

Economic Watch

China | China's role in global inflation: stabilizer or contributor?

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The current historical high inflation becomes the prime risk of the global economy, but is China aside?

Inflation has remained at unusually high levels particularly in the US and the Europe recently. The pressure on prices has recently been reinforced by the impact of the Russia-Ukraine war on commodity and agricultural prices as well as the continuation of supply bottlenecks in the aftermath of Covid-19 outbreak, in a context of relative strength in demand. The risk of significant second-round effects and de-anchoring of expectations is moderate, given central banks' aggressive reactions of interest rate hikes to curb the inflation, but it is still increasing in the foreseeable future. (Figure 1 and 2)

Central banks in the US and the EU have accelerated the process of raising interest rates. Their recent tone suggests that they will not hesitate to do what is necessary to control inflation in the medium and long term. The Fed will soon raise rates to restrictive levels, while in the Eurozone, in a context of less robust demand and risk of financial fragmentation, rates will converge to neutral rates.

Amid the central banks' tightening measures, the global economy will slow down significantly, with negative growth for more than a quarter in the US and the Eurozone, that will contribute to slow down inflation, which, however, will remain well above central bank targets in the short term. In the Eurozone, GDP contractions are expected in the coming quarters, fundamentally due to the disruptions created by the war, including energy shortages. The sharp monetary tightening makes a mild recession in the US likely. The environment is very uncertain due to the co-occurrence of multiple shocks. But in sum, a more persistent inflation could trigger even more severe increases in interest rates, and thus a deeper and more widespread recession in the US and the EU.

Is China aside the ongoing global high inflation and economic recession? Apparently, it is.

Indeed, China has an unsynchronized inflation cycle, business cycle and thus unsynchronized policy cycle with the US since the outbreak of the pandemic. Compared with more than 8% inflation headline figures in the US and the Europe, China's inflation figure looks quite contained, from less than 1% in 2021 to around 2.5% most recently. (Figure 1 and 2)

Regarding the growth perspective, after China's "first-in, first-out" of the Covid-19 pandemic as early as April 2020, while the other countries were still grappling with the virus, China was the first economy in the world to achieve positive growth and start to normalize its easing measures conducted in the pandemic time. In addition, China also took use of this precious "time window" to press ahead a series of regulatory storms and "common prosperity" reforms in 2021. However, China's strict "zero Covid" policy still cannot resist the second round of large-scale pandemic outbreak in early 2022 again, namely, Shanghai's lockdown and very restrictive measures in other regions etc. during March and April 2022. Again, the unsynchronized policy comes from China's easing monetary

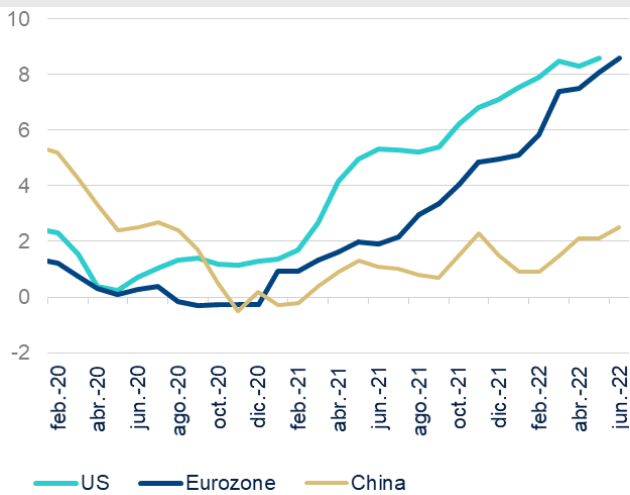
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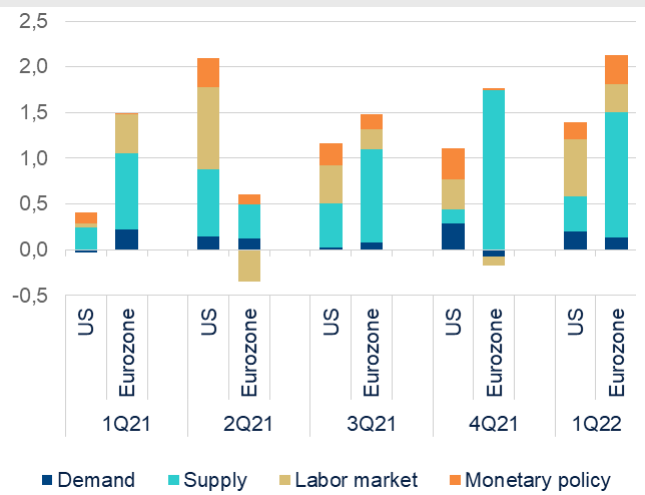
and fiscal measures in 2022 while the US and the Europe have already pressed ahead aggressively the tightening cycles.

