Optima Wealth Summer Update

October – December 2022

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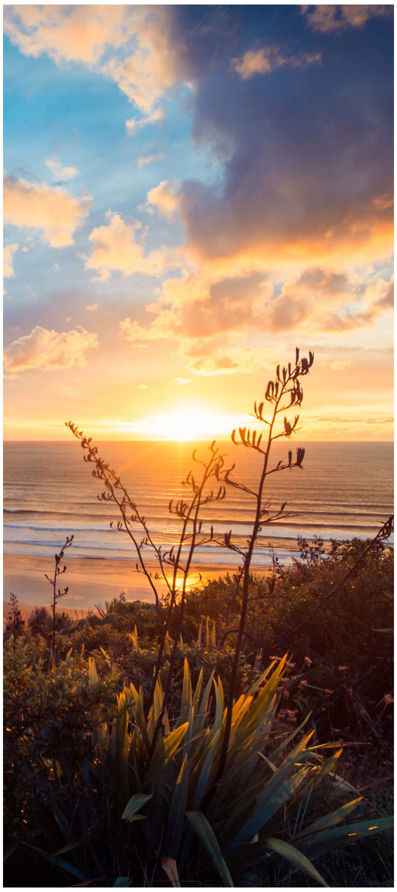

If you needed any reminder that investment markets are forward looking, then the last quarter of 2022 provided the perfect example.

Entering the final three months of the year, investors were surveying an environment that included a seemingly unending supply of negative news headlines:

"*The highest inflation in four decades*"

"*Double-digit losses in both share markets and bond markets*"

"*Interest rates rising rapidly*"

"*Ongoing war in Ukraine*"

"*Continued lockdowns in the world's second largest economy (China)*"

"*Elevated petrol prices*"

"*A slowdown in the housing market*"

So, what did share markets do?

They went up. In many cases, they went up strongly.

All of the 23 developed markets in the MSCI World Index were positive over the quarter and 19 went up by at least 6% (in local currency terms). It was a similar story in emerging markets where 14 of the 24 nations in the MSCI Emerging Markets Index went up by more than 6%. The gains in emerging markets were not uniform, with six emerging nations dipping into the red for the quarter.

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> ... it was a very strong quarter for share markets. The obvious question is, why? What do the markets know that we don't?

Markets don't actually 'know' any more than we do. The aggregate market is made up of individuals, trusts, companies, professional investors and a wide range of institutional investors. While individual investors can sometimes react poorly to the constant media 'noise', and occasionally make knee-jerk decisions to sell, investors that are committed to seeking longer term investment outcomes are often better able to block out this noise and focus on the value of the underlying assets.

When markets become difficult, investors that are easily influenced by emotion, uncertainty or fear are prone to making bad decisions. But for every panicked seller, we need to remember there is *always* a buyer (often more considered) taking an equal and opposite view.

During 2022, the prices of many good quality investments had reduced to the point that, in aggregate, market participants began to regard them as being relatively cheap. And for most long term investors, 'quality' plus 'cheap' equals an attractive investment opportunity.

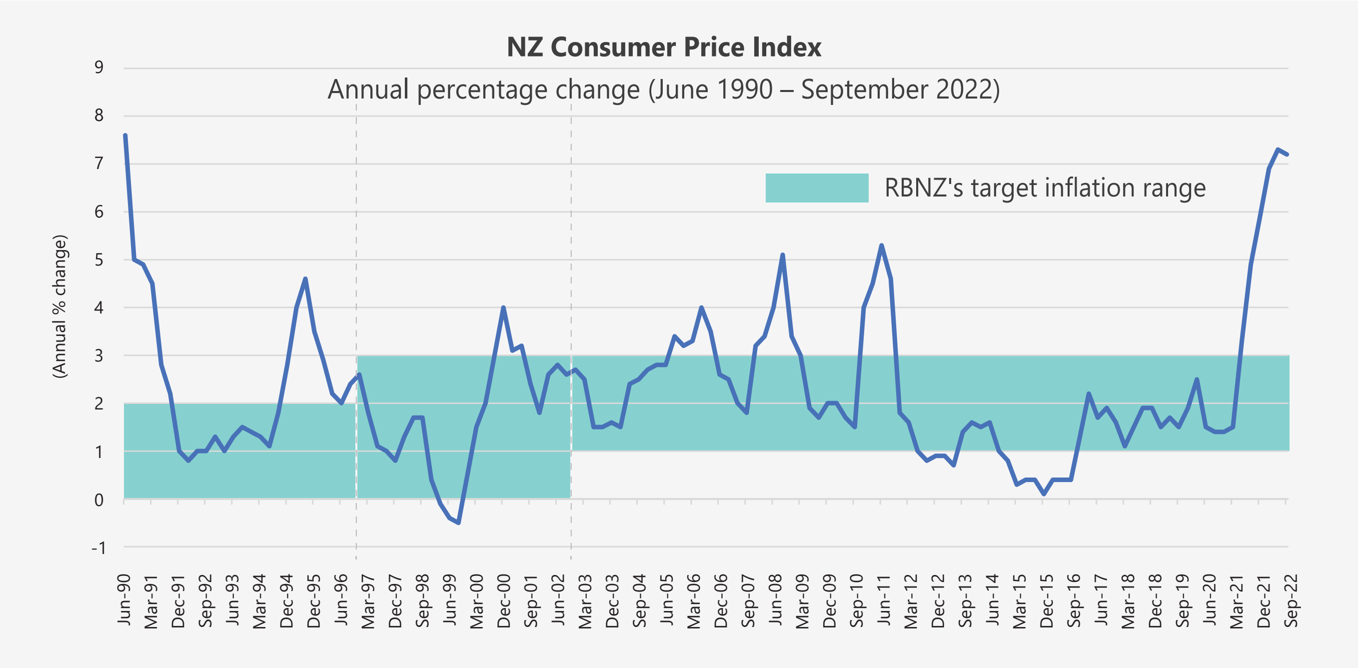
Sure, there were (and are) many uncertainties in the world and the list above covers most of the big ones. But investors looking to own high quality assets for the long term, don't need to be quite so concerned about *exactly* when interest rates might stop rising, when housing prices will stabilise, or even when the war in Ukraine will end.

