Allianz

Allianz Trade

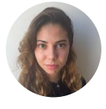
5 October 2022

Allianz Research

Globalization 2.0
Can the US and EU really "friendshore" away from China?

Executive Summary

Françoise Huang
Senior Economist for Asia Pacific and Trade
francoise.huang@allianz-trade.com



Polina Bulavko
Economic Assistant
polina.bulavko@allianz-trade.com

- **Globalization is changing, not dying, but recent crises have raised questions about the structure of global supply chains, and the exposure to geopolitically non-aligned suppliers.** The world's openness to trade has been plateauing since 2008, without showing a clear declining trend. But this overall trend masks the increasing divergence between regions, with stronger regional integration in Asia-Pacific and Africa (weaker in Europe and the Americas), as well as the development of certain technologies and sectors. At the same time, mounting geopolitical tensions are pushing the US and Europe towards reducing their dependence on China. In fact, China already started to lose market share in US imports since 2018 and the trade war, in part to the benefit of Asian competitors. Yet, 'friendshoring' is easier said than done.

- **We find that computers & telecom, electronics, household equipment, metals, autos & transport equipment, chemicals and machinery & equipment are the most globalized sectors – and most exhibit a strong exposure to China.** Together, they account for more than 50% of global trade. The supply provided by China to the rest of the world ranges from 6% (for autos & transport equipment) to 27% (for computer & telecom, electronics, household equipment) of global output in these sectors.

- **More importantly, China is a critical supplier for 276 types of goods for the US, and 141 types of goods for the EU.** Conversely, the US is a critical supplier to China for just 22 types of goods, and the EU for 188 types of goods. This means that, in an extreme scenario where US-China and US-EU-China trade relations are completely cut off, the US and Europe have more to lose: The loss of critical supplies would cost 1.3% of GDP for the US and 0.5% of GDP for the EU, but 0.3% of GDP for China. Note that as recently as 2018, the US' critical dependence on China was around half of what it is today (0.7% of GDP vs. 1.3%).

- **Mexico, South Korea, Japan, Vietnam, Indonesia, Brazil and Malaysia could be the best positioned as 'friendshoring candidates' for closer trade relations with the US and the EU. But the US and the EU could also look to increase bilateral cooperation.** With 300 types of goods concerned, the EU actually comes up as the most frequent critical supplier for the US. But in terms of size of imports, these supplies represent just 4% of total US imports – compared with nearly 10% when it comes to US critical imports from China. 'A free-trade agreement could be an option to close this gap, especially as the EU is becoming very dependent on the US for energy supply (oil and gas).

276

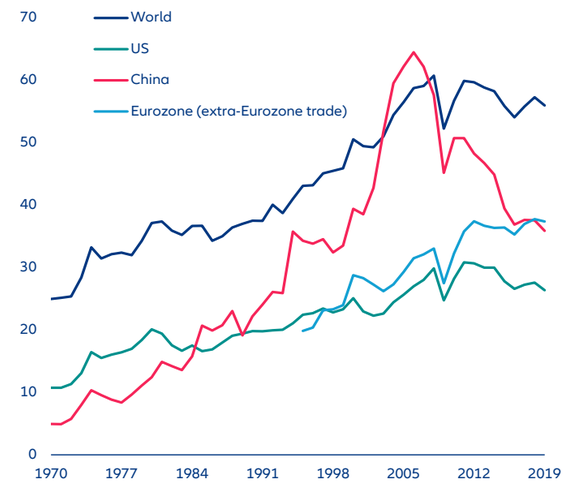
the number of goods for which China is a critical supplier to the US

Globalization is changing, not dying

After trade tensions that materialized under the Trump administration, the major crises of the past few years – the global Covid-19 pandemic and the ongoing war in Ukraine – have intensified doubts about the future of globalization, and increased scrutiny on supply-chain exposures. However, globalization is not dead yet. While intentions to reshore, friendshore or decouple from geopolitically non-aligned countries (e.g. China) seem to be rising, free-trade agreements are also still being signed and barriers to trade have been declining in 2022.

