

The Risks of Concentrated Stocks in Asia

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THE RISKS OF CONCENTRATED STOCKS IN ASIA

Inspired by Michael Cembalest's *The Agony & the Ecstasy*, the definitive study of the risks and rewards of concentrated stock positions, we have applied a similar analysis on major equity markets in Asia to broaden the scope of the research and test the hypotheses in an alternate geographical and economic context. Broadly, our findings corroborate the conclusions from the original study, and we believe the key takeaway for investors still hold true – “While concentrated stock positions can create substantial wealth, there is also a high probability of dramatic losses that have the potential to derail the financial future you had envisioned for you and your family.”

The story of concentrated wealth is particularly relevant in Asia. This region has more billionaires than any other part of the world¹, and has continued to produce them at an astonishing pace over the past decade and even throughout the pandemic. Pioneering innovation in various sectors coupled with Asia's vibrant economic fundamentals and capital markets have continued to sow opportunities for entrepreneurs and investors in the region. However, core to this story of competition and success is “creative destruction”, where new and innovative businesses disrupt or displace incumbents who once led their respective fields, creating both winners and losers. Both the positive and negative experiences of investors in those markets would be magnified by the level of concentration they have in specific companies or sectors. Furthermore, sector-level and broader macro risks are ever-present in this region – China's recent regulatory push against technology companies and the myriad of macro risks inherent to emerging markets come to mind – adding more layers of complexity to managing concentration risk.

Today, investors are grappling with heightened market volatility amidst global concerns over persistent inflation, faltering growth and rapidly tightening monetary conditions – a stark departure from past years of stable macro conditions and easy money. 2022 has been one of the worst years for both equities and fixed income in decades, and the average stock in some U.S. indices is down 40-50% from peak levels, far worse than the index's performance.² This experience is a stark reminder of the risks of concentration and the benefits of diversification.

Against this backdrop, we attempt to quantify the risks of concentrated stock positions, highlight several sector case studies, and summarize some of the broader macro risks which characterize the markets in the Asia region. When markets eventually recover from this episode, investors would do well to recall this experience and implement practical solutions to manage concentration risks, diversify sources of return and take steps towards achieving their goals.

Measuring Concentration Risks

Asia has a diverse set of economies and markets, each with unique nuances and histories. As an introduction, we focus on two of the leading exchanges in the Asia ex-Japan region, Hong Kong and Singapore. Borrowing the definition used in *Agony*, we see that a significant number of companies that were ever listed on those exchanges from 1992 to 2022 experienced “catastrophic loss” where the stock declined 70% or more from peak levels which is not recovered.

A SIGNIFICANT NUMBER OF COMPANIES EXPERIENCED LOSSES OR UNDERPERFORMED THE INDEX

% of companies listed from 1992-2022

Exchange	“Catastrophic Loss”	Negative Absolute Returns	Negative Excess Returns vs Index	“Mega Winners”
Hong Kong	66%	73%	76%	4%
Singapore	85%	65%	72%	3%

Source: Bloomberg Finance L.P. Data is as of June 2022. “Catastrophic Loss” refers to where the stock declined 70% or more from peak levels which is not recovered. “Mega Winners” refer to stocks which outperformed by their respective indices by over 500% cumulatively. The indices for Hong Kong and Singapore are the Hang Seng Index and Straits Times Index, respectively. This analysis uses month-end price data and covers companies that were listed on these exchanges from December 1992 to June 2022, including those which underwent an IPO or were de-listed for various reasons during this time period.

Further borrowing from the approach used in *Agony*, we also consider another way to think about the risks of concentrated stock positions: **“How often would a family have been better or worse off owning cash, or the relevant stock market's index instead of the concentrated position?”**

Around two-thirds of the time, a concentrated position in a single stock delivered negative absolute returns (which means it underperformed cash). Over 70% of the time, a concentrated position in a single stock underperformed a diversified position its

¹ UBS, PwC. Data as of July 31, 2020.

² Michael Cembalest. “Dearly Beloved”. Eye on the Market. Data as of June 7, 2022.

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respective main stock market index. The most successful companies did generate substantial wealth over the long run, but only less than 5% of stocks met the definition of “Mega Winners”, which means they

outperformed their respective indices by over 500% cumulatively. We also conducted a similar analysis for other exchanges in the region, with broadly similar conclusions.

A SIGNIFICANT NUMBER OF COMPANIES EXPERIENCED LOSSES OR UNDERPERFORMED THE INDEX

% of companies listed from 1992-2022

Exchange	Number of Stocks	“Catastrophic Loss”	Negative Absolute Returns	Negative Excess Returns vs Index	“Mega Winners”
Australia	3,754	59%	66%	73%	5%
India	2,867	42%	42%	67%	18%
Hong Kong	2,810	66%	73%	76%	4%
Shenzhen	2,787	38%	43%	70%	5%
Shanghai	2,238	32%	46%	63%	6%
Malaysia	1,537	55%	62%	69%	5%
Taiwan	1,206	37%	46%	74%	6%
Singapore	1,164	85%	65%	72%	3%
Thailand	1,102	39%	55%	64%	6%
Indonesia	923	47%	53%	75%	9%
Philippines	395	55%	49%	62%	10%
Summary	20,783	50%	55%	70%	7%

Source: Bloomberg Finance L.P. Data is as of June 2022. “Catastrophic Loss” refers to where the stock declined 70% or more from peak levels which is not recovered. “Mega Winners” refer to stocks which outperformed by their respective indices by over 500% cumulatively. This analysis uses month-end price data and covers companies that were listed on these exchanges from December 1992 to June 2022, including those which underwent an IPO or were de-listed for various reasons during this time period.

