BNY MELLON INVESTMENT MANAGEMENT

Don't Blame China for Inflation Damage in the U.S.

Global Economics & Investment Analysis, June 23, 2022

The tightness in global supply chains and its impact on developed markets (DM), especially U.S., inflation has garnered increasing attention of market and policy analysts. Recent research has focused on the tightness in production, shipping, logistics and the demand-supply imbalances in the oil market. The New York Fed has aggregated and standardized many such measures into a global supply-chain pressure index and found it to be closely correlated with inflation –especially global producer price inflation.

The state of global supply chains are widely seen as heavily influenced by developments in China. While it is true that China accounts for a large (nearly 30%) share of global manufacturing and shipping, we believe that it is far from obvious that it "causes" U.S. inflation.

In summary, we utilize a few alternate metrics and highlight that:

1. The U.S.' yearly import costs from China are running well below its headline and core inflation rate, as well as much below the import costs from its other major trading partners.
2. Omicron-related lockdowns in China has slowed, not destabilized, the recovery in global supply chains.
3. The gap between producer and consumer price inflation (PPI – CPI), a proxy for the manufacturing sector's margin squeeze, in China, is set to ease in coming months –that should lower what little export price pressure China exerts in U.S. markets.
4. In contrast to China, rising input costs of, and lagging pandemic recoveries at, upstream producers, of semiconductors and commodities, has amplified price pressure and done more damage to U.S. inflation.

In view of these findings, it seems increasingly obvious that laying the blame for the inflation damage in the U.S. on China's Zero-Covid strategy (ZCS) is only part of the big picture. Instead of waiting for the abatement of Zero-Covid in China, U.S. policymakers may be better off opting for tighter demand management policy and doing so speedily. The accompanying strength in the USD will also help.

Exhibit 1: U.S. headline and even core CPI running well ahead of its import costs from China

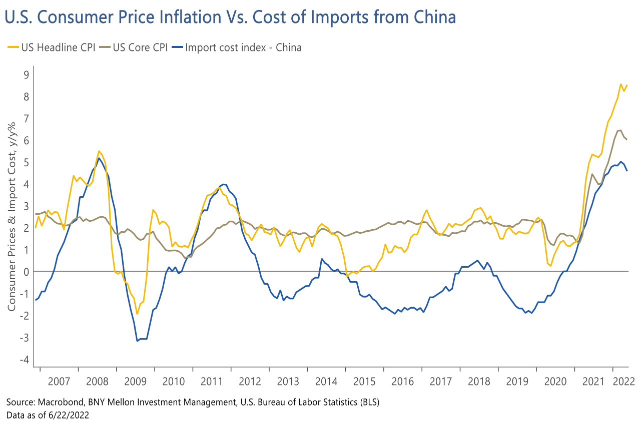
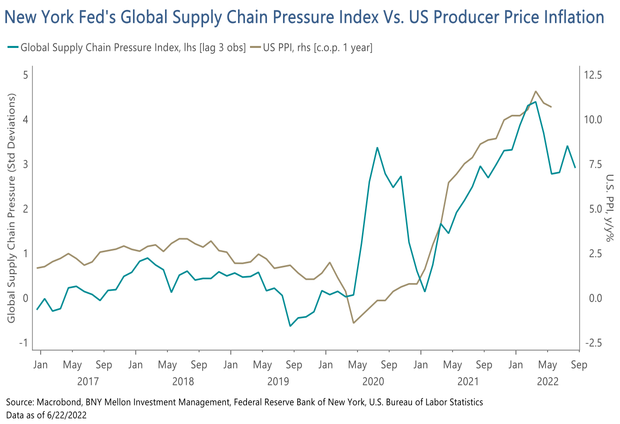


Exhibit 2: U.S. PPI may have peaked, but it is elevated & lagging the recovery in global supply chains



Data downloaded on June 22, 2022

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It's a pity to shoot the pianist when the piano is out of tune – Rene Coty (1882-1962), President of France

CHINA LOCKDOWNS CONTRIBUTE TO GLOBAL SUPPLY CHAIN TIGHTNESS BUT DO NOT DRIVE U.S. INFLATION

By now it is known that global supply chains are tight. We have all experienced delays in shipments, escalating prices of consumer durables and work-from-home electronics and even automobiles –just ask any U.S. resident about the cost of used cars and vehicle rentals.

