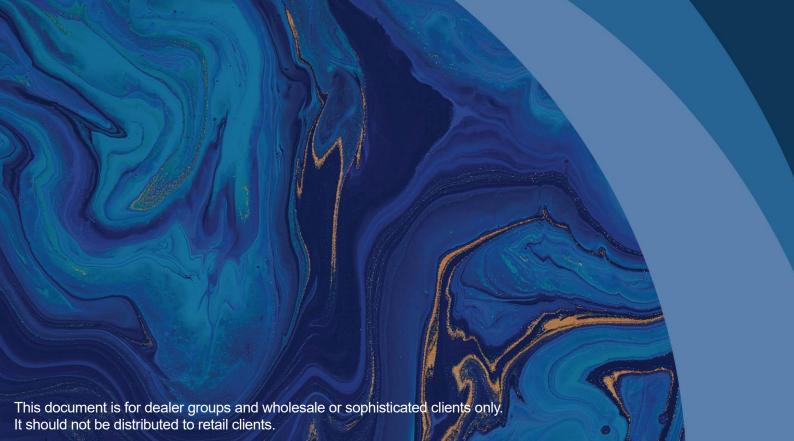


Mason Stevens OCIO Dynamic Asset Allocation 2024



Dynamic Asset Allocation - Overview

What is Dynamic Asset Allocation (DAA)?

DAA is an investment strategy that involves adjusting the allocation of assets in a portfolio based on changing market conditions, economic indicators, or other relevant factors. Unlike Strategic Asset Allocation (SAA), which involves setting a fixed mix of asset classes and maintaining it over time, DAA allows for flexibility and adaptability.

The goal of DAA is to enhance returns and manage risk by responding to shifts in market conditions. Investors employing this strategy may adjust the allocation of assets such as stocks, bonds, cash, and other investments based on their expectations of future market performance.

Why is DAA important?

SAA aims to construct portfolios that are positioned to meet investment objectives over the long term (5-10 years).

DAA is important because by effectively managing shorter term risks and identifying shorter term opportunities, investors will improve the likelihood of meeting investment objectives and generate better investment performance over the longer term.

What is our approach to DAA?

Our approach incorporates the following factors:

- » Economic and market conditions: we believe the fundamental drivers of investment markets are the direction of economic growth and inflation and how they interact with each other.
- » Valuation metrics: we use valuation tools to assess the relative attractiveness of different asset classes under different economic scenarios.
- Market sentiment: sentiment analysis involves assessing the mood and opinions of market participants. Changes in sentiment may signal potential shifts in market direction and can guide the implementation and timing of target allocations.

The objective of our DAA process is to make portfolios more resilient to a range of likely economic scenarios. Positioning portfolios for a single future economic scenario is fraught and introduces too much risk as regardless of conviction levels, there is always a substantially high chance that it will not eventuate given the uncertain nature of trying to predict the future.

We therefore consider multiple scenarios in our DAA approach and model how portfolios will perform under each scenario.

In summary, our process and its ongoing monitoring incorporates the formulation of different scenarios, an assessment of the likelihood of each scenario, the calculation of expected returns of assets, and the monitoring of market sentiment indicators, which in combination informs our decision on how best to position portfolios to be more resilient to a range of potential outcomes.

Dynamic Asset Allocation – Economic Scenarios

Scenarios can be described by the direction of economic growth and inflation and how they interact with each other. For example, economic growth increasing and inflation decreasing is colloquially known as 'Goldilocks' (because it's "just right"). Scenarios in which growth is decreasing (contractionary scenarios) would trigger risk appetites to fall. Asset classes behave differently under each scenario, hence it is important to be aware of the multiple scenarios and how they may impact investment portfolios.

We believe in the wisdom of crowds, which is the process of considering the collective opinion of a group of global experts rather than any single view to answer a question. Utilising this approach, as well as continually monitoring economic indicators, we form a view on *which* are the most likely economic scenarios that need to be formally assessed. This step of the process is intended to be 'dynamic' in the sense that the scenarios we consider are not always the same.

The likelihood of different economic scenarios eventuating is different at any point in time, and in many ways, markets behave like living organisms which morph based on the direction of data, probability assessment and emotion. As new information comes to light, investors will react by either implicitly or explicitly shifting probabilities of scenarios that may or may not ensue.

Assigning probabilities to the different scenarios is largely a subjective exercise and draws from the research we analyse and the experience of the team. We believe the value we add is in combining and distilling this information, and in relation to this step of the process, translating it into a set of probabilities assigned to the scenarios we have chosen to formally assess.

