

Investment Newsletter – January 2023

“There is nothing permanent except change” - Heraclitus

HAPPY NEW YEAR

We hope you managed to get good rest and recreation over the Christmas and new year break.

THE BIG PICTURE OF INVESTING – FOLLOW THE CHANGE

Let’s kick off the first letter of this year with a reminder to ourselves of how dramatically markets change over the long term. Investing is all about being attuned to changing trends and making sure your portfolio is sailing with positive investment trends. You don’t have to be ahead of a trend as that presents elevated risk of being too early and equally you don’t want to be too far behind so as to miss a cycle or two of great returns, or worse still, invested in stagnating opportunities.

Markets always evolve

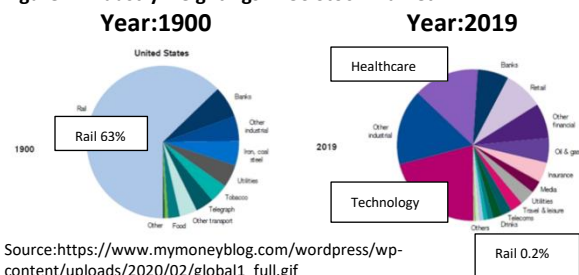
Many new companies emerge and grow into big brands while many leading sectors of the day disappear over just a span of few years and/or decades. Apple, Amazon, Google, Tesla, Nvidia, and Tencent Holdings all feature in the top 20 largest companies in the world today and all emerged over the past 10-20 years.

Sure, you might say, well, they are all technology companies. Yes, technology has been a mainstay theme or trend of the past twenty years and you had to be in it to win it. Today’s technology complex of companies could continue to get denser with new specialist subsectors emerging within next few years, in fact technology may be an evolving trend for the rest of this century and beyond.

For example, new segments of technology stocks built on fast maturing foundational Artificial Intelligence (AI) invention powered by supercomputers (which in turn rely on the rapidly growing and awe inspiring invention of nano-scale semi-conductor capability – please see the back page article on this technology)

could completely redesign the playing field for a range of traditional industries, much like smartphones did for entertainment industry (Netflix vs Video Ezy) and built-in high-resolution smartphone cameras did to traditional hand-held cameras & camcorders to name but few. As the technology complex continues to evolve and grows denser there will be new companies that you and I haven’t yet heard of. Again, stay open to the emerging trends, understand them, let them establish and then hook-in parts of your investment portfolio to these trends and sail with them.

Figure 1: Industry weightings in US Stock Market



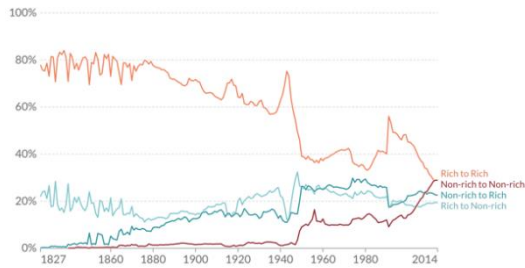
Source: https://www.mymoneyblog.com/wordpress/wp-content/uploads/2020/02/global1_full.gif

In the above chart on the left, at the start of 20th century, railroad stocks represented 63% of the US share market and just 0.2% a century later. Over the same period, by 2019, other major sectors such as Technology and Healthcare became significant part of the US stock market from virtually 0%. It is thus very likely that the market in the years ahead will again look very different.

Trade leads to profits and investment returns

Similarly, on the topic of change, on the chart below, you can see that the share of global trade has actually been shifting from Rich countries (Australia, Western Europe, U.S.) trading with each other to not-rich countries (all other countries) trading with each other, both trends are well entrenched over the past many decades.

Figure 2: Share of global exports by income level of the trade partners



Source: <https://ourworldindata.org/trade-and-globalization#trade-has-changed-the-world-economy>

What that simply suggests is that not-rich countries have for decades been becoming prosperous on trading with the rich countries while simultaneously building their own self-sustaining regional trade & economic systems which involves them trading with each other and underwriting their mutual prosperity. The thriving economies of India, China, Brazil, Indonesia, Malaysia etc. are at the core of this big group of not-rich countries' trading complex. China's one-belt-one-road multi-decade long project is perhaps the obvious example of the integration of the trade of Asia, Middle East, Africa, Central Asia, and parts of Europe. We will write more on this project in future letters.

