



**BetaShares**

Exchange Traded Funds



# **BETASHARES MODEL PORTFOLIO REPORT**

QUARTER ENDING IN MARCH 2022

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## 1. INTRODUCTION TO THE BETASHARES ASSET ALLOCATION AND MODEL PORTFOLIO REPORT

In response to growing demand from our clients, BetaShares has developed a suite of model portfolios that utilise exchange-traded products (ETFs and other exchange-traded products) to deliver transparent, diversified and cost-effective investment solutions for investors with differing risk profiles and investment objectives.

### Our four model portfolio solutions are:

- 1) **Strategic Asset Allocation (SAA) ETF Model Portfolios.** These are built using long-term expected returns and risk for a diversified range of major asset classes, reviewed annually. Models are optimised for five risk profiles as per APRA's Standard Risk Measure (i.e. maximum number of expected negative return years over a 20-year period).
- 2) **Dynamic Asset Allocation (DAA) ETF Model Portfolios.** These utilise as a benchmark the asset-class weightings of the SAA models, but with asset allocation dynamically tilted on a quarterly basis to reflect our quantitative modelling of asset class mis-valuations and qualitative assessment of market risks and opportunities.
- 3) **Dynamic Income Model Portfolios.** These use the same defensive/growth asset-class weightings as the DAA models above but make use of ETPs that weight returns towards income rather than capital growth over time.
- 4) **Pension Risk-Managed Model Portfolios.** These use a similar defensive/growth asset-class weighting to the SAA models above but make use of ETPs that aim to provide enhanced income returns and/or less volatile returns through a systematic risk-management overlay.

### Unique features of the BetaShares Model Portfolios

- **'Best-of-breed' ETF selection:** The underlying ETF product selection is based on investment merit, with both BetaShares funds as well as those from other managers used.
- **Reporting, service and support:** High quality reporting, support tools, dedicated nationwide adviser services team and personalised service. Access to BetaShares Portfolio Management Team, Investment Specialists and Chief Economist.
- **Dynamic asset allocation:** Flexibility to seek to capture both alpha from asset-class mispricing and manage downside risk by tilting from the strategic allocations.
- **Mix of market-cap and smart beta methodologies:** ETFs selected may use 'smart beta' methodologies which have a demonstrable rationale and seek to outperform market-cap weighted approaches.
- **Cost-effective:** The building blocks for ETF Model Portfolios are cost-effective ETFs, making the portfolios competitively-priced investment options for clients.

## 2. MARKET AND PORTFOLIO REVIEW: MARCH QUARTER 2022

### 2.1. Market Review

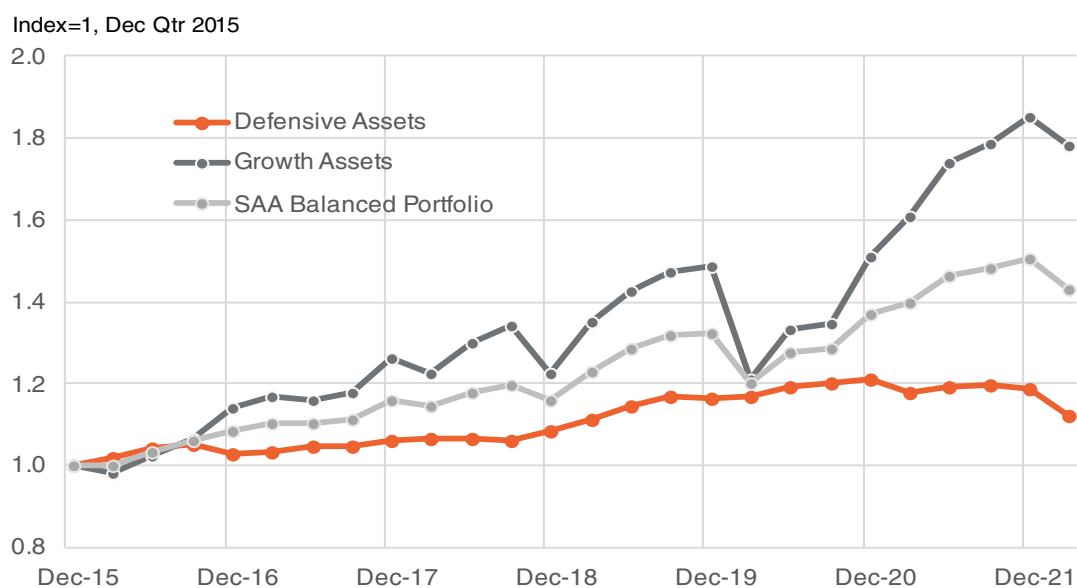
Both growth and defensive assets delivered negative returns in the March quarter, as a steep increase in bond yields reduced valuations for both equities and fixed-rate bonds. The prospect of higher U.S. official interest rates, together with heightened inflation concerns due to the upward pressure on energy and food prices following Russia's invasion of Ukraine, combined to push up global bond yields notably over the quarter. Gold prices lifted, benefitting from higher inflation concerns.

