

Tao and the Art of China Markets Speculation

- ☯ Market illiquidity that has been a source of microcaps alpha turned into the stem of volatility. In the end, not everyone could be bailed out or worthy of it. Chinese sentiment towards uncertainty suggests that any potential source of volatility would be frowned upon and heavily regulated.
- ☯ The six negative candlesticks during the quant-quake resemble the “K’un” hexagram in the I-Ching. This hexagram suggested being pliable and prudent during the plunge, and a reversal of trends. It is prescient. Now property remains the overhang.
- ☯ Change is the immutable Tao. Forecasting is to recognize subtle changes in their germinal state to shape the outcome of the future. And so, we are not blindly accepting our fate, but taking charge of our destiny.

In late January, just before the Year of the Dragon, China markets plunged. Some dubbed it China’s “quant-quake”, as structured financial products with embedded put options kicked in, and quant funds struggled to re-balance in a vicious downward spiral. It was one of the darkest episodes in the Chinese market.

In reality, it was the vicissitudes of the market-neutral strategies, the utter collapse of the “snowballs” and the abrupt changes in regulatory rules that together germinated a perfect storm. Each element in its own right was apposite, yet together in the unfolding conditions of *statu nascendi*, they ended up roiling the market, generating unfathomable losses with probability of occurrence of ~ 1 to 1,000,000,000, or about once in two million years. It should never have happened.

In this piece, we refer to the autochthonous wisdom encrypted in the *I-Ching*, or the Book of Changes, from the Yellow-River Culture that originated 5,000 years ago. *We are not trying to play the ghost or the devil*, but the I-Ching is a foundational text for two of China’s dominant schools of philosophy, the Taoist, and the Confucianism.

Till today, Taoism and Confucianism still guide the everyday life in China, with Confucianism governing a harmonious society on hierarchy in which the Chinese practices Taoism to wield balance with the exogeneous world. Our own proprietary theory and models of economic cycle are in part developed based on the principles of the “Ch’ien 乾卦” trigram in the I-Ching. In this report, we focus on the “Tao 道” of the I-Ching, drawing the metaphysics and dualism views from this Chinese classics.

“Hoarfrost Underfoot 履霜，冰將至”

The I-Ching is a book recording a sacred ritual of our ancestors from primordial times throwing yarrow stalks and divining the future. The eight trigrams formed by a combination of six whole or broken lines are conceived as heaven and earth, and everything between them. Over the centuries, hairsplitting cabalistic suppositions about how to interpret the trigrams have been shrouding the I-Ching with mysteries, leaving the book with a reputation of inscrutable profundity.

Most consult with the I-Ching at difficult junctures for omens, auguries, and divinations. That, however, is precisely what the I-Ching is not. The eight hexagrams indeed represent

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the transitional states that are constantly shifting. From them, we learn to foresee the direction in which the future would evolve, as well as understanding the past. The hexagrams recognize subtle changes in their germinal states, and thus an individual could shape his/her fate before a situation evolves into its full consequences overwhelming the individual who by then would be impotent and in vain.

How to dissect China's recent "quant-quake" through the prism of the I-Ching?

In early January, lured by high dividend yields of the large-cap stocks and following the national team's lead of buying CSI 50/300 ETFs, large mutual funds in China started to cut exposures in small caps and rotated into large caps. Such selling, especially by large mutual funds, while with all the good intentions to seek higher returns, mounted significant pressure on the small-cap indices such as CSI 500/1000 that served as the underlying indices for the "snowballs" structured products. Fortunately, by mid-December, we have cut down our portfolio exposure to zero.

These snowballs' payoff resembles selling a put – the buyer collects a steady and attractive yield should the market remain largely steady, but starts to lose money if the market plunges below the lower strike price, as it happened between Jan 8 and 26. It would mean a complete wipe out of the investor capital if leverage is employed.

Figure 1: Six days of quant-quake through the lens of the I-Ching.



Source: Bloomberg, GROW Research

Meanwhile, market-neutral strategies have been delivering consistent returns in the past few years. These strategies tend to long a portfolio of small and microcaps, while shorting the index futures to achieve "market neutral" exposure. Their return is the alpha from the long portfolio of small and microcaps less basis difference (hedging cost.) As small and microcaps fell, these strategies started to suffer losses on the long side but profiting from the expanding futures basis (negative hedging costs). By then, these strategies were motivated to close their positions and take profits.

There was only one problem – selling restrictions were abruptly placed on some of the DMAs without advance notice. As the large market neutral funds continued to close their positions, the pressure on the microcaps mount. But the “national team” was busy buying large caps to save the large-cap indices. And the trading restrictions accelerated selling by the funds who could still trade to get out of their positions. By early February, a liquidity crisis was in full view.