A Review of Business Failures: Case Studies

While business-specific failures arising from shortcomings in management may seem obvious and inevitable in hindsight, many instances of failure may arise from sectoral, regulatory or macro factors that were outside of the management team’s control. As with *Agony*, this section contains a selection of notable business failures over past decades. We have grouped these case studies into three broad categories: sectoral shifts, regulatory and market uncertainties, and macroeconomic risks.

1. Sectoral shifts

Certain sectors and sector leaders, once favored by investors, could be swiftly usurped by newer and more innovative disruptors within short timeframes as consumers and businesses continue to update and

reform their preferences and spending habits, leading to significant gains and losses in value. The Covid-19 pandemic and ensuing transformations in the technology space have accelerated those changes, making them more difficult than ever for investors to predict.

The abandoned supermarkets

Overbuilt and overvalued – and another victim of Covid-19.

Consumer behavior and lifestyles can change abruptly. Covid-19 accelerated structural e-commerce penetration, and a new application of online groceries emerged when the pandemic went into a lull in China in 2H20, namely the community group-buying (CGB) format. Before that, China’s leading modern supermarket and hypermarket players were recognized by investors as high-quality proxies to the country’s long-term consumption upgrade

trend. It had a compelling investment thesis: the penetration of modern retailer channels was meaningfully lower than developed nations, and the market was fragmented with the top 10 players making up less than 20% of market share vs 80-90% in Japan and Korea, leaving notable upside for industry leaders to consolidate.³

Leading modern retailer stocks rose over three times in the four years leading up to mid-2020, when they were disrupted by the unexpected

rise of CGB. Same-store-sales-growth (SSSG) collapsed sharply, and has yet to show any signs of recovery multiple quarters after, even until now. Even their strong backing from internet giants could not help – the prices where Tencent invested in Yonghui in 2018 and when Alibaba acquired Sun Art were both double that of current levels. The consumption upgrade trend means that traditional wet markets are indeed being replaced, albeit not by modern retailers as investors expected.

YONGHUI SUPERSTORES (601933 CH)



Source: Bloomberg Finance L.P. Data as of June 30, 2022.

CHENGDU HONGQI CHAIN (002697 CH)



Source: Bloomberg Finance L.P. Data as of June 30, 2022.

SUN ART RETAIL GROUP (6808 HK)



Source: Bloomberg Finance L.P. Data as of June 30, 2022.

JIAJIAYUE GROUP (603708 CH)



Source: Bloomberg Finance L.P. Data as of June 30, 2022.

Live streaming's short life

Online preferences rise and fall at the speed of the internet – keep up.

Each generation has their own medium of entertainment. Not too long ago, live streaming was deemed as one of the most promising and engaging online entertainment formats. Numerous types of activities, from e-sports to talent shows, to board games and even dining, were brought online and viewed by hundreds of millions of users every month. One of the leading live streaming platforms at the time, Huya, jumped over three times in one month following its IPO in 2018.

It took less than three years for this former rising star to become a near-consensus short on the street. The share prices of its peers' also dropped 70-80% from peaks, as they quickly surrendered their users' time share to a more addictive entertainment channel, namely the short-form video. Apps such as Tiktok, Douyin and Kuaishou saw their combined user time share in online entertainment rise to around 50% now from just 5% four years ago. Powered by their robust algorithm that parses user preferences, short-form video apps can easily keep a user for over 1.5 hours per day on average – even unconsciously, by filling up his or her fragmented pockets of time on the subway or in a queue using hundreds of video clips, each just a minute-long.⁴

³ J.P. Morgan Private Bank. Data is as of December 2021.

⁴ J.P. Morgan Private Bank. Data is as of December 2021.

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This was simply a case of a successful game being replaced by another more addictive one. The question is – will short-form video platforms be different this time?

HELLO GROUP (MOMO US)



Source: Bloomberg Finance L.P. Data as of June 30, 2022.

DOUYU INTERNATIONAL HOLDINGS (DOYU US)



Source: Bloomberg Finance L.P. Data as of June 30, 2022.

JOYY INC (YY US)



Source: Bloomberg Finance L.P. Data as of June 30, 2022.

HUYA LIVE (HUYA US)



Source: Bloomberg Finance L.P. Data as of June 30, 2022.

Fast fashion going out of fashion fast

A long-term consumption growth story may always sound compelling, but underlying tastes can shift quickly.

It would be difficult to find something more fickle than consumers' fast fashion preferences. A number of large-scale fashion brands, such as Esprit, Bossini and Giordano, which used to dominate the fashion industry from Hong Kong in the 1990s, are now a shadow of their former selves. This is mainly due to rise of European fast fashion chains, Zara and H&M, and their ability to outcompete the local incumbents.

The general lessons are broadly applicable across the sector – failures to quickly adapt to fast-moving shifts in consumer tastes and e-commerce adoption. We look deeper into one of the brands, Esprit, which thirty-somethings in Asia would be familiar with growing up but is hardly known by teenagers today. The previously U.S.-based brand was introduced to Hong Kong in 1993 and rapidly turned from a small retailer into a Hong Kong-listed fast fashion giant of the decade. At its peak, Esprit recorded HK\$37.2 billion in revenue in 2008, magnitudes greater than the HK\$770 million achieved in 1993.⁵ However, Esprit was then pressured by a new wave of European fast fashion chains, Zara and H&M, and it was unable to adapt its styles to attract younger customers while its core customer base began to grow out of the brand. Eventually, the company announced the closure of all of its 56 stores across Asian markets in early 2020 amidst Covid-19 induced lockdowns.⁶

⁵ Esprit. Data is as of December 2008.