Global equities, in unhedged \$A terms, were further hurt by the rise in the Australian dollar, which benefitted from the broader Russia-induced move higher in commodity prices over the quarter. Helping support growth assets, Australian equities delivered positive returns, with resource stocks especially benefitting from the lift in global commodity prices. Local listed property returns were negative, reflecting the lift in both Australian and global bond yields.

#### Growth vs. Defensive Assets<sup>1</sup>

Major Asset Classes	Mar Qtr	Dec Qtr	6-months	12-months
<b>Defensive</b>	<b>-5.6%</b>	<b>-0.9%</b>	<b>-6.4%</b>	<b>-5.1%</b>
Cash	0.1%	0.1%	0.1%	0.3%
Aust. Bonds	-7.2%	-1.7%	-8.7%	-6.8%
Global bonds	-5.6%	0.0%	-5.6%	-4.7%
Gold (hedged)	5.3%	4.8%	10.3%	12.3%
Aust. Listed Property	-6.8%	10.0%	2.5%	18.8%
Aust Equities	4.5%	1.5%	6.0%	16.2%
Global Equities (unhedged)	-8.5%	5.3%	-3.6%	8.8%
<b>Growth</b>	<b>-3.8%</b>	<b>4.2%</b>	<b>0.1%</b>	<b>11.9%</b>

<sup>1</sup> Asset class returns based on the total return after fees for the respective model ETFs, using benchmark strategic weights. Growth and defensive asset returns are calculated using benchmark strategic asset class weights for the balanced portfolio. Past performance is not an indicator of future performance.



Source: Bloomberg, BetaShares. Past performance is not an indicator of future performance. Based on SAA weights.

## 2.2. Balanced Model Portfolio Review

The value of the DAA (Balanced) Model Portfolio declined by 5.3% in the quarter, compared with a decline of 4.7% for the benchmark strategic portfolio.

### SAA and DAA Balanced Model Performance

Balanced Model Portfolio Weights as at end-Dec. 2021				
	% return Mar Qtr.	SAA	DAA	+/-
<b>Defensive Assets*</b>	<b>-5.6%</b>	<b>50.0%</b>	<b>50.0%</b>	<b>0.00%</b>
Cash (AAA)	0.1%	5.00%	11.50%	6.50%
Floating-Rate Bonds (QPON)	-0.6%	6.50%		-6.50%
Aust. Government Bonds (AGVT)	-8.6%	13.50%	13.50%	0.00%
Aust. Corporate Bonds (CRED)	-8.6%	7.00%	14.50%	7.50%
Global Bonds (VBND)	-5.6%	18.00%	10.50%	-7.50%
Gold (QAU)	5.3%	0.00%	0.00%	0.00%
<b>Growth Assets*</b>	<b>-3.8%</b>	<b>50.00%</b>	<b>50.00%</b>	<b>0.00%</b>
Aust. Listed Property (VAP)	-6.8%	2.50%	2.50%	0.00%
Aust. Equities (QOZ)	6.7%	8.75%	7.25%	-1.50%
Aust. Equities (A200)	2.4%	8.75%	7.25%	-1.50%
U.S. Equities (QUS)	-5.9%	7.25%	8.00%	0.75%
U.S. Equities (VTS)	-6.9%	7.25%	8.00%	0.75%
Non-U.S. Equities (QLTY)	-15.0%	6.00%	6.50%	0.50%
Non-U.S. Equities (VEU)	-7.4%	9.50%	10.50%	1.00%
<b>Quarterly % return</b>		<b>-4.7%</b>	<b>-5.3%</b>	

\*Using SAA weights. \*\*Prior to 21 December 2020, QUS traded under a different investment strategy and was subject to different management costs. QUS contribution to model portfolio performance prior to such date relates to the previous investment strategy.