These contradicting trends mean that global trade flows have somewhat adapted to the different shocks, and sometimes reflect structural changes in the global economy. A quantitative measure, i.e. trade as a percentage of GDP (see Figure 1), shows that overall globalization seems to be on pause – but it is not retreating. The share increased from 25% in 1970 to a peak of 61% in 2008. Beyond the volatility around the global financial crisis, the timid declining trend observed in the past decade is the result of a very visible decline in the share of trade in China's GDP (36% in 2019 vs. a peak of 64% in 2006). This latter phenomenon is a natural one in the development path of an economy as it relies increasingly on a maturing domestic market rather than external demand. China's global export market share has actually kept increasing during this period[1].

Figure 1: Trade in goods and services, as % of GDP



Sources: World Bank, national sources, Allianz Research

[1] 5% in 2002, 9% in 2008, 13% in 2019 and 15% in 2021.

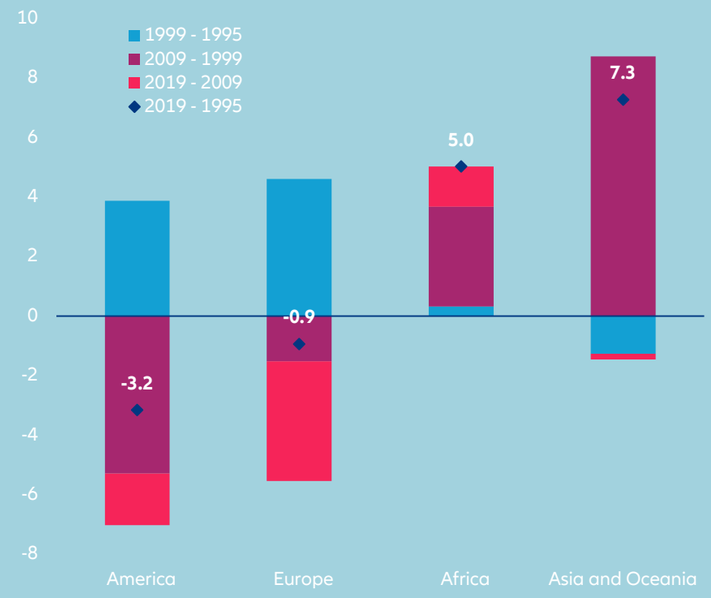
Under the hood, however, the plateauing overall measure for globalization does mask changes in the structure of global trade – both in terms of geography and sectors. In particular, regional integration has evolved differently (see Figure 2). Since 1999, intra-regional trade as a share of total trade rose by more than 7pps in Asia-Pacific and by 5pps in Africa, while it declined by nearly 1pp in Europe and by more than 3pps in the Americas.

These geographical changes are sometimes the result of regional trade agreements, but can also be put in relation to sectoral specializations and different levels of engagement in global supply chains. Indeed, globalization has partly been driven by the development of certain technologies and sectors over the past decades. To look at this in detail, we create a globalization score by sector (see Figure 3), which takes into account trade or output in the sector that crosses more than one border. Put differently, we consider trade or output that is not just flowing from the source country directly to the final market, but that is participating in different stages of supply chains.

We find that the largest sectors globally that also have significantly positive globalization scores are:
- Computers & telecom, electronics, household equipment (14% of global trade)
- Metals (14% of global trade)
- Autos & transport equipment (9% of global trade)
- Chemicals (9% of global trade)
- Machinery & equipment (5% of global trade)

