ERIKSENSGLOBAL

Actuaries & Investment Strategists

MARKET PERFORMANCE AND COMMENTARY - MAY 2022

MARKET PERFORMANCE

Index	Index	1 Month	3 Month	1 Year
	Level/Price	%	%	%
Global Equities				
MSCI World NR	6584.44	-0.2	-4.2	-1.4
MSCI World NR (NZD)	13043.63	-0.2	-2.0	6.5
MSCI Emerging Markets	671.92	-0.2	-5.7	-15.7
S&P 500 (US)	4132.15	0.0	-5.5	-1.7
Nikkei 225 (Japan)	27279.80	1.6	2.8	-5.5
FTSE 100 (UK)	7607.66	0.8	2.0	8.3
DAX (Germany)	14388.35	2.1	-0.5	-6.7
CAC 40 (France)	6468.80	-1.0	-2.9	0.3
Trans-Tasman Equities				
S&P/NZX 50	11308.34	-4.8	-5.6	-8.2
S&P/ASX 300	84348.91	-2.8	3.1	4.7
Bonds				
S&P/NZX NZ Govt Stock	1696.32	0.1	-4.7	-9.3
S&P/NZX A Grade Corporate	5471.06	0.4	-2.8	-6.4
Barclays Global Agg (Hedged to NZD)	393.22	-0.1	-5.0	-6.9
FTSE WGBI (Hedged to NZD)	0.00	-100.0	-100.0	-100.0
Oil				
West Texas Intermediate Crude	114.67	9.5	19.8	72.9
Brent Crude	119.85	12.5	18.9	74.4
NZD Foreign Exchange				
AUD	0.9074	-0.6	-2.7	-3.5
EUR	0.6077	-1.2	0.9	2.1
GBP	0.5165	-0.1	2.4	0.9
JPY	83.7415	-0.4	7.4	5.2
CNY	4.3480	0.9	1.8	-6.3
USD	0.6510	0.3	-3.8	-10.6

Source: Nikko AM, indices are in the local currency of the asset unless otherwise indicated.

Executive summary:

- Australian and New Zealand stock markets sold off. US markets stabilised.
- · Geopolitical risks are still high
- Food security is a priority on the global agenda
- Oil prices have risen to around \$120 per barrel
- Inflation is at record high levels in Europe
- New Zealand dollar depreciated against most currencies.

Level 9, 111 The Terrace

ECONOMIC COMMENTARY

GLOBAL SNAPSHOT

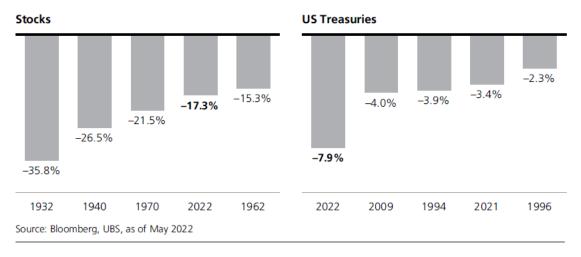
Geopolitical tensions have intensified. In May, China boosted its military exercises in Taiwanese airspace and strengthened its positions in the Pacific Islands. Russia advanced deeper into Ukrainian territory; Mariupol is now under Russian control after a drawn-out siege of the Azovstal plant.

According to the UN, the war in Ukraine has initiated a global food crisis that will last several years without intervention. The World Bank announced an additional \$12bn in funding to mitigate the "devastating effects". The global food crisis continues to influence markets, and we expect this to peak in August or September this year.

The S&P 500 had its poorest performance at this time of year since the 1970s. Year-to-date total returns from the Bloomberg US Treasury Index are the worst since the benchmark's inception in 1973, at -7.9%. The war in Ukraine, US inflation at four-decade highs, and recession fears as the Fed raises rates have all contributed to the decline (Figure 1).

