

Lessons of 2022

- Impermanence:** everything is ephemeral. At market extremes, bears are bulls. And vice versa.
- Sentiment:** market swings between lusts and fears. The obsession with profit plunges us into emotional euphoria and panic. Rise above it.
- Cycles:** The market runs in cycle. What is lost will be found again.

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Chinese version:

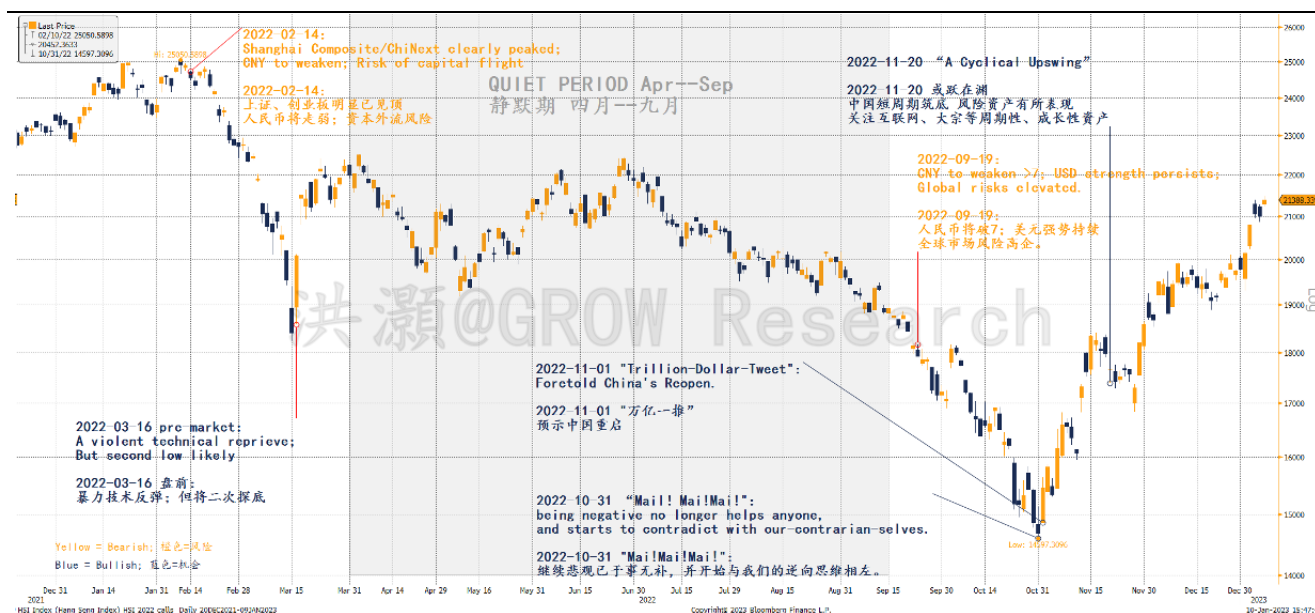
《2022 年启示录》

Impermanence 諸行無常

Impermanence is an essential concept in Buddhism philosophy. It is the first state of the “Three Marks of Existence” in Buddhism, and deals with change. All existence is conditioned without exception. It is “transient, evanescent, and inconstant” (David & Stede). And “all temporal things, whether material or mental, are compounded objects in a continuous change of condition, are subject to decline and destructions.” (Buswell & Lopez)

If my work in 2022 were to be judged by the quality of my market calls, it would have been one of my more prescient years. But life is impermanent, and much more can happen in life than plan. Such market clairvoyance had not yielded fruits for my professional career for a large part of 2022. Instead, it felt like Casandra’s last days.

Figure 1: Our Significant Calls in 2022.



Source: Bloomberg, GROW Research

I have summarized my significant market calls during 2022 in **Figure 1**. On February 14, 2022, I warned that the Chinese market had “clearly peaked”, the Chinese Yuan would weaken, and capital flight was looming. I further warned that a depreciating Yuan suggested elevated global market risks. That was the global market peak in 2022.

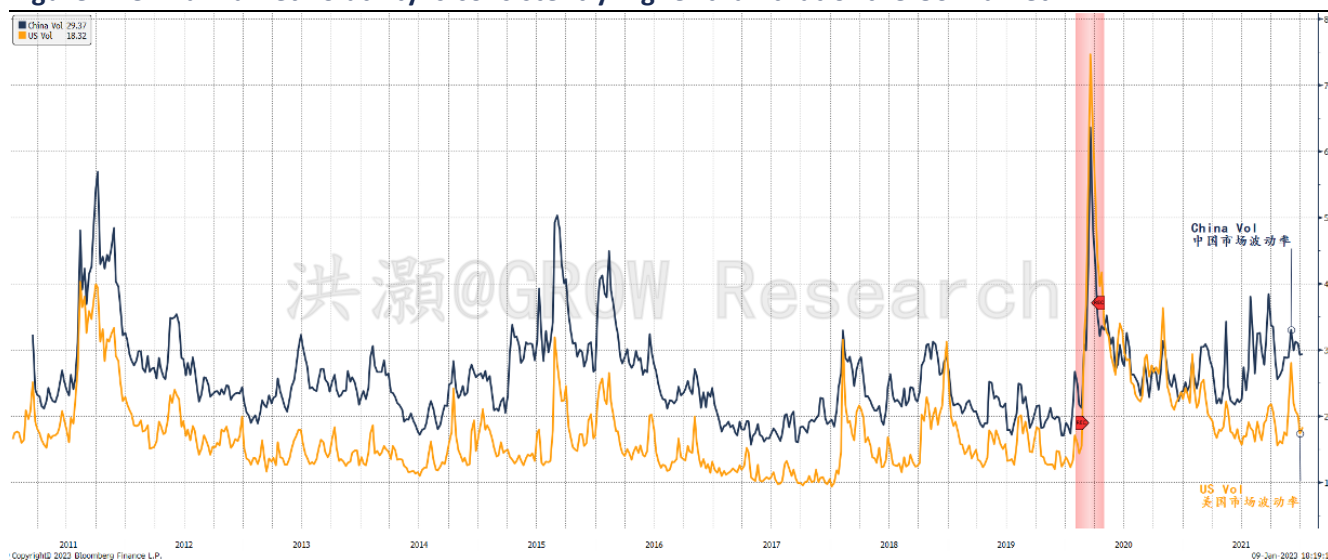
On March 16, 2022, I presaged an “imminent and violent technical rebound” due to epic short positions, but warned that “a second low” was likely. After an extended five-month of hiatus due to a career change, I called “**Mai! Mai! Mai!**” on October 31 when China’s markets were enduring unprecedented waves of selling. And my follow-up tweet previewing China’s COVID reopening was dubbed “**Trillion-Dollar Tweet**”. Since then, Chinese assets rallied to their best months ever, and investors both on- and offshore are coming back in droves.

There were two big bear markets in China of 2022 – stocks for almost the entire year, and bonds in the last two months of 2022 (we will discuss the bear market in bonds in the later section). While my bearish stance on Chinese stocks have been proven right eventually, it clashed with how volatility was viewed in the Chinese culture.