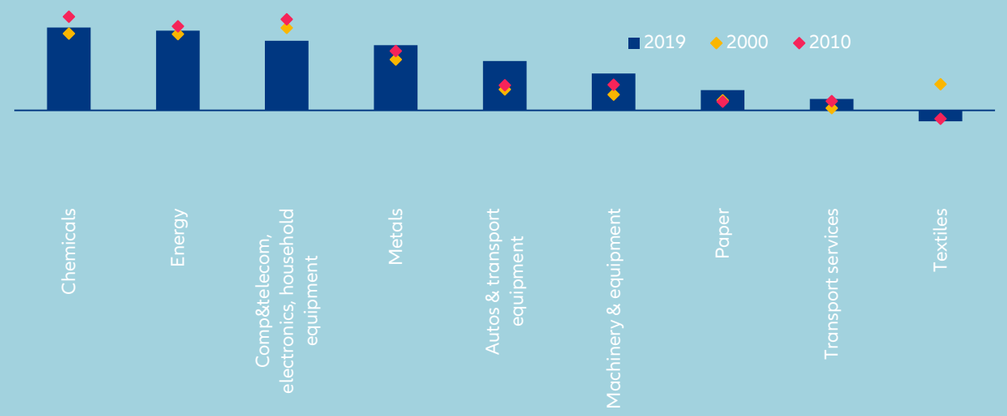
These five sectors together represent more than 50% of global trade. In the following section, we focus on these five large and globalized sectors, and look in detail into how China participates in their global supply chains. Such an analysis can then help us assess to what extent decoupling from China is possible, and, ultimately, what is the future for globalization.

Figure 2: Intra-regional trade as share of total: change over different periods (pp)



Sources: UNCTAD, Allianz Research

Figure 3: Globalization score* by sector



* share of global value-chain trade or output out of sector trade or output, distance from global level
Sources: World Bank (WITS), Allianz Research

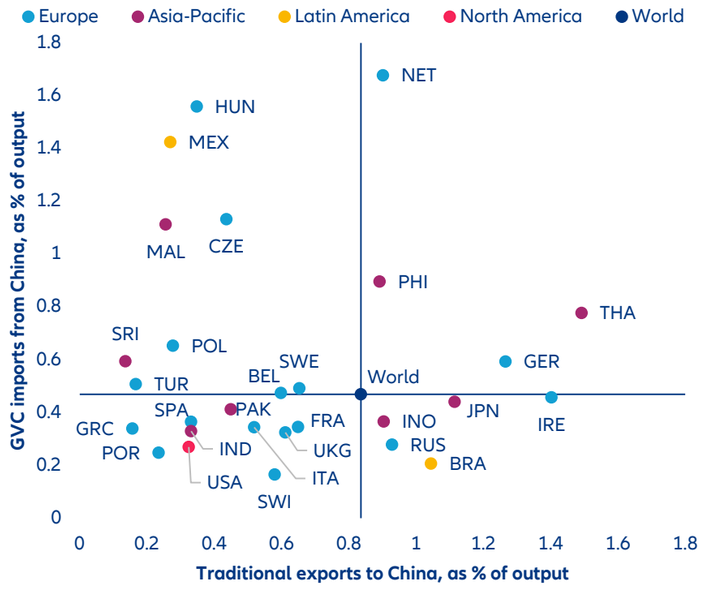
It is difficult to shake off the dependence on China, for now

The world's dependence on China is twofold, based on demand and supply. These dependencies can be understood through trade data, looking at both traditional trade (i.e. goods crossing only one border from source country to final market) and global value-chain trade (i.e. goods crossing more than one border and capturing the total participation at different stages of supply chains).

On the demand side, the world's traditional exports to China represent 0.8% of global output (see Figure 4). The share goes as high as 2.7% for South Korea and Australia, and stands at 1.3% for Germany and 0.3% for the US. In our previous reports, we identified that Taiwan, Malaysia, Singapore, Thailand and Chile are the most dependent on demand from China, and are set to incur the most losses in the medium run as the latter moves towards industrial autonomy, generating less demand for goods from abroad[2]. Losses for the Eurozone overall could amount to up to 0.9% of GDP in the medium run, with machinery & equipment, construction, agrifood and electronics the most exposed sectors.

