

## Chinese QE?

- ☉ The PBoC continues to ease. Interest rate/RRR cuts should be expected, property will be supported, leverage will rise. While not QE, it is not petty.
- ☉ China's M2 is expanding faster than credit. There is plenty of liquidity in the system, but few takers. It will take some time for the easing policies to work.
- ☉ Three divergences, public vs. private, domestic vs. foreign, up- vs. downstream, as shown in M2 vs. new loans, the CNY, and CPI vs. PPI are hinting at a cyclical recovery.

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**Chinese version:**

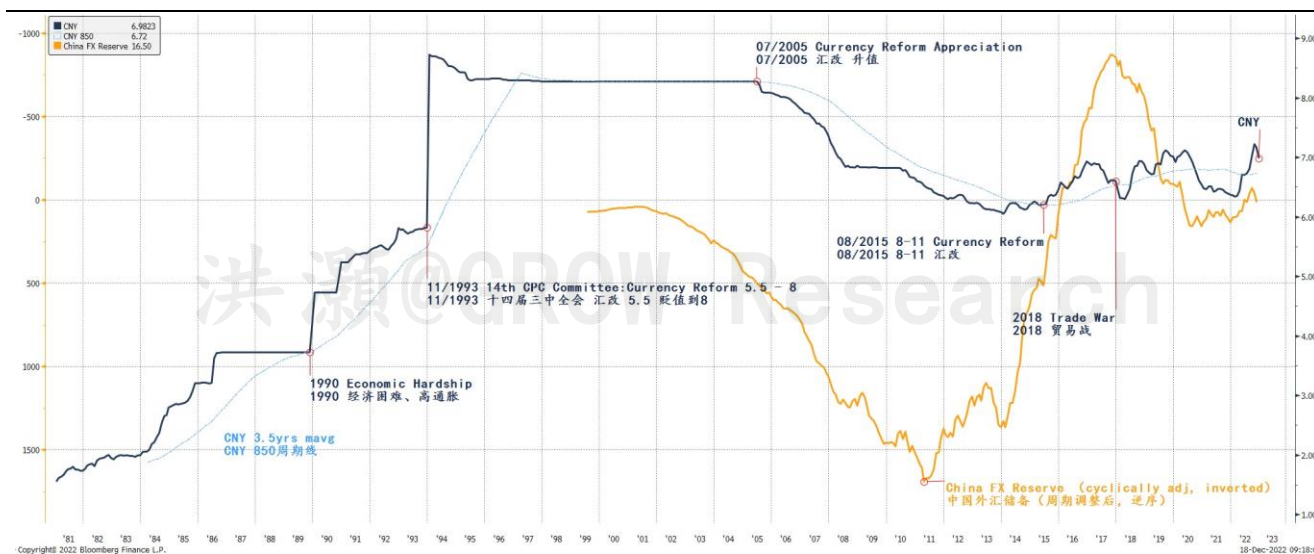
《中国量宽?》

## CNY at Crossroad

Recently, I hosted a roundtable discussion with some of China's top economists. These economists distinguish themselves with their acute awareness of the relationship between China's macroeconomy and its market. Their views are well sought-after.

To us, economics is more an art than science. And how the market responds to the macroeconomic changes often overwhelms mathematical formulae derived by economists treating the economy as interlocking gear wheels controlled by pulling levers. As Nobel Laureate, physicist Richard Feynman once put it, *"imagine how much harder physics would be if electrons had feelings"*.

**Figure 1: Comparison of CNY with China's Forex Reserve. Secular inflections at 850-day mavg crossing.**



Source: Bloomberg, GROW Research

At our roundtable, we discussed the outlook of US inflation and the Fed's monetary policy choices. We also compared Japan in the 90s with the Chinese economy at present. The economists then pivoted to China using the US and Japan as precedents to suggest that China had leeway for its own Quantitative Easing (QE).

Based on their views about China's potential for QE, the economists turned very bullish on the Chinese market. "The Shanghai Composite can go to 5,000 or even 10,000, if QE is implemented. We should stretch our imagination," one of the economists posited. This economist is renowned for his cautious stance and hence conservative portfolio allocation in the past three years. I was tickled.

Meanwhile, we note that the CNY is once again nearing its secular inflection point. The CNY has been one of the most important indicators for the current economic cycle. Recall that, as CNY plunged towards its weakest level of close to 7.4 in the current cycle, Chinese asset prices plummeted in tandem.

In the past three decades, China had undergone three significant currency reforms/revaluation - roughly ten years apart. The first one was in 1993 when the Third plenum of the 14th CPC Central Committee depreciate the CNY from 5.5 to 8 to boost the Chinese economy. Then in 2005, China let the CNY to appreciate to reflect the strength in its forex reserve accumulation since joining the WTO in late 2001. And in 2015, China depreciated the CNY and established the mechanism for setting the CNY reference rate.

Note that the first two reforms are the ones to reset the CNY valuation to reflect the underlying economic fundamentals. The third one is to make the CNY exchange rate setting more market-based. As the CNY went through three rounds of reform, the volatility of its exchange rate was gradually expanded to accommodate a market-driven pricing scheme.

Interestingly, around each reform, the CNY spot rate crossed its 850-day moving average – the wavelength of China's short economic cycle. (**Figure 1.** For detailed discussions of our China's economic cycle theory, please refer to my bestselling book "**Forecasting: Economy, Cycle and Market Bubbles**" published by the CITIC Press. It has been re-printed 14 times since its publication two years ago.)

**Figure 1** shows how each of the significant reform coincides with the crossing of the CNY spot rate at its 850-day moving average. At its current level not far from this important moving average, the CNY seems to be poised for some monumental changes.

The Central Economic Work Conference had just announced comprehensive goals and plans for economic development in 2023 and beyond. The Conference emphasized that monetary policy should be "*strong and accurate 精准有力*", adding back the phrase "*keeping liquidity at reasonable and sufficient level 保持流动性合理充裕*". And the CNY appears to have anticipated these upcoming policies.