Figure 1

US stocks and bonds: Worst start to the year in half a century
Performance (January–24 May close) for the S&P 500 (since 1928) and US Treasuries (since 1973), in %



The Fed plans to cut its \$8.5 trillion balance sheet from June, when it will no longer roll over \$30 billion in maturing Treasury securities and \$17.5 billion in maturing agency mortgage-backed securities per month. From September, those caps will rise to \$60 billion and \$35 billion, respectively.

The FOMC's early-May meeting surprised some institutions, with all members supporting 50-basis-point rate increases over the next few meetings to bring interest rates to a neutral level. Some members indicated that a more "restrictive" approach to tightening monetary policy could be in order, depending on how the economy evolves.



European Central Bank (ECB) President Christine Lagarde sided with hawkish colleagues in a blog post, confirming an early end to the ECB's bond-buying programme in the third quarter and making her first explicit call for interest rate increases.

Fitch's latest survey revealed that Australian investors expect the credit environment to become more challenging in 2022. Rising political and geopolitical tension is at the heart of investor concerns, with 52% of respondents ranking this as the most significant risk to credit markets over the next 12 months. A hard landing in China and a domestic housing-market downturn have consistently ranked among the top three threats in past surveys and now sit at third and fourth, respectively, behind the withdrawal of quantitative easing.

LOCAL SNAPSHOT

The RBNZ followed April's 50 basis point increase in the cash rate with another significant 50-point rise at its May policy meeting.

COVID disruption for businesses has reduced this year compared to the first two years of the pandemic. Companies will use lessons learned over the past few months to refine how they will respond to future waves of COVID. Meanwhile, inflation, supply chain and labour challenges have intensified – and will persist in 2022. Russia's invasion of Ukraine and China's COVID lockdowns are prolonging the pain. Labour shortages will continue through into 2023, even though New Zealand border restrictions will ease. Geopolitical tensions also mean that businesses need to start thinking more strategically about their future export markets and sources of imports. Investing in cost- and labour-saving capital and technology is one of the best options today.

The latest ANZBO survey showed that close to 56% of businesses now expect economic conditions to weaken over the coming year. That's a significant drop in confidence since last month, with economic confidence now at its lowest level since April 2020, when the economy was still in lockdown.

A key area of business concern is cost pressure, with 95% of businesses expecting operating costs to rise over the coming year. We expect all affected companies that haven't already will raise their prices over the next few months.

WORLD FINANCIAL MARKETS

Equities

The tech-heavy Nasdaq Composite Index gained ground, breaking a seven-week streak of declines in the last week of May, however still ended the month down 2.05%. The S&P 500 rallied 6.6% in the last week of May resulting in a flat return over the month (0.01%). Every sector in the S&P 500 advanced, with consumer discretionary and energy stocks performing especially well. Excepting the healthcare sector which lagged. The cross-sector strength appeared to reflect optimism that inflationary pressures could be peaking. Value stocks underperformed their growth counterparts and small-caps underperformed large-caps.



In Europe, the Euro Stoxx 50 fell 0.4% as investors concerned about elevated inflation, slowing economic growth, the pace of central bank policy tightening, and the invasion of Ukraine. The main market indexes posted gains except France. France's CAC 40 ended the month -1.0%. Germany's DAX added 2.1% and the UK's FTSE 100 returned 0.8%.

Fixed Interest

The 10-year US Treasury yield traded lower, down four basis points to 2.74% from 2.78%, as the market appeared to focus on signs of slowing growth in the economy that could lead to a slower pace of Fed rate hikes.% on the back of eurozone inflation data and news that the EU will ban most Russian oil imports by the end of this year.

Core eurozone bond yields fluctuated but ended slightly higher. Yields initially ticked up after ECB President Christine Lagarde suggested the possibility of positive rates by year-end. Yields retreated somewhat on weaker-than-expected eurozone PMI data. Over the last week of May, the German 10-year bund yield rose two basis points to 0.96% from 0.94%.

