

April 2022

04 Economic and market outlook

13 Current focal points





Editor's note

Welcome to the latest edition of MarketWatch.

Before we discuss the economy or the markets, we must first acknowledge the human tragedy in Ukraine. It will be little consolation to the Ukrainian people, but their resilience throughout the invasion has been extraordinary and it puts the frivolity of our daily concerns and the fickle nature of financial markets into sharp contrast.

In our 2022 outlook edition of MarketWatch, we listed military conflict as one of the potential risks on the horizon, but we did not expect the horrendous violence that we are seeing now. The West has turned up the heat by applying much stronger sanctions than expected, and the long-dormant Cold War is raging again. Even with China watching from the sidelines, geopolitical temperatures are at their highest in decades.

With prices already rising fast in the booming post-COVID-19 economy, the prospect of energy shortages has lifted inflation indices to their highest levels in 40 years. Central banks committing to hike interest rates are calling to mind the "stag-flationary" 1970s and early 1980s, when inflation and rates reached double digits and growth stalled. We note though, that the economy is stronger and less energy dependent now than it was back then, and rates are far lower, but the risk is not zero.

It's not surprising that the markets are churning, and investors are scratching their heads. Unlike the early 1980s, major stock indices are only a few percent off their all-time highs, and valuation ratios are well above long-term averages. How can the market still be running so hot with inflation so high and policy-makers tightening conditions? Underneath the surface though, different styles and sectors are showing more sensitivity to the economic conditions.

In this edition of MarketWatch, we update our outlook for the economy and the markets in 2022, in particular in light of higher interest rates. We discuss different styles of stock investing and explore how robust portfolio construction can be key to weathering difficult macro environments.

Should you have any questions in relation to the content within this quarter's edition, please contact your Davy Adviser.

& A

Donough KilmurrayChief Investment Officer

Warning: Past performance is not a reliable guide to future performance. The value of your investment may go down as well as up.

Warning: Forecasts are not a reliable indicator of future performance.

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Economic & market outlook

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Donough Kilmurray
Chief Investment Officer

Global and regional outlook - Don't fear the rate hikes (yet)



"No post-war recovery has died in bed of old age – the Federal Reserve has murdered every one of them"

- Rudi Dornbusch, renowned MIT (Massachusetts Institute of Technology) economist

After almost two years of a raging post-COVID-19 rally, the stock market has finally seen a correction (a price decline of 10%). While the tragic events in Ukraine have not helped, what has really unsettled investors is the recognition that higher interest rates are coming, and sooner than we previously expected. Tighter monetary policy has often been the precursor to recessions and bear markets (declines of 20% or more). So, how worried should we be this time?

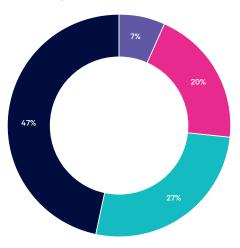
Looking at the historical record in Figure 1, we see that not all rate hike cycles have led to recessions or bear markets, at least not for several years. Of course, not all hiking cycles are the same. They vary widely by speed and size, whether they were expected or not, and what was the macro environment at the time. Most importantly, rate rises don't cause bear markets, recessions do.

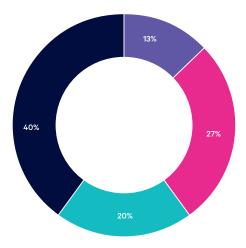
What's different this time?

Firstly, we are starting from an unusually low interest rate. The 3% (approx) of hikes that the Federal Reserve (the Fed) now projects would still only bring us to a low level by historical standards, and after inflation, the real rate would still be negative or close to zero. Also, governments have taken a more active role recently in supporting the economy, and so, overall conditions will still be highly accommodative.

On the downside, while interest rates have been on a downward trend since the 1980s, debt levels have risen significantly. Household and bank debt are much lower than before the GFC (Global Financial Crisis), but government debt and corporate debt are near all-time highs. Central banks are well aware of the potential impact of higher rates, and we expect them to tread carefully.

Figure 1: Frequency of recessions (left) and bear markets (right) during rate hike cycles (1950-present)





Source: Bloomberg and NBER (National Bureau of Economic Research)

Year1 Year 2 Year 3 Later

Finally, inflation, at almost 8% in the US, its highest level since the early 1980s, is all about supply and demand. Central banks can cool down an overheating economy by tightening policy but can do little for supply shortages. The post-COVID-19 rebound of 2020-21 saw a huge resurgence in demand, but the real problem has been broken supply chains and now the war in Ukraine. Higher interest rates will not replace lost supplies, missing workers, or Russian energy, but with inflation at these levels the Fed must act to avoid losing credibility, despite the uncertainty of the war.

Will Europe be different to the United States?

We focus on the US because it has the biggest economy, with the most powerful central bank, whose monetary policy usually provides the global lead. This time, the ECB (European Central Bank) may be slower to follow than usual. The US economy will see little impact from isolating Russia, whereas the Eurozone is heavily dependent on their energy. Indeed, core inflation in the Eurozone is only 2.7%, indicating much less over-heating. With war on its doorstep, the ECB will be more cautious in raising their main deposit rate, which may remain below zero into 2023.

The situation in the UK is closer to the US, but potentially worse. Less exposed to Russia than the Eurozone, but still vulnerable to gas prices, post-Brexit UK also faces supply constraints of its own making, reflected in the highest core inflation in

Western Europe. Therefore, the Bank of England has taken the lead in raising rates, and is expected to keep pace with the Fed this year, despite the UK economy suffering more fiscal damage from COVID-19 than most.

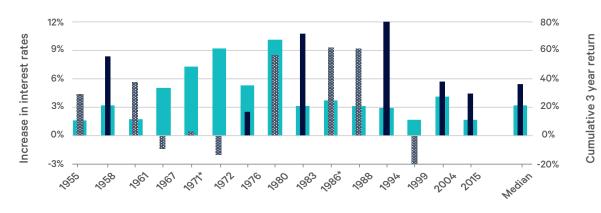
What does this mean for investors?

Cash: Higher interest rates should make cash more attractive, but rates are still likely to remain below inflation for years to come, especially in euro, meaning cash will continue to lose its real value.

Bonds: Long-term bond yields have already risen by over 1% in the past six months, causing bond returns to suffer their worst start to a year in over 40 years. Now with the damage done, and some yield cushion in place, it might be tempting for investors to look at bonds again. We caution that yields may yet rise further, and even at these higher levels, will likely remain below inflation for some time.

Currencies: In the long run, currencies from higher inflation economies depreciate as they lose their spending power faster. In the shorter term investors are attracted to higher yielding currencies, even though these yields may be a reflection of higher inflation. The US dollar, with its higher inflation and rate prospects, is also the world's reserve currency and safe haven in times of crisis. As fears recede and other central banks raise rates, the US dollar may give back some of its recent gains.