It is worth mentioning that while the absolute probabilities are of course important to the process, so is the *change* in probabilities which will often lead to changing the DAA positions. Special attention is given to emerging risks which may lead to completely new scenarios being considered and formally assessed.



Dynamic Asset Allocation – Return Forecasts

For each of the scenarios considered we formulate return forecasts for the key asset classes and their main drivers of performance for the calendar year. The combination of the forecasts is a framework for assessing the potential risk and reward in the context of portfolio construction, rather than being considered as specific targets.

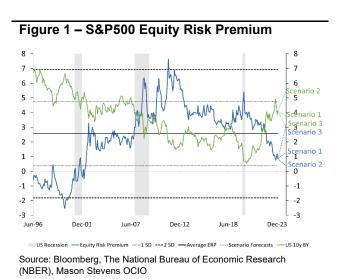
The below table is an example of asset class forecasts under three hypothetical scenarios:

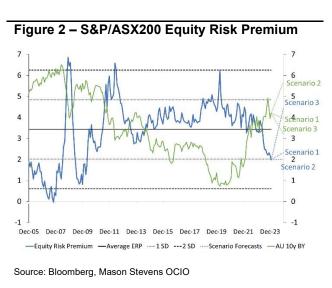
	Scenario 1 (%)	Scenario 2 (%)	Scenario 3 (%)
Australian Equities	7.5	-7.3	-23.8
Global Equities (unhedged)	0.7	-10.6	-14.9
Global Equities (hedged)	6.3	-2.3	-22.8
Australian Fixed Income	6.6	-1.5	11.1
Global Fixed Income (hedged)	6.6	-3.4	9.3
Global Listed Property (hedged)	2.2	-6.5	-8.2
Global Listed Infrastructure (hedged)	5.4	-4.7	-2.6

Source: Mason Stevens OCIO

Methodology

For equities we calculate the equity risk premium (ERP) as the current consensus estimated 1-year forward earnings yield (inverted Price-to-Earnings ratio) less the current 10-year bond yield and estimate where the risk premium is headed under each scenario to calculate an expected return from capital growth. For example, Figure 1 below charts the historical ERP for the S&P500 index and the US 10-year bond yield, and traces the path we could reasonably expect them to follow under certain economic scenarios.





We also consider the path of consensus earnings forecasts and estimate the total yield for the market, which for the US includes share buybacks.

For global equities we model the US and the European markets which between them represent circa 90% of the MSCI World index, with the US dominating the exposure at over 70%. We also forecast the Australian dollar versus the US dollar and the Euro so we can forecast the unhedged return from global equities.

A similar process is followed for global listed property and infrastructure, however we replace earnings yield with capitalisation rate (net operating income / market value) for property and an earnings yield before interest, tax, depreciation & amortisation over enterprise value (inverted EV/EBITDA ratio) for infrastructure.

For fixed income we consider the level of inflation and growth under each scenario and utilising the wisdom of crowds approach we estimate the 10-year bond yield, the term premium and credit spreads, considering historical outcomes under different regimes.

The calculation incorporates our forecasts for key drivers and depends on the make-up of the underlying index, e.g. to forecast the return from Australian fixed income we need to consider the proportion of credit in the benchmark index and the modified duration. The table below provides an example of how return forecasts are constructed for international fixed income:

	Scenario 1 (%)	Scenario 2 (%)	Scenario 3 (%)
US 10-year bond yield	3.75	5.50	3.00
US Inv Grade Spreads	0.95	1.10	2.10
US Gov. forecast return	6.7	-3.7	14.6
US Inv Grade Credit forecast return	7.8	-3.5	9.2
US Global Aggregate. forecast return	7.3	-3.6	11.5
Euro 10-year bond yield	2.10	3.50	1.80
Euro Inv Grade Spreads	1.15	1.35	2.15
Euro Gov. forecast return	3.6	-4.1	7.1
Euro Inv Grade Credit forecast return	6.5	-2.4	4.0
Euro Aggregate. forecast return	5.2	-3.1	5.3
Global Aggregate. forecast return	6.6	-3.4	9.3

Source: Mason Stevens OCIO

We do not forecast returns for alternatives in aggregate. We simply assume the long-term capital market assumptions from our SAA process are valid through the cycle given the nature of this asset class, where the majority of returns are uncorrelated to market beta.



Dynamic Asset Allocation – Multi Scenario Portfolio Positioning

It's important to note that the DAA portfolio construction process is discretionary, not systematic. We use a broad set of quantitative valuation, macroeconomic, fundamental, and sentiment indicators to inform our decision-making, but by no means is it a 'black box' machine that is self-driving, i.e. when the proverbial rubber hits the road, we are holding firmly onto the steering wheel!

