

PERFORMANCE

MPS PERFORMANCE TABLE to 31st December 2019

MPS performance pre 01.11.2018 is simulated using the IBOSS PMS portfolios

Portfolio	Cumulative Performance					Discrete Annual Performance											Rolling 5 year Data							
	1 Year	3 Years	5 Years	10 Years	Since Launch*	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Alpha	Beta	Sharpe Ratio	Info Ratio	Vol	Max DD	Downside Capture	
Outperformance																								
Portfolio 0	7.30	10.13	18.52	52.11	76.52	14.31	7.20	1.33	7.54	6.60	3.07	2.49	5.01	5.22	-2.45	7.30	1.07	0.89	0.58	0.66	2.53	-3.40	84.93	
IA Benchmark	6.23	7.39	14.13	37.80	57.35	9.42	6.25	1.15	5.03	3.46	3.39	0.31	5.95	3.40	-2.23	6.23	0.00	1.00	0.26	0.00	2.56	-3.14	100.00	
Portfolio 1	8.58	12.51	23.72	64.67	95.06	14.93	8.25	0.75	8.40	9.04	3.25	3.66	6.08	6.58	-2.78	8.58	1.50	0.76	0.74	0.36	3.16	-3.94	72.20	
IA Benchmark	8.72	10.17	19.95	52.07	79.00	11.71	7.77	1.38	6.22	4.20	4.84	0.38	8.47	4.84	-3.35	8.72	0.00	1.00	0.47	0.00	3.66	-4.49	100.00	
Portfolio 2	11.27	17.64	32.41	83.63	122.35	13.97	9.85	-0.88	9.48	10.69	5.10	4.49	7.72	9.56	-3.51	11.27	1.63	0.84	0.85	0.60	4.46	-5.37	75.33	
IA Benchmark	11.84	13.73	27.00	67.26	100.91	15.90	8.56	-1.89	8.35	8.85	4.85	1.21	10.32	7.16	-5.10	11.84	0.00	1.00	0.56	0.00	5.17	-6.56	100.00	
Portfolio 3	12.97	20.79	39.02	101.22	161.04	21.41	12.90	-2.83	11.54	12.18	5.44	4.99	9.62	11.97	-4.50	12.97	1.79	0.85	0.90	0.61	5.37	-6.25	77.58	
IA Benchmark	13.80	16.62	32.67	80.26	122.84	18.00	10.43	-3.72	9.16	11.64	4.86	1.94	11.60	8.56	-5.60	13.80	0.00	1.00	0.62	0.00	6.15	-7.62	100.00	
Portfolio 4	14.02	22.70	42.82	111.52	179.67	23.70	14.41	-4.41	12.30	14.29	5.51	5.93	9.88	13.51	-5.19	14.02	1.84	0.81	0.90	0.30	6.01	-7.02	75.20	
IA Benchmark	15.78	19.55	38.53	94.03	146.79	20.12	12.29	-5.51	9.97	14.47	4.87	2.66	12.87	9.98	-6.11	15.78	0.00	1.00	0.66	0.00	7.16	-8.68	100.00	
Portfolio 5	14.92	24.82	47.92	124.47	208.29	27.20	16.24	-6.02	13.73	15.50	5.75	6.38	11.39	15.15	-5.68	14.92	2.12	0.87	0.92	0.65	6.68	-7.40	80.03	
IA Benchmark	15.72	19.77	38.91	93.41	149.49	22.07	13.44	-7.13	10.05	14.51	4.88	2.33	13.34	10.59	-6.41	15.72	0.00	1.00	0.65	0.00	7.42	-9.34	100.00	
Portfolio 6	15.73	25.70	51.29	132.70	230.77	31.08	17.87	-7.27	14.41	16.01	6.01	7.31	12.17	15.49	-5.95	15.73	2.46	0.88	0.94	0.83	7.03	-7.91	81.20	
IA Benchmark	15.66	19.98	39.28	92.71	152.08	24.03	14.57	-8.73	10.13	14.54	4.89	1.99	13.82	11.21	-6.72	15.66	0.00	1.00	0.63	0.00	7.71	-10.00	100.00	

Please find the details for the associated benchmarks at the back of this document.

*Since Launch: Launch of PMS Portfolio 01/11/2008

Source of Data:  **ANALYTICS**
BE BETTER INFORMED

The Managed Portfolio Service (MPS) past performance figures include simulated performance to 1st November 2018. Simulated figures are based on the actual performance figures of the Portfolio Management Service provided by IBOSS Limited. The simulated past performance is not a reliable indicator of future performance.