Figure 2: Rate hikes and subsequent 3-year equity returns



Source: Bloomberg and NBER (National Bureau of Economic Research)

Max rate hike (LHS) Cumulative total 3-year return (RHS)

*Interrupted Fed cycles
Patterned bars indicate a bear market in the 3-year period.
LHS: left hand side; RHS: right hand side

Equities: The stock market's mood is usually driven by prospects for corporate profits, and so the macroeconomic conditions around rate increases can be more important than the interest rates themselves. Raising rates in a strong economy can be a vote of confidence, leading to higher markets, whereas hiking aggressively to stop inflation can seem desperate and scare investors away.

Figure 2 shows the historical performance of the S&P 500 index, since 1950, for the three years following the start of each Fed cycle. We see that markets generally did well as rates rose. The median return of 37% even includes several bear markets. However, there were episodes where rate hikes were followed by flat or even negative three-year returns. These were almost all in the high inflation period of the 1970s, with their aggressive interest rate policies.

Looking beneath the market surface to the sector level, we find more differentiation. Defensive sectors, such as healthcare or staples, tended to out-perform as rates rose, while cyclicals, such as technology and materials, did worse. The cyclical exceptions were financials, which tended to benefit from rising rates, and energy stocks, which did well in fast or high inflation cycles when energy prices were causing the inflation.

Commodities: Unless central banks tighten the economy into a recession, demand will not be the issue for most commodities. Physical and political supply constraints, which will not be solved by

higher rates, will continue to drive the price of energy and some metals. The exception is gold, whose price tends to move inversely to real yields. As rates rise and inflation eventually cools off, this could put gold under downward pressure.

Nothing to worry about then?

Unfortunately, there's always something to worry about. In the near term, the uncertainty around Russia-Ukraine and the potential energy crisis leaves central banks in a difficult position. As the outlook keeps shifting, they will come under pressure to speed up or slow down their policies. If they surprise the markets or lose their confidence, we could see disruption to the major indices.

Over the longer horizon, the market is only pricing in a relatively small amount of tightening. If this really is to be a decade of above-target inflation, then the bond market will have to change its expectations for 2024 and beyond. This realisation may cause further disruption in the economy and stock market. Industries whose growth expectations and high valuations rely on rock-bottom rates and weak wage growth may find the road ahead more challenging. However, we don't believe that this is a reason to exit the stock market, but instead a reason to be more selective in what you own.

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Aidan Donnelly Head of Equities, Davy Private Clients

Let's go round again -Understanding the growth/value rotation

One of the drawbacks of the investment industry over the last three decades has been its constant desire to classify or pigeonhole every investor into an ever-increasing array of boxes. The upshot of the proliferation of style or factor analysis means that when it comes to describing how you invest money you almost become like a Gen-Z in a Starbucks ordering coffee - anyone for an iced, ristretto, ten shot, venti, with breve, five pump vanilla, seven-pump caramel, four Splenda, (and) poured, not shaken?

Yet stripping aside the marketing parlance, at the core, aside from the obvious size classification - large, mid, or small capitalisation there is a strong case to be made that equity returns are ultimately guided by earnings (economic cycles and profitability) and valuation multiples (financial conditions/central bank measures) over the long-term. And while people will point to other factors, not least of all and pertinent in the current environment, geopolitics, many of these will drive "event risk" in the market for a period of time, rather than being a long-term fundamental factor.

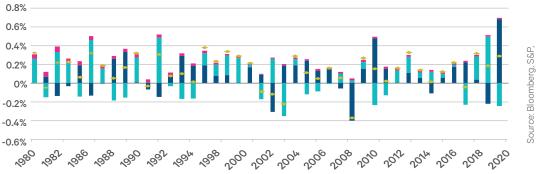
Two sides of the one coin

When I began working in this industry nearly 30 years ago, things were simpler. Investors were categorised as being "growth" or "value" investors with the major defining feature being the weight the investor places on each of the two factors in their investment decision: growth investors on earnings momentum; value investors on valuation.

In reality, these factors are not independent of each other and must be looked at in conjunction when assessing any investment. They are best viewed as two sides of the same coin - just because a share is at a low valuation does not make it a good investment if the fundamentals of the company are in serious decline. Likewise, if a high-growth company is trading on a very elevated valuation, the share price may already reflect the good "story" of the company.

The interplay between earnings growth and changes in valuation are key to driving returns of a stock market on a year-to-year basis. By deconstructing these yearly returns, the contribution of both factors can be analysed and as Figure 1 below demonstrates, the magnitude and direction of each factor can change significantly, even when the overall market return may be muted.

Figure 1: Decomposition of returns for the S&P 500 Index





The trend is your friend

Whilst either growth or value can have an impact on returns in any one year, it may be a surprise to hear that the dominance of growth or value as a style of investing tends to be a multi-year phenomenon rather than swinging hot and cold year over year. This is probably best evidenced by Figure 2 below which shows the relative performance between the two over time.

It might seem counterintuitive to say that even though both elements combine every year to generate returns, you can have long periods where one style is dominant over the other. Yet, if you look at Figure 1 and Figure 2 side by side, you can see the strong outperformance of growth in the last decade. This came when the growth component of each yearly return was the predominant contributor to returns for that year – a noticeable exception being the year 2020.

It's fair to say that since the Global Financial Crisis, we have witnessed a golden age for growth investing at the aggregate level. However, a key point here is "at the aggregate level" – this can be somewhat misleading in that it is not true to say that companies classified as "value" have not done well over this period. The fact that many of the companies in the "growth" cohort are the mega capitalised global names will have had a disproportionate impact on the overall, by dent of their size as well as their share price performance.

And while this has played a part in the scale of the outperformance, the forces behind it would have given the same directional result regardless. To this end, it is hard to deny that the combination of ultra-low interest rates, central bank activities (Quantitative Easing), and government fiscal expenditure has created a near "Goldilocks environment", protecting or driving economic growth while inflation has remained subdued. Or so we thought...

Figure 2: MSCI World Growth Index (USD) vs MSCI World Value (USD)





There's inflation Jim. but not as we know it!

Since early September 2021, we have started to see the relative performance pendulum swing back towards value. To be clear, this change in relative fortunes has more to do with the growth segment selling off than any marked rally in value index, but again the devil is in the detail. The sell-off in growth began with the steady move higher in bond yields – firstly due to rising inflation forecasts and then due to real (inflation adjusted) yields also moving higher.

By their nature, much of the "intrinsic value" of high-growth companies lies out in the future – and in some cases very far out in the future. Therefore, as bond yields rise, those future cashflows are worth less when discounted back in "today's money", and the share price falls. To be fair, there have been some areas of the market, traditionally labelled as "value", that are benefiting from higher bond yields and have therefore rallied, but for the most part this has been about "pain" in the growth segment.

