

CHINA MONTHLY

DECEMBER 2024

The Briefing	1
The Essay	2
China's Bull Decade?	

The Big Picture



Using the Chinese-made, EU CE-certified, Toumai Robot in Shanghai, French surgeon Youness Ahallal performed prostate cancer surgery for a patient in Morocco 12,000 kilometers away on November 16th, illustrating better access to expert surgeons for patients a few time zones away.

THE BRIEFING

Trump Adds Tariffs Targets

Donald Trump will slap 25% tariffs on Canadian and Mexican goods on day one of his presidency, and adding another 10 percentage points to the levy on goods from China, which called the tariffs "irresponsible" and warned that no one wins in a trade war. Mexico's president says tariffs will not solve the US's drug problem, while Canadian Prime Minister Justin Trudeau called a meeting with his country's premiers after they warned a 25% tariff would be "devastating" for workers.

Huawei's Homegrown Phone OS

Chinese tech giant Huawei launched on November 26th its first smartphone equipped with a fully home-grown operating system – the Mate 70 smartphone powered by an advanced domestically produced chip that runs on Huawei's HarmonyOS Next. Based on Android's open-source code, HarmonyOS Next requires a complete rewiring of all apps on the smartphones it powers. Over three million Mate 70 units have been pre-ordered, according to Huawei's online shopping platform, though that does not require them to be purchased.

Li Qiang Signals Stimulus Headroom

Premier Li Qiang said on November 5th that he was "fully confident" in China hitting its 5% growth target for 2024 and in the development of China's economy in the future. "In the face of downward economic pressure, we have the requirements for increasing counter-cyclical adjustments," said Li at a major international trade show in Shanghai. "There is a relatively large space for financial and monetary policies, and the policy tools are even more abundant."

Defence Min in Graft Probe

China Defence Minister Dong Jun has been placed under investigation, the third consecutive serving or former Chinese defence minister to be investigated for corruption. Former PLA Navy chief Dong was appointed defence minister in December 2023, while his predecessor Li Shangfu was removed seven months into the job. Dong declined to meet US Secretary of Defence Lloyd Austin at a November Laos meeting of military leaders from around the world, urging the US to "immediately correct mistakes" on Taiwan and respect China's core interests.

Beijing's Peruvian Port Strikes Nerve

Trump advisor Mauricio Claver-Carone called for duties to apply to goods from China or countries in South America that pass through the massive new deep-water port in Chancay, 60 kilometers north of Peru's capital Lima. President Xi Jinping inaugurated Beijing's USD1.3 billion investment before joining the Asia-Pacific Economic Cooperation summit in Lima and then attending the Group of 20 summit in Rio de Janeiro. He also made a state visit to Brazil.

CHINA'S BULL DECADE?

By Wong Kok Hoi

High-Tech to Drive Bull Decade

While we concur with the minority view that high-tech industries and manufacturing will take over from real estate in powering China's economic growth from 2026, we will go out on a limb and say that it could drive a decade-long bull run in the stock prices of China's companies helmed by well-educated, intelligent scientists and engineers full of irrepressible entrepreneurial drive. It is worthwhile to at least contemplate the conditions for such a scenario.

High-tech industries — not to be confused with e-commerce firms thin on both technology as well as investments, tangible assets, and R&D spend — are set to take over from a rapidly contracting real estate market as the largest sector of the economy by 2026. They will account for almost a quarter of China's GDP, according to Bloomberg Economics (Figure 1)

Figure 1: China's Innovative Sectors Set to Fill Property's Hole, BE Says

■ Property's contribution to China's GDP
■ High-tech
■ EV, battery, solar panel Other sectors 100% 50

Bloomberg Economics projects tech industries to be 23% of GDP by 2026

Source: Bloomberg Economics

2019

2020

2018

2017

Note: Hi-tech sectors are defined as medicine, advanced equipment, IT/communications equipment and services, and research and development. Figures for 2024 – 2026 represent projection.

