Investment Management

Ardea Real Outcome Fund

ARSN 158 996 699 APIR Code HOW0098AU

Monthly Performance Report September 2023

Performance[1]	1 month	3 month	1 year	2 year	3 year	5 year	10 year	Inception
Fund	0.19	1.54	3.94	2.44	1.76	3.98	3.75	3.68
Benchmark (CPI)[2]	0.33	1.31	5.49	6.38	5.24	3.60	2.68	2.68
Excess Return v CPI	-0.14	0.23	-1.55	-3.94	-3.49	0.38	1.07	1.00
Excess Return v Cash[3]	-0.15	0.46	0.37	0.41	0.40	2.70	2.01	1.80

[1] Performance figures are calculated after fees have been deducted and assume distributions have been reinvested. No allowance is made for tax when calculating these figures. Past performance is not a reliable indicator of future performance.
[2] The Fund benchmark is the Australian Consumer Price Index.
[3] The Bloomberg Ausbond Bank Bill Index
Inception: 20 July 2012
Source: Fidante Partners Limited, 30 September 2023.

Fund Features

Unique 'relative value' investment strategy: The Fund adopts a relative value investment strategy to access a range of fixed income return sources that are independent of interest rates.

Tight risk control: The Fund specifically targets low volatility returns by using a range of risk management strategies.

Diversification benefits: The Fund offers significant diversification benefits when combined with conventional bond, credit and equity investments in an investment portfolio.

Capital preservation: The Fund prioritises capital preservation by only investing in high quality government bonds, related derivatives and cash like investments. However, the Fund is not guaranteed.

Protect long term purchasing power: The Fund explicitly targets a return exceeding Australian inflation rates to protect long term purchasing power.

Daily liquidity: The Fund only invests in the most liquid segments of global fixed income markets.

Experienced and stable investment team: Ardea's investment team has decades of experience across global fixed income markets. Majority employee ownership of the Ardea business fosters team stability.

Fund Facts

Portfolio Manager	Ardea Investment Management
Investment Objective	The Fund targets low volatility returns exceeding cash rates and inflation, by investing in a global portfolio of high quality government bonds that prioritises capital preservation and liquidity.
Investment Horizon	Recommended min. 2 years
Inception Date	20 July 2012
Fund Size	$6.5bn
Management Fee	0.50% p.a.
Buy/Sell Spread	+0.05% / -0.05%
Distribution Frequency	Quarterly

Sector Exposure	
Government – National	58%
Government – State	42%
Total	100%

Rating Exposure	
AAA	63%
AA	33%
A	5%
Total	100%

Risk Contribution by Currency	
AUD	25%
CAD	7%
EUR	14%
JPY	2%
NZD	0%
GBP	18%
USD	34%
Total	100%

Source: Ardea Investment Management, S&P Ratings

Overview

Ardea's pure relative value (RV) investment specialisation is fundamentally different to conventional fixed income investing and therefore we customise our quarterly portfolio commentaries accordingly.

As our portfolios are inherently high turnover, highly diversified and designed to generate uncorrelated returns from a repeated investment process averaged over time:

- *performance is the cumulative result of interactions between hundreds of modestly sized trades that were entered, exited, and held over the preceding months*
- *performance is generally driven by many small gains / losses, rather than a few key contributors*
- *performance is not driven by broader bond / equity market fluctuations*
- *a single quarter is generally not enough time to draw meaningful conclusions about performance themes*

Therefore, we customise our quarterly portfolio commentaries in the following ways:

- *Consider quarterly performance in isolation only when there is outsized performance volatility, unusually concentrated performance drivers and / or noteworthy portfolio changes.*
- *Consider quarterly performance in a longer-term context, with reference to the Fund's investment objectives and the roles it plays as part of our clients' broader portfolios.*

Investment Objectives

The Fund's investment objectives encompass both the magnitude of returns generated ('size' of return) and the risk characteristics underlying those returns ('style' of return), resulting in a unique combination of risk / return attributes that cannot be obtained from conventional fixed income investments.

These attributes align to the roles that the Fund can play as part of clients' broader investment portfolios, all of which link to the underlying theme of defensive risk diversification.

Size of return:

- *target return of CPI / cash + 2% p.a. (before fees; 2-year investment horizon)*

Style of return:

- *uncorrelated returns (i.e. duration neutral + returns independent of bond / equity market performance and conventional macro factors that dominate most investments)*
- *defensive risk profile (i.e. bias to outperforming when bond / equity markets incur losses + exclude credit investments + maintain low performance volatility)*

Portfolio Commentary

Fund performance

Performance for the month of September was +0.2%, for the quarter the Fund returned 1.5%.

Performance volatility

Performance for every month this quarter was within the normal range of expected short-term performance variability.