Growth vs Value - what it isn't

While it is important to know what the labels of growth and value mean, it is equally important to know what they are not – a classification of quality. Many people make the incorrect assumption that "growth" is synonymous with high quality and "value" with low quality. Again, this is almost a natural by-product of the industry's increasing desire to pigeonhole investors who are coming through the golden age for growth. As rather than being causal in nature, the performance of high quality and growth has been more coincidental over the last 15 years.

High-quality companies can move between the growth and value camps multiple times over the course of their life cycle as they mature or reinvent themselves. So, for long-term investors, the most important "constant" should be sticking to the quality end of the spectrum, which tends to be less influenced by the whims of the market, and diversifying across the growth and value spectrum as required.

As the "style" landscape becomes ever more complex, it can be difficult for investors as they are faced with a plethora of labels and classifications, to know exactly what they are trying to achieve. Sometimes, it is best to take it back to the core principles, in just the same way as it is nice to go into Starbucks and order an Americano.

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Marie Gillespie Senior Equity Analyst

Irish Equities -In risk lies opportunity

At Davy, we often extol the virtues of a financial plan. The thinking is that if we look at investments with a long-term lens and a clear thought process, then we can look beyond short-term volatility and assess what risk exposure we are comfortable with in the longer-term. In fact, sometimes short-term volatility can present long-term opportunities once we are clear on what our desired outcomes and risk appetite from investments are.

This long-term strategic focus which is viewed through the lens of a financial plan has many analogies with strong company investment processes. Clearly, we are currently in a period of great uncertainty at both a company and a personal level. The war in Ukraine, notwithstanding the huge humanitarian impact, has had a knock-on impact on energy prices and consequently on other price inflation, as well as other supply chain issues. This in turn has had an impact on many business operations and hence share prices and volatility.

When it comes to direct exposure to Ukraine and Russia, Irish companies, whilst often global in nature, have relatively low exposure. Some Irish companies had mentioned the region as a source of possible growth in the future, for example in tourism. However, when it comes to current direct exposure, only one listed Irish company had more than 1% of its profits from Russia or Ukraine.

Nonetheless, it has become clear that Ukraine is a key supplier of both grain and timber as well as an exporter of plastics, steel, and copper – key inputs for many Irish industries including food and construction. Add to this the impact of high oil prices on energy intensive industries such as cement and paper and it's clear that the effects from today's

conflict will be felt for some considerable time both in Ireland and elsewhere. There is already evidence in some energy intensive industries that for certain players, current numbers simply don't stack up. Some producers of paper and fertiliser, for example, have simply decided to temporarily stop production, hence widening the supply-demand imbalance. There is also a clear gap between industries which have some ability to pass on increased costs, such as construction, and those that find it more difficult, such as food producers.

However, most global competitors are feeling similar pressures. Therein lies something of an opportunity for companies with long-term vision but crucially also the cash with which to fund it. Encouragingly, this is exactly where many Irish companies excel, with strong leadership in management teams and some exceptional balance sheets – a point which has been regularly made in MarketWatch. This will undoubtedly lead to the ability to gain market share for leaders in certain fields, and likely consolidation.

Of course, consolidation is not a new feature for Irish equities, with the banking industry in particular featuring last year as two major players exited the market. Furthermore, there is an expectation that we will see consolidation in other industries going forward. The airline industry for example is thought to be ripe for consolidation, with balance sheet strength again being a key differentiator.

Another overarching dominant theme in Ireland and elsewhere is sustainability. This theme has been building momentum for a significant period, with increasing investor awareness, customer pressure, and legislation at an investor and government level increasing. To this, we can now add enhanced



concerns over energy security, and a fast-tracked plan in Europe for increased independence from Russian fossil fuels. Hence, it seems a safe bet that investment in renewables and energy conservation will continue apace for some time, again providing opportunities for certain companies in Ireland and elsewhere.

Whilst the trends of industry consolidation, sustainability, and even supply chain issues may not be particularly new, a global pandemic swiftly followed by a war in Eastern Europe has arguably accelerated the pace of transformation. To bring us back full circle, this is where having a long-term focus in place has been key for Irish companies. Growth opportunities identified as part of a larger plan, identifying key long-term

trends, may now be more valid than ever. Many of these opportunities may lean towards sustainability – be it in energy conservation, renewable energy, reduced food waste/packaging, potential growth in green lending, etc. Others opportunities may come from an expected growth in the global population and resulting necessity for food and shelter. Hence, with a number of Irish companies in a strong financial position, it seems likely to expect expansion in identified areas of opportunity.

Similarly, for investors it seems fair to infer that there will continue to be long-term opportunities for investment in Ireland for those that, when referring to their financial plan, have the ability to withstand short-term volatility for long-term gains.



Stephen Grissing Investment Strategist

Asia High Yield - Caught between policy and a hard place

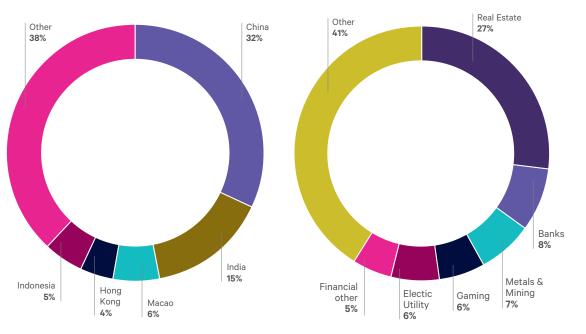
At Davy, we build discretionary portfolios in several stages. Firstly, for each risk level, we design the strategic asset allocation i.e. the mix of assets that we intend to hold over the long-term. Next, we select the instruments to implement our allocation plan. Depending on the mandate, these can include direct securities, passive index trackers, or active fund managers. Finally, we add tactical asset allocations, which are short-term deviations from the long-term plan, based on our outlook over the next twelve months.

It is important to have realistic expectations for tactical allocation. Ideally, it's about seeking out dislocations in the markets that create investment opportunities. Sometimes, these are large and obvious, like when the stock market drops over 30%

due to COVID-19, but usually they are more niche in nature. Most importantly, tactical allocation should not be about trying to time in and out of the market.

Since the COVID-19 bear market in 2020, there have been some dislocations, but they have all been driven by the same thing – the strength of the recovery and its consequences for inflation and central bank policy. This led to our over-weights in pro-cyclical equities, and our underweight and short-duration positioning in bonds. But diversification is key in portfolio construction and we are always on the lookout for unrelated opportunities. We believe that the stress in the Chinese property sector has created one in the Asian high yield ("HY") bond market, and this article outlines how we are gaining exposure to it in our discretionary portfolios.