2022

2023

2024

2025

2021

0

2026

These high-tech companies will likely reboot the economy in a way not seen before, with effects cascading to most sectors of the economy, especially the positive wealth effect propagating beyond 2026. It will comfortably take up the slack arising from the soft property market, assuming that it will not recover by then, significantly mitigating the chilling effect of that weighty problem on China's economic vitality.

Doomsday Predictions Discounted

While some grains of truth are sprinkled over a veritable buffet of scaremongering headlines from leading Western media and economists, investors had believed in many of those headlines, which had contributed partly to the market slump for three and a half years. By now, it is clear that many of the doom and gloom predictions are not being backed up by facts.

To get a handle on what the market had discounted in that period, it is worth recapping some of those titles and headlines. Many focused on doomsday and alarmist scenarios. Here is a sampling of the litany of articles that broadly fall under three themes:

Theme 1: The Collapse or Peak of China

- 1. Is This the End of the Chinese Miracle? (Foreign Policy, 2020)
- 2. China's Real Estate Crisis: A Ticking Time Bomb? (The Economist, 2021)
- 3. China's Demographic Time Bomb: A Looming Crisis? (The Guardian, 2022)
- 4. The Price of Xi Jinping's Zero-Covid Policy (Bloomberg, 2023)
- 5. China's Debt Bomb: A Ticking Time Bomb? (Financial Times, 2024)
- 6. China's Economic Slowdown Deepens, Raising Fears of a Lost Decade (The Wall Street Journal, 2023)
- 7. China's Property Market Crisis Spreads, Threatening Global Economy (Reuters, 2022)

Theme 2: Return of Common Prosperity/Communism/Mao Zedong/The Capitalist

- 8. Xi Jinping's 'Common Prosperity' Drive: A Return to Maoist Era? (The Diplomat, 2021)
- 9. China's Tech Crackdown: A Purge of Capitalist Excess? (The New York Times, 2021)
- 10. Mao Zedong's Ghost Haunts China's Future (The Spectator, 2022)
- 11. China's Crackdown on Private Enterprise Sparks Fears of a New Era of State Control (The Economist, 2022)
- 12. Xi Jinping's Cultural Revolution: A New Era of Red Terror? (The Wall Street Journal, 2023)
- 13. China's Socialist Market Economy: A Fading Dream? (Foreign Affairs, 2024)

Theme 3: Japanification

<u>Purge</u>

- 14. China's Ghost Cities: A Harbinger of Economic Decline? (The Diplomat, 2021)
- 15. Is China Heading for a Lost Decade? (Nikkei Asia, 2021)

16. China's Demographic Time Bomb: A Japanese-Style Decline? (The Economist, 2022)

- 17. China's Real Estate Bubble: A Japanese-Style Collapse? (Bloomberg, 2023)
- 18. China's Stagnant Economy: A Japanese-Style Scenario? (The Guardian, 2024)
- 19. China's Deflationary Spiral: A Japanese-Style Trap? (Financial Times, 2024)
- 20. China's Aging Population and Economic Stagnation: A Warning from Japan (The Wall Street Journal, 2022)
- 21. China's Debt Trap: A Lesson from Japan's Lost Decade (Reuters, 2023)

And these represent only a small percentage of the articles that instilled fear in investors. It is reasonable and fair to state that China did face multiple headwinds in the last two years, like all nations from time to time, but certainly the country has not peaked nor has it collapsed. It has neither backpedaled into Maoism nor entered a Japan-style deflationary period. At least, I have not detected compelling evidence for those doomsday predictions.

I believe the central pillar of China's new quality productive forces today is the semiconductor industry, which is itself critical to all the other pillars like telecommunications, infotech, drones, electric vehicles, robotics, solar energy, biotech, artificial intelligence, quantum computing, smartphones, low altitude aviation, deep space technology, and many more fields. China has poured tremendous amounts of engineering talent, and capital into this area in recent years but investors have not heard much about their intermittent successes and occasional key breakthroughs.

