Sterling Aberdeen Standard Multi Asset SMA’s

Model Portfolio Statistics

30 September 2021

Asset class exposure

Asset Classes	Sterling CPI+2%	Balanced 30/70	Sterling CPI+3.5%	Balanced 50/50	Sterling CPI+5%	Balanced 70/30
Australian Shares	2.8%	0.0%	2.8%	0.0%	4.9%	0.0%
Global Shares	16.5%	30.0%	33.2%	50.0%	53.0%	70.0%
AREITs	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
GREITs	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Alternatives	16.5%	0.0%	16.3%	0.0%	16.8%	0.0%
Australian Fixed Interest	34.9%	0.0%	21.9%	0.0%	5.4%	0.0%
Global Fixed Interest	24.0%	70.0%	19.8%	50.0%	13.7%	30.0%
Cash	5.4%	0.0%	5.9%	0.0%	6.2%	0.0%

Growth	36.4%	30.0%	53.0%	50.0%	75.4%	70.0%
Defensive	63.6%	70.0%	47.0%	50.0%	24.6%	30.0%

Source: abrdn, 30 September 2021.

Long term capital assumption

Asset Class/ Fund	Capital Gain	Income	Total Return
Money Market	0.0%	1.0%	1.0%
Asia ex Japan Equities	4.9%	2.2%	7.1%
US Equities	4.1%	2.0%	6.0%
Europe ex UK Equities	4.2%	2.3%	6.5%
Australian Equities	6.7%	2.5%	9.1%
Japan Equities	2.3%	2.7%	5.0%
UK Large Cap Equities	5.8%	2.8%	8.6%
Australia Floating	0.1%	0.9%	1.0%
Global Equities	4.1%	2.1%	6.2%
Emerging Markets Equities	4.5%	2.2%	6.7%
China Equities	5.0%	1.9%	6.9%
Global Equities SC	8.8%	1.9%	10.7%
Global REITs	1.9%	3.8%	5.7%
Global Healthcare	4.6%	1.6%	6.2%
Australian ILGB	3.0%	-0.4%	2.7%
Australian Govt	-0.7%	1.5%	0.8%
Australian Short-Dated Govt	-0.1%	0.9%	0.8%
Australian IG	2.1%	1.4%	3.5%
Global DM Govt	-0.3%	0.9%	0.5%
Global IG	0.4%	2.7%	3.1%
Global HY	0.8%	6.1%	6.9%
EM Sovereign Debt (Hard)	0.6%	6.0%	6.6%
MARRF	4.1%	3.0%	7.1%
GARS	3.0%	0.0%	3.0%

Return Type	Sterling CPI+2%	Balanced 30/70	Sterling CPI+3.5%	Balanced 50/50	Sterling CPI+5%	Balanced 70/30
Income	1.9%	2.5%	2.0%	2.4%	2.2%	2.3%
Capital Gain	2.1%	1.2%	2.9%	2.0%	4.0%	2.8%
Total Return	4.1%	3.7%	4.9%	4.4%	6.1%	5.1%

Source: abrdn, 30 September 2021. The above forecast total return is only based on Strategic Asset Allocation of our portfolios, we expect 1% extra alpha to be contributed through Tactical Asset Allocation and security selection within some of the asset classes across portfolios.

Portfolio return distribution probability

Working assumptions

Empirical data shows that the financial market return distribution deviates from those implied by normal distribution. Therefore using it to make projections of future return (parametric approach) would yield a significant underestimation of risk which is sub optimal. Note that this pitfall has been largely documented by academics and we are happy to provide further research papers if of interest. Therefore, to be conservative in our approach, we choose to employ an Asset Scenario Generator (non-parametric approach) that factors in negative skewness and excess kurtosis. For it, we use both historical data and stochastics models such as Monte Carlo simulation that ultimately for you (and the key takeaway) provides a distribution of returns closer to reality.

