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Morningstar Exchange Traded Funds Model Portfolio Methodology

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Introduction

The Morningstar ETF Model Portfolios are a series of diversified, model portfolios that use a passive investment framework to offer low-cost market exposure via exchange traded funds (ETFs).

Key benefits of the Morningstar ETF Model Portfolios include:

- They provide financial advisers with a template that offers diversification by individual security, sector, asset class and ETF provider
- Ongoing monitoring of portfolio asset allocation and constituents
- Formal performance updates provided on a quarterly basis
- Detailed research reports available on individual ETFs
- In addition to ongoing review, the models are re-assessed in the event of changes to the underlying ETFs, indices, investment processes, or other material events.

This document details:

- The objectives, time horizons and investment universes of the model portfolios
- The various model portfolio holdings and suggested allocations
- The methodology behind the asset allocation and ETF selection.

Each of the Morningstar ETF Model Portfolios aims to be appropriately diversified by manager and asset class while adhering to a long-term strategic asset allocation setting.

Asset allocations have been devised using Morningstar's strategic asset allocation framework and long-term capital market assumptions.

ETF selection relies on Morningstar's qualitative and quantitative ETF research. Our qualitative research is comprehensive and forward-looking, giving us a better indication about an ETF's expected behaviour and longevity. Additional detail on the model portfolio constituents is available in the relevant Morningstar ETF research report.

Strategic Asset Allocation

The Morningstar ETF Model Portfolios are constructed using the risk and return attributes of the Morningstar Risk Profiles. Underpinning these attributes is a set of investment objectives and time horizons that differentiate the six model portfolios across the risk/return spectrum. Each of the Morningstar ETF Model Portfolios aims to be appropriately diversified by ETF issuer and asset class while adhering to a long-term strategic asset allocation setting. This setting has been devised using Morningstar's strategic asset allocation framework and long-term capital market assumptions.

The investment objective, suggested time horizon and strategic asset allocation for each model portfolio is set out below.

Table 1: Investment Objectives and Time Horizons

	Conservative	**Cautious**	**Balanced**	**Growth**	**Aggressive**
Investment Objective %	CPI+0.5	CPI+1.0	CPI+2.5	CPI+3.5	CPI+4.5
Time Horizon	2 years	3 years	5 years	7 years	9 years

Table 2: Strategic Asset Allocations

	Conservative %	**Cautious %**	**Balanced %**	**Growth %**	**Aggressive %**
Australian Equity	5	9	16	23	30
International Equity	6	13	24	36	44
Australian Listed Property	4	8	10	8	8
International Listed Property	0	0	0	3	3
Fixed Interest	49	40	30	18	9
Cash	36	30	20	12	6
Growth Assets	**15.0**	**30.0**	**50.0**	**70.0**	**85.0**
Income Assets	**85.0**	**70.0**	**50.0**	**30.0**	**15.0**

Morningstar periodically reviews the strategic positioning of our six model portfolios with the aim of maintaining asset allocations that are robust, well diversified and that meet the needs of a range of investors.

As part of each review, Morningstar formulates long-term estimates of expected returns, standard deviations and correlations for the asset classes most relevant to Australian investors.

These statistics are then used as inputs in the portfolio construction process to find the combination of assets with the highest expected returns for a given level of risk. When the risks and returns of these portfolios are plotted on a chart with risk along the horizontal axis and return on the vertical, the result is a line stretching from the lower risk and return portfolio up to the high risk and expected return portfolio. That line is called the efficient frontier and each point along the line represents a particular combination of asset classes.

The long-term assumptions are outlined in the tables below.