As such, we believe that liquidity expansion will be structural and targeted, rather than blanket easing. To offset weak domestic demand and cushion the downside of the property market, macro-leverage will increase. And further interest rate/RRR cuts are in the cards. But it is not QE.

While we are not as sanguine as our panelists regarding the prospects of a Chinese QE, we share their positivity, albeit much more restrained, about the outlook of the Chinese markets.

## Imbalance Between Public Money and Private Credit

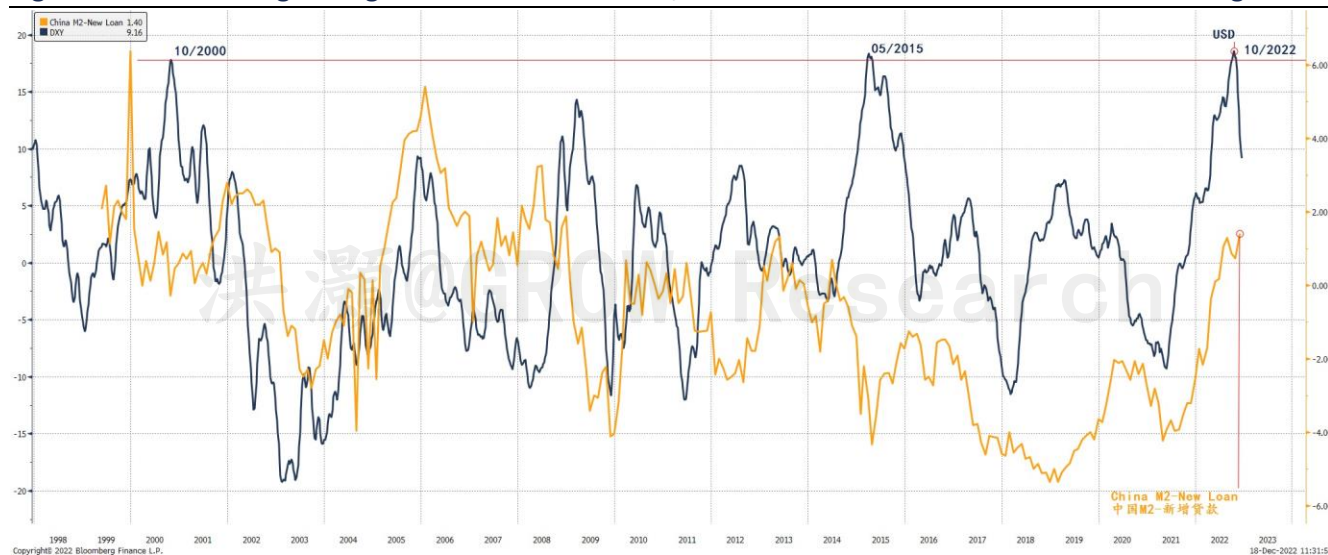
The recent turmoil in the market of wealth management product (WMP) is glaring. The drawdown of some WMPs was as high as 20%. Consensus believes that asset rotation from bonds to equities has led to the surge in bond yield, and hence the plunging value of WMPs.

In our 2023 outlook report “[A Cyclical Recovery](#)” published on November 20, 2022, we highlighted the prospects of an impending cyclical bottom and hence improvements in Chinese asset prices. While the consensus view on the malaise that WMPs are suffering appears to concur with our market view, it is difficult to fathom how a cyclical recovery would pummel one of the safest financial instruments in the market by as much as 20%.

We note that China’s M2 money supply growth is outpacing its lending growth (**Figure 2**). Such development would mean that cash is stuck in the system and has not turned into credit expansion via commercial bank lending. Or that the central bank has expanded its money supply, but commercial banks are finding it hard to lend out the money.

As such, there is an imbalance between public money supply and private credit expansion. It could be that after a prolonged period of economic uncertainties, people choose to save more rather than spending. It is no wonder that the PBOC depositor survey suggests unprecedented intention to save, and retail sales has shrunk y/y.

**Figure 2: China’s M2 growing faster than new credit, but should soon reverse. So will USD strength.**



Source: Bloomberg, GROW Research

Another perspective to see this public/private money-credit imbalance is to see it from an angle of foreign versus domestic. Recall that the Fed is tightening. And despite recent evidence suggesting that the US inflation has peaked, Powell is sticking to his hawkish stance, hinting at that the Fed’s work is “*far from done*”. Meanwhile, the PBoC is easing by all means, including interest rate and RRR cuts, expansion of PSL and structural loans, etc. And M2 is growing, despite weak demand for credit.

We can then compare China's M2/Credit growth divergence with the strength in the Dollar (**Figure 2**). The correlation between these two measures is palpable. The PBoC's easing will eventually turn into credit expansion, probably helped by a property recovery, and hence Chinese economic growth. But the Fed's tightening policy will continue to restrain US demand and eventually slowdown US growth.

Such relative economic strength will then be reflected in the weakening of the Dollar. Note that the Dollar strength is falling from a significant peak comparable to two important peaks of the USD in history, namely, in 2000 and 2015.

Contemporarily, the CNY should strengthen, especially from the weakest level of ~7.4 seen during the current cycle. Yet another angle to see the relative strength of foreign versus domestic demand is by examining China's macro margin measured by CPI-PPI. Think of CPI as a measure of pricing strength driven by domestic demand, while PPI as a measure of pricing strength driven by foreign demand, as a lot of Chinese goods are made for exports.

The gap between Chinese CPI and PPI suggests the relative strength of China's domestic demand compared with that of foreign countries. While domestic demand in China is weak, as suggested by a weak CPI and sluggish credit expansion, foreign demand for Chinese exports is cooling down even faster, as measured by a negative PPI and falling Chinese exports growth. Some exporters we met in Ningbo, the World's largest port and one of China's manufacturing hub for exports, said orders now were almost halved.