But is China to blame for much of this? The short answer, we believe, is no. We looked at data on the cost of imports from the Bureau of Labor Statistics (BLS) and show (in exhibit 1, on the previous page) that the U.S.' cost of imports from China peaked around 4.8%y/y and is headed lower. What's more, the cost of Chinese imports in U.S. markets is lower than the rate of headline inflation (8.6%) as well as the core rate (6%) recorded in May. Additionally, as evident from exhibit 2 (also on previous page), U.S. producer prices may have peaked at around 10%y/y, but it is elevated and lagging the recovery in supply-chains by several months.

To be sure, China has had its logistical setbacks as it grappled with the more infectious Omicron variant of the Covid 19 virus. Large-scale lockdowns, in accordance with its Zero-Covid Strategy (ZCS), has contributed to sharp deterioration in supplier-delivery times (see exhibit 3). This has slowed but not derailed the full scope of a (hoped for) reduction in supply chain pressure.

But the reality is that countries focused on production of commodities and tech products have contributed to far higher import costs in the U.S. than has China (see exhibit 4).

Exhibit 3: deterioration in Chinese logistics, due to zero-Covid, does slow a faster recovery of Global Supply Chain Pressure, but…

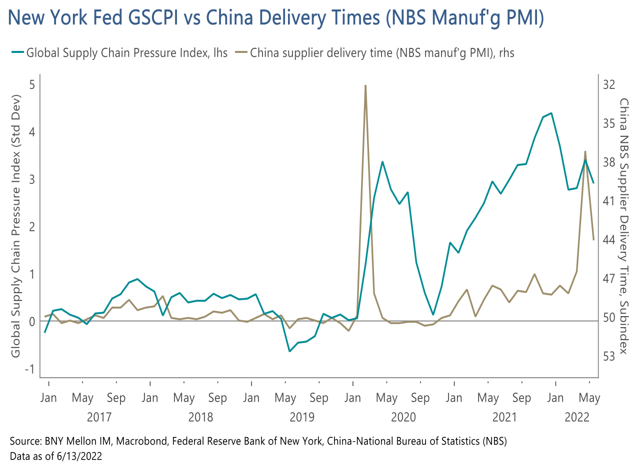

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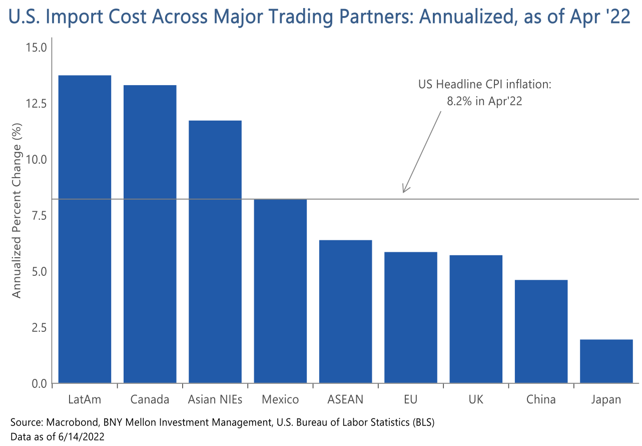
Exhibit 4: … reality is that U.S. import costs from upstream commodity & information technology producers, not China, has been running much higher



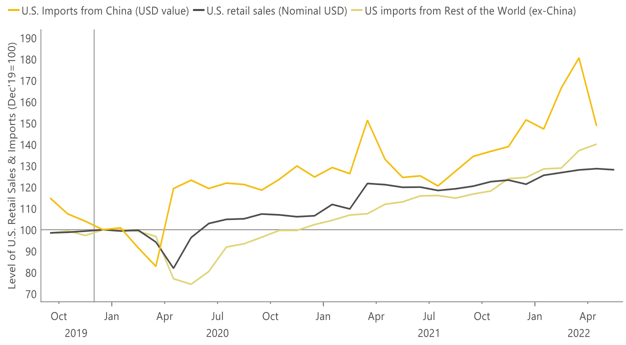
In our opinion, there are several plausible reasons for why China's ZCS has not resulted in much wider supply-chain disruption or raised U.S. imports costs significantly higher:

- First, there are in-built redundancies which have enabled China to re-distribute at least a portion of the load of production and shipping outages from one part of the country to another.
- Second, Chinese authorities have prioritized minimizing production outages --through 'closed loop systems' at factories and logistical networks -- to safeguard against complete shutdowns of manufacturing output and shipments.