The Managed Portfolio Service (MPS) performance is produced using the preferred share classes, this may differ from platform to platform.

The Managed Portfolio Service (MPS) is shown net of fund fees only, they do not incorporate platform costs, adviser's client fee or DFM service charge.

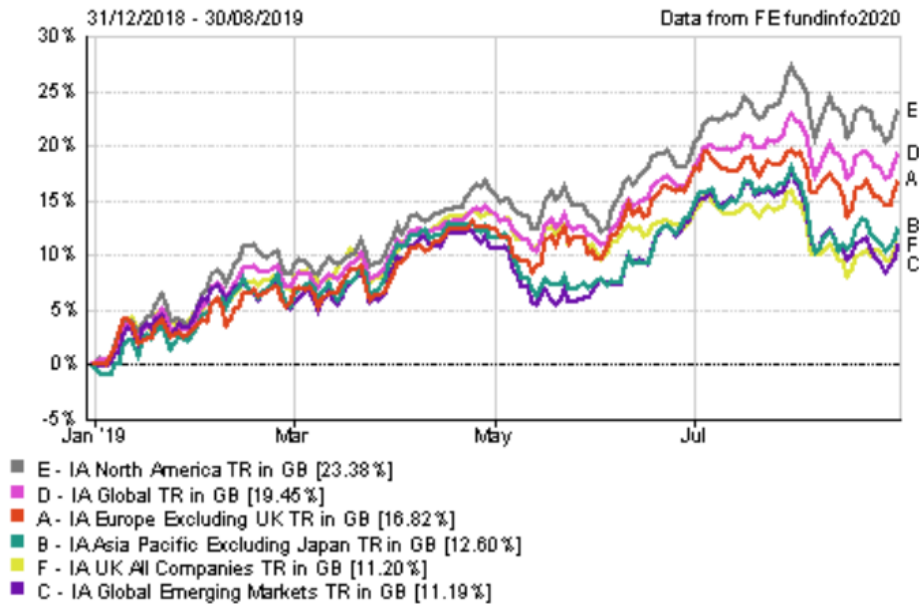
SUMMARY

On a pure cumulative performance basis, December made little change to the relative performance of the portfolios for 2019. The month did however see all portfolios (excluding portfolio 2) marginally outperform their respective benchmarks. The principle reasons that Portfolios 0 and 6 outperformed over the year, whilst the others didn't, was our relative UK Gilt and US equity holdings respectively.

For all the razzamatazz surrounding a small number of US Tech stocks making new highs on a daily basis, the chart below demonstrates that 2019 was slightly more complicated than that. The best place to be, by a considerable margin, in the last third of 2019 was UK assets, a trend which accelerated following the election. We still feel the downside risk on some US assets is considerable but that doesn't mean we are not invested, just less so than the benchmarks.