Based on the Fund's 2% p.a. volatility target, monthly performance is expected to remain in a range of -1.0% to +1.3% about 95% of the time and be outside this range about 5% of the time. About 68% of the time, we expect monthly performance in a tighter band of -0.4% to +0.7%.

Performance attribution

As usual, performance drivers for the quarter were diversified across many small gains / losses, with no unusually concentrated performance drivers.

Performance Attribution - Currency Breakdown (before fees)								
3 Months	AUD	CAD	EUR	GBP	JPY	NZD	USD	TOTAL
Rates	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	**0.1%**
Curve	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	**0.5%**
Bonds vs Derivatives	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	0.3%	**0.6%**
Options	0.1%	0.0%	-0.1%	-0.1%	0.0%	0.0%	-0.5%	**-0.6%**
Total RV Alpha	**0.2%**	**0.0%**	**-0.1%**	**0.0%**	**0.1%**	**0.1%**	**0.3%**	**0.6%**

The Fund's aggregate option exposures incurred a loss over the quarter, which was balanced by gains on other RV exposures. This pattern is expected in the context of how we use options.

Our portfolios buy interest rate options to provide 'risk balance' in portfolio construction.

Many RV trades are biased to temporarily underperform in stressed market environments, while option exposures (and other risk balancing trades) have the opposite bias, thereby balancing out the other loss-making trades and dampening overall Fund performance volatility.

When market volatility subsides – as it generally has over the past quarter – the balancing process reverses, with options underperforming, while other RV trades outperform.

This behaviour of the Fund's option exposures also fits particularly well in the context of the Fund's defensive role as part of clients' broader investment portfolios because options are most likely to contribute positively to Fund performance in stressed market environments, which is when other investments in client portfolios are most likely to incur losses.

Longer term performance context

The Fund's 1-year return was +3.9%, outperforming vs AUD cash rates (+0.4% vs AusBond Bank Bills Index) but underperforming vs inflation (-1.5% vs CPI).

This performance was delivered against a backdrop of rising interest rates, persistently high inflation and generally positive performance from government bond, credit, and equity markets.

Over the year to 30-Sep-2023:

- *AUD cash rates rose from 2.8% to 4.1% (AusBond Bank Bill Index yield)*
- *AU inflation rose to 6.0% (AUD CPI index YoY change)*
- *AUD bonds returned +1.6% (CY 2022 -9.7%; AusBond Composite Bond Index)*
- *Global bonds returned +0.5% (CY 2022 -12.3%; Bloomberg Global Agg Bond Index in AUD)*

The Fund's positive performance over the past year follows its positive return over CY 2022, a period which serves as a perfect example of why the Fund can play a compelling diversification role for multi-asset portfolios.

> *2022 was a period of significant volatility across global financial markets that proved particularly challenging for multi-asset portfolios to navigate because both equities, and the traditional 'safe haven' of government bonds, incurred substantial losses in unison.*
>
> *By contrast, the Fund's performance remained independent of broader financial market performance, thereby helping to diversify risk and dampen volatility in client portfolios.*

September 2023	1Y	CY2022	2Y
ARO Total Return	3.9%	1.0%	2.4%
Ausbond Composite Bond Index	1.6%	-9.7%	-5.1%
S&P/ASX200	8.9%	-5.5%	-2.0%

Portfolio composition

While the Fund's individual trades are constantly changing, there were no notable structural or thematic changes in portfolio composition over the quarter.

The table below conveys the Fund's current positioning by decomposing its risk utilisation across geographies (rows) and risk factors (columns). Each box in the table can be further decomposed into a large number of modestly sized relative value trade structures.

As examples of how to interpret these numbers:

> *19.5% of the Fund's risk is currently allocated to USD Micro Curve RV exposures. This is made up of many combinations of trades (i.e. long/short positions in bonds, swaps, and futures) that seek to profit from pricing anomalies in the shapes of US interest rate curves.*
>
> *8.5% of the Fund's risk is currently allocated to EUR Bond vs Swap exposures. This is made up of many long and short positions in government bonds that seek to profit from dispersion in the pricing of similar of bonds.*

Risk Budget Breakdown - Allocation by Risk Factor and Currency									
			Nominal Rates						
Currency	Bond vs Swap	Inflation Curve	Macro Level	Macro Slope	Macro Curvature	RV Micro Curve	SSA Spread	XCCY Basis	Total
AUD	13.7%	4.3%	0.3%	0.0%	0.0%	5.9%	1.1%	0.0%	**25.4%**
CAD	0.0%	0.0%	0.0%	0.1%	0.2%	6.8%	0.0%	0.0%	**7.2%**
EUR	8.5%	0.0%	0.1%	0.1%	0.0%	5.3%	0.2%	0.0%	**14.1%**
GBP	2.7%	0.7%	0.7%	0.5%	0.2%	13.3%	0.0%	0.0%	**17.9%**
JPY	0.2%	0.0%	0.1%	0.1%	0.0%	1.2%	0.0%	0.0%	**1.5%**
NZD	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	**0.1%**
USD	5.5%	3.4%	0.4%	2.3%	0.2%	19.5%	0.0%	2.4%	**33.8%**
Total	**30.5%**	**8.4%**	**1.6%**	**3.1%**	**0.6%**	**52.1%**	**1.2%**	**2.4%**	**100%**