At some point (hopefully sooner rather than later), most investors believe that all of these things will happen. And, when viewed through that lens, it's easier to understand how the asset prices available at the beginning of the September could generally be considered attractive, regardless of what was still going on in the world around us.

Fighting inflation

The cost of living crisis was one of the big talking points of 2022 with prices, particularly at the supermarket and at the petrol pump, rising uncomfortably quickly at times.

Having successfully controlled inflation within their target range of 1-3% over most of the last decade (as the following chart shows), the Reserve Bank of New Zealand (RBNZ) had also very effectively managed our collective inflation expectations. That is, we all generally expected average inflation of around 2% (give or take) to persist into the future, and our spending and investment behaviours reflected those expectations.



Note: The RBNZ's target inflation range was established as 0-2% in March 1990 and subsequently amended to 0-3% in December 1996 and the current 1-3% in September 2002.

However, following the post-Covid surge in inflation from 2021 to the current level of 7.2% pa (as at 30 September 2022), the RBNZ has become increasingly concerned about the risk of a potential 'de-anchoring' of our collective inflation expectations. In other words, they are concerned we may begin to expect much higher levels of inflation into the future than we had previously.

If we begin to expect higher inflation, this is likely to impact our decision making in relation to savings, investment and spending. It is also likely to impact other areas such as wage negotiations, putting pressure on wages to continue to rise higher and higher to meet rising costs. This, in turn, flames the inflationary pressures we are already facing.

If our inflation expectations were to be reset at higher levels, it presents a much bigger challenge for the RBNZ to quickly get price inflation back down towards the levels we had previously been experiencing.

Galvanised by these concerns, the RBNZ hiked New Zealand's official cash rate (OCR) by another 0.75% at their November meeting to 4.25%, and revised their projection for the OCR to now reach a peak of 5.50% in 2023. This revised peak is a full 1.40% above the OCR forecast of 4.10% from their August announcement.

How successful the RBNZ are at curbing inflation will be something to watch this year. The chart shows that when inflation has historically reached a short term peak of 4% or more, it has subsequently fallen reasonably quickly (usually after the RBNZ has moved interest rates higher). If something similar can be achieved within the next one or two inflation updates, there is still a chance the projected OCR peak of 5.50% may not be required. For now we watch and wait for more inflation data.

It should also be noted that with much of the global economy experiencing similar inflationary issues, the coordinated interest rate rising that is occurring around the world will act as a headwind to global growth in 2023. If that headwind blows too hard for too long, it increases the chances that we will see a period of lower or negative growth in some countries/regions later this year. Clearly, a delicate balancing act for central banks around the globe.

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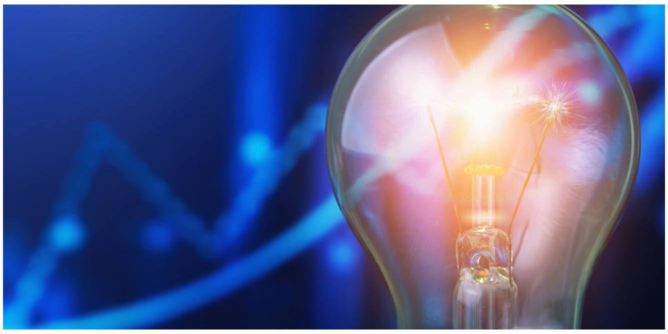

Energy sector outperforms

While it wasn't a good year overall for share markets, there was one standout performer – the energy sector.

Higher oil and gas prices were a feature of the year, and it was one of several factors that contributed to rocketing global inflation. Although higher oil prices are generally bad news for consumers and travellers, it was great news for the energy industry (and it's investors). As oil prices soared, so too did the performance of many listed energy companies.

