Chinese economy, and that these changes may impose an important drag on the open economies of Asia going forward (for example, China alone accounted for a third of the slowdown of Korea's exports during the global trade slowdown). However, an EM- or China-driven turn away from exports is not a large part of the global story, for two reasons.

First, our analysis of individual trade flows shows that shifts in external demand faced by individual exporters, not changes to the economies of exporting countries themselves, appear to be the primary driver of both the export growth increases of the 2000s and the export growth declines of 2011. For example, the annual growth rate of Chinese exports of audio equipment to the US fell by 16% in 2011. If this slowdown were primarily driven by slowing US demand for imported audio equipment, we should see declines in the growth rates of US imports of such products from all of its trading partners. Indeed, the annual growth rate of total US audio equipment imports from its 42 supplier countries fell by 10% in 2011. This implies that slightly more than half of the decline in China's exports of such products to the US was a response to external demand, rather than an export growth decline specific to China.

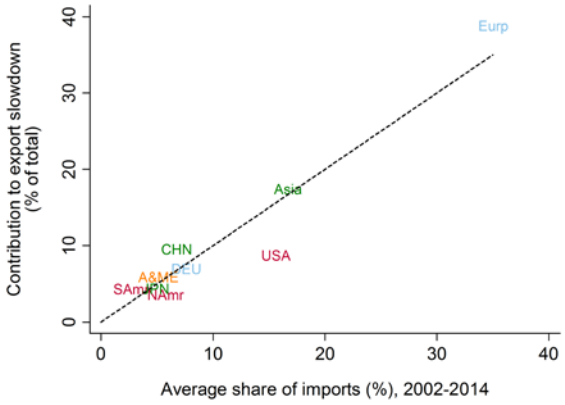
Applying this to tens of thousands of different importer-good pairs (like "US-audio equipment"), we again find that a slowdown in external demand—not a turn away from exports—was the primary driver of the slowdowns in export growth for the vast majority of the world's largest exporters in 2011.

China, however, is a large and important outlier: consistent with the idea that China's 2001 entry into the WTO provided a one-time boost to its export growth that has begun to fade in recent years, slowing external demand cannot account for roughly half of the decline in Chinese export growth in 2011. However, this unexplained decline still accounts for only 7% of the global trade slowdown.

Similarly, because China and other EMs don't (yet) account for a large enough share of global trade, their slowing import growth matters less for the global picture than import growth declines in developed markets, particularly in Europe. Europe, which imports 43% of global traded goods and represents an important source of external demand for nearly all of the world's major exporters, decreased its rate of import growth by slightly more than the global average in 2011. Weighing each country's import slowdown by its share of global trade (a "shift-share" framework), we find that Europe accounts for roughly half of the global trade slowdown. By contrast, China—which imports a far smaller fraction of global trade, but slowed its rate of import growth at a comparable pace—contributed only 10%.

Europe accounts for roughly half of the global slowdown

Average share of imports (x axis) vs. contribution to export slowdown (y axis) for seven comprehensive groups of importers



Colors denote continent; case denotes low- vs.high-income. The groups plotted represent Europe ex-Germany (Eurp), Asia ex-China and Japan (Asia), the USA (USA), Germany (DEU), China (CHN), North America (NAmr), Japan (JPN), Africa and the Middle East (A&ME), and South America (SAmr). Source: UNCTAD.

The "death of globalization" is greatly exaggerated

Though the forces driving globalization over the very long run continue to be debated, and may indeed shift in coming decades, arguments commonly put forward in support of "peak trade" are, to us, far from convincing. While the trade growth rates of the 2000s may not return in the near term, suggestions that we have witnessed the "end of globalization" appear premature: we find little evidence to suggest that the forces that have driven a strengthening of cross-country trade links over the better part of the past century have weakened.

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Interview with Dean Baker

Dean Baker is the co-founder and co-director of the Center for Economic Policy Research. His research focuses on trade, employment, intellectual property, and Social Security, among other issues. Baker is the author of several books, including *Getting Back to Full Employment: A Better Bargain for Working People* (2013). He has worked as a consultant to the Joint Economic Committee of the US Congress and the OECD's Trade Union Advisory Council. Below, he argues that the most harmful distributional consequences of free trade are likely behind us, but warns that newer deals like the Trans-Pacific Partnership focus on measures that are counterproductive.

The views stated herein are those of the interviewee and do not necessarily reflect those of Goldman Sachs.

Allison Nathan: What is your perspective on the costs vs. the benefits of free trade? Have the benefits of trade been overstated?

Dean Baker: Leveraging countries' comparative advantages undoubtedly generates real and consequential efficiency gains. That being said, I think that economists have often overstated the size of the aggregate gains from trade, especially in recent decades, since most of the big reductions to trade barriers happened in the 1950s, '60s, and '70s. Looking at the aggregate gains also ignores the question of distribution. Even if a country is better off in aggregate, large numbers—and even the majority—of people could find themselves worse off, and these people are unfortunately often at the middle or bottom of the income distribution. That story has largely played out over the last 15 years or so as imports from China and elsewhere have displaced large chunks of US manufacturing. Everyone may be getting cheaper manufactured goods, but the resulting job losses and lower wages certainly outweigh these benefits for people working in manufacturing industries.

For a long time, economists were quick to dismiss the importance of these distributional consequences. I deeply respect Paul Krugman, but in the 1990s, he—among many others—totally rejected the idea that trade with developing countries could have any notable negative impact on wages in the US. In fairness, the impact wasn't as large in the '90s, but it was there, and it obviously became much bigger as trade increased with China in the following decade.

More recently, economists seem to be catching up to the negative distributional consequences of trade. But there is also a lot of hand-waving from both economists and policymakers arguing that the winners win more than the losers lose, so we can simply redistribute the gains and ensure that everyone is better off. That is a dishonest assertion because costless mechanisms for redistribution do not exist.

Allison Nathan: How does the import surge from China compare to prior surges from Japan or Mexico? Is China the main reason the last 15 years of trade have been particularly disruptive for US workers?

Dean Baker: The inflow of manufactured goods from China and other developing countries has been truly extraordinary and has therefore had a much greater impact on US labor markets. Just look at manufacturing employment. As a share of total employment, it has been declining since the 1960s—well before China joined the WTO in 2001. But the actual number of people employed in manufacturing remained roughly constant at around 18 million until the year 2000. Manufacturing employment fell during the 2001 recession and continued to decline even throughout the recovery. In all, three million jobs—about 20% of total manufacturing jobs—were lost in that period. There has been some very good recent research from David Autor at MIT and others documenting that a sizeable share of the job losses and the resulting decline in wages during this period were directly linked to the inflow of goods from China.

The other issue is that the surge in imports, and the related increase in the trade deficit, dovetailed with a recession followed by a difficult economic recovery. Most trade models assume that any periods of unemployment will be very brief. But since 2008, we've seen that the economy doesn't always just bounce back. In this weaker macro environment, we don't have an easy way to replace the demand lost due to the trade deficit. A larger trade deficit therefore means a loss of output and employment that could easily dwarf any gains from trade.

Allison Nathan: Is the demand loss attributed to trade deficits really that large when you consider that US dollars spent on imports typically find their way back to the US through capital flows?

Dean Baker: I find the argument that capital inflows offset the impact of net goods outflows a sloppy one. If we have, for example, a $200 billion trade deficit with Germany, and Germany purchases $200 billion of US government bonds with this capital inflow, that has the same impact on US demand as does the Fed buying $200 billion worth of US bonds. I don't know any economist who would argue that that bond buying would have anywhere near the same impact on US demand as would Germany buying $200 billion worth of US goods.

Allison Nathan: What would be the impact of new trade deals, like the Trans-Pacific Partnership (TPP)?

Dean Baker: When I look at deals like the TPP, I'm less concerned about any further impact on employment or on the wages of manufacturing workers just because we mostly have an open door already with so many developing countries. It's hard to see how it gets notably worse. But we also don't have a lot more to gain from lowering barriers to trade. The many rounds of trade negotiations since WWII have left most tariffs and quotas in the world already very low. The Obama Administration has said that the TPP will eliminate 18,000

tariffs on US products, but if you take a closer look, many of them are inconsequential; the one I get the largest kick out of is eliminating tariffs on US exports of ski boots to Brunei! It's a lot of silliness. The deal is about regulations, copyright, and patent protection. It's not about removing the remaining trade barriers.

Allison Nathan: What is your take on the TPP's "non-trade" provisions, like stronger intellectual property protections and the Investor-State Dispute Settlement mechanism?