Figure 1. **INFLATION: CPI (Y/Y %)**



Source: CEIC and BBVA Research

Figure 2. **SHOCKS TO CORE INFLATION (PP) IN THE US AND THE EUROPE**



Source: CEIC and BBVA Research

However, China is not aside for the global inflation issue in the medium to long term. As the second largest economy in the world and with the tightening trade and financial linkages with other economies, in the past export-driven growth model taking use of China's cheap labors, cheap capital and cheap currency etc., China used to play as a global inflation stabilizer in the past decades since China joined the WTO in 2000.

But this situation bears some changes in the post-pandemic and post-war era. In particular, demographic shifts (the aging problem), slowing technological change and self-sufficient technology policy, de-globalization, trade war and technology war between China and the US and rising populism etc. will all weaken disinflationary forces from China in the long term. Thus, analyzing China's role to global inflation in the short, medium and long term becomes a relevant and exigent question, which we are trying to answer in this report.

Evidences show that China has not exported inflation to the world in the short term since the pandemic outbreak

There are sufficient evidences showing that in the near term, similar to the past decades since China joined WTO in 2000, China has not exported inflation to the world since the outbreak of the pandemic. By contrast, China's role as global manufacturing factory during the global pandemic time helped to stabilize global inflation. (Figure 3-5)

The first evidence is that China's terms of trade which is defined as the exports price to imports price has been declining over time since the pandemic outbreak. This suggests that the increase of exports price is actually lower than that of the imports price comparatively, thus, it is obvious that China is not exporting inflation since the outbreak of the pandemic in early 2020. (Figure 3) Due to the dominant role of processing trade in China, namely, China imports raw materials and after the processing exports final products, China is actually the absorber of global inflation, instead of the net contributor. Actually, the recent China's exports price (RMB denominated) trending-up has included the imported inflation of raw materials and commodities as well as RMB appreciation.

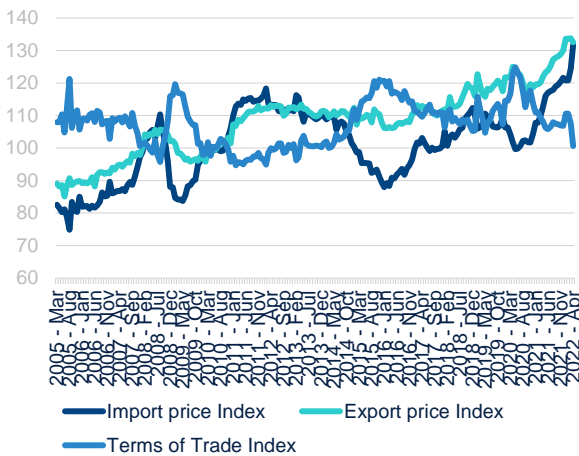
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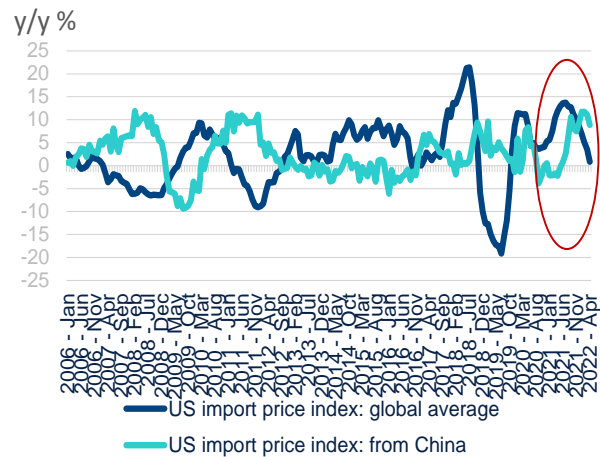
Second, if we compare the US import price from China and the import price from the global average, both at the growth rate and at the level, the former has been consistently lower than the latter. This evidence, again, strongly and firmly proves that China is not exporting inflation in the short term.