The “national team” extended its buying to small-cap indices such as CSI 500 till all the snowballs were exercised. The pressure on CSI 500 and 1000 was then lifted. But the rally in these indices would mean narrowing hedging gains from the futures basis for the market-neutral funds, while their long side could not be liquidated because of the lack of liquidity in the microcaps and the trading restrictions. It was a double whammy for these funds. The bloodbath continued until the “national team” started to buy CSI 2000 the microcap index.

During different stages of the selloff, the candlestick chart of the Shanghai Composite manifests striking resemblances to the pattern of the hexagram “K’un 坤” in the I-Ching (**Figure 1**). The Judgement of “K’un 坤” says, “... sublime success furthering through the perseverance of a mare ... if he follows, he finds guidance ... quiet perseverance brings good fortune.” In short, the “K’un 坤” advocates patience, prudence, solitude and pliant.

In **Figure 1**, we can see how the market local top on 29 January 2024 morph into selling and then plunge into crisis. We can also see how the market inflection point emerging on 5 February, as the “yin 陰” energy, or the falling candlestick, exhausting itself and transforming into the “yang 陽”.

The candlestick at the inception of the plunge is called “six at the beginning (初六)” in “K’un 坤”. Six signifies “yin 陰” in the I-Ching numerology and is a sign of negativity. This trigram says, “*hoarfrost on foot, ice not far off*”, auguring for an impending crisis. The interlude on the fourth day of the plunge, manifested as a “doji” in the candlestick and a sign of hesitation in technical analysis, corresponds to the fourth trigram of the “K’un 坤” that forewarns dangerous times and advises to maintain reserve. Finally, the nadir of the plunge on February 5 corresponds to the last trigram (上六) of the “K’un 坤”.

“When six is at the top, dragons fight in the meadow, their blood is black and yellow”. This last trigram of the “K’un 坤” vividly paints the picture of great upheaval when the true dragon descends from the sky to fight with the false one on earth, who is not in its deserving position. By then, the “Ch’ien 乾” and the “K’un 坤” reversed, “yin 陰” yields to “yang 陽”, and the market recovers from negative to positive. We shared our view about this inflection point with our V+ paid readers on Weibo on February 8, and began to add to our risk exposure.

In the above discussion, we study the recent market dislocation through the prism of the “K’un 坤” hexagram in the I-Ching. With the yarrow stalks in different positions, the I-Ching hints to us a constantly evolving process of interrelated changes. By discerning early omens at the fledging stage of the process, such as a sudden change in liquidity

conditions between the large and the small caps, or an abrupt change of trading rules, one can choose the ensuing course of action.

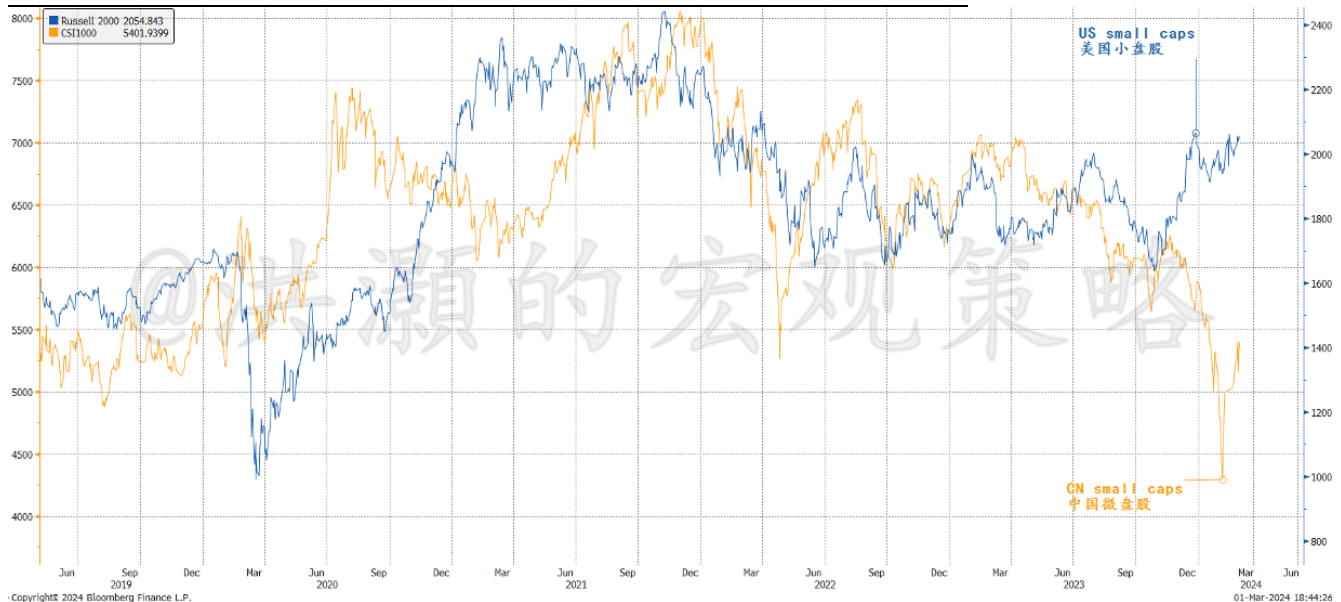
This is the essence of forecasting – by being part of the forecast with continuous rejiggering, traders can shape the outcome of their impending trades. Forecasting is about recognizing subtle shifts in their germinal stages to anticipate future market direction. Forecast is not about predicting a certain price level for sure and fixating our trading plans upon this pseudo certainty.