In the US, the energy sector returned more than 65% in 2022 - its best year on record - and in Europe it was also easily the leading sector, up more than 37%. These returns are even more remarkable in a year when global share markets were broadly negative.

This represented a dramatic turnaround from the depths of 2020, when the energy sector was initially the largest casualty of the global shutdown that followed the arrival of the Covid-19 pandemic.

A much better outlook for bonds

The combination of rising interest rates and higher inflation in 2022 led not only to a bear market in shares, but the worst year for bonds in modern financial history.

As interest rates rose faster and further than all early predictions, bond prices declined by significantly more than we are accustomed to. As the year wore on, it led to some investors considering potential alternative assets, particularly ones that could also help to offset traditional share market risk.

However, just as investors may be starting to lose faith in the role that bonds play within diversified portfolios, the forward-looking prospects for bonds are now better than they have been in years.

As at 30 December, the S&P/NZX A-Grade Corporate Bond Index in New Zealand had a running yield of 5.4%, while the Global Aggregate Bond Index was yielding 4.9% in New Zealand dollar hedged terms, (having touched over 5% in recent months).

With central banks now well into their interest rate tightening cycles, early signs of global inflation beginning to moderate and consumer demand seemingly softening, we have an environment for stronger bond returns than we have seen in recent years.

Also noteworthy, is that bond yields are now at levels where they have room to rally (i.e. room for bond prices to rise) if, for example, a non-inflationary macroeconomic shock were to occur and policymakers were to respond by lowering interest rates.

This more positive outlook may be tempered a little by the fact that the large government deficits that built up during the early and mid-stages of the Covid pandemic, are likely to remain elevated for some time. Even if governments are successful in taking a more frugal approach to future spending, they will need to continue selling more bonds to the private sector, and that will be happening in a financial system with reduced overall liquidity. This could limit the scope for bond yields to decline much as headline inflation falls back from peak levels.

However, even in a scenario where bond yields may remain more consistently at or around their current levels, the running yields alone, as outlined above, make them an attractive component of diversified portfolios.

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All eyes on 2023

The final quarter of 2022 provided a very positive end to an otherwise challenging year for investors.

It was encouraging that in spite of the lack of clarity on a number of high profile macroeconomic, and geopolitical issues, the markets were able to look through these matters and conclude that many asset prices were increasingly looking attractive.

One strong quarter in no way guarantees that the recent challenging market conditions are fully behind us, but it is a positive sign, and it takes us into the new year with more reason for optimism about the potential for better times ahead.

If the uneven transition from Covid lockdowns to a global economic reopening has shown us anything, it's that governments, central banks and investment markets don't have a proven playbook about how to seamlessly return the world back to its pre-Covid state. As a result, the last few years have thrown up economic outcomes and market eccentricities that have been well outside our normal expectations.

With the potential for inflation pressures to ease in 2023 and for interest rates to stabilise, it is not unreasonable to hope that some of these eccentricities also begin to moderate.

In the meantime, when markets are as difficult to navigate as they have been lately, the very best approach is always to stay invested, stay well diversified, keep costs low, and stay patient.

Key market movements for the quarter

After such a challenging first three quarters of 2022, it was difficult to imagine the final quarter would deliver anything substantially different. As they say however, it is always darkest before the dawn. With no new risks surprising or alarming markets, and the impact of significant, and ongoing, tightening of monetary policy starting to be reflected in reducing rates of inflation, market participants started to consider when recent rate hikes could begin to be pared back. With tentative optimism that this rate rising cycle might end sooner than expected, November in particular saw strong performances in both shares and bonds, helping propel the final quarter of the year into the positives.

Unemployment remains low, GDP growth beat estimates, inflation has slowed (a little), and the corporate earnings reporting season was strong in many sectors, all of which contributed to positive returns.

Many central banks, in particular the US Federal Reserve (the Fed), reduced the speed at which they have been increasing interest rates. Although the Fed's final announcement of the year warned of difficulties still to come for the economy and that the interest rates were far from their peak level in this cycle. That halted the emerging 'Santa rally' in early December and the last month of the year was generally weaker. Regardless, the quarter overall was generally positive across the board which helped claw back some of the market weakness from earlier in the year.

+7.1%
(hedged to NZD)

-3.4%
(unhedged)

International shares

US, Eurozone and UK share markets all made strong gains in the quarter, with much of the progress made in November. Investors were generally balancing ongoing central bank caution with signs that elevated global inflation could begin to ease, and indications that the current pace of policy tightening would slow.

Gains in the UK were also helped, in part, by the country emerging from its September crisis when the former prime minister and chancellor announced huge fiscal stimulus, with little detail on how it would be funded.

In a reversal of recent price action, the New Zealand dollar was very strong through the quarter. While this was good news for anyone buying foreign currency over the holidays, it was not so good for investors holding unhedged foreign assets, as these holdings, when reported in New Zealand dollar terms, are worth less. Conversely, any NZD hedged securities were insulated from this and given the volatility in currency markets in 2022, it underlines the perils of being fully hedged, or fully unhedged, in these highly unpredictable times.