Figure 3. CHINA'S TERMS OF TRADE INDEX HAS BEEN DECLINING OVERTIME



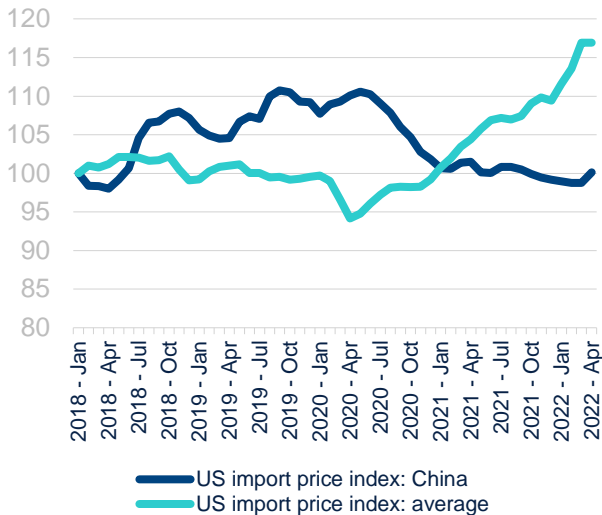
Source: CEIC and BBVA Research

Figure 4. US IMPORT PRICE GROWTH FROM CHINA HAS BEEN LOWER THAN ITS IMPORT PRICE GROWTH OF GLOBAL AVERAGE



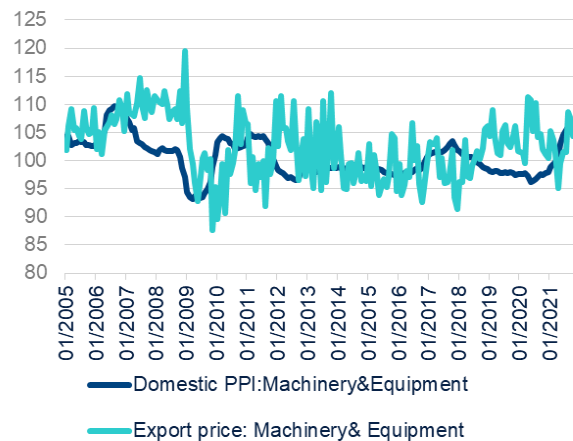
Source: CEIC and BBVA Research

Figure 5. COMPARISON OF US IMPORT PRICE INDEX FROM CHINA VS. GLOBAL AVERAGE (INDEX, LEVEL)