Life is never black and white. Many misconstrue the I-Ching as a book of oracles. However, what is foretold and immutable is fate. But when we ask the next questions, “what am I to do in this situation”, the I-Ching then becomes a book of enlightenment.

“The Eternal Dao 非常道”

Why microcaps in China markets were able to deliver consistent returns for years, but in the US market it is the large caps leading the charge while small and microcaps lag (Figure 2). Further, why would some quantitative strategies be able to pick microcaps that can outperform from a group of obscure stocks in a market corner rife with frauds and irregularities?

Figure 2: Splitting performance between China and US small caps.



Source: Bloomberg, GROW Research

In the Hong Kong market, traders have a nickname for microcaps -- “little fairies 仙姑” – for the little investment merits they possess. We have done research on this inscrutable bunch in the past. Because of a lack of liquidity in these stocks, they are difficult to trade.

Our exchanges with some quant funds reveal that many of the stock screening criteria to trade the Chinese microcaps employ metrics of price and momentum, but very few metrics of fundamentals such as cashflow, dividend and valuation. Why would such naïve

stock screening criteria that have nothing to do with economic fundamentals yield consistent alpha over the years? And this observation alone is peculiar enough to contradict the so-called “Efficient Market Hypothesis”.

If microcaps are mostly junk as consensus perceives, it appears that these strategies were able to pick treasure from junks. From this perspective, the microcap investment process resembles a lottery draw, with each stock ticker as a lottery number waiting to be drawn to yield a winning number.

Such investment process has little to do with economic analysis, where fundamentals of cashflow and earnings are substituted by technicals of price and momentum. As such, these strategies are competing based on who can write better and more efficient codes with faster hardware and network, rather than who could analyze and think better. Economists pale in this discipline.

If the investment return from the microcaps is not based on good fundamentals but rather on technicals, then this least researched and thus inscrutable group of stocks are fertile ground for exploitation.

Due to the lack of liquidity, the bid-ask spread of microcaps are wider than large caps and thus fast speed and T+0 turnaround are necessary to exploit the pricing inefficiency. The fact that these quant funds have grown exponentially within a short time seems to suggest that the entry hurdle may not be as high as commonly perceived.

But precisely because of the lack of liquidity, the return from microcaps in many ways resembles liquidity premium offered by the trading opponents. When funds crowd into this illiquid corner of the market in an immature, heavily regulated environment, a liquidity crisis is inevitable.

Essentially, these are short volatility strategies, betting stock prices would go up in a market segment that is prone to volatility given the leverage employed and the shallow liquidity conditions. Eventually, the NAV of these funds’ traverses like a Thanksgiving turkey – it prevails, till the Thanksgiving Day.

Chinese loathes volatility, as volatility means something is out of the peripheral of control. Because of this sentiment, and in light of the recent quant-quake, it is likely that grip on these quant funds will be increasingly tightened. As such, a rapid recovery in these funds will likely be arduous. Contrarily, the US short-vol funds recovered quickly after the early 2018 quant crisis. Their AUM are now six times as large as they were in 2018.

The I-Ching was written way before the theory of probability was developed. That is, our ancestors were not yet aware of the concept of randomness. To them, the shape of the yarrow stalks could not have been random. It must have been from heaven.

When market volatility surges, the randomness, or the entropy in the system quickly multiplies, and the probability of tail events soars. In an effort to suppress volatility in one market segment without understanding the whole picture, we introduce volatility in the other parts of the market. The illiquidity in microcaps has the quality of duality revealed in I-Ching – it has been a fountain of market volatility but also a source of alpha.

Raking in illiquidity premium during tranquil times amounts to hoarding penalties for the strategy during volatile times. It is like “picking up nickels in front of a bulldozer”.