[2] See "Dual circulation : China's way of reshoring?" for more details

Figure 4: Demand (exports to China, % of output) and supply (global value-chain imports from China, % of output) exposures to China



Note: Taiwan, Vietnam, South Korea, Australia, Hong Kong and Singapore, which have strong exposures, were removed from the chart for better legibility.
Sources: World Bank (WITS), Allianz Research

On the supply side, in absolute terms, China is by far the largest contributor in the world, with the output it produces that is destined for global value chains amounting to nearly USD3.4trn (with the US a distant-second at USD1.8trn and Germany at USD1.4trn in third position). In relative terms, global value-chain imports from China account for 0.5% of global output (see Figure 4). The share goes as high as 3.9% for Vietnam, 3% for Singapore and 2.3% for Taiwan and Hong Kong. It stands at 0.6% for Germany and 0.3% for the US.

Looking at the five large and globalized sectors we identified in the previous section, China's output destined for traditional and global value-chain trade as a share of global output in the sector ranges from 6% (for autos & transport equipment) to 27% (for computer & telecom, electronics, household equipment) – see Figure 5. In each sector, around two-thirds of the ratios is output destined for traditional exports, and the rest is output destined for global value-chain exports[3]. Importantly, despite the slight declining trend in globalization in the 2010s, and despite increased talks of decoupling from China after that, the world's dependence on supply from China actually increased significantly in three of the five sectors analyzed (i.e. computer & telecom, electronics, household equipment, chemicals and machinery & equipment – see Figure 5).

Going one step further within sectors, concentrated dependence for specific types of goods can also prove to be problematic. Indeed, the past years have shown that sudden stops in industrial activity in source countries (e.g. due to lockdowns induced by Covid-19) can contribute to severe shortages of goods or inputs (e.g. semiconductors and chips). To understand whether the US and the EU have critical dependencies on some supplying countries, we analyze detailed trade data by product (at the six-digit level of the Harmonized System, which classifies goods into 6,338 categories) for the top 35 exporters in the world. Taking the US dependence on China as an example, China is deemed a critical supplier of a type of good X if three criteria are met[4] :

1 The US is a net importer of good X.
2 More than 50% of US imports of good X comes from China.
3 China's global export market share for good X exceeds 50%.

We find that the US exhibits 674 critical dependencies in total (see Figure 6), of which 276 are with China. US imports of these goods from China represent nearly 50% of total imports from China, or nearly 10% of US total imports. Other geopolitically non-aligned critical suppliers for the US are Turkey and Russia, but with respectively only four and two types of goods[5]. For the EU, the total number of critical dependencies is much lower, with 206 types of products concerned: 141 of those are with China, representing 15% of EU imports from China, or 3% of total EU imports. The EU also has eight critical dependencies with Turkey, and two with Russia[6].

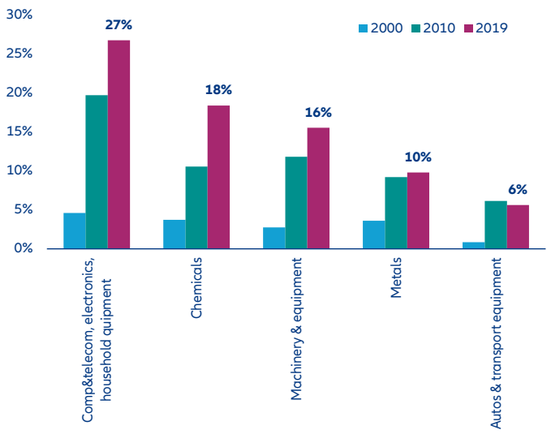
It's also interesting to note that for the US, with 300 types of goods concerned, the EU comes up as the most frequent critical supplier. The largest sectors are machinery & equipment (23%), chemicals (15%), agrifood (14%), textiles (13%) and metals (11%). But in terms of size of imports, the supply of these 300 types of goods from the EU represents just 4% of total US imports – compared to nearly 10% when it comes to critical imports from China. This gap could imply a basis for closer trade cooperation between the US and the EU.

