

# MyFolio Due Diligence Report

Quarter 4 2018



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# About Aberdeen Standard Investments

**Aberdeen Standard Investments is dedicated to helping investors around the world reach their desired investment goals and broaden their financial horizons**

We seek to provide world-class investment expertise across a breadth of markets and asset classes. Our full range of solutions spans equities, multi-asset, fixed income, liquidity, sovereign wealth funds, real estate and private markets. Coupled with a range of investment approaches, from quantitatively-managed 'smart beta' to highly active alpha-seeking strategies, we transform new investment ideas into practical investment products designed to deliver real value for money to investors.

We have one of the world's largest teams of investment professionals with approximately 1,000 portfolio managers, analysts and product, risk and trading specialists located globally

ensuring close proximity to our clients and the markets in which we invest. In addition, we have 500 client specialists working closely with investors and professional advisors to understand their goals and deliver innovative, world class investment solutions. Today, we manage £557 billion (€630 bn/US\$736 bn) of assets on behalf of governments, pension funds, insurers, companies, charities, foundations and individuals across 80 countries (as at 30 June 2018). The largest active asset manager in the UK, we are also one of the top five asset managers headquartered in Europe and one of the biggest active asset managers worldwide not owned by a bank. As a responsible global investor, we leverage our scale and market leadership to raise standards in both the companies and industries in which we invest, and drive best practice across the asset management industry.

**Aberdeen Standard Investments is a brand of the investment businesses of Aberdeen Asset Management and Standard Life Investments.**

# MyFolio Investment Process

The Standard Life Investments MyFolio funds are managed by Bambos Hambi, Head of Multi-Manager Strategies at Aberdeen Standard Investments.

Bambos is supported in the management of the MyFolio funds by a number of our key investment professionals, in the Strategic and Tactical Asset Allocation, Fund Selection and Governance functions.

## Strategic Asset Allocation

The Strategic Asset Allocation (SAA) for the funds is determined by Aberdeen Standard Investments in consultation with Moody's Analytics, a world leader in financial risk modelling. The SAA is formally reviewed on a quarterly basis on completion of the Moody's Analytics analysis.

Moody's Analytics undertake a risk/return optimisation process using the appropriate strategic asset classes as agreed with Aberdeen Standard Investments and make recommendations to Aberdeen Standard Investments as to the optimum strategic mix of those assets. The mix of assets is constrained to ensure a suitably diversified portfolio is achieved. The constrained optimisation process uses a 10 year time horizon to construct the strategic asset allocation benchmarks with the aim of generating optimal returns for each level of risk over the period. The resulting asset allocations are used to populate the asset mix "pots" for the MyFolio Market Funds.

## SAA for MyFolio Managed and Multi-Manager Funds

For the two suites of active MyFolio Funds there is an additional step. Aberdeen Standard Investments believe that absolute return strategies offer a valuable source of diversification for the MyFolio Managed, Managed Income, Multi-Manager and Multi-Manager Income ranges. It should be noted that due to the asset management strategies adopted in absolute return funds, traditional "long only" modelling techniques are less relevant for strategic asset allocation purposes.

## Tactical Asset Allocation

Tactical Asset Allocation (TAA) positions for each fund will be decided by the Multi-Asset Investing (MAI) Team within Aberdeen Standard Investments. The MAI Team will apply their tactical

investment views to fine tune the strategic asset allocation and take advantage of shorter term opportunities. In practice this will tilt the strategic asset allocation benchmarks in the direction of favoured asset classes over the shorter term. The TAA positions implemented across the multi-asset portfolios are reviewed on a regular basis with any changes being driven by a change in recommendation from the Global Investment Group (GIG), the team that collates our House View or by a change in the benchmark weighting in a specific asset class.

The nature of the five risk based funds requires disciplined strategic risk controls consistently applied across the suite of funds, therefore the maximum TAA positions permissible within each asset class is + /- 5%. An additional risk control is also applied at defensive and growth assets level. This higher level constraint is at the same level of +/- 5%.

## Fund Selection

### MyFolio Market Funds

Fund selection for the Market Funds is largely centred on finding suitable tracker funds to replicate the performance of the strategic asset class benchmarks. The key selection criterion is confidence in the underlying Fund Managers to deliver a low tracking error fund at a competitive price.

The selection of the active real estate and active high yield bond funds follows the same process as for other active external managers with the aim of creating a well-diversified basket of assets that can act as a proxy for their respective markets.