The I-Ching, as its name suggests, is a Book of Changes. The underlying principle of the whole is change. In the words of Zhuangzi, one of Taosim’s ancient founding philosophers, *"Emptiness is formless, and change is constant. Is it death? Or life? Does it merge with heaven and earth? Or does it travel with the divine and the mysterious? Vastly indeterminate, where does it head? Suddenly elusive, where does it turn? All things are fully enmeshed, yet none suffices to return to. The ancient arts and methods resided here."*

Zhuangzi alone communed with the spirit of heaven and earth, without arrogance towards all beings, refraining from judging right or wrong, thus navigating the secular world. This statement reveals the essence of change in full — it is the immutable law of heaven and earth, and everything in between. The significance of being prone to change is not about the fleeting transformation of one single thing, but lies in the eternal principle of managing the transcendence ceaselessly between and among all things.

And such is the eternal Tao.

Conclusion

The recent quant-quake in China markets reveals the vulnerability innate to a crowded investment strategy. As the crisis unfolded, the market plunged through series of escalating phases where selloffs begot further selloff, until the excess in the system was purged. The national team was fending off one collapse after another, but wasn’t able to bail out all participants. A price must be paid by some.

Illiquidity is a source of alpha during tranquil times, but a source of volatility during crisis. Such is the dualism of the market. No pain no gain is a commonplace saying. The six consecutive negative candlesticks that resemble the hexagram of extreme adversity in the “K’un 坤” hints at a significant market bottom. But few understand it, especially when the going gets tough.

To us, the essence of forecasting is not to predict and fixate upon a definitive level. Rather, much like the hexagrams of the I-Ching, forecasting is about discerning subtle changes in their germinal state before they evolve into their full consequences overwhelming the individual now in vain. Then, we adapt our trading plan accordingly to shape the outcome of our investment. And so, we are not blindly accepting our fate, but taking charge of our destiny.

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Appendix 1: Performance of major asset classes (weekly)