The combination of the scenario probabilities and return forecasts allows us to analyse expected returns from portfolios under each scenario, as well as on a probability weighted basis. We ask ourselves "how can we position portfolios such that, relative to their SAAs, they:

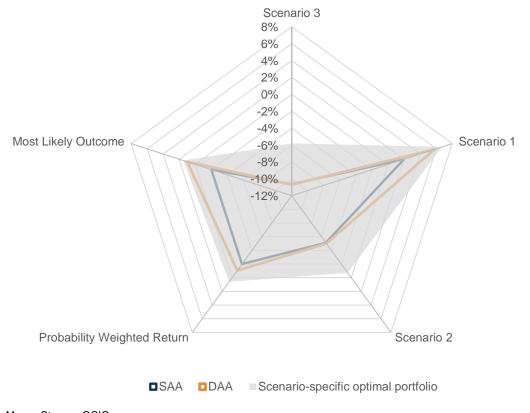
- » improve portfolio returns for the most likely scenario(s) without substantially reducing the prospect of returns in other, less likely, scenarios,
- » improve the probability weighted return (PWR),
- » reduce the magnitude of a drawdown in a negative scenario,
- » minimise return deviations to optimal scenario-specific portfolios"?

Below are two charts (Figures 3 & 4) that illustrates this step in the process. In these hypothetical examples, we are assessing three scenarios, the PWR, and the 'most likely' return forecast which may be different to a single scenario outcome because regions may have different probabilities assigned to them. The grey area is plotting the optimal portfolios' forecast returns under each scenario, i.e. the scenario-specific optimal portfolios, using the forecast asset class returns derived from the previous step in the process. The blue line is plotting the forecast returns of the SAA portfolio under each scenario, while the orange line is the DAA portfolio. The grey area is the theoretical boundary of any single DAA portfolio because it represents the maximum forecast return under each scenario, whereas the DAA portfolio will need to be a compromise, i.e. if the optimal portfolio for Scenario 1 is chosen to be the DAA portfolio, then that portfolio will not be the optimal portfolio for the other scenarios.

In the below example (Figure 3), the DAA portfolio is expected to outperform the SAA portfolio under Scenario 2, the most likely scenario outcome, and the PWR, while performing in line with SAA under Scenarios 1 and 3. The proposed DAA portfolio could be chosen when we believe Scenario 2 has a relatively high likelihood of occurring, and so we want to maximise returns under that scenario, without introducing downside risk in the other scenarios.



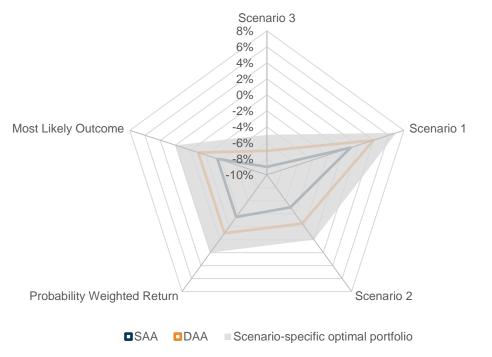
Figure 3 – Forecast returns



Source: Mason Stevens OCIO

In the situation where each scenario is equally likely to occur, we will look to minimise forecast return deviations to the optimal scenario-specific portfolios and/or the SAA portfolios, as per figure 4:

Figure 4 - Forecast returns



Source: Mason Stevens OCIO

A large degree of subjectivity and flexibility in the process is important because what we utilise to help inform decision-making are merely tools, and we are acutely aware they are not perfect.

For example, relative valuation spreads between asset classes tend to mean-revert, so we would typically underweight the expensive asset classes and overweight the cheap ones, such as stocks versus bonds, domestic equities versus international equities or domestic bonds versus international bonds. It's a simple approach, and it has worked well for asset allocators over time.

Over the years, there has been extensive research conducted on relative valuation models. In summary, the research shows that relative valuation works, *but not consistently*, and that the signal tends to work better for time horizons greater than six months and up to three years. However, it can fail spectacularly, with some spreads persisting for a long time before beginning to mean-revert, for example during the four to five years before the 2019 coronavirus pandemic when US rates trended down and the large IT stocks outperformed, asset allocators relying on relative valuation signals underperformed due to holding an underweight position to US equities. Another example is during 2023 with the rally in the "Magnificent Seven" (Alphabet/Google, Amazon, Apple, Meta Platforms/Facebook, Microsoft, NVIDIA, and Tesla), which led to the signal failing again. The US equity indices are now dominated by the large IT stocks which impacts the structural make-up of the market. When asset classes experience structural changes, relative valuations can trend over long periods. It is therefore important to allow flexibility in order to deal with these situations.



