Pie Funds

Slice of Pie

KEEPING YOU UP TO DATE WITH PIE FUNDS AND THE MARKETS

ISSUE 172 • DECEMBER 2022

Investing for 15 years

PIE FUNDS CELEBRATES A MILESTONE

Pie Funds

> “We believe in skin in the game. Investing should be a partnership and that’s why we invest alongside our Pie clients. In fact, more than 7% of the money that we manage is the personal investments of our staff, directors and shareholders.”

Mike Taylor
Founder & CIO

A MESSAGE FROM MIKE

Our 15-year milestone

This month, Pie Funds celebrates its 15-year anniversary. Even better was we had the whole investment team here in Auckland recently to share this significant milestone. This included our Sydney and London teams who travelled to New Zealand for our recent Investor Events. It was great to be all together again after about three years, and we enjoyed a lot of time catching up and sharing ideas.

When I started Pie Funds, I wanted the investment funds to outperform the market. I believed most fund managers were serial underperformers and saw an opportunity. We launched our first fund in December 2007. Today, we have $2.1 billion* of funds under management, nine investment funds plus three KiwiSaver funds, and global offices. We were, and are still, one of the few New Zealand fund managers to have an office in London.

Over the years, Pie Funds has been recognised with various industry awards. But one of our biggest achievements is the wealth we have made over the years for our clients. I am very proud of this.

Many of the investors from when we started are still with us. We now have 3,000 highly valued clients and nearly 20,000 KiwiSaver members. We appreciate you all and thank you for your support.

Bumpy ride for investors

It has been a very big year and a bumpy ride for investors, but every cloud has a silver lining and there might be some light at the end of the tunnel at last to finish 2022. The year is, at this stage, finishing with a strong bounce.

All year, markets have been under pressure from rising inflation and rising interest rates. Most economic forecasters have lifted their target for a peak in interest rates multiple times this year and, with each successive move, there has been a corresponding sell-off in stocks and bonds. On top of that, there have been two (possibly three if we include the current move) false dawns, as the market has played chicken with central banks, pushing for the so-called ‘pivot’.

For those who attended our investor events at the end of November, you will be aware that we are fairly optimistic about the outlook for 2023. This is based partly on the fact we believe inflation has peaked and partly because we believe interest rates are close to the peak. But mostly because, after such a terrible year – unless the world is going to end – history shows poor-performing periods are usually followed by strong returns if you look out 12 months. This could be especially true if you were able to scoop up oversold stocks and bonds in October when asset prices were at their nadir for the year.

Economic slowdown on horizon

We, like you, remain acutely aware that the interest rate rises of 2022, the accompanying pressure on household incomes from higher mortgages, not to mention higher prices from inflation, will lead to the slowing of consumer discretionary spending and, therefore, a general economic slowdown or recession.

A recession or slowdown will impact corporate profits, on average, anywhere from 10-40%. A mild recession, with a 10% fall in profits, is now already ‘in the price’, so if that’s all we get, then stocks have most likely bottomed. A severe recession, if we have one, is not yet in the price. And the severity of the coming recession really depends on future events and actions of central bankers. And despite what you, or I, or anyone will tell you, the future is uncertain. It has to be – it can't be anything other than that.

Two likely scenarios for 2023

I have, together with the team, positioned the funds for what we believe are the two most likely scenarios for 2023 based on the latest facts and analysing the data of past bear markets.

Under the first scenario, the effect of tight monetary conditions is already starting to bite, a slower consumer and falling house prices are already upon us, and inflation falls rapidly in 2023 as the economy slows. This allows central banks to pause rate hikes at the end of 2022. But the economic slowdown is modest as the consumer breathes a sigh of relief that inflation is under control and a more 'normal' post-Covid recovery commences mid-year. This scenario means stocks likely bottomed in October and should have a positive year in 2023. Bonds would also deliver a positive return after 2022's nightmare.

The second scenario is that inflation takes a little longer to fall because of the tight labour market and strong commodity prices, and so interest rates are taken higher to start the year. However, the lagged effect of tightening means central bankers ultimately make a policy mistake by having rates too high for too long. This induces a sharp economic contraction in the first half of 2023, and once inflation does finally fall around mid-year, central bankers have to cut rates aggressively to stave off a deeper recession as unemployment rises. But once the rate cuts commence and investors can see monetary policy shifting from restrictive to accommodative, they sniff out a bottom. Under this scenario, stocks will probably bottom around March-May next year, leading to strong gains in the second half of 2023, i.e. further pain before the gain. A recession would be positive for government bond returns but challenging for high-yield credit. The economy, however, probably doesn't bottom out until late 2023.

Whatever the outcome, investors are much better prepared than they were starting 2022. They have plenty of cash on the sidelines, and a lack of investor enthusiasm, a sure sign all the heat has come out of the market. Based on 15 years of managing client money, I know that investors won't start to return to stocks until at least six months after the bottom. So that means investor sentiment will remain cautious until at least April.

Investment team update

I am pleased to announce the hiring of Michelle Lopez as Head of Australasian Equities and Portfolio Manager in Sydney. Michelle has had a long career spanning 18 years at ABRDN Asset Management, and formerly held a similar role with them. If you are a viewer of Livewire you will find a number of videos featuring Michelle in recent years. Michelle will add a lot of capability to the investment team, and this now means we have four portfolio managers on the ground in our Sydney office. We are delighted Michelle is joining us, and she starts at the end of January.

"I am excited to be joining a fantastic team of professionals at Pie Funds and building on the successes to date," Michelle says. "My focus will be on realising the full potential of the Australasian equity team, who have delivered solid long-term returns for clients, and a framework of strong collaboration within the organisation. There is a tremendous amount to look forward to, for staff and clients alike."

Increase in phishing

You might have already noticed scams and other cyber security attacks have become more prevalent since Covid-19. We recently saw an example of phishing involving a client who was emailed a purported offer for a renewable energy bond from what looked like an investment bank. On face value, the email and attached offer document looked legitimate, with current articles from an actual legal website and a professional looking layout. Fortunately, enquiries were made and the client avoided being caught by the phishing attack. If you have any doubts, do not hesitate to contact us.

Have a wonderful holiday season

I wish you all a very Merry Christmas with your families. I'm sorry that it's been a tough year. Here's hoping for a year without another war, a pandemic, an energy crisis, the fastest rate rises in history, and the highest inflation in a generation! Thank you again for your support.

Mike Taylor
Founder and Chief
Investment Officer

**As at 30 November 2022, including JUNO KiwiSaver Scheme.*
Information is current as at 30 November 2022. Pie Funds opened its first fund on 3 December 2007. Pie Funds Management Limited is the manager of the funds in the Pie Funds Management Scheme. Any advice is given by Pie Funds Management Limited and is general only. Our advice relates only to the specific financial products mentioned and does not account for personal circumstances or financial goals. Please see a financial adviser for tailored advice. You may have to pay product or other fees, like brokerage, if you act on any advice. As manager of the Pie Funds Management Scheme investment funds, we receive fees determined by your balance and we benefit financially if you invest in our products. We manage this conflict of interest via an internal compliance framework designed to help us meet our duties to you. For information about how we can help you, our duties and complaint process and how disputes can be resolved, or to see our product disclosure statement, please visit www.piefunds.co.nz. Please let us know if you would like a hard copy of this disclosure information. Past performance is not a reliable indicator of future returns. Returns can be negative as well as positive and returns over different periods may vary.