Deglobalisation of trade is not what it seems

Since Donald Trump's years of presidency in the US, we have been reading in the media about the 'de-globalisation' risk and its supposed implications for global economy slowing down. This risk specifically refers to trade between rich and not-rich countries slowing down. However, it is very clear from the chart in Figure 2 that this strand of de-globalisation is likely to be a non-issue in terms of overall impact on global trade over the long term. The trade between not-rich and rich countries has already been flat in terms of the share of overall global trade since the 1960s. And if indeed trade between rich and not-rich countries does deteriorate (de-globalisation) it will likely be more than offset by the rapid growth in trade between highly populated not-rich countries.

What does all that mean for investors? Well, provided you can assess and navigate the dynamic geo-political risks, the not-rich countries will likely be a source of growth in portfolios in the years ahead as they continue to ride the wave of economic prosperity. India is a classic example with the highest expected economic growth rate in 2023 amongst the middle-income & rich countries with a high performing share market. China is also looking appealing though China should be played nimbly and not as a set and forget investment given the

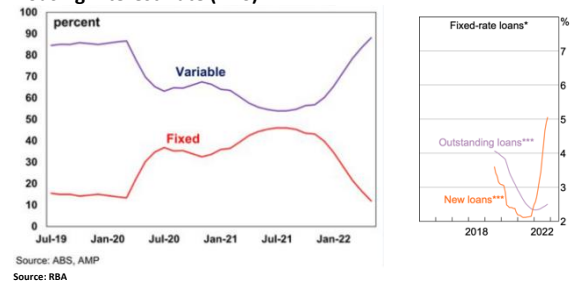
underlying political tensions between China and the West.

NEAR TERM ECONOMIC OUTLOOK

Turning to more immediate concerns of a slowing economy in Australia (and elsewhere) in 2023. We keep hearing in the news the key risk for Australia's economy right now is existing home loans on low fixed interest rates converting to high variable interest rates throughout this year. The insinuation is that some home loan borrowers will fall on hard times and may not be able to service their higher monthly repayments. We have run an analysis on this risk and formed the conclusion that the number of potentially distressed borrowers is not as dire as the media commentary would suggest and there are plenty of positive offsetting factors to suggest that the situation may be manageable.

You can see in Figure 3 below, the chart on the left, while majority of the new home loans issued since 2020 were on record low variable interest rates, there was a significant minority of new home loan borrowers (up to 40% in Jul 2021) that also fixed their mortgage interest rates for 1, 2 or more years.

Figure 3: Fixed versus variable home lending (LHS) & Average Fixed Housing Interest Rate (RHS)



Moreover, the above chart on the right shows that since 2020 those borrowers who fixed their interest rates, they did so at very low average interest rate of 2.5% p.a.

We would like to note here, that the market commentators seem to be fixated on the risk of these fixed rate loans coming off throughout 2023 from average 2.5% p.a. to +5% p.a. which would mean monthly repayments rising by 40-50%. Yes, that is a significant increase and will lead to these specific borrowers coming under economic strain, however, it must equally be noted that this group of borrowers represent less than 6% (or estimated \$130 billion) of the total home loans outstanding of \$2.1 trillion in Australia.

The other 94% of home loans outstanding either were borrowed at much higher interest rates in the past five years or earlier and thus have greater repayment capacity anyway, or, even those that borrowed since 2020 at very low variable rates seem to be adjusting to higher monthly repayments which have now been rising for the past eight months. The evidence is in retail sales not just holding up well but continuing to post record numbers into December. We do think the economy will slow down this year, there may well be some sell-offs in the market along the way but largely we think investors will continue to reward companies that give believable growth and pay solid dividends.