In terms of performance attribution, our neutral allocation between growth and defensive assets neither contributed nor detracted from DAA relative performance in the quarter. Instead, both our overweight to Australian bonds over global bonds and our overweight to global equities over Australian equities detracted from relative DAA performance in the quarter.

To an extent, the unexpected Russian invasion of Ukraine – and the associated lift in global commodity prices which relatively favours commodity-exporting countries such as Australia – worked against our DAA tactical tilts in the quarter, which have generally been based on less upward pressure on local bonds yields and a relatively weaker earnings outlook for local equities.

### Balanced Dynamic Portfolio: Performance attribution

	Return performance			Performance attribution*		
	DAA	SAA	DAA vs SAA	growth vs. defensive	intra defensive	intra growth
Total Returns						
3-months	-5.3%	-4.7%	-0.6%	0.0%	-0.2%	-0.4%
6-months	-3.9%	-3.4%	-0.5%	0.2%	-0.4%	-0.3%
12-months	2.7%	2.6%	0.1%	0.7%	-0.2%	-0.3%
Since incept. (31/12/15)	5.6%	5.9%	-0.3%	-0.5%	0.1%	0.1%

\*Growth vs. defensive refers to broad dynamic tilts between growth and defensive assets. Intra-defensive and intra-growth refer to tilts within each broad asset type. Attribution equals the difference in each ETF's quarterly return vs. overall SAA portfolio return multiplied by the difference between that ETF's DAA and SAA weights.

## 2.3. Market Outlook and Portfolio Positioning

Following the March 2022 quarterly review, our major tactical themes for the coming quarter are outlined in the table below.

Investment Theme	Investment Strategy	Comment/Analysis
Late economic cycle, early stage Fed tightening	Neutral growth vs. defensive assets	Low unemployment and rising wage inflation suggests the U.S. economy is at a "late cycle" stage, where the risk around equities relative to defensive assets are more evenly balanced than at earlier stages of the cycle. Due to good post-COVID growth momentum, the risk of a serious economic downturn anytime soon remains low, suggesting it's premature to decrease exposure to growth assets.
RBA to lag the Fed	Overweight Australian government bonds over global bonds	Although the RBA is expected to raise interest rates in the coming months, along with the U.S. Federal Reserve, market pricing of local policy tightening over the coming year appears too aggressive given lower local inflation pressures - implying local fixed-rate bonds remain relative good value.
Mixed global sector performance	Neutral Australian vs. global equities	Global sector performance, and hence Australian vs. global equity performance, is anticipated to remain somewhat mixed at this late-cycle stage. While higher global interest rates is generally expected to hurt growth/technology stocks, the recent rise in commodity prices could also be unwound as global growth slows, and especially if a peace deal is achieved between Russia and Ukraine.

Due to the late-cycle stage of the U.S. economic expansion we have retained our neutral growth vs. defensive asset exposure that was implemented in the previous quarter.

The global equity outlook remains mixed, with the global economic growth and corporate earnings outlook still positive, yet there is ongoing downward pressure on equity valuations due to higher bond yields reflecting the first stage of central bank tightening. Although the U.S. Federal Reserve is expected to lift interest rates fairly aggressively in coming months, to a degree this is already anticipated by markets, and it remains unclear how resolute the Fed will be in raising interest rates – despite current high inflation - should the U.S. economy and corporate earnings start to slow.

Within growth assets, we removed our long-standing overweight to global equities in preference for a more neutral exposure compared to Australian equities. The earlier long-standing outperformance of growth/technology sectors – which favours global markets over Australia – is likely to remain constrained in today's environment of rising global interest rates. That said, it also seems premature to overweight Australia, as the current strength in commodity prices could come under pressure if global growth slows and/or a peace deal is negotiated between Russia and Ukraine.