### MyFolio Managed Funds

The funds selected for the Managed Funds are primarily selected from the range of Standard Life Investments retail mutual funds. There is a wide range of quality funds available across the majority of the asset classes. Where there is not a suitable Standard Life Investments fund the Fund Manager will seek to invest in funds from the rest of the market.

### MyFolio Multi-Manager Funds

We apply a consistent tried and tested manager selection process to capitalise on opportunities we identify. By undertaking a combination of both quantitative and qualitative due diligence we aim to filter a large universe of funds into a select group of funds which represent 'best of breed' solutions.

## Portfolio Construction

From a rigorously researched position, we construct efficient, well-diversified, active portfolios with a risk/reward profile appropriate to the fund's stated mandate. In doing so, we will seek to generate superior risk-adjusted returns in a consistent manner throughout the economic cycle.

Once we invest in a fund, it is continuously monitored in order to identify any changes that could impact future returns. We recognise the importance of having a strong sell discipline and therefore consider our monitoring process as important as the initial selection. Monitoring our risk exposures also allows us to highlight any unintended risks that may emerge in our portfolios, so that we can remove them before they begin to impact returns.

The Fund Manager has ultimate responsibility for ensuring that any fund selected is an appropriate selection for the asset class the fund has been chosen to represent.

## Fund Rebalancing

Aberdeen Standard Investments aim to always keep trading costs to a minimum whilst ensuring funds remain within their agreed risk parameters.

Fund holdings are reviewed daily to determine what, if any, re-balancing is required as a result of market movements and cash flow. Daily re-balancing back to an exact pre-determined TAA position without any tolerance levels would, we believe, be counter productive from a cost perspective.

As such we consider three key areas on a daily basis, asset allocation tolerance, portfolio tracking error and deal size to determine our dealing strategy for the fund.

**Asset allocation tolerance** – we aim to keep the daily positions of each asset class within +/-1.25% of the TAA position

**Portfolio Tracking Error** – we aim to have a low daily tracking error relative to the default portfolio position

**Deal size** – deal sizes are considered to ensure dealing costs are not disproportionately high relative to the cash allocation.

Before any deals are struck we go through an iterative process that determines the most cost effective dealing strategy taking into account the above factors. We believe we add value through this process by keeping dealing costs low whilst ensuring the funds remain within their defined risk parameters.

## Risk Management & Control

### Portfolio Risk Management

There is an extensive risk management infrastructure to ensure that the Multi-Manager Strategies and MAI Team operate within the investment framework. Risk is monitored and controlled by a combination of organisational structures and processes. There are three distinct groups engaged in the risk management process for MyFolio:

**Multi-Manager Strategies Team** – undertakes risk analysis at portfolio level. On top of backward looking risk measures such as information ratios, monthly underlying holdings are received from fund groups to understand forward looking risk indicators. For all funds we own (and before purchase of a new fund), we insist on monthly portfolio holdings data by the 15th day of every month. For all investment groups that we deal with, we have arranged Non-Disclosure Agreements which are signed-off by both parties' legal teams to ensure confidentiality.

**Investment Risk Team** – our Investment Risk Team works independently and are responsible for monitoring the performance and risk characteristics of the portfolios managed at Aberdeen Standard Investments. We utilise Industry standard systems – such as RiskMetrics, SunGard APT and UBS Delta to measure and monitor risk.

**Investment Governance Team** – working independently this team is responsible for ensuring the consistency and integrity of the operation of the investment process versus specification/ mandate.

### Risk Management

The Investment Restrictions Control Team's sole responsibility is to monitor positions within funds on a daily basis, and ensure compliance with regulatory and client-driven investment restrictions and guidelines. This team is managed independently from our asset management teams and reports to the Director of Investment Governance.

# Performance Summary

## Performance

Growth Funds	3 mths Total Return %	12 mths Total Return %	3 yrs PA %	5 yrs PA %	Launch* Total Return %	Launch* PA %	Volatility 3 yrs Std Dev %
Managed I	-3.0	-3.6	2.2	2.7	35.3	3.7	3.1
Managed II	-5.0	-5.0	2.8	3.6	48.6	4.9	4.4
Managed III	-7.0	-6.4	3.3	4.3	62.4	6.1	5.8
Managed IV	-8.8	-7.9	4.0	5.0	70.4	6.7	7.3
Managed V	-11.0	-9.7	4.3	5.4	79.1	7.3	8.8
Market I	-2.6	-2.1	3.7	3.7	39.9	4.2	3.4
Market II	-4.5	-3.2	5.0	4.8	56.2	5.6	4.9
Market III	-6.1	-3.9	6.4	5.7	68.6	6.5	6.4
Market IV	-8.0	-4.9	7.8	6.6	79.1	7.3	8.2
Market V	-10.1	-6.3	8.8	7.3	89.4	8.0	10.0
Multi-Manager I	-2.8	-3.4	2.4	2.8	31.8	3.4	2.9
Multi-Manager II	-4.6	-4.5	3.4	3.8	46.7	4.8	4.2
Multi-Manager III	-6.4	-5.8	4.1	4.4	58.0	5.7	5.6
Multi-Manager IV	-8.1	-7.0	4.9	5.2	70.1	6.7	7.0
Multi-Manager V	-10.0	-8.5	5.5	5.6	76.6	7.1	8.5