Dean Baker: Patents and copyrights are forms of protectionism. The pharmaceutical industry provides a clear example. In 2016, the US population is expected to spend $430 billion on prescription drugs. If drug patents were eliminated, that number would fall to an estimated $60-80 billion. So we will spend an extra $360 billion or so on drugs, ostensibly for drug companies to finance research. But there are more efficient ways to achieve innovation. Under direct government funding, which we already do for biomedical research through the National Institutes of Health, drugs would be substantially cheaper. And instead of giving companies an incentive to protect their findings or conceal information that could hurt their sales, information on the effectiveness and risks of drugs would be publicly available. This approach would be more costly for the government, but I think it would be much more efficient on a per-dollar basis. And since many high-cost, patent-protected drugs are currently paid for by Medicare and Medicaid, and there are substantial tax deductions for healthcare insurance, we would almost surely be able to fund drug research with the savings accrued by eliminating patents.

As for the Investor State Dispute Settlement (ISDS), I find it bizarre. The mechanism establishes an extra-judicial process by which foreign investors can sue governments with a panel of three private-sector lawyers serving as the judge. Other trade agreements have already put ISDS into practice, but the TPP would likely substantially increase its use. Even a foreign subsidiary of a US company could, say, sue New York State over some law that limits fracking. I suppose the underlying assumption is that investors won't be treated fairly by foreign governments. But in much of the world where investors do business there are well-developed legal systems. And the idea that we need an extrajudicial process for everyone because this might not be the case in a handful of instances just seems crazy. All told, I would be inclined to agree to the parts of TPP that reduce any meaningful remaining tariff protections, but drop the rest of the agreement.

Allison Nathan: If tariffs are already low and other protections are counterproductive, are there any areas where you think trade liberalization might still be useful?

Dean Baker: One area where we could make substantial progress is eliminating protection for higher-income professionals, such as doctors and lawyers. US policies have quite deliberately put US manufacturing workers in direct competition with their low-paid counterparts in the developing world but have protected high-paid professionals through strict educational and other requirements; for example, with few exceptions, an individual must complete a residency program in the US in order to practice medicine there. The gains from breaking down these trade barriers would be enormous. We would likely see a huge fall in wages paid to US professionals, which would result in lower-cost healthcare and other services and go a long way in addressing some of the most pressing redistribution problems we've discussed.

Of course, we would want to establish standards so as not to jeopardize quality, in the same way that we have taken great care to standardize rules on manufactured goods, which was not a simple process. But I see no reason our doctors should get paid twice as much as doctors in Germany or Canada, with very little evidence that we get any better outcomes. Breaking down this type of protectionist barrier is what the gains of free trade are all about. Anyone who embraces the gains of free trade in manufactured goods but not in professional services is favoring protectionist policies that help people at the top and free-trade policies that hurt people at the middle and bottom.

Allison Nathan: What do you make of the protectionist leanings of the US presidential candidates?

Dean Baker: I believe that Donald Trump's complaints about Chinese currency manipulation are justified. But I question whether yelling about high tariffs is the best way to kick off a negotiation on the matter. Trump's stance on Mexico is even more puzzling. We've seen a number of US factories already relocate to Mexico in recent decades, and they're not coming back even if we impose tariffs.

Secretary Clinton now claims to oppose the TPP even though she has a long history of supporting trade deals, so it is hard to say what route she would take regarding trade if she assumes the presidency. But I don't believe she would be inclined to raise tariffs so am not terribly worried about a significant increase in protectionism under a Clinton administration. That being said, I would point out that the US already makes selective use of tariffs. President Obama has brought a number of WTO cases against China, and the standard remedy has been to impose a tariff, which I believe is reasonable when there are clear cases of dumping. I don't think of these actions as protectionist; they are perfectly consistent with the rules of trade that have been put in place by people who consider themselves free traders. I suspect that if Clinton ends up in the White House she might enact similar measures.

Allison Nathan: What else should policymakers be doing to take advantage of the benefits of free trade while addressing the unwanted side effects?

Dean Baker: In addition to breaking down the barriers in professional services, I think it is important to focus on full-employment policies such as aggressive stimulus programs in infrastructure, education, or other areas. I think we could also improve our unemployment insurance program, as only about a third of the unemployed are getting that insurance today.

Although there has been some focus on worker retraining and similar programs to more directly address manufacturing job losses, I don't think those programs will ultimately be that effective. After losing two or three million manufacturing jobs from trade, we can't think that some government program will make everything right. If we focus on continuing to raise employment more broadly while eliminating the remaining barriers to services provided by highly paid professionals, the chances of seeing improvement—especially where it is needed the most—are much greater.

US politics & trade: Has the tide turned?

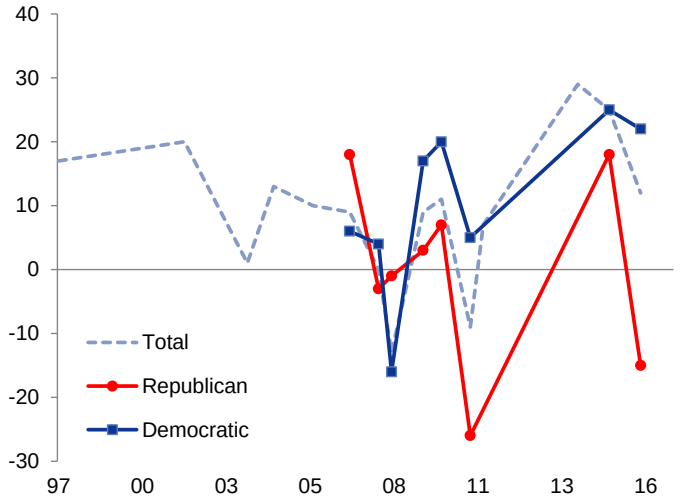
Alec Phillips discusses deteriorating Republican support for free trade, which could reduce the odds of TPP passage

Trade policy has been one of this election campaign's most surprising themes. Hillary Clinton and Donald Trump both oppose the Trans-Pacific Partnership (TPP) in its current form and support renegotiating the North American Free Trade Agreement (NAFTA), despite the fact that Clinton has been closely associated with, and an advocate for, these trade deals in the past. Trump has gone even further, raising the prospect of tariffs on imports from China and possible withdrawal from the WTO—leaving one hard-pressed to identify a Republican candidate in recent history that was as skeptical of trade.

Perhaps also somewhat surprisingly, overall public sentiment on trade remains slightly positive. This is broadly consistent with the last couple of decades, which have seen weaker support during and soon after recessions and stronger support at other times. However, there has been a substantial shift in support for trade between the political parties. Republican and Republican-leaning voters had a net positive view of trade agreements until the end of the Bush Administration, but are now far more skeptical than their Democratic counterparts. "Tea Party" supporters, who view trade deals much more negatively than other Republicans, have played an important part in this divergence, as have Trump supporters. Gallup polling shows that this gap continues to widen.

Trade views break down along party lines

Share of the public that views trade agreements as a "good thing" minus the share that sees them as a "bad thing," %



Source: Pew Research Center.

Some of Clinton and Trump's tough talk against trade might be chalked up to normal election-year rhetoric; in 2008, for example, then-Senator Barack Obama also promised to renegotiate NAFTA and raised concerns about pending bilateral trade deals, but left the former intact and ultimately went through with the latter. Nevertheless, deterioration in Republican support for trade, coupled with both candidates' increasingly staunch views against it, suggest a tough road ahead for further trade liberalization.

A tough road for TPP

Given these trends, passing the TPP in the near term is likely to be difficult. Most recent trade bills have passed by narrow margins relying mainly on Republican votes, but some Republican lawmakers may be wary of supporting the TPP in light of net opposition among their constituents. Moreover, given the election, it is unlikely that the TPP will be up for a vote under the current administration. If Clinton is elected, she seems likely to let this controversial issue rest for a while to focus on other priorities in her first term. (For President Obama, it took three years after entering office to pass the Colombia, Korea, and Panama trade deals that he had critiqued on the campaign trail.) What Trump might do is even harder to predict. Overall, we expect TPP to be sidelined under either scenario, though we do expect that the next president will eventually try to resurrect it.

Did you know?

Until the 1940s, Republicans from the industrial Northeast and Midwest generally supported higher tariffs, while Democrats representing agricultural interests in the South wanted them lower. The parties gradually realigned and, for the last few decades, support for trade liberalization was generally stronger among Republican lawmakers.