Output across portfolios

Defensive

Percentile	Sterling CPI+2%					Balanced Fund 30/70				
	1y	3y	5y	8y	10y	1y	3y	5y	8y	10y
95th Percentile	13.38%	10.71%	10.61%	10.69%	11.14%	10.39%	7.96%	7.42%	7.06%	6.91%
75th Percentile	8.65%	7.60%	7.63%	7.76%	8.41%	6.14%	5.20%	4.90%	4.91%	4.92%
50th Percentile	4.97%	5.27%	5.62%	6.03%	6.38%	3.12%	3.30%	3.26%	3.43%	3.60%
25th Percentile	1.83%	3.38%	4.00%	4.41%	4.78%	0.19%	1.25%	1.71%	2.32%	2.38%
5th Percentile	-3.13%	0.14%	1.50%	2.16%	2.91%	-4.29%	-1.14%	-0.22%	0.39%	0.86%
Probability (<3.5%)	36.25%	27.30%	22.20%	15.25%	12.10%	53.35%	54.50%	53.90%	51.65%	48.00%
Probability (<0.0%)	13.90%	4.35%	0.80%	0.40%	0.00%	24.85%	11.45%	6.00%	2.25%	1.35%

Balanced

Percentile	Sterling CPI+3.5%					Balanced Fund 50/50				
	1y	3y	5y	8y	10y	1y	3y	5y	8y	10y
95th Percentile	17.56%	13.79%	13.44%	13.74%	14.47%	15.50%	11.79%	10.41%	10.34%	10.33%
75th Percentile	10.46%	9.31%	9.27%	9.70%	10.40%	8.77%	6.87%	6.59%	6.86%	6.73%
50th Percentile	6.20%	6.22%	6.74%	7.15%	7.73%	3.81%	4.01%	4.17%	4.42%	4.53%
25th Percentile	1.35%	3.47%	4.19%	4.97%	5.35%	-0.48%	1.35%	1.92%	2.20%	2.84%
5th Percentile	-5.02%	-0.18%	0.76%	2.09%	2.62%	-7.25%	-2.43%	-1.16%	-0.16%	0.46%
Probability (<5.0%)	43.85%	37.65%	32.50%	24.95%	21.35%	57.05%	57.25%	57.50%	60.10%	51.85%
Probability (<0.0%)	17.90%	6.70%	3.00%	0.80%	0.25%	27.70%	15.80%	10.40%	5.40%	3.70%

Growth

Percentile	Sterling CPI+5%					Balanced Fund 70/30				
	1y	3y	5y	8y	10y	1y	3y	5y	8y	10y
95th Percentile	22.92%	17.76%	18.70%	18.94%	20.54%	21.58%	15.97%	14.78%	14.92%	14.83%
75th Percentile	13.21%	11.99%	12.24%	13.09%	13.57%	10.81%	8.75%	8.61%	8.82%	8.96%
50th Percentile	7.51%	7.61%	7.99%	8.81%	9.51%	4.55%	4.94%	5.25%	5.36%	5.75%
25th Percentile	1.11%	4.02%	4.07%	5.58%	6.40%	-1.16%	0.94%	1.68%	2.67%	2.82%
5th Percentile	-7.43%	-1.68%	-0.20%	1.69%	2.47%	-10.55%	-3.91%	-2.14%	-0.90%	-0.19%
Probability (<6.5%)	45.65%	42.95%	36.90%	31.80%	27.55%	57.20%	63.25%	61.00%	60.40%	55.95%
Probability (<0.0%)	20.30%	8.85%	3.75%	1.65%	0.55%	29.25%	18.40%	13.35%	8.45%	6.85%

Source: abrdn, 30 September 2021.

Conclusion

In this updated version, key takeaways across the three risk profiles are as follows:

- Strong growth, albeit the return expectations are slightly less than the previous quarter. The Sterling portfolios exhibit better upside capture with stronger resilience as opposed to traditional portfolio construct.

- Each of the Sterling portfolios show high probability to meet return target within time horizon.

- Probability to meet the return target is far superior to traditional balanced allocations. Inflation expectation has been increased to 1.5% on a 3 year forward looking basis.

- Over the long run, the Sterling portfolios show better risk return prospects as opposed to traditional balanced allocation. That's the result of traditional risk premia compression, particularly on fixed income, combined with less diversification potential between equities and fixed income.

Tail risk assessment

Similar to the first edition, we use stress testing in order to further test the resilience of the portfolios against possible future financial events or shocks. We use a suite of historical and proprietary forward looking scenarios which aim to focus on tail risks. While historical data is a good starting point for any kind of analysis, we acknowledge that chances are low that past scenarios will identically reproduce in the future. Hence, we do put more emphasis on the proprietary forward looking approach.

a. Historical stress testing

The objective here is to look at how the portfolios would have reacted to a suite of events that happened in the past. Note that for this, we have kept portfolio weights statics while in reality we would have been actively managing these portfolios at these various periods of time, it is very likely that allocations would have been different to reflect our view of the world at that time. However this historical analysis still provides valuable insights into the resilience of the Sterling portfolios.