Figure 1: Asia HY country and industry weightings



Source: PIMCO as of 31st January 2022

The Asian high yield bond market

Firstly, an important distinction – our area of focus is the offshore market, where the bonds are issued in US dollars (USD), and not the onshore bonds that are issued in local Asian currencies. So the risk we are assessing is the credit risk of the issuers and not the currency risk of the countries.

From a geographical perspective, we see in Figure 1 (based of PIMCO's GIS Asia High Yield Bond Fund) that Asia HY is dominated by Chinese corporate issuers, who make up almost one third of the geographic exposure, while India is the second largest region (15%). At the industry level, real estate is the largest sector, at close to 27%, followed by banks (8%) and metals and mining companies (7%). Overall, Asia HY investors are getting roughly 21% exposure to Chinese real estate.

Recent developments in Asian high yield

The yield of a corporate bond represents the cost for the issuer to borrow in the bond market. To compensate for the greater chance of default, riskier issuers generally must pay a higher yield to borrow compared to a superior quality investment grade ("IG") issuer. Figure 2 shows the historical yield of the Bloomberg Asia ex-Japan High Yield USD Index. In late March, it traded at an unusually high yield of 15.9%. This compares to 4.4% and 6.0% for Euro and US HY markets (in EUR and USD respectively).

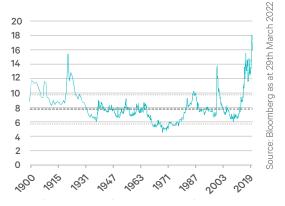
Explainer:

For a bond investor, yield-to-worst is the lower of:

- **1. Yield-to-maturity:** the interest earned when a bond is held to maturity.
- Yield-to-call: the interest earned by a bond investor if a bond is called at its call date prior to maturity.

The Asia HY market has rarely traded at such extreme levels in it's history; the only previous occasions were during the sovereign debt crisis in 2011 and the COVID-19 crisis in 2020. We believe that the market is pricing in an excessive level of expected defaults, and represents an investment opportunity. But how did we get here? At the beginning of 2021, the market was trading at a yield of 6.5%. What has caused the dramatic increase in yield and fall in price? (a bond's price and yield move in opposite directions)

Figure 2: Bloomberg Asia Ex-Japan High Yield Index USD, yield-to-worst, %



To understand what has been driving Asia HY yields higher, it is helpful to look at developments in China and in particular the real estate sector there.

- Over time, Chinese economic growth has become heavily dependent on the real estate sector, which by some accounts makes up close to a third of China's GDP (Gross Domestic Product).
- House prices in China have risen more than six-fold since 2002. This astonishing growth compares to increases of 100% in Ireland and 230% in Spain during their ruinous housing booms.
- Corporate debt in China has grown to 160% of GDP in recent years, compared to the US which is closer to 80% of GDP.

The Chinese government, recognising these dangerous trends, announced that debt reduction would be one of its five major tasks in 2021.

More specific details emerged in the form of their "three red lines" policies. These policies, which focus on leverage and liquidity levels, were designed to curtail the build-up of debt in the real estate sector, and to improve its financial strength via strict deleveraging criteria.

It quickly became apparent that the Chinese government was walking a difficult and narrow path – trying to tackle deep structural problems in the real estate sector, whilst avoiding a hard landing that could derail their ambitious economic targets. The potential impact of the tighter policies unnerved bond investors. From the beginning of July 2021 to the end of the year, the Bloomberg Asia and China HY USD indices lost 15.4% and 25.1% respectively (Figure 3). After much speculation, Evergrande Group and Kaisa Group Holdings Ltd, two of China's largest housing developers, both defaulted on bond repayments in December 2021, confirming market fears.

Figure 3: Bloomberg Asia and China HY USD indices performance since 30th June 2021, %



Bloomberg China USD High Yield Index Bloomberg Asia Ex-Japan USD High Yield Index

Easier times ahead

2022 poses to be another challenging year for Chinese real estate developers, with US \$117 billion of developers' debt maturing in the year (\$36 billion of this denominated in US dollars). As developers try to sell assets to raise the necessary cash, default-related headlines will continue in the months to come. On speaking with local experts, we expect further bouts of volatility in the market, particularly during the first half of 2022, before conditions stabilise and eventually recover.

On a more positive note, recent indications suggest that policy is reaching an inflection point, and gradually turning more supportive. The government is understandably keen to avoid a credit crisis, and with President Xi anticipating an extension to his leadership at the 20th Party Congress later this year, we may be approaching a limit to the disruption that will be tolerated. Recent announcements include cuts to the central bank of China's key interest rate, easing of borrowing limits for property firms using the funds for mergers and acquisitions, and new rules making it easier for developers to access funds from sales that are held in escrow accounts. Although, we do not anticipate a return to the aggressive easing seen in previous periods of difficulty, we do expect further policy tweaking to ease pressure on the sector.

How is Davy getting exposure to Asian HY bond market?

Given the risk and opacity in the Chinese HY bond market, our implementation approach is key. Firstly, we decided to invest in the broader Asian HY market to reduce concentration risk. Secondly, rather than simply buying the index, we opted for an active manager with strong local expertise to better navigate the turbulent environment. Specifically, we chose PIMCO's GIS Asia High Yield Bond Fund. With dispersion amongst Chinese real estate issuers so high, the credit selection and risk management abilities of PIMCO fund managers should be especially beneficial.

A third important point is that the managers at PIMCO favour higher quality issuers, particularly those positioned to benefit from expected policy tweaking. This means that many of the highest yielding issuers, with a greater chance of default, are not held within the fund. As a result, the yield-to-worst (measure of the lowest possible yield) on the fund (10.0% at the end of February) is lower than the yield of the Bloomberg index. By reducing exposure to defaults, rather than chasing the highest yields, we expect the fund to generate a superior total return. And of course, we limit the risk by limiting the size of our allocation.

Summarv

We recognise that Asian HY is not a familiar asset class for most European investors, and may bring different risks than we are used to, so we intend to tread carefully. The Chinese government has a difficult job to do to re-balance their economy without disrupting it. But in this environment of elevated risk and lower return prospects, we are keen to find diversification opportunities that do not move to the same risk-on / risk-off rhythm as everything else. We will keep a close watch on this investment and adjust our allocation if and when appropriate.

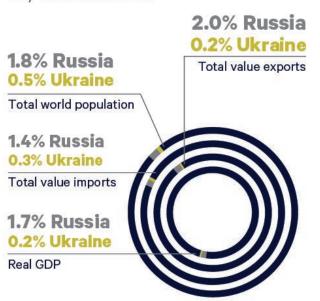
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Current focal points

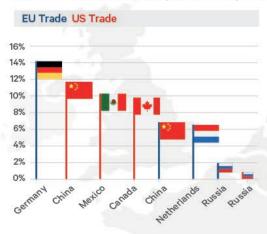
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Russia & Ukraine's Macro Economic Snapshot

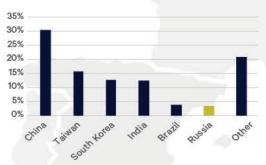
The humanitarian impact of the conflict in Ukraine has been extensive. Economically, there have been a range of implications. Here we assess to what extent will the political instability affect key world markets.