Why is this so? Reminiscent of British novelist Ian Fleming's James Bond character, a secret agent with the famous 007 codename, China's semiconductor companies, big and small, have signed non-disclosure agreements with Beijing that preclude them from sharing information with investors on their R&D and roles in this national effort. I have spoken to more than a dozen companies and industry watchers who have confirmed this fact, which explains why so little is revealed in the media.

For instance, the technological breakthrough achieved by SMIC in the production of the 7 nm chips in August 2023 is a feat and game changer for China, but this has not been trumpeted as such. Huawei's 5G smartphone sales have been booming for the past 12 months despite US-led embargoes, and this is even before Huawei sells their 5G phones in overseas markets. Huawei has just started taking substantial market share from Samsung and Apple domestically and will shortly spread its wings abroad in the world's USD600 billion smartphone market. Beware Apple and Samsung! This overseas expansion may not be spearheaded by the headline-grabbing Mate 60 phone as supply cannot cope with demand, with the Mate 70, P60 series, and future new models being Huawei's new challengers. Besides maintaining its clear lead in high-speed rail, telecommunications, EVs, batteries, drones, solar photovoltaic cells, wind turbines, and mobile payment systems, etc., China is rapidly narrowing the gap with Western powerhouses in areas like semiconductors (Figure 2).

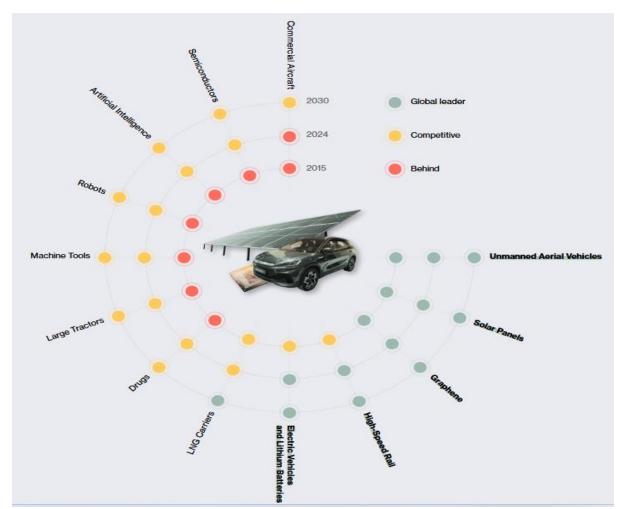


Figure 2: China has Achieved a Global Leadership Position in Five Key Technologies

China's clinching of the leadership position in EVs is phenomenal and a bigger game changer, because the global auto market is worth USD3 trillion. China has already won the EV "war" by a combination of innovation, agility, speed, and quality in the entire supply chain. In contrast, legacy automakers and component makers— while impressive in their own right—are tragically static like the French Maginot Line and seem unable to adapt to the rapid changes. They are facing the real risk of becoming symbols of outmoded companies reliant on outdated product lines, unable to adapt to the automobile market's tectonic technological shift towards EVs.

Again, the Chinese play down their achievements, lest they attract even more tariffs on top of the hefty ones already being levelled at them by both the EU and US. China's EV industry and many other tech industries are making brisk progress in recent years, but this is not quite trumpeted in China and elsewhere. Part Confucian humility, part Double-Oh-Seven secrecy.

On the other hand, the very public, phenomenal rise in popularity of Chinese technology company ByteDance's TikTok subsidiary has forced American social media platforms like YouTube and Instagram to adapt. To compete with TikTok's short-form video format, YouTube launched Shorts and Instagram introduced Reels in a proverbial rearguard action. On another front, Chinese e-commerce company PDD Holdings' unit Temu launched

its US operations barely two years ago and is forecast to achieve Gross Merchandise Value of USD29.5 bn in 2024 and USD40.9 bn in 2025. It may not be long before they threaten incumbents in Europe and Southeast Asia.