Even though the Chinese is master of cycles, the Chinese essentially hold a disapproving view of volatility – it is frowned upon. The Chinese concept of time is circular – time revolves around in cycles, as opposed to the western linear view of time. Such different perceptions of time between east and west help explain why time travel has been such an enchanting subject of the western cinema, while reincarnation and afterlife have been a perpetual Chinese favorite.

Because of such a circular perception of time, the Chinese applies time to resolve risk. Back in the 90s when the Shanghai stock market was undergoing its most volatile phase due to “growing pain”, the management philosophy then was to stretch out the time duration of the decline, and over time spread out the losses among investors. Such philosophy had led to the introduction of the daily stop limits and the rules of t+1 settlement in the onshore market. As time goes in circle, the fallen stocks will eventually nirvana, or come back when given enough time. The state of fallen, in the eyes of Chinese, is impermanent.

Figure 2: China market volatility is consistently higher than that of the US market.



Source: Bloomberg, GROW Research

Such bias against volatility, or the innate desire to suppress it, inevitably gives rise to clogs in the system, as systemic risks cannot be diversified but transferred. It also means that even for the financial professionals, risks cannot be efficiently identified and priced. The market function of appropriately pricing risks is thus distorted, and thus cannot function properly.

In such a system, risk tends to be underpriced and thus over-rewarded. Simply put, the Chinese market tends to be over-priced with such distorted view of volatility. It explains why the Chinese onshore market is often overvalued, especially relative to its offshore counterparts such as Hong Kong, and is prone to bubble. The A/H premium is perennially well above 100%, and rose even higher after the Connect Scheme was launched (**Figure 2**).

It also explains why the onshore market is predisposed to bouts of volatility, as the overvaluation levels cannot be timely corrected, and systemic risks continue to accumulate – much like a dike trying to hold back a raging river during a severe flood. Towards the end, the mass of flood water would become so great that the dike would be overwhelmed. Or the dike would have to be manually breached to release the flood water.

Such market construct also suggests that there would be a shortage of “bears” - traders who could freely hold an opposing view to the consensus. These bearish traders without an existing position can become liquidity providers as counter parties when the market plunges and prices fall to a level where these ex-bears see value.

All market crises are liquidity crises. A lack of counter parties during market plunges would suggest that such plunges can be violent and precipitous. And thus, the complex for the “National Team” to the rescue.

Further, can an unspoken bearish view affect the market functioning in any way? From an existentialism point of view, it certainly can. It does so by skewing the price of risks because of the inability to express an opposing view. Simply put, if everyone holds the same position, there would be no market, no trade and thus no liquidity.

In China, there has been much discussion about “*pricing power*” (定价权). The debate has been centering on who has the upper hand in setting market prices by comparison of the depth of pocket. But setting the price right is not about who has more money, but who has a more unbiased view — as the market prices on the margin. Big money may be able to briefly sway market prices to one end. But it “*cannot fool all people all the time*” (Lincoln) – just look at what happened in 2022 when many big growth companies crashed 80 percent back to earth. The market is an exchange of ideas, as much as it is an exchange of capital.

The market ebbs and flows, much like life in a state of flux. But right market calls do not necessarily get rewarded. And market selloff indeed seeds the next phase of market recovery and rejuvenation. Reading investment classics never really results in real learning beyond consensus, except for perhaps a few good quotes. Real life is so much more. And such is the impermanence of the market, and life.

Hopes & Fears 諸行是苦

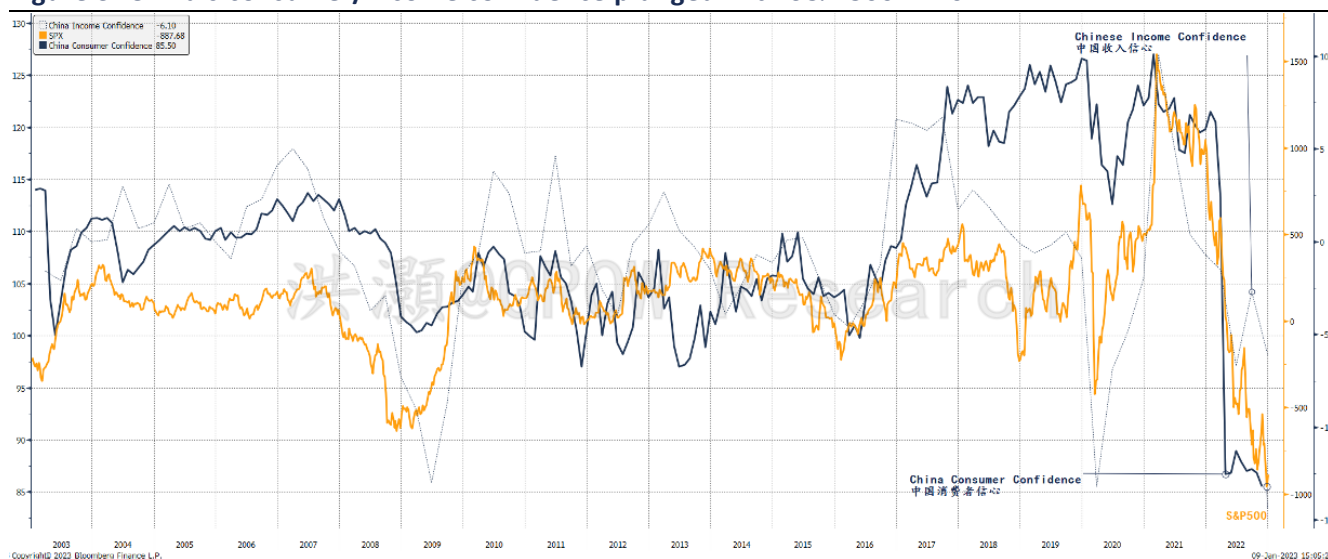
The second “*Mark of Existence*” in the Buddhism philosophy is the pervasive pain and sufferings, and how we anguish and perish with them. Such pain arises not only because everything in life is transient and impermanent, but also because of our longing for the evanescence and our attachment to them.

This insatiable craving keeps us caught in “*samsara*”, trapped in endless cycle of rebirth and mundane existence that are considered suffering. It also refers to “*the endless cycle of attraction and rejection that perpetuates the ego*” (Payutto). In market terms, it is hopes and fears that weave the tapestry of market history. And most of us are mired within.

The year 2022 is a prime example of this second “*Mark of Existence*”. The euphoria and depression in the Chinese market was palpable through epic market volatility. Early in the year when the Hang Seng was approaching its peak of 2022 at ~25,000, southbound funds rushed into Hong Kong and buying everything indiscriminately. Like every other episode of market euphoria, traders call this trade “*usurping the pricing power of the Hong Kong market*”.