The US and EU critical dependencies on China are mostly found in the following four sectors: computer & telecom, electronics, household equipment; textiles; chemicals and metals. Looking at dependencies the other way around, we find that the US is a critical supplier for China for only 22 types of goods (mostly in the agrifood sector), representing just 3% of China's imports from the US and 0.2% of China's total imports. Conversely, the EU's role is more substantial as it is a critical supplier in 188 types of goods (mostly in the agrifood, textiles and machinery & equipment sectors). This represents nearly 20% of China's imports from the EU but only 2% of China's total imports.

This means that, in an extreme scenario where US-China and EU-China trade relations are completely cut off, the US and EU have more to lose. The loss of critical supplies that are likely difficult to substitute would amount to:
• 10% of total imports for the US, or 1.3% of GDP.
• 3% of total imports for the EU, or 0.5% of GDP.
• 2% of total imports for China, or 0.3% of GDP.

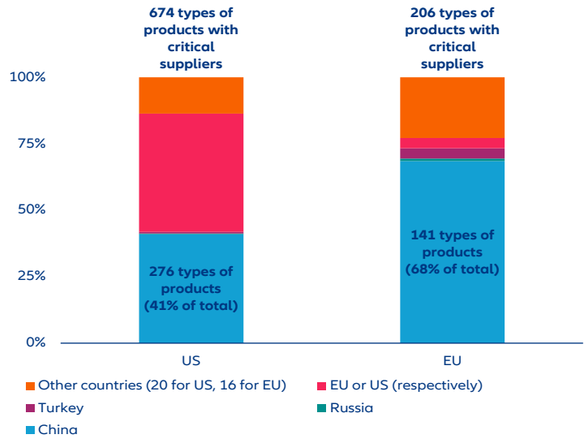
Such (asymmetrical) critical dependencies explain why 'friendshoring' is increasingly on the radar of US and EU firms and policymakers. All the more so since the world's critical dependence on China seems to keep increasing: Taking the US as an example, China's critical supplies amounted to 0.7% of in GDP in 2018, compared to 0.4% in 2010.

Figure 5: China's output for traditional and global value-chain exports, as % of global output in the sector



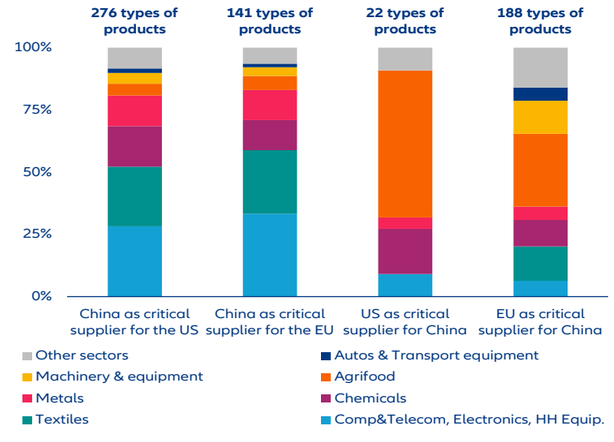
Sources: World Bank (WITS), Allianz Research

Figure 6: Critical suppliers of goods for the US and the EU, distribution for selected countries



Sources: ITC, Allianz Research

Figure 7: China as critical supplier for the US and the EU and vice versa, distribution by sector



Sources: ITC, Allianz Research

[3] Note that if we also take into account output that is produced for the domestic market, China would represent between c.20% and c.50% of global output in these five sectors. We do not include this as the aim here is to understand the rest of the world's dependence on supply exported by China.

[4] This definition of critical dependency is in line with research, e.g. "The dependency on China of Spain's supply chains", Lucia Salinas Conte (2022).