Growth Funds	Year on year % (as at 31/12/2018)				
	48-60m	36-48m	24-36m	12-24m	0-12m
Managed I	5.7	1.5	5.7	4.6	-3.6
Managed II	6.9	3.0	7.1	6.7	-5.0
Managed III	7.4	4.3	7.8	9.4	-6.4
Managed IV	7.7	5.4	9.3	11.7	-7.9
Managed V	8.1	6.0	10.9	13.2	-9.7
Market I	6.4	1.0	8.6	4.8	-2.1
Market II	7.1	1.8	11.9	7.0	-3.2
Market III	7.1	2.2	14.7	9.4	-3.9
Market IV	7.4	2.5	18.1	11.5	-4.9
Market V	7.7	2.6	21.6	13.1	-6.3
Multi-Manager I	5.7	0.9	6.3	4.6	-3.4
Multi-Manager II	6.5	2.3	8.5	6.6	-4.5
Multi-Manager III	6.5	3.1	10.3	8.6	-5.8
Multi-Manager IV	7.1	3.9	12.2	10.6	-7.0
Multi-Manager V	7.4	4.2	14.7	12.0	-8.5

\*Launch: 01 October 2010 \*\* Launch: 06 January 2012

Sources: Aberdeen Standard Investments, Morningstar, Lipper, 31 December 2018, institutional accumulation share class performance shown. Standard deviation based on 36 monthly data points.

# Performance Summary

## Performance

Income Funds	3 mths Total Return %	12 mths Total Return %	3 yrs PA %	5 yrs PA %	Launch* Total Return %	Launch* PA %	Volatility 3 yrs Std Dev %
Managed Income I	-2.6	-3.3	2.5	2.8	26.8	3.5	3.1
Managed Income II	-4.5	-5.1	2.3	3.2	37.8	4.7	4.3
Managed Income III	-5.8	-5.7	3.2	3.9	48.6	5.8	5.4
Managed Income IV	-7.9	-7.4	3.0	4.1	53.6	6.3	6.7
Managed Income V	-9.7	-9.1	3.9	4.8	61.3	7.1	8.1
Multi-Manager Income I	-2.4	-3.1	2.6	2.5	22.5	2.9	2.8
Multi-Manager Income II	-4.2	-4.6	2.7	3.0	34.5	4.3	4.0
Multi-Manager Income III	-5.6	-5.6	3.7	3.6	47.9	5.8	5.3
Multi-Manager Income IV	-7.4	-6.8	3.8	3.6	48.9	5.9	6.5
Multi-Manager Income V	-8.9	-8.1	4.7	4.5	56.1	6.6	8.1

Income Funds	Year on year % (as at 31/12/2018)				
	48-60m	36-48m	24-36m	12-24m	0-12m
Managed Income I	5.4	1.1	6.4	4.7	-3.3
Managed Income II	7.1	1.9	6.6	5.8	-5.1
Managed Income III	7.4	2.7	7.9	7.8	-5.7
Managed Income IV	7.9	3.1	8.8	8.5	-7.4
Managed Income V	8.0	4.0	11.5	10.5	-9.1
Multi-Manager Income I	4.4	0.1	6.8	4.3	-3.1
Multi-Manager Income II	6.4	0.5	8.0	5.3	-4.7
Multi-Manager Income III	6.2	0.7	10.6	6.7	-5.6
Multi-Manager Income IV	6.2	0.4	11.8	7.4	-6.7
Multi-Manager Income V	7.2	1.1	14.8	8.7	-8.1

\*Launch: 01 October 2010 \*\* Launch: 06 January 2012

Sources: Aberdeen Standard Investments, Morningstar, Lipper, 31 December 2018, institutional accumulation share class performance shown. Standard deviation based on 36 monthly data points

# Market Review and Outlook

## Market review

Global equity markets endured a bruising end to 2018, posting their worst quarter for several years. This erased the previous nine months' gains. Worries about rising interest rates, slowing global growth and escalating political risks combined to unnerve investors. In particular, many questioned the US Federal Reserve's December rate hike, given that global growth showed signs of faltering. Elsewhere, Europe again came under pressure from lacklustre economic data and political discord. Meanwhile, the UK remained mired in Brexit-related uncertainty.