⁶ Esprit. Data is as of April 27, 2020.

ESPRIT HOLDINGS (330 HK)



Source: Bloomberg Finance L.P. Data as of June 30, 2022.

GIORDANO INTERNATIONAL (709 HK)



Source: Bloomberg Finance L.P. Data as of June 30, 2022.

2. Regulatory and market uncertainty

Government regulation, which may be heavy-handed, could lead to boom-bust cycles for sectors and companies. China's 2021 regulatory push in the internet sector is one such example. Geopolitics will also likely remain front of mind for companies in this region. These ongoing issues have damaged the confidence and sentiment of foreign investors when it comes to Chinese markets, with many fundamentally re-evaluating their China exposure. As we retreat from an unprecedented era of easy money and low volatility, unexpected market participants can also play an outsized role in driving volatility – ranging from meme stock traders on Reddit to over-leveraged hedge funds on Wall Street.

Lessons from the Archegos saga: 'who's moving my stocks?'

The unknown unknowns and the risk of concentration elsewhere in the market.

Bill Hwang's Archegos Fund, alongside a number of its fellow "Tiger cubs", have been investing in a remarkably similar way: conducting in-depth fundamental research, leveraging up on concentrated positions, and making big returns. The stocks it owned, including Vipshop Holdings and Tencent Music Entertainment, jumped 2-3x from 4Q20 to 1Q21. Not bounded by the 50% margin loan cap on individual retail investors, Archegos' leverage exceeded 5x by late March of 2021, funded by the prime desks of various investment banks.

The party ended when one of Hwang's bets, ViacomCBS, tumbled over 30% in two days following its stock and convertible bond offering in March 2021. Jeopardized by their swap agreement with Archegos, Morgan Stanley and Goldman Sachs preemptively liquidated \$15bn+ of Hwang's shares through blocks on March 25 and 26 and blew up the broader portfolio.⁷ Significant losses were taken by investors, as well as the prime desks in other investment banks who were not prepared enough to escape unscathed.

The moral of this story is that we cannot expect our fellow investors to be rational. While Archegos was also impacted in the saga it created, it is an important point worth considering for company owners to think about how diversified their shareholder base is – another shareholder could just be their undoing.

VIPSHOP HOLDINGS (VIPS US)



Source: Bloomberg Finance L.P. Data as of June 30, 2022.

⁷ Bloomberg Finance L.P. Data is as of March 2021.

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TENCENT MUSIC ENTERTAINMENT GROUP (TME US)



Source: Bloomberg Finance L.P. Data as of June 30, 2022.

IQIYI INC (IQ US)



Source: Bloomberg Finance L.P. Data as of June 30, 2022.

Cracking the burden of after-school tutoring (AST)

Policymakers' intentions can be difficult to predict.

Most market participants would be familiar with this story, but in hindsight, investors were actually left with some time to escape from China's education stocks. As a result of the intense competition in college entrance exams, AST demand had been resilient throughout the country. The sector was widely chased across China equities, which boasts gross margins north of 50%⁸, highly-visible growth and stellar free cash flow generation. Famous AST stocks, such as New Oriental Education and TAL Education, typically registered returns of over three-times during 2018-2020.

The education system in China has long been blamed as one of the key factors behind the robust expansion of AST sites, and it now ranks as one of the 'three new burdens' to families, together with housing and drug prices. China implemented the Non-State Education Promotion Law in 2018, starting systematically with regulating education companies in the private sector. In 2019, the government limited the pre-charging of tuition fees to 3 months for tutoring companies. Moreover, even when education was

defined as a 'charitable industry' in China's 14th Five Year Plan draft in 2020, few would imagine the release of the education 'double reduction' document several months later, compelling K-12 AST companies to turn into non-profit organizations.

Since the market started to hear rumors of the introduction of 'double reduction' in 2021, the top 2 players in the industry have lost 80%+ of their market cap, with hundreds of billions of dollars in value being wiped out. No matter if the regulations may be adjusted 2-3 years later, the cost of the initial over-regulation is being borne by investors.

NEW ORIENTAL EDUCATION AND TECHNOLOGY GROUP (EDU US)



Source: Bloomberg Finance L.P. Data as of June 30, 2022.

TAL EDUCATION GROUP (TAL US)



Source: Bloomberg Finance L.P. Data as of June 30, 2022.

Slowing the rise of China tech

How do you price regulatory uncertainty?

Once the darlings of global investors and seen as the cornerstone of many investors' portfolios, China's tech champions have fallen hard. They represent a classic case of concentration risk given how widely they were held, and the unpredictability of their fall, which is resulting less from fundamentals and more from unprecedented shifts in regulatory focus. Enough has been written on this space that there is little remaining that needs to be said. Their fall from the upper

⁸ J.P. Morgan Private Bank. Data is as of December 2021.

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echelons highlights the risk of unexpected regulatory shifts, especially when those shifts fundamentally alter the companies' trajectories as is the case with Alibaba, Tencent and other large-cap Chinese internet players.

