Asia FI & FX Strategy Watch

CNY – nominal concern vs. real value

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GEM FI & FX Strategy
Asia

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USD/CNY moves are nominal

USD/CNY's move above 7.00, touching a high of 7.0818 (May 24), is raising concerns over whether the CNY can appreciate against the USD this year. This 2% year-to-date depreciation comes amid broader USD strength and signs that China's recovery is uneven, with some questioning if China's recovery is self-sustaining.

We maintain a year-end USD/CNY forecast of 6.75 and end 2Q forecast of 7.00. We recognize that recent activity data is disappointing and that the PBoC is accommodating CNY weakness by allowing the daily fixing to move in line with the market and fix above USD/CNY 7.00. However, we highlight that the move is orderly, thus far. The spot basis between onshore CNY and offshore CNH, as well as CFETS basket fixing and spot basis is in line with historical norms, suggesting little market stress. Portfolio outflows appear manageable, while the PBoC is perceived to be intervening against speculative shorts.

Getting real with CNY

In this note, we draw attention to China's real or inflation adjusted trade-weighted exchange rate, rather than nominal CNY movements against the USD.

We focus on three valuation themes: (1) CNY's increasing competitiveness in traded goods (2) The context of NE Asia FX valuations where JPY and KRW are also trading inexpensive (3) real FX competitiveness in industry specific sector such as manufacturing and electronics. Contrary to CPI based measures of the CNY's trade-weighted exchange rate (see Exhibit 1) we show that the CNY is gaining competitiveness in producer prices terms, especially in manufacturing and electronics.

CFETS – China Foreign Exchange Trading System

PBoC – People's Bank of China

REER – Real Effective Exchange rate

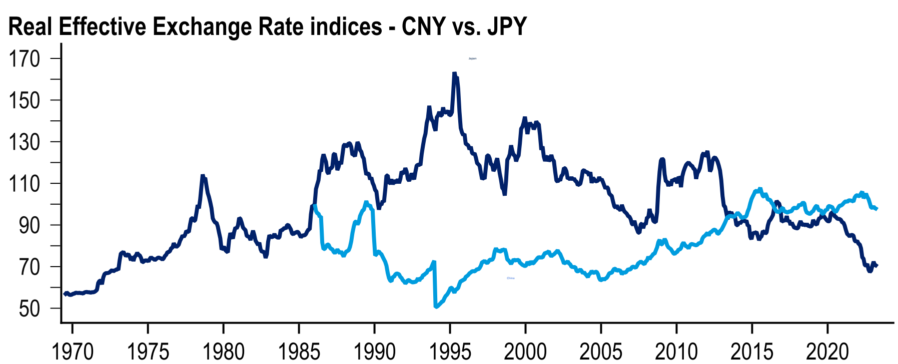
NEER – Nominal Effective Exchange Rate

ToT – Terms of Trade

CPI – Consumer Price Index

PPI – Producer Price Index

Exhibit 1: Back to the future - CNY goes back to 1986, JPY goes back to 1970
Exchange rate valuations in CPI inflation adjusted trade-weighted terms



Source: BofA Global Research, Macrobond, Bruegel REER indices

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Refer to important disclosures on page 7 to 9. 12563110

How to get real with CNY

There was once a time when exchange rate valuation mattered and were scrutinized by policy makers. Indeed, at last year's G7 Summit there were still calls for better coordination of exchange rates amid relentless USD strength.

However, at the latest G7 Summit (May 20th) there was only one passing reference to upholding existing commitments to stable exchange rates. Instead, policy priorities are shifting to securing stable and diversified supply chains.

The focus away from exchange rate values comes as the Japanese yen has reached record lows in trade-weighted terms, both in nominal and inflation adjusted terms. In the past three years the JPY has lost some 20% in value – see Exhibit 3.

By comparison the CNY's depreciation appears less dramatic. The CNY has lost only 2% over the past three years in trade-weighted terms, using CPI to adjust for inflation since 2010. In nominal trade-weighted terms it is up 7.6%, according to Exhibit 2.

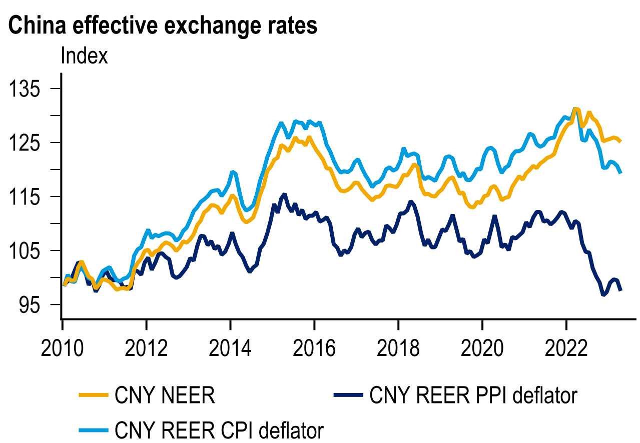
> However, when adjusting for inflation using producer prices, rather than consumer prices (CPI), we see a much bigger 10% depreciation. This would take the value of CNY back to 2010, in trade-weighted real terms.