Source: CEIC and BBVA Research

Figure 6. CHINA'S EXPORT PRICE HAS NOT CONSTANTLY HIGHER THAN THE DOMESTIC PRICE: BY SECTORS



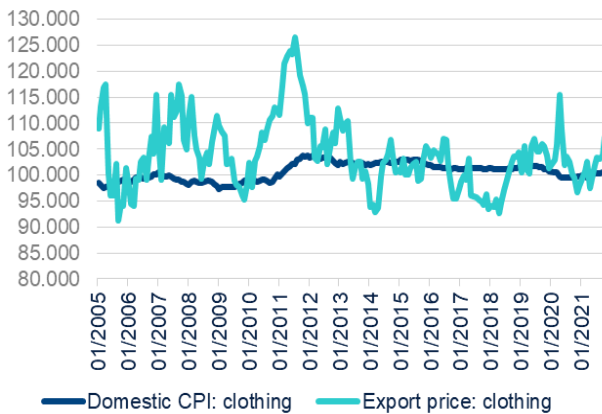
Source: CEIC and BBVA Research

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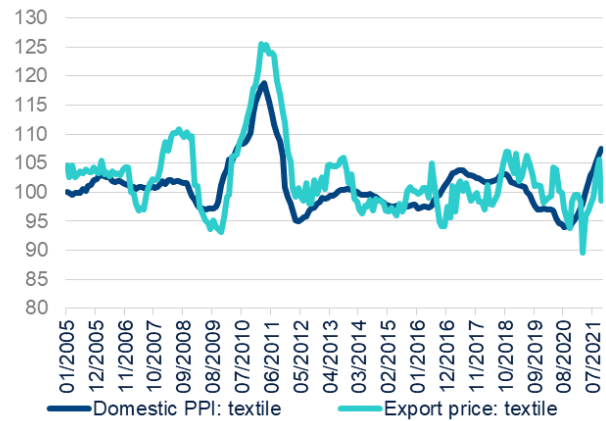


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Source: CEIC and BBVA Research

Figure 6. CHINA'S EXPORT PRICE HAS NOT CONSTANTLY HIGHER THAN THE DOMESTIC PRICE: BY SECTORS



Source: CEIC and BBVA Research

Third, by sector analysis of comparing each sector's domestic price and export price also illustrate our view that China has not exported inflation to the world since the pandemic time. (Figure 6-8) We only listed three main sectors below as examples, namely machinery and equipment, clothing and textile, but we actually investigated every trade sector and conclude that we cannot find any evidence to show that the domestic price has been consistently higher than that of the export price in every specific sector. That means, China is not exporting inflation to the world by artificially raise the export prices.

For the medium term of 1-3 years, China will not export inflation as well...

China is experiencing growth slowdown in 2022 due to its continuation of “zero-Covid” policy and lockdown measures, and we envisage that China is unlikely to have strong growth recovery in the following months with the whole year growth forecast at 4.5%, compared with the growth target at 5.5%. Unlike many economies in the world, China's government didn't distribute money directly to the household sector in a bid to stimulate consumption. At the same time, the confidence of entrepreneurs is at a record low, not only due to the “zero Covid” policy but also due to the clampdown on a number of sectors last year such as after-school tutoring, housing, platform economy and gaming etc. Housing market, which used to be one of the main growth engines in the past decades, also behaved quite lackluster with the real estate investment remaining in the negative growth and housing price dipping over time. Based on all of these, the unemployment situation might be worse than the official figures show at the current stage.

Under such a circumstance, the government has already reverted back to the “old” growth engines to stimulate growth, namely, exports, real estate and infrastructure investment, which were the main counter-cyclical measures in the past decades. (See our recent [Economic Watch: China | Will infrastructure investment become the key growth stabilizer in 2022?](#)) That means, China will become more reliant on the external sector to solve the unemployment problem, thus to unveil more export-friendly policies to create more jobs in the external sector, including export tax rebate, currency depreciation etc. In this context, a competitive export price will maintain China's export momentum in the medium term, that certainly indicates China will not export inflation in the medium term.

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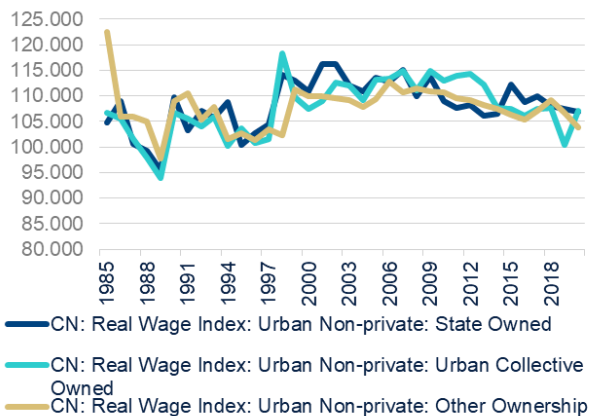
For the long term, will China export inflation to the world?