Monthly Updates

KEEPING YOU UP TO DATE WITH PIE FUNDS AND THE MARKETS

Funds Snapshot

Monthly Update as at 30 November 2022

AUSTRALASIAN GROWTH | GLOBAL GROWTH | DIVERSIFIED

FUND DETAILS

	Fund Status	Inception Date	Unit Price	Standard Withdrawal Period	Portfolio Manager(s)
Australasian Growth	CLOSED	Dec-07	$5.88	20 working days	Michael Goltsman
Australasian Dividend Growth	OPEN	Sep-11	$3.82	10 working days	Mike Ross
Australasian Emerging	CLOSED	Apr-13	$5.18	3 months	Kent Williams
Australasian Growth 2	CLOSED	Aug-15	$2.22	10 working days	Kent Williams
Global Growth	OPEN	Sep-13	$2.30	10 working days	Guy Thornewill*, Toby Woods* & Mike Taylor
Growth UK & Europe	OPEN	Nov-16	$1.65	10 working days	Guy Thornewill*, Toby Woods* & Mike Taylor
Global Growth 2	OPEN	May-18	$1.12	Up to 5 working days	Guy Thornewill*, Toby Woods* & Mike Taylor
Conservative	OPEN	Apr-15	$1.12	Up to 5 working days	Mike Taylor & Travis Murdoch
Chairman's**	OPEN	Sep-14	$2.11	20 working days	Mike Taylor

**Guy Thornewill and Toby Woods are responsible for research and analysis*
***Minimum investment is $500,000*

PERFORMANCE

	1 month	1 yr	3 yrs (p.a.)	5 yrs (p.a.)	7 yrs (p.a.)	10 yrs (p.a.)	Annualised since inception
Australasian Growth	0.6%	-29.3%	-1.5%	6.1%	3.9%	8.5%	12.5%
Australasian Dividend Growth	2.3%	-11.1%	11.3%	12.2%	13.4%	13.3%	15.8%
Australasian Emerging	3.2%	-14.0%	7.2%	10.4%	11.3%		18.6%
Australasian Growth 2	2.8%	-25.6%	2.8%	8.8%	10.5%		11.5%
Global Growth	3.6%	-13.2%	11.2%	9.0%	9.5%		9.4%
Growth UK & Europe	5.3%	-15.3%	10.7%	6.1%			8.6%
Global Growth 2	3.7%	-14.8%	3.4%				2.5%
Conservative	1.6%	-4.0%	0.9%	2.3%	3.1%		3.2%
Chairman's	3.3%	-15.9%	7.4%	8.5%	9.0%		9.5%

Returns after fees but before individual PIR tax applied

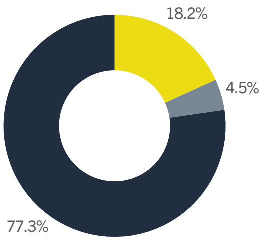
Funds Snapshot

Monthly Update as at 30 November 2022

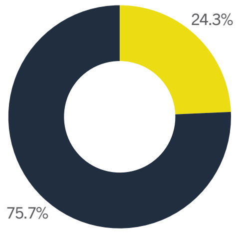
TOTAL FUNDS UNDER MANAGEMENT: $1.6b[1]

INVESTMENT MIX

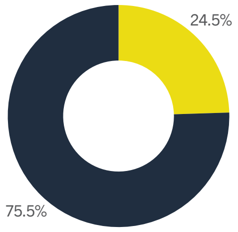
AUSTRALASIAN GROWTH



AUSTRALASIAN DIVIDEND GROWTH

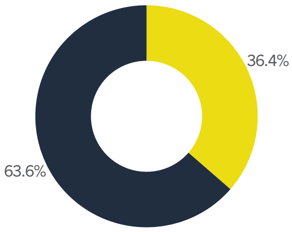


AUSTRALASIAN EMERGING

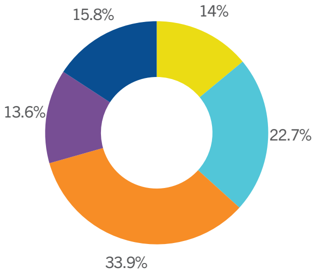


- ● Cash/other (including short and long derivatives)
- ● New Zealand fixed income
- ● Global fixed income
- ● Asian equities
- ● Emerging markets equities
- ● European equities
- ● UK equities
- ● US and Canadian equities
- ● New Zealand equities
- ● Australian equities
- ● Listed property

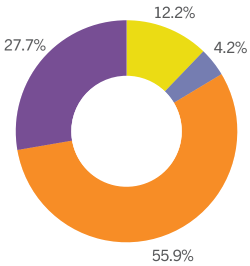
AUSTRALASIAN GROWTH 2



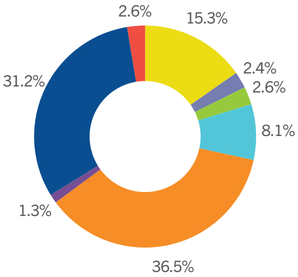
GLOBAL GROWTH



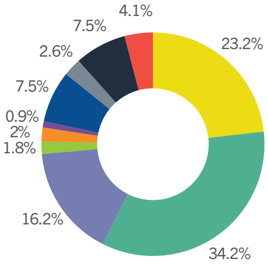
GROWTH UK & EUROPE



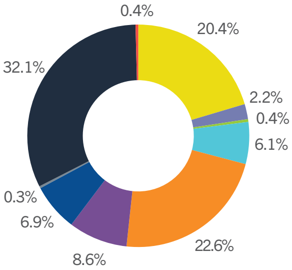
GLOBAL GROWTH 2



CONSERVATIVE



CHAIRMAN'S



Pie Funds

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1. Total funds under management includes $207m of interfund investments ie Chairman's Fund investing into other funds.

Information is current as at 30 November 2022. Pie Funds Management Limited is the manager of the funds in the Pie Funds Management Scheme. Any advice is given by Pie Funds Management Limited and is general only. Our advice relates only to the specific financial products mentioned and does not account for personal circumstances or financial goals. Please see a financial adviser for tailored advice. You may have to pay product or other fees, like brokerage, if you act on any advice. As manager of the Pie Funds Management Scheme investment funds, we receive fees determined by your balance and we benefit financially if you invest in our products. We manage this conflict of interest via an internal compliance framework designed to help us meet our duties to you. For information about how we can help you, our duties and complaint process and how disputes can be resolved, or to see our product disclosure statement, please visit www.piefunds.co.nz. Please let us know if you would like a hard copy of this disclosure information. Past performance is not a reliable indicator of future returns. Returns can be negative as well as positive and returns over different periods may vary.

Australasian Growth Fund

Monthly Update as at 30 November 2022

PORTFOLIO MANAGER(S)

MICHAEL GOLTSMAN
Portfolio Manager

FUND COMMENTARY

The Australasian Growth Fund returned 0.6% in November 2022 and -29.3% in the last 12 months.

It was a strong month for equities with the index up 2.7% in NZD terms, as materials supported index returns. The fund is underweight materials and remains defensively positioned with approximately 18% cash and market hedging.