Doomsayers proclaiming China's decline have yet to explain why China's goods trade surplus is on track to hit a record this year, on pace to reach USD1 tn, bringing the cumulative surplus to USD4 tn over the last four years. In contrast, Japan in its best year posted only USD144 bn. This is one metric that is impossible to unilaterally massage or window dress because one nation's surplus is its trading partner's trade deficit — two sides of the same coin. The bottom line is that China's products are highly competitive and are in demand all over the world. Having visited more than a hundred companies including site visits, and spending about half of my time in China over the last two years, I have no doubt in my mind that China has not peaked. Its best years are still ahead!

Inimitable Manufacturing Ecosystem - China's Future

Over the past 40 years, China has built an immensely productive, competitive and successful ecosystem befitting of a manufacturing powerhouse that produces one-third of the world's manufactured products. I do not see this changing in the next 20 or even 50 years, despite calls by the West to decouple.

Can India or Vietnam or Japan be the next manufacturing complex of the world? I do not think so. Building a manufacturing powerhouse is not just about building factories and hiring workers, but also constructing infrastructure such as airports, seaports, power plants, and roads; building an entire supply chain — including materials, components, logistics, etc., nurturing and training millions of high-quality, industrious, and resourceful engineers and technicians, a penchant for meticulousness, and so on and so forth. This colossal asset which China has painstakingly and exactingly built will serve the country well in the decades ahead. Trillions of dollars have been invested building this powerful manufacturing eco-system!

China's Human Assets - Overlooked

Chinese workers still share the same work ethos, mindset and mentality that propel China's economic miracle. They are still hardworking; they still want to make more money. The new generation is better educated, resourceful, disciplined, and more skilled. Which countries' students frequently win the International Mathematical Olympiad competitions? This is an important ingredient for economic success, especially in this digital, high-tech world.

They are in turn led by successful entrepreneurs, most of whom are still alive, are at the peak of their lives, and still want to do even better for themselves and their progeny. Future entrepreneurs would make even better businessmen because they will be more educated, have a global outlook, some will have wealthy parents and therefore have access to capital from day one, and they also have a massive domestic market. A 2024 Shanghai exhibition which I attended attracted over 1,000 semicon companies. There must be tens of

thousands of companies in China's semicon ecosystem today. If there is money to be made, China will not lack the risk-taking entrepreneurs and engineers.

It is this powerful combination of its powerhouse of a manufacturing ecosystem as well as its human talent and enterprise, which cannot be easily duplicated elsewhere, that will contribute to China's continued economic success and prosperity. This is of course predicated on there being no war nor internal civil strife. Casting historical reasons aside, there are no compelling economic reasons today for China to want to go to war with the US over Taiwan, or for that matter with the Philippines or India or any ASEAN country over territorial disputes.

September 24th is a Major Turning Point – New Direction of Travel

In our view, September 24th was a critical turning point for China. Never in my memory has there ever been a time when over a short few days, the entire leadership of the country — from President Xi to Premier Li Qiang to Finance Minister Lan Fo'an to PBOC Governor Pan Gongsheng to CSRC Chairman Wu Qing to Minister of the National Financial Regulatory Administration Li Yunze, etc., assuring the nation that they would do their utmost to address the woes of the economy, real estate market, and stock market. What is most significant for equity investors is Pan's assurances in the press conference. In short, he committed to providing as much liquidity to the stock market as it would need to boost the market and break the vicious downward spiral of selling that begets more selling. The very prudent PBOC has never acted as the banker for the stock market, not in the 2015 market crash nor in other past bear markets. In my opinion, such an unprecedented move would not have been possible without the approval of the very top leadership. In short, investors now have a "Pan put". Such a move is the right move as it would also boost consumer confidence and reverse the negative wealth effect, which has hit consumer and business sentiment so hard.

The timing of September's Politburo meeting was unusual as that agenda is usually reserved for the Politburo's April, July, and December meetings. Bringing it forward by three months can be interpreted as a sense of urgency at the very top. Economists and analysts have been busily assessing the adequacy of the stimulus measures to date in turning things around and have concluded that they are not sufficient.