The government-led common prosperity agenda, de-emphasis of the consumer internet space in favor of hard technology, and efforts at reducing the internet companies' hold on society have all combined to alter their prospects. It has become increasingly unclear how to value these companies – how does one assess their margins with less

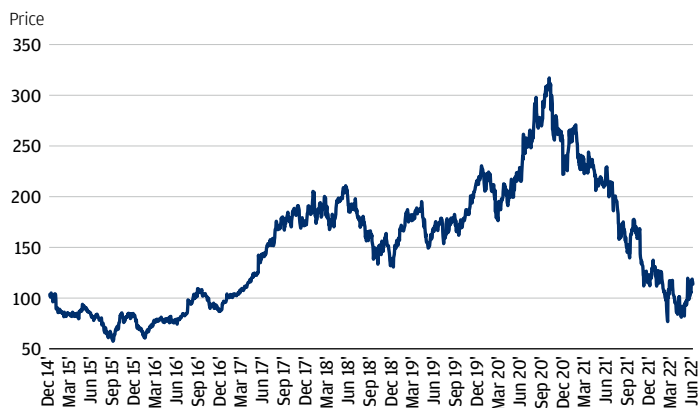
control over how much they change for products and how much they pay their workers? What will their future growth look like with unclear expansion prospects? What does future innovation look like when they have less control over how they reinvest their earnings? Increased state control has made it less clear whether they fall into the category of high growth tech, utilities, or SOEs, or some combination of the above. Just the regulatory uncertainty alone has caused global investors who are over-exposed to reduce their positions.

HANG SENG TECH INDEX



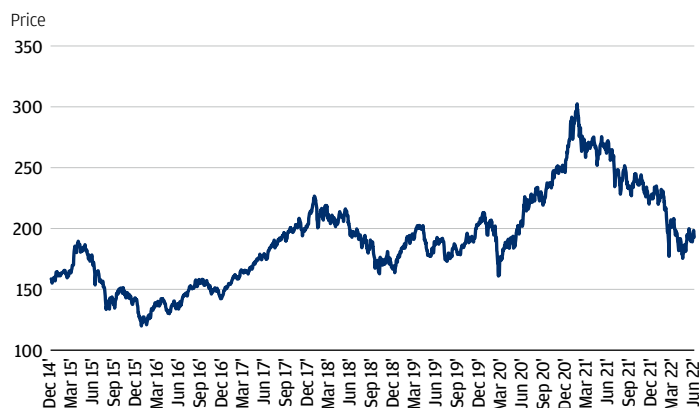
Source: Bloomberg Finance L.P. Data as of June 30, 2022.

ALIBABA GROUP HOLDING (BABA US)



Source: Bloomberg Finance L.P. Data as of June 30, 2022.

MSCI GOLDEN DRAGON INDEX



Source: Bloomberg Finance L.P. Data as of June 30, 2022.

TENCENT HOLDINGS (700 HK)



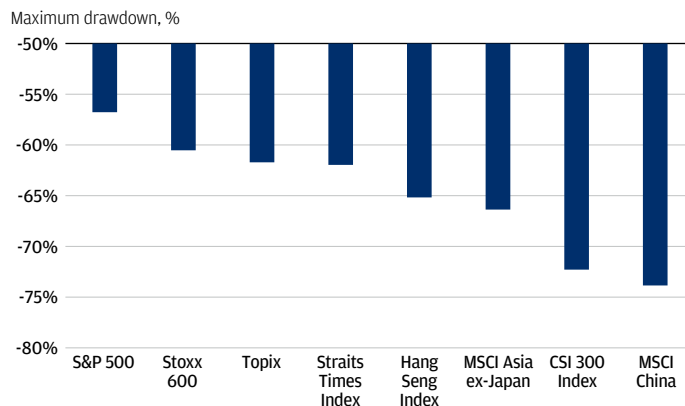
Source: Bloomberg Finance L.P. Data as of June 30, 2022.

3. Macro Risks

Even with the most adept of corporate management teams navigating the pitfalls of competitors and regulators, broader macro risks may not spare their companies from bouts of volatility which impact most, if not all sectors in their respective geographies. This is critical considering the inherent characteristics of emerging markets. With many Asian economies still in the process of development and financial liberalization, coupled with growing macro risks related to inflation and growth, emerging markets could see significant volatility.

One starting point for framing the volatility across these markets could be to compare the maximum drawdown for various indices over a set time frame. Over the past 20 years, most of these drawdowns transpired over the 2008-09 financial crisis. Emerging markets in Asia experienced a markedly larger degree of downside compared to developed markets (DM).

EMERGING MARKETS IN ASIA EXPERIENCED LARGER MAXIMUM DRAWDOWNS IN THE PAST 20 YEARS



Sources: Bloomberg Finance L.P. Data is as of June 30, 2022.

From 2002 to 2022, emerging markets in Asia also experienced a larger degree of volatility than DM peers. While some indices or individual companies have generated impressive returns, investors who hold concentrated positions in these markets would likely be dealing with a higher degree of volatility in their portfolios, reinforcing the need for prudent risk management.

THOUGH EMERGING ASIAN MARKETS DELIVERED HIGHER HISTORICAL RETURNS, THEY ALSO HAD HIGHER VOLATILITY

Market	Annualized Returns (%)	Market	Annualized Volatility (%)
India	15.4%	Europe	14.3%
China	11.8%	U.S.	14.4%
APAC ex-Japan	10.3%	Japan	17.3%
U.S.	9.9%	ASEAN	18.5%
Taiwan	9.6%	Taiwan	18.6%
China A	9.3%	Korea	19.0%
Korea	9.0%	APAC ex-Japan	19.3%
ASEAN	7.5%	India	22.3%
Europe	6.9%	China	24.4%
Japan	6.1%	China A	27.7%

Source: Bloomberg Finance L.P. Data is as of June 30, 2022.