Key contributors this month were IPD Group and Aroa Biosurgery.

IPD Group held its AGM during the month and confirmed that strong double-digit growth has continued into 1H23 while margins have been maintained. IPD Group exemplifies the style of defensive growth business we look for with structural tailwinds in electrification, market share opportunities as they expand their portfolio of ABB products, and high levels of ownership by management.

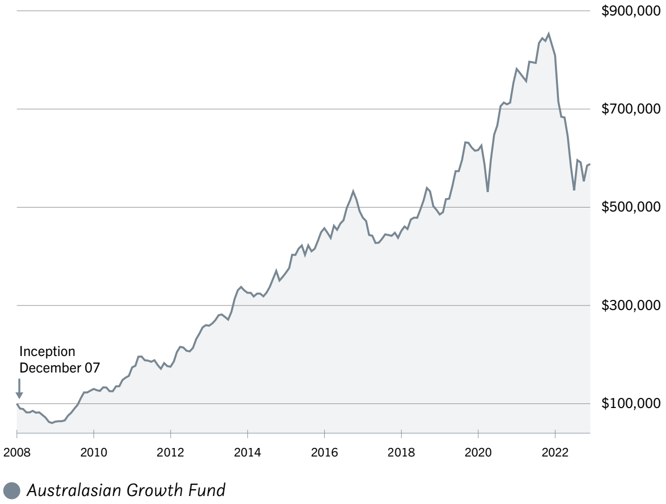
Aroa Biosurgery was up 26% during the month. The company reported its half year result, which reconfirmed its expectations for FY23 earnings which it recently upgraded in October. The company continues to see strong sales momentum for its Ovitex product sold through US distributor Tela Bio and is having early sales success with its own distributed product Myriad.

Bravura Solutions was the principal stock detractor this month. The company provided earnings guidance for FY23 which was materially below analyst expectations. We held a small position as we saw opportunity for the company to reduce its bloated cost base under a new management team and with the shares already down 60% from a year earlier, we did not see much baked into expectations around improved sales execution. However, we misjudged the extent of cost pressures facing the business in the short term, particularly as labour shortages forced employee churn in low-cost markets to be substituted by employees in high-cost markets. The outcome was disappointing, and the magnitude of the earnings miss has caused us to reassess our thesis and fragilities in Bravura's business model. As such, we have subsequently decided to exit the position and reallocate capital to other ideas.

For more information on our funds, please visit
www.piefunds.co.nz/Investor-Documents

CUMULATIVE FUND PERFORMANCE

If you had invested $100,000 at inception, the graph below shows what it would be worth today.



FUND DETAILS

Recommended minimum investment period	5 years
Objective	Capital growth over a period exceeding five years.
Description	Invests predominantly in listed Australasian smaller companies.
Inception date	December 2007
Standard withdrawal period	20 working days
Risk indicator	Potentially Lower Returns — Potentially Higher Returns 1 2 3 4 **5** 6 7 Lower Risk — Higher Risk

Australasian Growth Fund

Monthly Update as at 30 November 2022

PERFORMANCE

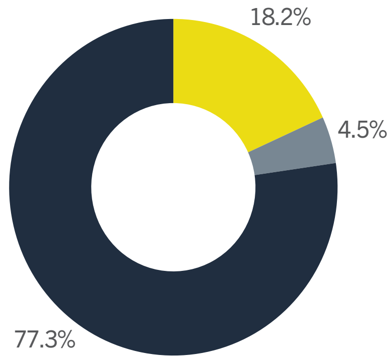
	1 month	1 yr	3 yrs (p.a.)	5 yrs (p.a.)	7 yrs (p.a.)	10 yrs (p.a.)	Annualised since inception
Australasian Growth Fund	0.6%	-29.3%	-1.5%	6.1%	3.9%	8.5%	12.5%
MARKET INDEX: XSOAI[1]	2.7%	-11.3%	3.3%	3.8%	7.5%	4.1%	0.6%

Returns after fees but before individual PIR tax applied

1. S&P/ASX Small Ordinaries Total Return Index (NZD)

INVESTMENT MIX

●	Cash/other (including short and long derivatives)	18.2%
●	New Zealand equities	4.5%
●	Australian equities	77.3%



TOP FIVE EQUITY HOLDINGS

Clearview Wealth Ltd	CVW: ASX
Life360 Inc	360: ASX
Macquarie Telecom Group Ltd	MAQ:ASX
Probiotec Ltd	PBP: ASX
Reject Shop Ltd/The	TRS: ASX

Holdings are listed in alphabetical order.

UNIT PRICE

$5.88

ANNUALISED RETURN SINCE INCEPTION

12.5% p.a.

after fees and before tax

FUND STATUS

CLOSED OPEN

Pie Funds

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Australasian Dividend Growth Fund

Monthly Update as at 30 November 2022

PORTFOLIO MANAGER(S)

MIKE ROSS
Portfolio Manager

FUND COMMENTARY

The Dividend Growth Fund returned 2.3% in November. The S&P/ASX Small Ordinaries Total Return Index (NZD) returned 2.7% for the month, buoyed by resources which outperformed industrials.

Contributors to performance included AUB Group, Accent Group and Imdex. Detractors included Omni Bridgeway and Collins Foods.

Accent Group's share price increased by 22% during the month. The company provided a trading update at its AGM which highlighted sales momentum, new store openings ahead of guidance, and a strong recovery in gross margins. Management is confident about the inventory position heading into the key Christmas period.

Insurance broker AUB Group increased by almost 12% in November after upgrading its guidance for the base business and providing maiden guidance for Tysers (acquired September) early in the month.

Imdex has been a strong performer lately and advanced by almost 19% in November. The company recently released a strong trading update for the first quarter of the financial year and presented at an industry conference during the month, reporting continuing strong conditions.

Collins Foods, an operator of KFC restaurants in Australia and Europe, was the largest detractor for the month, falling 20% after releasing its half-year result. The result came in in slightly below expectations as margin pressure more than offset reasonable revenue growth. We expected cost pressure, but the magnitude surprised us and management, who revised margin guidance (issued six months ago) lower.

For more information on our funds, please visit
www.piefunds.co.nz/Investor-Documents

CUMULATIVE FUND PERFORMANCE

If you had invested $100,000 at inception, the graph below shows what it would be worth today.