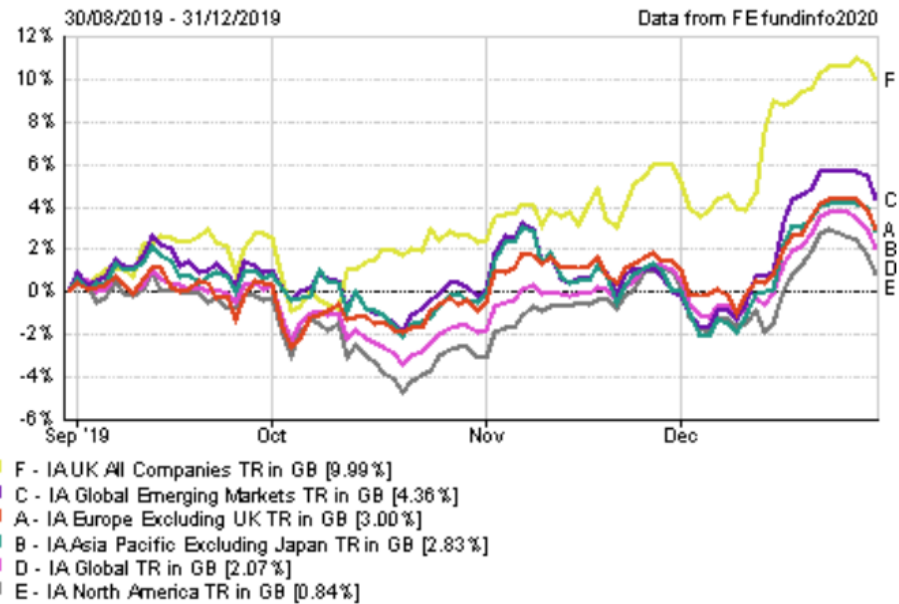
2019 – The First Eight Months

31/12/2018 - 30/08/2019



2019 – The Last Four Months

30/08/2019 - 31/12/2019



Although hard to accurately quantify, 2019 was one of our best years for underlying fund selection, especially in the European and Asian equity space. Q4 of 2018 and the year 2019 were diametrically opposed due, almost wholly, to the actions of the Federal Reserve. Given that we are longer term investors than those purely trading 'Fed speak' or trade war tweets, this made it a tougher environment for us on a relative to benchmark basis. It was also a year that saw investments that took purely market risk (as measured by beta) perform relatively well. Our approach is to take less than the average market risk and to outperform based on our asset allocation and fund selection. It's probably worth repeating our overall goal which is to 'Beat the relevant benchmark over as many time periods as possible, with less than benchmark volatility, lower drawdowns and across all risk ratings'.

Risk Adjusted Returns & Defensive Characteristics

For the third consecutive year, our Portfolios 1, 2, 4 and 6 all finished above the benchmark of their respective IA sectors on a risk adjusted basis (Sharpe Ratio). This sets us apart from our peer group as many score well in certain market conditions or at certain risk levels.

To put this in perspective, you would have to go back to 2016 to find an example of any of our portfolios offering worse risk adjusted returns than the benchmark over a discrete calendar year. Additionally, there have been only 3 times where the IBOSS portfolios finished below their respective benchmarks. This consistency has not only given us top decile Sharpe ratios since launch, but a full range of defensive characteristics which are predominantly top quartile and often top decile.

Ultimately, we defer to advisers and how they define success, but it is also important that we continue to articulate what we consider to be success. Risk adjusted returns, as measured by the Sharpe ratio, are a key measure but we would also contend that our use of multiple funds in each sector reduces risks which are less quantifiable. In a year which saw funds blow up, suspend and cease trading altogether, it seems prudent to limit our holdings in any one area. There are no end of experts explaining *after the fact* why and how these, often idiosyncratic, fund issues occur but this type of analysis is of little actual help. What is perhaps more useful is an acceptance of how much you don't or can't know *before* the fact, and this is justification enough for us to target maximum diversification.

Discrete Calendar Year Sharpe Ratios ranked within IA Sectors

	2009	%	2010	%	2011	%	2012	%	2013	%	2014	%	2015	%	2016	%	2017	%	2018	%	2019	%
Investment Portfolio 1	1.82	10	1.22	48	0.00	57	1.96	38	1.78	4	0.48	76	0.32	5	0.95	81	2.01	7	0.00	37	2.24	47
Investment Portfolio 2	1.52	50	1.43	10	0.00	26	1.75	34	1.66	18	0.96	40	0.40	15	1.24	54	2.44	13	0.00	18	2.19	42
Investment Portfolio 4	1.87	17	1.31	11	-0.01	24	1.59	12	1.76	23	0.74	33	0.49	10	1.27	62	2.86	9	0.00	18	2.16	37
Investment Portfolio 6	1.96	26	1.28	16	-0.01	43	1.47	9	1.59	43	0.66	30	0.58	5	1.36	55	2.93	19	-0.01	33	2.12	22

Start of Data Defensive Characteristics ranked within IA Sectors

	Alpha	%	Beta	%	Downside Risk	%	Information Ratio	%	Maximum Drawdown	%	Maximum Loss	%	R2	%	Sharpe	%	Sortino	%	Volatility	%	Downside Capture	%
Investment Portfolio 1	1.44	5	0.88	20	3.80	1	0.45	20	-4.39	10	-4.39	10	0.85	25	1.00	1	1.09	5	4.16	15	84.08	5
Investment Portfolio 2	1.73	9	0.87	12	5.03	5	0.62	6	-5.68	2	-5.68	3	0.94	1	1.04	3	1.08	3	5.23	5	81.81	8
Investment Portfolio 4	2.17	10	0.87	12	7.00	4	0.60	10	-8.86	6	-8.83	14	0.96	7	1.01	3	1.09	4	7.57	6	82.58	6
Investment Portfolio 6	2.71	11	0.97	38	9.02	25	1.24	1	-11.88	26	-11.66	38	0.96	4	0.98	7	1.03	4	9.52	26	90.43	29

1st Quartile	2nd Quartile	3rd Quartile	4th Quartile
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Colours indicate the quartile position within sector. The percentile figure breaks each sector into 100ths e.g. 50th percentile would indicate a fund/portfolio was in the middle of the sector.