We, too, at one stage early in 2022, were attracted to Hong Kong’s relatively lower valuation compared with that of the onshore market, some key technical levels that appeared well bought and supported, and Hong Kong market’s resilience in the backdrop of a weak US market. We eventually gave up this stance, as we noted that the Shanghai Composite and the Chinext “had clearly peaked” on February 14, 2022 (**Figure 1**).

Figure 3: China’s consumer/income confidence plunged with S&P 500 in 2022.

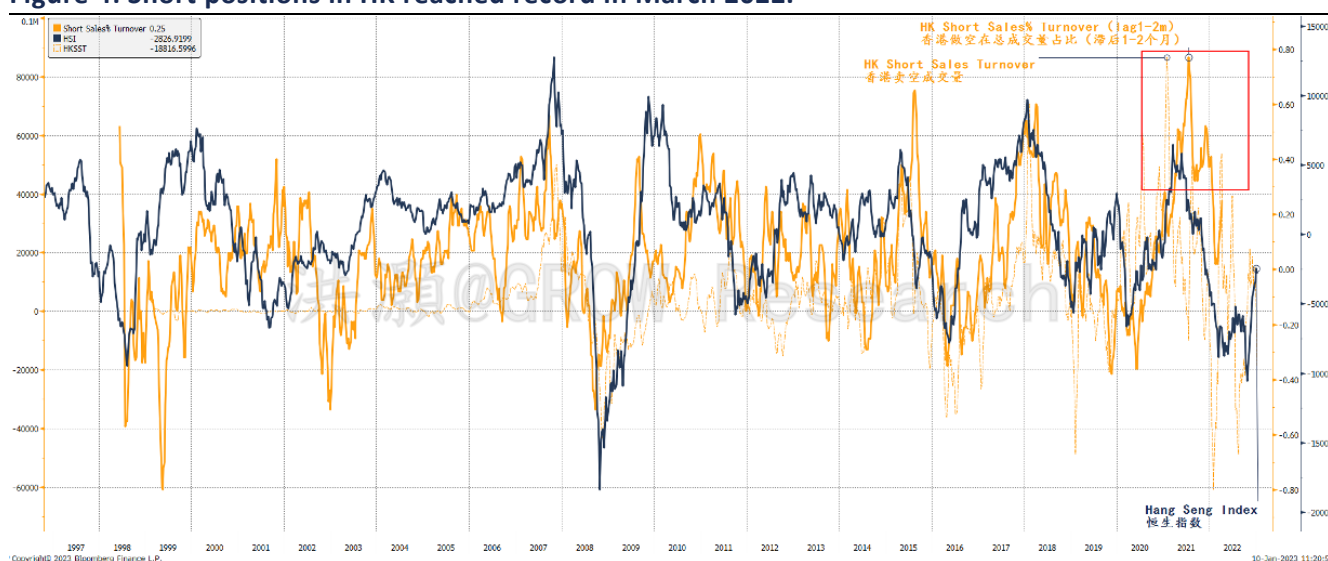


In the March selloff, short position against the Hang Seng reached one of the worst in history. It was in part triggered by Russia’s FX reserve being frozen by the US authority due to Russian invasion of Ukraine. Consensus view was that the Hong Kong Dollar peg

an anchor of Hong Kong's economic stability and prosperity, could be in danger. As it was the first time the US dollar had been weaponized, rampant panic ensued. Market plunged in tandem with confidence (**Figure 3**), and the HKMA had to burn through its FX reserve at a record pace to defend the HKD peg.

But such record short positions are rocket fuel for short-covering rally (**Figure 4**). On March 16, 2022, pre-market, we issued a strong trading call to buy the Hang Seng. And the market responded immediately and strongly, surging ~30% in the ensuing few weeks. On October 31, 2022, with our report titled "**Mai! Mai! Mai!**", the entire Chinese space responded immediately and strongly across the board. Our report marked the inception of the current trend reversal that is still unraveling.

Figure 4: Short positions in HK reached record in March 2022.



Source: Bloomberg, GROW Research

These market swings between extremes during 2022 show how human emotions shape the market course. The continuing urge to avoid trading loss and the greed for profit give rise to market panic and euphoria. In between it is the pervasive pain and sufferings, as traders anguish when trying to buy the bottom and sell the peak. Sell low buy high is more prevalent than the other way round. And people who catch the bottom tend to be different those who call the top. As such, everybody hurts. The hallmark of a true market guru is the ability to pick the top as well as the bottom, and do so consistently over many cycles. But it is few and far between.

Cycles 諸法無我

The third “*Mark of Existence*” in Buddhism philosophy is about selflessness – there is no permanent essence in any thing or phenomena, including oneself and all living beings. This is a much broader scope than impermanence. Even the belief “I am” is a transient conceit without substance. Such conceit is also a source of pain and suffering. To end it is a way to end all torments. This is a state that transcends impermanence.

In late October the Hong Kong market was enduring unprecedented selloff to a valuation level unseen in history. One of my proprietary models, the EYBY model that had been key to my market calls, started to bottom out. The model uses relative valuation and my theory of economic cycles to allocate capital between bonds and stocks. It was surprising that the model suggested an impending economic cycle bottom and sent out a strong buy signal amid unrelenting selloffs and prevalent market depression (**Figure 5**).

Figure 5: The epic bottom reversal in our EYBY model based on cycles.



Source: Bloomberg, GROW Research

For a person who had been non-consensually cautious for the most part of 2022, such bullish signal at the nadir of the market seemed to contradict most of the presumptions in my mind. After all, economic data then were dismal and kept getting worse, and conspiracy theories abound. Only valuation was getting cheaper. The stock market is such a place that when everything is on sale, people run away from it.

Late October in 2022 was the darkest hour for Chinese assets. But as Scott Fitzgerald once wrote: “*The test of a first-rate intelligence is the ability to hold two opposing ideas in mind at the same time and still retain the ability to function. One should, for example, be able to see that things are hopeless yet be determined to make them otherwise.*” Even so, when I decided to change from bearish to bullish, it was not an easy call to make. I was going against the crowd, as well as going against myself.

On October 31, 2022, I published a report titled “[Mai! Mai! Mai!](#)”, which in Chinese means “[Buy! Buy! Buy!](#)”. I then followed up with our 2023 outlook report “[A Cyclical Recovery](#)” on November 21, 2022. The risk in global market also appeared to be subsiding from its high plateau at that juncture (Figure 6). And the rest is history.

Figure 6: The VIX cycle = 3 x 3.5 years.



Source: TradingView, GROW Research

Meanwhile, another significant bear market in domestic bonds erupted, just as Chinese stocks were undergoing historic surge into a bull market. This bear market in Chinese bonds at the end of 2022 has been less discussed in the foreign investment community. As my EYBY model suggested at that juncture, capital should start to be rotated from bonds to stocks. Suddenly, some of the wealth management products (WMPs) based on bonds started to plunge. Market consensus used the rotation from bonds to stocks identified by my EYBY model as the explanation of the eruption of a severe bond bear market.

However, it is odd that an asset class rotation based on economic cycle and relative valuation could plunge the price of the safest asset in the market by 20% in a week, with one third of the WMPs breaking their book value.