● *Australasian Dividend Growth Fund*

FUND DETAILS

Recommended minimum investment period	5 years
Objective	Generate income and capital growth over a period exceeding 5 years.
Description	Invests predominantly in listed Australasian smaller and medium growth companies paying dividends or that will produce cash-flow for future distributions.
Inception date	September 2011
Standard withdrawal period	10 working days
Risk indicator	Potentially Lower Returns — Potentially Higher Returns 1 2 3 4 5 ●6 7 Lower Risk — Higher Risk

Australasian Dividend Growth Fund

Monthly Update as at 30 November 2022

PERFORMANCE

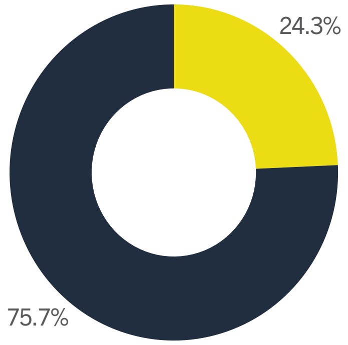
	1 month	1 yr	3 yrs (p.a.)	5 yrs (p.a.)	7 yrs (p.a.)	10 yrs (p.a.)	Annualised since inception
Australasian Dividend Growth Fund	2.3%	-11.1%	11.3%	12.2%	13.4%	13.3%	15.8%
MARKET INDEX: XSOAI[1]	2.7%	-11.3%	3.3%	3.8%	7.5%	4.1%	3.3%

Returns after fees but before individual PIR tax applied

1. *S&P/ASX Small Ordinaries Total ReturnIndex (NZD)*

INVESTMENT MIX

🟡	Cash/other (including short and long derivatives)	24.3%
●	Australian equities	75.7%



TOP FIVE EQUITY HOLDINGS

AUB Group Limited	ASX: AUB
Data#3 Ltd	DTL: ASX
Johns Lyng Group LTD	JLG:ASX
Karoon Gas Australia Ltd	KAR: ASX
Macquarie Telecom Group Ltd	MAQ:ASX

Holdings are listed in alphabetical order.

UNIT PRICE

$3.82

ANNUALISED RETURN SINCE INCEPTION

15.8% p.a.

after fees and before tax

FUND STATUS

CLOSED [✓ OPEN]

Pie Funds

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Australasian Emerging Companies Fund

Monthly Update as at 30 November 2022

PORTFOLIO MANAGER(S)

KENT WILLIAMS

Portfolio Manager

FUND COMMENTARY

The Australasian Emerging Companies Fund returned 3.2% for the month, bringing it to a 12-month return of -14.0%, and 18.6% annualised since inception.

Overall, the fund delivered pleasing results and outperformed the index in what was generally a 'risk-on' market, with a significant rally mid month after comments from the Fed were interpreted as more accommodative to monetary policy going forward.

The key contributors to performance during the month were IPD Group (+32%) and Duratec (+18%). IPD Group continued its strong run in November as the market anticipated a strong trading update – which the company certainly delivered on. The business is well positioned to benefit from ongoing growth in their existing business units as well as expanding into Electric Vehicle charging which is a thematic we are positive on. Duratec is starting to show positive signs of investor interest after their recently announce acquisition of Wilsons Pipe Fabrication, and providing full year guidance at their AGM.

The key detractor during the month was RPM Global, which has been a strong performer in the fund but pulled back over November on no news. The company remains a key holding within the fund.

Key changes for the month included initiating positions in Ramelius Resources as well as increasing MMA Offshore and Universal Store. Ramelius is an Australian-based gold producer and has recently put out three-year production guidance which we believe is very achievable. We increased our holding in MMA Offshore as we see this business is very well positioned to benefit from the ongoing requirement for increasing offshore capex in both energy and renewables. We also increased our position in Universal Store as we are attracted to the long-term growth opportunity in this business and see it trading on a reasonable valuation.

A key focus coming into December is to continue finding those high-quality companies that are now trading on attractive valuations, particularly where we see a strong medium to long-term growth opportunity. This remains our biggest focus and I look forward to updating you on what we have been doing here in future newsletters.

For more information on our funds, please visit
www.piefunds.co.nz/Investor-Documents

CUMULATIVE FUND PERFORMANCE

If you had invested $100,000 at inception, the graph below shows what it would be worth today.

FUND DETAILS

Recommended minimum investment period	5 years
Objective	Capital growth over a period exceeding five years.
Description	Invests predominantly in listed Australasian emerging companies.
Inception date	April 2013
Standard withdrawal period	3 months
Risk indicator	Potentially Lower Returns – Potentially Higher Returns 1 2 3 4 5 **6** 7 Lower Risk – Higher Risk

Australasian Emerging Companies Fund

Monthly Update as at 30 November 2022

PERFORMANCE

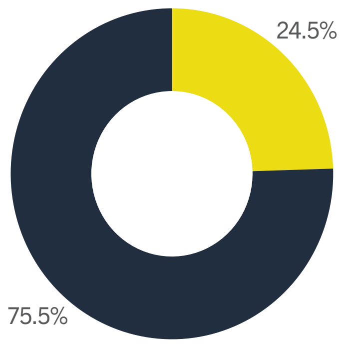
	1 month	1 yr	3 yrs (p.a.)	5 yrs (p.a.)	7 yrs (p.a.)	Annualised since inception
Australasian Emerging Companies Fund	3.2%	-14.0%	7.2%	10.4%	11.3%	18.6%
MARKET INDEX: SPAXECT[1]	1.1%	-13.5%	13.7%	9.7%	12.1%	6.8%

Returns after fees but before individual PIR tax applied

1. *S&P/ASX Emerging Companies Index (Total Return) (NZD)*

INVESTMENT MIX

●	Cash/other (including short and long derivatives)	24.5%
●	Australian equities	75.5%



TOP FIVE EQUITY HOLDINGS

Duratec Ltd	DUR: ASX
IPD Group Ltd	IPG: ASX
Kip McGrath Education Centres	KME: ASX
Probiotec Ltd	PBP: ASX
RPMGlobal Holdings Ltd	RUL: ASX

Holdings are listed in alphabetical order.

UNIT PRICE

$5.18

ANNUALISED RETURN SINCE INCEPTION

18.6% p.a.

after fees and before tax

FUND STATUS

CLOSED OPEN

Pie Funds

Information is current as at 30 November 2022. Pie Funds Management Limited is the manager of the funds in the Pie Funds Management Scheme. Any advice is given by Pie Funds Management Limited and is general only. Our advice relates only to the specific financial products mentioned and does not account for personal circumstances or financial goals. Please see a financial adviser for tailored advice. You may have to pay product or other fees, like brokerage, if you act on any advice. As manager of the Pie Funds Management Scheme investment funds, we receive fees determined by your balance and we benefit financially if you invest in our products. We manage this conflict of interest via an internal compliance framework designed to help us meet our duties to you. For information about how we can help you, our duties and complaint process and how disputes can be resolved, or to see our product disclosure statement, please visit www.piefunds.co.nz. Please let us know if you would like a hard copy of this disclosure information. Past performance is not a reliable indicator of future returns. Returns can be negative as well as positive and returns over different periods may vary.

Australasian Growth 2 Fund

Monthly Update as at 30 November 2022

PORTFOLIO MANAGER(S)

KENT WILLIAMS
Portfolio Manager

FUND COMMENTARY

The Australasian Growth 2 Fund returned 2.8% for the month, bringing it to a 12-month return of -25.6%, and 11.5% annualised since inception. Overall the fund performance in November was in line with the benchmark.

November was characterised as generally 'risk-on' with a significant rally mid month after comments from the Fed were interpreted as more accommodative to monetary policy going forward.

The key contributors to performance this month were Aroa Biosurgery and Imdex, both of which remain core positions within the fund. Aroa delivered a positive quarterly update late in October which was followed by strong investor sentiment over the month of November, with the stock up 25%. Imdex continued to perform strongly following a positive AGM update in October. The company also benefited from being exposed to the resources theme, where companies exposed to this sector generally performed well during the month.