Traded versus non-traded goods

What explains the divergence in real exchange rate valuations using relative producer prices versus consumer prices. In some sense, producer prices should be a better metric of trade-competitiveness as they represent a goods basket that is more readily traded internationally. By contrast, consumer prices are considered to comprise more non-traded or domestic goods. This measure would better capture the international purchasing power of consumers.

What we are witnessing in Exhibit 2 is a rebalancing of sorts in China's economy, consumer purchasing power has improved as demand has been more robust, relative to the export sector. By contrast, it appears that Japan's consumer pricing power has diminished by more than the exporter sector.

Exhibit 2: China's nominal and real trade-weighted exchange rates
In producer price adjusted terms, China's FX depreciation is much deeper



Source: BofA Global Research, Bloomberg, JPM

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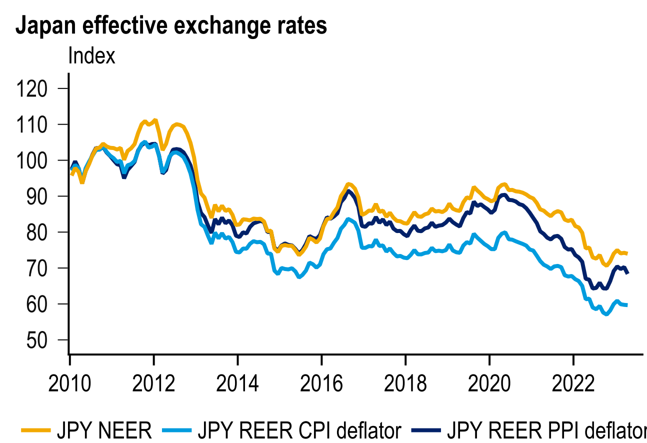
Exhibit 3: Japan's effective exchange rates are inexpensive
However, CPI adjusted FX appreciation is more than PPI



Source: BofA Global Research, Bloomberg, JPM

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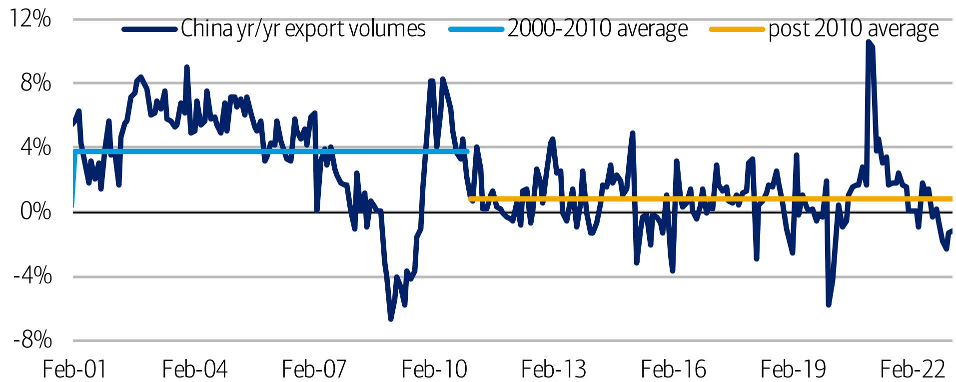
What is happening to exporter pricing power?

The answer to this question is complex, but it is worthwhile looking at some basic charts to describe the circumstances. There are likely four factors that would play a key role in determining relative pricing power: First, global demand for exports. Second, productivity. Three, commodity prices and supply shocks. Four, possible subsides.

Exhibit 4 shows a structural shift in global export demand after the Global Financial Crisis (GFC). Prior to the GFC, China's export volumes were growing, on average, at 3.8% yr/yr. However, after the crisis this dropped to meagre rate of 0.8% as demand fell.