There has to be another explanation. As most managers of WMPs use hold-to-maturity strategy for the underlying bonds of their WMPs without any hedge. In a market that didn't have too much volatility, and WMPs are managed by pooling funds together, it was easy to iron out any ripples in the value of WMPs without causing much havoc.

But then WMPs management was changed to be net-asset-value based, with specific underlying assets to respective WMPs, rather than pooling funds. Consequently, unhedged positions in the underlying bonds of the WMPs due to a turn in economic cycle led to a sharp decline in the net asset value of the WMPs. And once the net value plunged, redemption waves ensued. It was a vicious cycle.

This episode of a bond bear market just as stocks surging back into a bull market can reveal a lot. Apparently, WMP manager's philosophy of hold-to-maturity to realize investment gains is diagonally opposite to our afore-discussions about market impermanence. And in an unhedged position, a small but abrupt change can ruin the best-laid plan.

Further, such unhedged positions again suggest that the pricing efficiency in the Chinese market is very low. As in the stock market, there is few to take the opposite side of the trade and to offer hedging. Most are just complacent to huddle with peers in similar positions. Consequently, the market always runs out of liquidity during crisis. The market's main function is to provide liquidity, rather than offering textbook market efficiency. Without diverse views, there will be no market and thus no liquidity.

It would be difficult to fathom such financial market would have any "*pricing power*" (定价权) – unless changes are initiated in the future. The market cannot rely on bailout every time it runs into trouble. A market that constantly requires intervention could not be deemed as a matured market with the efficiency to set pricing. It is at best a big crying baby.

In sum, the market runs in cycles. One asset's fortune can mean dismay for another. Cycles transcend bulls and bears. Too much self-consciousness, obstinately holding onto one's position with biases would blind us when the market starts to turn from extremes. And at market extremes, bears are bulls.

Conclusion: All Conditioned Existence 一切有為法

Suffering is essential in Buddhism philosophy. On the surface, this second "*Mark of Existence*" could well be an appropriate word that depict the year of "*Twenty Twenty, Too*".

But central to Buddhism philosophy is about how one could transcend sufferings, by recognizing every existence and all living being are impermanent, or merely conditioned existence, including oneself. Such appreciation of impermanence in life and the detachment from evanescence that led to sufferings will mean enlightenment, freeing us from endless circle of senseless rebirth and mundane existence and delivering us to the state of no-self, or selflessness.

In short, Buddhism philosophy teaches us about the origin of pain, the suffering from pain and how to transcend it.

In investing, we could also learn from the teaching of the Buddha. The panic and euphoria events in the extraordinary 2022 are indeed impermanent. At market extremes, bulls are indistinguishable from bears, as their loaded positions that could only be liquidated. Failure to recognize this market impermanence is the source of pain. Failure to let the market express its view freely is the source of volatility.

Market is here to provide liquidity, rather than offering academic market efficiency as consensus believes. But there will be no market efficiency without liquidity, and no

market without diverse views. Many fail to recognize it, and the unquenched urge to pinpoint the market's top and bottom had anguished the mass.

And the Chinese bias against volatility is an opposing view to the Buddhism philosophy of impermanence. As risk is underappreciated and thus underpriced, a market with such false presumption is prone to overvaluation, and thus abrupt and precipitous turns. One must be able to hold two opposing views in mind and still be able to negotiate the torrents of greed and fear. Only when one nirvana from the attachment to permanence could one be truly free and become the master of trading.

"All conditioned phenomena

Are like a dream, an illusion, a bubble, a shadow,

Like dew or a flash of lightning.

Thus should we meditate upon them."

Hao Hong, CFA

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Appendix 1: Performance of major asset classes (weekly)