China's 2007 and 2015 stock market bubbles and the 1997 Asian Financial Crisis are some of the more evocative historical examples of macro volatility which led to precipitous stock market declines. Developed markets have had their own bouts of trouble – think Japan's 1990 asset price bubble and crash. Beyond the stock markets, other assets such as bonds and currencies have also experienced catastrophic drawdowns in some cases. We have summarized a few of those case studies below.

Lessons drawn from Japan's asset bubble

Thinking of jumping on the market bandwagon? A structural collapse afterwards can hurt for far longer than investors think.

In the wake of the Plaza Accord in 1985, the yen's sharp appreciation and resulting recession led to a sequence of aggressive easing measures by the Bank of Japan (BoJ) through lowering interest rates coupled with the government's stimulative fiscal policy. Along with rapid credit growth led by aggressive bank lending behavior, equity and real estate values ballooned in the late 1980s. These assets eventually crashed due to tightening by the BoJ and a near-collapse of the financial and banking sector on soured loans. The rest was history – the infamous “lost decade” (which some deem as a lost ‘20 years’) and an anemic state of economic stagnation, deflation and low to near-zero yields which researchers and economists dreaded would afflict developed economies after the 2008 crisis, giving rise to the concept of “Japanization”.

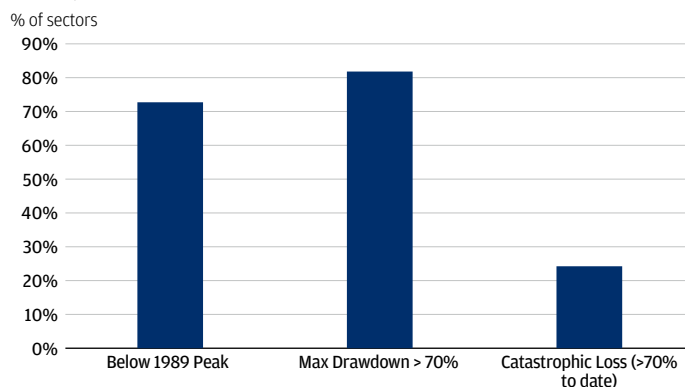
NIKKEI 225 INDEX



Source: Bloomberg Finance L.P. Data as of June 30, 2022.

How did stock markets fare during this episode? The Nikkei 225 Index more than tripled from 1985 to 1989 and subsequently lost over 80% of its value from its peak in late 1989 to its bottom in March 2009. The speed of the initial selloff was also remarkable – with the index losing nearly half of its value within a year of peaking. To this day, the index has never recovered to the highs of the late 1980s. The pain was also broadly felt across sectors for decades. A majority of sectors remain below their 1989 peaks, even more experienced a maximum drawdown of over 70%, and a sizeable handful remain at “catastrophic loss” levels today, at more than 70% below peaks. This case illustrates how a significant macro calamity and ongoing structural economic issues could have broad and long-lasting impacts on asset values.

MOST SECTORS EXPERIENCED SIGNIFICANT VOLATILITY AND TRADE BELOW PEAK LEVELS, AND SOME REMAIN AT CATASTROPHIC LOSS LEVELS



Source: Bloomberg Finance L.P. Data as of June 30, 2022.

Echoes of Japan's past: China's real estate unwind

The collapsing bubble in one of the world's largest asset class and the risks of implicit government backing.

Often called one of the world's largest asset classes, China's property sector has been the engine of China's growth since 2009. Over that time, excesses have built up: property developers dramatically increased leverage, property prices doubled in short time, and household leverage jumped. Property has been the key policy tool when policymakers needed to stimulate economic growth. Whenever growth slowed, credit flowed into the sector, boosting prices, sales, construction activity, and local government revenues, in effect turning the cycle. Although imbalances continued to build and policymakers knew it was an unsustainable model, no party wanted to take the necessary pain of deleveraging.

However, the excesses of ten years of printed money flowing into this sector has created systemic risks: developers have massive liabilities which they are unable to meet, excess construction created one of the world's highest vacancy rates, and massive speculation amongst investors created the most expensive housing markets in the world. Recognizing these risks, policymakers are now intent on addressing these vulnerabilities. Policies such as the “three red lines” and tougher mortgage standards have reduced the flow of credit and sent shockwaves across the sector, causing developers to default and buyers to stay on the sidelines. The broad real estate sector – which various estimates put at 20-30% of China's GDP – is now deleveraging and shrinking down to a more sustainable size.⁹

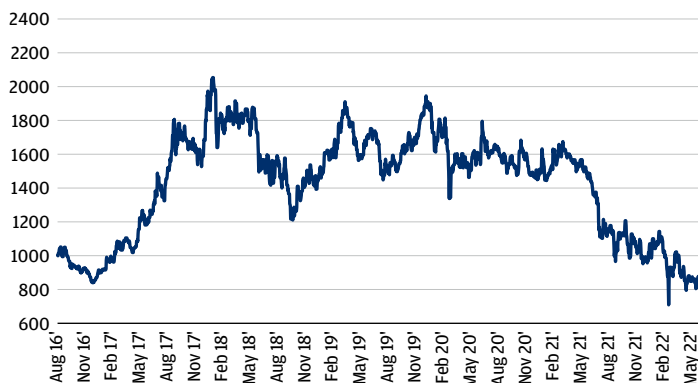
⁹ K. Rogoff, Y. Yang, National Bureau of Economic Research. Data as of August 2020.