The relative strength between domestic and foreign demand is shifting. As such, the CNY will likely strengthen (**Figure 3**). Understandably, as China implements its growth-oriented policies, it is likely that domestic demand will recover, especially relative to foreign demand suppressed by a hawkish Fed.

**Figure 3: China's macro margin vs. CNY**



Source: Bloomberg, GROW Research

## USD Long-term Trend Starting to Weaken

Interestingly, as the CNY starting to strengthen, the long-term trend of the US Dollar is starting to weaken in tandem. In **Figure 4**, we show that US current account deficit, a dominant source of global liquidity, seems to be arriving at an important low. The US current account deficit and its cycle tend to lead the Dollar cycle by a few years. The expanding US current account deficit over the past few years has been fueled by the US demand for foreign goods, suggesting a weaker dollar in the coming years.

**Figure 4: Expanding US current account deficit bodes ill for the dollar in the coming years.**



Source: Bloomberg, GROW Research

Such relationship between the US current account deficit and the Dollar is no coincidence. The Fed loosens its monetary policy to stimulate US demand that buys imports while exporting Dollar liquidity via the US current account deficit. The mirror image is China's ballooning current account surplus and strong export growth. This is indeed what had happened in the past three years of COVID.

Now, as the Fed tightens, US demand will cool, pressuring US growth and shrinking Dollar liquidity. As US demand cools, US inflation pressure will ease, Chinese exports will weaken, Chinese growth outlook is still murky, but has improved after the Central Economic Work Conference.

Please note that our discussion here regarding the Dollar is for a longer-term cycle that measures in years rather than days. Nevertheless, recent palpable weakness in the Dollar can be the prelude to what is to come. And a weaker dollar bodes well for commodities, emerging markets, and other dollar-priced risk assets.

## Conclusion

While some prominent economists are arguing for Chinese QE, recent Central Economic Work Conference suggests a more measured approach. More interest rate/RRR cuts, coupled with further PSL expansion and supports for the property sector should be in the cards. Macro leverage will likely rise in tandem. The CNY is poised for some significant changes, as it is once again nearing the crossing with its 850-day moving average that historically coincided with three momentous currency reforms in the past three decades.

The gap between China's CPI and PPI not only shows the strength of downstream versus upstream, but also hints at the relative strength between domestic and foreign demand. We note that the USD's secular trend has started to weaken. As the PBOC eases while the Fed tightens, the relative strength between Chinese and US demand will start to skew in China's favor. The CNY and other risk assets, too.

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## Appendix 1: Performance of major asset classes (weekly)