It was also a tough period for corporate bonds. Concerns grew around the global economy and the longevity of the corporate earnings cycle. This was against the backdrop of tightening global liquidity and elevated levels of non-financial corporate debt. Beyond this, the escalating US-China trade war, Brexit uncertainty and Italy's budget drama depressed investor sentiment. In this environment, government bond markets performed well, as investors sought shelter in safe-haven assets.

Total returns continued to slow amid a difficult period for the UK commercial property market. As expected, 2018 was a weaker year for real estate. Full-year returns are unlikely to match the double figures achieved in 2017. Ongoing uncertainty surrounding the Brexit withdrawal agreement caused investors to be more cautious. Over the last nine years, real estate has delivered returns of more than 10% per year. However, the market is at a late stage in the cycle. Valuations appear expensive relative to their long-term worth.

## Outlook

Given that economic data and earnings estimates remain solid, it is possible that global equity markets will bounce back from the recent sell-off. However, numerous headwinds remain, from the US-China trade dispute to worries around Italy's budget. The resolution of any of these would provide a boost to sentiment. Brexit, meanwhile, has entered the final, critical stages. Investors will watch the outcome closely. Against this backdrop, we believe earnings rather than valuations will be the primary driver of share prices.

Investment grade corporate bonds now look to be fairly valued. However, volatility may persist, given the combination of trade tensions and continuing political uncertainty around Brexit. Meanwhile, the path and speed of interest rate changes will continue to determine the short-term outlook for government bond markets.

For UK commercial real estate, uncertainty around Brexit and the expectation that the government faces defeat in parliament's 'meaningful vote' on the EU Withdrawal Agreement is biting into sentiment. There is also growing evidence that it is impairing liquidity. We expect values to fall further during the first quarter of 2019, after turning negative in November. Even with the base case scenario of an eventual agreement passing and a smooth transition period for the UK, our forecast returns are weak for the next three years.

# Strategic Asset Allocation Update

The Strategic Asset Allocation Committee	
<b>Archie Struthers (Chair)</b> Global Head of Investment Governance and Oversight	Archie is responsible for ensuring that agreed investment processes are applied by the investment teams and that investment actively is consistent with both regulatory requirements and investment guidelines.
<b>Stephen Acheson</b> Executive Director, Global Head of Insurance	Stephen has responsibility for the provision of investment management services and support to the wider global Standard Life Aberdeen group, covering both Retail and Institutional operations.
<b>James Esland</b> Investment Director - Multi-Asset Investing	James is responsible for the Investment Management processes for Global Absolute Returns and Liability Driven Investment products. He also makes the Tactical Asset Allocation decisions for MyFolio.
<b>Bambos Hambi</b> Co Head of Multi-Manager Strategies	Bambos has overall responsibility for the portfolio management of the 25 MyFolio funds. Bambos also heads up the Multi-Manager Strategies Team.
<b>Iain McLeod</b> Investment Director - Multi-Asset Investment Specialist	Iain is responsible for the development, technical support and promotion of the full range of Standard Life Investments' retail multi funds.
<b>Eddie Middleton</b> Global Head of Investment Governance	Eddie is responsible for two functions within Investment Governance: quantitative risk processes and investment processes.
<b>James Millard</b> Co Head of Multi-Manager Strategies	James co heads the leadership of the Multi-Manager Strategies Team alongside his role as Head of Portfolio Management. He is also charged with expanding our investment capabilities and offerings to broaden our footprint into new distribution channels both in the UK and overseas.
<b>Joe Wiggins</b> Senior Investment Manager	Joe is responsible for the management of a range of multi-asset, fund of funds, including the MyFolio SICAV range. He is integral to the assessment, analysis and suitability of the asset classes utilised within the strategic asset allocation models.

We review the Strategic Asset Allocation (SAA) for each of the MyFolio funds every quarter, with the aim of ensuring that we continue to meet investors' long-term interests. At the most recent review, we made modest changes, which we believe will improve the prospects for long-term, risk-adjusted returns.