The Sharpe ratio calculates the level of a fund's return above a notional risk-free investment, often the 10 Year US Treasury yield. The difference in returns is divided by the fund's standard deviation (volatility). The resulting ratio is an indication of the amount of excess return generated per unit of risk. Sharpe is useful when comparing similar portfolios/instruments. In general, it's considered the higher the Sharpe ratio, the better. As the ratio increases, so does the risk-adjusted performance. In effect, when analysing similar investments, the one with the highest Sharpe has achieved more return while taking no more risk than its peers or conversely, has achieved a similar return with less risk.

2020, it's US election year and no outcomes should be ruled out

We won't waste anybody's time attempting to predict the direction of asset classes as there are already plenty of meaningless indices and stock guesstimates. What we will do is summarise what we do know. We know markets are floating on a sea of central bank liquidity, we know there is a super-hyped but largely inconsequential trade deal and we know that investors are excited that there may be no imminent recession. These first two points are potentially great for markets, as they can be almost endlessly jawboned to keep up market sentiment, and equity markets high. The third is a little trickier, recessions are factual but often calculated using lagging indicators and will likely be dealt with further down the line and not for now. We also must be mindful that it's election year. Every election these days is couched in phrases such as 'the most important election in a generation' but this one might just live up to the billing. If Trump loses, we could have some radically different economic policies with a populist twist. This will likely include some untested economics which could inevitably cause casualties, deserved or not. On the other hand, if Trump wins a second term, then we can expect some potentially more extreme policies than those in his first term. There will of course be implications for many sectors of the economy, both US and externally, as well as implications for the environment and foreign relations. We continue to believe that there has never been a better time for a well-diversified portfolio than in 2020, especially if the emphasis is on relatively defensive characteristics.

Ratio Definitions

Alpha - Alpha is a measure of a fund's performance by comparison to its benchmark. It represents the return of the fund when the benchmark is assumed to have a return of zero and indicates the extra value a manager's activities have contributed: if the Alpha is 5, the fund has outperformed its benchmark by 5%. A further aspect of Alpha emerges when it is taken in conjunction with Beta. If a strong R-Squared correlation exists, the Beta will show how volatile the fund is compared to its benchmark and indicate how much extra risk the manager has taken on in order to get that high-Alpha performance. So, Alpha indicates better/worse performance compared with the index, whilst Beta shows higher/lower risk.

Beta - Beta is the estimate of a fund's volatility by comparison to its benchmark, i.e. how sensitive the fund is to movements in the section of the market that comprises the benchmark. A fund with a Beta close to 1 means that the fund will generally move in line with the benchmark. Higher than 1 and the fund is more volatile than the benchmark, so that with a Beta of 1.5, say, the fund will be expected to rise or fall 1.5 points for every 1 point of benchmark movement. It's important to stress that Beta is just an estimate: however, the stronger the R-Squared correlation between fund and benchmark, the more reliable this estimate becomes.

Downside Risk - Downside risk is a measurement which only considers negative returns. It is calculated as a downside deviation of returns below a specified Risk-Free Rate. It represents an estimation of a security's potential to suffer a decline in price in negative market conditions. It could be considered as an estimate of the potential loss on any investment.

Information Ratio - So called because it assesses the degree to which a manager uses skill and knowledge to enhance returns, this is a versatile and useful risk-adjusted measure of actively managed fund performance. It is calculated by deducting the returns of the fund's benchmark from the fund's overall returns, then dividing the result by its Tracking Error (which is a measure of the volatility of those excess returns). In this way, we arrive at the value, per unit of extra risk assumed, that the manager's decisions have added to what the market would have delivered anyway. The higher the Information Ratio the better. As ever, the R-squared between the fund and its benchmark must be strong if any discrete reliance is to be placed on the Information Ratio.

Maximum Drawdown - Represents the worst possible return over a period, e.g. buying at the maximum price over the period and selling at the worst.