Tabling TPP? Winners and losers

If the TPP agreement fails, the missed opportunity for the US economy would be modest. By our estimates, the deal would boost US GDP by 0.2% over several years. However, its sector impacts could be more significant. The TPP scales back or eliminates tariffs and quotas in some of the most sensitive areas, albeit over several years or even decades in some cases. For example, it removes US tariffs on cars (2.5%) and mid-size trucks (25%) within 10 years for most TPP partners, and in 25 years for Japan. In agriculture, it reduces Japanese tariffs on highly protected commodities like beef, pork, and dairy over the course of several years. In textiles and apparel, TPP tariff reductions could, by some estimates—e.g., Petri, Plummer, and Zhai (2015)—increase clothing and footwear imports, in percentage terms, by more than any other category of goods, driven primarily by low-cost exports from Vietnam. This too may take time, however, as Vietnam will need to reduce its reliance on imported materials from non-TPP members in order to qualify for reduced tariffs. And in biotech, TPP would set a minimum exclusivity period for biologic (protein-based) drugs of either 8 years or 5 years followed by additional regulatory constraints, though the US—a proponent of stronger exclusivity rules—will maintain its 12-year period.

The net impact of these changes would depend on the structure of companies' supply chains. A US manufacturer, for instance, could face increased import competition but fewer barriers to exporting the goods it produces overseas. Company specifics will thus be key to determining the winners and losers from TPP.

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Q&A on the TPP

What is the TPP? The Trans-Pacific Partnership is a trade agreement among 12 nations that collectively account for close to 40% of world GDP: Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, the US, and Vietnam.

What are its main provisions? The TPP removes most of member countries' remaining tariffs (some immediately, and others over periods of up to 30 years), ultimately leaving around 99% of member countries' tariff lines—or detailed product codes—duty-free.[1] It also reduces restrictions on trade in services and "new" areas like data flows and e-commerce. Besides targeting barriers to trade, the deal includes more stringent environmental and labor standards, new rules for state-owned enterprises, and stronger intellectual property (IP) protections, as well as a procedure for corporations to resolve legal disputes with foreign governments via international arbitration (Investor-State Dispute Settlement or ISDS).

What are the arguments for and against it? The TPP has been subject to debate on many of the same questions raised by other trade agreements, such as its eventual costs and benefits to domestic workers and industries, as well as its treatment of corporate interests. Supporters of the deal expect the aforementioned provisions to result in aggregate economic gains, more coherent trade/investment rules, and improved governance. They also see the TPP as a strategic counterweight to China in the Asia-Pacific. Opponents argue that the deal disproportionately benefits corporations, does little to stem Chinese influence in the region, and—through its governance provisions—encroaches on national sovereignty.

ISDS, which sees disputes resolved in arbitration panels of lawyers and trade experts rather than in domestic courts, has drawn particularly strong opposition in this context. Critics contend that the mechanism, originally intended to protect companies from outright expropriation by foreign governments, makes it too easy for corporations to sue governments over various policies harmful to their business, with little recourse on the governments' part.

These debates are amplified by the fact that most TPP members' tariffs are already relatively low—alternately cited by proponents of the deal as evidence that the TPP would do little harm to industries at risk of import competition, and by critics as evidence that the TPP offers few gains from trade and instead aims to advance various non-trade interests via its other provisions.

What economic impact will it have? Estimates of the TPP's effect on GDP and employment vary considerably. One frequently cited analysis published by the Peterson Institute for International Economics estimates that the TPP will boost US and Japanese real GDP by 0.4% and 1.9%, respectively, by 2025[2]; another by economists from Tufts University and the UN has countered with estimates of -0.54% and -0.12%[3], respectively, over the same time period. These are just two examples among many, and both have been subject to criticism; nonetheless, they help illustrate the spectrum of views on the TPP's possible outcomes.

The striking differences between these two studies in large part reflect the authors' expectations for labor markets. In the more optimistic study, labor markets absorb the effects of the TPP, with workers transitioning from less competitive sectors that contract to more competitive ones that expand. While some workers face adjustment costs in this process, the shift in economic activity helps increase overall productivity and allows wages to rise, especially in expanding sectors. By contrast, the more pessimistic study assumes that workers do not necessarily find new employment and that cost-cutting pressures result in lost jobs and lower wages.

Our economists expect the TPP to have a modestly positive effect on the US economy, adding 0.2% to the level of US GDP over several years, and to provide a negligible boost to output in Japan. Given the time it will take to reduce tariffs in the most protected industries, they expect the deal's effects to be felt gradually.

What is the status of the deal? Negotiations concluded in October 2015, and the agreement was signed in February 2016. To enter into force, it needs to be ratified within two years (i.e., by February 2018) by at least six countries accounting for 85% of TPP members' total GDP. Ratification by both the United States and Japan is therefore crucial. Neither has approved the deal yet.

In the US, the president must present Congress with legislation that makes existing policies consistent with the TPP. Under "fast-track" Trade Promotion Authority, Congress will then have 90 working days to consider the legislation without an opportunity to make amendments. No vote is expected before the November presidential election, leaving the Obama administration a brief window to push for TPP approval before his term expires; the issue will otherwise pass to the next presidency (see also pg. 14).

What about TTIP? TTIP is the Transatlantic Trade and Investment Partnership, an agreement to reduce barriers to goods and services trade between the US and the EU. As in the case of TPP, the parties' tariffs are already fairly low in most areas. There is more room to open up traditionally protected sectors (e.g., agriculture) and reduce various non-tariff barriers, but political obstacles to liberalization in these areas are high. Other contentious points similar to TPP's include the ISDS mechanism and IP protections. TTIP talks are ongoing since 2013 and have gone through 14 rounds so far. Given the rise of populist and protectionist sentiment in both Europe and the US, not to mention policymakers' focus on forthcoming Brexit talks, our economists are skeptical that a deal will be reached this year.

[1] Fergusson, Ian F., Mark A. McMinimy, and Brock R. Williams. The Trans-Pacific Partnership (TPP): In Brief. Congressional Research Service, 2016.
[2] Petri, Peter A., and Michael G. Plummer. The Economic Effects of the Trans-Pacific Partnership: New Estimates. Peterson Institute for International Economics, 2016.
[3] Capaldo, Jeronim, Alex Izurieta, and Jomo Kwame Sundaram. Trading Down: Unemployment, Inequality and other Risks of the Trans-Pacific Partnership Agreement. Tufts University, 2016.

Shipping's (delayed) supply response

Patrick Creuset writes that global trade growth remains crucial to the container shipping industry's nascent rebalancing

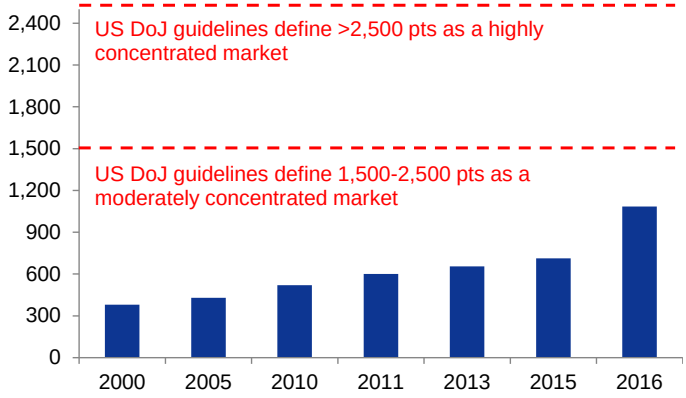
The orderbooks for container ships and oil tankers peaked at ~60% of the fleet and at 120% for iron ore carriers in 2007, shortly before global trade contracted 12% in 2008/2009. The resulting supply overhang has since depressed global shipping markets. Underpinning this unusually long and severe shipping depression has been a slower-than-expected recovery in global trade, which, having previously grown at 2X GDP, had "bailed-out" equally undisciplined ship owners in previous cycles.

A delayed, but increasingly powerful supply response

Container (i.e., manufactured goods) shipping differs from commodities shipping in that it is a network business: whereas a tanker owner can charter out a single vessel to an oil major, a container carrier needs a fleet of at least 10 ships costing >$100mn a piece just to operate a single service on, e.g., the Asia-Europe trade lane. As a result, entry barriers are high and scale economies significant (Maersk Line operates a fleet of >600 ships). The largest carriers thus consistently gain market share, and the industry consolidates over time.

Consolidating its way to redemption

Herfindahl-Hirschman Index (market concentration ratio) for global container shipping, as compared to US Dept. of Justice guidelines



Source: Goldman Sachs Global Investment Research.

Until recently, however, market concentration in absolute terms remained low, preventing supply from adjusting decisively enough to a lower-growth environment post-GFC. Hence small players kept ordering new ships to reduce unit costs and freight rates fell to historic lows in 1H16 (c.15% below 2009 lows, not even covering fuel costs on many routes).