Output across the Sterling Aberdeen Standard portfolios

Historical Risk Events	Sterling CPI+2%	Sterling CPI+3.5%	Sterling CPI+5%	Global Equity	Balanced Fund 30/70	Balanced Fund 50/50	Balanced Fund 70/30
Asian Crisis 1997	0.11%	-2.54%	-4.38%	-2.87%	2.11%	0.68%	-0.74%
Russian Default 1998	-0.41%	-2.12%	-4.34%	-6.15%	1.92%	-0.38%	-2.69%
9-11 2001	-4.33%	-6.76%	-9.83%	-11.63%	-2.83%	-5.35%	-7.86%
WorldCom 2002	-2.85%	-4.18%	-6.15%	-9.20%	-2.68%	-4.54%	-6.41%
2008 Financial Crisis	-9.52%	-17.35%	-27.71%	-45.47%	-15.42%	-24.01%	-32.59%
European Sovereign Debt Crisis 2010	-1.79%	-3.61%	-6.26%	-12.13%	-3.27%	-5.80%	-8.33%
USA Debt Ceiling Crisis & Downgrade 2011	-2.96%	-5.73%	-9.55%	-15.66%	-3.66%	-7.09%	-10.52%
Japan Earthquake 2011	-0.55%	-1.46%	-2.68%	-4.86%	-0.54%	-1.78%	-3.01%
Greece Financial Crisis 2015	-0.90%	-1.99%	-3.21%	-5.19%	-1.68%	-2.68%	-3.68%

Source: abrdn, 30 September 2021.

Traditional Diversified are for illustrative and comparison purpose only. Historical data used are MSCI world index for global equity exposure and Barclays global aggregate total return index for fixed income exposure. Balanced portfolios weights are static and rebalanced monthly.

Conclusion

The Sterling Aberdeen Standard portfolios allocate sizable amount to listed alternatives as those assets provide idiosyncratic price drivers which are lowly or uncorrelated to the global economic cycle while providing attractive return potential. As a result, they serve as a great diversification source. It is worth noting that the listed alternatives market started to boom after the global financial crisis, and as such there were no appropriate indices for listed alternatives for us to simulate all of the historical events in the above table. As a result, the stress analysis of scenarios prior to 2008/2009 is only for reference as the essence of listed alternatives couldn't be captured in such market backdrops.

For other historical scenarios which are more recent, the Sterling Aberdeen Standard portfolios show strong resilience in both absolute and relative terms against not only the equity market but also compared to static Traditional Diversified portfolios. The historical analysis reinforces our view that true diversification enables the portfolios to better navigate through turbulent environments and ensures a smoother long term investment journey.

b. Forward looking scenario analysis

To further test portfolios' resilience against "Tail Risks" and acknowledging that past events won't reproduce in the exact same fashion in the future, we also conducted forward looking scenario analysis. This represents the last step of our quantitative analysis. The objective is to set out a series of extreme but economically plausible scenarios, diverging from our central view, which we believe could potentially have a material impact on the global economy and financial markets. Through this quantitative assessment, the portfolio managers have a more complete picture on what types of risks the Sterling portfolios may potentially face and the impact these would have on the portfolio construct.

Output across Sterling's portfolios

ASI Scenarios	Sterling CPI+2%	Sterling CPI+3.5%	Sterling CPI+5%	Global Equity	Balanced Fund 30/70	Balanced Fund 50/50	Balanced Fund 70/30
CapitalToLabour	-3.12%	-3.92%	-5.23%	-6.00%	-3.15%	-3.97%	-4.78%
ClimateChange	0.35%	1.12%	2.32%	6.70%	2.44%	3.66%	4.87%
FedUp	-4.92%	-5.39%	-6.22%	-5.98%	-4.52%	-4.94%	-5.35%
ModernMonetaryTheory	2.98%	3.97%	3.96%	-0.33%	-1.12%	-0.90%	-0.67%
OneChina	2.01%	2.77%	4.06%	11.00%	6.07%	7.48%	8.89%
InflationBreakout	-4.85%	-6.26%	-8.78%	-15.30%	-6.57%	-9.06%	-11.55%
RapidSavingRundown	2.60%	3.95%	5.71%	6.54%	-0.26%	1.68%	3.63%
SchwarzeNull	2.60%	3.90%	5.49%	6.85%	-0.14%	1.86%	3.85%

Source: abrdn, 30 September 2021.

Note that for the three traditional balanced funds, returns are hedged back to AUD.