The key detractors this month were Ridley and Lovisa. Ridley fell roughly 8% over the month after posting a trading update that, while positive overall, did highlight some short-term headwinds stemming from their seasonal crop transition. Lovisa declined slightly after a strong trading update, as we believe some investors may have used the opportunity to take profits in the short term.

During the month we increased our positions in Perenti Global and Perseus Mining as we believe both are favourably positioned in the current market environment. Perenti continues to benefit from improving contracts in its mining contracting business as well as improving labour conditions, particularly in WA. Perseus Mining is, we believe, a best-in-class gold resource company with an excellent track record of consistently delivering on expectations. In terms of sells this month, we continued to reduce exposure to companies where we lack confidence in their ability to deliver on earnings.

A key focus coming into December is to continue finding those high-quality companies that are now trading on very attractive valuations, particularly where we see a strong medium to long-term growth opportunity. This remains our biggest focus and I look forward to updating you on what we have been doing here in future newsletters.

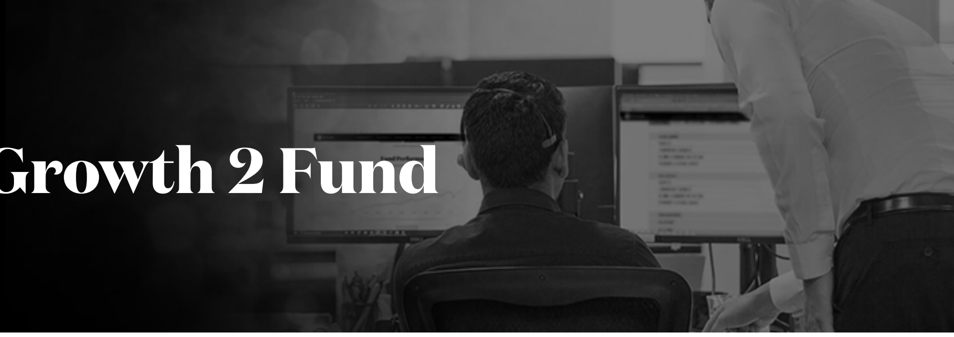
For more information on our funds, please visit
www.piefunds.co.nz/Investor-Documents

CUMULATIVE FUND PERFORMANCE

If you had invested $100,000 at inception, the graph below shows what it would be worth today.

FUND DETAILS

Recommended minimum investment period	5 years
Objective	Capital growth over a period exceeding five years.
Description	Invests predominantly in listed Australasian smaller and medium companies.
Inception date	August 2015
Standard withdrawal period	10 working days
Risk indicator	Potentially Lower Returns — Potentially Higher Returns 1 2 3 4 5 **6** 7 Lower Risk — Higher Risk



Australasian Growth 2 Fund

Monthly Update as at 30 November 2022

PERFORMANCE

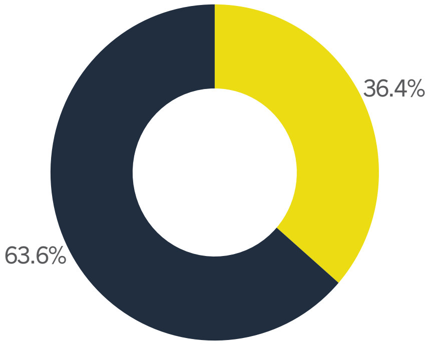
	1 month	1 yr	3 yrs (p.a.)	5 yrs (p.a.)	7 yrs (p.a.)	Annualised since inception
Australasian Growth 2 Fund	2.8%	-25.6%	2.8%	8.8%	10.5%	11.5%
MARKET INDEX: XSOAI[1]	2.7%	-11.3%	3.3%	3.8%	7.5%	7.3%

Returns after fees but before individual PIR tax applied

[1] *S&P/ASX Small Ordinaries Total Return Index (NZD)*

INVESTMENT MIX

●	Cash/other (including short and long derivatives)	36.4%
●	Australian equities	63.6%



TOP FIVE EQUITY HOLDINGS

Aroa Biosurgery Ltd	ARX: ASX
HUB24 Ltd	HUB: ASX
IDP Education Ltd	IEL: ASX
Imdex Ltd	IMD: ASX
Perenti LLtd	PRN: ASX

Holdings are listed in alphabetical order.

UNIT PRICE

$2.22

ANNUALISED RETURN SINCE INCEPTION

11.5% p.a.

after fees and before tax

FUND STATUS

CLOSED OPEN

Pie Funds

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Global Growth Fund

Monthly Update as at 30 November 2022

PORTFOLIO MANAGER(S)

GUY THORNEWILL*
Head of Global Research

TOBY WOODS*
Senior Investment Analyst

MIKE TAYLOR
Founder and Chief Investment Officer

**Guy Thornewill and Toby Woods are responsible for research and analysis*

FUND COMMENTARY

The fund returned 3.6% for the month, bringing it to a 12-month return of -13.2%.

November saw a further rebound in global equity markets, aided by slightly better news on the inflation front from the US, lower energy prices in Europe, and some tentative signs that China would ease its zero-Covid policy. Interest rate expectations look to have peaked as we have been expecting, and the US dollar weakened. The earnings outlook for many companies is still gloomy as we get closer to a recession in many economies, but markets have already anticipated much of this. We are beginning to move the fund into higher beta stocks, while keeping defensive growth holdings at the core.

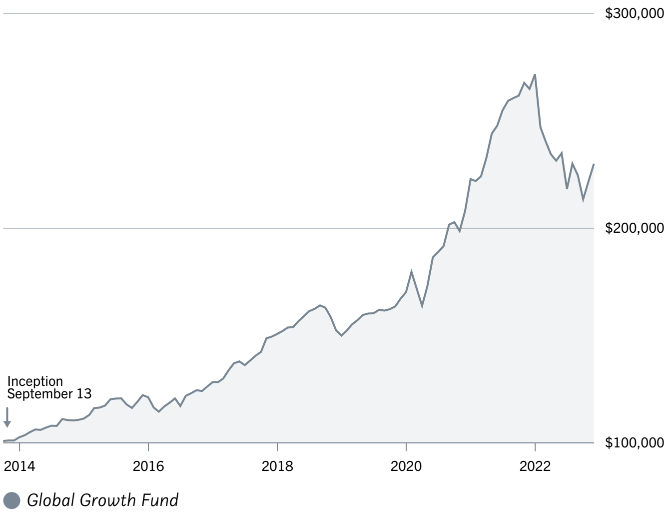
During the month we added three new positions: Munters, Crocs, and Winmark. Munters, based in Sweden, is a leading provider of energy efficient and mission-critical dehumidification and cooling solutions across the industrial and food sectors. Its solutions reduce customers' climate and environmental impact through efficient resource consumption. It is a clear play on energy curtailment in industrial processes – a key theme we are developing. Crocs is a footwear business we know well, having owned it in the past. Brand momentum remains strong despite consumer spending pressures, and we feel the shares are undervalued. Winmark operates a franchise model for second hand clothes stores in the US. Given consumers are looking to save money, we expect its sales growth to accelerate as it did in the last recession, and the company has a great long-term track record.

There have been many winners in the fund this month, including Bufab, Traxion, Nexus and Tecan. SES-imagotag performed well again after presenting an ambitious growth plan at its Capital Markets Day in Paris. Looking forward, we will continue to deploy cash if markets soften, and we are looking to increase exposure further in consumer discretionary and technology stocks. Finally, we think companies that help commercial and residential buildings become more energy efficient will see strong demand in the next few years, so we are looking to find the best global companies in this area.