The MSCI World ex-Australia Index delivered a return of +7.1% for the quarter hedged to the NZ dollar, and -3.4% for the unhedged index. This meant the 2022 calendar year return for the New Zealand dollar hedged index ended down -17.9%, while the unhedged index returned -12.0%.

Source: MSCI World ex-Australia Index (net div.)

-3.2%

Emerging markets shares

The relaxation of Covid restrictions in China and the weakening in the US dollar were the main themes in emerging markets through the quarter, driving up returns in local currencies. The headline MSCI Emerging Markets Index gained +9.8% for the quarter in US dollar terms.

Investors welcomed the relaxation of China's Covid regulations, which helped boost optimism regarding an earlier-than-expected re-opening of the economy. This propelled the Chinese share market to a double-digit return and via its significant weight was the main driver of the strong index returns.

Poland and Hungary also rebounded strongly following months of underperformance resulting from the war in neighbouring Ukraine.

Weaker energy prices over the quarter led to Middle Eastern markets generally underperforming, with soccer world cup hosts Qatar, stumbling to a double-digit decline for the quarter.

Although these results were very good in local currency, the strong New Zealand dollar meant the MSCI Emerging Markets Index produced a quarterly return of -3.2% in unhedged New Zealand dollar terms and finished the year down -13.4%.

Source: MSCI Emerging Markets Index (gross div.)

+3.8%

New Zealand shares

The New Zealand market, as measured by the S&P/NZX 50 Index, shook off a negative October to post a welcome gain of +3.8% for the quarter. Unfortunately, the index still recorded a -11.3% return the year, remarkably, the first negative calendar year for the NZ share market since 2008.

Three of the top 15 companies by market capitalisation, made strong contributions to the overall index performance – Fisher & Paykel Healthcare (+23.1%), a2 Milk (+20.6%) and Ebos Group (+16.7%). For a2 Milk and Fisher & Paykel in particular, both of having had their share prices under some pressure at different times throughout the Covid disruptions, it was a very pleasing result.

At the other end of the spectrum, a trio of Healthcare companies: Ryman (-36.5%), Arvida (-19.1%) and Summerset Group (-17.9%) all struggled, continuing a downward trend in the performance of each of these shares over the last 18 months.

Source: S&P/NZX 50 Index (gross with imputation credits)

+2.6%

Australian shares

The Australian share market (ASX 200 Total Return Index) closed out a relatively robust year delivering +9.4% in local currency terms through the quarter.

This strong quarterly result is less surprising when the two largest components of the index – BHP Group and Rio Tinto – delivered returns (in Australian dollars) of +18.5% and +24.7% respectively. Both of these mining firms have benefitted considerably from a more than 50% rally in iron ore prices since the beginning of November.

Other large index constituents include the 'Big Four' banks (CBA, NAB, Westpac and ANZ) which all delivered quarterly returns ranging from +7.0% to +16.2% as their revenue expectations continue to benefit from a higher interest rate environment.

Although the Australian share market was strong overall, the reported returns to unhedged New Zealand investors were much lower due to the relative strength of the New Zealand dollar over the quarter. For the full 2022 calendar year, the ASX 200 was slightly negative (-1.1% in AUD and -0.1% in NZD terms). However, relative to most other assets classes, the ASX was a very resilient performer during a highly challenging period for investment markets.

Source: S&P/ASX 200 Index (total return)

+0.5%

International fixed interest

Bond markets ended the year on a mixed note in the final quarter. Government bond yields edged higher towards the end of the year, reflecting some disappointment at the still hawkish tone from some central banks, despite mounting evidence of slowing economic growth.

The US Federal Reserve raised interest rates twice during the quarter, with the Fed Funds rate ending the year at 4.5%. The Bank of England also announced two rate hikes, bringing the UK interest rate to 3.5%, while the Bank of Japan announced a modification to its yield curve control policy.

Credit spreads (the extra return investors need to encourage them to invest in bonds with lower credit quality) generally tightened across the quarter on improved risk sentiment. This resulted in US and European investment grade bonds generally outperforming government bonds.

The eurozone faced its most challenging year for inflation in its history, although indicators late in the year signalled slowing headline inflation, helped by falling energy price pressures. Nevertheless, the European Central Bank (ECB) continued to tighten monetary policy conditions and maintained its aggressive stance about future rate hikes.

Over the quarter, the US 10 year bond yield rose from 3.83% to 3.88%, with the two year bond yield rising from 4.27% to 4.43%. Germany's 10 year bond yield increased from 2.11% to 2.56%. The UK 10 year yield decreased from 4.10% to 3.67%, after the country's new prime minister reversed most of his predecessor's 'mini budget' proposals, which had been very poorly received by the markets.

The FTSE World Government Bond Index 1-5 Years (hedged to NZD) returned +0.5% for the quarter and -4.6% for the year. The broader Bloomberg Global Aggregate Bond Index (hedged to NZD) advanced +0.8% in the quarter but declined -11.7% for the year, comfortably the worst calendar year for this asset class.