GLOBAL MARKETS OVERVIEW

	Units	Month End Value	Price Performance (% Chg)			
			1-day	1-mth	6-mths	1-year
Developed Markets Equities						
ASX 200	AUD	7,039	0.27%	-3.37%	7.17%	-5.45%
ASX 200 Futures	AUD	6,992	0.45%	-3.66%	9.34%	-2.69%
Dow Jones	USD	33,147	-0.22%	-4.17%	7.71%	-8.78%
S&P 500	USD	3,840	-0.25%	-5.90%	1.43%	-19.44%
Stoxx Europe 600	EUR	425	-1.27%	-3.44%	4.34%	-12.90%
FTSE 100 (UK)	GBP	7,452	-0.81%	-1.60%	3.94%	0.91%
DAX (Germany)	EUR	13,924	-1.05%	-3.29%	8.92%	-12.35%
CAC (France)	EUR	6,474	-1.52%	-3.93%	9.30%	-9.50%
Nikkei 225	JPY	26,095	0.00%	-6.70%	-1.13%	-9.37%
Emerging Markets Equities						
MSCI Emerging Markets	USD	956	-0.11%	-1.64%	-4.43%	-22.37%
Shanghai Composite	CNY	3,089	0.51%	-1.97%	-9.10%	-15.13%
South Korea	KRW	2,236	0.00%	-9.55%	-4.13%	-24.89%
Taiwan	TWD	14,138	0.37%	-4.99%	-4.64%	-22.40%
Brazil	BRL	109,735	0.00%	-2.45%	11.36%	4.69%
South Africa	ZAR	66,955	-0.80%	-2.35%	11.39%	-0.14%
Foreign Exchange						
AUDUSD	Currency	0.6813	0.52%	0.37%	-1.30%	-6.20%
AUDGBP	Currency	0.5634	0.21%	0.08%	-0.62%	4.91%
AUDEUR	Currency	0.6366	0.14%	-2.39%	-3.34%	-0.38%
AUDCNY	Currency	4.67	-0.72%	-1.63%	1.15%	1.23%
Commodities						
LME ALUMINUM 3MO (\$)	USD/mt	2,378	-1.12%	-4.02%	-2.76%	-15.30%
LME COPPER 3MO (\$)	USD/mt	8,372	-0.55%	1.61%	1.38%	-13.87%
LME NICKEL 3MO (\$)	USD/mt	30,048	-0.70%	11.34%	32.38%	44.76%
SILVER FUTURE Mar23	USD/oz	24.04	-0.87%	10.37%	16.28%	1.74%
ICE Newc Coal Fut Feb23	USD/mt	363.00	2.22%	-4.35%	13.88%	206.46%
62% Import Fine Ore in USD	USD/t	108.63	0.00%	12.09%	-5.97%	-4.79%
Gold Spot \$/Oz	USD/oz	1,824	0.50%	3.14%	0.93%	-0.28%
WTI Oil	USD/bbl	80.26	2.37%	-0.50%	-12.81%	16.72%
Henry Hub	USD/mmbtu	3.52	-5.88%	-48.21%	-45.85%	-3.83%
Com	USD/Bu	678.50	-0.15%	2.49%	-8.77%	14.37%
Wheat	USD/Bu	792.00	2.33%	2.66%	-8.83%	2.76%
Fixed Interest						
10-Yr Bond Yield						
Australia	AUD	4.05%	+0.03%	+0.52%	+0.39%	+2.38%
US	USD	3.87%	+0.06%	+0.27%	+0.86%	+2.36%
Germany	EUR	2.57%	+0.13%	+0.64%	+1.24%	+2.75%
Japan	JPY	0.42%	-0.04%	+0.17%	+0.19%	+0.35%
Italy	EUR	4.72%	+0.19%	+0.84%	+1.45%	+3.54%
Australian Rates						
Cash Rate	AUD	3.10%	+0.00%	+0.25%	+2.25%	+3.00%
90-Day BBSW	AUD	3.26%	+0.01%	+0.22%	+1.42%	+3.20%
180-Day BBSW	AUD	3.77%	+0.01%	+0.28%	+1.05%	+3.55%
CBOE Options						
CBOE VIX (Volatility Index)	Index	21.67	1.07%	5.30%	-24.52%	25.84%

Data as of 31 December 2022

ECONOMIC NEWS

• **In Australia** the Reserve Bank of Australia (RBA) raised its key interest rate for an eighth consecutive month, raising by +0.25% to 3.1%, the highest level since November 2012 with minutes from policy meeting revealing RBA considered pausing its policy tightening cycle but decided against it as RBA's most recent forecasts indicated that inflation was

expected to take several years to return to the 2-3% target, even with further increases in the cash rate.

Economic expansion decelerated in September quarter 2022 with GDP advancing +5.9% p.a.. Consumer confidence rebounded from a 2-1/2-year low, rising +3% over the month in December, however, remained deeply pessimistic. Business confidence turned negative for the first time this year, as high inflation and interest rate increases weighed leading to Australia's household spending growth slowing to a 7-month low in the month.