To answer the question whether China exports inflation or deflation to the world in the long term is much more challenging than that of the short term. After all, China used to play as a global inflation stabilizer in the past decades since China joined the WTO in 2000. This situation bears a lot changes in the post-pandemic and post-war era. In particular, demographic shifts (the aging problem), slowing technological change and self-sufficient technology policy, de-globalization, trade war and technology war between China and the US and rising populism etc. will all weaken disinflationary forces from China in the long term.

One of the most relevant theoretical frameworks to answer this question is the Balassa-Samuelson Theory which indicates that a country with a comparative increase in productivity, it will have wages and price level rise and real exchange rate appreciate. The Balassa-Samuelson Theory seems not hold in China in past decades as China exported deflation by contrary anyway. Two important factors may explain why Balassa-Samuelson theory did not hold in China in the past: (i) Compared with the US, China's technology improvement still lags behind; (ii) The Balassa-Samuelson Theory only considers current account but not consider capital account movements. (Figure 7 and 8) But will it hold in the long-term depends on the comparative technology advancement between China and the US, and also depends on the comparative movements of capital account and current account, which remains an unknown and interesting question to be investigated.

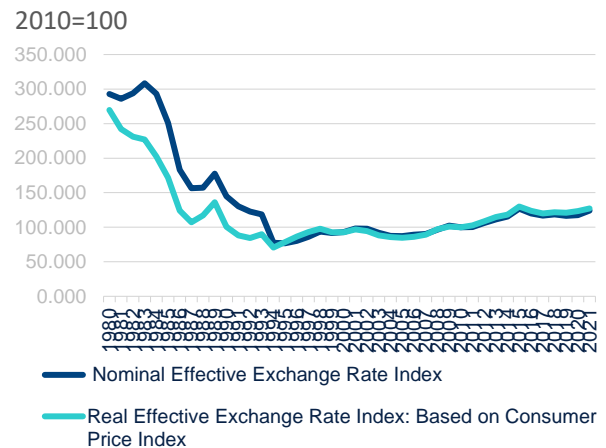
In our analysis framework for the long-term issue, we first of all list all of the factors, both positive and negative, that may affect our answer to this question from two sides.

Figure 7. **CHINA'S REAL WAGE INDEX GROWTH DID NOT DISPLAY AN UPTRENDING (PREV YEAR=100)**



Source: CEIC and BBVA Research

Figure 8. **BOTH NOMINAL AND REAL EFFECTIVE EXCHANGE RATE DEPRECIATED MILDLY (INSTEAD OF APPRECIATION) AFTER JOINING WTO IN 2000**



Source: Zhongtai Securities Research report (2020) and BBVA Research

Quite a number of factors supports that China may still remain the stabilizer of global inflation in the long term:

- (i) One-way RMB appreciation is not anticipated. China's RMB exchange rate is still managed by the central bank, based on the historical evidence, the PBoC promotes two-way fluctuations and has not allowed either one-way appreciation or depreciation to last for long. Thus, the argument that blame China exports inflation through artificially appreciating its currency cannot stand.

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- (ii) Regarding aging, China has a special phenomenon of migrant workers coming from rural area to urban area to conduct labor-intensive work, indicating China still has a lot of buffer to deal with aging problem.
- (iii) China's long-lasting prudent monetary policy to maintain financial stability (i.e. limited monetary easing in pandemic time and quick normalization after the pandemic eased) helps to curb global inflation. In addition, the modern monetary theory (MMT) has never been and will not be the policy choice of the PBoC.
- (iv) In China's new growth model, China is transferring from US-model which is consumption-driven to German-model which focuses on high-end manufacturing, which means, to continue to be stabilizer of global inflation by exporting high-end manufacturing products with competitive prices.
- (v) Technology advancement in China is ways to increase efficiency thus reduce inflation.