Asset Class		16/12/2022	9/12/2022	2/12/2022	25/11/2022	18/11/2022	11/11/2022	4/11/2022	28/10/2022	21/10/2022	14/10/2022	7/10/2022
<b>MSCI Index</b>												
MSCI World		-2.14%	-2.14%	1.34%	1.48%	-0.42%	6.55%	-1.42%	3.34%	3.23%	-1.94%	1.74%
MSCI DM		-2.13%	-2.17%	1.09%	1.68%	-0.17%	6.65%	-2.10%	4.01%	3.61%	-1.70%	1.64%
MSCI EM		-2.14%	0.45%	3.49%	-0.21%	0.78%	5.73%	4.66%	-2.15%	0.20%	-3.83%	2.51%
MSCI China		-2.18%	6.77%	8.19%	-3.14%	4.02%	5.81%	10.98%	-8.88%	-2.70%	-6.18%	1.52%
MSCI AC Asia Ex. Japan		-1.95%	1.66%	4.37%	-0.43%	1.72%	7.64%	5.06%	-2.44%	-1.44%	-4.17%	1.96%
MSCI Europe		-3.11%	-0.17%	0.67%	1.65%	0.32%	3.44%	1.52%	3.55%	1.28%	-0.18%	1.04%
<b>Stock</b>												
U.S.	S&P 500	-2.08%	-3.17%	1.13%	1.53%	-0.69%	5.90%	-3.15%	3.95%	4.74%	-1.55%	1.51%
Chinese Mainland	SHCOMP	-1.22%	1.61%	1.76%	0.14%	0.32%	0.54%	5.31%	-4.05%	-1.08%	1.57%	0.00%
	SZCOMP	-1.75%	1.53%	3.05%	-2.12%	0.56%	-0.11%	7.50%	-4.46%	-0.88%	3.78%	0.00%
HK SAR, China	HSI	-2.16%	6.56%	6.27%	-2.33%	3.85%	7.21%	8.73%	-8.32%	-2.77%	-6.90%	3.00%
Japan	Nikkei 225	-1.14%	0.44%	-1.19%	1.37%	-1.19%	3.51%	0.35%	0.80%	-0.14%	-0.09%	4.55%
South Korea	KOSPI	-1.86%	0.00%	-0.42%	-1.16%	5.74%	3.53%	2.50%	0.00%	0.00%	-0.91%	3.59%
Germany	DAX	-3.32%	-1.09%	-0.08%	0.76%	1.46%	5.68%	1.63%	4.03%	2.36%	1.34%	1.31%
U.K.	FTSE 100	-1.93%	-1.05%	0.93%	1.37%	0.92%	-0.13%	4.07%	1.12%	1.62%	-1.89%	1.41%
France	CAC 40	-3.77%	-0.16%	0.44%	1.02%	0.76%	2.78%	2.29%	3.94%	1.74%	1.11%	1.82%
<b>Bloomberg Barclays Indices</b>												
Global		-0.09%	-0.07%	1.60%	0.89%	0.51%	3.86%	-0.94%	2.50%	-0.69%	-1.42%	-0.39%
China		-0.37%	1.16%	1.44%	-0.11%	-0.81%	2.00%	-0.17%	0.05%	-0.71%	-1.08%	0.00%
Global + China		-0.09%	-0.07%	1.60%	0.89%	0.51%	3.87%	-0.94%	2.49%	-0.69%	-1.42%	-0.39%
U.S.		0.80%	-0.44%	1.54%	1.05%	0.48%	2.29%	-0.18%	1.65%	-1.07%	-1.19%	-0.25%
Europe		-1.09%	0.40%	1.50%	0.90%	1.59%	5.56%	-1.75%	4.02%	0.16%	-1.17%	-0.63%
Asian Pacific		-0.42%	0.20%	2.19%	0.22%	-0.33%	4.80%	-0.18%	1.71%	-1.17%	-2.00%	0.06%
EM		0.47%	0.04%	2.19%	1.45%	1.75%	2.41%	-0.10%	1.99%	-1.10%	-1.69%	0.33%
Treasuries		-0.42%	-0.10%	1.72%	0.75%	0.39%	4.37%	-1.07%	2.76%	-0.70%	-1.47%	-0.12%
Corporate		0.23%	-0.03%	1.58%	1.35%	1.16%	3.45%	-0.14%	2.38%	-0.69%	-1.47%	-0.07%
High Yield		0.19%	-0.07%	1.41%	1.34%	0.98%	2.78%	-0.66%	2.77%	0.05%	-1.38%	1.12%
<b>Commodity</b>												
<b>Bloomberg Commodity Index</b>												
Energy		0.87%	-2.19%	-0.19%	0.11%	-1.78%	-0.12%	5.13%	0.44%	-2.11%	-2.96%	5.06%
	Natural Gas	3.81%	-7.17%	-4.17%	0.88%	-2.04%	-5.14%	7.75%	3.44%	-7.00%	-4.98%	10.87%
	WTI Crude	4.46%	-11.19%	4.85%	-4.18%	-9.13%	-3.60%	5.59%	3.17%	0.48%	-7.06%	16.54%
	Brent Crude	3.77%	-10.46%	2.41%	-3.49%	-6.90%	-2.11%	5.12%	2.66%	1.32%	-5.99%	14.81%
	Heating Oil	9.40%	-11.70%	0.01%	-6.73%	-1.56%	-6.66%	2.99%	4.45%	-1.12%	-3.14%	24.74%
	Unleaded Gasoline	3.62%	-9.89%	0.33%	-3.32%	-8.01%	-3.52%	6.34%	3.39%	0.71%	-5.33%	15.19%
Precious Metal		-0.45%	0.54%	3.56%	0.46%	-1.10%	5.21%	3.45%	-0.44%	1.55%	-5.12%	3.17%
	Gold	-0.38%	0.06%	2.31%	-0.01%	-0.81%	5.52%	1.93%	-0.49%	0.45%	-3.53%	2.23%
	Silver	-1.44%	2.01%	7.59%	1.95%	-2.87%	4.25%	8.55%	0.42%	5.51%	-10.78%	6.39%
Industrial Metal		-4.13%	0.99%	8.21%	-1.52%	-3.98%	7.14%	6.17%	-0.93%	-0.47%	-0.59%	2.76%
	Aluminum	-3.02%	0.73%	6.06%	-0.10%	-6.65%	6.04%	7.51%	-1.11%	1.49%	1.09%	-0.16%
	Copper	-4.19%	-2.75%	7.77%	-3.09%	-1.19%	4.45%	6.47%	0.15%	-4.13%	0.29%	6.26%
	Nickel	-6.88%	5.53%	5.46%	-3.55%	-0.03%	5.35%	1.86%	-3.88%	-0.14%	-1.18%	0.40%
	Zinc	-4.06%	1.73%	13.61%	0.10%	-5.88%	13.05%	7.55%	0.77%	0.79%	-3.13%	6.38%
Agriculture		1.37%	0.18%	-2.00%	-0.18%	-1.17%	-1.12%	3.65%	-1.99%	0.26%	-0.70%	0.67%
	Grains	0.96%	-0.10%	-2.81%	-0.44%	-0.63%	-2.88%	2.27%	-1.04%	-0.16%	0.05%	-0.82%
	Softs	2.72%	-1.46%	0.57%	-0.67%	-2.02%	1.72%	7.75%	-7.19%	-3.14%	-3.70%	1.53%
Livestock		0.74%	-2.42%	1.02%	-0.69%	1.57%	0.60%	-1.14%	-0.44%	4.77%	1.83%	0.84%
	Live Cattle	0.14%	-0.11%	0.48%	-0.47%	1.70%	-0.15%	-0.48%	0.38%	3.15%	-0.19%	0.68%
	Lean Hogs	2.11%	-7.10%	2.17%	-1.17%	1.30%	2.52%	-3.63%	-3.19%	8.36%	6.61%	1.21%
<b>Foreign Exchange</b>												
US Dollar Index		-0.10%	0.25%	-1.33%	-0.91%	0.60%	-4.14%	-1.01%	-1.15%	0.46%	0.60%	-0.55%
USDCNY		0.22%	-1.15%	-1.16%	0.63%	0.32%	-1.12%	-0.13%	0.53%	1.08%	0.00%	-0.17%
MSCI EM Currency		-0.44%	0.23%	1.27%	0.28%	-0.37%	2.41%	0.69%	-0.18%	-0.18%	0.29%	-0.55%
USDHKD		-0.03%	-0.03%	-0.12%	-0.11%	-0.19%	-0.17%	0.00%	-0.01%	0.00%	0.00%	0.01%
JPYUSD		0.03%	1.68%	-3.11%	-0.84%	1.12%	-5.33%	-0.10%	-0.49%	2.35%	0.35%	1.00%
EURUSD		0.44%	0.05%	1.35%	0.68%	-0.21%	3.52%	0.95%	1.44%	-0.13%	-0.19%	1.19%
GBPUSD		-0.11%	-0.17%	1.55%	1.70%	0.51%	3.96%	0.67%	1.17%	0.78%	-0.15%	2.86%