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The rapid turnaround has not come as a surprise to anyone watching China's property sector. Its path was unsustainable, but the market believed differently for too long. The market viewed the sector as too big to fail, too central to China's economy, and assumed policymakers would always bail it out when growth faltered. Valuations in both stocks and bonds were built on an implicit government backing that many thought would never shift. Until it did. When the reaction function of policymakers shifted, many of the largest developers – such as Evergrande, Kaisa, and Shimao – defaulted. Some developers which were previously assumed to be among the safest also suffered. One of these, Country Garden, is trading at over 60% below its peak.¹⁰ Implicit backing can evaporate and companies once seen as systemic can collapse.

CHINESE REAL ESTATE COMPANIES ARE TRADING AROUND 60% BELOW PEAK LEVELS

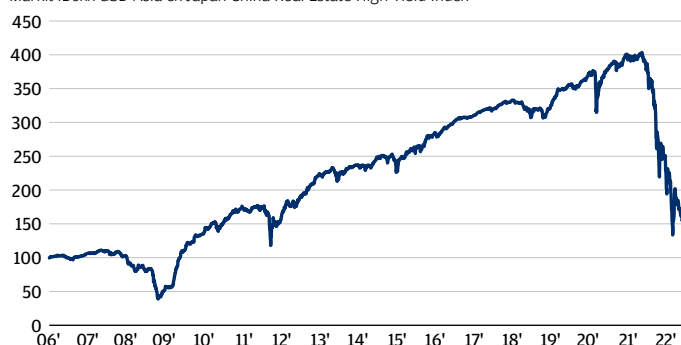
MSCI China Real Estate Index



Source: Bloomberg Finance L.P. Data as of June 30, 2022.

CHINA'S REAL ESTATE HIGH YIELD MARKET HAS COLLAPSED

Markit iBoxx USD Asia ex-Japan China Real Estate High Yield Index



Source: Bloomberg Finance L.P. Data as of June 30, 2022.

Easy come, easy go: The Asian Financial Crisis

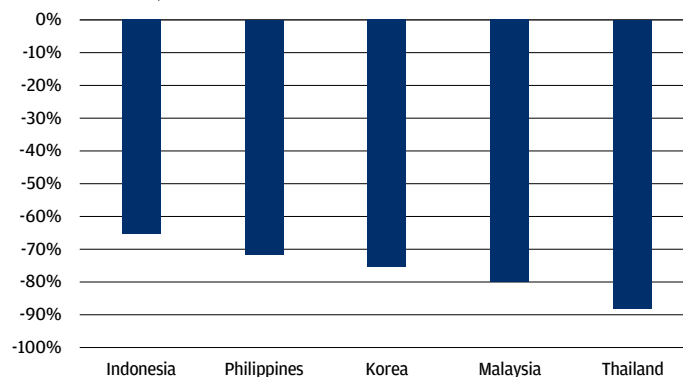
Too good to be true? Look below the surface of emerging markets to understand their macro vulnerabilities.

Against a backdrop of seemingly sound economic fundamentals and rapid growth, especially in exports, several emerging Asian economies prospered from the 1980's to 1990's. However, the headline strength belied structural issues in many of those economies, including external debt exposure, poor credit underwriting standards and corruption, which led to excessive asset bubbles. By the mid 1990's, there was growing pressure from rising U.S. interest rates and an appreciating dollar. The immediate crisis was triggered by the collapse of the Thai baht in 1997 after the government was forced to float the currency when its USD peg broke amidst speculative attacks and depleted foreign reserves. Panic then spread amongst lenders, leading to a credit crunch which spread to other emerging economies in the region, pressuring currencies and asset markets, eventually leading to collapses in the corporate and financial sectors. At the worst of the carnage, economies, currencies and stock markets had lost anything from 30% to 70% of their values, with Indonesia, South Korea and Thailand being some of the worst affected.

While the region gradually recovered after the crisis, the historic volatility in the currencies and respective stock markets would have claimed many investors who failed to diversify their risks. The speed of those declines, many of which happened within a year, would have also left investors with little time to manage their exposures. As we bear down on another Fed hiking cycle and weakening global growth, investors would do well to be mindful of specific risks for the more vulnerable emerging economies and broader risks in the emerging markets complex.

EMERGING MARKETS IN ASIA EXPERIENCED SIGNIFICANT EQUITY DRAWDOWNS DURING THE ASIAN FINANCIAL CRISIS

Maximum drawdown, %

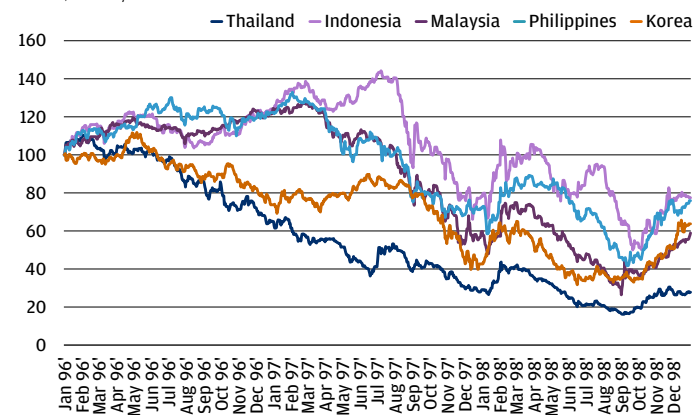


Source: Bloomberg Finance L.P. Data as of June 30, 2022.

¹⁰ Bloomberg Finance L.P. Data as of June 2022.

EMERGING MARKETS IN ASIA EXPERIENCED SIGNIFICANT EQUITY DRAWDOWNS DURING THE ASIAN FINANCIAL CRISIS

Indexed, January 1996 = 100



Source: Bloomberg Finance L.P. Data as of December 31, 1998.