Conclusion

The forward-looking scenario exercise is for portfolio managers to examine how the Sterling portfolios would perform under different extreme, but economic plausible scenarios. Our portfolio positioning reflects our long-term SAA view and short-term TAA view in a central base case scenario, which may or may not always outperform in other extreme risk scenarios, especially those that are far away from our current central scenario. That is to say, we do not necessarily adjust our portfolio positioning solely because of our portfolios underperforming traditional balanced portfolios in some of the scenarios. Also, we always adjust the portfolios dynamically, that is, we would adjust portfolio positions based on the prevailing market dynamic we perceive for the near future, as we take semi-annual SAA review and weekly (or even more frequent depending on how markets move) TAA adjustments to manage risk and outcomes for each portfolio..

Our current short-term view (TAA) remains positive on cyclical equity and higher yielding bonds (high yield credit, emerging market bonds). We expect above trend growth for 3 years provides a supportive backdrop for equities. With government bonds and investment grade bonds screening as expensive, high yield bonds currently offer stable income with policy support that keeps defaults contained. We find our asset allocation across the Sterling portfolios robust.

Scenario output commentary

- In most of the scenarios, Sterling's portfolios show resilience to downside shocks and upside capture during stronger market events.
- In the 'Climate Change' scenario, the impact to emerging market assets, Australian equities, and high yield, which the Sterling portfolios hold, don't perform as well as traditional assets (developed market equities and developed market government bonds that balanced funds hold), hence the underperformance of the Sterling portfolios in our simulation.
- In the 'Fed-Up' scenario, our multi-asset fund holdings such as Multi-Asset Real Return Fund and Global Absolute Return Strategies Fund underperform global equities and global government bonds, resulting in modest underperformance in this forward-looking scenario.
- The 'One China' scenario tends to benefit global equities and developed market government bonds. As the Sterling portfolios take a diversified approach within their equity exposure, and are underweight government bonds, the simulation results show underperformance.

Cost Analysis

Underlying bid-ask spread analysis

Portfolio	Average Bid Ask Spread (%)
Sterling Aberdeen Standard CPI + 2.0%	0.29
Sterling Aberdeen Standard CPI + 3.5%	0.31
Sterling Aberdeen Standard CPI + 5.0%	0.32

Underlying Asset/ Fund	Bid Ask Spread (%)
Asia ex Japan Equities	0.23
Australian Equities	0.44
Australian IG	0.12
Australian Floating Rate	0.11
Chinese Equities	0.40
EM Sovereign Debt (Hard)	0.47
Emerging Markets Equities	0.27
Europe ex UK Equities	0.25
Global Absolute Return Strategies Fund	0.58
Global Equities	0.04
Global HY	0.39
Global IG	0.26
Global Small Cap	0.34
UK Equities	0.25
MARRF	0.55
Money Market	0.02
US Equities	0.04

Source: abrdn, 30 September 2021.

The source of bid-ask spread of underlying asset classes/ funds is Bloomberg. The average bid-ask spread on portfolio level is the weighted bid-ask spread considering each portfolio's exposure to each underlying asset class/fund.

Portfolio management cost

Cost	Sterling CPI+2%	Sterling CPI+3.5%	Sterling CPI+5%
Management Expense Ratio	0.32%	0.35%	0.38%
RG97 (Indirect Costs)	0.08%	0.09%	0.10%
Total Portfolio Management Cost	**0.40%**	**0.44%**	**0.47%**
ASI Advisory Fees	0.19%	0.19%	0.19%
Total Portfolio ICR	**0.59%**	**0.63%**	**0.66%**
Sterling Management Fee	0.15%	0.15%	0.15%
Total Client Cost (ex. Platform)	**0.74%**	**0.78%**	**0.81%**

Source: abrdn, 30 September 2021.

APPENDIX

Scenario description

Capital -> Labour

The Biden/Yellen tax proposals pass unaltered through the Democratic-controlled Congress, against market expectations for some watering-down. The US corporate tax rate increases from 21% to 28%, the effective tax rate on Global Intangible Low Tax Income rises from 10.5% to 21%, a new mimimum tax on book income of 15% is introduced, corporate inversions become much more difficult, and the capital gains tax rate increases from 20% to 40%.

Markets have to incorporate not only the direct EPS implications of these tax changes, but also extrapolate to a broader shift away from corporate market power and the favourable treatment of capital, to a rising labour share of income and increased worker bargaining power. The rapid pricing in of this shift hits risk markets, and in particular the momentum and growth factors sell-off, while market inflation expectations and nominal bond yields increase.