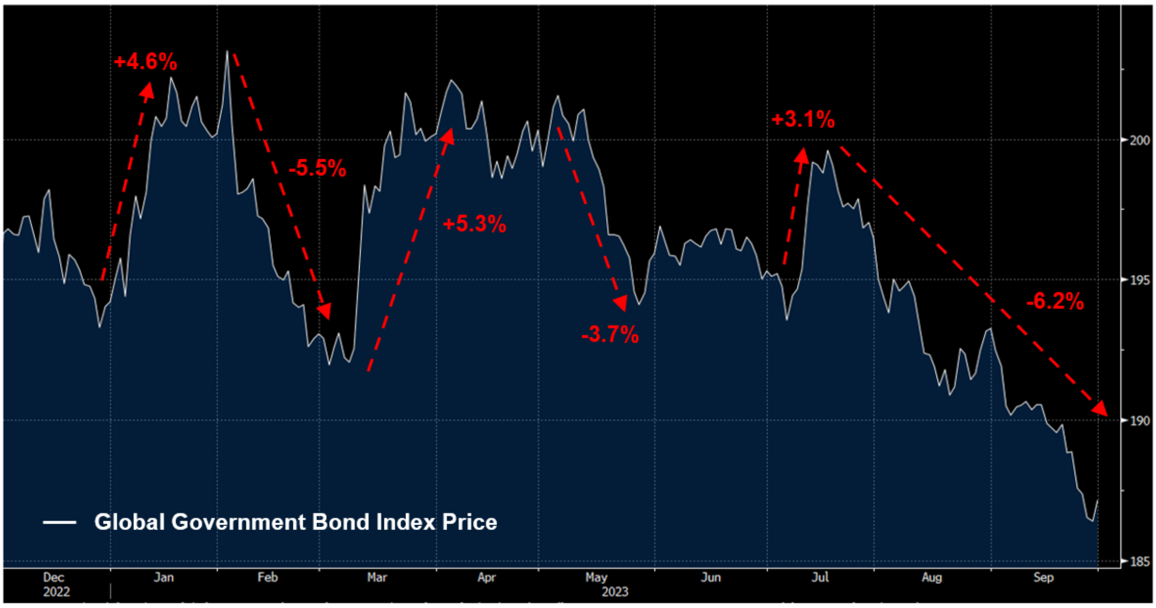
Market Themes & Fund Outlook

Fixed income market themes

On the surface, bond markets appear to have calmed considerably relative to the historically extreme turmoil of 2022, with YTD bond index returns hovering around small positives or negatives. Beneath the surface however, bond markets remain highly volatile by historical standards.

CYTD 2023 bond market returns:

- *AUD bonds +1.2% (AusBond Composite Bond Index)*
- *Global bonds -0.1% (Bloomberg Global Agg Bond Index in AUD)*



* Data as at 30-Sep-2023. Global Government Bond Index = Bloomberg Global Aggregate Treasuries Index
Source: Ardea Investment Management, Bloomberg

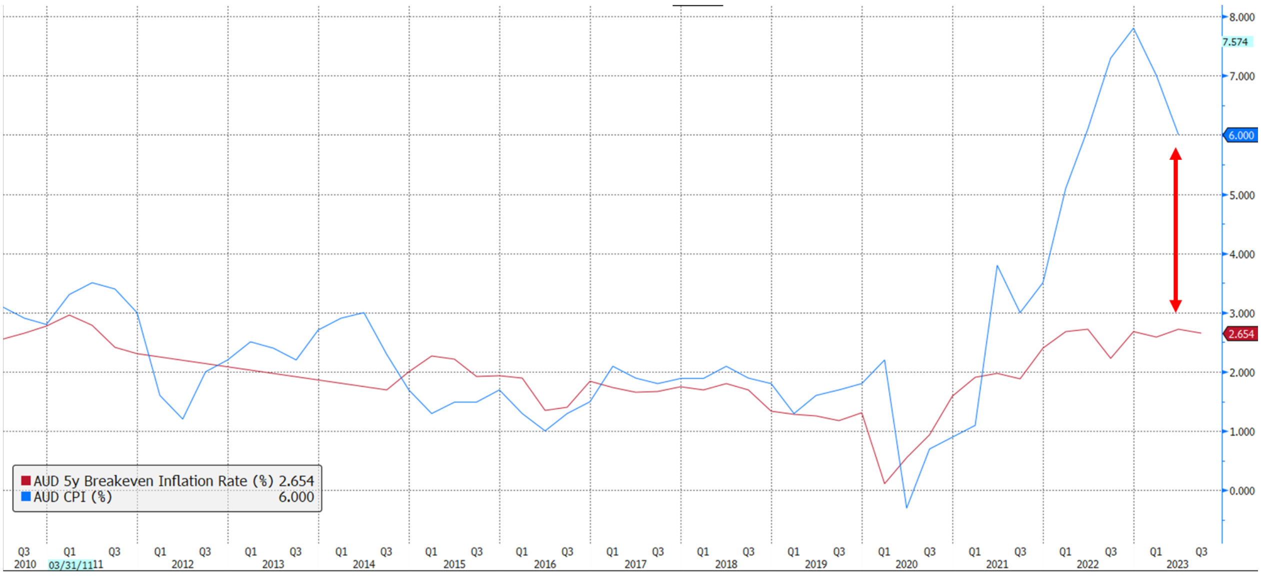
Government bond markets remain highly volatile because of elevated macro uncertainty, stemming from the tension between persistent inflation vs recession risk.