Source: FTSE World Government Bond Index 1-5 Years (hedged to NZD)

+0.2%

New Zealand fixed interest

The Reserve Bank of New Zealand (RBNZ) raised the Official Cash Rate (OCR) twice more in the fourth quarter taking this benchmark rate to 4.25%.

In their 23 November statement, the RBNZ noted that to meet its policy remit of low annual inflation while supporting maximum sustainable employment, both 'actual and expected' inflation needed to decline substantially. Accordingly, given the extent to which domestic spending was contributing to higher and more persistent actual and expected inflation outcomes, the RBNZ determined that a November rate hike of 0.75% to 4.25% was warranted and revised their projections for a higher OCR peak (now targeting 5.50%) in 2023.

Similar to the broad trends overseas, the New Zealand 10 year bond yield opened the quarter at 4.29%, briefly touched 4.00% in early December, and finished the quarter at 4.55%.

The S&P/NZX A-Grade Corporate Bond Index rose +0.2% for the quarter, while the longer duration but higher quality S&P/NZX NZ Government Bond Index gained +0.1%. Both indices ended the year well down at -5.1% and -9.1% respectively.

Source: S&P/NZX A-Grade Corporate Bond Index

Table 1: Asset class returns to 31 December 2022

Asset Class	Index Name	3 months	1 year	3 years	5 years	10 years
New Zealand shares	S&P/NZX 50 Index (gross with imputation credits)	+3.8%	-11.3%	+0.6%	+7.3%	+12.1%
Australian shares	S&P/ASX 200 Index (total return)	+2.6%	-0.1%	+6.6%	+6.5%	+6.9%
International shares	MSCI World ex Australia Index (net div., hedged to NZD)	+7.1%	-17.9%	+4.3%	+6.0%	+10.7%
	MSCI World ex Australia Index (net div.)	-3.4%	-12.0%	+7.0%	+8.5%	+11.9%
Emerging markets shares	MSCI Emerging Markets Index (gross div.)	-3.2%	-13.4%	-0.4%	+1.2%	+4.5%
New Zealand fixed interest	S&P/NZX A-Grade Corporate Bond Index	+0.2%	-5.1%	-1.5%	+1.0%	+3.0%
International fixed interest	FTSE World Government Bond Index 1-5 years (hedged to NZD)	+0.5%	-4.6%	-0.7%	+0.6%	+2.1%
New Zealand cash	New Zealand One-Month Bank Bill Yields Index	+1.0%	+2.6%	+1.1%	+1.4%	+2.0%

Unless otherwise specified, all returns are expressed in NZD. We assume Australian shares and emerging markets shares are invested on an unhedged basis, and therefore returns from these asset classes are susceptible to movement in the value of the NZD. Index returns are before all costs and tax. Returns are annualised for time periods greater than one year.

Why is there no Lionel Messi of managed funds?

Lionel Messi coolly placed the ball on the penalty spot. He had every reason to be confident in that moment. He had, after all, scored 793 goals, and supplied 250 assists in his professional career. That's 72 minutes on average per goal contribution – more than one a game.

Nothing in his career would mean more than these next few seconds. He had already scored twice in the final of the World Cup and brilliantly assisted the third. A whole nation held their breath. Unlike players that tried to convert penalty kicks with power, Messi has learned he merely needs to kick the ball calmly to where the goalie isn't. His stuttered approach to the ball is really an attempt to wait until the very last split second to decide where to place the ball. French goalie Hugo Lloris flinched first to his left. It was the break Messi was waiting for. He guided the penalty to the opposite corner.

GOOOAL!!!

Glory.

You may or may not be an international football fan. Maybe you confuse FIFA with the Fertilizer Industry Federation of Australia. But no matter who you are, you can be impressed with a player like Lionel Messi who has been so consistently great for so long. Even if you're French, you'd have to tip your cap to Messi's incredible career.

It's Messi's persistent greatness that we can use as a relevant contrast to the complete lack of persistent greatness in the arena of investment management.

Messi was of course splendid at the 2022 Qatar FIFA World Cup, and football commentators all over the world were not the least surprised. Messi, 35, has been great for many years. As proof of this, look at the FIFA annual awards for the best male footballer in the world.

In the last five years, Messi was named the top footballer in 2019. He came second place twice and once third. In 2018, Messi was ranked in fifth place. This is impressive considering there are 130,000[1] professional football players worldwide, as estimated by Statista.

	1st place	2nd place	3rd place
2021	Robert Lewandowski	Lionel Messi	Mohamed Salah
2020	Robert Lewandowski	Christiano Ronaldo	Lionel Messi
2019	Lionel Messi	Virgil van Dijk	Christiano Ronaldo
2018	Luka Modrić	Christiano Ronaldo	Mohamed Salah
2017	Christiano Ronaldo	Lionel Messi	Neymar

The reason Messi performs so well year after year is because of his astounding skill, mental toughness and hard work. And those attributes persist. Skill especially persists in football, chess, tennis and many other disciplines. It's normal and intuitive to count on skill to persist.