Asset Class		3/1/2024	2/23/2024	2/16/2024	2/9/2024	2/2/2024	1/26/2024	1/19/2024	1/12/2024	1/5/2024	12/29/2023	12/22/2023
MSCI Index												
MSCI World		0.90	1.49	0.11	1.04	0.98	1.29	0.22	1.53	-1.53	0.54	0.84
MSCI DM		0.77	1.46	0.31	1.01	0.91	1.30	-0.06	1.31	-1.60	0.81	0.66
MSCI EM		-0.35	1.19	2.08	0.74	0.32	1.46	-2.55	-0.58	-2.12	3.17	-0.86
MSCI China		-0.64	2.78	3.74	2.89	-3.78	3.35	-5.83	-1.69	-2.66	4.81	-4.03
MSCI Asia Ex Japan		-0.48	1.42	2.36	0.92	0.43	1.47	-2.63	-0.83	-2.51	3.55	-1.22
MSCI Europe		0.03	1.16	1.37	0.14	0.05	3.11	-1.50	0.06	-0.48	0.33	0.18
Stock												
US	S&P 500	0.95	1.66	-0.42	1.37	1.38	1.06	1.17	1.84	-1.52	0.32	0.75
Chinese Mainland	SHCOMP	0.74	4.85	0.00	4.97	-6.19	2.75	-1.72	-1.61	-1.54	2.06	-0.94
	SZCOMP	3.33	5.87	0.00	5.74	-11.10	-0.51	-3.59	-1.35	-3.51	2.92	-2.33
HK SAR, China	HSI	-0.82	2.36	3.77	1.37	-2.62	4.20	-5.76	-1.76	-3.00	4.33	-2.69
Japan	Nikkei 225	2.08	1.59	4.31	2.04	1.14	-0.59	1.09	6.59	-0.26	0.89	0.60
Germany	DAX	1.81	1.76	1.13	0.05	-0.25	2.45	-0.89	0.66	-0.94	0.27	-0.27
UK	FTSE 100	-0.31	-0.07	1.84	-0.56	-0.26	2.32	-2.14	-0.84	-0.56	0.46	1.60
France	CAC40	-0.41	2.56	1.58	0.73	-0.55	3.56	-1.25	0.60	-1.62	-0.34	-0.37
Bloomberg Barclays Indices												
Global		0.26	0.43	-0.34	-0.81	0.37	0.08	-1.42	0.38	-1.38	0.48	0.53
China		0.31	0.28	0.00	-0.17	0.47	0.43	-0.29	0.06	-0.81	1.01	-0.28
US		0.47	0.25	-0.55	-0.82	0.65	0.10	-1.10	0.92	-1.20	0.48	0.14
Europe		-0.16	0.30	0.19	-0.84	0.27	0.32	-0.75	0.07	-0.77	-0.36	0.58
Asia Pacific		-0.05	0.43	0.24	0.04	0.62	-0.00	0.47	0.39	0.59	-0.00	0.58
EM		0.45	0.58	-0.01	-0.30	0.70	0.13	-0.77	0.78	-1.45	0.36	0.43
Treasuries		0.55	0.28	-0.58	-0.81	0.72	0.02	-1.04	0.67	-1.02	0.41	0.09
Corporate		0.22	0.41	-0.45	-0.95	0.58	0.22	-1.00	1.26	-1.54	0.65	-0.16
High Yield		0.20	0.42	-0.32	0.13	0.10	0.61	-0.52	0.98	-1.12	0.40	0.67
Commodity												
Bloomberg Commodity Index		1.90	-0.88	-0.72	0.29	-2.14	2.05	-1.18	-0.68	-0.01	-0.71	0.46
Energy												
	Brent Crude	4.17	-1.62	-1.69	3.41	-5.88	3.90	-3.26	-0.27	4.47	-2.07	1.71
	WTI Crude	3.40	-2.34	1.38	5.89	-6.60	6.08	0.03	-0.74	2.03	-2.17	1.92
	Natural Gas	4.55	-2.51	2.20	6.18	-7.14	6.48	0.33	-1.34	2.58	-2.48	2.12
		8.00	1.13	-10.88	-9.64	-5.18	-2.96	-12.03	0.31	11.50	0.52	-1.76
Precious Metal												
	Gold	1.90	0.44	0.36	-0.77	0.58	-0.30	-1.47	0.07	-1.53	-0.33	1.65
	Silver	2.26	1.25	-0.72	-0.73	0.86	-0.61	-1.10	0.08	-1.06	0.14	1.63
Industrial Metal												
	Copper	0.75	-2.10	3.84	-0.90	-0.34	0.71	-2.65	0.06	-3.19	-1.93	1.71
	Aluminum	0.40	1.34	2.51	-3.25	-2.30	3.64	-0.80	-1.71	-3.00	1.00	1.11
	Nickel	-1.00	1.27	4.04	-3.82	-0.79	1.78	1.14	-1.61	-2.01	-0.33	0.40
Agriculture												
	Soybean	3.02	-2.10	0.11	-0.96	-2.02	5.09	-2.45	-2.58	-4.86	2.31	3.48
	Corn	0.85	7.05	2.71	-2.12	-3.41	4.56	-1.97	-0.38	-1.55	0.48	-3.76
Livestock												
	Live Cattle	0.70	-2.50	-2.54	-0.13	-0.60	0.59	0.48	-1.33	-2.02	-0.42	-1.89
	Lean Hogs	0.83	-2.93	-1.16	-0.69	-1.48	-0.55	-1.03	-2.25	-3.29	-0.72	-1.95
		2.72	-3.73	-2.72	-2.65	-0.49	-0.05	-0.65	-3.01	-2.22	-0.36	-1.92
		0.55	0.96	2.06	-0.13	0.98	3.88	0.96	1.09	1.74	-1.44	-0.57
		0.29	0.19	0.44	1.62	1.14	2.42	1.84	0.45	0.67	0.07	-0.42
		1.00	2.32	5.02	-3.19	0.69	6.53	-0.60	2.95	2.04	-3.51	-1.34
Foreign Exchange												
US Dollar Index		-0.07	-0.33	0.16	0.18	0.47	0.14	0.86	-0.01	1.06	-0.36	-0.83
USDCNY		0.01	0.04	0.00	0.00	0.22	-0.22	0.36	0.29	0.66	-0.50	0.20
MSCI EM Currency		0.21	-0.04	0.09	-0.15	0.27	0.25	-0.73	0.09	-0.69	0.79	0.02
USDHKD		0.05	0.03	0.03	-0.02	0.08	-0.05	-0.03	0.11	0.01	-0.00	0.11
USDJPY		-0.26	0.20	0.62	0.61	0.16	0.02	2.24	0.17	2.55	-0.96	0.18
EURUSD		0.15	0.41	-0.06	-0.04	-0.60	-0.41	-0.48	0.07	-0.87	0.23	1.09
GBPUSD		-0.13	0.56	-0.21	-0.02	-0.57	0.00	-0.39	0.26	-0.09	0.24	0.16

Source: Bloomberg, GROW Research (Updated on 01/03/2024, same below)

Appendix 2: Performance of major asset classes (annual)