For more information on our funds, please visit
www.piefunds.co.nz/Investor-Documents

CUMULATIVE FUND PERFORMANCE

If you had invested $100,000 at inception, the graph below shows what it would be worth today.



FUND DETAILS

Recommended minimum investment period	5 years
Objective	Capital growth over a period exceeding five years.
Description	Invests predominantly in listed international smaller companies, international managed funds and other products issued by Pie Funds.
Inception date	September 2013
Standard withdrawal period	10 working days
Risk indicator	Potentially Lower Returns — Potentially Higher Returns 1 2 3 4 **5** 6 7 Lower Risk — Higher Risk

Global Growth Fund

Monthly Update as at 30 November 2022

PERFORMANCE

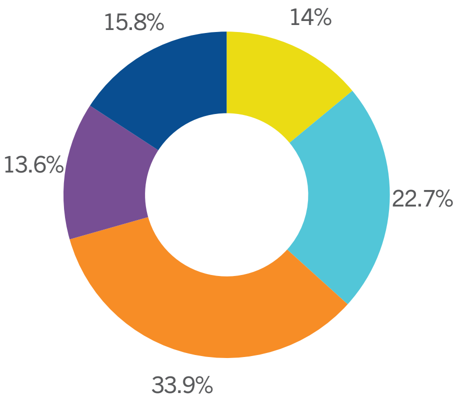
	1 month	1 yr	3 yrs (p.a.)	5 yrs (p.a.)	7 yrs (p.a.)	Annualised since inception
Global Growth Fund	3.6%	-13.2%	11.2%	9.0%	9.5%	9.4%
MARKET INDEX: STEMGLU[1]	-0.4%	-4.3%	6.6%	6.3%	8.2%	10.1%

Returns after fees but before individual PIR tax applied

1. S&P Global SmallCap (Total Return) Index (NZD)

INVESTMENT MIX

●	Cash/other (including short and long derivatives)	14.0%
●	Emerging markets equities	22.7%
●	European equities	33.9%
●	UK equities	13.6%
●	US and Canadian equities	15.8%



TOP FIVE EQUITY HOLDINGS

Discoverie Group	DSCV: LSE
Frp Advisory Group	FRP: AIM
Grenergy Renovables SA	GRE: BME
Sdiptech AB (publ)	SDIP B: OM
William Blair SICAV - Emerging Markets	

Holdings are listed in alphabetical order.

UNIT PRICE

$2.30

ANNUALISED RETURN SINCE INCEPTION

9.4% p.a.

after fees and before tax

FUND STATUS

CLOSED [✓ OPEN]

Pie Funds

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Growth UK & Europe Fund

Monthly Update as at 30 November 2022

PORTFOLIO MANAGER(S)

GUY THORNEWILL*
Head of Global Research

TOBY WOODS*
Senior Investment Analyst

MIKE TAYLOR
Founder and Chief Investment Officer

**Guy Thornewill and Toby Woods are responsible for research and analysis*

FUND COMMENTARY

The fund returned 5.3% for the month, bringing it to a 12-month return of -15.3%.

Momentum continued from October into November across all global markets, with the main tailwinds in Europe being the lower gas price. In fact, gas storage in Europe peaked about three weeks later than normal this year and was 15% higher than last year, following better-than-expected supply and the warm weather that reduced demand. This bodes well for the rest of the winter even if the weather turns much colder, giving us confidence that the worst of the energy crisis may well have passed.

During the month we added two new positions: Munters and HelloFresh. Munters is a leading provider of energy efficient and mission-critical dehumidification and cooling solutions across industrial and agricultural sectors based in Sweden with global operations. Its solutions reduce customers' climate and environmental impact through efficient resource consumption while also driving better efficiency. It is a clear play on energy curtailment in industrial processes, a key theme we are developing. HelloFresh is a business we know well having owned it in the past. While there are headwinds to consumer spending which may adversely affect the meal delivery sector, we feel that valuation has become too cheap to ignore for this global leader.

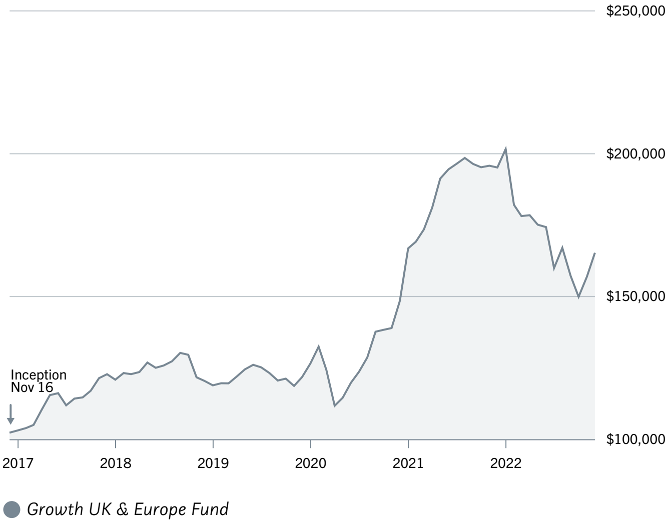
There have been many winners in the fund this month, including Elmos Semiconductor (+29%), CTS Eventim (+23%) and Impax (+18%), and one detractor, Marlowe (-38%). Marlowe is frustrating as the defensive nature of its business, supplying critical services and software which assure safety and regulatory compliance for a wide range of sectors, has been outweighed by higher interest rate costs that spooked the market. Fortunately it is a low weight and we have reduced exposure.

Finally, we thoroughly enjoyed the investor days this month. The three of us in the UK team appreciated presenting to and speaking with clients in five different destinations across New Zealand. It was a long overdue trip which we look forward to repeating in 2023!

For more information on our funds, please visit
www.piefunds.co.nz/Investor-Documents

CUMULATIVE FUND PERFORMANCE

If you had invested $100,000 at inception, the graph below shows what it would be worth today.



FUND DETAILS

Recommended minimum investment period	5 years
Objective	Capital growth over a period exceeding five years.
Description	Invests predominantly in listed UK & European smaller companies.
Inception date	November 2016
Standard withdrawal period	10 working days
Risk indicator	Potentially Lower Returns — Potentially Higher Returns 1 2 3 4 **5** 6 7 Lower Risk — Higher Risk

Growth UK & Europe Fund

Monthly Update as at 30 November 2022

PERFORMANCE

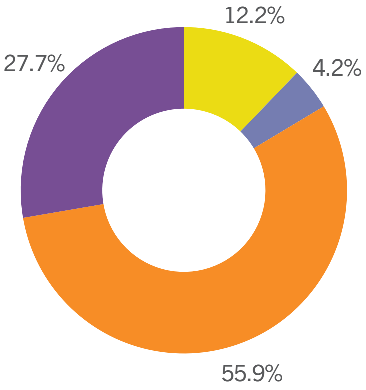
	1 month	1 yr	3 yrs (p.a.)	5 yrs (p.a.)	Annualised since inception
Growth UK & Europe Fund	5.3%	-15.3%	10.7%	6.1%	8.6%
MARKET INDEX: M7EUSC [1]	3.5%	-17.4%	1.1%	2.1%	7.5%

Returns after fees but before individual PIR tax applied

1. *MSCI Europe Small Cap Net Return Index (NZD)*

INVESTMENT MIX

●	Cash/other (including short and long derivatives)	12.2%
●	Global fixed income	4.2%
●	European equities	55.9%
●	UK equities	27.7%



TOP FIVE EQUITY HOLDINGS

Discoverie Group	DSCV: LSE
Frp Advisory Group	FRP: AIM
Nexus AG	NXU: XTRA
Sdiptech AB (publ)	SDIP B: OM
SES-imagotag	SESL: ENXTPA

Holdings are listed in alphabetical order.