- Third, the rest of Asia and the rest of the World --around 70% of global manufacturing-- have steadily re-opened from Covid-related shutdowns and manufacturing and shipping activity elsewhere has largely recovered –this is evident in the rebound in Asia-ex-China manufacturing PMIs. It is also evident in the recent (year-to-date) upturn in the rest of the world's exports to the U.S. relative to Chinese exports – see exhibit 5 below.

A few sceptics would still point toward production and supply shortages in 2021 as stimulus-fueled U.S. demand kicked into high gear and consumer price inflation began rising. To them we would point out that it was China's massive supply- and export-response which made up for most, if not all, the supply shortages. As evident from exhibit 5, below, Chinese exports grew much faster than all other countries, in 2020-21, and even outpaced the above trend increases in U.S. retail sales. This has resulted in a sharp (+2 percentage-point) increase in China's share in global exports --exhibit 6.

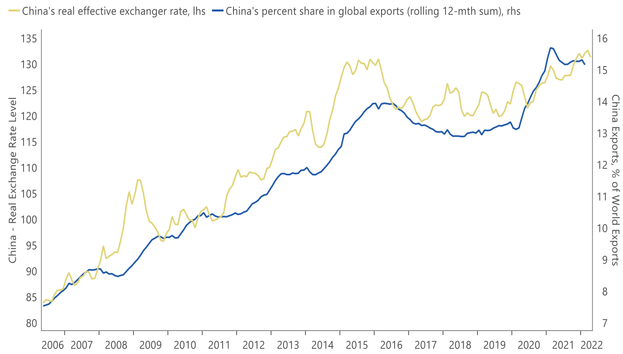
Exhibit 5: Chinese exports outpaced U.S. demand and offset the slump in global (ex-China) exports, but the rest of the world has recently begun stepping up…



Source: Macrobond, BNY Mellon Investment Management, U.S. Census Bureau, U.S. Bureau of Economic Analysis (BEA), U.S. Bureau of Labor Statistics (BLS)
Data as of 6/22/2022

Data downloaded on June 22, 2022

Exhibit 6: Chinese exports gained global market share in 2020-21 –up by 2 percentage points to 15%



Source: Macrobond, BNY Mellon Investment Management, BIS (The Bank for International Settlements), International Monetary Fund (IMF)
Data as of 6/22/2022

IN FACT, CHINA HAS BEGUN IMPARTING A MILDLY DISINFLATIONARY IMPULSE ACROSS THE WORLD

On balance, China is likely to grow below potential and sustain output gaps through 2023, but without undermining global supply chains as we argue in the three points below.

- First, GDP growth is set to slow this year led by a slump in private consumption and investment which will take time to recover as we highlighted, here, last month, when we downgraded our growth forecast by one percentage point to 3.1%y/y. Weakening external demand will also become a headwind and we do not expect output gaps to close until mid-2023.

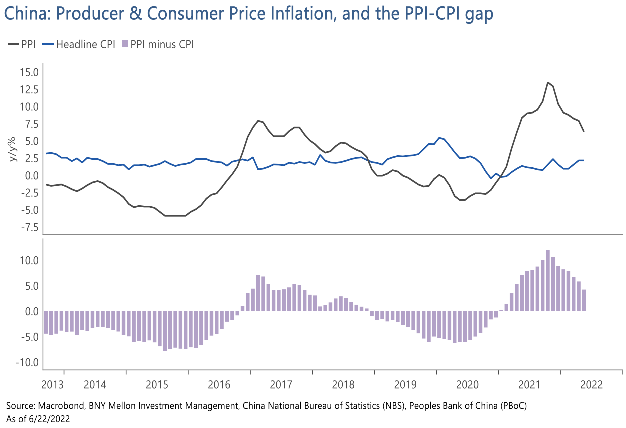
- Secondly, in our view, the infrastructure stimulus led by local governments will not offset the full extent of the downturn in property. This is because, amidst ongoing Zero-Covid policies, land and property prices as well as tech sector sentiment (and capex) will take more time to recover. In turn these will hold back the recovery in labor markets, household incomes and overall private demand well into next year.