I think they have missed the most important point, which is the top leadership's realization that an economic crisis is imminent if dramatic measures are not taken. In short, Beijing has decided on a clear direction of travel, which is to do what it must to help the economy, property market, and stock market. Future moves will be impactful, rather than the incrementalism that has characterized policy actions in the past. This is critical in signalling to local officials, businesspeople, consumers, and workers that this is now "The" direction of travel with a capital T – impactful and decisive intervention.

Prospect Theory

As China's stock market is still dominated by retail investors, it is perhaps worth recapping the prospect theory in order to better understand the behaviour of the market in recent years.

While China has undoubtedly had to battle powerful, persistent headwinds in recent years, the stock market overly priced this in, as dictated by psychologists Daniel Kahneman and Amos Tversky's 1979 Prospect theory that describes how people make decisions under risk and uncertainty — often evaluating gains and losses relative to their current situation, feeling losses more acutely than gains, preferring certainty (even at the expense of an inferior outcome), and overestimating small probabilities while underestimating large ones.

A typical investor, given two options:

- 1. A guaranteed USD900 gain.
- 2. A 90% chance of winning USD1,000 and a 10% chance of winning nothing.

Traditional economic theory might suggest choosing option 2. However, Prospect theory often predicts people will choose option 1 because they overvalue the certainty of USD900 and are risk-averse for gains.

Conversely, for losses:

- 1. A guaranteed loss of USD900.
- 2. A 90% chance of losing \$1,000 and a 10% chance of losing nothing.

People are more likely to choose option 2 because they overvalue the small chance of avoiding a loss entirely, showing risk-seeking behaviour for losses. Based on my conversations with investors this year in particular, I get the sense that many have been victims of this theory.

Conditions Ripe for a Multi-Year Bull Market

At this point, I think there are five legs critical for a sustained, steady, and vibrant decadelong bull market. Aware that this view will be ridiculed in some quarters, let me explain the two stages of a bull market that I think could evolve. In my prediction of the first stage of this bull market, I think it is likely to be driven by these four factors:

- Maximal bearish investor sentiment both abroad and at home. Global investors from many countries have completely exited China equities, something unseen in the past 20 years;
- 2. Depressed valuations across multiple cross sections of the equity market, in contrast with lofty valuations in other major equity markets. As of November 22nd, the MSCI China index was at 10.4x P/E, the CSI 300 index was at 15.3x, while China ADRs were valued at 12.4x P/E, with the Hang Seng China Enterprises Index languishing at 8.3x P/E. In contrast, the S&P 500 was trading at 25.0x P/E while India's SENSEX traded at 22.86x P/E and Japan's Nikkei 225 was valued at 20.2x P/E that same day. Invariably, investors point out that there are as many

overvalued stocks as there are undervalued stocks in China. Why is this so? I can only guess that this market is subject to behavioral finance's prospect theory, that it is driven more by speculation and euphoria over in-vogue investment themes (with the former a dominant factor in this bear market), than by being steered by sober fundamental analysis;

- 3. Real interest rates are still high in China compared to many advanced economies, where real rates are sometimes negative or near zero. China's 10-year sovereign bond was trading at around 2.2% versus benign CPI growth of 0.3% at the end of October, so there is still headroom for the PBOC to employ further rate cuts if necessary;
- 4. Earnings growth will get a strong boost from expansionary fiscal policies by both local governments and Beijing, as well as low funding costs and ample liquidity. This factor was absent before September 24th but this factor will be a clear driver from 2025. This intent has been very clearly outlined by the top leadership.

If real interest rates stay as low as expected and earnings recover, we expect China stock prices to rise 50%-100% over the next two to three years, powered by a 10%-20% earnings recovery in 2025 on a low base, and then growing 10%-15% in the ensuing two years. In this environment, P/E ratios should rise to the 15x-20x range. This will still be conservative compared with India, Japan, and the US.