Given this, you would naturally assume that in the world of managed funds, the best approach would be to find a skilful manager, e.g., the 'Lionel Messi of managed funds!' It would be intuitive to think finding a manager like that would greatly improve your chances of investment glory.

However, we'd argue such an approach is doomed to mediocrity or worse, failure.

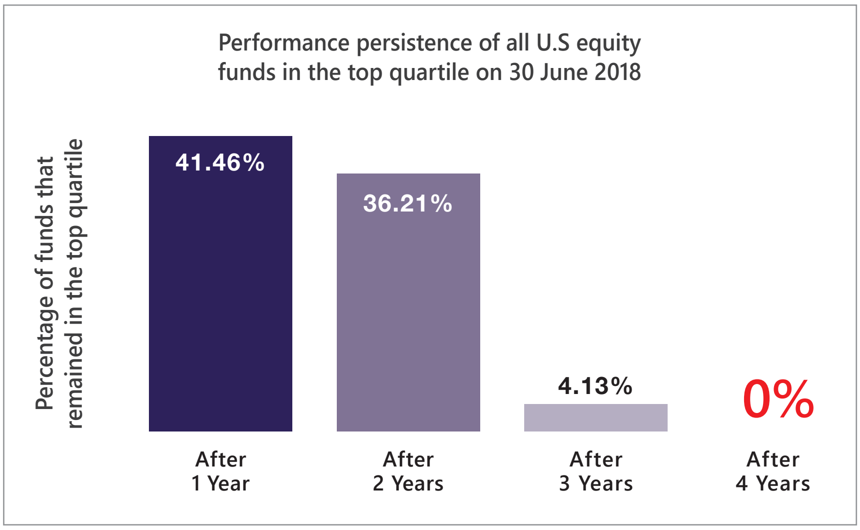
Here's a curious fact. In the world of investment management, skill, defined as manager led outperformance against a relevant benchmark, doesn't persist. Let's look at how we can justify that statement, and then outline the approach we take to selecting investment managers for your portfolio.

What proof do we have that in the world of investment management skill doesn't persist? The best data comes from the United States.

In the United States, index provider Standard and Poors (S&P), has developed something called the Persistence Scorecard to study the persistence of investment performance by managed funds[2]. S&P's Persistence Scorecard tracks the percentage of U.S. equity funds that remained in the top-quartile (25%) or top-half (50%) of equity fund rankings over five-consecutive annual periods (through mid-2022).

In their latest report, S&P researchers highlighted a few key takeaways. Those included:

- Among all actively managed funds whose performance over the 12 months ending June 2018 placed them in the top quartile with their respective category, "*not one fund in any of our reported fixed-income and equity categories remained in the top quartile in each of the four subsequent one-year periods ending in June 2022.*"
- Over a five-year horizon "*it was statistically near impossible to find consistent outperformance.*"



Source: S&P Dow Jones Indices LLC, CRSP. Data as at 30 June 2022.

> The Persistence Scorecard shows that outperformance is typically relatively short-lived, with few funds consistently outranking their peers.

Look at the graphic above which substantiates the statements from S&P.

You might assume this was a US only phenomenon, but S&P has found the same results in every country it tests. That includes Australia[3] where S&P concluded, "Over a five-year horizon, it was statistically near impossible to find consistent outperformance," for an Australian fund manager.

This lack of persistence is quite the contrast to Messi who was in the top 0.0038% for five consecutive years!

What's going on? Why is there such a lack of persistence amongst investment managers but such great persistence from the likes of Messi?

There are several reasons that investment manager performance doesn't persist:

Even playing field: The net outperformance of all managers in the market is zero. Losers evenly offset winners and no one wants to lose this game.

Competition: The losers go out of business. The skilled managers that remain and go into competition with each other, eroding each other's advantage. Some winners must subsequently become losers. The cycle repeats.

Cost: Managers with skill naturally charge higher fees and those fees offset the benefit they can bring to investors.

Bloating: Managers with skill often end up with more assets than they have good investment ideas, watering down their skill.

Luck: Many managers that initially look skilful are often just lucky. Statistically you need about 30 years of returns to distinguish luck from skill. It would be rare that a manager with skill stayed with one fund for 30 years.

Flawed measurement: Managers that boast skill often compare themselves to a benchmark with different risk attributes to what they invest in. Once you use an accurate benchmark, much of what looked like skill just melts away.

The Persistence Scorecard shows that outperformance is typically relatively short-lived, with few funds consistently outranking their peers.

If that's the case, then how do we go about selecting funds for a portfolio? The answer is to look past manager performance and identify the key characteristics of funds which have been academically proven to provide higher returns over long periods of time. The main characteristics that affect long term performance are:

- The types of assets the fund owns – for example New Zealand shares
- How diversified is the fund
- The cost of the fund
- The average size, price and profitability of the underlying businesses the fund owns
- Does the fund keep the above attributes consistent over time
- The tax liability of the assets the fund owns

Although none of the above might sound as attractive as finding a 'Lionel Messi' fund manager, over time these types of investment characteristics, if held calmly and (here's our buzz word) persistently by investors, can yield excellent results.