Within defensive assets, we reduced exposure to global index linked bonds. Instead, we increased our allocation to short-dated sterling corporate bonds that we believe offer better long-term returns. In the growth assets, we increased our allocation to emerging market debt, which offer better yields than developed market bonds. We also increased our allocation to UK equities, while making a smaller increase to Japanese equities. Meanwhile, we reduced exposure to both US and European equities.

# Tactical Asset Allocation Update

Within Tactical Asset Allocation (TAA), we made the following changes (where applicable within each risk level).

- Increased our holding in global real estate investment trusts (REITs)
- Added to our holding in UK equities (becoming neutral versus the SAA)
- Reduced our US, Japanese and emerging markets equities positions (while remaining overweight versus the SAA)
- Introduced an overweight position in global high yield bonds
- Reduced our emerging market debt position (to neutral versus the SAA)

Market weakness provided an opportunity to add to global REITs, which offer a good yield. Meanwhile, we increased our holding in UK equities, where sterling moves have driven returns in recent months. Given uncertainty as we approach March's Brexit deadline, we want to reduce exposure to currency volatility. As a result, we increased our position to neutral versus the SAA.

We reduced our holding in various overseas equity markets (US, Japan and emerging markets). Sentiment towards these remains poor following a recent sell-off, given ongoing 'trade war' developments. However, we retain reduced overweight positions, particularly in Japanese and emerging market equities. Valuations here remain relatively more attractive. Finally, we became overweight in global high yield bonds. These provide a good yield and protect against sharp sterling moves.

# Risk Management and Control Update

Portfolio Risk Management Governance	
Multi-Manager Strategies Team	Nothing to Report
Investment Risk	Nothing to Report
Investment Governance	Nothing to Report
Risk Management	
Investment Restrictions Control	Nothing to Report

# Fund Manager Meetings

During the quarter, the Multi-Manager Strategies Team met with the following asset managers.

Fund Manager Meetings	
Aberdeen	LF Morant
Allianz	M&G
Amundi	Majedie
AQR	Man GLG
Artemis	Mayfair Capital
Baillie Gifford	Mirae Asset
Baring	New Capital
BlackRock	Old Mutual
BNY Mellon	Oppenheimer
Brookfield	Pictet
Brown Advisory	Pictet-Japanese
Candriam	PIMCO
Charlemagne	Polar Capital
Cordea Savills	Prusik
Eastspring	Pzena
Eaton Vance	RobecoSAM
Edgewood	Royal London
Fidelity	Schroder
First State	SLI
Hermes	T Rowe Price
Invesco Perpetual	Tellworth
Janus Henderson	Threadneedle
JOHCM	Tokio Marine
JPM	UBAM
Jupiter	Waverton
Kames Capital	Wellington
Lazard	William Blair
Legg Mason	

# Fund Changes

MyFolio Managed		
Period	Buys	Sells
Q4 2018	Aberdeen Alternative Risk Premia Fund (£ hgd) Aberdeen European Equity Enhanced Index Aberdeen UK Equity Enhanced Index SLI UK Equity Recovery	SLI Global Index Linked Brookfield Global REITS

MyFolio Market		
Period	Buys	Sells
Q4 2018	No changes	iShares US Equity Index L&G Global Infl-Linked Bond Index Vanguard UK Inflation-Linked Gilt Index

MyFolio Managed Income		
Period	Buys	Sells
Q4 2018	No changes	No changes

MyFolio Multi-Manager		
Period	Buys	Sells
Q4 2018	Artemis Global Emerging Markets Lazard European Smaller Companies LF Tellworth UK Smaller Companies Merian North American Equity Oppenheimer EM Local Currency Debt Schroder ISF Multi-Asset Total Return (£ hgd)	Fidelity Short Dated Corporate Bond Invesco Perpetual Emerging Countries L&G US Index Old Mutual North American Equity Royal London Global Index Linked Wellington US Research Equity

MyFolio Multi-Manager Income		
Period	Buys	Sells
Q4 2018	No changes	No changes

Fund changes may not apply at every risk level.

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The value of investments, and the income from them, can go down as well as up and an investor may get back less than the amount invested. Past performance is not a guide to future results.

Please refer to the Key Investor Information Document or the Prospectus for more details of the risks applicable to each fund in the MyFolio range.

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The logo for Aberdeen Standard Investments. It features the word "Aberdeen" in a dark blue font with a stylized blue wave icon to its left. To the right of "Aberdeen" is the word "Standard" in a larger, bold, dark blue font. Below "Standard" is the word "Investments" in a smaller, grey font. A small blue triangle points upwards to the right of the word "Standard".