Asset Class	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014	
MSCI Index												
MSCI World	3.66	21.77	-19.46	20.14	14.06	25.19	-10.44	20.11	5.32	-2.74	2.93	
MSCI DM	3.20	20.09	-19.80	16.80	14.34	24.05	-11.18	21.62	5.63	-4.26	2.10	
MSCI EM	-0.73	7.04	-22.37	-4.59	15.84	15.42	-16.63	34.35	8.58	-16.96	-4.63	
MSCI China	-4.34	-13.22	-23.51	-22.37	26.70	20.37	-20.31	52.34	-1.38	-10.10	4.67	
MSCI Asia Ex Japan	-0.89	3.60	-21.54	-6.36	22.47	15.37	-16.38	38.71	2.88	-11.32	2.23	
MSCI Europe	2.71	12.73	-11.86	22.38	-5.37	22.24	-13.10	7.27	-0.50	5.47	4.09	
Stock												
US	S&P 500	4.94	24.23	-19.44	26.89	16.26	28.88	-6.24	19.42	9.54	-0.73	11.39
Chinese Mainland	SHCOMP	-3.67	-3.70	-15.13	4.80	13.87	22.30	-24.59	6.56	-12.31	9.41	52.87
	SZCOMP	-14.18	-6.97	-21.92	8.62	35.20	35.89	-33.25	-3.54	-14.72	63.15	33.80
HK SAR, China	HSI	-4.15	-13.82	-15.46	-14.08	-3.40	9.07	-13.61	35.99	0.39	-7.16	1.28
Japan	Nikkei 225	15.01	28.24	-9.37	4.91	16.01	18.20	-12.08	19.10	0.42	9.07	7.12
Germany	DAX	2.18	20.31	-12.35	15.79	3.55	25.48	-18.26	12.51	6.87	9.56	2.65
UK	FTSE 100	-0.28	3.78	0.91	14.30	-14.34	12.10	-12.48	7.63	14.43	-4.93	-2.71
France	CAC40	2.98	16.52	-9.50	28.85	-7.14	26.37	-10.95	9.26	4.86	8.53	-0.54
Bloomberg Barclays Indices												
Global		-3.11	5.72	-16.25	-4.71	9.20	6.84	-1.20	7.39	2.09	-3.15	0.59
China		-0.32	2.71	-5.20	8.41	9.77	3.36	3.54	6.19	-5.17	3.95	8.04
US		-2.01	5.53	-13.01	-1.54	7.51	8.72	0.01	3.54	2.65	0.55	5.97
Europe		-1.51	7.19	-17.18	-2.85	4.05	5.98	0.41	0.68	3.32	1.00	11.10
Asia Pacific		2.36	5.85	-0.09	5.91	1.25	2.71	0.01	1.60	2.08	-0.13	6.28
EM		-0.95	9.09	-15.26	-1.65	6.52	13.11	-2.46	8.17	9.88	1.29	4.76
Treasuries		-2.03	4.05	-12.46	-2.32	8.00	6.86	0.86	2.31	1.04	0.84	5.05
Corporate		-1.90	8.52	-15.76	-1.04	9.89	14.54	-2.51	6.42	6.11	-0.68	7.46
High Yield		-0.15	13.45	-11.19	5.28	7.11	14.32	-2.08	7.50	17.13	-4.47	2.45
Commodity												
Bloomberg Commodity Index		-2.43	-12.55	13.75	27.05	-3.50	5.44	-12.99	0.75	11.40	-24.70	-17.04
Energy		0.20	-25.59	33.46	52.06	-42.94	9.44	-14.41	-5.21	15.89	-38.91	-39.36
	Brent Crude	7.75	-3.38	16.64	37.82	-13.29	-5.25	4.48	-	-	-	-
	WTI Crude	8.96	-4.48	18.48	40.77	-11.91	-2.71	-	-	-	-	-
	Natural Gas	-27.08	-40.00	34.55	23.76	-1.91	-11.58	-5.71	-5.27	-16.38	-20.59	-3.45
Precious Metal		-3.04	4.11	-1.90	-6.15	25.12	14.57	-6.44	9.90	9.14	-11.50	-6.74
	Gold	-3.24	8.10	-	-	-	-	-	-	-	-	-
	Silver	-2.61	-4.17	-	-	-	-	-	-	-	-	-
Industrial Metal		-5.02	-13.72	-4.37	30.28	15.88	4.74	-21.06	28.13	19.52	-26.92	-6.90
	Copper	-1.46	2.90	-11.90	22.24	22.57	-	-	-	-	-	-
	Aluminum	-7.70	-4.15	-1.51	19.68	-1.54	-1.91	-12.11	24.86	2.24	-14.72	-8.10
	Nickel	-2.39	-46.52	53.55	17.73	13.66	24.46	-	-	-	-	-
Agriculture		-5.47	-9.25	13.22	26.61	16.03	-0.41	-12.54	-11.89	1.76	-15.65	-9.26
	Soybean	-10.02	-6.09	16.12	-	-	-	-	-	-	-	-
	Corn	-11.26	-22.09	22.53	-	-	-	-	-	-	-	-
Livestock		11.02	-6.86	5.27	8.57	-23.72	-7.96	-3.64	5.36	-5.94	-18.88	11.52
	Live Cattle	8.88	2.16	-	-	-	-	-	-	-	-	-
	Lean Hogs	13.86	-17.22	-	-	-	-	-	-	-	-	-
Foreign Exchange												
US Dollar Index		2.90	-2.11	8.21	6.37	-6.69	0.22	4.40	-9.87	3.63	9.26	12.79
USDCNY		1.32	2.92	8.54	-2.62	-6.26	1.23	5.71	-6.31	6.95	4.64	2.51
MSCI EM Currency		-0.87	4.80	-4.26	0.85	3.27	3.12	-3.75	11.35	3.48	-7.06	-4.27
USDHKD		0.13	0.13	0.06	0.56	-0.49	-0.52	0.23	0.75	0.07	-0.06	0.01
USDJPY		6.50	7.57	13.94	11.46	-4.94	-0.98	-2.66	-3.65	-2.71	0.37	13.74
EURUSD		-2.37	3.12	-5.85	-6.93	8.94	-2.22	-4.48	14.15	-3.18	-10.22	-11.97
GBPUSD		-1.01	5.36	-10.71	-1.01	3.12	3.94	-5.62	9.51	-16.26	-5.40	-5.92