• **Global growth outlook.** All IMF, World Bank, WTO and OECD raised concerns about a worsening global outlook with a research by the Centre for Economics and Business Research revealing, the world economy will face recession in 2023 as a result of the rises in interest rates in response to higher inflation, forecasting central bankers to stick to their guns in 2023 despite the economic costs with the cost of bringing inflation down to more comfortable levels being a poorer growth outlook for a number of years to come.

• **In the US** - The Fed downshifted its rapid pace of interest-rate hikes, raising benchmark rate by +0.50% to 4.25-4.5%, while signalling that borrowing costs, now the highest since 2007, will outstrip investors' expectations, projecting rates to end at 5.1% in 2023 before being cut to 4.1% in 2024, a higher level than previously indicated, as the bank updated its forecast for GDP growth (2022 increased to 0.5%, 2023 down to 0.5%, 2024 down to 1.6% and 2025 unchanged at 1.8%), inflation (2022 up to 5.6%, 2023 up to 3.1%, 2024 up to 2.5% and 2025 up to 2.1%) and unemployment rate (2022 down to 3.7%, both 2023 and 2024 up to 4.6% and 2025 up to 4.5%).

US Economic growth in September Quarter 2022 was firmer than previously estimated with inflation-adjusted GDP increasing at +3.2% p.a. rate during the period, reflecting upward revisions to consumer spending and business investment. Consumer confidence, which reflects consumers' six-month outlook, climbed to highest since January and gauge of current conditions advancing to a three-month high as short-term inflation expectations unexpectedly declined to 4.6%, the lowest level since June 2021 while long-term inflation expectations held steady at 3%.

• **China.** Economic activity in December fell to the slowest pace since February 2020 with both official manufacturing and non-manufacturing activity falling further into contraction. China's Central bank (PBOC) revealed Chinese residents saw their confidence in the job market and their incomes plunge to new lows in December Quarter 2022, while interest in buying homes, and business conditions and export orders among industrial companies also fell as the economic slowdown worsened.

• **Europe. European Central Bank (ECB)** hiked rates by +0.50% to 2.5% and widened efforts to subdue double-digit inflation with a decision to shrink its €5 trillion bond portfolio from March, with President Christine Lagarde telling investors to prepare for a long-running campaign of similar moves as the bank increased its inflation forecasts for the next two years, seeing price growth remaining above the 2% target in 2025.

• **India's central bank (RBI)** raised the benchmark repurchase rate by +0.35% to 6.25%, a level last seen in 2018, as it retained its 6.7% inflation forecast for 2022 with



price gains expected to be back below 6% in December Quarter 2022, while lowering 2022 GDP expansion forecast to 6.8%. The World Bank revised its growth forecast for the country in the current fiscal year to 6.9%, driven by expectations of stronger consumption and more robust domestic activity, however, cut forecasts for 2024 to 6.6%.

GLOBAL MARKETS

US markets. US markets were weaker in December, with the Dow Jones down -4.2% and S&P500 down -5.9%.

European markets were weaker with the Stoxx Europe 600 Index down -3.4%, UK FTSE down -1.6% and German DAX down -3.3%.

Australian Share Market. The ASX200 declined -3.4%, equating to 2022 yearly decline of -5.5%, its worst yearly performance since 2018.

THE LONG READ

WHEN THE CHIPS ARE DOWN STAY FOCUSED ON THE FUNDAMENTALS

We often consider fossil fuels, the sun, clean water, and air as the basic necessities of life on earth. We know that we cannot exist without these basic resources. In this article we will introduce you to the fifth resource without which our modern life will simply grind to a halt, we are not exaggerating here either! Astoundingly, this resource is controlled by a handful of global companies and even more astonishing is the fact that there is only one company in the world that can produce a critical part of this resource. What is this resource? ***It is semiconductors or chips.***

At the core of almost every electronic device is either a memory chip or logic chip, or both. We are going to refer to these two, collectively, as chips. These chips are in your smartphones, computers, the infrastructure that runs global internet, military equipment, medical equipment, cars, aeroplanes, industrial plants & machines, consumer electronics, and the list just goes on and on. Basically, any device that has electricity running through it is likely to have a chip installed in it. So, we hope you would now concur with me that chips run our modern lives. Next, let's turn our attention briefly to how chips are made, their design, and size. This knowledge is important as it will make you appreciate how incredibly complex the process is to design and manufacture chips and you can't just set up a plant and start producing.