Asset Class		6/1/2023	30/12/2022	23/12/2022	16/12/2022	9/12/2022	2/12/2022	25/11/2022	18/11/2022	11/11/2022	4/11/2022	28/10/2022
MSCI Index												
	MSCI World	1.99%	-0.07%	-0.06%	-2.14%	-2.14%	1.34%	1.48%	-0.42%	6.56%	-1.42%	3.34%
	MSCI DM	1.81%	-0.10%	-0.03%	-2.13%	-2.13%	1.09%	1.68%	-0.17%	6.66%	-2.10%	4.01%
	MSCI EM	3.38%	0.17%	-0.16%	-2.14%	0.45%	3.49%	-0.11%	0.78%	5.73%	4.66%	-2.15%
	MSCI China	7.60%	1.27%	-0.62%	-2.18%	6.77%	8.19%	-1.14%	4.02%	5.81%	10.28%	-8.98%
	MSCI AC Asia Ex. Japan	3.64%	0.48%	-1.13%	-1.05%	1.66%	4.37%	-0.43%	1.72%	7.64%	5.06%	-2.44%
	MSCI Europe	4.74%	-0.19%	0.64%	-1.11%	-0.17%	0.67%	1.65%	0.32%	3.44%	1.52%	3.55%
Stock												
	U.S. S&P 500	1.45%	-0.14%	-0.10%	-2.08%	3.37%	1.13%	1.53%	-0.19%	5.90%	3.35%	3.95%
	Chinese Mainland SHCOMP	2.21%	1.42%	3.85%	-1.12%	1.61%	1.76%	0.14%	0.32%	0.54%	5.31%	-4.05%
	SZCOMP	3.29%	1.31%	-4.39%	-1.15%	1.53%	3.05%	-2.12%	0.56%	-0.11%	7.50%	-4.46%
	HK SAR, China HSI	6.42%	0.96%	0.73%	-2.16%	6.56%	6.27%	-2.13%	3.85%	7.21%	8.63%	-8.12%
	Japan Nikkei 225	-0.46%	-0.44%	-4.89%	-1.14%	0.44%	-1.19%	1.37%	-1.19%	3.91%	0.35%	0.80%
	South Korea KOSPI	8.34%	-1.16%	-1.11%	-1.16%	0.00%	-0.42%	-1.16%	5.74%	3.53%	2.50%	0.00%
	Germany DAX	4.93%	-0.12%	0.34%	3.12%	-1.09%	-0.08%	0.76%	1.46%	5.68%	1.63%	4.03%
	U.K. FTSE 100	3.32%	-0.18%	1.92%	-1.13%	-1.05%	0.93%	1.37%	0.92%	-0.13%	4.07%	1.12%
	France CAC 40	5.98%	-0.48%	0.81%	3.17%	-0.66%	0.44%	1.02%	0.76%	2.78%	2.29%	3.94%
Bloomberg Barclays Indices												
	Global	1.39%	-0.14%	-0.12%	-0.09%	-0.07%	1.60%	0.89%	0.51%	3.86%	-0.14%	2.50%
	China	1.55%	0.63%	0.06%	-0.17%	1.16%	1.44%	-0.11%	-0.11%	2.00%	-0.17%	0.05%
	Global + China	1.39%	-0.14%	-0.12%	-0.09%	-0.07%	1.60%	0.89%	0.51%	3.87%	-0.14%	2.49%
	U.S.	1.85%	-0.15%	-1.47%	0.80%	-0.44%	1.54%	1.05%	0.48%	2.29%	-0.18%	1.65%
	Europe	1.52%	-0.11%	-1.34%	-1.09%	0.40%	1.50%	0.90%	1.59%	5.56%	-1.15%	4.02%
	Asian Pacific	0.55%	0.27%	1.04%	-0.12%	0.20%	2.19%	0.22%	-0.13%	4.80%	-0.18%	1.71%
	EM	0.99%	-0.18%	-0.66%	0.40%	0.04%	2.19%	1.45%	1.75%	2.41%	-0.10%	1.99%
	Treasuries	1.23%	-0.12%	-0.10%	-0.12%	-0.10%	1.72%	0.75%	0.39%	4.37%	-1.07%	2.76%
	Corporate	1.56%	-0.14%	-1.13%	0.23%	-0.03%	1.58%	1.35%	1.16%	3.45%	-0.14%	2.38%
	High Yield	1.67%	-0.11%	-0.13%	0.19%	-0.07%	1.41%	1.34%	0.98%	2.78%	-0.16%	2.77%
Commodity												
	Bloomberg Commodity Index	-4.16%	0.22%	-0.14%	0.87%	-2.19%	-0.19%	0.11%	-1.18%	-0.12%	5.13%	0.44%
	Energy	-10.47%	-0.16%	-3.17%	3.81%	-7.37%	-4.17%	0.88%	-2.04%	-5.14%	7.75%	3.44%
	Natural Gas	-17.34%	-7.15%	-21.14%	1.40%	-1.06%	-14.33%	9.13%	7.27%	-7.27%	13.14%	3.47%
	WTI Crude	-7.37%	1.02%	6.84%	4.46%	-11.19%	4.85%	-4.18%	-9.13%	-3.00%	5.59%	3.17%
	Brent Crude	8.34%	1.67%	6.30%	3.77%	-10.46%	2.41%	-3.19%	-6.10%	-2.17%	5.12%	2.66%
	Heating Oil	8.11%	1.85%	5.09%	9.40%	-11.70%	0.01%	-6.13%	-1.16%	-6.66%	2.99%	4.45%
	Unleaded Gasoline	9.15%	3.43%	10.99%	3.62%	9.89%	0.33%	-3.12%	-3.11%	-3.12%	6.34%	3.39%
	Precious Metal	1.72%	1.04%	0.80%	-0.15%	0.54%	3.56%	0.45%	-1.10%	5.21%	3.45%	-0.44%
	Gold	2.38%	1.22%	0.22%	-0.18%	0.06%	2.31%	-0.11%	-0.11%	5.52%	1.93%	-0.49%
	Silver	-0.14%	0.50%	2.54%	-1.14%	2.01%	7.59%	1.95%	-2.17%	4.25%	8.55%	0.42%
	Industrial Metal	-1.48%	0.38%	1.37%	-4.13%	0.99%	8.21%	-1.12%	-3.18%	7.14%	6.17%	-0.13%
	Copper	2.64%	0.04%	1.26%	-3.02%	0.73%	6.06%	-0.10%	-6.15%	6.04%	7.31%	-1.11%
	Aluminum	-3.16%	-0.16%	0.46%	-4.19%	-2.15%	7.77%	-3.19%	-1.19%	4.45%	6.47%	0.15%
	Zinc	1.76%	0.25%	-1.15%	-6.18%	5.53%	5.46%	-3.15%	-0.03%	5.35%	1.86%	-3.18%
	Nickel	-6.16%	1.70%	4.47%	-4.16%	1.73%	13.11%	0.10%	-5.18%	13.05%	7.55%	0.77%
	Agriculture	-2.18%	0.91%	1.94%	1.37%	0.18%	-2.00%	-0.18%	-1.17%	-1.12%	3.65%	-1.19%
	Grains	-3.18%	2.14%	1.64%	0.96%	-0.10%	-2.11%	-0.44%	-0.13%	-2.18%	2.27%	-1.44%
	Softs	-3.14%	-3.12%	4.42%	2.72%	-1.06%	0.57%	-0.17%	-2.12%	1.72%	7.75%	-7.19%
	Livestock	-3.12%	0.02%	1.61%	0.74%	-2.12%	1.02%	-0.19%	1.57%	0.60%	-1.14%	-0.44%
	Live Cattle	-0.11%	0.10%	1.27%	0.14%	-0.21%	0.48%	-0.17%	1.70%	-0.15%	-0.18%	0.38%
	Lean Hogs	8.17%	-0.14%	2.39%	2.11%	-7.10%	2.17%	-1.17%	1.30%	2.52%	-3.13%	-3.19%
Foreign Exchange												
	US Dollar Index	0.34%	-0.16%	-0.17%	-0.10%	0.25%	-1.13%	-0.11%	0.60%	-4.14%	-1.11%	-1.15%
	USDCNY	-1.02%	-1.11%	0.28%	0.22%	-1.15%	-1.16%	0.63%	0.32%	-1.12%	-0.13%	0.53%
	MSCI EM Currency	0.54%	0.32%	0.63%	-0.14%	0.23%	1.27%	0.28%	-0.17%	2.41%	0.69%	-0.18%
	USDHKD	0.07%	-0.04%	0.27%	-0.03%	-0.03%	-0.12%	-0.11%	-0.19%	-0.17%	0.00%	-0.01%
	JPYUSD	0.73%	-1.15%	-2.10%	0.03%	1.68%	-3.11%	-0.14%	1.12%	-5.13%	-0.10%	-0.19%
	EURUSD	-0.77%	0.83%	0.29%	0.44%	0.05%	1.35%	0.68%	-0.11%	3.92%	0.96%	1.44%
	GBPUSD	0.08%	0.25%	-0.18%	-0.11%	-0.17%	1.55%	1.70%	0.51%	3.16%	0.67%	1.17%

Source: Bloomberg, GROW Research (Updated on 06/01/2023, same below)

Appendix 2: Performance of major asset classes (annual)