On one side, persistent inflation continues to put upward pressure on interest rates / bond yields.

On the other side, the lagged effect of past rate hikes could eventually tip economies into recession, triggering future rate cuts, which puts downward pressure on interest rates / bond yields.

For the past 2 years inflation has generally surprised to the upside vs consensus forecasts. Despite this, markets continue to price a forward-looking expectation that inflation – and by extension interest rates / bond yields – have already peaked and will fall relatively quickly from current levels.

As an example, the chart below shows the extreme divergence between current inflation (blue line) and forward-looking market expectations of future inflation (red line).



Source: Ardea IM, Bloomberg

Back in 2013, Warren Buffett famously compared interest rates to the force of gravity. – *"… interest rates are to asset prices, you know, sort of like gravity is to the apple."* – The implication being that higher rates generally means lower asset prices, because of discount rate effects.

The current optimistic consensus view about future inflation is a key reason why most equity markets (and riskier assets more broadly) have so far managed to resist the gravitational pull of higher rates.

Nobody can reliably forecast how inflation – and by extension interest rates / bond yields – will evolve. What we can see is that markets are currently priced for a benign scenario in which inflation / rates have already peaked and economies will avoid recession.

However, this plays out, it is likely that we are now in a regime where central banks have flipped from being volatility suppressors to volatility amplifiers.

From 2008 to 2020, the dual policy objectives of most central banks were aligned in the same direction. Inflation was generally running well below target levels, which justified monetary policy stimulus to lift inflation, which also supported economic growth.

Any time economic growth was at risk, it was easy for central banks to justify more stimulus to quickly get things back on track, which meant they acted as a safety net / volatility suppressor.

With the regime shift to higher inflation, the dual policy objectives of central banks are now in opposition to each other because monetary policy tightening to control inflation risk tipping economies into recession. Therefore, central banks are now volatility amplifier.

The second order effect of central banks becoming volatility amplifiers, combined with elevated uncertainty about inflation, is that we are now also in a regime of structurally higher interest rate / bond market volatility and more variable bond vs equity correlations. This in turn has implications for multi-asset portfolio construction.

It used to be sufficient to just rely on government bond duration to diversify equity beta exposure. But with that duration now more volatile and having more variable correlation vs equities, additional portfolio diversification levers are now more important.

Hence the Fund's value as a 3rd lever in fixed income – the first two being duration and credit; a lever that is inherently uncorrelated and lower volatility vs conventional bond investments and has a tendency to outperform when duration / credit incur losses.

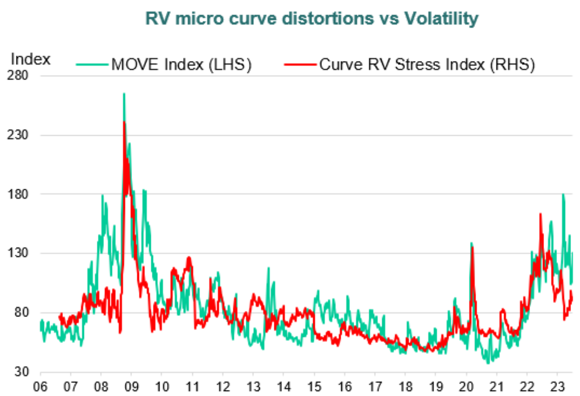
Fund performance outlook

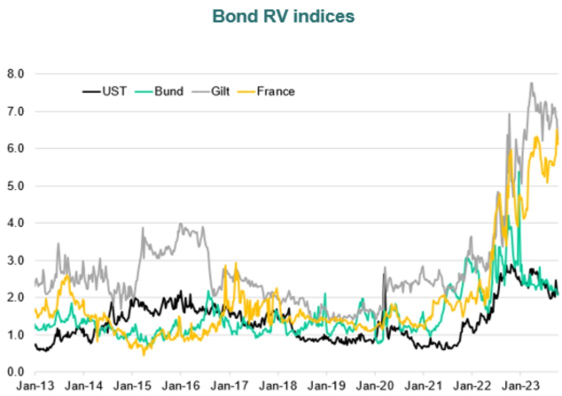
With rate market volatility subsiding from the 2022 extremes, but still remaining elevated, we are in a sweet spot for RV investing; volatility is high enough to create lots of new RV mispricing from which to profit, but not so extreme as to cause violent dislocations in the behaviour of RV pricing relationships.