At the same time, people may argue that there are also many factors which support that China will contribute to global inflation in the long term:

- (i) Carbon Neutrality target will lead to capacity reduction and price-in of green economy thus may lead to higher inflation and higher export prices.
- (ii) China's supply-side reform and overcapacity reduction will also lead to higher manufacturing prices thus reduce China's exports of deflation.
- (iii) By composition of China's growth, exports' contribution to growth has already given way to consumption and investment, not only in the past years but also in the future. (Figure 10)
- (iv) Common prosperity in China's long-term New Growth Model indicates income re-distribution favoring labor rather than capital, which pushes up wage increasing in labor-intensive manufacturing sector.
- (v) De-globalization, trade protectionism, global value chain De-Sinicization all point to the fact that China's trade share in the world will decline over time, thus, will not export as much deflation as it did during the past decades. (Figure 9)
- (vi) China's contribution to global inflation in the long-term is not only through its export prices but also through its imports. China's decent growth figures in the long-term means China will remain as large importer of commodities and other raw materials. Indeed, we found the synchronized pattern of global commodity prices and China's GDP growth figures. That means, China will also contribute to global commodity inflation from the import perspective. (Figure 12)

After analyzing these positive and negative factors, how can we reach our conclusion that whether China export inflation or deflation in the long term on balance?

In our baseline scenario, whether China is the contributor or stabilizer of global inflation in the long term depends on China's growth pattern and growth model. The carbon neutrality target, common prosperity reform, supply-side reform and over-capacity reduction, consumption-driven growth engine, de-globalization, supply chain de-Sinicization etc. all point to the conclusion that China may contribute global inflation in the long term. In addition, if Balassa-Samuelson effect holds in long term which hinges on whether China will have comparative technology improvement compared with the US, also supports our argument that China may become a contributor of global inflation. Among all factors, on balance, at least what we are firm is China will not export deflation as large as before and to some degree will contribute to global inflation.

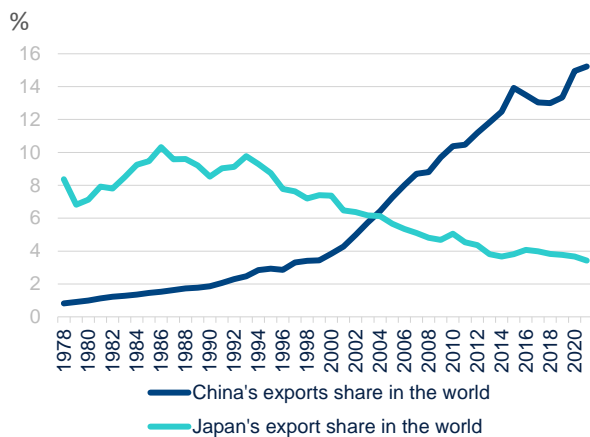
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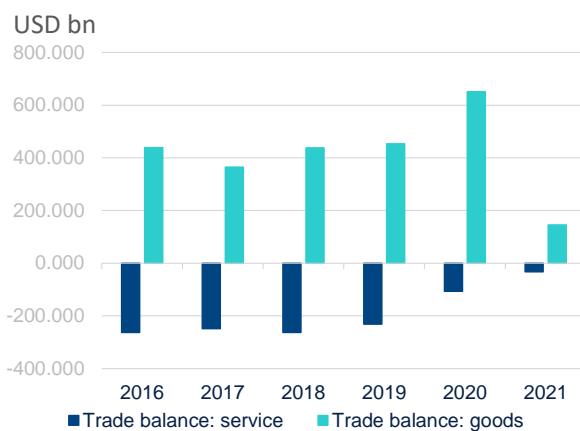
In the risk scenarios which means a significant deviation from our baseline scenario, here are two possibilities: in the risk scenario 1: under faster-than-expected De-Sinicization, China-decoupling and de-globalization, we expect global inflation will rise significantly due to supply chain relocation outside of China, China-US trade war and technology war etc. In the risk scenario 2: China may enter into “Japanization” after the pandemic; that means, China’s growth could stay subpar for a long time like Japan over the past three decades. In this case, China might need to continue to keep its export prices at a competitive level so as to maximize its employment. Thus, global inflation will likely be dragged down by China’s weak growth, weak commodity demand and competitive export prices.