A chip is a set of electronic circuits etched on a very small flat piece of usually rectangular silicon sheet. This silicon-based chip is usually the size of our finger nail. Etched on these finger nail size chips are billions of electronic circuits (transistors). These etchings are measured in nanometers. A nanometer is one billionth of a meter, or a millionth of a millimetre. For further context of the miniature size we are referring to here, a

human red blood cell is 7,000 nanometer in diameter, and the average virus is 14 nanometers. The smallest etched circuits on the most advanced chips are currently 10 nanometers and there is expectation of their size falling to 2 nanometers! Thus, chip circuits are much, much smaller than a red blood cell and a virus. Just imagine the manufacturing precision required to etch billions of these nano circuits on a single finger-nail size flat chip. Then imagine the complexity of making billions of finger nail size chips at fast production speeds without mistake to feed the demand for these chips into so many applications mentioned earlier in this article. The manufacturing process of miniaturised electric circuits and the machines and software used from design to production is nothing short of extraordinary human invention of

the past 70 years. It has been a long and costly journey of deep learning and ongoing inventions by a handful of companies mostly based in the Silicon Valley in the US such as AMD, Qualcomm, Apple, Intel, Nvidia and some other global companies; TSMC of Taiwan, Samsung of Korea, and ASML of Netherlands.

For example, Apple iPhone has around 12 chips loaded into the phone, each chip runs a specific function of the phone such as operating the battery, the display screen, Wi-fi, audio, the camera and so on. Apple does not fabricate any of these chips. It buys most off-the-shelf: memory chips from Japan's Kioxia, radio frequency chips from California's Skyworks, audio chips from Cirrus Logic in Texas. Additionally, Apple designs in-house the ultra-complex processing chips that run an iPhone's overall operating system, however, it cannot actually manufacture these processing chips. These chips can only be produced by a single company, TSMC of Taiwan, in a single building, the most expensive factory in human history. In fact, no firm in the world produces chips with more precision than Taiwan Semiconductor Manufacturing Company, also known as TSMC.

Furthermore, while TSMC produces the overall chips for use in electronic devices it is important to note that TSMC itself relies on a critical machine from a Netherlands based company named ASML. ASML sells a \$140 million extreme-ultraviolet lithography (laser) machine which is used for the actual etching of circuits on the silicon chips. The chip manufacturers such as TSMC rely on ASML's engineers to train them to operate these highly technical laser machines and be available round the clock for any maintenance issues. In short, if ASML stops supplying its machines to chip manufactures like TSMC, Samsung, and Intel then these companies will be unable to operate their plants. Critically, ASML is the only company in the world that makes the extreme UV light laser machines critical for making advanced chips. ASML has spent



billions of dollars and 30 years developing its machines.

The key point to note here is that if you are not a company already part of this exclusive club of chip design and production companies then the chance of catching up to their level of capability is slim to none in the foreseeable future.

This last point is important to note in the current political rift between US and China. The rift in a nutshell is as follows, China's industrial economy and defence systems rely on advanced microchips that are designed using US controlled software systems using X86 & ARM design architecture and produced/fabricated by companies like TSMC, Samsung, Intel that are aligned with the US government. So, the assertion we made at the beginning about chips being an essential resource for modern life and China singularly reliant on the US for this resource then it is clear that the US has the power to shut down China's industry by stopping China's access to these chips. Right now, the US strategy for China as far as chip supplies are concerned is to stop supplying China with the most advanced chips to ensure that China's industrial and defence capabilities are few steps behind the US.

Moreover, with the cold war now seemingly on with US on one side and China and Russia on the other side building industrial scale militaries. The US is likely to not just focus on equalling the count on the number of tanks, missiles, and boots on the ground but also build on its lead and monopoly on advanced chips and run its military installations smarter with much more precision than the other side, making the US army far more capable.

To that purpose, the US governments is further strengthening its semiconductor industry through partnership with US based chip companies where the US government is subsidising their R&D and Manufacturing with billions of dollars to effectively continue building on US' competitive advantage in semiconductors. When you combine this cheap partial funding for US semiconductor companies with ongoing demand growth for advanced chips from consumer industries and defence industries it is not hard to imagine that a diversified exposure to chip companies over the long term should pay well. Over the past five years to 30 December 2022, the US semiconductor stocks ETF (Nasdaq: SOXX) has delivered over 93% return overall while the broader NASDAQ technology index delivered 47% and the wider US stock market index S&P500 delivered 40%.

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