Within defensive assets, we have removed our underweight exposure to floating-rate bonds relative to cash due to a widening in credit spreads and better relative risk-adjusted value. Despite last quarter's underperformance, we have retained our overweight to Australian fixed-rate bonds relative to global bonds due to what we consider excessive pricing of RBA rate hikes over the coming year (the market expects an official cash rate closer to 3% by end-2023, compared to our expectation of a rise to only 1.5 to 1.75%). That said, in part due to the increased credit risk through more exposure to floating-rate bonds, we have spread our overweight to Australian fixed-rate bonds more evenly across both Australian government bonds and corporate bonds.

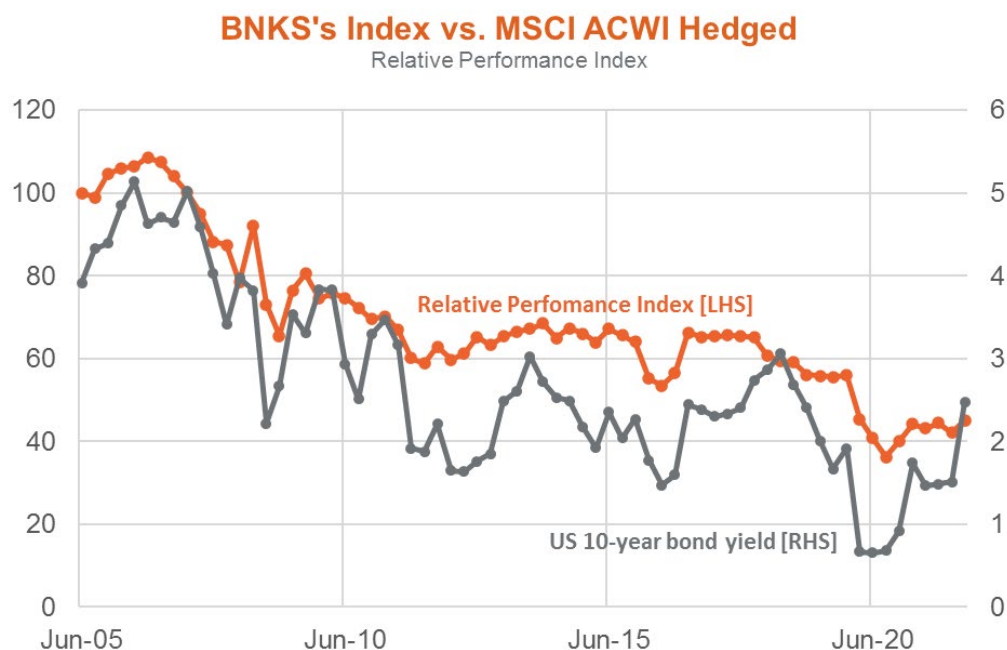


## 2.4. Thematic Tilts – Global Banks and Japan

While not explicitly included in our Dynamic ETF model portfolios, we set out below our current suggested ETF-based ‘thematic tilts’ that some may find of interest.

### Theme 1: Global Banks (via the BNKS ETF)

Global banks enjoyed modest outperformance last quarter, despite some financial concerns surrounding the global sanctions imposed on Russia. We retain our suggested tilt towards global banks (BNKS ETF) on the view that upward risks to global bond yields may support margin expansion and hence bank earnings. Provided a major global economic downturn is avoided, global banks have tended to do relatively well in a rising yield environment.



Source: Bloomberg, BetaShares. Quarterly data ending at 31 March 2022. Index=100, 30-June-2005. Past performance is not an indicator of future performance. Performance is compared against the \$A-hedged MSCI World Index when ETF is currency-hedged, and against the unhedged MSCI World Index otherwise. You cannot invest directly in an Index.