UNIT PRICE

$1.65

ANNUALISED RETURN SINCE INCEPTION

8.6% p.a.

after fees and before tax

FUND STATUS

CLOSED [✓ OPEN]

Pie Funds

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Global Growth 2 Fund

Monthly Update as at 30 November 2022

PORTFOLIO MANAGER(S)

GUY THORNEWILL*
Head of Global Research

TOBY WOODS*
Senior Investment Analyst

MIKE TAYLOR
Founder and Chief Investment Officer

**Guy Thornewill and Toby Woods are responsible for research and analysis*

FUND COMMENTARY

The fund returned 3.7% for the month, bringing it to a 12-month return of -14.8%.

November saw a further rebound in global equity markets, aided by slightly better news on the inflation front from the US, lower energy prices in Europe, and some tentative signs that China would ease its zero covid policy. Interest rate expectations look to have peaked as we have been expecting, and the US dollar weakened. The earnings outlook for many companies is still gloomy as we get closer to a recession in many economies, but markets have already anticipated much of this. We are beginning to move the fund into higher beta stocks, while keeping defensive growth holdings at the core.

During the month we added four new positions as we start to increase the fund's consumer and technology weightings, where we are seeing value emerge despite the short-term outlook remaining tricky. We bought salesforce.com, the global leader in enterprise software for customer relationship management, after the shares fell more than 50%. We added HelloFresh, which is a business we know well having owned it in the past. While there are headwinds to consumer spending which may adversely affect the meal-kit delivery sector, we felt that the valuation had become too cheap to ignore for this global leader. Also in the consumer sector we bought LVMH, the global leader in luxury goods. The shares have performed well since purchase as China is starting to ease its Covid rules. Finally, we bought Ayala Land, a leading Philippine property company trading at close to a 50% discount to its Net Asset Value, as we feel the headwinds of 2022 will soon become tailwinds.

There were many good performers in the month, including Equinix (data centre operator), CTS Eventim (ticketing), EssilorLuxottica (eyecare), ThermoFisher (diagnostic equipment) and Metso Outotec (mining equipment). Yeti rose about 50% in the month as it reported better than expected sales for its drinkware and coolers, and it demonstrated it could sustain sales growth despite having been a covid winner. Finally, SES-imagotag performed well again after presenting an ambitious growth plan at its Capital Markets Day in Paris.

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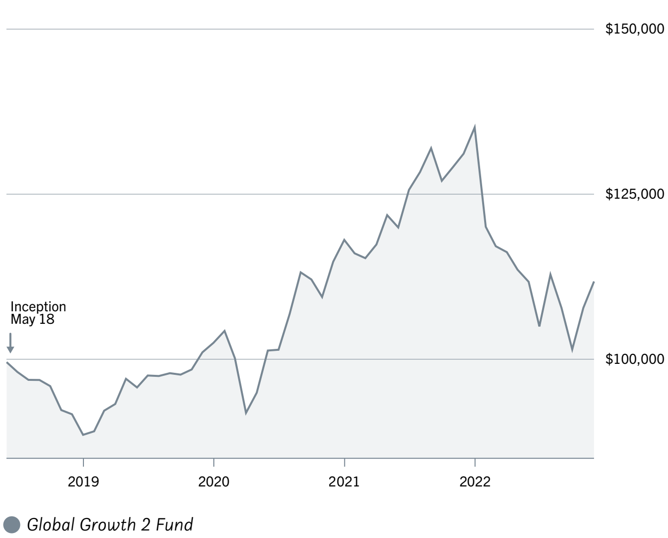
www.piefunds.co.nz/Investor-Documents

CUMULATIVE FUND PERFORMANCE

If you had invested $100,000 at inception, the graph below shows what it would be worth today.



FUND DETAILS

Recommended minimum investment period	5 years
Objective	Capital growth over a period exceeding five years.
Description	Invests predominantly in listed international large companies.
Inception date	May 2018
Standard withdrawal period	Up to 5 working days
Risk indicator	Potentially Lower Returns — Potentially Higher Returns 1 2 3 4 **5** 6 7 Lower Risk — Higher Risk

Global Growth 2 Fund

Monthly Update as at 30 November 2022

PERFORMANCE

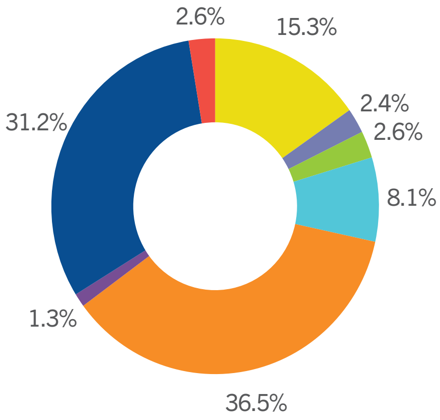
	1 month	1 yr	3 yrs (p.a.)	Annualised since inception
Global Growth 2 Fund	3.7%	-14.8%	3.4%	2.5%
MARKET INDEX: MSCIACWI[1]	0.4%	-5.2%	5.9%	7.5%

Returns after fees but before individual PIR tax applied

1. MSCI ACWI Index (NZD)

INVESTMENT MIX

●	Cash/other (including short and long derivatives)	15.3%
●	Global fixed income	2.4%
●	Asian equities	2.6%
●	Emerging markets equities	8.1%
●	European equities	36.5%
●	UK equities	1.3%
●	US and Canadian equities	31.2%
●	Listed property	2.6%



TOP FIVE EQUITY HOLDINGS

Alcon AG	ALC: SWX
Cellnex Telecom SA	CLNX: BME
NextEra Energy Partners LP	NEP: NYSE
Schneider Electric SE	SU: ENXTPA
Sika AG	SIKA: SWX

Holdings are listed in alphabetical order.

UNIT PRICE

$1.12

ANNUALISED RETURN SINCE INCEPTION

2.5% p.a.

after fees and before tax

FUND STATUS

CLOSED [✓ OPEN]

Pie Funds

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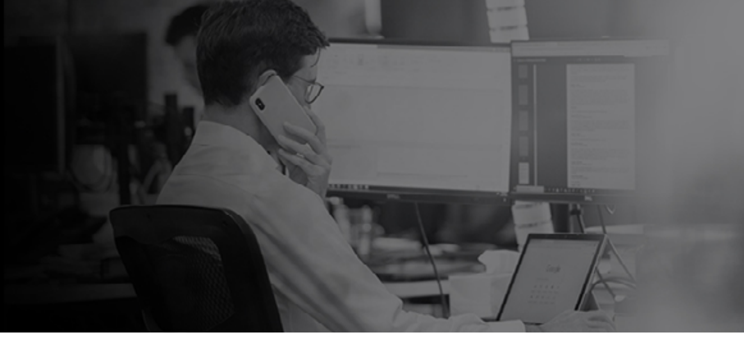


Conservative Fund

Monthly Update as at 30 November 2022

PORTFOLIO MANAGER(S)

MIKE TAYLOR
Founder and Chief
Investment Officer

TRAVIS MURDOCH
Head of Fixed Income and
Portfolio Manager

FUND COMMENTARY

The fund returned 1.6% for the month, bringing it to a 12-month return of -4.0%.