■ Total US & EU Trade (Exports and Imports)



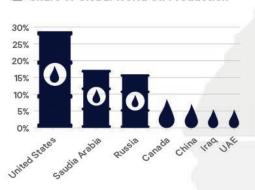
MSCI EM Russia weight



What does this mean for energy importing countries like in Europe?



■ Share of Global World Oil Production



■ Share of Global World Gas Production



Russia & Ukraine commodity production



3.4%

<1.0% <u>Å</u>

11% **

of global wheat production

of world gas production

of global wheat production

<1.0%

11%

of world oil production

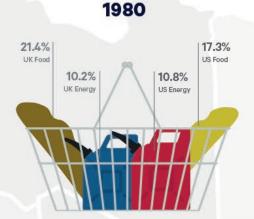
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of world oil production

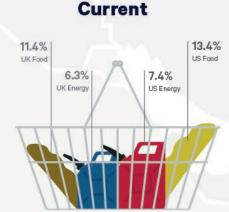
Energy and food prices have soared, particularly in Europe, turning investor and consumer spotlight toward them.

Interestingly, on average, a smaller part of our income is spent on these items than 40 years ago.









Please note that inflation for US is based on CPI (Consumer Price Index) and for UK it is based on RPI (Retail Price Index).

The percentage shows how much each item makes up of the official consumer basket.



Eileen Rowsome Senior Investment Analyst

An introduction to Infrastructure Investing

Infrastructure investment has been happening since the industrial Revolution. However, as an asset class, it really only emerged in the 1990s following the privatisation of state-run utility, telecommunication, and transportation companies in the previous years. In recent times, we have seen evidence of infrastructure investment in Ireland through the increased number of onshore wind farms which are aiding our energy transition from fossil-based to zero-carbon, while also supporting energy independence. We have also seen investment in our road networks such as the M17/M18 Tuam to Gort dual carriageway where private capital was provided in a public-private partnership (PPP) project.

PPP projects are where a public authority engages a private investor to undertake the development and ownership of an infrastructure asset which is then leased back to the state. The PPP project structure is an important tool for governments to help fund the public financing gap as a large upfront investment from the state is not required. The energy transition prompts another tailwind for infrastructure investment in the coming decades.

Infrastructure as an asset class

Infrastructure is the basic physical and organisational structures, services, and facilities (e.g. buildings, roads, power supplies) needed for the operation of a society or enterprise. Investment in infrastructure can be made by purchasing the assets directly (large investment size needed) or via pooled fund vehicles managed by a specialist investment manager. Investment can be in the form of infrastructure equity as well as infrastructure debt.

The demand for infrastructure generally does not change due to the essential nature of the services infrastructure provides and many infrastructure assets enjoy a monopolistic position. This means that changes in the economic cycle have little impact when compared to traditional asset classes like equity and bonds. This is not to say the asset class doesn't experience sensitivity to GDP (Gross Domestic Product) growth with some sectors, like airports, considered cyclical and therefore, sensitive to the macroeconomic cycle.

Economic Infrastructure			Social Infrastructure		
Energy	Transport	Utilities			
Electricity generation	Ports	Water purification	Hospitals		
Oil/Gas pipelines	Airports	Waste processing	Schools		
Energy storage	Toll Roads	Electricity distribution	Care homes		
Wind/Solar Energy	Tunnels & bridges	District heating networks	Affordable housing		
Hydropower plants	Railway network	Telecommunication networks			



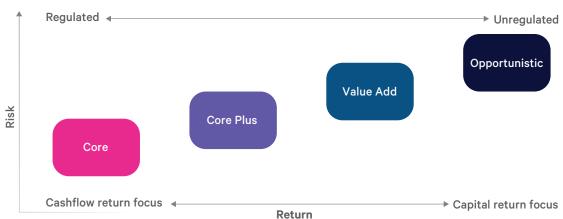
Infrastructure can be crudely broken down into economic infrastructure and social infrastructure with a multitude of subsectors therein. Economic infrastructure is the core of what most infrastructure investment managers will focus on. Social infrastructure tends to be specialist and can have a dual focus on social outcomes and returns, therefore, returns can be lower.

How does infrastructure produce a return?

Infrastructure investment involves long-term contracts where assets are leased, like real estate, and these assets typically have a long life. This makes cash flow relatively predictable, and leases typically have an inflation component which provides protection against future inflation. Certain parts of the infrastructure universe are highly regulated and while this may cap returns, it can bring more certainty in the cash flow received.

The payment the infrastructure asset owner receives for leasing the infrastructure assets can be on an availability-basis or a volume-basis. In the case of availability-based assets, the asset owner is paid a fixed amount, typically adjusted for inflation, for making the asset available to the user. This is typically the case for utility infrastructure. Volume-based assets will have more demand risk and can have a higher link to GDP growth. Take the example of a toll road, where the infrastructure owner may take payment through the tolls received from the road traffic. In times of economic boom, tolls may be at record levels. However, in recessionary periods road traffic may decrease thus reducing the revenue received.

Infrastructure Equity Investment





Infrastructure can also be classified from a risk and return perspective into four categories: 'Core, Core Plus, Value Add' and 'Opportunistic'. These four categories range in terms of risk, return and capital appreciation focus. As you would expect, assets with the lowest risk and return tend to be in the regulated space where the cash flow makes up the bulk of the return and these types of investments would be considered 'Core' infrastructure. On the opposite end of the spectrum sits 'Opportunistic' infrastructure where investments are in newer areas of infrastructure and may also involve construction risk where the assets are not yet operational.

Benefits of including infrastructure in a multi asset portfolio

As infrastructure cash flows are typically linked to inflation, an investment in infrastructure can provide a hedge against inflation. While equities are also considered a good inflation hedge over the long-term, infrastructure equities have proven to provide superior returns in time of inflationary shocks where inflation turns out to be higher than expected. Given the essential nature of the services infrastructure provide, the asset class tends to exhibit lower volatility than equities, public or private. Albeit this effect is lessened as an investor moves out the risk-return spectrum.

Risks of investing in infrastructure

An investment in private infrastructure comes with illiquidity risk. An investor may need to commit capital for over a decade to reap the rewards from the asset class.

Counterparty risk may also need to be considered. In the case of developed market investing, the counterparties are typically national or regional governments with high credit ratings. When investing in infrastructure in less emerging markets the risk of counterparty default may rise.