This can be visualised in the charts below, which show RV indices that are a rough proxy for the average level of RV mispricing evident in different rate market segments.

The left chart tracks Curve RV mispricing (i.e. relative mispricing between different points on an interest rate curve). The red line shows the extent of mispricing has subsided from 2022 extremes, but still remains at decade highs.

The right chart tracks Bond RV mispricing (i.e. relative mispricing between similar government bonds). These lines are mostly still close to their 2022 extremes because government bond prices have remained highly volatile due to a combination of central banks winding back QE and more bond supply from governments funding budget deficits.





Given the Fund's role as a defensive risk diversifier, it is designed to protect investor capital in volatile market environments, which means we expect the Fund to generally deliver positive returns through these periods.

2022 was a good example of this, being a period of extreme market volatility through which equities and conventional bond investments incurred large losses in unison. By contrast, the Fund delivered a positive return (after fees).

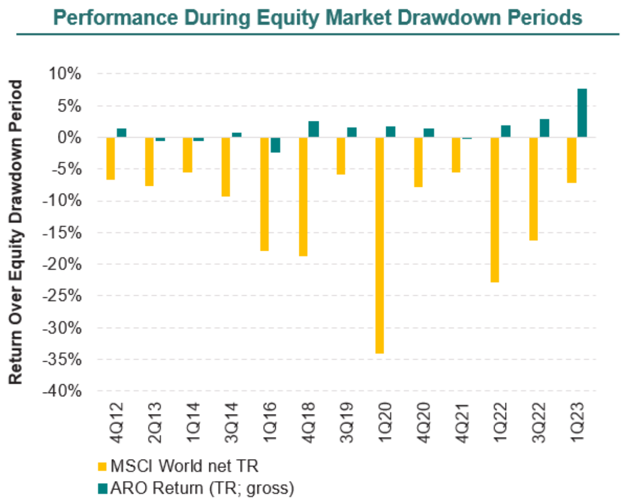
More generally, the Fund's performance in volatile environments is driven by a balancing act between the following factors:

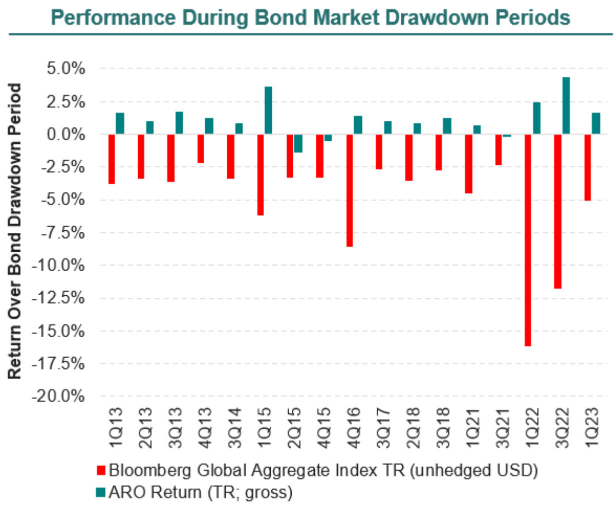
- *more volatility = more fertile opportunity set for RV mispricing = positive for performance*
- *more volatility = more upside from the Fund's options exposures = positive for performance*
- *extreme volatility = violent dislocations in the behaviour of RV pricing relationships = can be temporarily negative for performance*

Generally, this balancing act skews toward positive performance, but sometimes results in modest negative performance. Therefore, a reasonable expectation is that out of every 10 periods of market volatility we expect the Fund to deliver positive performance in 5, be about flat in 3 and deliver modestly negative performance in 2.

The Fund's general tendency to deliver positive returns in volatile market environments is evident over its 11-year track record to date and, combined with the Fund's uncorrelated return profile, is consistent with its portfolio role as a defensive risk diversifier.

For example, the chart below shows the Fund's historical performance during every material equity and bond market drawdown since the Fund's inception. The green bars show the Fund's mostly positive returns over each of the respective peak-to-trough equity and bond market drawdowns.





Note the X-axis labels only provide a reference point for approximately when each index drawdown occurred, while the return is calculated specifically over the peak-to-trough drawdown period.