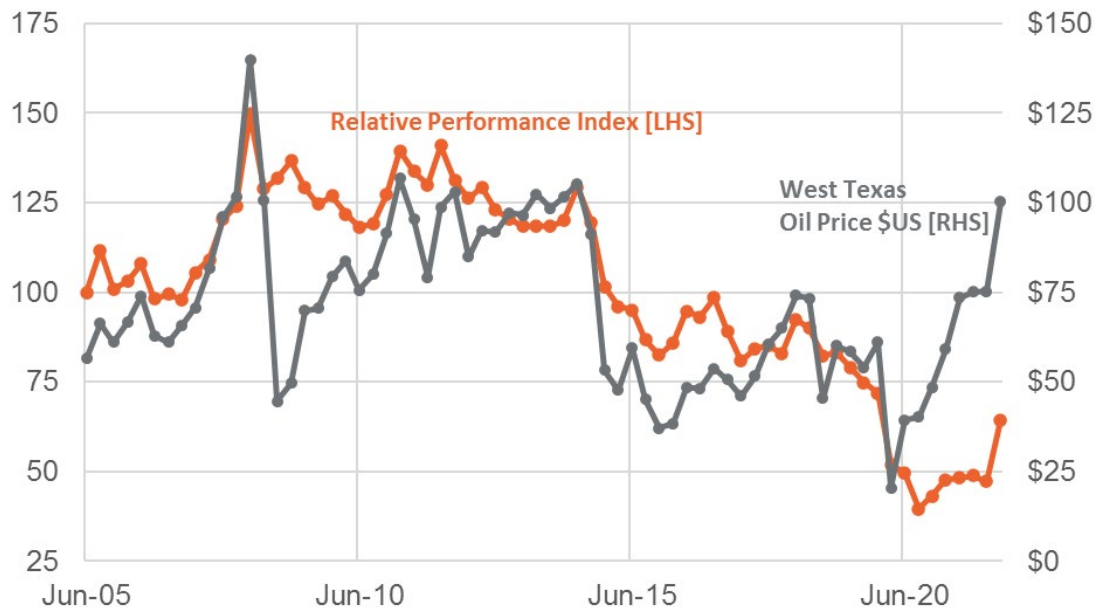
### Theme 2: Energy Producers (via the FUEL ETF)

In view of the upward pressure on energy prices associated with solid global demand, tight supplies, and disruptions risks associated with Russia's invasion of Ukraine, we have switched our second suggested thematic tilt from Japanese equities (HJPN ETF) to global energy producers (FUEL ETF).

As would be expected, energy producing companies tend to benefit from rising energy prices. And to an extent, the solid gain in energy (especially oil) prices in recent quarters has yet to be matched by an equally solid and sustained lift in the relative performance of energy companies. Should the Russia-Ukraine conflict drag on, energy prices may remain high, supporting the global energy sector. Either way, ongoing global economic growth, limited spare oil production capacity and an increasing desire by many countries to diversify their source of supply away from Russia could continue to support energy prices and the energy sector.

## FUEL's Index vs. MSCI ACWI Hedged

Relative Performance Index



Source: Bloomberg, BetaShares. Quarterly data ending at 31 March 2022. Index=100, 30-June-2005. Past performance is not an indicator of future performance. Performance is compared against the \$A-hedged MSCI World Index when ETF is currency-hedged, and against the unhedged MSCI World Index otherwise. You cannot invest directly in an Index.

### 3. MODEL PORTFOLIO PERFORMANCE REVIEW

The table below summarises return performance for a 'Balanced' risk profile across our suite of model portfolios.