Source: Bloomberg, GROW Research (Updated on 12/17/2022, same below)

## Appendix 2: Performance of major asset classes (annual)

Asset Class	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
<b>MSCI Index</b>														
MSCI World	-19.7%	16.8%	14.3%	24.0%	-11.2%	21.6%	5.6%	-4.8%	2.1%	20.3%	13.4%	-9.4%	10.4%	31.5%
MSCI DM	-19.4%	20.1%	14.1%	25.2%	-10.4%	20.1%	5.3%	-2.7%	2.9%	24.1%	13.2%	-7.6%	9.6%	27.0%
MSCI EM	-22.3%	-4.5%	15.8%	15.4%	-16.6%	34.3%	8.6%	-17.0%	-4.6%	-5.0%	15.1%	-20.4%	16.4%	74.5%
MSCI China	-24.0%	-22.4%	26.7%	20.4%	-20.3%	52.3%	-1.4%	-10.1%	4.7%	0.4%	18.7%	-20.4%	2.6%	58.9%
MSCI AC Asia Ex. Japan	-21.0%	-6.4%	22.5%	15.4%	-16.4%	38.7%	2.9%	-11.3%	2.2%	0.7%	19.4%	-19.2%	17.0%	68.3%
MSCI Europe	-11.9%	22.4%	-5.4%	22.2%	-13.1%	7.3%	-0.5%	5.4%	4.1%	16.4%	13.4%	-10.9%	8.0%	27.1%
<b>Stock</b>														
U.S. S&P 500	-19.2%	26.9%	16.3%	28.9%	-6.2%	19.4%	9.5%	-0.7%	11.4%	29.5%	13.4%	0.0%	12.8%	23.5%
Chinese Mainland SHCOMP	-13.0%	4.8%	13.9%	22.3%	-24.6%	6.6%	-12.3%	9.4%	52.9%	-6.7%	3.2%	-21.7%	-14.3%	80.0%
SZCOMP	-19.4%	8.6%	35.2%	35.9%	-33.2%	-3.5%	-14.7%	63.2%	33.8%	20.0%	1.7%	-32.9%	7.5%	117.1%
HK SAR, China HSI	-16.9%	-14.1%	-3.4%	9.1%	-13.6%	36.0%	0.4%	-7.2%	1.3%	2.9%	22.9%	-20.0%	5.3%	52.0%
Japan Nikkei 225	-4.4%	4.9%	16.0%	18.2%	-12.1%	19.1%	0.4%	9.1%	7.1%	56.7%	22.9%	-17.3%	-3.0%	19.0%
South Korea KOSPI	-20.7%	3.6%	30.8%	7.7%	-17.3%	21.8%	3.3%	2.4%	-4.8%	0.7%	9.4%	-11.0%	21.9%	49.7%
Germany DAX	-12.5%	15.8%	3.5%	25.5%	-18.3%	12.5%	6.9%	9.6%	2.7%	25.5%	29.1%	-14.7%	16.1%	23.8%
U.K. FTSE 100	-0.7%	14.3%	-14.3%	12.1%	-12.5%	7.6%	14.4%	-4.9%	-2.7%	14.4%	5.8%	-5.5%	9.0%	22.1%
France CAC 40	-9.8%	28.9%	-7.1%	26.4%	-11.0%	9.3%	4.9%	8.5%	-0.5%	18.0%	15.2%	-17.0%	-3.3%	22.3%
<b>Bloomberg Barclays Indices</b>														
Global	-15.3%	-4.7%	9.2%	6.8%	-1.2%	7.4%	2.1%	-3.2%	0.6%	-2.6%	4.3%	5.6%	5.5%	6.9%
China	-5.9%	8.4%	9.8%	3.4%	3.5%	6.2%	-5.2%	3.9%	8.0%	1.3%	5.1%	9.2%	6.4%	1.8%
Global + China	-15.3%	-4.7%	9.2%	6.6%	-0.9%	7.3%	1.7%	-2.9%	0.9%	-2.5%	4.3%	5.8%	5.6%	6.8%
U.S.	-11.1%	-1.5%	7.5%	8.7%	0.0%	3.5%	2.6%	0.5%	6.0%	-2.0%	4.2%	7.8%	6.5%	5.9%
Europe	-20.9%	-9.7%	13.4%	4.1%	-4.4%	14.6%	0.3%	-9.8%	-2.4%	6.8%	12.9%	-0.1%	-4.5%	10.4%
Asian Pacific	-13.9%	-5.0%	6.6%	3.7%	2.7%	5.2%	5.3%	-0.5%	-6.8%	-14.6%	-7.0%	7.3%	17.2%	0.0%
EM	-14.5%	-1.7%	6.5%	13.1%	-2.5%	8.2%	9.9%	1.3%	4.8%	-4.1%	17.9%	7.0%	12.8%	34.2%
Treasuries	-16.8%	-6.5%	9.5%	5.6%	-0.4%	7.3%	1.7%	-3.8%	-0.8%	-4.3%	1.8%	6.3%	5.9%	2.6%
Corporate	-15.2%	-2.9%	10.4%	11.5%	-3.5%	9.1%	4.3%	-3.5%	3.1%	0.3%	11.2%	4.3%	5.8%	19.2%
High Yield	-12.0%	1.0%	7.0%	12.6%	-4.1%	10.4%	14.3%	-2.7%	0.0%	7.3%	19.6%	3.1%	14.8%	59.4%