Exhibit 4: Post 2010 GFC China export volumes decelerate as global demand falters
During the first decade China annual export volumes grew 3.8%, since then an average of 0.8%



Source: BofA Global Research, CPB Workd Trade Monitor

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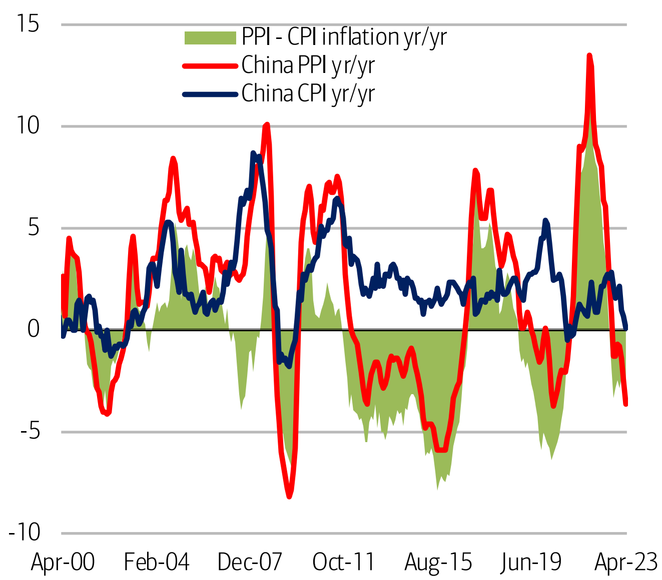
Another key factor is the post GFC slump in commodity prices, which lasted until COVID hit in 2020. This also led to input prices and producer prices falling steeply in China, relative to consumer prices -Exhibit 5. This helps to explain the divergence of real CNY FX valuations using producer versus consumer prices.

Exhibit 5: Post 2010, China PPI deflates relative to CPI
Traded goods prices fall relative to non-traded goods



Source: BofA Global Research, Bloomberg

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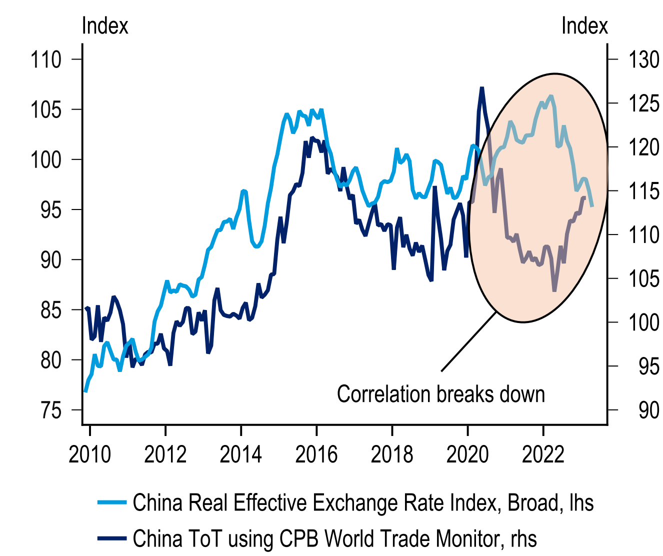
Exhibit 6: China's improving terms of trade vs. REER
Positive trade terms no longer correlated with REER appreciation



Source: BofA Global Research, Macrobond, BIS

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Given China's high dependency on commodity imports it is notable that there is a high correlation between China's terms-of-trade and CNY valuation in trade-weighted real terms – see Exhibit 6 above. The terms-of-trade (ToT) measures the relative pricing power of a country's import costs relative to its export prices. An improving terms of trade usually results in current appreciation as export proceeds outpace import costs.

However, Exhibit 6, also shows how this correlation has broken down during COVID. One likely explanation for this is that large shifts in global export demand overwhelmed the effect of relative change in ToT. Global goods demand boomed in the initial phase of COVID and is now falling away, leaving a glut of capacity in China and downward pressure on the REER through other channels such as portfolio outflows.

Valuation – in the eye of the beholder

The divergence in China's improving terns-of-trade and depreciation real exchange rate points to CNY under-valuation. Indeed, our behavioral equilibrium model that relies heavily on terms of trade shows the CNY 38% undervalued against the USD and 16% undervalued in trade-weighted terms – see page 24 Asia FI & FX Strategy Watch: Asia FX Monthly – China reopening optimism unwinding 24 May 2023.

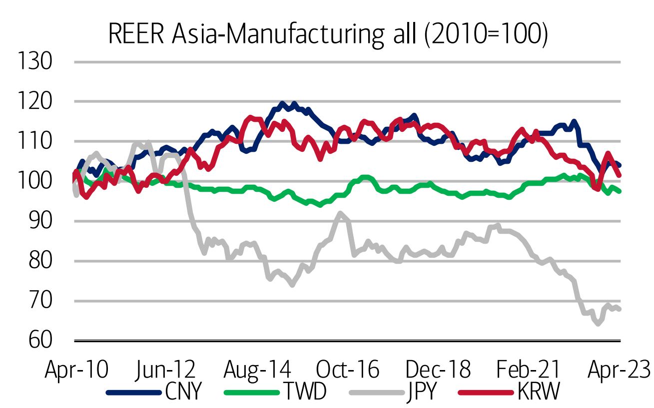
Even if we discount the fact that this valuation places too much weight on terms-of-trade, our COMPASS model that is based on broader equilibrium current account positions shows the CNY 5% undervalued against the USD and its trading partners.