This extreme financial stress—hitting balance sheets already stretched by nine years of shipping depression—has catalyzed unprecedented, albeit overdue, market repair. Year to date, major (mostly state-controlled) players such as Singapore's NOL, China Shipping, United Arab Shipping, and recently Korea's Hanjin have exited the market via M&A or bankruptcy. As a result, the global container carrier Herfindahl-Hirschman Index, a measure of market concentration, has risen from ~700 in 2015 to nearly 1100 this year, approaching levels defined by the US Department of Justice as moderately concentrated.

Consolidation creates the conditions for rebalancing…

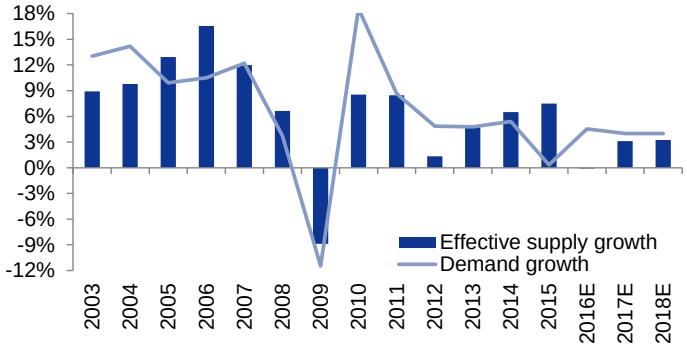
Rather than threatening supply chains, consolidation is a necessary fix for an industry mostly on the brink of bankruptcy (with the exception of Maersk). It is also unlikely to lead to sustained and damaging transport cost inflation, as at least 15% of global capacity remains dormant and could be re-activated. Instead, near-term we expect pricing to rise back to a level between cash cost and industry WACC following the recent recovery in load factors (to >95% on the Asia-EU/US lanes). In the medium term, consolidation should constrain new vessel orders, as carriers pool existing capacity via M&A and alliances to cut capex and thereby repair balance sheets. Based on the current orderbook, we expect net supply growth of ~3% pa in 2017/18, significantly lower than the 10% pa average over 2000-15. Extrapolating ytd ordering trends, fleet growth could be flat or negative beyond 2018.

…but trade growth remains necessary

However, based on the above, a full supply-demand re-balancing is still contingent on trade growing at least in line with global GDP (3%+). European re-stocking, a weaker yuan, and a fading drag from EMs have so far helped bring global trade growth back to 3-4% on the latest readings, from 0-1% in 2015. A further recovery in DM consumption remains key, as our analysis suggests that DM import weakness explains most of the recent decline in trade's sensitivity to economic growth. Assuming 4% pa trade growth (vs. 3% in 2012-15 and 6% in 1970-15), a full re-balancing would still take ~5 years. At this point however, freight rates could rise substantially for a couple of years—the time to build new ships.

Closing in on the supply-demand gap

Global container shipping supply-demand, % per annum



Source: Goldman Sachs Global Investment Research, Clarksons.

Maersk likely to emerge as a winner of market repair

A structural cost advantage (2013-1H16 shipping ROIC 7% vs. industry -1%) and strong balance sheet leaves Maersk the natural winner of current industry repair. In previous shipping up-cycles, best-in-class carriers have achieved 15-20% ROIC; hypothetically applying this to Maersk Line's $20bn IC and keeping all else constant would imply a 16% equity FCF yield on our 2018 estimates (vs. 8% on our published estimates). The freight rate required to achieve 20% ROIC in Maersk Line is about last year's average, all else equal.

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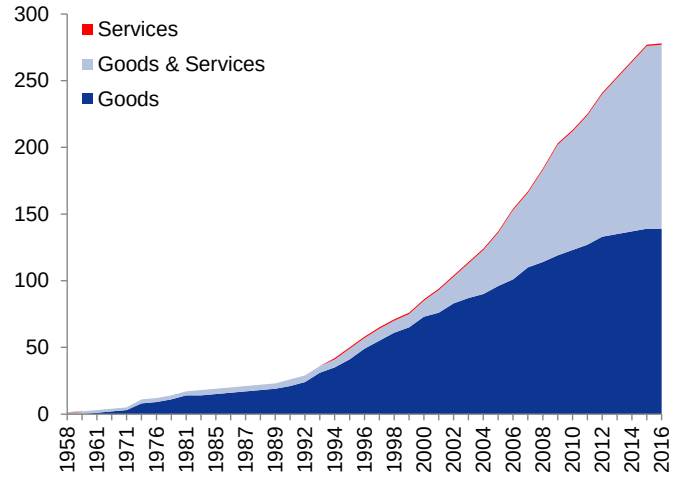
Trade deals, views, and trends

Trade agreements have grown to 250+

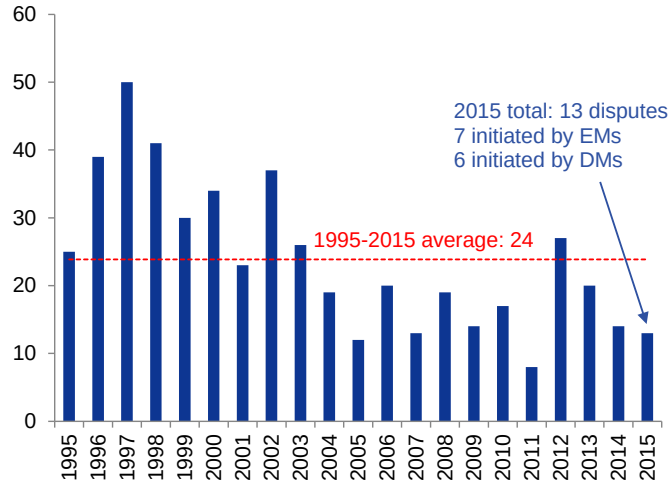
Cumulative number of regional trade agreements



Source: WTO, Goldman Sachs Global Investment Research.

WTO disputes have fallen below average in recent years

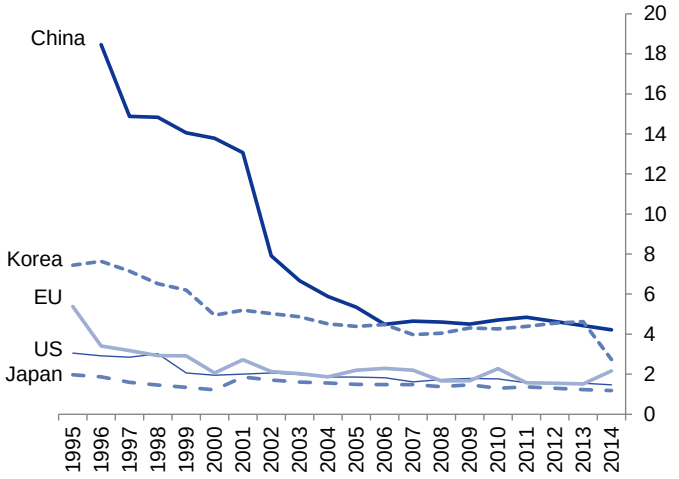
Number of WTO disputes initiated each year



Source: WTO.

Tariffs are low by historical standards

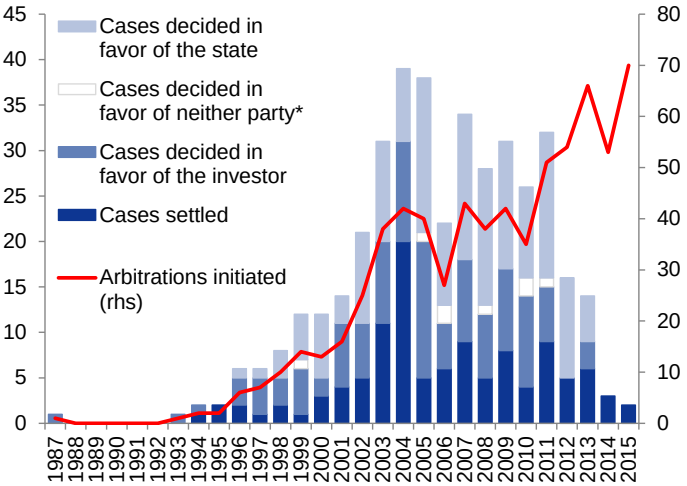
Weighted average of effectively applied tariffs on imports of manufactured goods from the rest of the world, %



Source: UNCTAD.