Table 1: Expected Long-Term Return and Risk Assumptions

Asset Classes	Expected Return %p.a.	Income %p.a.	Growth %p.a.	Standard Deviation %p.a.
Cash	5.0	5.0	0.0	1.8
Australian Fixed Interest	5.5	5.5	0.0	5.0
International Fixed Interest	5.5	5.5	0.0	5.0
Australian Listed Property	8.0	6.0	2.0	13.0
International Listed Property	8.0	4.0	4.0	14.0
Australian Equity	9.0	4.0	5.0	16.0
International Equity	9.0	2.0	7.0	15.0

Table 2: Asset Class Correlation Assumptions

Asset Class Correlations		1	2	3	4	5	6	7
1	Cash	1.00	0.20	0.05	0.00	0.00	0.00	0.00
2	Australian Fixed Interest	0.20	1.00	0.60	0.00	0.00	0.00	0.00
3	International Fixed Interest	0.05	0.60	1.00	0.00	0.00	0.00	0.00
4	Australian Listed Property	0.00	0.00	0.00	1.00	0.70	0.70	0.60
5	International Listed Property	0.00	0.00	0.00	0.70	1.00	0.75	0.60
6	Australian Equity	0.00	0.00	0.00	0.70	0.75	1.00	0.65
7	International Equity	0.00	0.00	0.00	0.60	0.60	0.65	1.00

ETF Selection

The Morningstar ETF Model Portfolios are generally populated with ETFs that carry a favourable Morningstar recommendation. This usually means "Recommended" or better, though there may be exceptions where research has been undertaken but no formal recommendation has been published, or where there is a strong portfolio construction argument for the inclusion of an "Investment Grade" rated ETF.

The key goals of Morningstar's qualitative research are to:

- Issue a judgment on the ETF's overall investment merit, with an eye to selecting those capable of best achieving investment outcomes
- Help investors understand how an ETF fits into an investment portfolio
- Provide insights and analysis into how an ETF might behave in different market conditions
- Compare ETFs with peers, including active and passive managed funds and listed investment company rivals
- Monitor the qualitative assessment over time and assess when a significant change has affected the ETF's investment merit.

In more than a decade of ETF research, Morningstar's global ETF research team has identified five areas that we believe are crucial to predicting the future success of ETFs: People, Parent, Process, Performance and Price. In so doing, we evaluate not only each pillar but also the interaction between them, which we believe is crucial to understanding an ETF's overall merit.

The Rating Process

Morningstar recommendations are decided by consideration and open debate within Morningstar's manager and ETF research team.

The aim of the rating process is to clearly distinguish the ETFs that in Morningstar's view are the standouts, those that should be avoided and those in between. To determine the Morningstar recommendation, the lead analyst proposes an initial recommendation that is discussed extensively with the team and an overall view is formed. Morningstar recommendations are discussed when appropriate with Morningstar's global ETF analyst teams. The Morningstar recommendation is the final outcome of a collaborative process based on a site visit, fundamental assessment, quantitative and holdings-based analysis of the portfolio and an assessment of the key issues outlined.

Morningstar's qualitative ETF research reports are reviewed periodically and updated to reflect relevant changes, developments or issues that may have developed. As part of Morningstar's ongoing commitment, we also provide frequent discussions, episodic articles and commentary of issues relating to ETFs, ensuring that clients remain abreast of relevant investment issues.

More information on Morningstar's ETF research can be found in our ETF Methodology document and in tools such as Morningstar Direct™ and Morningstar Adviser Research Centre™.

Portfolio Construction

After identifying the highest-quality ETFs in the available universe through qualitative ETF analysis, the final stage of the ETF selection process is blending the ETFs appropriately, considering potential risk/return outcomes for the portfolio as a whole.

We aim to incorporate the most capable ETFs in our line-up. To contain costs, we minimise the number of ETFs in each portfolio while keeping in mind the competing need to diversify across ETF issuers and ETFs.

We also consider the underlying exposures provided by each potential ETF, whether it is sector or country exposure for equity ETFs, or duration or credit exposure for fixed interest ETFs. This ensures the choice of ETFs and the weightings assigned to each portfolio constituent delivers the desired overall portfolio exposures with limited overlap among underlying ETFs.

Model Portfolio Performance and Reviews

We review the performance of our model portfolios and their constituents on a quarterly basis using Morningstar's extensive suite of analytical tools. We compare the returns on the models with the relevant Morningstar peer group averages and benchmarks.

We review our model portfolios on an ongoing basis, or where there has been a material change to an underlying constituent, taking into account the following factors:

- Whether the current ETFs still represent best-of-breed options
- Whether the ETFs/indices have maintained the desired style characteristics
- Whether the funds continue to blend to produce the desired portfolio outcomes
- Any changes to strategic asset allocations.

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