Asset Class	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
MSCI Index														
MSCI World	2.0%	-19.8%	16.8%	14.3%	24.0%	-11.2%	21.6%	5.6%	-4.8%	2.1%	20.3%	13.4%	-9.4%	10.4%
MSCI DM	1.8%	-19.5%	20.1%	14.1%	25.2%	-10.4%	20.1%	5.3%	-2.7%	2.9%	24.1%	13.2%	-7.5%	9.6%
MSCI EM	3.4%	-22.4%	-4.6%	15.8%	15.4%	-16.6%	34.3%	8.6%	-17.0%	-4.6%	-5.0%	15.1%	-20.4%	16.4%
MSCI China	7.6%	-23.5%	-22.4%	26.7%	20.4%	-20.3%	52.3%	-1.1%	-10.1%	4.7%	0.4%	18.7%	-20.4%	2.6%
MSCI AC Asia Ex. Japan	3.6%	-21.5%	-6.4%	22.5%	15.4%	-16.4%	38.7%	2.9%	-11.3%	2.2%	0.7%	19.4%	-19.2%	17.0%
MSCI Europe	4.1%	-11.9%	22.4%	-5.4%	22.2%	-18.1%	7.3%	-0.5%	5.5%	4.1%	16.4%	13.4%	-10.9%	8.0%
Stock														
U.S. S&P 500	1.4%	-19.4%	26.9%	16.3%	28.9%	-6.2%	19.4%	9.5%	-0.7%	11.4%	29.6%	13.4%	0.0%	12.8%
Chinese Mainland SHCOMP	2.2%	-15.1%	4.8%	13.9%	22.3%	-24.6%	6.6%	-12.3%	9.4%	52.9%	-6.7%	3.2%	-21.7%	-14.3%
SZCOMP	3.3%	-21.9%	8.6%	35.2%	35.9%	-33.2%	-3.5%	-14.7%	63.2%	33.8%	20.0%	1.7%	-32.9%	7.5%
HK SAR, China HSI	6.1%	-15.5%	-14.1%	-3.1%	9.1%	-13.6%	36.0%	0.4%	-7.2%	1.3%	2.9%	22.9%	-20.0%	5.3%
Japan Nikkei 225	-0.5%	-9.4%	4.9%	16.0%	18.2%	-12.1%	19.1%	0.4%	9.1%	7.1%	56.7%	22.9%	-12.3%	-3.0%
South Korea KOSPI	2.4%	-24.9%	3.6%	30.8%	7.7%	-17.3%	21.3%	3.3%	2.4%	-4.8%	0.7%	9.4%	-11.0%	21.9%
Germany DAX	4.9%	-12.3%	15.8%	3.5%	25.5%	-18.3%	12.5%	6.9%	9.6%	2.7%	25.5%	29.1%	-14.7%	16.1%
U.K. FTSE 100	3.3%	0.9%	14.3%	-14.3%	12.1%	-12.5%	7.6%	14.4%	-4.9%	-2.7%	14.1%	5.8%	-5.5%	9.0%
France CAC 40	6.0%	-9.5%	28.9%	-7.1%	26.4%	-11.0%	9.3%	4.9%	8.5%	-0.5%	18.0%	15.2%	-17.0%	-3.8%
Bloomberg Barclays Indices														
Global	1.4%	-16.2%	-4.7%	9.2%	6.8%	-1.2%	7.4%	2.1%	-3.2%	0.6%	-2.6%	4.3%	5.6%	5.5%
China	1.5%	-5.2%	8.4%	9.8%	3.4%	3.5%	6.2%	-5.2%	3.9%	8.0%	1.3%	5.1%	9.2%	6.4%
Global + China	1.4%	-16.2%	-4.7%	9.2%	6.6%	-0.9%	7.3%	1.7%	-2.9%	0.9%	-2.6%	4.3%	5.8%	5.6%
U.S.	1.8%	-13.0%	-1.5%	7.5%	8.7%	0.6%	3.5%	2.6%	0.5%	6.0%	-2.0%	4.2%	7.8%	6.5%
Europe	1.5%	-22.3%	-9.7%	13.4%	4.1%	-4.4%	14.6%	0.3%	-9.3%	-2.4%	6.8%	12.9%	-0.1%	-4.5%
Asian Pacific	0.6%	-12.8%	-5.0%	6.6%	3.7%	2.7%	5.2%	5.3%	-0.5%	-6.8%	-14.6%	-7.0%	7.3%	17.2%
EM	1.0%	-15.3%	-1.7%	6.5%	13.1%	-2.5%	8.2%	9.9%	1.3%	4.8%	-4.0%	17.9%	7.0%	12.8%
Treasuries	1.2%	-17.5%	-6.5%	9.5%	5.6%	-0.4%	7.3%	1.7%	-3.8%	-0.8%	-4.8%	1.8%	6.3%	5.9%
Corporate	1.6%	-16.7%	-2.9%	10.4%	11.5%	-3.5%	9.1%	4.3%	-3.5%	3.1%	0.3%	11.2%	4.3%	5.8%
High Yield	1.7%	-12.7%	1.0%	7.0%	12.6%	-4.1%	10.4%	14.3%	-2.7%	0.0%	7.3%	19.6%	3.1%	14.8%
Commodity														
Bloomberg Commodity Index														
Energy														
Natural Gas	-17.3%	17.0%	27.9%	-42.2%	-38.5%	-2.1%	-37.0%	10.0%	-40.0%	-30.7%	4.9%	-30.7%	-47.1%	-40.7%
WTI Crude	-8.0%	22.4%	61.5%	-50.9%	31.6%	-22.0%	4.1%	6.1%	-44.4%	-41.7%	6.8%	-11.8%	-3.7%	3.7%
Brent Crude	-8.5%	38.9%	65.5%	-31.8%	32.7%	-16.6%	13.2%	25.0%	-45.6%	-47.6%	7.2%	7.5%	16.8%	11.3%
Heating Oil	-8.1%	90.9%	58.2%	-38.5%	22.0%	-12.4%	13.9%	33.0%	-42.9%	-38.8%	0.3%	5.4%	10.6%	8.2%
Unleaded Gasoline	-9.2%	45.7%	69.5%	-31.2%	41.5%	-29.7%	1.8%	6.1%	-12.7%	-43.8%	1.9%	25.6%	14.4%	12.9%
Precious Metal														
Gold	1.7%	-1.9%	-6.1%	25.1%	14.6%	-6.8%	9.9%	9.1%	-11.5%	-6.7%	-30.8%	6.2%	4.5%	42.5%
Silver	2.4%	-2.7%	-4.8%	20.5%	15.6%	-4.7%	11.7%	7.4%	-10.9%	-1.8%	-28.7%	6.0%	9.6%	28.5%
Industrial Metal														
Copper	-0.2%	0.5%	-12.3%	41.9%	11.5%	-11.9%	4.8%	13.6%	-12.8%	-20.5%	-36.7%	7.0%	-10.2%	81.6%
Aluminum	-1.5%	-4.4%	30.3%	15.9%	4.7%	-21.1%	28.1%	19.5%	-26.9%	-6.9%	-13.7%	0.6%	-24.3%	16.1%
Zinc	2.6%	-15.3%	27.0%	22.8%	5.0%	-22.8%	28.0%	15.4%	-25.2%	-16.6%	-8.8%	4.9%	-24.5%	29.4%
Nickel	-3.5%	-16.8%	38.9%	3.5%	-5.8%	-18.5%	29.9%	9.4%	-28.0%	-3.1%	-20.8%	-4.1%	-21.7%	5.2%
Agriculture														
Grains	1.8%	-12.3%	27.9%	18.1%	-3.2%	-22.9%	28.5%	56.9%	-28.0%	3.5%	-7.0%	8.9%	-27.8%	-9.0%
Softs	-6.7%	43.7%	25.1%	16.2%	29.8%	-18.0%	24.4%	11.5%	-42.7%	7.3%	-20.1%	-10.3%	-24.7%	32.0%
Livestock														
Live Cattle	-2.9%	15.6%	20.9%	18.9%	-3.2%	-7.8%	-12.1%	-6.2%	-19.5%	-9.4%	-16.9%	18.1%	-14.5%	30.1%
Lean Hogs	-3.9%	-5.4%	43.9%	2.5%	2.1%	-23.8%	-15.6%	12.8%	-9.9%	-10.1%	-16.9%	-22.5%	-14.0%	59.7%
Foreign Exchange														
US Dollar Index	-0.7%	5.3%	8.6%	-28.7%	-8.0%	-3.5%	5.4%	-5.9%	-18.9%	11.5%	-3.5%	-3.5%	-2.4%	9.1%
USDCNY	-0.7%	2.6%	-0.1%	-18.2%	-0.9%	0.6%	8.1%	-7.7%	-14.3%	22.0%	-5.1%	-4.0%	-1.1%	14.8%
MSCI EM Currency	-8.5%	10.8%	25.1%	-31.8%	-20.9%	-12.7%	1.8%	-3.8%	-26.1%	-4.4%	-2.1%	-3.0%	-4.5%	0.2%
USDHKD	0.3%	8.2%	6.4%	-6.7%	0.2%	4.4%	-9.9%	3.6%	9.3%	12.8%	0.3%	-0.5%	1.5%	1.5%
JPYUSD	-1.0%	8.5%	-2.5%	-6.8%	1.2%	5.7%	-6.3%	6.9%	4.6%	2.5%	-2.8%	-1.0%	-4.5%	-3.4%
EURUSD	0.5%	-4.3%	0.9%	3.3%	3.1%	-3.8%	11.4%	3.3%	-7.2%	-4.3%	-1.9%	5.5%	-2.5%	7.9%
GBPUSD	0.1%	0.1%	0.6%	-0.5%	-0.5%	0.2%	0.7%	0.1%	-0.1%	0.0%	0.0%	-0.2%	-0.1%	0.2%
	0.7%	13.9%	11.5%	-4.9%	-1.0%	-2.7%	-3.7%	-2.7%	0.4%	13.7%	21.4%	12.8%	-5.2%	-12.8%
	-0.5%	-5.8%	-6.9%	8.9%	-2.2%	-4.5%	14.1%	-3.2%	-10.2%	-12.0%	4.2%	1.8%	-3.2%	-6.5%
	0.1%	-10.7%	-1.0%	3.1%	3.9%	-5.5%	9.5%	-16.3%	-5.4%	-5.9%	1.9%	4.6%	-0.4%	-3.5%