Source, Ardea IM, Bloomberg

RV Theme Examples

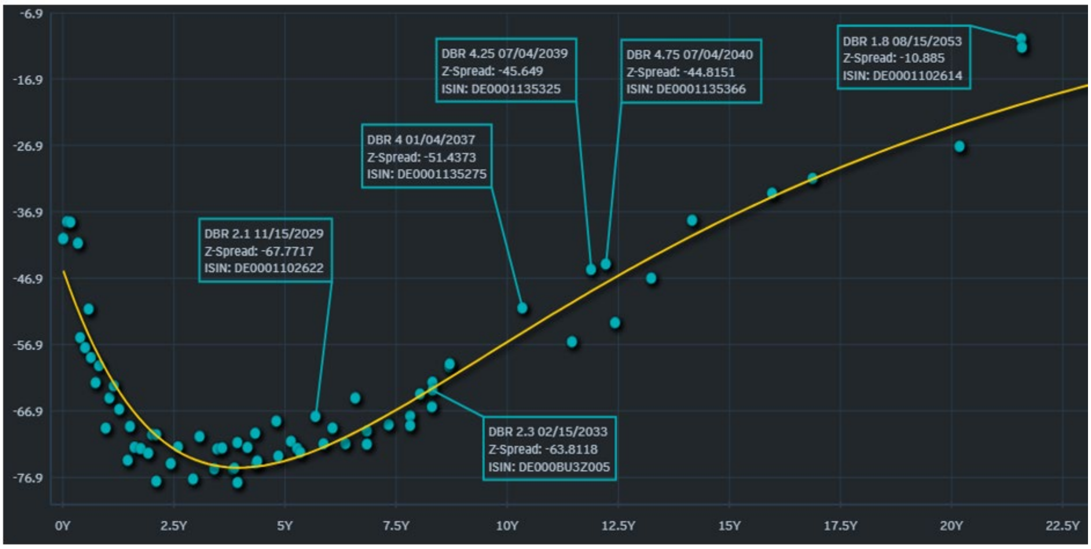
German government bonds

This example seeks to profit from dispersion in relative pricing between similar German government bonds, underlying driver of which is market inefficiency.

A large and diverse range of market participants buy and sell these individual bonds for different reasons, often without regard to relative valuations or profit maximisation, because they are responding to their own specific objectives and constraints. Their activity creates temporary demand vs supply imbalances, resulting in the individual bonds becoming cheap / expensive relative to each other.

The chart below shows a simplified RV analytical framework for comparing the pricing of individual bonds (green dots) to each other by referencing the pricing of each bond to a common baseline pricing curve (yellow line). Bonds above (below) the yellow line are cheap (expensive) on relative value basis.

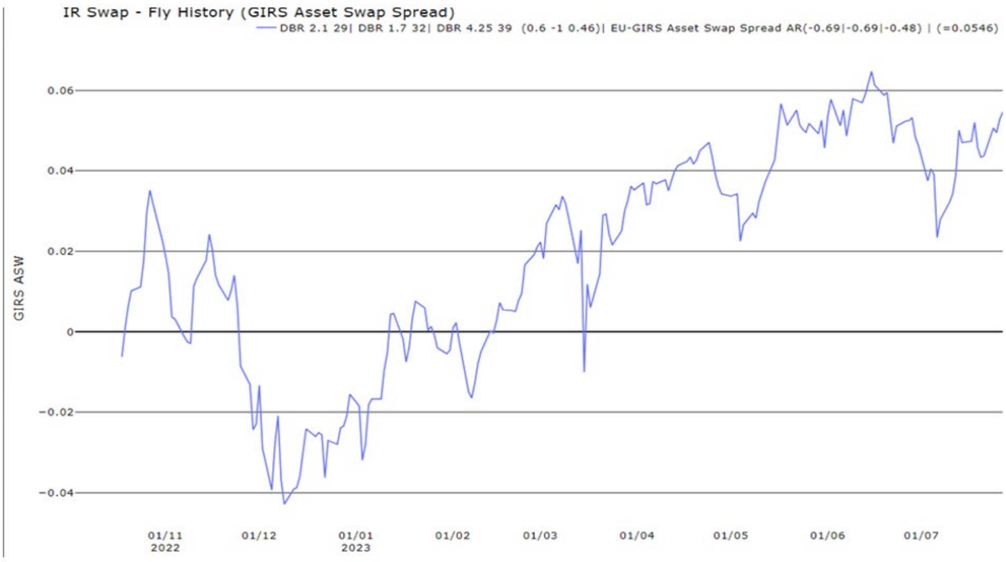
Note: While this chart accurately conveys the general principles involved in this type of RV analysis, it ignores much of the technical nuance that is important in practice but cannot be readily conveyed in a 2-dimensional chart.



We use this analysis to create spread trades, which comprise multiple long and short positions in various cheap and expensive bonds.