New ISDS cases have skyrocketed

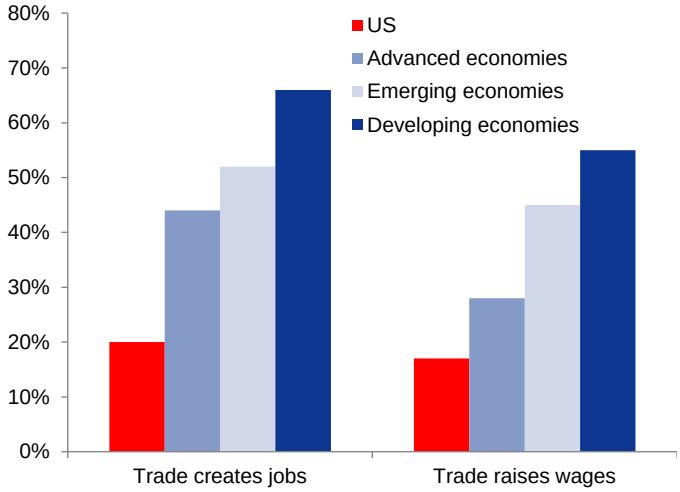
Investor-State Dispute Settlement cases concluded—broken down by outcome (lhs) vs. cases initiated (rhs); for more on ISDS, see pg. 15



Source: UNCTAD, Goldman Sachs Global Investment Research.

The US is especially negative on trade

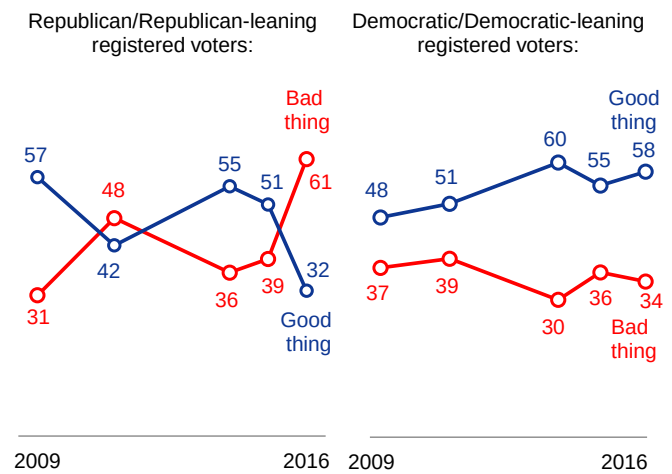
Survey respondents agreeing that trade creates jobs/raises wages, %



Note: Country groups show medians. Advanced median excludes the US.
Source: Pew Research Center Spring 2014 Global Attitudes Survey.

Views on free trade diverge along party lines

Survey respondents saying FTAs have been good/bad for the US, %



Source: Pew Research Center (last survey conducted August 9-16 2016).

Interview with Parag Khanna

Parag Khanna is a global strategist and book author; his latest book is *Connectography: Mapping the Future of Global Civilization* (2016). He is a CNN Global Contributor, a Senior Research Fellow at the Lee Kuan Yew School of Public Policy at the National University of Singapore, the Managing Partner of Hybrid Reality, a boutique geo-strategic advisory firm, and Co-Founder & CEO of Factotum, a content branding agency. He has been a fellow at the New America Foundation and the Brookings Institution, and has advised the US National Intelligence Council and US Special Operations Forces. Below, he argues that standard measures of trade are out of touch with reality, and discusses the relentless and powerful force of globalization.

The views stated herein are those of the interviewee and do not necessarily reflect those of Goldman Sachs.

Allison Nathan: Despite the apparent stagnation in global trade growth, you believe that trade—and globalization in general—is accelerating. What supports this?

Parag Khanna: The conventional wisdom that global trade has stagnated is based on a very narrow measure—the rate of growth in goods trade across borders with respect to the rate of growth in world GDP—which has been falling. But this measure is sub-optimal when it comes to capturing the real value of trade. For example, there is a financial value to international data flows that is very difficult to quantify. We're also missing a lot of what might fall into the services trade category, which is greater than the trade in global goods. In short, our methodologies for measuring trade are a decade behind the reality of today's technology and economic activity.

It's also very important to look at the ways in which trade and investment intersect. There is a saying today that all trade agreements are actually investment agreements, and vice versa. That means you need to look at capital flows and foreign direct investment (FDI), not just cross-border flows of specific products. For example, South-South trade already represents the largest share of growth in global trade, but we tend to discount the growing number of South-South M&A transactions and other kinds of FDI. And more broadly, despite the capital that has fled emerging markets in recent years, an increasing number of long-term investors are still looking at increasing their international capital allocations over lengthier horizons.

Finally, if you look at the *capacity* for global trade, rather than just the volume this quarter or this year, there is no doubt that it tells a positive story. The mileage of cross-border highways, railways, flights, and pipelines we have built is remarkable. There are now around 64 million kilometers of highways and 750,000 kilometers of undersea internet cables. In my opinion, this type of connective infrastructure is the most important asset class of the 21st century—especially at a time when debt is high and interest rates are at record lows. By some estimates, more infrastructure will be built in the next 40 years than in the past 4,000. And given the growth in overall connectivity that this enables, the number of transactions occurring across borders is undoubtedly growing too. The point is, if you have a more holistic methodology, you will come to a more optimistic conclusion.

Allison Nathan: The political rhetoric in the US and elsewhere seems increasingly protectionist if not isolationist. How does that jive with your theory that the world will continue becoming more integrated?

Parag Khanna: The world being a far more connected place is not a theory; it's the reality. But there is a strain of populist discourse today that speaks to the desire to reject aspects of globalization—either demographic integration with our neighbors or the terms of our trade relationships with other countries. The problem with this discourse is that it ignores the reality that America is one of the biggest net winners from globalization. Our productivity metrics treat everyone like they're a Michigan factory worker, but more holistic accounting would show that the lower cost of goods, the greater abundance of technology, and other things that result from globalization all substantially improve Americans' overall welfare and productivity. The fact is that just 10 million people work in US factories, while 25 or 30 million depend on the "gigonomy," which has benefited enormously from technology and globalization.

Financial and trade interdependence does impact jobs; the question is how countries deal with it. Places like Germany and South Korea witnessed labor outsourcing over the last 10 to 15 years, but they have good vocational education and worker retraining programs. They also have policies that require a certain degree of domestic investment and restrain capital from moving offshore. And in some cases, they have a larger share of private companies and SMEs that are locally rooted. The US could have changed its system in similar ways to cope with the outsourcing of jobs, but it didn't. So I don't know why we aren't blaming ourselves more for the negative effects of trade.

Of course, ripping up trade agreements is not the right way to go. In a world where American companies depend heavily on overseas revenues, that's shooting ourselves in the foot, and it might even backfire. For example, China has shown in past tariff disputes that it is willing to retaliate. So escalating a dispute with China could actually wipe out US jobs sooner than trade and offshoring would! That's not to say we will never see protectionism. Every country has a right to make mistakes!

Allison Nathan: Is the proliferation of regional trade agreements a good thing or a bad thing?

Parag Khanna: People have long argued that the "spaghetti bowl" approach of multiple, less comprehensive trade agreements is counter-productive and that policymakers need

to focus their efforts on a single, global free trade agreement. I disagree. The vast plethora of bilateral, regional, and interregional agreements may be sub-optimal in some ways, but each of these agreements is additive. At the same time, this approach lets countries keep certain protections or subsidies they might desire, either to preserve a way of life, keep people from losing their jobs, or prevent foreign investment from dominating the local economy. These imperfect agreements—the ugly spaghetti bowl—have allowed the net value of global trade to grow.

The other notion I strongly disagree with is the idea that free trade agreements are competitive, and especially the notion that the Trans-Pacific Partnership (TPP) is competitive with the Regional Comprehensive Economic Partnership (RCEP), the trade agreement proposed by China for its neighbors in the Association of Southeast Asian Nations (ASEAN). Some people—including in US Congress—think of this as a mutually exclusive competition between the US and China. But that's not the way that investment, supply chains, and trade interact today. It is just not realistic to think that the US could create an agreement with China's neighbors that truly excludes China. Chinese companies can easily transfer production to their subsidiaries in TPP member countries in order to gain duty-free access to the US market. So China will be "in" TPP, even if it's technically not. In my view, RCEP and TPP will both happen, and they will reinforce each other. And the smart countries are those that want to be members of both, such as the Philippines, Vietnam, and Singapore.

Allison Nathan: You often say that it isn't countries, but cities that will be the key to continued integration…

Parag Khanna: That's right. Think about it: the city always outlasts the country. Whether it's Baghdad or Istanbul or Amsterdam or London, cities have seen empires rise and fall and countries come and go. And there is no such thing as a successful state without a successful city. Cities by their nature want connectivity because they often don't have their own natural resources or even their own labor force, and they therefore depend on flows. Also, by being services-based, their economies require connectivity to some degree. So it is cities and the businesses based in them that drive linkages across continents, demanding seamless transactions in trading and investment. For example, the recent announcement of further investment in a road project connecting Afghanistan to the Arabian Sea through Iran is a direct response to Afghan cities needing access to the coast to pursue trade.