BetaShares Model Portfolios: Performance Summary									
Asset Class	Investment Exposure	Model ETFs/ETPs	Mar Qtr (%)	6-months (%)	NAV Return 12-months (%)	Balanced Model Weightings As at start of the Quarter			
						Strategic	Dynamic	Income	Pension
Cash	Bank deposits	AAA	0.1%	0.1%	0.3%	5.00%	11.50%	3.25%	5.00%
Aust. Bonds	Aust. FRNs	QPON	-0.6%	-0.8%	-0.7%	6.50%			7.50%
	Aust. Government	AGVT	-8.6%	-10.2%	-7.9%	13.50%	13.50%	10.75%	15.00%
	Aust. Corporates	CRED	-8.6%	-10.7%	-8.2%	7.00%	14.50%	10.50%	7.50%
Int. Bonds	Int. Bonds	VBND	-5.6%	-5.6%	-4.7%	18.00%	10.50%	10.50%	
Aust. Property	Aust. Listed property	VAP	-6.8%	2.5%	18.8%	2.50%	2.50%		
	Real Assets	RINC	-0.7%	3.7%	18.5%			2.50%	
Aust. Equity	Aust. Equities	A200	2.4%	4.7%	15.5%	8.75%	7.25%		
	Aust. Equities	QOZ	6.7%	7.4%	16.8%	8.75%	7.25%		
	Aust. Equities	AUST	0.5%	1.5%	9.3%				13.00%
	Aust. Equities	HVST	0.3%	1.1%	7.5%				7.00%
	Aust. Equities	EINC	5.0%	3.9%	12.7%			7.25%	
	Aust. Equities	VHY	8.4%	11.2%	18.0%			7.25%	
Int. Equity	Int. Equities (US)	QUS	-5.9%	1.7%	14.0%	7.25%	8.00%		
	Int. Equities (US)	VTX	-6.9%	-0.7%	15.7%	7.25%	8.00%		
	Int. Equities	VEU	-7.4%	-7.1%	0.6%	9.50%	10.50%		
	Int. Equities	QLTY	-15.0%	-8.2%	7.1%	6.00%	6.50%		
	Int. Equities (non-US)	WRLD	-6.6%	-0.3%	11.0%				30.00%
	Int. Equities	INCM	-1.0%	3.9%	10.4%			33.00%	
Commodities	Gold	QAU	5.3%	10.3%	12.3%				
Hybrids	Aust. Hybrids	HBRD	-0.5%	0.7%	2.3%			15.00%	15.00%
Aust. Equity	S&P/ASX 200		2.2%	4.4%	15.0%				
Int. Equity	US S&P 500 (\$A)		-7.6%	1.9%	17.3%				
Total						100%	100%	100%	100%
Defensive <sup>2</sup>						50%	50%	50%	50%
Growth <sup>2</sup>						50%	50%	50%	50%
Net Performance <sup>1</sup>									
Mar Qtr						-4.7%	-5.3%	-1.9%	-4.0%
6-months						-3.4%	-3.9%	0.0%	-1.9%
12-months						2.6%	2.7%	4.6%	3.4%
3-year						5.2%	12.0%	9.8%	8.4%
Since incept. (31/12/15)						5.9%	5.6%	4.6%	4.0%
Price Return						2.2%	2.0%	0.3%	-0.1%
Net Income Return						3.7%	3.6%	4.3%	4.0%
Volatility <sup>3</sup>						5.9%	5.8%	6.4%	4.6%
Maximum Drawdown <sup>3</sup>						-16.9%	-18.8%	-23.0%	-11.2%
Net Distribution Yield <sup>4</sup>						3.0%	2.7%	3.3%	2.0%
Gross Distribution Yield <sup>4</sup>						3.2%	2.9%	3.7%	2.5%

1. Portfolios are rebalanced on a quarterly basis. 2. Defensive assets are Cash, Australian Bonds, International Bonds, Gold and Hybrids. Growth assets are

Australian Property, Australian Equities and International Equities. 3. Since inception. 4. Trailing 12-months, as at 31 March 2022

Prior to 21 December 2020, QUS traded under a different investment strategy and was subject to different management costs. QUS's contribution to model performance prior to that date relates to the previous investment strategy.

As noted above, the DAA (Balanced) Portfolio returned negative 5.3% during the quarter, reflecting weakness in both defensive and growth assets.

Compared to the DAA (Balanced) Portfolio, the Dynamic Income (Balanced) Portfolio returned negative 1.9%, reflecting lower exposure to fixed-rate bond ETFs relative to the floating-rate HBRD fund, and a relatively smaller decline in high-income global equities (via the INCM ETF) compared to the overall global market.

The Pension Risk-Managed (Balanced) Portfolio returned negative 4.0% in the quarter, also reflecting lower exposure to fixed-rate bonds relative to hybrids.

Performance of all portfolios since inception is summarised in the table below.