Climate Change

An intense El Nino episode develops during 2021/22 - greater even than the 1997/98 episode - which climate scientists partially attribute to the effects of climate change. This lifts global average temperatures more than a degree above their already dangerous warming trend, pushes countries ranging from Australia, Brazil, India, Indonesia, and Brazil into severe and prolonged droughts and fire seasons, while other regions, including parts of Africa and the Americas face record rainfall and extreme flooding. These extreme weather patterns spark widespread crop failures, which depresses output in countries with large agricultural sectors and pushes up the prices of internationally traded agricultural commodity prices.

As a result, headline inflation rises everywhere, though the effects are especially large in emerging countries for which agricultural prices make up the largest share of consumer price baskets. While DM central banks are able to look through this negative supply shock, it still shocks inflation breakevens higher, particularly against a backdrop in which growth and prices are recovering strongly from the Covid shock. But in emerging economies, particularly those where inflation expectations are less well anchored, it is harder to look through the shock and some central banks are forced to tighten policy even as growth is depressed by the commodity shock.

Fed-Up

Following a successful vaccination program, and positive results from the effectiveness of transmission post-vaccine, restrictions are lifted sooner than expected, paving the way for a strong recovery in DM economies, particularly the US which is buoyed by a large fiscal stimulus package. Inflation picks up over the summer as expected due to base effects but longer term inflation expectations also start rising significantly as measured by the 5 year 5 year forward breakeven.

Fed communication and Chairman Powell's language changes in a more hawkish direction, and in the market's assessment by more than is justified by the underlying economic improvement. The market prices this as an exogenous policy shock, re-assessing the path of short term interest rates. This results in a material bear flattening of the US curve and lower inflation breakevens, meaning real rates rise and risk markets re-rate, unwinding much of the cyclical returns built up over the year. Higher US rates result in a strengthening of the USD.

Modern Monetary Theory

US elections resulted in a strong Democratic win which created the push for large scale fiscal spending supported by MMT. The Fiscal deficit remains at elevated levels >6% of GDP with little political will to reduce it.

Front end rates remained relatively anchored for the mean time, but long end of the bond markets take a different view and steepened aggressively.

Value stocks outperformed growth stocks as future profits become discounted more heavily and inflation concerns increase. USD liquidity floods the world economy leading to a weak trade weighted USD with significant benefits for EM FX.

One China

Tensions between China and the US over the future of Taiwan continue to rise. China escalates its displays of military power through repeated aerial incursions, while also engaging in other "grey zone" actions such as cyber-attacks, and interfering in elections and social media to further its One China policy.

This is matched by increasingly public US support for Taiwan, with more direct senior level contact and advanced military defence contracts. At some point, a red line is inadvertently crossed, leading to an intensity of frictions that becomes destabilising economically. This could be a disruption to important supply chains in the technology sector, or a more wide-ranging suite of economic sanctions on Chinese entities that could include use of the USD in international trade.

While stopping short of an outright military conflict, the US and China fall into a new Cold War, and the disruption causes significant economic damage in the global technology sector, on Chinese economic activity and of course on the TWD exchange rate. Global uncertainty rises, causing a spike in volatility with implications most acute for Japan and Korea in the Asian region.

Inflation Breakout

In this scenario, the rise in inflation proves much more persistent than we are expecting, as the supply side of economies takes longer to adjust to changing patterns of demand.

The pick-up in inflation feeds through into expectations and thus wage and price setting behaviour. Central banks misjudge the persistence of the inflationary impulse and leave tightening until it is too late.

Rapid Savings Rundown

The pandemic and the associated restrictions on spending opportunities, particularly on services, has led to a large increase in household savings across most of the major economies.

Although savings rates decline towards their pre-pandemic levels in our baseline, much of the savings buffers that have been built are retained for precautionary reasons.

But in an upside scenario, a much larger proportion of this pool of savings could be run down, supporting stronger consumption and broader economic growth, while also contributing to stronger inflation pressures.

Schwarze Null Thanks

The German Greens are the largest party in the Bundestag after the September 2021 federal elections, and take both the Chancellor and Finance Minister posts in a new coalition government. In these roles, the Greens go about instating some of their long-held fiscal policies – dropping the debt brake; reforming the Stability and Growth Pact; and advancing European fiscal integration.

The upshot is a persistently more expansionary German fiscal stance even after the Covid shock has passed, and greater fiscal spending across Eurozone economies as a whole. Sentiment and economic activity in Europe improves, and the response in markets is impressive. Risk markets rally while bond curves steepen sharply on increased bond issuance and an ECB on board, adopting a wait and see approach on policy rates to the uplift in sentiment.