Allison Nathan: How are global trade patterns evolving?

Parag Khanna: There is no question that they are increasingly moving east. In the 1970s, transatlantic shipping accounted for 80% of global trade; by 2013, it was only 40%. Today, more than half of world trade is among China, the Middle East, and Africa, and almost all of the net growth in world goods trade is in the greater Indian Ocean region—the "maritime silk road." And this trade is in critical products; about 80% of Middle Eastern oil and gas flows to Japan, Korea, and China across the Indian Ocean and through the Strait of Malacca.

And there is no doubt in my mind that Eurasian terrestrial silk roads—a collection of railways, energy pipelines, and communications networks being spearheaded by China—will move forward in the coming 5 to 15 years. Already, Eurasia represents two-thirds of the world's population, economy, and trade. Imagine when these silk roads are actually completed: you'll have a united Eurasian super-continent with near-seamless connectivity between European companies and their largest market. These kinds of relationships—this "functional geography"—will be far more important than the political geography—or legal borders—we are used to. The Europeans have raced to join the Asia Infrastructure and Investment Bank (AIIB) for this reason, and there was little the US could do to dissuade them. When China puts $150 billion on the table for infrastructure investment, there is clearly money to be made!

Allison Nathan: How does the United States stay competitive as Eurasia gets more connected?

Parag Khanna: US competitiveness doesn't hinge on representing the largest share of world GDP anymore. To me, being competitive today is about the extent to which you are preferred as a service provider. What really matters is the rise in US exports of technology services, the US' new role as a net energy exporter to Asia and to Europe, and the continued need for American capital and liquidity to underwrite global investment activity in US dollars. The US may be geographically remote from dynamic centers of economic activity in Asia, but it is still profiting by selling them technology and services. So the US is and will continue benefiting from Eurasian connectivity, not competing with it.

Allison Nathan: Besides Asia or Eurasia, where else do you expect new trade hubs to develop?

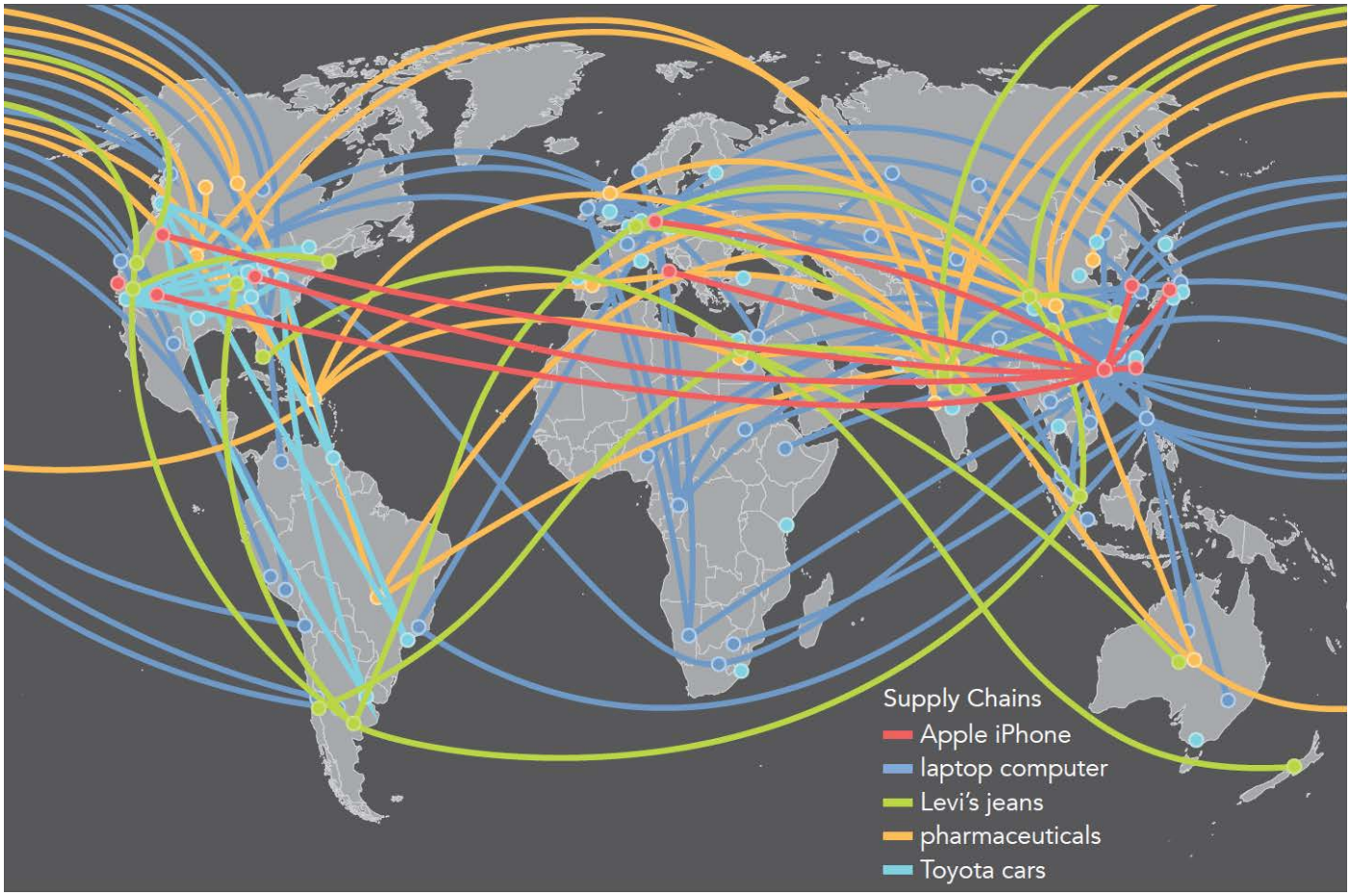
Parag Khanna: There will be significant growth in the Arctic. Arctic thawing has implications for food production, as well as our ability to exploit resources like uranium in Greenland or natural gas in northern Canada. And it will be significantly faster to ship over the Arctic than it is to ship through the Suez Canal. All of this creates big opportunities for Russia, Canada, and Norway. Even the US could capitalize on it, because rail infrastructure could move goods to the interior US through Canada. Perhaps most importantly, Arctic shipping bypasses geopolitical volatility, which has been dictating energy prices for decades. So as tragic as the Arctic thaw is in terms of climate change, it ultimately makes global trade capacity more resilient.

Allison Nathan: What are the risks to your view of global integration? Is there a chance that protectionism wins out?

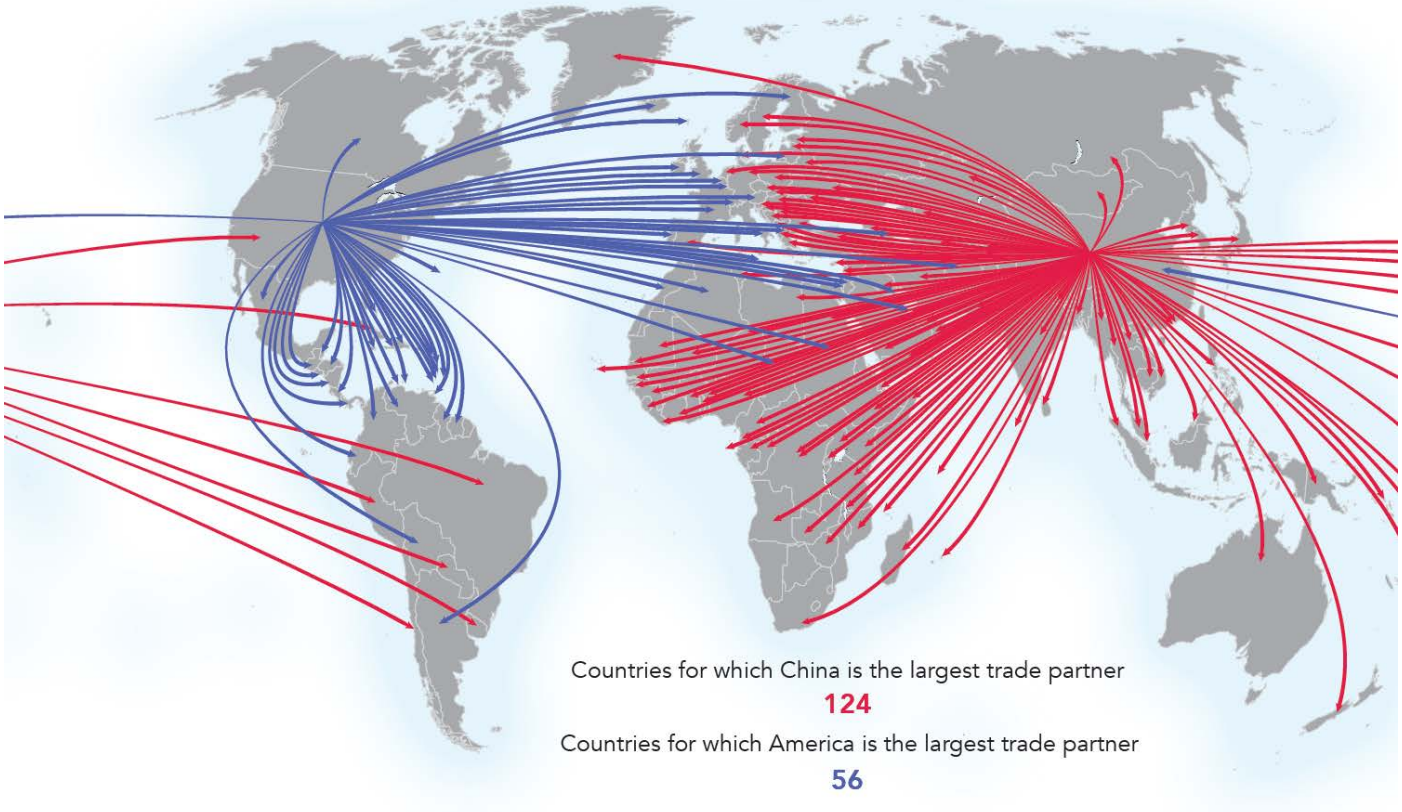
Parag Khanna: The capacity for globalization is increasing relentlessly; even a place as isolated as North Korea has increasing access to mobile phones, data, and the internet. So the risks to globalization with a "big G" are very, very few and far between. A plague would wipe out of a lot of people, but it wouldn't impact the *capacity* to transact globally—only the utilization of that capacity. A war could have ripple effects on supply chains, the financial system, and the economies involved. But would that stop globalization? No. The recovery from a setback such as a war or the election of a leader with a protectionist bent may take a year or two or 50. But ultimately, infrastructure will continue to increase our capacity to transact globally. That's not a theory—that's the last 60,000 years of history. At the end of the day, flow prevails over friction.