An essential nuance is the relative weighting given to the various long and short legs of the spread trade, which is important because the weightings must correctly account for the differing price volatilities of each bond in order to create a trade structure that cleanly isolates the RV mispricing being targeted by minimising exposure to broader bond market fluctuations.

As an example, the chart below shows an RV mispricing of approx. 5 basis points (i.e. 0.05%) that is isolated via a combination of long positions in the cheap 2029 and 2039 bonds vs a short position in the expensive 2032 bond.



Note that these RV pricing relationships are dynamic (i.e. fluctuations in the blue line), which means we constantly re-adjust by trading in and out of individual positions as their relative pricing changes.

For instance, a few days later the 2032 bond may have become less expensive (i.e. its price has dopped vs the other bonds), meaning it may now be optimal to close that short position (i.e. monetise the profit) and replace it with a short position in a different bond.

Therefore, rather than viewing this as a standalone trade structure that we neatly enter and exit as a single package, we view it as an RV theme, which comprises a series of individual long/short positions that are each constantly being adjusted (i.e. entered, exited, res-sized) to incrementally monetise profits over time.

In addition, we also need to constantly account for how these individual bond positions interact with other related exposures in the portfolio (e.g. German bond futures contracts, EUR interest rate swaps) and adjust them accordingly.

Japan interest rate curve

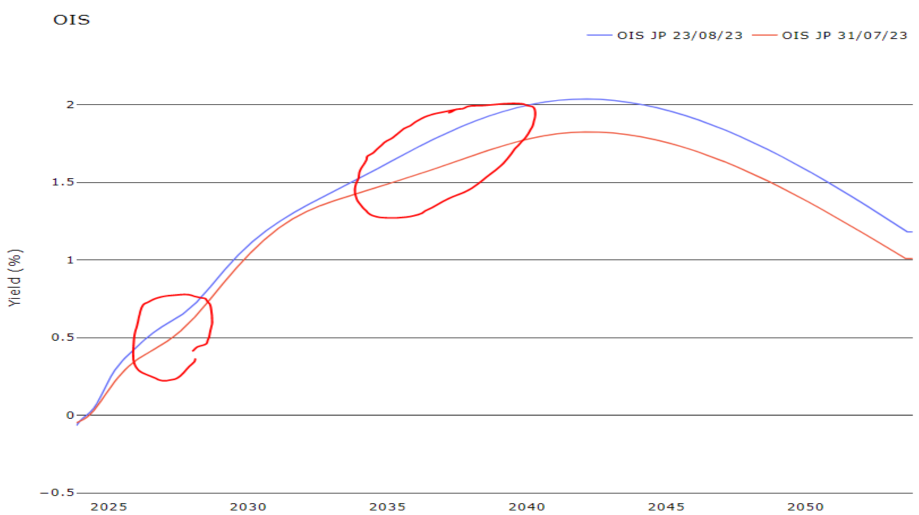
This example seeks to profit from a situation where a macro catalyst has interacted with micro demand / supply factors to create an RV mispricing opportunity.

Macro catalyst = transition to higher rates (and more rate volatility) in Japan due to shifting monetary policy in response to higher inflation.

Micro demand / supply factors = 10Y and 30Y curve points are resistant to upward rates pressure because of strong demand for bonds (10Y due to Bank of Japan buying as part of market intervention and 30Y due to pension fund / life insurance buying for duration); 20Y point is vulnerable to upward rates pressure because of strong supply of bonds (Ministry of Finance currently focusing new government bond issuance around 20Y point)

As the macro catalysts shifted the whole rate curve in higher, the micro factors have caused some parts of the curve to move more or less than others, resulting in curve shape distortions driven by temporary demand / supply imbalances.