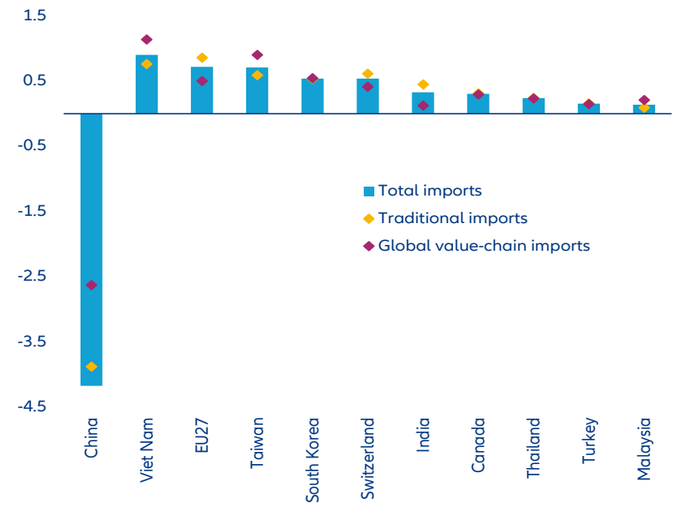
[5] The US has four critical dependencies on Turkey in the agrifood and textiles sectors, and two on Russia in the energy and machinery & equipment sectors.

[6] The EU has eight critical dependencies on Turkey in the agrifood, construction and textiles sectors, and two on Russia in the construction and rnergy sectors.

Friendshoring away from China: who are the potential candidates?

It is difficult to shake off the dependence on China, but the recent experience of the US-China trade war can provide some guidance. Tariff hikes between the two countries were first introduced in 2018, and tariffs have remained at high levels since (despite the very slight declines following the Phase One agreement in early 2020). As a result, China has been losing market share in US imports: accounting for total imports (i.e. both traditional and global value-chain), China's market share rose from 4% in 2000 to 13% in 2010 and 15% in 2018, before declining to 10% in 2021. China has thus moved from being the second-largest import source of the US (after the EU27) in 2018 to the fourth position in 2021 (after the EU27, Mexico and Canada). This loss has partly benefited Asian competitors (see Figure 8), with Vietnam, Taiwan, South Korea, India, Thailand and Malaysia among the top 10 exporters gaining market share over 2018-2021. Their total gains add up to 2.8pps (compared to China's loss of 4.2pps). The EU27 gained 0.7pp of total market share over this period.

Figure 8: Change in market share of US imports over 2018-2021 (pp), China and top 10 gaining exporters



Sources: World Bank (WITS), Allianz Research

China

is the most competitive exporter in the world when it comes to traditional trade.

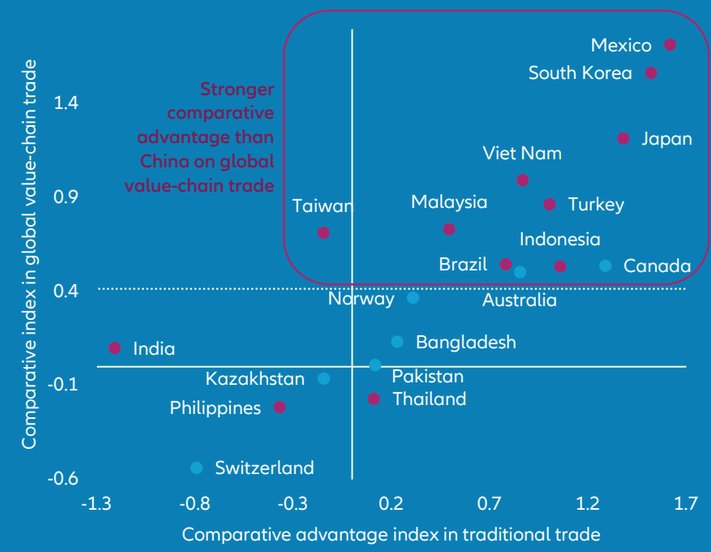
Beyond the experience of the US-China trade war, we look at the trade structure and strength of exporters to understand who could be better positioned to benefit from the US and the EU decoupling from China. To that end, we compute trade complementarity indices, which measure the similarity between the export and import structures of a pair of countries, and comparative advantage indices, which measure the relative advantage of an exporter in a certain sector. We have already used such indices in past research[7], but the novelty here is that we base our estimates on traditional trade and global value-chain trade data, rather than total trade. We derive a list of large exporters that are particularly complementary with US and EU imports (see Figure 9), and contrast their comparative advantage indices with those of China. We find that China's comparative advantage on traditional exports is the highest of all 63 economies in our sample, meaning that China is the most competitive exporter when it comes to goods that are fully produced in the domestic economy before being shipped to the final demand market. This may not come as a surprise, given the size of the Chinese economy and its labor force. However, looking at global value-chain trade, and thus exports of goods that are produced over multiple countries, China is not the most competitive.