UK gilt yields broadly tracked core markets. The 10-year gilt yield ended the month at 2.1%.

Spreads in the US investment-grade corporate market tightened as investors' risk appetite increased. Demand for high yield bonds was stronger across sectors. Total fixed interest returns were 0.55% in May.

HI-TECH RACE: WEST OR EAST

By the middle of this decade, many major automakers will act more like tech companies than car companies. Hyundai offered a glimpse into the future with a new \$5 billion investment to expand its robotic, autonomous, and electric air-vehicle ambitions. It's just one example of the larger automotive industry's transition into a software-driven industry.

The company already owns 80% of robotics company Boston Dynamics and has partnered with Korean driverless vehicle company Motional to roll out a line of robotaxis. Hyundai also launched the Supernal division last year to develop electric air taxis, which they hope will carry passengers by 2028.

Last year, Ford unveiled a hands-free driving system for some of its most popular truck models. Meanwhile, hundreds of companies are in a race to develop air taxis. By the middle of the decade, more automakers will call themselves "mixed mobility" companies. The average car today is 90% hardware and 10% software. But the future could see hardware's share fall to 40%, industry experts say, while software will account for another 40% and content 20%. Telecom Ericsson predicts this connected automotive market could reach \$166 billion by 2025.

Significant investments in domestic chip production could lead to a global semiconductor alliance by the end of the decade. Samsung announced a massive investment in South Korea's domestic chip sovereignty with a pledge to spend nearly \$365 billion on next-gen tech over the next five years. The pandemic has forced

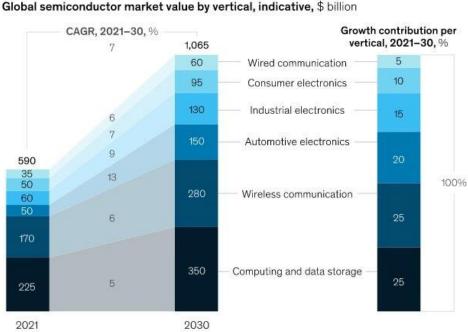


nations to reassess their domestic production capabilities to secure supply chains for microchips. But economic cooperation with allies could be the best way to strengthen supply chains.

About 80% of Samsung's investment will stay in South Korea. The goal is to use the investments to secure the two weakest links in the semiconductor supply chain: talent and machinery. The money will create 80,000 jobs by 2026 and purchase the most advanced production machines from ASML. These machines can cost around \$400 million apiece at their current price point. Both Samsung and US-based Intel want these machines to create 3-nanometer chips and compete to get them to market before the other. These 'N3' chips could be used for high-performance, low-power application processors, next-gen telecom, and highresolution image sensors.

The CEO of Intel projected that the current chip shortage is likely to persist through 2024. The industry is worth approximately \$600 billion and could grow to a trillion by the end of the decade (Figure 2). Nations see it as worthwhile to invest heavily in new domestic manufacturing, and chipmakers are thriving. Samsung has already pledged billions to create plants in the US alongside Intel and industry leader TSMC. This is to take advantage of the CHIPS for America Act that will grant billions in subsidies for production and research and development in the US. India, the EU, and China all have similar plans to woo chipmakers to their shores. But the investments required to create domestic supply chains in each region would cost \$30 billion every year for decades. No one nation or company can sustain those levels, so a global semiconductor alliance could ultimately be the solution.

Figure 2 The overall growth in the global semiconductor market is driven by the automotive, data storage, and wireless industries.



Source: McKinsey

Deere wants to become the Apple of agriculture. The farm equipment giant unveiled a new push for autonomous tractors with software to harvest crop data. The race to automate agriculture has accelerated as labour shortages and the global food crisis gain momentum.