<b>Commodity</b>														
<b>Bloomberg Commodity Index</b>														
Energy	13.7%	27.1%	-3.5%	5.4%	-13.0%	0.7%	11.4%	-24.7%	-17.0%	-9.5%	-1.1%	-13.4%	16.7%	18.7%
Natural Gas	59.8%	27.9%	-42.2%	-38.5%	-2.1%	-37.0%	10.0%	-40.0%	-30.7%	4.9%	-30.7%	-47.1%	-40.7%	-51.6%
WTI Crude	13.4%	61.5%	-50.9%	31.6%	-22.0%	4.1%	6.7%	-44.4%	-41.7%	6.8%	-11.8%	-3.7%	3.7%	4.2%
Brent Crude	28.5%	65.5%	-31.8%	32.7%	-16.6%	13.2%	25.0%	-45.6%	-47.6%	7.2%	7.5%	16.8%	11.3%	28.4%
Heating Oil	78.4%	58.2%	-38.5%	22.0%	-17.4%	13.9%	33.0%	-42.9%	-38.8%	0.3%	5.4%	10.6%	8.2%	20.3%
Unleaded Gasoline	26.9%	69.5%	-31.2%	41.5%	-29.7%	1.8%	6.1%	-12.7%	-43.8%	1.9%	25.6%	14.4%	12.9%	74.4%
Precious Metal	-3.7%	-6.1%	25.1%	14.6%	-6.4%	9.9%	9.1%	-11.5%	-6.7%	-30.8%	6.2%	4.5%	42.5%	29.0%
Gold	-4.1%	-4.3%	20.5%	15.6%	-4.7%	11.7%	7.4%	-10.9%	-1.8%	-28.7%	6.0%	9.6%	28.5%	22.7%
Silver	-2.5%	-12.3%	41.9%	11.5%	-11.9%	4.8%	13.6%	-12.8%	-20.5%	-36.7%	7.0%	-10.2%	81.6%	47.4%
Industrial Metal	-6.0%	30.3%	15.9%	4.7%	-21.1%	28.1%	19.5%	-26.9%	-6.9%	-13.7%	0.6%	-24.3%	16.1%	79.7%
Aluminum	-16.4%	27.0%	22.8%	5.0%	-22.8%	28.0%	15.4%	-25.2%	-16.6%	-8.8%	4.9%	-24.5%	29.4%	129.6%
Copper	-16.7%	38.9%	3.5%	-5.8%	-18.5%	29.9%	9.4%	-23.0%	-3.1%	-20.8%	-4.1%	-21.7%	5.2%	33.6%
Nickel	-11.0%	27.9%	18.1%	-3.2%	-22.9%	28.5%	56.9%	-28.0%	3.5%	-7.0%	8.9%	-27.8%	-9.0%	98.0%
Zinc	35.3%	25.1%	16.2%	29.8%	-18.0%	24.4%	11.5%	-42.7%	7.3%	-20.1%	-10.3%	-24.7%	32.0%	54.6%
Agriculture	10.1%	26.5%	16.0%	-0.4%	-12.5%	-11.9%	1.8%	-15.7%	-9.8%	-14.3%	3.9%	-14.4%	38.3%	13.5%
Grains	11.4%	20.9%	18.9%	-3.2%	-7.4%	-12.1%	-6.2%	-19.5%	-9.4%	-16.9%	18.1%	-14.5%	30.1%	-1.8%
Softs	-6.1%	43.9%	2.5%	2.1%	-23.8%	-15.6%	12.8%	-9.9%	-10.1%	-16.9%	-22.5%	-14.0%	59.7%	44.0%
Livestock	3.6%	8.6%	-23.7%	-8.0%	-3.5%	5.4%	-5.9%	-18.9%	11.5%	-3.5%	-3.6%	-2.4%	9.1%	-15.2%
Live Cattle	1.2%	-0.1%	-18.2%	-0.9%	0.6%	8.1%	-7.7%	-14.3%	22.0%	-5.1%	-4.0%	-1.1%	14.8%	-9.9%
Lean Hogs	8.3%	25.1%	-31.8%	-20.9%	-12.7%	1.8%	-3.3%	-26.1%	-4.4%	-2.1%	-3.0%	-4.5%	0.2%	-22.6%
<b>Foreign Exchange</b>														
US Dollar Index	9.4%	6.4%	-6.7%	0.2%	4.4%	-9.9%	3.6%	9.3%	12.8%	0.3%	-0.5%	1.5%	1.5%	-4.2%
USDCNY	9.7%	-2.5%	-6.3%	1.2%	5.7%	-6.3%	6.9%	4.6%	2.5%	-2.8%	-1.0%	-4.5%	-3.4%	0.0%
MSCI EM Currency	-5.2%	0.9%	3.3%	3.1%	-3.8%	11.4%	3.5%	-7.1%	-4.3%	-1.9%	5.5%	-2.5%	7.9%	13.9%
USDHKD	-0.2%	0.6%	-0.5%	-0.5%	0.2%	0.7%	0.1%	-0.1%	0.0%	0.0%	-0.2%	-0.1%	0.2%	0.1%
JPYUSD	18.7%	11.5%	-4.9%	-1.0%	-2.7%	-3.7%	-2.7%	0.4%	13.7%	21.4%	12.8%	-5.2%	-12.8%	2.6%
EURUSD	-6.9%	-6.9%	8.9%	-2.2%	-4.5%	14.1%	-3.2%	-10.2%	-12.0%	4.2%	1.8%	-3.2%	-6.5%	2.5%
GBPUSD	-10.2%	-1.0%	3.1%	3.9%	-5.6%	9.5%	-16.3%	-5.4%	-5.9%	1.9%	4.6%	-0.4%	-3.5%	10.8%