2026 to be Another Major Turning Point

2026 will likely be the first year that the advanced, high value-add manufacturing sector will overtake the property sector as the largest sector of the economy. China has invested enormous financial and engineering resources into this sector. While it has achieved remarkable results in EVs, drones, telecommunications, solar panels, robotics, quantum computing, automation, bioscience in recent years, it still lags in aircraft, semiconductors, medical devices, and AI. The details of China's modernisation can be found in the Zhejiang High Quality Development and Common Prosperity Plan, which I had written about in the September 2021 CIO Note "Common Prosperity or Common Poverty?". I had once thought that it was a pilot plan rolled out for the Zhejiang province.

No, it is not. It is China's politico-socio-economic blueprint, the sequel to the Made in China 2025 Plan. From all the signs one can see, China has achieved many of its stated goals and is on track to achieve the others.

Semiconductors is an area that China has poured in enormous resources. According to a reliable source, China targets to develop its first EUV lithography equipment by the end of 2025, a target that has raised the eyebrows of even the China optimists. Even if that date is ambitious, 2027 may likely be the year that China will achieve the **mother of all breakthroughs**. If that feat is accomplished, undoubtedly, China would enter a golden age of economic success and prosperity that should last for a decade or more, which should lead to a decade-long bull market. Admittedly, there is a degree of uncertainty in this scenario as technological progress can sometimes be difficult to predict. Be that as it may, one source tells me that a leading technology company with 50,000 R&D staff will be announcing

technological breakthroughs and feats one after another soon. In his words, a "technological explosion".

Even if that is exaggerated, but with billions of dollars poured into this endeavour, plus the best engineering talent working round the clock and the massive government support, it would be unwise to bet against it. Achieving 80% of its stated goals will be not bad at all. I say this because going by the experience of economies such as Japan, Taiwan, South Korea, the Netherlands, Germany, and even the US, which had invested less although they have a head start, odds are high that China should be able to catch up — it is merely a matter of time, in my view.

The Ace in the Hole — Easing Graft Busting and Possible Tax Amnesty?

Key to this entrepreneurial Spring is the material easing of China's decade-long anticorruption campaign, which has already made much progress at all levels. Relief may be in sight for Chinese businessman who have lost sleep over this, as well as over tax evasion inspections that can go as far back as thirty years! Their entrepreneurial spirits trapped once again in the proverbial genie's bottle, they had preferred to forgo making their next million if it meant avoiding a call from the graft busters or tax authorities.

China's National Development and Reform Commission, whose influence extends to nearly every aspect of China's economy and society, on 10 October 2024 issued a consultation paper on a law to promote the private economy. This paper escaped the notice of most investors. Like in Singapore, measures delineated in such public consultations are typically rolled out before too long, with minor adjustments at the most. This draft "establishes an efficient communication mechanism between the government and private enterprises. It mandates that laws, regulations, and policies related to business operations must consider private enterprises' opinions...preventing overlapping law enforcement. A credit restoration system is established to lift sanctions for eligible entities and ensure coordinated restoration on public credit information platforms."

The draft also "regulates actions involving restrictions on personal freedom, as well as seizures, detentions, and asset freezes, requiring compliance with statutory authorities, conditions, and procedures. It prohibits the use of administrative or criminal means to unlawfully intervene in economic disputes. Provisions are included to standardize legal procedures and regulate cross-jurisdiction enforcement actions."

It also introduces measures to strengthen payment guarantees for accounts receivables, improve budget management, and establish procedures for the negotiation, mediation, and resolution of payment arrears by government entities.

This is indeed a big step in Beijing's post-September direction of travel that will go a long way in unleashing the country's entrepreneurial spirits. It would be even better if this is coupled with a general amnesty program where businessmen would declare their ill-gotten wealth and in return the government guarantees that they would not be investigated for past violations. A very drastic proposition for sure, but extraordinary times call for extraordinary measures. What to do about past violations? Surely, they must not be let off lightly. A penalty

of a certain percentage of declared assets can be imposed, guided by the experiences of the governments of South Africa, Italy, Mexico, and Indonesia, which has had five amnesty programs in the last 40 years!