While it's frustrating (and rare) when a low-risk product produces a negative return, considering that it has been the worst year for bonds in history and we've also been in an equity bear market, I think this result is a good outcome and better than many of our peers.

The good news is that, statistically, the odds of a positive return in 2023, even a strong positive return, have now increased, particularly given where we are starting from. As such, I'm optimistic about the outlook for the Conservative Fund in 2023, and we are much better placed than 12 months ago when stocks were at all-time highs and bonds were at all-time low yields.

On the equity front, our faith in holding on to online marketplace Etsy has been rewarded with the stock up 41% in November. Our conventional energy plays, Exxon, Schlumberger and ASX-listed Karoon, all hit 12-month highs during the month. In fact, almost all of the 500 stocks in the S&P500 were up during the month, with many sectors and indices posting double-digit gains.

Global interest rates generally moved lower (bond prices higher) with the exception of NZ where the Reserve Bank of New Zealand raised the Official Cash Rate by a record 0.75% and signalled a significantly higher peak in rates than previously indicated.

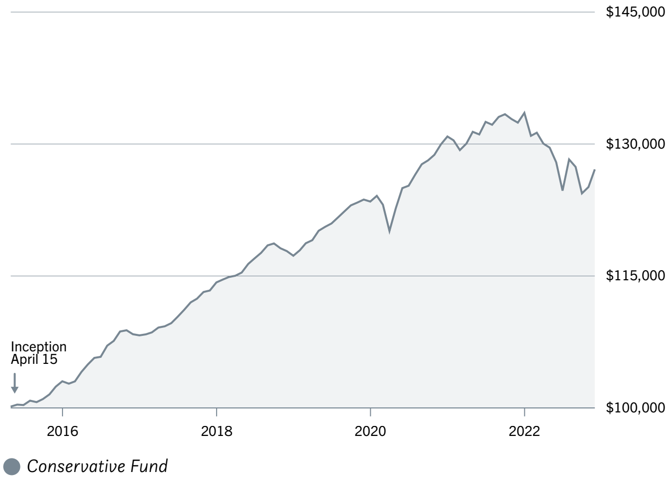
Nonetheless, the fund benefited from the outperformance bond holdings, such as Citigroup US dollar bonds, which gained from the move lower in interest rates offshore.

Our confidence is growing that inflation has peaked. While labour markets remain tight, and certain elements of inflation remain sticky, core goods prices in the US continue to ease from the highs and were actually negative in October. The path is not clear, but we may have already seen the highs in market interest rates for this cycle. With the fund's bond holdings still yielding above 5.5%, the outlook for bonds looks better than it has in some time.

For more information on our funds, please visit
www.piefunds.co.nz/Investor-Documents

CUMULATIVE FUND PERFORMANCE

If you had invested $100,000 at inception, the graph below shows what it would be worth today.

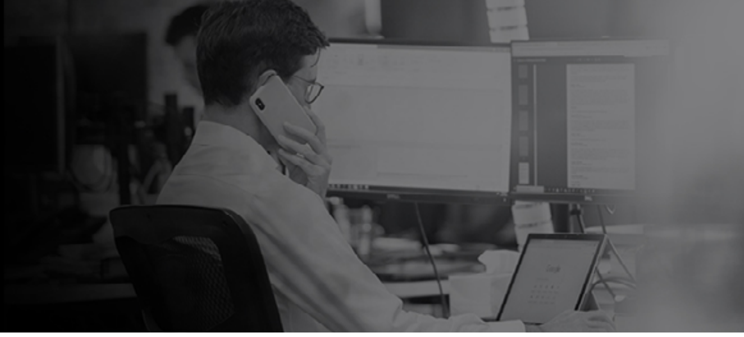


FUND DETAILS

Recommended minimum investment period	3 years
Objective	Preserve capital (with some growth), which outperforms the market index over a 3-5 year period.
Description	Invests predominantly in fixed interest securities and some cash, with an allocation to equities (directly or through other products issued by Pie Funds).
Inception date	April 2015
Standard withdrawal period	Up to 5 working days
Risk indicator	Potentially Lower Returns … Potentially Higher Returns 1 2 **3** 4 5 6 7 Lower Risk … Higher Risk

Conservative Fund

Monthly Update as at 30 November 2022



PERFORMANCE

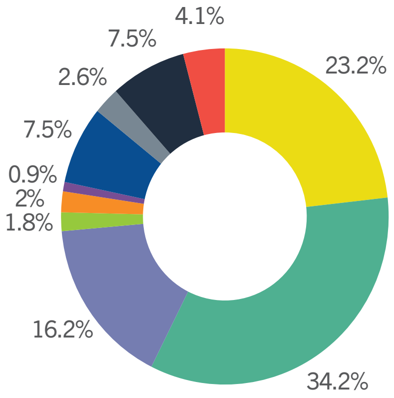
	1 month	1 yr	3 yrs (p.a.)	5 yrs (p.a.)	7 yrs (p.a.)	Annualised since inception
Conservative Fund	1.6%	-4.0%	0.9%	2.3%	3.1%	3.2%
MARKET INDEX: COMPOSITE INDEX[1]	1.1%	-3.5%	0.8%	2.7%	3.5%	3.7%

Returns after fees but before individual PIR tax applied

1. The market index is a composite index (25% NZBond Bank Bill Index (NZD), 30% S&P NZX Investment Grade Corporate Bond Total Return Index (NZD), 20% Bloomberg Barclays Global Aggregate Total Return Index Hedged (NZD), 5% S&P/ASX All Ordinaries Accumulation Index (NZD), 15% MSCI ACWI IMI Net Total Return Index (NZD), 5% S&P Global REIT Total Return Index (NZD)).

INVESTMENT MIX

●	Cash/other (including short and long derivatives)	23.2%
●	New Zealand fixed income	34.2%
●	Global fixed income	16.2%
●	Asian equities	1.8%
●	European equities	2.0%
●	UK equities	0.9%
●	US and Canadian equities	7.5%
●	New Zealand equities	2.6%
●	Australian equities	7.5%
●	Listed property	4.1%



TOP FIVE HOLDINGS (EXCLUDING CASH)

HBLNZ Term Deposit

ISHARES ESG AWARE

ISHARES ESG AWARE US AGGREGATE BOND

IShares Global Green Bond ETF

van Eyk B/Print Emerging Income Opportunities

Holdings are listed in alphabetical order and exclude cash.

UNIT PRICE

$1.12

ANNUALISED RETURN SINCE INCEPTION

3.2% p.a.

after fees and before tax

FUND STATUS

CLOSED **OPEN**

Pie Funds

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