Dynamic Asset Allocation – Sentiment

One way to mitigate the risks from over reliance on relative valuation models is to incorporate analysis on sentiment indicators. Tracking sentiment gives investors a forward-looking perspective of the market instead of relying on historical data, which tends to result in hindsight bias.

Sentiment indicators can act as a guide for *when* to implement the proposed DAA tilts. For example, and as already discussed, markets will often appear under or over-valued, however they can remain under/over valued for lengthy periods of time and indeed continue to get more 'cheap' or 'expensive' over the short to medium term. Monitoring sentiment indicators can provide valuable information on where the market is likely headed, which may lead us to override the signal based on our valuation driven return forecasts or lead us to phase the proposed DAA tilts over time.

We assess sentiment through a number of different tools including but not limited to the AAII (American Association of Individual Investors) sentiment surveys and Citi's Levkovich Index, which both have demonstrated alpha generating signals.

Surveys gauge the sentiments of individual investors towards various asset classes, providing valuable insights for portfolio decision-making and implementation of asset allocation tilts away from SAA.

Investor sentiment is the general mood of investors toward the market. It is often expressed as "bearish" or "bullish." Additionally, investors can be described as being either "fearful" or "greedy," depending on market sentiment. These are terms that help investors measure the mood and tone of market sentiment and gauge how positive and negative market sentiment is driving price fluctuations and creating opportunities. The AAII index is considered to be a contrarian indicator providing a 'buy' signal when market sentiment is negative and vice versa.

The Levkovich index on the other hand is a composite index attempting to measure when the market is in 'euphoria' or in 'panic' mode. It has excellent predictive power when the index is in 'panic' mode, with the S&P 500 index delivering a positive 12-month forward return 95% of the time with a median return of 17.5%, and a negative return when in 'euphoria' 73% of the time with a median return of -10%.

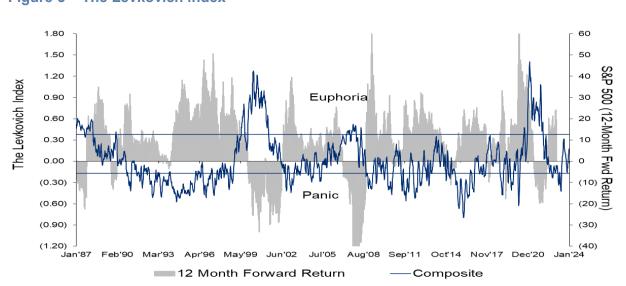


Figure 5 - The Levkovich index

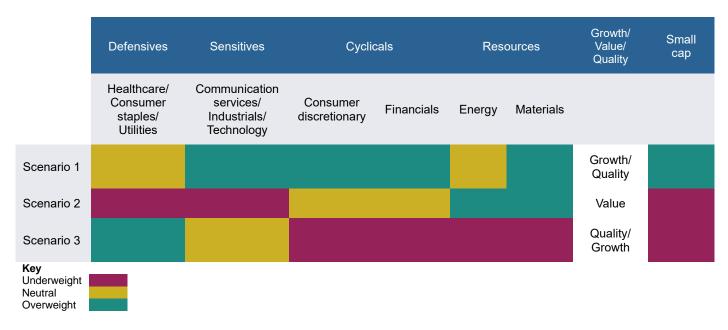
Dynamic Asset Allocation - Sleeve Strategy

Sleeve strategy incorporates tilts away from benchmark index within an asset class. For example, certain segments of the index may be expected to under/outperform during different economic scenarios.

We analyse and assess the different segments and sectors of the asset classes, and map how they are expected to perform under each scenario. For example, within equities:

- "High beta' stocks, such as cyclicals and small-to-mid caps, tend to outperform when risk appetites increase.
- » In a 'risk-off' scenario, defensive sectors such as consumer staples and healthcare should outperform.
- » Falling bond yields would lead to interest rate sensitive sectors, such as utilities, to outperform.
- » Quality' should outperform during market drawdowns as investors flock to relative 'safe havens', valuing stability and financial strength more highly during times of rising risk aversion.
- » Elevated inflation and rising bond yields would be negative for interest-rate sensitive sectors and longer 'duration' growth, therefore driving 'Value' stocks to outperform 'Growth'.
- » Caution is warranted from the effects of continued high interest rates, such as highly leveraged companies needing to refinance debt, and 'price takers' who have limited scope to pass on higher costs arising from high inflation.