Mapping trade flows

Thank you to Parag Khanna, who shared these maps from his book, *Connectography: Mapping the Future of Global Civilization*.



Source: Natural Earth; Source-Map; thegatewayonline.com. Created by Claire Trainor, University of Wisconsin-Madison Cartography Laboratory.



Source: IMF; Natural Earth. Created by Claire Trainor, University of Wisconsin-Madison Cartography Laboratory.

What have economists said about trade?

Protectionist sentiment is running high in the US, with both presidential candidates citing the need to shield workers from the alleged harmful effects of foreign trade. Public opinion seems to stand behind this view, as Pew surveys have found that roughly half of Americans believe trade destroys jobs and lowers wages, compared to only about 20% who think the opposite. Perhaps more surprising, a review of research on trade, jobs, and wage inequality over the last 25 years shows that economists are also increasingly emphasizing the costs that trade can impose on US workers.

Early days: Think tech, not trade

Economic theory predicts that, in aggregate, trade benefits all parties; by importing goods that a trading partner can produce more efficiently, countries increase their consumption and welfare. But economists have also long recognized that trade leads the prices of labor to converge across borders. For developed countries, that pressures less-skilled workers, who find themselves effectively competing with cheaper foreign labor, and who face challenges in transitioning to more competitive parts of the economy.

As trade flourished in the 1970s and 1980s, its effects on labor markets attracted increasing attention. Between 1970 and 1990, goods trade rose from 8% to 15% of US GDP, while the share of manufacturing workers in US employment declined from 25% to 16%. Wage inequality increased, with the "premium" for a college vs. a high school graduate growing from around 45% to 60%. Economists agreed that blue-collar workers were being squeezed; the question was how much of it was due to trade.

For most researchers, the answer at the time was very little. Skill-biased technological change (e.g., the automation of routine tasks) and related productivity gains were generally deemed more important. Robert Lawrence and Matthew Slaughter (1993), for example, concluded from shifts in traded goods prices that trade contributed little to rising wage inequality. Paul Krugman (1994, 1995) similarly assigned trade a "quantitatively minor" role, and estimated that trade with less developed countries accounted for only around 10% of the increase in US wage disparity over the prior 20 years. Effects on employment were also deemed modest. By the estimates of Jeffrey Sachs and Howard Shatz (1994), trade with developing economies between 1978 and 1990 reduced US demand for lower-skilled manufacturing jobs by just 6.2%.

Some researchers did find more substantial effects. Translating the US trade deficit into an effective increase in the supply of less-skilled labor, George Borjas, Richard Freeman, and Lawrence Katz (1992) showed that trade accounted for up to 25% of the widening US wage gap between 1980 and 1985. And Adrian Wood (1994), contending that most studies understated the labor displaced by imports, concluded that trade reduced unskilled manufacturing employment in developed economies by 21.5%, more than three times the Sachs/Shatz estimate. Still, these views were in the minority; among more than 30 studies on wage inequality reviewed by William Cline (1997), most found that the adverse impacts of trade were minimal to modest. In short, the research acknowledged some losses from foreign trade, but emphasized overall gains.

The new view: A bigger role for trade

Between 1990 and 2010, developing economies' share of world trade roughly doubled, to 38%, driven in large part by EM Asia and China's 2001 entry into the WTO. In the US, the college wage premium approached 80%, while the trade deficit widened well beyond prior extremes. These shifts prompted economists to revisit the conclusions of the 1990s with new data. Krugman wrote in 2008 that it was "no longer safe" to argue that trade's impact on inequality in developed economies was insignificant.

Indeed, the work that followed often pointed to greater costs from trade. In an update of Krugman's 1995 model, Josh Bivens (2013) estimated that trade with less developed countries accounted for one-third of the rise in US wage inequality between 1979 and 2011—and more than 90% of it after 1995. In another example, Michael Elsby, Bart Hobijn, and Aysegul Sahin (2013) found that import exposure could account for 85% of the 3.9pp decline in US workers' share of national income over the prior 25 years.

Recent research has also highlighted the spillovers from pressure on US manufacturing. In one such study, Avraham Ebenstein and colleagues (2014) found that trade was pushing workers out of generally higher-paying manufacturing jobs and into lower-paying positions in other parts of the economy. Using census data on individual workers across industries, the authors estimated that people who switched occupations due to trade or offshoring saw their real wages fall 12-17% between 1984 and 2002.

China has played an important part in these developments, having increased its share of US imports to 21% in 2015 from only 6% in 1995. MIT's David Autor and other researchers (2013, 2016) mapped the exposure of 700+ US labor markets to this surge based on initial industry composition, and concluded that workers in more-exposed regions faced lower lifetime earnings, particularly if they were already at the lower end of the pay scale. By Autor's estimates, Chinese imports cost the US up to 2.4mn jobs between 1999 and 2011, of which nearly 1mn were in manufacturing. Others have found evidence of US jobs effectively "moving" abroad: Ebenstein et al (2012) noted that US job losses have corresponded with Chinese gains in the same sectors. That these shifts occurred even for routine tasks suggests, in their view, that US workers are being displaced by trade rather than technology.

When the facts change, I change my mind

The recent research has not invalidated earlier findings; indeed, the trade landscape has changed considerably since the "first wave" of analysis. More importantly, economists remain proponents of free trade (and, to be sure, some maintain that trade is not an important driver of wage inequality). However, the tone around trade appears to be shifting toward a greater acknowledgment of concentrated losses rather than an affirmation of overall gains. In the words of Harvard University's Dani Rodrik, "The populist rhetoric on trade may be excessive, but few deny any longer that the underlying grievances are real."

For sources, see pg. 22.