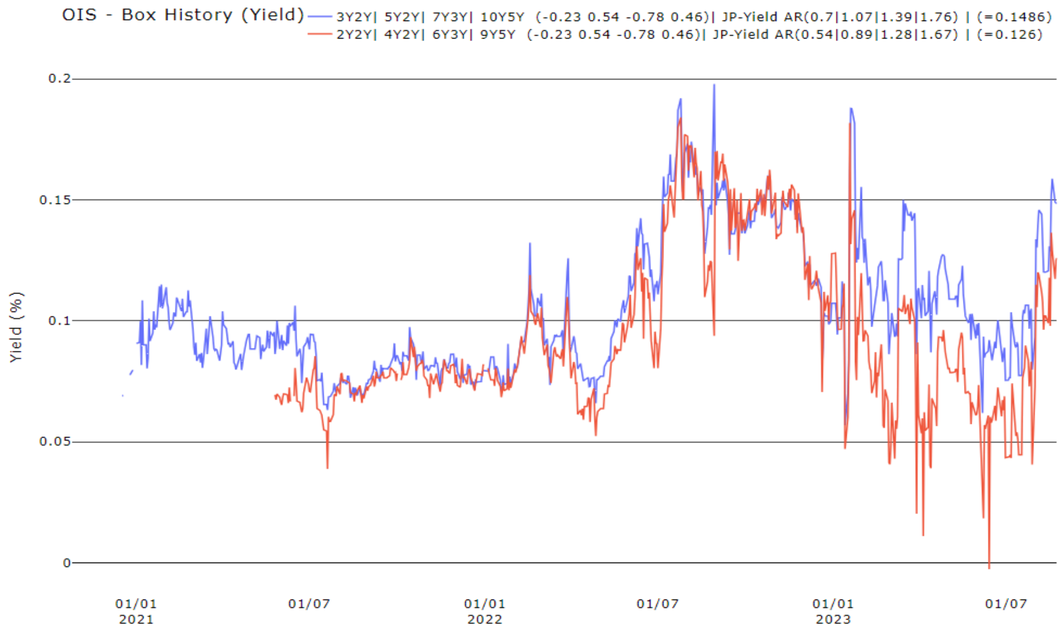
The chart below shows the shape of the rate curve at 31-July (red line) vs 3 weeks later (blue line) and the circled areas highlight points where the curve shape changed. (Note: The chart shows a simplified view of the curve shape change vs our internal analytics that view these changes in a more precise way)



We use this analysis to create spread trades, which comprise multiple long and short positions using interest rate derivatives at various points on the curve.

An essential nuance is the relative weighting given to the various long and short legs of the spread trade, which is important because the weightings must correctly account for the differing volatilities of each curve point in order to create a trade structure that cleanly isolates the RV mispricing being targeted by minimising exposure to broader rate market fluctuations.

As an example, the chart below shows a specifically weighted combination of forward starting interest rate swaps that involves long (short) positions around curve points that have risen relatively more (less). This specific combination of longs around 15Y / 7Y vs shorts around 5Y / 10Y delivers a net positive of 15 basis points (i.e. 0.15%), which is unusually high relative to its average range (blue line). Additionally, this structure has positive decay, meaning that it delivers profits as time passes and each of the swaps gets closer to maturity.



Note that these curve shapes are dynamic (i.e. fluctuations in the blue line), which means we constantly re-adjust our exposures to individual curve points as their relative pricing changes.

Therefore, rather than viewing this as a standalone trade structure that we neatly enter and exit as a single package, we view it as an RV theme, which comprises a series of individual long/short positions that are each constantly being adjusted (i.e. entered, exited, res-sized) to incrementally monetise profits over time.

It is impossible to perfectly time the optimal entry point for these types of trades, which is a key reason why our portfolio-based approach offers competitive advantage.

While qualitative information about market flows can help refine trade timing, we always expect that these types of curve anomalies can get more extreme before they normalise.

So, these trades – as with all our trades – are implemented in the Fund as just one of numerous modestly sized and well diversified trades, whose risk is managed in the context of the broader portfolio as a whole.

Therefore, if the trade moves against us in the short-term (i.e. incurs a loss) – which happens often – its impact on total Fund performance will be small and we can simply hold onto it long enough for the RV dynamics to play out as we expect.

Market Commentary

Please see the Insights section of the Ardea website for our latest thoughts on markets and investment themes.

Understanding Performance

Performance is evaluated over rolling 2 year periods for consistency with the recommended minimum investment horizon of 2 years. Over short-term horizons it is expected that portfolio performance will fluctuate in a range around the expected long-term investment outcome, including periods of negative returns. This is because the Fund's targeted return is not expected to materialise evenly over the investment horizon.

We use the concept of ‘expected performance variability’ to objectively define a range of short-term performance fluctuation that is consistent with the investment strategy operating as expected. This range is based on the Fund’s volatility target of 2% p.a. and translates to an expectation for monthly performance to commonly fluctuate in a range of -0.4% to +0.7%.

The Fund’s highly differentiated investment approach generates returns exclusively from capturing RV mispricing opportunities across global interest rate markets. This approach is intentionally independent of the level of bond yields, the direction of interest rates and broader bond market themes.

The Fund’s portfolio construction process intentionally diversifies risk across many different types of independent and modestly sized RV trades. Therefore, performance is the cumulative result of interactions between hundreds of trades entered, exited, and held over the preceding months.

For these reasons, the Fund’s performance is ordinarily not driven by a few key trades, nor can it be mapped to broader market fluctuations or macro themes.

This is intentional, because the Fund aims to deliver volatility controlled returns that exhibit low correlation to the performance of government bond, credit, and equity markets. This is precisely why the Fund can offer compelling diversification benefits when combined with conventional investments.

Please note that monthly performance attribution is heavily influenced by short-term ‘noise’ and ordinarily offers little genuine information value.

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Analyst-Driven % 100

Data Coverage % 100

The Morningstar Medalist Rating™ for the Ardea Real Outcome Fund is 'Bronze' as of 07/09/2022

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