In the case of an investment in opportunistic infrastructure, construction risk would need to be considered. This is the risk that the construction of the asset is delivered on budget and on time, as well as the risk that the asset will achieve the desired return as it may not already be contracted.

However, if an investor focuses on the 'Core' to 'Core Plus' part of the infrastructure space, they can reap the benefits of returns with a reasonable amount of cash flow certainty and portfolio diversification benefits.

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Anna Heaney Investment Associate

May you live in interesting times

Supposedly derived from a Chinese proverb, this has often been quoted when referencing periods of history where there was momentous change and sometimes chaos. Though the origin of the saying is hard to source, the intended meaning is equally as difficult to determine, with some referencing it as a blessing, and others, a curse. Our recent lived history has been nothing if not interesting. A global pandemic, geopolitical tension and war, spiking inflation, destabilising power structures, climate crisis, and lives lived in an acceleratingly digital dimension, may lead some to think that this generation must have had it worse than those that came before it.

The early 2020s will indeed have a significant section in the history books and will be an arduous read for many, but does our perspective as spectators living through a period in time cloud our judgment as to the severity of the situation at hand? And as investors, either well versed or new to the game, how do we endeavour to keep any perspective on long-term financial goals when things seem in such disarray over the short-term and we grapple with volatility?

This is not to undermine in any shape or form the horrific conflict taking place in Ukraine or make light of the situation in that country or any other events causing harm and hardship. We are also coming from the perspective of a relatively privileged position, living in a relatively safe environment, in a Western context. This is simply to assess what crises other generations were faced with, how they moved through them, and as investors, how do we keep our nerve when it feels like things are crumbling around us and the uncertainty can become paralysing.

Race to the bottom

Each generation stakes a claim that their era had it worse off. Anyone who's heard themselves echoing the phrase "back in my day.." will agree that although we have a strong nostalgia for the era in which we were born, we also tend to feel that we have been dealt a more difficult hand than those that came before us and certainly had it harder than those that will follow. But how does that theory stack up? Of course, it's impossible to measure, with no clear metric with which to judge it and such a vast array of personal experiences depending on a multitude of factors so as with any generational comment, we are very much generalising in our assessments.

Crises of the past

The baby boomers (born 1946 – 1964) were born into a time of post-war optimism and prosperity. Dramatic social change took place during this period and for those who began their careers and building wealth, the majority have reaped the benefits of a time of extreme growth. The Cold War and civil rights movements were taking place at this time and it was a period of huge social change. Though indeed synonymous with growth, there were also multiple recessionary periods this generation faced, most notably the 1970s oil crisis, which lead to a quadrupling of oil prices by the OPEC (Organization of the Petroleum Exporting Countries) embargo, coupled with the 1973–1974 stock market crash leading to a stagflation and high unemployment recession in the US. This was considered the worst economic period since The Great Depression, and though there was a further energy crisis a few years after, the Fed managed to bring down the temperature at the time by lowering rates and resultingly The Misery Index (Fig. 1) dropped in

the US & UK (where we have available data). Despite these periods of uncertainty, if you were lucky enough to have begun your investment journey during this period, you would have witnessed a steady accumulation of wealth over time.

Next came Generation X (1965-1980), sometimes described as the forgotten generation. Those born during this period would have lived through two recessions before they reached adolescence. One in the early 1980s and the other in the early 1990s. Both were tackled by policy makers intervention and eventually in the 1990s prosperity commenced again. Millennials (1981-1996) followed, who having been doted on by their boomer helicopter parents, faced multiple upheavals, such as 9/11 and the Global Financial Crisis. Entering the job market during a recession and resultingly facing lower earnings, wealth, and delayed milestones, The Misery Index soared, particularly in Ireland where the effects were particularly acute.

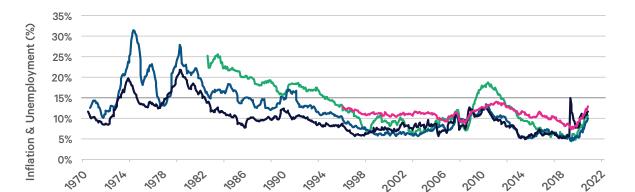
The Gen Z (born 1996-2010) are coming of age in the midst of this period of extreme uncertainty. Already considered the "new cursed generation" following their predecessors, the key difference however is that at least millennials got to experience a relatively prosperous, non-dystopian childhood. The COVID-19 recession was said to hit this cohort disproportionately, with job prospects dashed as they begin their careers and an era of peak inflation as they begin to create and build wealth. That's not to mention the ongoing climate crisis and the fourth industrial revolution that's taking place, tearing up the traditional blueprint of lives being mapped out with milestones, the mainstream 9-5 work week is

becoming a thing of the past, enabled by technology and automation and artificial intelligence (AI) leading to the elimination of many career paths. With a war now waging in Europe and the instability it brings, Gen Z certainly have much to contend with and The Misery Index reflects this.

Reasons to be (cautiously) optimistic

Firstly, humanity is resilient, we only have to look at the global response to the war in Ukraine. Widespread protests against the war have taken place and support and welcome has been offered to refugees streaming out of their war-torn country. Community support and solidarity has also been exemplary throughout COVID-19. In the investing context, portfolios are also resilient, if they are built with sufficient diversification as they are in Davy. In fact, the stock markets seem to have already looked past all that the world and the economy is grappling with.

Unfortunately, there will always be chaos & misery in the world, and markets will always react to it. No previous or future generation can avoid that fact. During any crisis, it can seem like the situation has permanence. Perspective only arrives after the crisis. The proximity of the war beginning as lockdown eased meant that there was no time for relief. We may feel as though things have been going from bad to worse, when it comes to investing, we are looking at where to turn. Though crisis will inevitably make us more risk-averse, we can't let the fear factor undermine our and the market's potential for resilience



USA Eurozone UK Ireland

Figure 1: The Misery Index

Source: Bloomberg & Datastream, 2022. The "Misery Index" is used to track the sum of inflation and unemployment. The higher it is, the more miserable peoples' lives are.



Peter DalyDirector, Portfolio Construction

Diversification -Providing resilience in crises

Why diversify?

The central premise of diversification is that, as the future is unknowable, we should invest in a way that allows us to benefit from returns, while minimising the risk of permanent capital impairment. In simple terms, spreading our investments around so that our portfolio is not overly reliant on a single security, industry, or asset class. This helps to reduce the chance of owning something that goes to zero in a crisis, but also to manage risk and avert a behavioural error such as selling in the middle of a stomach-churning bear market. History can provide a guide as to what we can expect from markets over the long-term, however, the next crisis is always different to what has come before in some way. Howard Marks, a well-known investor, said "we diversify to protect against what we don't know". Considering there are more variables that we don't know about than we do, diversification is a key concept to understand.