Source: Bloomberg, GROW Research

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

	6/1/2023	30/12/2022	23/12/2022	16/12/2022	9/12/2022	2/12/2022	25/11/2022	18/11/2022	11/11/2022	4/11/2022	28/10/2022
S&P 500 GICS Groups Index											
S&P 500 GICS Groups Index	1.45%	-0.14%	-0.20%	-2.08%	-3.37%	1.13%	1.53%	-0.69%	5.90%	-3.35%	3.95%
Info. Tech.	0.22%	-0.15%	-2.04%	-2.67%	-3.34%	1.31%	0.98%	-0.85%	10.03%	-6.89%	4.28%
Industrials	2.72%	-0.18%	0.76%	-1.10%	-3.20%	1.00%	1.90%	-0.23%	4.60%	0.44%	6.73%
Materials	3.45%	-1.18%	-0.10%	-2.34%	-3.33%	1.54%	2.92%	-1.61%	7.69%	0.86%	3.34%
Consumer Staples	1.75%	-0.86%	1.00%	-1.40%	-1.83%	1.10%	2.10%	1.69%	2.38%	-1.83%	6.09%
Health Care	-0.19%	-0.19%	0.81%	-1.83%	-1.29%	1.91%	1.91%	0.99%	1.78%	-1.59%	5.00%
Consumer Discretionary	2.25%	-0.26%	-3.10%	-3.63%	-4.48%	2.10%	1.13%	-3.15%	5.93%	-5.78%	0.71%
Financials	3.33%	0.68%	1.40%	-2.50%	-3.90%	-0.64%	2.16%	-1.48%	5.72%	-0.83%	6.19%
Energy	0.00%	0.60%	4.38%	1.72%	-8.40%	-1.97%	0.26%	-2.35%	2.00%	2.37%	2.75%
Real Estate	2.48%	-0.61%	-0.01%	-2.38%	-1.85%	0.43%	1.99%	-1.83%	7.07%	-1.78%	6.17%
Utilities	0.70%	-0.64%	1.42%	-0.55%	-0.32%	0.06%	3.04%	0.83%	1.39%	-0.55%	6.48%
Telecom	3.70%	-0.08%	-0.40%	-2.47%	-5.39%	3.31%	1.01%	-0.08%	9.23%	-7.44%	-2.85%
Shanghai Stock Exchange Sector Index											
Info.Tech.	2.57%	2.25%	-5.71%	-0.76%	0.93%	-0.01%	-4.90%	5.34%	-2.63%	7.54%	2.05%
Industrials	1.98%	2.26%	-5.16%	-2.44%	0.50%	0.83%	1.29%	-2.25%	-1.65%	5.42%	-1.34%
Materials	2.66%	1.21%	-4.41%	-3.05%	3.76%	1.08%	0.88%	-1.44%	4.56%	5.51%	-3.55%
Consumer Staples	1.10%	-0.61%	-0.96%	0.75%	6.34%	7.14%	-3.77%	0.80%	1.38%	11.11%	-10.57%
Health Care	2.71%	2.89%	-4.96%	0.38%	0.37%	0.85%	-5.06%	5.05%	-2.28%	6.99%	-1.35%
Consumer Discretionary	3.15%	0.04%	-2.90%	-0.67%	2.84%	4.88%	-2.30%	-2.02%	-0.45%	10.68%	-4.45%
Financials	2.48%	1.77%	-2.53%	-0.87%	3.94%	1.44%	2.93%	1.22%	4.05%	2.78%	-5.08%
Energy	0.63%	0.23%	-4.88%	-2.17%	-0.68%	-1.00%	4.69%	-4.80%	1.02%	0.99%	-3.79%
Utilities	2.37%	5.26%	-4.02%	-1.12%	-2.91%	-0.73%	3.92%	0.69%	0.55%	1.50%	-7.45%
Telecom	4.72%	1.48%	-2.23%	-2.20%	-1.45%	5.10%	0.41%	1.60%	-1.42%	2.41%	-3.84%
Hang Seng Sector Index											
Info.Tech.	10.20%	0.82%	1.09%	-4.21%	10.36%	11.51%	-7.46%	8.47%	6.81%	16.74%	-11.55%
Industrials	3.21%	0.99%	-3.98%	-0.53%	4.31%	3.91%	-2.18%	1.74%	7.70%	8.28%	-6.01%
Materials	4.34%	1.17%	-3.76%	-2.86%	5.57%	4.53%	1.78%	-0.98%	13.30%	7.04%	-2.35%
Consumer	4.03%	0.08%	2.04%	-2.27%	4.86%	12.49%	-6.26%	2.92%	7.29%	10.40%	-6.52%
Financials	4.48%	1.77%	0.89%	-1.16%	4.87%	3.09%	2.10%	2.05%	8.28%	5.02%	-7.40%
Energy	0.19%	0.93%	-1.64%	1.58%	-0.29%	-1.40%	3.76%	-1.50%	2.88%	1.06%	-4.37%
Real Estate	5.85%	0.48%	-1.94%	-2.45%	10.80%	0.23%	3.48%	4.49%	11.53%	4.20%	-11.10%
Utilities	5.32%	4.33%	-2.23%	-0.58%	5.65%	-1.34%	1.53%	4.03%	4.50%	0.88%	-4.83%
Telecom	3.14%	-0.94%	0.88%	0.22%	1.06%	-0.27%	4.26%	1.66%	2.19%	0.69%	-3.84%