No wonder several high-profile businessmen who had left the country are recently returning for visits.

Thinking Out of the Box Benefits

An enormous side benefit would be that the penalties and fines collected can be a major source of revenue for the local governments. To avoid a repeat of the same old problems, this time, clear red lines on bribery must be drawn. Businesspeople can make their millions, create jobs, etc., in China's new productive business regime, but without breaking the law. And local governments can collect their tax revenue. In short, comprehensively signal to the resourceful, hardworking, savvy, and money-loving Chinese businessmen once again that, "To get rich is glorious." However, this time, they have clear out-of-bounds markers to adhere to.

Such a package of measures will likely restore China's economic vitality to the extent where it mirrors the past 40 years. Its high-tech industries will boom for many years to come, with China's nominal GDP possibly surpassing that of the US in 5-7 years. The yuan will likely also appreciate, as China thunders on in a stock market bull run for a decade, and possibly beyond.

One Last Word

This may be an optimistic scenario, but in my view, this country has the conditions to make it happen. It would hinge on three key factors — extending this direction of travel, a united workforce which will maintain its work ethos and values under a Common Prosperity doctrine (shared success), and skilfully using its existing manufacturing powerhouse which it should continually build and strengthen. This could well be the crucial work that would need to be done to complete the China Dream. China bulls can look forward to heartening, rewarding times ahead. For China bears, it is time for them to take earnest, holistic second looks at the forgotten fundamentals.

Wong Kok Hoi is the Founder and co-CIO of APS Asset Management. He has 43 years of investment experience, including CIO at Cititrust Japan, Senior PM at Citibank HK, and Senior Investment Officer of GIC. He was the recipient of the Monbusho Scholarship in Japan and graduated with a Bachelor of Commerce degree from the Hitotsubashi University (1981). Mr. Wong also completed the Investment Appraisal and Management Program at Harvard University (1990). Mr. Wong is a CFA charter holder.

IMPORTANT NOTICE: The views expressed in this article are solely those of the author in his private capacity and do not in any way represent the views of APS Asset Management Pte Ltd. This Publication is strictly for information and does not have regard to the specific objectives, financial situation and particular needs of any specific person. It is not, and should not be construed as, an offer or invitation to offer, whatsoever, to enter into any dealing of securities. Nothing contained herein constitutes investment advice and should not be relied upon as such. Past performance of the securities and any forecasts made or opinions expressed on the economy, stock market or economic trends of the markets are definitely not indicative of future or likely performance or any guarantee of returns. APS accepts no liability and responsibility, whatsoever, for any direct or consequential loss arising from any use of or reliance on this Publication. While APS believes the information for the Publication, which is based on certain assumptions, conditions and facts available, to be reliable, this Publication is provided on an "as is" and "as available" basis subject to change, of whatsoever form and nature, at any time without notice. This advertisement has not been reviewed by the Monetary Authority of Singapore. APS has not independently verified and does not make any representation or warranty as to the accuracy, adequacy, completeness, reasonableness or truth of the Publication. Distribution of this Publication to any person other than the recipient and its adviser(s) is unauthorized and any reproduction of the Publication, in whole or in part, or the disclosure of any of the contents, in each such instance is strictly prohibited.

APS, the CIO, or their connected or associated persons may directly or indirectly have interest in the acquisition or disposal of the securities. Neither APS, the CIO, nor their connected or associated persons have any interest in any corporate finance advisory relationship with the issuer or make a market in the securities. APS and the CIO do not receive any compensation, whether directly or indirectly, related to the specific views expressed in this Publication.

APS and its officers may cause certain funds which are managed or advised by APS to take positions in the securities mentioned in this Publication. APS has in place policies to mitigate potential conflicts of interests that may arise in connection with the production of this Publication.