- Lastly, China has repeatedly demonstrated an ability to implement its Zero-Covid Strategy without destabilizing global supply chains. It has implemented strict and targeted lockdowns, but not country-wide shutdowns. The latter would have come as a much bigger shock for global supply chains. We acknowledge that Chinese lockdowns have slowed a quicker recovery of global supply-side pressure (see Exhibit 3, previous page), but, it has not derailed it.

Below potential growth at home coupled with a worsening global slowdown has already begun easing metals prices (on a year-on-year basis) and lowered China's producer price inflation (PPI, see exhibit 7 below). In fact, Chinese producer prices have come off quicker than its counterpart in the U.S.

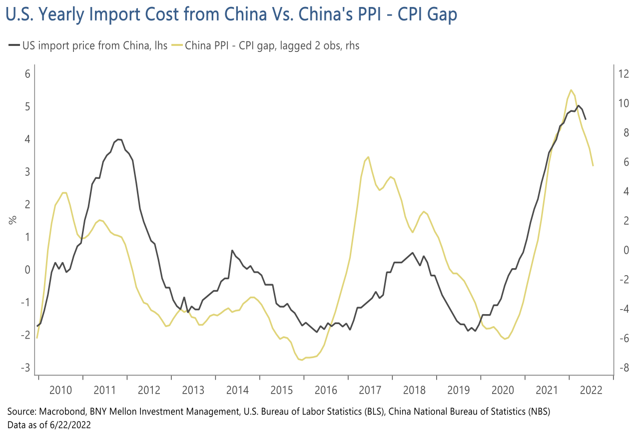
A narrower PPI-CPI gap is important as, going forward, it implies less pressure on domestic manufacturing margins – and, ultimately, a softening of export prices (exhibit 8). To be sure, elevated oil prices remain a problem for the U.S. as well as for China. But if, as we expect, Chinese PPI softens to the mid-single-digit rate in coming months and CPI stabilizes at current levels (c.2%), the narrower PPI-CPI gap implies U.S. import costs from China will ease to an annualized rate of 3-4% before this year is out (exhibit 8).

Exhibit 7: China's producer prices have been weakening on slowing (non-energy) commodity prices, and is narrowing the onshore PPI-CPI gap



Data downloaded on June 22, 2022

Exhibit 8: China's narrowing PPI-CPI gap will pull down the U.S.' import cost from China, to 4% or below, with a 2-month lag



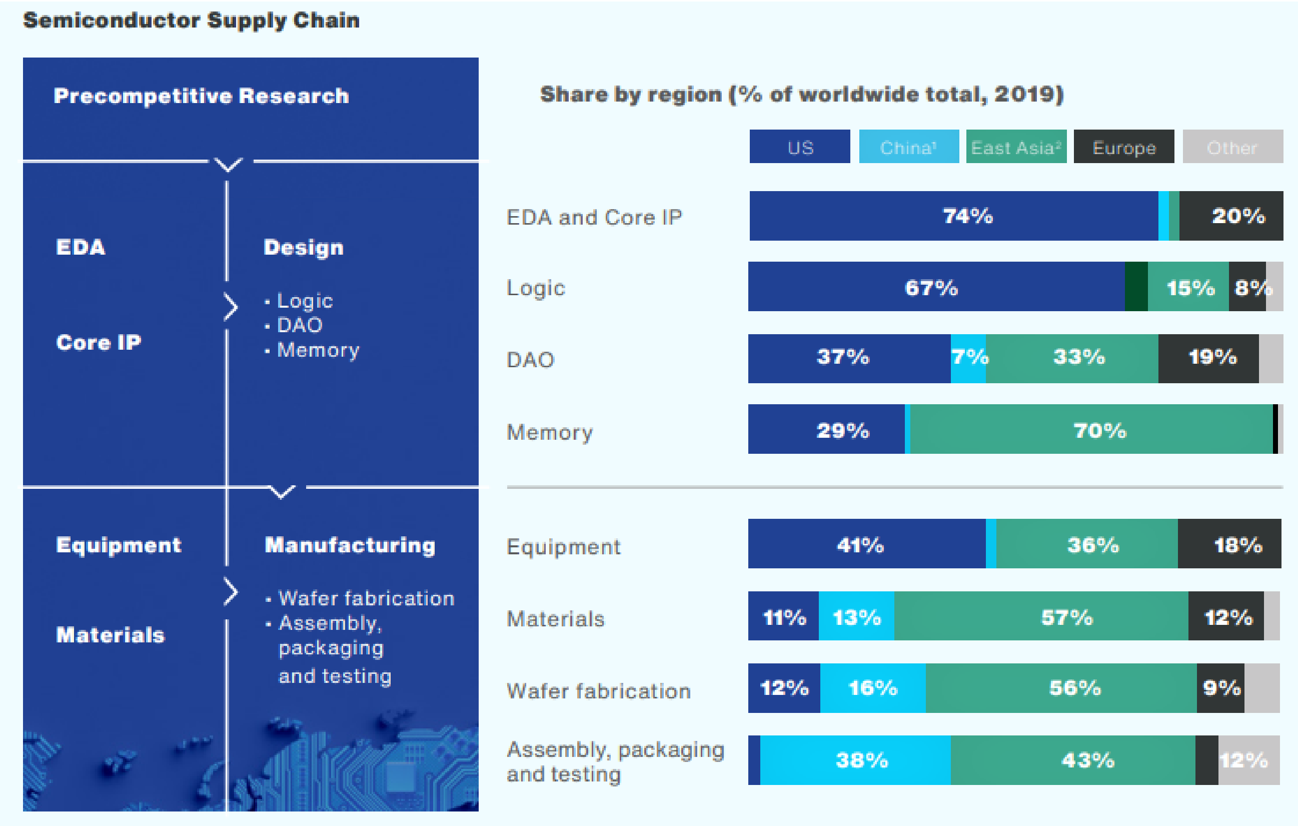
We anticipate that a weakening trend in the USDCNY should also spur further decreases in U.S. import costs from China. Chinese manufacturers will not have to contend with a strong Renminbi which would otherwise crimp their external sales margins. We expect the CNY to weaken on the widening policy and market rates-divergence (in favor of the USD) and a normalization of China's current account surplus as external demand wanes.