Deere has developed self-driving tractors loaded with \$500,000 of the latest software to harvest data. The first green 14-ton tractors will begin to plough fields in the US fall. The company will also combine the smart tractors with a subscription model to drive revenue growth. Deere's strategy to scale its tech products came after the manufacturer's stock plunged 14% on 20 May. It was the company's most significant drop in 14 years. Its closest competitors, AGCO and CNH Industrial, have announced they will pursue similar smart setups.

These advancements come with some risks. The growth in agritech has made the sector vulnerable to hackers. Meat processing giant JBS paid \$11 million in ransom to resolve a cyber-attack that impacted Australia, Canada, and the US. And this month, US agriculture firm AGCO was hit by a ransomware attack that affected production. If hackers disrupt hardware and software used in crops, it could severely impact the global supply chain.

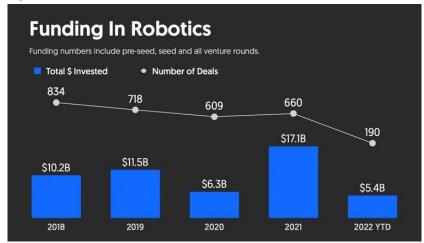
IBM estimates that the average smart farm can generate half a million data points per day. The next step is to build machines that autonomously plant seeds with this harvested data. As the number of grain producers dwindles, investments in automation will save farmers time and money. Globally we could see nearly 39,000 autonomous tractors in use by 2026. Deere and its rivals will embrace innovation to feed a global population expected to hit 9.7 billion by 2050.

Household robots are also on the rise. Appliance giant Dyson will invest \$3.4 billion to debut new robots by 2030 to complete everyday household chores. It's the latest investment in robots connected to the cloud, but their rollout could stagnate with the slow adoption of 5G networks.

Dyson aims to tackle more mundane household chores with new robot prototypes with fine motor skills. Their arms can lift plates, vacuum, or pick up toys and will require 5G connectivity to roam wirelessly. It helps utilize the cloud's vast computing and data storage for precision control in near real-time. Dyson plans to build the UK's largest robotics centre and has already hired 2,000 employees for the initiative, half of which are engineers.



Figure 3



Source: Crunchbase

5G connectivity's low latency is the key to speed up robot adoption, as it provides greater processor power beyond the physical limits of the bot. However, this highlights a chicken-and-egg quandary. South Korea was the first nation to launch 5G and 45% of its population is now connected. So far, \$20 billion has been spent on network upgrades, but telecom firms are reluctant to spend more even though the tech is capable of 20x faster speeds. Demand and uptake haven't yet made it worthwhile.

South Korean tech firm Naver has invested \$550 million into its own robots called The Rookies, who deliver parcels and coffee to employees at its headquarters. To power them, it became South Korea's first non-telecom company to launch a locally licensed 5G network. As expensive processors are offloaded to the cloud, it saves an average of \$1,500 per robot. Besides Naver, no one sees this value more than Amazon, which employs an army of warehouse-bots and pledged \$1 billion towards new robotic innovations last year. But whether it's robots in the office, the warehouse, or at home, developers and 5G providers will need to sync up to make this cloud-powered vision a reality.

GEOPOLITICS

The war in Ukraine is in focus from a humanitarian and food supply perspective. Russian troops have advanced deep into Ukrainian territory and now control major parts of the southern and eastern regions. The last stand of defence in Mariupol fell and "Azovstal" defenders surrendered in May. The number of surrenders varies from hundreds to thousands depending on the source of information, however, Red Cross and other humanitarian organisations have kept silent and have avoided reporting figures.

EU unity is crumbling in face of a total oil embargo. The members of the Union could not agree on terms and exemptions for some members such as Hungary, Czech Republic, and Slovakia. Asia has become the largest importer of Russian oil for the first time in history. India and China have benefitted from the current situation by importing highly discounted oil from Russia. These increased Chinese imports of Russian oil heavily hit Iran, another nation with heavy sanctions. Before the war in Ukraine, Iran was the main supplier of oil to China which helped to keep its economy afloat. That situation has now changed and less money is



coming into the country. That, coupled with a food supply shortage, has created difficulties for the President and Ayatollah.