Taking into account all factors, that is to say:
- Strong trade complementarity with the US and the EU.
- Stronger competitiveness than China when it comes to global value-chain trade.
- Strong competitiveness when it comes to traditional trade (though lower than China).
- Absence of geopolitical tensions with the US and the EU.

We find that Mexico, South Korea, Japan, Vietnam, Indonesia, Brazil and Malaysia could be the best positioned as friendshoring candidates.

[7] See our previous publication "The world is moving East, fast"

Figure 9: Comparative advantage indices



Sources: World Bank (WITS), Allianz Research

Our team

Chief Economist Allianz SE

Ludovic Subran
ludovic.subran@allianz.com

Head of Economic Research Allianz Trade

Ana Boata
ana.boata@allianz-trade.com

Head of Macro and Capital Markets Research Allianz SE

Andreas Jobst
andreas.jobst@allianz.com

Head of Insurance, Wealth and Trends Research Allianz SE

Arne Holzhausen
arne.holzhausen@allianz.com

Macroeconomic Research

Françoise Huang
Senior Economist for Asia Pacific
francoise.huang@allianz-trade.com

Katharina Utermöhl
Senior Economist for Europe
katharina.utermoehl@allianz.com

Roberta Fortes
SeniorEconomist for Ibero-Latin America
roberta.fortes@allianz-trade.com

Maddalena Martini
Economist for Italy & Greece
maddalena.martini@allianz.com

Manfred Stamer
Senior Economist for Middle East and Emerging Europe
manfred.stamer@allianz-trade.com

Maxime Darmet-Cucchiarini
Senior Economist for US and France
maxime.darmet@allianz-trade.com

Corporate Research

Ano Kuhanathan
Head of Corporate Research
ano.kuhanathan@allianz-trade.com

Maxime Lemerle
Lead Analyst for Insolvency Research
maxime.lemrle@allianz-trade.com

Aurélien Duthoit
Senior Sector Advisor
aurelien.duthoit@allianz-trade.com

Maria Latorre
Sector Advisor
maria.latorre@allianz-trade.com

Capital Markets Research

Eric Barthalon
Head of Capital Markets Research
eric.barthalon@allianz.com

Jordi Basco-Carrera
Senior Investment Expert
jordi.basco_carrera@allianz.com

Patrick Krizan
Senior Economist , Fixed Income
patrick.krizan@allianz.com

Pablo Espinosa Uriel
Capital Market Research Analyst
pablo.espinosa-uriel@allianz.com