This is the type of persistence that really matters.

[1] *https://www.statista.com/statistics/1283927/number-pro-soccer-players-by-country/#:~:text=Pro%20soccer%20players%20worldwide%20in%202021%2C%20by%20country&text=Of%20the%20estimated%20130%20-thousand,10%20thousand%20originated%20from%20Brazil.*
[2] *https://www.spglobal.com/spdji/en/spiva/article/us-persistence-scorecard/*
[3] *https://www.spglobal.com/spdji/en/spiva/article/australia-persistence-scorecard*

Randomness of returns

This table shows each asset class in our portfolios and their returns over the past 20 years, as well as the returns of a 50/50 portfolio. There is no discernible pattern in the results from year to year. This makes it exceptionally challenging to pick in advance, the highest performing asset class each year. To achieve more consistent results, we invest in multiple asset classes. This ensures our portfolios always have some exposure to the highest returning sectors, whilst never being at risk of only being allocated to the lowest returning sectors. This is known as prudent diversification.

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Avg
New Zealand shares	25.6%	25.1%	10.0%	20.3%	-0.3%	-32.8%	18.9%	2.4%	-1.0%	24.2%	16.5%	17.5%	13.6%	10.1%	23.6%	6.0%	31.6%	14.6%	0.2%	-11.3%	9.8%
Australian shares	22.2%	21.0%	21.5%	29.6%	18.2%	-35.6%	42.1%	7.8%	-10.5%	15.0%	3.9%	1.8%	4.4%	9.0%	18.5%	-7.4%	22.6%	4.2%	16.2%	-0.1%	8.9%
Global large shares	6.0%	4.3%	15.7%	16.6%	-0.3%	-21.9%	4.5%	4.0%	-5.5%	9.4%	27.0%	10.6%	13.5%	5.3%	20.1%	-3.3%	27.0%	8.5%	28.2%	-11.4%	7.2%
Global value shares	10.0%	7.7%	15.8%	21.5%	-5.5%	-21.5%	1.8%	1.5%	-5.5%	9.1%	27.0%	9.3%	9.0%	10.0%	14.9%	-5.5%	21.1%	-7.4%	28.3%	1.2%	6.4%
Global small shares	25.7%	13.0%	22.3%	13.8%	-7.9%	-23.5%	15.9%	17.4%	-9.0%	11.0%	32.7%	7.4%	14.1%	10.4%	20.4%	-8.8%	25.5%	8.6%	21.8%	-12.1%	8.9%
Emerging markets shares	24.1%	14.1%	41.7%	28.3%	27.5%	-38.5%	43.5%	10.7%	-18.4%	11.6%	-2.3%	3.1%	-2.6%	9.9%	35.0%	-9.5%	18.5%	11.0%	2.7%	-13.4%	7.8%
New Zealand property	13.4%	20.0%	19.7%	24.9%	-4.3%	-20.8%	11.8%	3.4%	11.2%	20.5%	3.9%	24.2%	14.5%	3.8%	13.9%	10.9%	32.4%	5.0%	3.5%	-21.8%	8.6%
Global property	11.5%	25.2%	17.9%	38.3%	-20.8%	-28.7%	9.5%	15.1%	0.1%	17.7%	3.1%	28.7%	14.2%	4.1%	5.0%	-0.1%	23.0%	-14.5%	38.6%	-18.9%	6.8%
New Zealand fixed interest	4.3%	5.9%	6.3%	5.9%	2.7%	15.4%	5.7%	8.7%	9.3%	6.3%	1.9%	7.4%	5.8%	4.1%	5.8%	4.4%	5.2%	5.4%	-4.4%	-5.1%	5.0%
Hedged global bonds	6.3%	9.5%	9.1%	5.5%	8.9%	15.2%	3.5%	6.3%	8.3%	7.2%	2.2%	11.1%	4.5%	5.8%	4.0%	1.8%	7.5%	5.4%	-1.2%	-11.7%	5.3%
New Zealand Cash	5.6%	6.3%	7.3%	7.7%	8.6%	8.3%	3.1%	3.0%	2.7%	2.7%	2.7%	3.4%	3.3%	2.3%	1.9%	1.9%	1.5%	0.4%	0.4%	2.6%	3.7%
Portfolio 50/50	11.8%	11.7%	12.2%	16.0%	3.5%	-8.2%	17.0%	9.1%	0.1%	12.4%	9.1%	9.0%	6.2%	9.0%	12.3%	-2.0%	14.3%	6.0%	7.9%	-9.1%	7.2%
Inflation	1.6%	2.7%	3.2%	2.6%	3.2%	3.3%	2.1%	3.9%	1.9%	1.0%	1.6%	0.7%	0.1%	1.3%	1.6%	1.9%	1.9%	1.4%	5.9%	6.5%*	2.4%