On a call from the UN and global leaders, Russia agreed to open the Ukrainian ports for wheat exports to curb food shortages, in exchange for the lifting of sanctions. Russia is also considering lifting its ban on fertiliser exports if sanctions are withdrawn.

More than a 1,000 companies with foreign capital have left Russia since the start of the Ukraine invasion. Unsurprisingly, their places have been taken by Chinese investors. JAC, a Chinese automaker, is considering opening up production in Avtovaz plants in Russia. These were formerly owned by the Renault-Nissan Alliance who pulled their production lines due to the conflict.

Aside from economic co-operation, China and Russia have also strengthened their military ties. During President Biden's visit to Japan and South Korea with the Indo-Pacific Economic Forum initiative, Russian and Chinese air forces held joint exercises which included nuclear bombers flying alongside Japanese and Korean air spaces.

China is also testing Taiwanese air defences after deploying 30 fighter aircraft. This is the biggest deployment since January 2022, when 22 aircraft were involved in similar actions. Tensions between China and Taiwan have further increased after Biden announced that the US will protect the independence of the island by any means, including military action. The US Foreign Office has since denounced that statement.

Tensions are increasing on the border between China and India, too. China has built a second bridge over Lake Pangong Tao (Figure 4). Experts say it will increase mobility of troops to reach the disputed territory currently isolated by the lake and give China a strategic advantage.

Eukung

Spangmik

Man

Merak

Tokia

Chushula

Shumatnang
gongkia

Kistmang

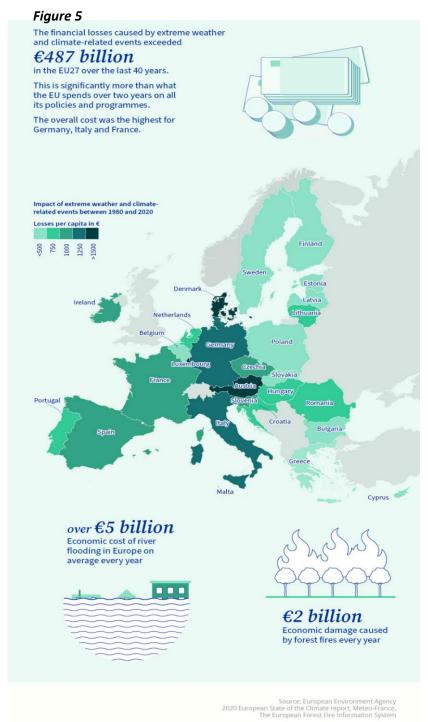
Figure 4

Source: Google Map



After signing an agreement with the Solomon Islands in April, China continues to increase its presence in the Pacific region. Diplomats were hoping to sign a security deal with 10 Pacific nations however this has been unsuccessful to date. Many analysts expect the Chinese to continue their diplomacy and increase their influence in the area, gaining access to key fisheries.

CLIMATE CHANGE



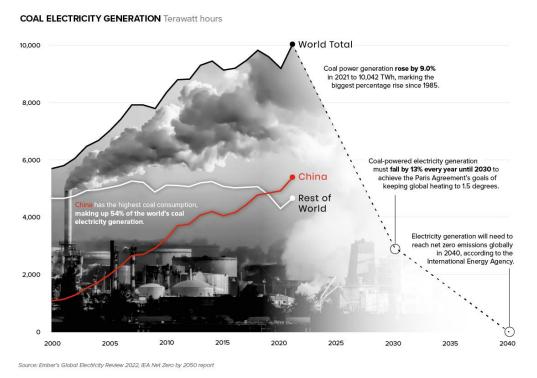
The 2022 heatwave is estimated to have led to at least 90 deaths across India and Pakistan and triggered an extreme glacial lake flood in northern Pakistan and forest fires in India. The heat reduced India's wheat crop yields, causing the government to reverse an earlier plan to supplement the global wheat supply that the war in Ukraine has impacted. In India, a shortage of coal led to power outages that limited access to cooling, compounding health impacts and forcing millions of people to use basic coping mechanisms such as limiting activity to the early morning and evening.