Insurance, Wealth and Trends Research

Michaela Grimm
Senior Expert demographics
michaela.grimm@allianz.com

Markus Zimmer
Senior Expert ESG
markus.zimmer@allianz.com

Patricia Pelayo-Romero
Expert Insurance
patricia.pelayo-romero@allianz.com

Kathrin Stoffel
Expert Wealth
kathrin.stoffel@allianz.com

Recent Publications

04/10/2022 | Gilt market meltdown – A first post mortem and key takeaways
30/09/2022 | Eurozone public debt: The interest rates reality check
29/09/2022 | Reverse currency war puts emerging markets at risk
22/09/2022 | US housing market: The first victim of the Fed
20/09/2022 | Shipping: liners swimming in money but supply chains sinking
15/09/2022 | Lights out! Energy crisis, policy mistakes and uncertainty
13/09/2022 | Missing chips cost EUR100bn to the European auto sector
09/09/2022 | Italy's elections: snapping back?
07/09/2022 | Double trouble? Inflation means less cash and more debt for companies
01/09/2022 | Averting Gasmageddon and securing a just transition
30/08/2022 | Green infrastructure investment: The public sector cannot do it alone
28/07/2022 | How to ease inflation? Non-tariff barriers to trade in the spotlight
26/07/2022 | High yield: have the tourists left?
21/07/2022 | Eurozone: watch credit conditions!
20/07/2022 | Remote work: Is the honeymoon over?
19/07/2022 | The anatomy of financial bubbles, crashes & where we stand today
13/07/2022 | Back on the (climate) track The quest for independence powers Germany's energy transition
11/07/2022 | Allianz Pulse 2022: United in pessimism
07/07/2022 | Price war for European airlines – Fasten your seatbelts
06/07/2022 | Breaking spread: fragmentation risk in the Eurozone
27/06/2022 | Economic and Market Outlook: Running up the hill s?
24/06/2022 | Obesity: Costly epidemic
20/06/2022 | Commercial debt collection: USD4.2trn at risk in the most complex countries
15/06/2022 | A trade recession before a mild Chinese reopening?
14/06/2022 | Eleven countries at high risk of a food crisis
10/06/2022 | Can the European consumer hold on?
08/06/2022 | ECB: Hike while you can!
02/06/2022 | The great green renovation: the buildings sector transition pathway
30/05/2022 | Rallying ruble and the weaponization of finance
23/05/2022 | European food inflation: and the loser is the consumer
18/05/2022 | Global Insolvency Report: Growing risks and uneven state support
16/05/2022 | TGIF? Allianz survey on job attitudes
11/05/2022 | Who should be afraid of a stop in Russian energy supply?

Discover all our publications on our websites: Allianz Research and Allianz Trade Economic Research

Director of Publications
Ludovic Subran, Chief Economist
Allianz Research
Phone +49 89 3800 7859

Allianz Group Economic Research
https://www.allianz.com/en/economic_research
http://www.allianz-trade.com/economic-research
Königinstraße 28 | 80802 Munich | Germany
allianz.research@allianz.com

@allianz
allianz

Allianz Trade Economic Research
http://www.allianz-trade.com/economic-research
1 Place des Saisons | 92048 Paris-La-Défense Cedex | France
research@allianz-trade.com

@allianz-trade
allianz-trade

About Allianz Research
Allianz Research encompasses Allianz Group Economic Research and the Economic Research department of Allianz Trade.

Forward looking statements

The statements contained herein may include prospects, statements of future expectations and other forward-looking statements that are based on management's current views and assumptions and involve known and unknown risks and uncertainties. Actual results, performance or events may differ materially from those expressed or implied in such forward-looking statements.
Such deviations may arise due to, without limitation, (i) changes of the general economic conditions and competitive situ-ation, particularly in the Allianz Group's core business and core markets, (ii) per-formance of financial markets (particularly market volatility, liquidity and credit events), (iii) frequency and severity of insured loss events, including from natural catastrophes, and the development of loss expenses, (iv) mortality and morbidity levels and trends, (v) per-sistency levels, (vi) particularly in the banking business, the extent of credit defaults, (vii) interest rate levels, (viii) currency exchange rates including the EUR/USD exchange rate, (ix) changes in laws and regulations, including tax regulations, (x) the impact of acquisitions, including related integration issues, and reorganization measures, and (xi) general compet-itive factors, in each case on a local, regional, national and/or global basis.
Many of these factors

No duty to update

The company assumes no obligation to update any information or forward-looking statement cont-ained herein, save for any information required to be disclosed by law. may be more likely to occur, or more pronounced, as a result of terrorist activities and their consequences.