Figure 9. IN THE LONG TERM, CHINA'S EXPORT SHARE IN THE WORLD MAY DECLINE AMID DE-GLOBALIZATION AND VALUE CHAIN RELOCATION (VS. JAPAN IN 80-90S)



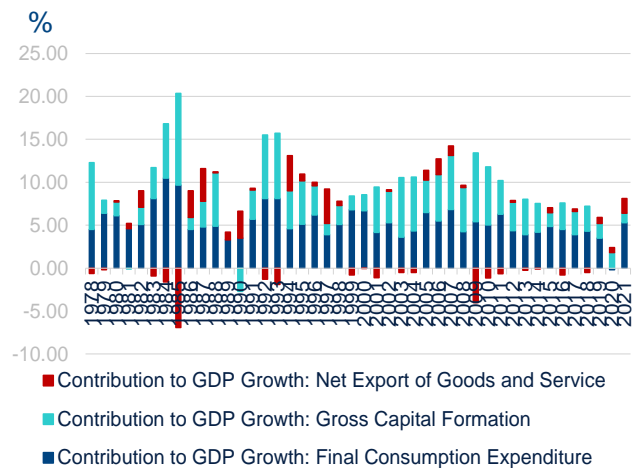
Source: CEIC and BBVA Research

Figure 11. CHINA IS A NET EXPORTER OF GOODS BUT NET IMPORTER OF SERVICE, SERVICE TRADE IS NOT POSSIBLE TO BECOME CHINA'S MAIN TRADE TYPE



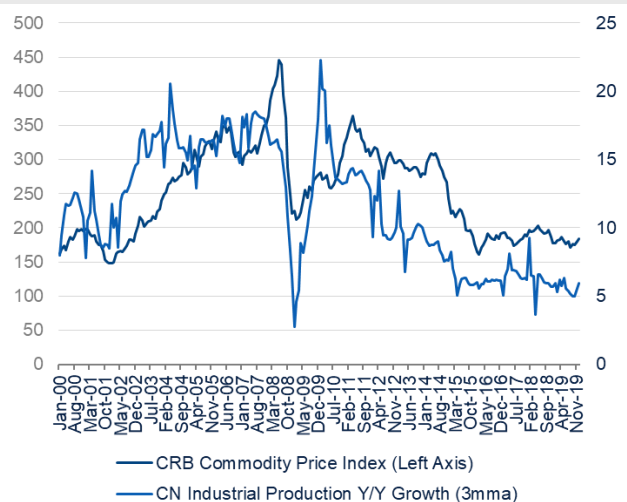
Source: CEIC and BBVA Research

Figure 10. CHINA'S GROWTH DECOMPOSITION: EXPORT CONTRIBUTION TO GROWTH MAY DECLINE OVER TIME



Source: CEIC and BBVA Research

Figure 12. SYNCHRONIZATION OF CHINA'S GROWTH AND GLOBAL COMMODITY PRICES



Source: CEIC and BBVA Research

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Some quantitative econometrics results based on the historical data: how large is China's inflation spillover effect?

Last but not least, if we agree China will export inflation instead of deflation in the world in the long term, it is necessary and important to have a general sense of how large is the spillover effect is. Table 1 summarizes the related literature based on the historical data and the econometrics models.

Although different model setting, country sample and time period may result in very different estimation figures, generally, China's inflation spillover effect is limited, through trade linkage, around 0.17-0.8% reduction of the inflation to the importers based on the estimation results in the past decades.