Source: Bloomberg, GROW Research

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

	3/1/2024	2/23/2024	2/16/2024	2/9/2024	2/2/2024	1/26/2024	1/19/2024	1/12/2024	1/5/2024	12/29/2023	12/22/2023
S&P 500											
S&P 500	0.95	1.66	-0.42	1.37	1.38	1.06	1.17	1.84	-1.52	0.32	0.75
Info Tech	2.51	1.97	-2.46	3.21	0.77	0.93	4.31	4.86	-4.05	0.27	0.06
Financials	-0.07	1.60	1.44	0.18	0.81	1.88	0.94	-0.53	0.33	0.71	0.28
Health Care	-1.05	1.51	1.02	1.43	1.98	-0.23	-0.72	0.89	2.07	0.96	1.07
Cons Discret	2.04	1.54	-0.77	1.45	3.77	-1.40	0.52	1.53	-3.45	-0.43	0.51
Telecom Svc	-0.31	1.48	-1.61	1.02	1.63	4.52	1.95	3.44	-1.16	-0.40	4.10
Industrials	1.00	1.78	0.85	1.17	1.88	0.87	0.29	0.57	-2.15	0.71	0.65
Cons Staples	-0.54	2.11	0.15	-1.33	2.13	0.83	-1.04	1.16	0.03	1.08	0.63
Energy	1.30	0.42	2.17	-0.24	-1.01	5.15	-3.08	-2.39	1.12	-1.37	1.66
Real Estate	2.11	0.88	-0.18	0.25	-0.49	-0.51	-2.13	0.64	-1.90	0.59	0.25
Materials	1.16	1.90	2.36	0.02	0.76	0.29	-1.49	-1.04	-1.42	-0.16	1.13
Utilities	-0.63	1.15	1.35	-2.08	0.36	0.42	-3.70	-1.87	1.84	1.14	-1.27
CSI 300											
CSI 300	1.38	3.71	0.00	5.83	-4.63	1.96	-0.44	-1.35	-2.97	2.81	-0.13
Financials	-1.60	4.65	0.00	3.26	-2.47	5.30	0.93	-1.65	-1.21	1.79	-0.54
Industrials	1.63	2.14	0.00	6.48	-6.13	1.60	-0.69	0.93	-3.60	3.73	0.69
Cons Staples	-1.92	2.61	0.00	6.70	-2.63	0.09	-0.90	-1.14	-2.51	3.93	0.82
Info Tech	9.34	4.55	0.00	9.03	-8.88	1.35	-0.76	-4.42	-6.95	3.18	-1.67
Materials	1.71	4.69	0.00	6.45	-5.63	2.38	-2.69	-1.44	-1.25	3.01	0.85
Cons Discret	4.09	2.43	0.00	5.94	-2.84	-0.53	-0.65	0.41	-2.38	2.47	-0.17
Health Care	1.09	1.37	0.00	10.62	-10.41	2.47	-0.72	-2.22	-2.35	2.27	-0.92
Utilities	-2.43	4.53	0.00	1.00	0.76	4.11	-1.38	-0.29	2.86	1.00	1.12
Telecom Svc	5.63	6.94	0.00	5.75	-4.51	4.79	2.19	-3.53	-4.50	3.29	-3.10
Energy	-2.72	8.39	0.00	1.69	-0.11	9.77	-0.91	-1.63	5.00	1.70	2.62
HSI											
HSI	-0.82	2.36	3.77	1.37	-2.62	4.20	-5.76	-1.76	-3.00	4.33	-2.69
Industrials	-0.25	2.75	4.66	1.44	-2.73	3.38	-6.40	-1.80	-3.14	5.26	-3.99
Financials	-1.70	1.56	2.66	1.94	-2.86	6.00	-4.60	-1.68	-2.79	3.12	-0.89
Real Estate	-2.20	2.80	3.63	-1.64	-2.66	2.07	-7.20	2.40	-4.44	3.39	1.67
Utilities	0.70	3.29	0.78	-0.56	1.49	3.50	-4.07	-0.68	-0.26	2.34	-0.09
HSTECH	2.60	1.71	6.89	2.74	-4.47	1.81	-9.82	-3.39	-4.57	6.09	-6.15