Source: Bloomberg, GROW Research



### Appendix 3: Performance of major stock market sectors (weekly)

	16/12/2022	9/12/2022	2/12/2022	25/11/2022	18/11/2022	11/11/2022	4/11/2022	28/10/2022	21/10/2022	14/10/2022	7/10/2022
<b>S&amp;P 500 GICS Groups Index</b>											
S&P 500 GICS Groups Index	-2.08%	-3.37%	1.13%	1.53%	-0.69%	5.90%	-3.35%	3.95%	4.74%	-1.55%	1.51%
Info. Tech.	-2.67%	-3.34%	1.31%	0.98%	-0.85%	10.03%	-6.89%	4.28%	6.49%	-3.23%	1.64%
Industrials	-1.10%	-3.20%	1.00%	1.90%	-0.23%	4.60%	0.44%	6.73%	4.65%	-0.56%	2.86%
Materials	-2.34%	-3.33%	1.54%	2.92%	-1.61%	7.69%	0.86%	3.34%	6.15%	-1.89%	2.15%
Consumer Staples	-1.40%	-1.83%	1.10%	2.10%	1.69%	2.38%	-1.83%	6.09%	2.16%	1.45%	-0.40%
Health Care	-1.83%	-1.29%	1.91%	1.91%	0.99%	1.78%	-1.59%	5.00%	2.29%	0.80%	1.30%
Consumer Discretionary	-3.63%	-4.48%	2.10%	1.13%	-3.15%	5.93%	-5.78%	0.71%	5.64%	-4.09%	-1.12%
Financials	-2.50%	-3.90%	-0.64%	2.16%	-1.48%	5.72%	-0.83%	6.19%	3.93%	0.20%	1.84%
Energy	1.72%	-8.40%	-1.97%	0.26%	-2.35%	2.00%	2.37%	2.75%	8.08%	-1.85%	13.86%
Real Estate	-2.38%	-1.85%	0.43%	1.99%	-1.83%	7.07%	-1.78%	6.17%	2.79%	-2.36%	-4.15%
Utilities	-0.55%	-0.32%	0.06%	3.04%	0.83%	1.39%	-0.55%	6.48%	1.95%	-2.58%	-2.63%
Telecom	-2.47%	-5.39%	3.31%	1.01%	-0.08%	9.23%	-7.44%	-2.85%	5.03%	-1.86%	1.47%
<b>Shanghai Stock Exchange Sector Index</b>											
Info.Tech.	-0.76%	0.93%	-0.01%	-4.90%	5.34%	-2.63%	7.54%	2.05%	2.80%	1.14%	0.00%
Industrials	-2.44%	0.50%	0.83%	1.29%	-2.25%	-1.65%	5.42%	-1.34%	-1.13%	4.12%	0.00%
Materials	-3.05%	3.76%	1.08%	0.88%	-1.44%	4.56%	5.51%	-3.55%	-3.15%	1.25%	0.00%
Consumer Staples	0.75%	6.34%	7.14%	-3.77%	0.80%	1.38%	11.11%	-10.57%	-5.32%	-3.72%	0.00%
Health Care	0.38%	0.37%	0.85%	-5.06%	5.05%	-2.28%	6.99%	-1.35%	2.10%	7.35%	0.00%
Consumer Discretionary	-0.67%	2.84%	4.88%	-2.30%	-2.02%	-0.45%	10.68%	-4.45%	-4.74%	0.69%	0.00%
Financials	-0.87%	3.94%	1.44%	2.93%	1.22%	4.05%	2.78%	-5.08%	-2.36%	-0.82%	0.00%
Energy	-2.17%	-0.68%	-1.00%	4.69%	-4.80%	1.02%	0.99%	-3.79%	-2.23%	-0.70%	0.00%
Utilities	-1.12%	-2.91%	-0.73%	3.92%	0.69%	0.55%	1.50%	-7.45%	-2.09%	6.98%	0.00%
Telecom	-2.20%	-1.45%	5.10%	0.41%	1.60%	-1.42%	2.41%	-3.84%	0.48%	4.39%	0.00%
<b>Hang Seng Sector Index</b>											
Info.Tech.	-4.21%	10.36%	11.51%	-7.46%	8.47%	6.81%	16.74%	-11.55%	-5.02%	-9.75%	2.76%
Industrials	-0.53%	4.31%	3.91%	-2.18%	1.74%	7.70%	8.28%	-6.01%	1.24%	-4.90%	1.75%
Materials	-2.86%	5.57%	4.53%	1.78%	-0.98%	13.30%	7.04%	-2.35%	-1.38%	-3.40%	4.10%
Consumer	-2.27%	4.86%	12.49%	-6.26%	2.92%	7.29%	10.40%	-6.52%	-5.13%	-8.60%	5.35%
Financials	-1.16%	4.87%	3.09%	2.10%	2.05%	8.28%	5.02%	-7.40%	0.59%	-4.23%	2.41%
Energy	1.58%	-0.29%	-1.40%	3.76%	-1.50%	2.88%	1.06%	-4.37%	1.75%	-3.36%	4.22%
Real Estate	-2.45%	10.80%	0.23%	3.48%	4.49%	11.53%	4.20%	-11.10%	-1.91%	-5.10%	1.87%
Utilities	-0.58%	5.65%	-1.34%	1.53%	4.03%	4.50%	0.88%	-4.83%	-1.19%	-3.72%	-0.41%
Telecom	0.22%	1.06%	-0.27%	4.26%	1.66%	2.19%	0.69%	-3.84%	-0.53%	-1.30%	1.18%