Climate change is also impacting Europe. Drought, snow falling on blossoms, and travelling to Scotland for cold water swim training are a few ways in which Europeans are experiencing climate change. The financial impact of climate change is exceeding billions of euros per year (Figure 5).

COAL ENERGY?

China has the highest coal consumption, making up 54% of the world's coal electricity generation. The country's consumption jumped 12% between 2010 and 2020, despite coal making up a lower percentage of the country's energy mix in relative terms (Figure 6).

Figure 6



Source: visualcapitalist.com

Combined, China and India account for 66% of global coal consumption and emit about 35% of the world's greenhouse gasses (GHG). If we add the United States to the mix, this goes up to 72% of coal consumption and 49% of GHGs.

How fast the transition away from coal will be achieved depends on a complicated balance between carbon emissions cuts and maintaining economic growth, the latter of which is still largely dependent on coal power. The current geopolitical situation undermined all efforts for the previous decade when an artificially created deficit of oil served to increase coal consumption.

FOOD SECURITY

Social unrest in the southwest province of Iran became the first wakeup call caused by continued soaring food prices in several cities. The protests were triggered in late May by a cut in state subsidies for imported wheat that caused price hikes of 300% for a variety of flour-based staples. The government of President Ebrahim Raisi also raised the prices of basic goods such as cooking oil and dairy products.



The UN estimated 1 in 3 people faced food insecurity in 2020. For billions of people hunger is the norm and the risk of famine is ever-present, often exacerbated by conflict and climate change. Broadly speaking, the situation is further deteriorating.

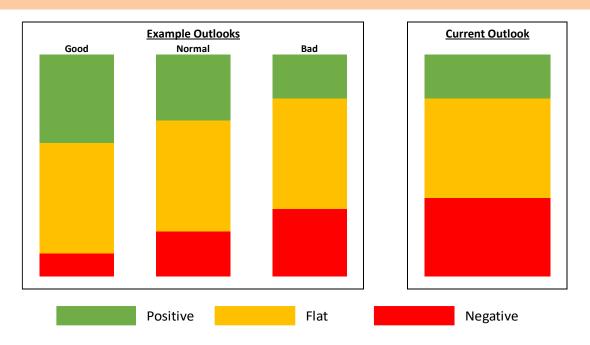
Middle-income countries, such as Egypt and Brazil, are exceptionally poorly placed to cope with increased food insecurity. Many governments have exhausted their financial and material reserves fighting COVID and have subsequently incurred large debts.

The total number of people facing acute food insecurity and requiring urgent food assistance has nearly doubled since 2016, according to the Global Network Against Food Crises, a joint UN and EU project. Their latest report has pinpointed countries of particular concern: Ethiopia, South Sudan, southern Madagascar and Yemen, where around 570,000 people are in the most severe or "catastrophe" phase of food insecurity, immediately in threat of starvation and death.

According to the U.S. Department of Agriculture, Russia, Europe, the United States, and Canada are traditionally the top global wheat exporters and accounted for roughly 60% of world wheat exports from 2015 through 2020. However, each has faced significant wheat crop setbacks in recent seasons, with their collective export share dropping to only 50.7% in the 2021-22 season and most likely will drop further due to the war in Ukraine reducing import opportunities.

As previously mentioned in *Climate Change*, India was planning to ease the wheat shortage, however heat waves in March and April have disrupted these plans. The Indian government banned the private export of wheat but still permitted exports through the government channels to existing importers – Bangladesh and Sri Lanka.

MARKET OUTLOOK



The current market is less likely to have a good return (green) as a bad return (red) over the next two to three years. It is more likely to have an average return (amber).