Maximum Loss - Represents the worst running return over a period e.g. the longest running consecutive loss without making a gain

R-Squared - The R-Squared measure is an indication of how closely correlated a fund is to an index or a benchmark. It can be treated as a percentage, showing what proportion of a fund's movements can be attributed to those of the benchmark. Values for R-Squared range between 0 and 1, with 0 indicating no correlation at all, and 1, rarely, showing a perfect match. Values upwards of 0.7 suggest that the fund's behaviour is increasingly closely linked to its benchmark, whereas the relevance diminishes as R-Squared descends towards 0.5 and starts to disappear altogether below that. R-Squared is a key ratio, in that other measures of a fund's performance - such as Alpha and Beta - will have been calculated by reference to its benchmark. The weaker the R-Squared correlation, the more unsuitable the benchmark is, and the more unreliable these measures will be in assessing the fund.

Sortino Ratio - This ratio is similar to the Sharpe Ratio, using downside risk rather than standard deviation as the denominator. Thus, the Sortino Ratio is calculated by subtracting the risk-free rate from the return of the portfolio and then dividing by the downside deviation. The Sortino ratio measures the return to "bad" volatility thereby giving investors a measure to assess risk in a better manner than simply looking at excess returns to total volatility. A large Sortino Ratio indicates a low risk

Volatility - Standard deviation is a statistical measurement which, when applied to an investment fund, expresses its volatility, or risk. It shows how widely a range of returns varied from the fund's average return over a particular period. Low volatility reduces the risk of buying into an investment in the upper range of its deviation cycle, then seeing its value head towards the lower extreme. For example, if a fund had an average return of 5%, and its volatility was 15, this would mean that the range of its returns over the period had swung between +20% and -10%. Another fund with the same average return and 5% volatility would return between 10% and nothing, but there would at least be no loss. While volatility is specific to a fund's particular mix of investments, and comparison to other portfolios is difficult, clearly, for those that offer similar returns, the lower-volatility funds are preferable. There is no point in taking on higher risk than necessary in order to achieve the same reward.

BENCHMARKS

Portfolio	Benchmark
0	70% IA Mixed Investment/0%-35% Shares/ 30% Composite IA Money Market
1	IA Mixed Investment 0%-35% Shares
2	IA Mixed Investment 20%-60% Shares
3	50% IA Mixed Investment 20%-60% Shares/ 50% IA Mixed Investment 40%-85% Shares
4	IA Mixed Investment 40%-85% Shares
5	50% IA Mixed Investment 40%-85% Shares/ 50% IA Flexible Investment
6	IA Flexible Investment
Equity	IA Global

NB. MPU Figures are calculated on a Total Return basis - Total return shows the total return of the instrument with all income reinvested, assuming income is taxed at basic rates of income tax.

IMPORTANT INFORMATION

Past Performance is no guarantee of future performance. The value of an investment and the income from it can fall as well as rise and investors may get back less than they invested. Quoted yields are based on the 12 months distributions by the funds in the portfolios and are not guaranteed. The past performance figures are from the Portfolio Management Service provided by IBOSS Limited. The same data has been used for the IBOSS Asset Management Limited discretionary Managed Portfolio Service, but with different share classes. The simulated past performance data is not a reliable indicator of future performance. Future distributions may differ and will be subject to market factors. Risk factors should be taken into account and understood including (but not limited to) currency movements, market risk, liquidity risk, concentration risk, lack of certainty risk, inflation risk, performance risk, local market risk and credit risk. This communication is designed for Professional Financial Advisers only and not approved for direct marketing with individual clients. It does not purport to be all-inclusive or contain all of the information which a proposed investor may require in order to make a decision as to whether to invest in the portfolio. Nothing in this document constitutes a recommendation suitable or appropriate to a recipient's individual circumstances or otherwise constitutes a personal recommendation. It is the responsibility of the Financial Adviser to ensure they are satisfied with the research undertaken by IBOSS Asset Management Limited in relation to the investments included within each portfolio; copies of which are available on written request. Data is provided by Financial Express (FE). Care has been taken to ensure that the information is correct but FE neither warrants, neither represents nor guarantees the contents of the information, nor does it accept any responsibility for errors, inaccuracies, omissions or any inconsistencies herein. Please note FE data should only be given to retail clients if the IFA firm has the relevant licence with FE.

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