Source: Bloomberg, GROW Research

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

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
S&P 500 GICS Groups Index														
S&P 500 GICS Groups Index	4.2%	-15.4%	26.9%	16.3%	28.9%	-6.2%	19.4%	9.1%	-0.7%	11.4%	29.6%	13.4%	0.8%	12.8%
Info. Tech.	4.8%	-22.9%	33.4%	42.2%	48.0%	-1.5%	36.9%	12.0%	4.1%	18.2%	26.2%	13.1%	1.1%	9.1%
Industrials	4.1%	-7.1%	19.4%	9.9%	26.8%	-15.0%	18.5%	16.1%	-4.7%	7.5%	37.6%	12.5%	-2.9%	23.9%
Materials	7.9%	-14.1%	25.0%	18.1%	21.9%	-18.4%	21.4%	14.1%	-10.4%	4.7%	22.7%	12.2%	-11.6%	19.9%
Consumer Staples	0.8%	-3.2%	15.6%	7.5%	24.0%	-11.2%	10.5%	2.8%	3.8%	12.9%	22.7%	7.5%	10.5%	10.7%
Health Care	-0.4%	-3.5%	24.2%	11.4%	18.7%	4.7%	20.0%	-4.4%	5.1%	23.3%	38.7%	15.2%	10.2%	0.7%
Consumer Discretionary	8.1%	-37.6%	23.7%	32.1%	26.2%	-0.5%	21.2%	4.3%	8.1%	8.9%	41.0%	21.9%	4.1%	25.7%
Financials	5.4%	-12.4%	32.5%	-4.1%	29.2%	-14.7%	20.0%	20.1%	-3.5%	13.1%	33.2%	26.3%	-13.4%	10.8%
Energy	2.7%	59.0%	47.7%	13.3%	7.5%	-20.5%	-3.8%	23.7%	-23.6%	-10.0%	22.3%	2.3%	2.8%	17.9%
Real Estate	7.6%	-28.4%	42.5%	-5.2%	24.9%	-5.5%	7.2%	0.8%	1.2%	26.1%	-1.5%	16.2%	7.9%	28.0%
Utilities	1.1%	-1.4%	14.0%	-2.8%	22.2%	0.5%	8.1%	12.2%	-8.4%	24.3%	8.8%	-2.9%	14.8%	0.9%
Telecom	7.9%	-40.4%	20.5%	22.2%	30.9%	-15.4%	-6.0%	17.8%	-1.7%	-1.9%	6.5%	12.5%	0.8%	12.3%
Shanghai Stock Exchange Sector Index														
Info. Tech.	2.7%	-37.1%	-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	2.1%	-18.3%	14.3%	25.3%	13.7%	-23.6%	5.1%	-15.0%	10.7%	68.0%	-3.2%	-4.5%	-32.5%	-4.9%
Materials	4.8%	-21.4%	15.9%	22.7%	29.0%	-30.1%	27.3%	-7.5%	-1.0%	38.9%	-24.0%	9.1%	-33.1%	-3.2%
Consumer Staples	4.9%	-16.0%	-6.9%	81.5%	47.5%	-19.3%	43.8%	1.1%	24.1%	15.1%	7.7%	4.5%	-26.1%	12.7%
Health Care	5.1%	-22.7%	-8.3%	57.4%	24.3%	-28.4%	18.2%	-11.4%	45.8%	6.1%	32.6%	10.9%	-31.2%	33.8%
Consumer Discretionary	5.1%	-16.0%	-6.9%	81.5%	47.5%	-19.3%	43.8%	1.1%	24.1%	15.1%	7.7%	4.5%	-26.1%	12.7%
Financials	4.8%	-11.2%	-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	4.1%	16.4%	29.6%	-1.3%	2.1%	-26.3%	6.4%	-3.9%	-15.0%	24.0%	-33.0%	-4.3%	-23.5%	-10.9%
Utilities	0.0%	-15.3%	39.4%	-3.8%	3.1%	-11.1%	-3.0%	-20.5%	6.1%	73.1%	-1.0%	3.1%	-17.2%	-16.8%
Telecom	5.6%	-10.5%	9.1%	-6.9%	29.9%	-29.8%	12.1%	-7.5%	56.0%	34.6%	30.6%	-22.8%	-33.8%	4.6%
Hang Seng Sector Index														
Info. Tech.	14.5%	-25.1%	-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	4.1%	-21.2%	-18.8%	-15.9%	15.7%	-10.2%	48.8%	-1.8%	-2.6%	3.1%	-9.9%	42.9%	-26.5%	4.1%
Materials	12.0%	-15.2%	9.1%	30.0%	-0.4%	-29.5%	30.5%	21.0%	-18.7%	-1.1%	-21.9%	8.1%	-40.4%	4.1%
Consumer Goods	7.8%	-21.1%	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	7.8%	-21.1%	6.7%	-27.6%	39.7%	3.1%	-23.9%	-30.5%	40.1%	22.2%	-20.6%	25.3%	70.6%	-62.1%
Financials	7.9%	-5.5%	-6.3%	-6.9%	7.5%	-14.8%	31.2%	-3.1%	-10.0%	7.5%	3.9%	24.2%	-24.6%	-0.7%
Energy	6.1%	17.3%	20.5%	-34.7%	-4.1%	-2.8%	11.4%	14.3%	-31.3%	-17.3%	-16.2%	12.7%	-15.1%	16.5%
Real Estate	4.6%	-21.2%	-18.8%	-15.9%	15.7%	-10.2%	48.8%	-1.8%	-2.6%	3.1%	-9.9%	42.9%	-26.5%	4.1%
Utilities	5.2%	-30.3%	17.6%	-9.4%	-0.9%	1.2%	15.7%	-7.4%	-8.1%	6.2%	13.8%	15.0%	2.1%	6.2%
Telecom	7.1%	6.9%	0.5%	-29.9%	-9.7%	-3.4%	-1.0%	-6.0%	-5.1%	11.5%	-10.2%	11.7%	2.7%	8.1%

Source: Bloomberg, GROW Research

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