Diversifying across stocks

Research has shown that 90% of the benefits of diversification are achieved by investing across twelve to eighteen stocks. However, it is not enough to hold a minimum number – stock holdings should be diversified by geography and sector and hold enough of the "winners" to capture market returns.

History is filled with examples of country equity market collapses from wars, recessions, monetary crises and inflation. Geographic diversification is imperative to ensure portfolios are not concentrated and exposed to a country-specific event.

Similarly, concentrating in a single sector exposes a portfolio to significant risk: the tech-focused NASDAQ Composite fell 78% during the TMT bubble in the early 2000s and the global energy sector returned -60% from 2014 to 2020.

■ Table 1: Worst equity excess return drawdowns across countries (USD Terms)

Country	Data Starts	Period of Worst Drawdown	What Caused it to Happen	Years to recover from Start of DD	Magnitude Of Losses
Switzerland	Jan 1966	2007 - 2009	Global Financial Crisis	7	-51%
Equal-Weight	Jan 1900	1929 - 1932	Great Depression	13	-66%
Australia	Jun 1933	1969 - 1979	70s Inflation	10	-66%
UK	Jan 1900	1972 - 1974	70s Inflation	11	-72%
Norway	Feb 1970	1974 - 1978	70s Inflation	16	-74%
Japan	May 1949	1989 - 2003	Deflationary Grind	29 & Counting	-75%
Brazil	Aug 1994	1994 - 1998	Balance of Payment Crisis	24 & Counting	-77%
Canada	Jan 1919	1929 - 1932	Great Depression	16	-79%
New Zealand	Dec 1984	1986 - 1990	Currency & Constitutional Crisis	32 & Counting	-81%
Sweden	Dec 1915	1917 - 1932	WWI and Great Depression	29	-81%
Spain	Dec 1915	1973 - 1982	Political Turmoil/70s Inflation	26	-83%
France	Jan 1900	1944 - 1950	WWII	15	-83%
Taiwan	Jan 1988	1990 - 2001	Asian Financial Crisis	29 & Counting	-85%
United States	Jan 1900	1929 - 1932	Great Depression	16	-85%
Italy	Jan 1948	1960 - 1977	Political Turmoil ("Years of Lead")	59 & Counting	-87%
Korea	Jan 1965	1989 - 1998	Asian Financial Crisis	30 & Counting	-91%
Germany	Jan 1900	1912 - 1923	WWI	47	-99%
Russia	Jan 1900	1912 - 1918	WWI and Bolshevik Revolution	Never	-100%



Hendrik Bessembinder, a professor at Arizona State University, studied the long-term returns of 64,000 stocks. He found that most (over 55%) underperformed one-month U.S. Treasury Bills and just a fraction of top firms (2.4% in the U.S., 1.4% outside the U.S.) were responsible for all of the net wealth creation.

The case for equity diversification is clear: the more diversified a portfolio is, the more likely it is to hold the small percentage of stocks that are responsible for most of the market's long-term return and the less exposed it could be to a country or sector-specific deep drawdown.

Diversifying across asset classes

Even a highly diversified equity portfolio cannot eliminate market risk and will sell-off heavily in a global recession. Holding a mix of asset classes that behave differently throughout the economic cycle, investing in equities and bonds for example, can dramatically reduce portfolio volatility. The percentage in each will depend on individual circumstances and preferences. In general, equity/ bond portfolios are a very effective combination equities provide higher returns and bonds provide stability in a downturn. Recent decades have proven favourable for a diversified equity/bond portfolio, a period of falling interest rates and low inflation. However, from a starting point of low (and likely rising) rates today and increasing inflation, this portfolio is vulnerable to an environment where potentially equity and bonds both underperform. Low bond yields offer limited downside protection

compared to recent history. We can improve portfolio robustness to different macro-economic regimes through the addition of other asset classes such as gold, inflation linked bonds, real estate, and diversifying strategies.

Diversification and the role of correlations

The key element when observing which asset classes can improve resilience during crises is correlation; how the assets move in relation to each other. The correlation of risk assets such as equities move toward one in a crisis - i.e. asset prices fall together during periods of market turmoil. Financial market history is littered with episodes of people realising too late that their assets are highly correlated in a market event. Long-term Capital Management (LTCM) was a hedge fund that collapsed in 1998, in part, because they underestimated how correlated its investments were, even in portfolio stress scenarios they tested beforehand. In the lead up to the Global Financial Crisis (GFC), investors and ratings agencies relied on a model from a mathematician named David Li. The model calculated the interrelatedness of risks held in securitised assets such as Collateralised Debt Obligations (CDOs). However, the model was based on stable economic conditions, and broke down once the crisis hit and asset correlations changed.

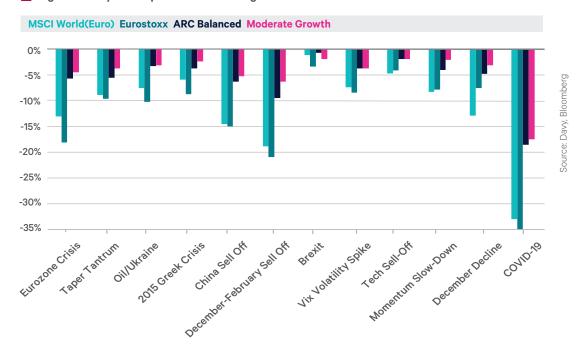
The correlation between equities and bonds has been negative over the last twenty years, making bonds a great hedge for equities. Prior to this, however, there have been periods where equity/bond correlations were positive and as investors, we must



be cautious against relying on a zero or negative correlation relationship to hold. To mitigate the risk of traditional asset classes underperforming at the same time, we look for other assets that may not add much to return during an expansion, but that we are grateful to hold when conditions turn south. Davy multi-asset portfolios and funds are designed

to achieve a level of return within pre-defined risk profiles, the choice of which will depend on the investor's tolerance and capacity for risk. Across all of our portfolio options we place a strong emphasis on managing risk, with diversification as a foundational element of this process.