The trouble with mean reversion

The trouble with currency valuation metrics is that they depend on reversion to a mean valuation. The challenge is how long is the mean-reversion process and is the mean valuation stable. Exhibit 7 focuses on valuation of NE Asian currencies using producer prices and trade-weights specific to the manufacturing sector. The JPY REER shows a long-term depreciation. In fact, looking at the overall JPY REER, we are back to 1970 levels, having peaked in May 1995 and subsequently depreciating 56% in real terms.

Japan's case illustrates those successive economic shocks; 1990 bubble bust and subsequent debt deflation, followed by GFC and COVID negative shocks can lead to permanent or long-lasting shocks in the equilibrium exchange rate. However, Exhibit 8, shows that relative undervaluation of Asian REER manufacturing indices is quite broad (below the 30th percentile), with only Singapore at the 98 percentiles of its trading history since 2010.

Exhibit 7: China's manufacturing competitors are cheaper in REER
Japan's manufacturing REER competitiveness accelerated since 2020



Source: BofA Global Research, The Research Institute of Economy, Trade and Industry (RIETI)
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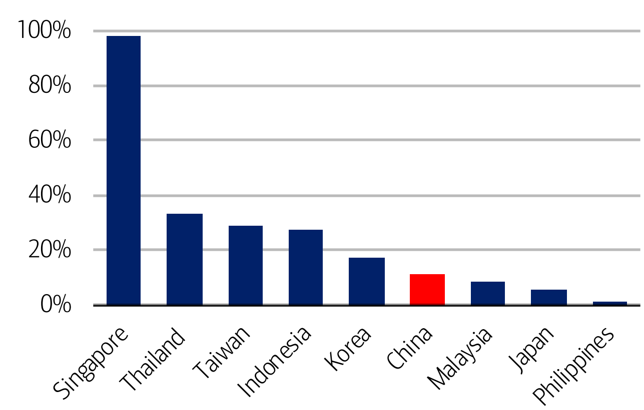
Exhibit 8: Asia Manufacturing REERs in percentile of their history
China is trading in 38th percentile of its REER history since 2010



Source: BofA Global Research, The Research Institute of Economy, Trade and Industry (RIETI)
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Economic fundamentals dictate that the undervaluation of real effective exchange rates should correct because of the law of one price. Given the commoditized nature of manufacturing and electronic goods, they should be priced very closely internationally. If this is not the case, international trade and arbitrage should allow goods in undervalued countries to be sold in overvalued countries for a profit. The adjustment in trade flows would result in an adjustment in the nominal exchange rates and subsequent appreciation of the undervalued currency.

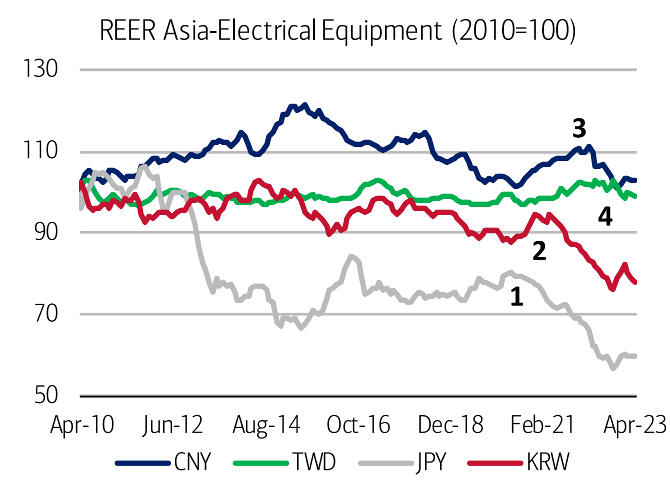
Sector specifics – Electronics

Given the recent geoeconomic focus on supply chains and the electronics sector, Exhibit 9 and Exhibit 10 look at the relative currency competitiveness of Asian countries in real terms, specific to their electrical equipment sectors. These indices are calculated by Japan's Research Institute of Economy, Trade, and Industry (RIETI) using 2010 weights. The electronics sector is especially important as it accounts for 16% of Japan's industrial exports, 20.5% for Korea and 33% for China.