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Highest	25.7%	25.2%	41.7%	38.3%	27.5%	15.4%	43.5%	17.4%	11.2%	24.2%	32.7%	28.7%	14.5%	10.4%	35.0%	10.9%	32.4%	14.6%	38.6%	2.6%
	25.6%	25.1%	22.3%	29.6%	18.2%	15.2%	42.1%	15.1%	9.3%	20.5%	27.0%	24.2%	14.2%	10.1%	23.6%	6.0%	31.6%	11.0%	28.3%	1.2%
	24.1%	21.0%	21.5%	28.3%	8.9%	8.3%	18.9%	10.7%	8.3%	17.7%	27.0%	17.5%	14.1%	10.0%	20.4%	4.4%	27.0%	8.6%	28.2%	-0.1%
	22.2%	20.0%	19.7%	24.9%	8.6%	-8.2%	17.0%	9.1%	2.7%	15.0%	16.5%	11.1%	13.6%	9.9%	20.1%	1.9%	25.5%	8.5%	21.8%	-5.1%
	13.4%	14.1%	17.9%	21.5%	3.5%	-20.8%	15.9%	8.7%	0.1%	12.4%	9.1%	10.6%	13.5%	9.0%	18.5%	1.8%	23.0%	6.0%	16.2%	-9.1%
	11.8%	13.0%	15.8%	20.3%	2.7%	-21.5%	11.8%	7.8%	0.1%	11.6%	3.9%	9.3%	9.0%	9.0%	14.9%	-0.1%	22.6%	5.4%	7.9%	-11.3%
	11.5%	11.7%	15.7%	16.6%	-0.3%	-21.9%	9.5%	6.3%	-1.0%	11.0%	3.9%	9.0%	6.2%	5.8%	13.9%	-2.0%	21.1%	5.4%	3.5%	-11.4%
	10.0%	9.5%	12.2%	16.0%	-0.3%	-23.5%	5.7%	4.0%	-5.5%	9.4%	3.1%	7.4%	5.8%	5.3%	12.3%	-3.3%	18.5%	5.0%	2.7%	-11.7%
	6.3%	7.7%	10.0%	13.8%	-4.3%	-28.7%	4.5%	3.4%	-5.5%	9.1%	2.7%	7.4%	4.5%	4.1%	5.8%	-5.5%	14.3%	4.2%	0.4%	-12.1%
	6.0%	6.3%	9.1%	7.7%	-5.5%	-32.8%	3.5%	3.0%	-9.0%	7.2%	2.2%	3.4%	4.4%	4.1%	5.0%	-7.4%	7.5%	0.4%	0.2%	-13.4%
	5.6%	5.9%	7.3%	5.9%	-7.9%	-35.6%	3.1%	2.4%	-10.5%	6.3%	1.9%	3.1%	3.3%	3.8%	4.0%	-8.8%	5.2%	-7.4%	-1.2%	-18.9%
Lowest	4.3%	4.3%	6.3%	5.5%	-20.8%	-38.5%	1.8%	1.5%	-18.4%	2.7%	-2.3%	1.8%	-2.6%	2.3%	1.9%	-9.5%	1.5%	-14.5%	-4.4%	-21.8%

*Source: **NZ equities:** NZSX 50 Index (Gross Dividends) from Jan 2003 to Dec 2022. S&P/NZX 50 Index (Gross with Imputation) from Jan 2016 to present. **Australian equities:** S&P/ASX 200 Index (Total Return) **Global large equities:** MSCI World Index (net div., AUD) **Global value equities:** MSCI World Value Index (net div., AUD) **Global small equities:** MSCI World Small Cap Index (net div., AUD) **Emerging markets equities:** MSCI Emerging Markets Index from Jan 2002 to Dec 2015. MSCI Emerging Markets (Gross Div.) from Jan 2016 to present. **NZ property:** New Zealand Property Index (Gross Dividends) from Jan 2002 to Dec 2015 S&P/NZX All Real Estate Index (Gross with ICs) from Jan 2016 to present. **Global property:** UBS Global Real Estate Index (Gross Dividends) from Jan 2002 to Dec 2014. S&P Developed REIT Index (net div.) from Jan 2015 to present. **NZ fixed interest:** NZX 10 Yr Govt Bonds from Jan 2002 to May 2003. ANZ Corporate A Bonds from Jun 2003 to Jun 2015. S&P/NZX A-Grade Corporate Bond Index Jul2015 to present. **Hedged global bonds:** Citigroup World Government Bond Index Hedged to NZD Jan 2002 to Dec 2012. Bloomberg Barclays Global Aggregate Bond Index (hedged to NZD) Jan 2013 to present. **New Zealand cash:** NZ One Month Bank Bill Yields. **50/50 portfolio:** portfolio returns net of manager fees, but gross of tax, adviser and platform fees. **Inflation:** Statistics NZ change in New Zealand Consumer Price Index from Jan 2003 to Dec 2021. *Indicative 2022 figure as at 13 January 2023.*