Marina Grushin

Continued from pg. 21

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Summary of our key forecasts

	GDP Growth (% yoy)				FX				Equity				Rates (% eop)				Revision Notes
	2016		2017		3-mth		12-mth		3-mth		12-mth		Policy*		10-yr		
	GS	Cons	GS	Cons	GS	Cons	GS	Cons	GS	Cons	GS	Cons	2016	2017	2016	2017	
Global	3.1	3.0	3.5	3.4	-	-	-	-	-	-	-	-	-	-	-	-	
					EUR/$		**EUR/$**		**SP500**		**SP500**						
US	1.5	1.5	2.1	2.3	1.08	1.09	1.00	1.08	2100	-	2175	-	0.50 to 0.75	1.25 to 1.50	2.00	2.50	
					EUR/$		**EUR/$**		**Eurostoxx 50**		**Eurostoxx 50**						
EURO AREA	1.5	1.5	1.3	1.3	1.08	1.09	1.00	1.08	2900	-	3200	-	0.00	0.00	-	-	On September 5, we raised our 2016 and 2017 GDP growth forecasts to 1.5% and 1.3%, respectively, from 1.3% and 1.2% previously, reflecting our revised expectations for a smaller slowdown in the UK economy due to added monetary and fiscal stimulus, as well as a marking-to-market based on Euro area GDP data for Q2.
					EUR/$		**EUR/$**		**DAX**		**DAX**						
GERMANY	1.7	1.6	1.1	1.2	1.08	1.09	1.00	1.08	-	-	-	-	-	-	0.30	0.70	On September 5, we raised our Euro area GDP growth forecasts (see above), bringing our German GDP growth forecast for 2016 to 1.7% from 1.4% previously.
					$/JPY		**$/JPY**		**TOPIX**		**TOPIX**						
JAPAN	0.6	0.6	1.0	0.8	108	103	115	108	1300	-	1400	-	-0.10	-0.10	0.05	0.20	On September 18 (prior to the BOJ's September meeting), we lowered our 3/6/12-month $/JPY forecasts to 108/110/115, respectively, from 115/120/125 previously, reflecting our view that the BOJ has exhibited a lack of urgency in easing policy to raise inflation. Following the meeting on September 21, we have retained these forecasts, although we see risks to attaining these targets if the BOJ does not take more aggressive action. On September 27, we removed the expectation of further BOJ easing from our policy rate forecasts, bringing them to the current rate of -0.1% for both 2016 and 2017, from -0.2% and -0.4%, respectively. Barring significant yen appreciation, we do not expect the BOJ to ease further over the medium term.
					$/CNY+		**$/CNY+**		**MXCN**		**MXCN**						
CHINA	6.6	6.6	6.4	6.3	6.70	6.75	7.00	6.89	-	-	70	-	2.25	2.00	-	-	On September 12, we raised and rolled forward our 12-month MXCN target to 70 from 60.5, reflecting several factors that we expect to improve the trading backdrop in China, including a potential cyclical pickup in investment provoked by renewed policy easing, a stabilization in corporate earnings growth and profitability, and an equity-friendly liquidity environment. On September 15, we pushed out our forecast for lower short-term rates in China, raising our 2016 and 2017 forecasts for the 7-day repo rate to 2.25% and 2.00% from 1.50% previously, reflecting concerns about shadow banking activity and capital outflows.
					$/BRL		**$/BRL**		**BOVESPA**		**BOVESPA**						
BRAZIL	-3.2	-3.2	1.1	1.1	3.20	3.26	3.50	3.45	-	-	-	-	13.50	11.00	-	-	As of September 27, we expect a 25bp Selic cut in October and a 50bp cut in November, bringing our 2016 and 2017 Selic forecasts to 13.50% and 11.00%, respectively.

Commodities	Brent crude oil ($/bbl)				Copper ($/mt)				Gold ($/toz)				Corn ($/bu)				
	3-mth		12-mth		3-mth		12-mth		3-mth		12-mth		3-mth		12-mth		
	GS	Cons	GS	Cons	GS	Cons	GS	Cons	GS	Cons	GS	Cons	GS	Cons	GS	Cons	
	43	51	57	58	4500	-	4000	-	1300	-	1250	-	375	-	375	-	On September 28, we lowered our 3-month Brent crude forecast to $43/bbl from $49/bbl, reflecting upside surprises to production and greater clarity on new project delivery into year-end.

Note: Recent revisions marked in red; GDP consensus is Consensus Economics; all other consensus is Reuters; commodity 12-mo consensus is Reuters for 2017 average.

+ CNY daily fix * Euro area rate is MRO rate. China rate is 7-day repo rate.

Source: Goldman Sachs Global Investment Research.

Glossary of GS proprietary indices

Current Activity Indicator (CAI)

Measures the growth signal in the major high-frequency activity indicators for the economy. Gross Domestic Product (GDP) is a useful but imperfect guide to current activity. In most countries, GDP is only available quarterly, is released with a substantial delay, and initial estimates are often heavily revised. GDP also ignores important measures of real activity, such as employment and the purchasing managers' indexes (PMIs). All of these problems reduce the effectiveness of GDP for investment and policy decisions. Our CAIs are alternative summary measures of economic activity that attempt to overcome some of these drawbacks. We currently calculate CAIs for the following countries: USA, Euro area, UK, Norway, Sweden, China, Japan, Hong Kong, India, Indonesia, Malaysia, Philippines, Singapore, South Korea, Taiwan, Thailand, Australia and New Zealand.

Financial Conditions Index (FCI)

Financial conditions are important because shifts in monetary policy do not tell the whole story. Our FCIs attempt to measure the direct and indirect effects of monetary policy on economic activity. We feel they provide a better gauge of the overall financial climate because they include variables that directly affect spending on domestically produced goods and services. Each FCI is calculated as a weighted average of a policy rate, a long-term riskless bond yield, a corporate credit spread, an equity price variable, and a trade-weighted exchange rate; in the Euro area we also include a sovereign credit spread. The weights mirror the effects of the financial variables on real GDP growth in our models over a one-year horizon.

Global Leading Indicator (GLI)

Our GLIs provide a more timely reading on the state of the global industrial cycle than the existing alternatives, and in a way that is largely independent of market variables. Global cyclical swings are important to a huge range of asset classes; as a result, we have come to rely on this consistent leading measure of the global cycle. Over the past few years, our GLI has provided early signals on turning points in the global cycle on a number of occasions and has helped confirm or deny the direction in which markets were heading. Our GLI currently includes the following components: Consumer Confidence aggregate, Japan IP inventory/sales ratio, Korea exports, S&P GS Industrial Metals Index, US Initial jobless claims, Belgian and Netherlands manufacturing surveys, Global PMI, GS Australian and Canadian dollar trade weighted index aggregate, Global new orders less inventories, Baltic Dry Index.

Goldman Sachs Analyst Index (GSAI)

Our US GSAI is based on a monthly survey of Goldman Sachs equity analysts to obtain their assessments of business conditions in the industries they follow. The results provide timely "bottom-up" information about US economic activity to supplement and cross-check our analysis of "top-down" data. Based on their responses, we create a diffusion index for economic activity comparable to the ISM's indexes for activity in the manufacturing and nonmanufacturing sectors.

Macro-data Assessment Platform (MAP)

Our MAP scores facilitate rapid interpretation of new data releases. In essence, MAP combines into one simple measure the importance of a specific data release (i.e., its historical correlation with GDP) and the degree of surprise relative to the consensus forecast. We put a sign on the degree of surprise, so that an underperformance will be characterized with a negative number and an outperformance with a positive number. We rank each of these two components on a scale from 0 to 5, and the MAP score will be the product of the two, i.e., from -25 to +25. The idea is that when data are released, the assessment we make will include a MAP score of, for example, +20 (5;+4)—which would indicate that the data has a very high correlation to GDP (the '5') and that it came out well above consensus expectations (the '+4')—for a total MAP value of '+20.' We currently employ MAP for US, EMEA and Asia data releases.

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RETINA provides a comprehensive econometric methodology able to filter incoming information from the most up-to-date high frequency variables in order to track real GDP growth in the Euro area. Along with a GDP tracker, RETINA also captures the interrelated mechanisms of the area-wide pricing chain, providing a short-term view on inflation dynamics.

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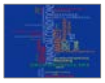

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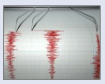

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Reg AC

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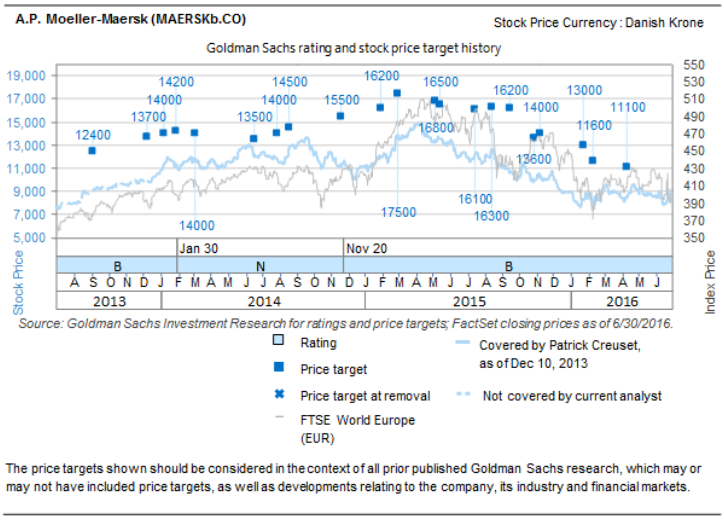

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