ON THE OTHER HAND, SUPPLY DISRUPTIONS AT UPSTREAM PRODUCERS HAVE AMPLIFIED DOWNSTREAM PRICE PRESSURES LIKELY CAUSING MORE DAMAGE TO U.S. INFLATION

Outages of critical commodities and semiconductors tend to have larger second-round impacts, across the world, on downstream prices. For instance, semiconductor chip shortages can result in production stoppages across a range of downstream industries ranging from autos to washing machines to laptops. Crude production outages have a similar impact by raising the cost of hydrocarbons and transportation.

With this upstream effect in mind, and to understand why the U.S.' cost of imports from Asian NIEs (Asian New Industrialized Economies) has risen so much higher than China, we looked at industry research put together by Boston Consulting Group (BCG, 2019) on the semi-conductor sector which highlights the much bigger role played by East Asia --mainly Korea and Taiwan. Exhibit 9, next page, highlights how East Asia accounts for as much as 36% to 57% of the total manufacturing process of actual chip production. In contrast, China's role is much smaller, though, it plays an important role in assembly, packaging, and testing.

Exhibit 9: The Global Semiconductor Supply Chain Based on Geographical Specialization



Source: Boston Consulting Group, April, 2021; downloaded on June 22, 2022

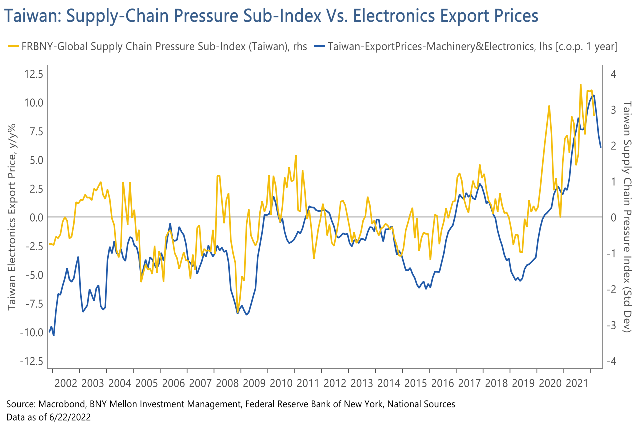
Production outages in East Asia (ex China), and in the U.S. itself, contributed to a much larger increase in chip prices, ultimately resulting the inflation in autos, electronics and a range of other durable goods.