A brief history of boom and bust: China's 2007 and 2015 stock market crashes

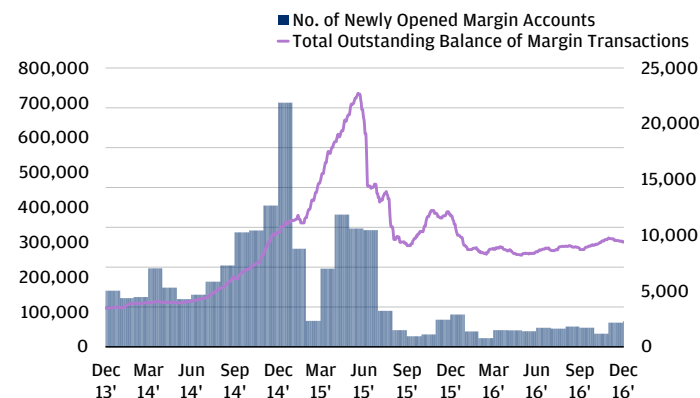
Will this time be different? Market structure and regulators may matter more than fundamentals.

Before the 2021 implosion of Chinese stocks ingrained itself into investors' collective memories, we had the original China crashes, which took place in 2007 and 2015. Focusing in on the latter case, regulators began gradually loosening rules prohibiting short-selling and margin trading in the years leading up to the bubble. The government ran a campaign promoting stock investments. Retail investors, who dominate China's onshore equity markets, started piling into stocks in 2014 with tens of millions opening margin accounts, leading to a substantial build-up of outstanding margin. The market more than doubled from 2014 to 2015, detaching from corporate and economic fundamentals, while the economy was experiencing a slowdown. The bubble eventually turned against the investors in June 2015, and over-leveraged investors faced margin calls, precipitating the steep decline. Intervention efforts by the authorities to stem the turbulence, including limiting short-selling, enforcing lock-up periods for positions held by major shareholders, and providing liquidity for direct purchasing of stocks by state-owned financial institutions, were not effective beyond short-term boosts to the market. The initial sell-off wiped out over \$2.6 trillion in value from onshore indices within a month of their peaks¹¹, with several more bouts of volatility in the months after.

¹¹ Bloomberg Finance L.P. Data as of June 2022.

MARGIN TRADING WAS A KEY DRIVER OF THE 2015 CHINA STOCK MARKET BUBBLE AND BUST

(LHS) Number of Newly Opened Margin Accounts; (RHS) Total Outstanding Balance of Margin Transactions, RMB 100 million



Source: Bloomberg Finance L.P. Data as of December 31, 2016.

CHINA'S ONSHORE STOCK MARKET HAS YET TO RECOVER TO PREVIOUS PEAKS

Shanghai Composite Index



Source: Bloomberg Finance L.P. Data as of June 30, 2022.

When the dust started to settle at the start of 2016, the Shanghai Composite Index (SSE) had almost halved from peak levels. If an investor bought the index at the 2015 peak, they would still be at a loss today - the highest level it reached was the post-pandemic peak in September 2021, which was just above 3,700, or 27% lower than the entry point. This is an interesting point to keep in mind as while China has continued to deliver robust high single-digit growth rates in the years following that bust, but the equity market has not kept pace with the economy. In fact, the Shanghai Composite level at the time of writing is roughly flat with the start of 2010, while China is generally regarded as the world's primary growth engine of the decade. Other indices, such as the CSI 300, may have fared a bit better, but no major benchmark has recovered to the 2015 peak.

When it comes to assessing risk in China, its unique characteristics and market structure, and propensity for heavy regulatory intervention are just some of the myriad of considerations that concentrated investors, not only in single stocks, but also in geographies, should be aware of and can take essential steps to mitigate.

What can concentrated investors do?

While concentrated positions are often the result of successful business ventures or investments and are responsible for substantial wealth creation, they also increase the probability of significant losses and increase the uncertainties of long-term financial plans. It is essential for investors to develop their long and short-term financial goals, which would guide the approaches they can consider for managing their concentrated positions. There is a broad range of strategies designed for investors to de-risk, monetize and diversify their positions in line with their goals and specific financial circumstances. *Agony* provides a comprehensive discussion of those. Please contact your J.P. Morgan representative to discuss tailored solutions for your specific needs.

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Index definitions:

The Hang Seng Index ("HSI"), the most widely quoted gauge of the Hong Kong stock market, includes the largest and most liquid stocks listed on the Main Board of the Stock Exchange of Hong Kong.

The Straits Times Index (STI) is a market capitalization weighted index that tracks the performance of the top 30 companies listed on SGX.

The Hang Seng TECH Index ("HSTECH") represents the 30 largest technology companies listed in Hong Kong that have high business exposure to technology themes and pass the index's screening criteria.

The MSCI Golden Dragon Index captures the equity market performance of large and mid-cap China securities (H shares, B shares, Red-Chips and P-Chips) as well as securities classified in Hong Kong and Taiwan. Currently, the index also includes A stock connect large and mid-cap shares.

Standard and Poor's 500 Index is a capitalization-weighted index of 500 stocks. The index is designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries. The index was developed with a base level of 10 for the 1941-43 base period.

STOXX Europe 600 Index (SXXP Index): An index tracking 600 publicly traded companies based in one of 18 EU countries. The index includes small cap, medium cap, and large cap companies. The countries represented in the index are Austria, Belgium, Denmark, Finland, France, Germany, Greece, Holland, Iceland, Ireland, Italy, Luxembourg, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

TOPIX also known as the Tokyo Stock Price Index, is a capitalization-weighted index of all companies listed on the First Section of the Tokyo Stock Exchange.