One troubling aspect of Exhibit 9 is what appears to be superficial signs of competitive depreciations or export pricing competition in the electronics starting with JPY(1 around November 2020), KRW (2 = April 2021), CNY (3 = April 22) and TWD (4= October 2022).

Indeed, Exhibit 10, shows how Asian REERs specific to the electronics sector are trading at historically inexpensive levels for Korea, Japan and China; below their 10% percentile trading history since 2010. This would suggest that there would be little to gain from further FX depreciation as the real valuations are already inexpensive compared with the post 2010 period.

Exhibit 9: Japan's REER for electrical equipment falls 57%
Superficial signs of price competition, FX depreciation, in electronics sector



Source: BofA Global Research, The Research Institute of Economy, Trade and Industry (RIETI)
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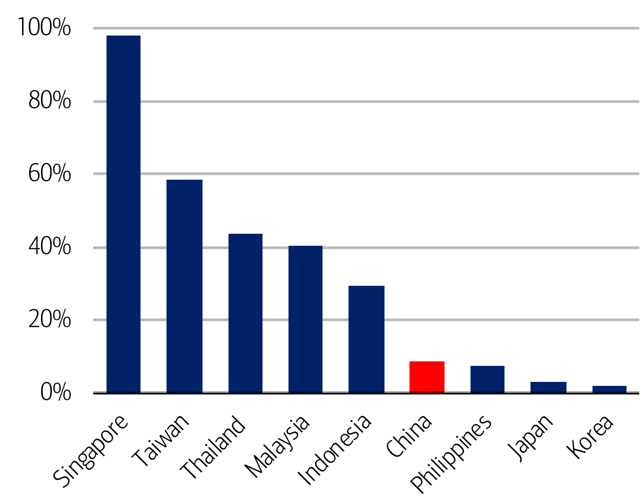
Exhibit 10: Asia Electronic REERs in percentile of their history
CNY is trading in the 41st percentile of REER history since 2010



Source: BofA Global Research, The Research Institute of Economy, Trade and Industry (RIETI)
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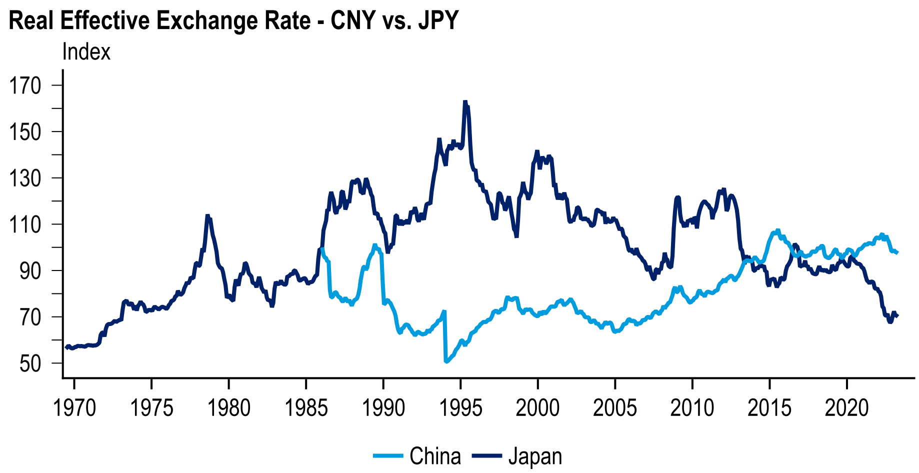
The Long View of Exchange rates

The final chart, Exhibit 11, concludes with the long-term history of China's and Japan's real effective exchange rates using CPI, sourced from the Breugel economic think tank indices. Here, we see that in the longer sweep of history the Japanese yen is back to its valuation levels of the 1970s, whereafter the collapse of Bretton Woods and higher inflation took its toll on the USD and the JPY appreciated.

By contrast, the CNY has returned to its 1986 levels, which was followed by high inflation and economic liberalization, including exchange rate reforms, resulting in CNY devaluations. China's 2001 entry into WTO and subsequent trade, reform and productivity boom resulted in a sustained CNY appreciation until the mini devaluation of 2015. Since then, the CNY continues to hold its 'historically' high levels. However, as we point out in this note, the CNY is maintaining competitiveness in the traded goods sector and in particular, manufacturing and electronics.

Exhibit 11: Back to the future - CNY goes back to 1986, JPY goes back to 1970
Exchange rate valuations in CPI inflation adjusted trade-weighted terms



Source: BofA Global Research, Macrobond, Breugel

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