Source: Bloomberg, GROW Research

#### Appendix 4: Performance of major stock market sectors (annual)

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
<b>S&amp;P 500 GICS Groups Index</b>													
S&P 500 GICS Groups Index	-18.5%	26.9%	16.3%	28.9%	-6.2%	19.4%	9.5%	-0.7%	11.4%	29.6%	13.4%	0.0%	12.8%
Info. Tech.	-26.5%	33.4%	42.2%	48.0%	-1.6%	36.9%	12.0%	4.3%	18.2%	26.2%	13.1%	1.3%	9.1%
Industrials	-7.5%	19.4%	9.0%	26.8%	-15.0%	18.5%	16.1%	-4.7%	7.5%	37.6%	12.5%	-2.9%	23.9%
Materials	-12.7%	25.0%	18.1%	21.9%	-16.4%	21.4%	14.1%	-10.4%	4.7%	22.7%	12.2%	-11.6%	19.9%
Consumer Staples	-3.3%	15.6%	7.6%	24.0%	-11.2%	10.5%	2.6%	3.8%	12.9%	22.7%	7.5%	10.5%	10.7%
Health Care	-3.1%	24.2%	11.4%	18.7%	4.7%	20.0%	-4.4%	5.2%	23.3%	38.7%	15.2%	10.2%	0.7%
Consumer Discretionary	-34.6%	23.7%	32.1%	26.2%	-0.5%	21.2%	4.3%	8.4%	8.0%	41.0%	21.9%	4.4%	25.7%
Financials	-13.9%	32.5%	-4.1%	29.2%	-14.7%	20.0%	20.1%	-3.5%	13.1%	33.2%	26.3%	-18.4%	10.8%
Energy	52.7%	47.7%	-37.3%	7.6%	-20.5%	-3.8%	23.7%	-23.6%	-10.0%	22.3%	2.3%	2.8%	17.9%
Real Estate	-25.7%	42.5%	-5.2%	24.9%	-5.6%	7.2%	0.0%	1.2%	26.1%	-1.5%	16.2%	7.9%	28.0%
Utilities	-0.5%	14.0%	-2.8%	22.2%	0.5%	8.3%	12.2%	-8.4%	24.3%	8.8%	-2.9%	14.8%	0.9%
Telecom	-40.3%	20.5%	22.2%	30.9%	-16.4%	-6.0%	17.8%	-1.7%	-1.9%	6.5%	12.5%	0.4%	12.3%
<b>Shanghai Stock Exchange Sector Index</b>													
Info. Tech.	-33.6%	-0.2%	22.5%	65.4%	-34.1%	-4.9%	-26.9%	60.0%	36.5%	46.8%	-14.1%	-39.2%	27.2%
Industrials	-15.7%	14.3%	25.3%	13.7%	-23.6%	5.5%	-15.0%	10.7%	68.0%	-3.2%	-4.3%	-32.5%	-4.9%
Materials	-18.4%	15.9%	22.7%	29.0%	-30.1%	27.3%	-7.5%	-1.0%	38.9%	-24.0%	9.1%	-35.1%	-3.2%
Consumer Staples	-15.0%	-6.9%	81.6%	47.5%	-19.3%	43.8%	1.1%	24.1%	15.1%	7.7%	4.5%	-22.1%	12.7%
Health Care	-21.7%	-8.3%	57.4%	24.3%	-26.4%	18.2%	-11.4%	45.8%	6.3%	32.6%	10.3%	-31.2%	33.8%
Consumer Discretionary	-18.7%	-6.9%	81.6%	47.5%	-19.3%	43.8%	1.1%	24.1%	15.1%	7.7%	4.5%	-22.1%	12.7%
Financials	-11.5%	-12.7%	-3.0%	29.6%	-17.4%	23.4%	-7.8%	-9.7%	82.0%	-9.9%	20.9%	-13.9%	-26.8%
Energy	21.5%	29.6%	-11.3%	2.4%	-26.3%	6.4%	-3.9%	-15.0%	24.0%	-33.0%	-4.3%	-23.5%	-10.9%
Utilities	-16.9%	39.4%	-3.3%	3.4%	-11.1%	-3.0%	-20.5%	6.2%	73.1%	-1.2%	3.4%	-17.2%	-16.8%
Telecom	-9.2%	9.2%	-6.2%	29.9%	-29.8%	12.1%	-7.5%	56.0%	34.5%	30.6%	-22.8%	-38.8%	4.6%
<b>Hang Seng Sector Index</b>													
Info. Tech.	-26.5%	-32.3%	69.6%	23.7%	-29.6%	92.3%	18.2%	22.3%	8.9%	70.0%	36.5%	-18.6%	-7.0%
Industrials	-21.3%	-18.8%	-15.9%	15.7%	-10.2%	48.8%	-1.8%	-2.5%	3.1%	-9.9%	42.9%	-26.5%	4.5%
Materials	-12.6%	9.4%	30.0%	-0.4%	-29.5%	30.5%	21.0%	-18.7%	-1.1%	-21.9%	8.1%	-42.4%	4.4%
Consumer Goods	-22.9%	19.1%	-27.1%	51.3%	-6.5%	-10.3%	-11.1%	11.2%	10.1%	-24.3%	9.3%	116.6%	-52.6%
Consumer Services		6.7%	-22.6%	39.7%	3.6%	-23.9%	-30.5%	40.1%	22.2%	-20.6%	25.3%	70.6%	-62.1%
Financials	-8.2%	-6.8%	-6.9%	7.5%	-14.8%	31.2%	-3.1%	-10.0%	7.6%	3.0%	24.2%	-24.6%	-0.7%
Energy	17.8%	20.5%	-33.7%	-4.1%	-2.8%	11.4%	14.3%	-31.3%	-17.3%	-16.2%	12.7%	-15.1%	16.5%
Real Estate	-21.3%	-18.8%	-15.9%	15.7%	-10.2%	48.8%	-1.8%	-2.5%	3.1%	-9.9%	42.9%	-26.5%	4.5%
Utilities	-31.5%	17.6%	-9.4%	-0.9%	1.2%	15.7%	-7.4%	-8.1%	6.2%	13.8%	15.0%	2.8%	6.2%
Telecom	6.9%	0.5%	-29.9%	-9.7%	-3.4%	-1.0%	-6.0%	-5.1%	11.5%	-10.2%	11.7%	2.7%	8.4%

Source: Bloomberg, GROW Research

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