The MSCI AC Asia ex Japan Index captures large and mid cap representation across two of three Developed Markets countries (excluding Japan) and eight Emerging Markets countries in Asia. With 609 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country. Developed Markets countries in the index include: Hong Kong and Singapore. Emerging Markets countries include: China, India, Indonesia, Korea, Malaysia, the Philippines, Taiwan and Thailand.

The CSI 300 is a capitalization-weighted stock market index designed to replicate the performance of the top 300 stocks traded on the Shanghai Stock Exchange and the Shenzhen Stock Exchange.

The MSCI China Index captures large and mid cap representation across China A shares, H shares, B shares, Red chips, P chips and foreign listings (e.g. ADRs). With 740 constituents, the index covers about 85% of this China equity universe. Currently, the index includes Large Cap A and Mid Cap A shares represented at 20% of their free float adjusted market capitalization.

The Nikkei 225 Index comprises 225 stocks selected from domestic common stocks in the first section of the Tokyo Stock Exchange, excluding ETFs, REITs, preferred equity contribution securities,

tracking stocks (on subsidiary dividend), etc., other than common stocks.

The MSCI China Real Estate Index is designed to capture the large and mid-cap segments of the China equity markets. Currently, the index also includes Large Cap A shares represented at 10% of their free float adjusted market capitalization. All securities in the index are classified in the Real Estate Sector according to the Global Industry Classification Standard (GICS®).

Markit iBoxx USD Asia ex-Japan China Real Estate High Yield Index family is designed to reflect the performance of USD-denominated bonds issued by non-investment-grade, real estate entities domiciled in China. The index rules aim to offer a broad coverage of the universe for USD denominated bonds from Asian issuers, while upholding minimum standards of investability and liquidity.

The SSE Composite Index also known as SSE Index is a stock market index of all stocks (A shares and B shares) that are traded at the Shanghai Stock Exchange.

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Weiheng Chen – Global Market Strategist

Weiheng Chen is a Global Investment Strategist based in Singapore. He is responsible for developing and communicating the Private Bank's economic and market views, as well as investment strategies, to advisors and clients.

Mr. Chen has spent his entire career at J.P. Morgan, and was formerly a member of the Global Investment Opportunities group and the China team as an investment specialist for ultra-high net worth clients in Asia.

Mr. Chen holds a bachelor's degree in Economics and Economic History from the London School of Economics. He is fluent in Mandarin and English.



Alex Wolf – Head of Investment Strategy, Asia

Alex Wolf is Managing Director and Head of Investment Strategy for Asia at J.P. Morgan Private Bank. Alex is now based in Singapore after spending 10+ years in greater China. Alex's responsibilities include developing and communicating the Private Bank's view on markets, the economy, and geopolitics for investors and clients in the Asia region.

Prior to joining J.P. Morgan, Mr. Wolf was the Senior Emerging Markets Economist with Aberdeen Standard Investments, responsible for economic analysis and macro investing strategies covering China and global EM. Prior to this, he spent ten years with the U.S. Government in roles primarily at the State Department. Most recently, Mr. Wolf served as part of the diplomatic service with overseas postings to the U.S. Embassy in Beijing and the American Institute in Taiwan. His responsibilities included developing and implementing U.S. policy on bilateral and multilateral economic and trade issues, including cross border investment, market access, international finance and development assistance, and intellectual property rights protection. Alex was a key interlocutor with host government officials and a key adviser to the Ambassador and visiting officials on local economic conditions and issues that affect U.S. policy. Prior to joining the diplomatic service, Mr. Wolf was an officer at the Defense Department working on Asian security and defense policy. In addition to his government experience, Mr. Wolf has held roles at Lehman Brothers and Zhejiang University of Finance and Economics.

Mr. Wolf holds degrees in economics from Johns Hopkins University and the University of Pittsburgh and has published extensively on China's economy, Asian markets, and US foreign policy. He speaks and reads Mandarin.



Yuxuan Tang – Global Market Strategist

Yuxuan Tang, based in Hong Kong, is a market strategist responsible for delivering research-driven insights on the global economy with a focus on Asia, developing and communicating the firm's economic market views and investment strategies to advisors and clients.

Prior to her current role, Ms. Tang worked at HSBC in a rotational analyst program, where she gained extensive exposure to multiple functions across the private bank including relationship management, investment advising and wealth planning.

Ms. Tang holds dual bachelor degrees in International Relations and Economics from Peking University, and a Master of Public Administration degree (Economic Policy track) from Columbia University. She is fluent in English, Mandarin and Cantonese.



Kendrick Cheung – Equity Strategist

Kendrick Cheung is an Equity Strategist of J.P. Morgan Private Bank in Asia. Based in Hong Kong, he is responsible for identifying stock specific and thematic opportunities across developed markets.

Prior to joining J.P. Morgan, Mr. Cheung was an Equity Research Analyst at Credit Suisse, covering HK & China Property for 2 years. His experience includes conducting primary research including fundamental analysis, due diligence on market trends and financial modelling on property developers and property management companies. He began his career as a Debt Syndicate trainee at Natixis Investment Bank.

Mr. Cheung holds a Bachelor's degree in Actuarial Science from Cass Business School, City, University of London. He is fluent in English, Mandarin and Cantonese.

THE RISKS OF CONCENTRATED STOCKS IN ASIA

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