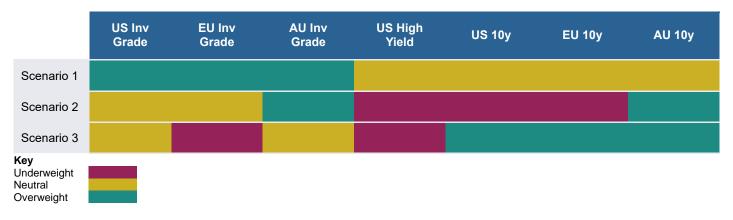
The below table provides an example of the equities sleeve strategy analysis under our DAA process:



Source: Mason Stevens OCIO

For the fixed income sleeve strategy:

- » US bonds would outperform in a recessionary scenario given the longer duration of the index. Credit spreads would widen leading to underperformance from investment grade securities and more so from high yield securities.
- » In a scenario where yields are expected to rise, long duration would underperform leading to Australian fixed income outperforming the US.
- » In expansionary scenarios, credit would be expected to outperform.



Source: Mason Stevens OCIO

Within the alternatives asset class, we classify strategies with equity like objectives but low correlations and market beta to equities as 'growth alternatives'. Similarly, strategies with bond like objectives but with low correlations and market beta to bond markets are classified as 'defensive alternatives'. Within the context of a multi-asset portfolio, an allocation to a strongly performing alternatives sleeve will typically significantly enhance the risk adjusted return of the portfolio over time.

Given these characteristics, and the fact that some investments tend be illiquid, the alternatives allocations may well be the most stable component of a portfolio's asset allocation. Despite this, there are some considerations and opportunities within the alternatives allocation depending on the economic scenario. For example:

- » When risk appetites increase and equity markets perform strongly, low beta strategies would underperform, as would strategies that derive their returns from heightened volatility and trend following strategies.
- » Growth alternatives will often provide their strongest periods of relative outperformance during market drawdowns brought on by a recession. Long/short strategies may vary from market neutral through to variable beta approaches, but in either case should provide relative outperformance during a cyclical recession.
- » Private equity and private credit strategies have an underlying exposure to SMEs, which in aggregate will be challenged during a recession, and lower returns would be likely from both sets of strategies.
- » For direct property, while a fall in interest rates will likely present a buying opportunity at some point, the initial hit to income and rents in a recession will likely be the driver of returns in the first instance.
- » Absolute return bond strategies can be expected to underperform traditional bonds during a recession, however, should outperform when bond yields are expected to rise (such as when growth and/or inflation is expected to rise).

A brief summary of sleeve strategy as it relates to the three hypothetical scenarios is shown in the table below:

	Expa	Contraction	
Scenario	Scenario 1 – sub trend growth Global GDP growth 2-3.5% Inflation ~2%	Scenario 2 – above trend growth Global GDP growth >3.5% Inflation >2%	Scenario 3 Global GDP growth <2% Deflation
Market and positioning	Equities, specifically small caps, and emerging markets equities. Investment grade credit provides compelling carry.	Cyclical equities and Value should outperform. Short duration floating fixed income exposure would be the preference from a fixed income perspective.	Infrastructure, select alternatives, and US long dated treasuries would likely outperform.

Dynamic Asset Allocation – Putting It All Together

The result of the DAA process is to construct a portfolio that is superior to the SAA under multiple scenarios, being mindful of how sentiment indicators are pointing.

Our view in early 2024 was that a single scenario was the most likely with a greater than 50% likelihood. We therefore implemented DAA tilts that increased the forecasted portfolio return under that scenario, whilst not generating a substantially lower return in the other scenarios. Sentiment was assessed as being neutral so it didn't impact the decision.

The analysis, based on our calendar year forecast returns, we implemented the following adjustments to SAA:

- » 25-30% of the global equities exposure should be hedged.
- » Overweight infrastructure at the expense of property.
- » Overweight global fixed income at the expense of growth alternatives.

By making these portfolio tilts and comparing to our SAA portfolios, we estimated that our portfolios would perform better under two of the three scenarios, including the most likely scenario, and in line under the third scenario.

The below table is an example of how we map recommended DAA and sleeve strategy positions:

	Strongly Underweight	Underweight	Neutral	Overweight	Strongly Overweight
Growth Assets					
Defensive Assets					
Australian Equities					
Growth					
Value					
Small Caps					
Global Equities					
EM (ex-China)					
Growth					
Quality					
Value					
Small Caps			-		
Infrastructure					
Property					



Neutral Overweight



Source: Mason Stevens OCIO

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