History may not repeat, as China's new growth model will lead to China exports inflation instead of deflation in the long term. However, history may be rhyming in the sense that China's contribution to the world inflation dynamics might be not as large as we expect. If we attribute the current high inflation mainly to the central banks' Quantitative Easing measures conducted in the pandemic time, given that Chinese RMB has not been international currency and China's PBoC has always been prudent and conservative in terms of easing monetary measures, we believe the inflation spillover effect may be limited as well.

Table 1. **ECONOMETRICS MODEL BASED RESULTS: HOW LARGE IS CHINA'S INFLATION SPILLOVER EFFECT?**

Authors	Paper name	Methodology	Quantitative results
Cote and Resende (2008)	Globalization and Inflation: The Role of China	It estimates a dynamic inflation equation derived from their theoretical model with eighteen OECD countries over the 1984-2006. It computes the time-varying effect of China on CPI using a counterfactual exercise in which it compares the actual inflation rates with a counterfactual measure of inflation calculated.	China reduced inflation in OECD by -0.07 of a percentage point per year over 1990-2006, and by -0.17 of a percentage point per year in 2001-2006.
Eikmeier and Kuhnlenz (2013)	China's Role in Global Inflation Dynamics	We apply a structural dynamic factor model based on SVAR identified by sign restrictions to a large quarterly dataset covering 38 countries between 2002 and 2011 to analyze China's role in global inflation dynamics. We identify Chinese supply and demand shocks and examine their contributions to global price dynamics and the transmission mechanism.	The overall share of international inflation explained by Chinese shocks is notable: about 5% on average over all countries but not more than 13% in each region.
Salzmann (2020)	China's Economic Slowdown and International Inflation Dynamics	It examines the impact of the Chinese economic slowdown that started after the Great Recession on global inflation dynamics. To this end, it fits a high-dimensional data set comprising macroeconomic indicators of 41 countries to a structural factor-augmented vector autoregressive model.	Historical decompositions indicate that after 2014, shocks from China lowered PPI inflation rates outside China by up to 0.3% per quarter, resulting in a cumulative effect on the PPI of 6%. Hence, they markedly contributed to the decline in global inflation rates and hampered the recent upward trend.
Kamin et al. (2006)	The Impact of Chinese Exports on Global Import Prices	Using a multi-country database of trade transactions, we estimate that, since 1993, Chinese exports lowered annual import inflation in a large set of economies by 0.25 percentage point or less on average.	Import competition from China has a modest effect on US import prices, reducing the overall US import price inflation by approximately 0.8% per year from 1993 to 2002. China's effects on 33 OECD nations are even smaller, lowering import price inflation by 0.10 to 0.25% on average per year.
Bugamelli et al. (2010)	The Pro-Competitive Effect of Imports from China: An Analysis of Firm-Level Price Data	They use Italy's manufacturing firms' data over 1990 to 2006 to examine the procompetitive effect of imports from China on Italy's price dynamics.	10% increase in the Chinese share in imports will decrease the price dynamics by 0.30 to 0.35% , whereas the same increase in overall imports will only decrease the price dynamics by 0.06%. The price change is larger in less technological sectors and smaller firms.

Source: BBVA Research the selected literature

Conclusion

We provide an analytical framework to address the question whether China exports inflation to the world in the short, medium and long term. In the short term, China is not exporting inflation to the world since Covid-19 outbreak, although Shanghai lockdown may create some temporary but limited disruptions of global supply chain; this effect is fading when the lockdown ends with a fast supply-side resumption. In the medium term, China will not

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export inflation to the world as China will revert to export sector as the “old” growth engine to stimulate growth amid “zero Covid” policy and growth slowdown. Thus China needs to maintain a competitive export price.

In the long term, to answer this question is more challenging among all the mixed factors. We believe China tends to contribute global inflation, at least China will not export as large deflation as it did in the past decades. Overcapacity reduction, “common prosperity”, carbon neutrality, China’s economic rebalancing as well as de-globalization will all lead China to contribute to global inflation.

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