Figure 1: Davy model performance during crises



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Market data

Total Return (%) in local currency	2017	2018	2019	2020	2021	YTD
Equities (local currency)						
MSCI World	19.1	-6.9	28.1	14.1	24.7	-4.5
MSCI USA	21.2	-5.0	30.9	20.7	26.5	-5.3
MSCI USA Financials	22.1	-13.6	32.9	-2.0	35.8	-2.6
MSCI USA Small Cap	16.8	-10.4	26.7	18.3	19.1	-6.0
NASDAQ	29.6	-2.8	36.7	44.9	22.2	-8.9
NASDAQ 100	33.0	0.0	39.5	48.9	27.5	-8.9
MSCI Emerging Markets (USD)	37.3	-14.6	18.4	18.3	-2.5	-7.0
FTSE Europe Ex UK	14.9	-10.4	27.8	2.2	24.5	-10.3
S&P 500	21.8	-4.4	31.5	18.4	28.7	-4.6
Eurostoxx 50	9.2	-12.0	28.2	-3.2	23.3	-9.0
FTSE 100	11.9	-8.7	17.3	-11.5	18.4	2.9
ISEQ*	8.0	-22.2	31.1	2.7	14.5	-14.3
MSCI ACWI	19.8	-7.7	26.2	14.2	20.9	-4.7
CSI 300	24.3	-23.6	39.2	29.9	-3.5	-14.5
Nikkei Index	21.3	-10.3	20.7	18.3	6.7	-2.5
Equities (EUR)						
MSCI World	7.5	-4.1	30.0	6.3	31.1	-3.1
MSCI USA	6.4	-0.3	33.3	10.8	36.1	-3.2
MSCI USA Financials	7.1	-9.3	35.6	-10.0	45.8	0.1
MSCI USA Small Cap	2.4	-5.9	29.3	8.7	27.9	-3.4
NASDAQ	13.7	2.0	39.4	33.1	31.2	-6.4
NASDAQ 100	16.7	5.0	42.2	36.7	36.9	-6.4
MSCI Emerging Markets	20.4	-10.3	20.8	8.7	4.6	-4.4
FTSE Europe Ex UK	14.9	-10.4	27.8	2.2	24.5	-10.3
S&P 500	6.9	0.4	34.1	8.8	38.2	-2.0
Eurostoxx 50	9.2	-12.0	28.2	-3.2	23.3	-9.0
FTSE 100	7.6	-9.7	24.5	-16.4	26.1	2.6
ISEQ*	8.0	-22.2	31.1	2.7	14.5	-14.3
MSCI ACWI	8.9	-4.8	28.9	6.7	27.5	-3.3
CSI 300	16.3	-24.1	40.1	27.3	6.4	-12.0
Nikkei Index	10.3	-3.9	24.9	13.8	3.8	-5.7
Global Sectors						
MSCI World Energy	5.0	-15.8	11.4	-31.5	40.1	30.6
MSCI World Materials	28.9	-16.9	23.3	19.9	16.3	2.6
MSCI World Industrials	25.2	-14.5	27.8	11.7	16.6	-6.2
MSCI World Consumer Disc	23.7	-5.5	26.6	36.6	17.9	-10.6
MSCI World Consumer Staples	17.0	-10.1	22.8	7.8	13.1	-3.6
MSCI World Health Care	19.8	2.5	23.2	13.5	19.8	-3.4
MSCI World Financials	22.7	-17.0	25.5	-2.8	27.9	-1.5
MSCI World IT	38.2	-2.6	47.6	43.8	29.8	-10.2
MSCI World Telecoms	5.8	-10.0	27.4	23.0	14.4	-10.5
MSCI World Utilities	13.7	2.0	22.5	4.8	9.8	1.3
MSCI World Growth	26.4	-7.8	32.2	32.7	20.4	-9.7
MSCI World Value	14.2	-13.1	18.3	-3.6	19.3	-1.0

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Total Return (%) in local currency	2017	2018	2019	2020	2021	YTD
Government Bond Yields (%)						
US 10 Year	2.4	2.7	1.9	0.9	1.5	2.3
US 2 Year	1.9	2.5	1.6	0.1	0.7	2.3
Germany 10 Year	0.4	0.2	-0.2	-0.6	-0.2	0.5
Germany 2 Year	-0.6	-0.6	-0.6	-0.7	-0.6	-0.1
UK 10 Year	1.2	1.3	0.8	0.2	1.0	1.6
UK 2 Year	0.4	0.8	0.5	-0.2	0.7	1.4
Japan 10 Year	0.0	0.0	0.0	0.0	0.1	0.2
Japan 2 Year	-0.1	-0.1	-0.1	-0.1	-0.1	0.0
France 10 Year	0.8	0.7	0.1	-0.3	0.2	1.0
Canada 2 Year	1.7	1.9	1.7	0.2	1.0	2.3
Bond Performance (Total Return)						
Bloomberg US Treasury Total return fund	2.3	0.9	6.9	8.0	-2.3	-5.6
Bloomberg euro gov't bond index	0.4	0.4	3.2	2.1	-1.6	-3.5
Bloomberg Global Government Bonds	7.3	-0.4	5.6	9.5	-6.6	-6.2
Bloomberg Barclays Global Agg Neg Yielding Debt	3.1	0.4	35.4	57.6	-36.3	-73.6
Bloomberg Asia Ex-Japan USD Credit Corporate High Yield	6.1	-3.5	13.0	7.5	-15.2	-12.1
Bloomberg China USD Credit Corporate High Yield Index	6.5	-4.2	12.7	7.5	-26.3	-18.5
PIMCO Asian High Yield	-	-	-	-	-11.2	-9.6
Commodities						
Bloomberg Commodity Index	1.7	-11.2	7.7	-3.1	27.1	25.5
Gold	12.8	-2.8	18.0	20.9	-4.3	6.6
Brent Crude Oil	15.5	-15.3	37.7	-35.1	63.0	43.0
WTI Crude Oil	4.1	-20.5	34.1	-60.3	62.2	40.8
Natural Gas	-36.5	4.8	-32.3	-45.9	35.1	62.4
Platinum	3.0	-14.8	21.6	8.5	-11.4	3.3
Wheat	-13.3	1.5	7.1	9.8	14.0	29.5
Corn	-12.1	-4.6	-5.2	12.9	34.4	26.3
Silver	5.8	-10.2	13.9	42.5	-12.3	7.5
Currency rates						
EURUSD	1.2	1.1	1.1	1.2	1.1	1.1
EURGBP	0.9	0.9	0.8	0.9	0.8	0.8
EURJPY	135.3	125.8	121.8	126.2	130.9	134.7
GBPUSD	1.4	1.3	1.3	1.4	1.4	1.3
GBPEUR	1.1	1.1	1.2	1.1	1.2	1.2
USDJPY	112.7	109.7	108.6	103.3	115.1	121.7
Cryptocurrencies (vs USD)						
Bitcoin	14310.9	3674.2	7158.3	28996.3	46333.7	45767.6
Davy Core Portfolios & ARC Benchmarks						
Davy Moderate Growth	4.6	-3.8	13.7	5.9	14.6	-3.8
ARC Balanced Index	5.2	-6.9	11.8	3	9.7	-3.4

Source: Data is sourced from Bloomberg as at market close March 31st 2022 and returns are based on price indices in local currency terms, unless otherwise stated.
*Figures are price return as total return unavailable for certain indices. Source for ARC benchmarks is Asset Risk Consultants Limited. Source for Davy portfolios is Davy.

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