Source: Bloomberg, GROW Research

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

	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
S&P 500											
S&P 500	4.94	24.23	-19.44	26.89	16.26	28.88	-6.24	19.42	9.54	-0.73	11.39
Info Tech	7.45	56.39	-28.91	33.35	42.21	48.04	-1.62	36.91	11.99	4.27	18.19
Financials	5.14	9.94	-12.35	32.54	-4.10	29.17	-14.67	20.03	20.14	-3.48	13.10
Health Care	6.59	0.30	-3.55	24.16	11.43	18.68	4.69	20.00	-4.36	5.21	23.30
Cons Discret	1.48	4.04	-37.58	23.66	32.07	26.20	-0.49	21.23	4.32	3.43	8.05
Telecom Svc	10.05	54.36	-40.42	20.53	22.18	30.88	-16.43	-4.97	17.81	-1.73	-1.91
Industrials	3.48	16.04	-7.10	19.40	9.01	26.83	-16.00	18.54	16.08	-4.72	7.52
Cons Staples	1.90	-2.16	-5.17	15.55	7.63	23.97	-11.15	10.46	2.58	3.77	12.87
Energy	1.49	-4.80	59.04	47.74	-37.31	7.64	-20.50	-3.80	23.65	-23.55	-6.99
Real Estate	-4.28	8.27	-28.45	42.50	-6.17	24.93	-6.64	7.17	0.01	1.24	26.14
Materials	-0.58	10.23	-14.06	25.00	18.11	21.87	-16.45	21.39	14.08	-10.36	4.68
Utilities	-8.75	-10.20	-1.44	18.99	-2.83	22.24	0.46	8.32	12.20	-6.39	24.29
CSI 300											
CSI 300	-1.93	-1.38	-21.63	-5.20	27.21	36.07	-25.31	21.78	-11.28	5.58	51.66
Financials	3.99	-9.38	-4.98	-1.78	0.76	38.60	20.02	17.72	-9.78	-7.28	86.34
Industrials	-1.88	-24.16	-24.79	-1.22	33.90	17.91	-26.60	4.86	-6.51	-2.14	62.22
Cons Staples	-2.73	-2.64	-4.96	-8.92	75.09	79.32	-22.37	81.02	-8.40	22.54	14.48
Info Tech	-3.50	-2.35	-36.86	-1.90	34.40	59.54	-37.58	22.74	-20.41	48.11	3.47
Materials	-2.59	-2.90	-24.40	-4.57	38.99	28.28	-35.56	29.22	-4.85	-1.85	39.60
Cons Discret	-0.29	-2.40	-20.47	-6.93	54.75	37.84	-30.14	28.43	-6.56	26.76	20.12
Health Care	-0.26	-4.35	-24.67	-6.68	55.42	38.39	-21.77	26.37	-2.92	36.12	5.12
Utilities	-7.16	-7.73	-11.63	-29.58	-1.53	1.86	-7.18	9.97	-9.50	-0.38	83.12
Telecom Svc	-0.38	-7.85	-20.99	3.29	-7.69	36.52	-38.31	24.51	-2.54	30.54	37.34
Energy	-4.12	-4.06	-8.29	-8.19	-6.29	3.92	-23.68	11.41	-3.02	-8.84	20.46
HSI											
HSI	-4.15	-3.82	-5.46	-4.08	-3.40	9.07	-3.61	35.99	0.39	-7.16	1.28
Industrials	-4.97	-5.41	-22.01	-9.80	-7.51	10.76	-9.27	40.91	2.89	-5.29	-5.74
Financials	-1.75	-8.08	-4.20	-8.31	-5.56	9.23	-2.30	34.71	-0.88	-9.81	5.21
Real Estate	-2.36	-29.62	-1.97	-7.93	-20.06	8.20	-7.35	38.28	-3.06	-2.09	7.16
Utilities	0.05	-10.74	-27.34	-10.76	-9.13	-2.09	-3.84	11.23	-2.11	-6.32	12.78
HSTECH	-1.20	-8.83	-27.19	-2.70	-8.71	36.25	-37.65	51.29	-0.84	-0.32	0.00

Source: Bloomberg, GROW Research

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