In looking at export price data more closely, we had two other interesting observations:

- First, using a country example, there is a tight relationship between the New York Fed's sub-index for Taiwanese supply chain pressure and Taiwan's own electronics export price index (exhibit 10, overleaf) - this corroborates that supply tightness at NIEs does indeed push-up import prices paid in the U.S.
- Second, staying with the experience of Taiwan and Korea –we do find that the pick-up in semiconductor prices has sharply lifted Taiwan's and Korea's export-price deflators, obtained from their national accounts (see exhibit 11, also next page). In Taiwan's case this is without precedent in decades.

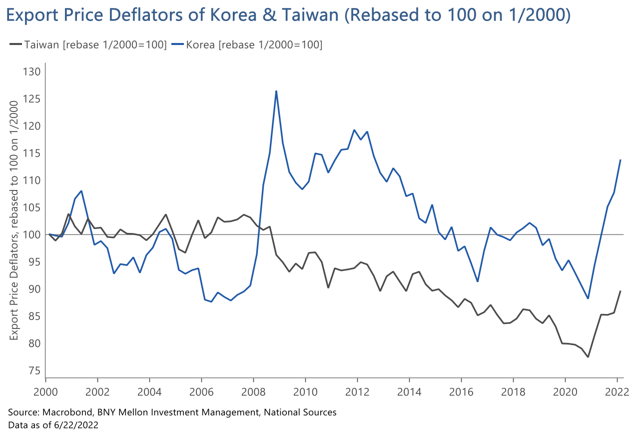
The amplification of downstream price and supply-chain impacts from semi-conductor production disruptions is just an example. The price spike in other up-stream products like energy, agricultural produce, and chemicals –adversely impacted by the Ukraine conflict- is also causing a cascading downstream effect on fuel, food and fertilizer prices.

Exhibit 10: Taiwan's electronics export prices are closely correlated with Taiwan's supply-chain tightness



Data downloaded on June 22, 2022

Exhibit 11: The downstream price impacts, felt in the U.S., are also noticeable in Taiwan's and Korea's export deflators

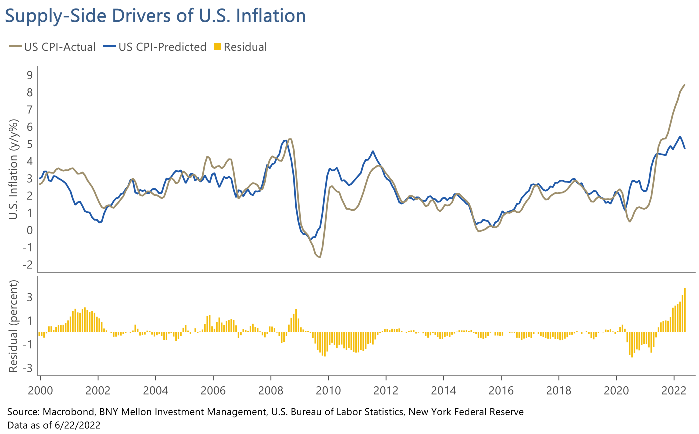


UNTANGLING SUPPLY-CHAINS MAY BE COMPLICATED, AND NOT ENTIRELY UP TO CHINA, BUT THERE IS NO SUBSTITUTE FOR TIGHTER AND QUICKER DEMAND MANAGEMENT WITHIN THE U.S. ITSELF

The final point we would make is that our supply-side model of U.S. headline inflation shows a very large (actual minus predicted) inflation residual of +3.5% (exhibit 12 below). This can mean either demand-side pressures are getting out of hand or inflation expectations are worsening. Or both. Our results (with a 0.64 R-square) were statistically significant and based on a regression of the New York Fed's global supply-chain pressure index and BLS data on the U.S.' overall import cost (the independent variables) on U.S. headline CPI inflation.

What this goes to show is that demand management matters. Even if we believed, for arguments sake, that the slow recovery in global supply-chains --including setbacks from China's ZCS-- or the annual rate of import costs were all it took to drive U.S. inflation, the predicted CPI inflation rate comes to around 5%. But actual inflation is running much higher at 8.6% (as of May'22). It is, therefore, increasingly clear that policy measures to rein in demand-driven inflation, and inflation expectations, are becoming more critical.

Exhibit 12: A supply-side model of U.S. inflation (driven by import costs & supply tightness) shows a +3.5ppt inflation residual



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