BetaShares Model Portfolios: Performance Summary					
	Conservative	Moderate	Balanced	Growth	High Growth
<b>Strategic (Benchmark) ETF Model Portfolio</b>					
<i>Total Return Performance<sup>1</sup></i>					
3-months	-4.7%	-4.6%	-4.7%	-4.5%	-4.4%
6-months	-4.6%	-4.0%	-3.4%	-2.4%	-1.4%
12-months	-1.7%	0.4%	2.6%	5.5%	8.6%
3-year	2.1%	3.8%	5.2%	6.9%	8.8%
Since incept. <sup>2</sup>	3.4%	4.7%	5.9%	7.3%	9.0%
Volatility <sup>2</sup>	2.8%	4.2%	5.9%	8.0%	10.8%
Net Yield <sup>3</sup>	2.8%	2.9%	3.0%	2.9%	2.7%
Gross Yield <sup>3</sup>	2.9%	3.1%	3.2%	3.2%	3.1%
<b>Dynamic ETF Model Portfolio</b>					
<i>Total Return Performance<sup>1</sup></i>					
3-months	-5.0%	-5.1%	-5.3%	-5.3%	-5.0%
6-months	-5.0%	-4.5%	-3.9%	-3.1%	-1.8%
12-months	-1.5%	0.5%	2.7%	5.4%	8.7%
3-year	1.6%	3.2%	4.7%	6.4%	8.3%
Since incept. <sup>2</sup>	3.3%	4.5%	5.6%	6.9%	8.6%
Volatility <sup>2</sup>	2.9%	4.2%	5.8%	8.0%	10.6%
Net Yield <sup>3</sup>	2.4%	2.5%	2.7%	2.7%	2.6%
Gross Yield <sup>3</sup>	2.5%	2.6%	2.9%	3.0%	3.0%
<b>Dynamic Income Model Portfolio</b>					
<i>Total Return Performance<sup>1</sup></i>					
3-months	-3.5%	-2.7%	-1.9%	-0.7%	0.7%
6-months	-3.1%	-1.6%	0.0%	1.8%	4.2%
12-months	-0.4%	2.0%	4.6%	7.7%	11.2%
3-year	1.0%	1.9%	2.8%	3.7%	4.8%
Since incept. <sup>2</sup>	3.1%	3.9%	4.6%	5.4%	6.2%
Price Return	-0.4%	0.1%	0.3%	0.9%	1.2%
Net Income Return	3.5%	3.9%	4.3%	4.6%	5.0%
Volatility <sup>2</sup>	3.1%	4.7%	6.4%	8.7%	11.4%
Net Yield <sup>3</sup>	2.7%	3.0%	3.3%	3.5%	3.7%
Gross Yield <sup>3</sup>	3.0%	3.4%	3.7%	3.9%	4.2%
<b>Pension Risk-Managed Model Portfolio</b>					
<i>Total Return Performance<sup>1</sup></i>					
3-months	-1.5%	-4.0%	-4.0%		
6-months	-1.1%	-2.6%	-1.9%		
12-months	1.2%	1.2%	3.4%		
3-year	2.5%	2.7%	3.7%		
Since incept. (31/12/15)	3.0%	3.2%	4.0%		
Volatility <sup>2</sup>	2.4%	3.4%	4.6%		
Net Yield <sup>3</sup>	2.2%	1.8%	2.0%		
Gross Yield <sup>3</sup>	2.6%	2.2%	2.5%		

1. Portfolios are rebalanced on a quarterly basis.

2. Since inception 31 December 2015






3. Trailing 12-months, as at 31 March 2022



## 4. MODEL PORTFOLIOS: AS AT 31 MARCH 2022

### 4.1. Strategic and Dynamic Model Portfolios

The SAA and DAA Model Portfolios are detailed in the table below.

Defensive Growth																					
Asset Class	ETF	SAA	Conservative DAA	+/-	qtrly change	SAA	Moderate DAA	+/-	qtrly change	SAA	Balanced DAA	+/-	qtrly change	SAA	Growth DAA	+/-	qtrly change	SAA	High Growth DAA	+/-	qtrly change
Defensive		80.0%	80.0%			65.0%	65.0%			50.0%	50.0%			30.0%	30.0%			10.0%	10.0%		
Cash	AAA	15.00%	15.00%		-9.50%	10.00%	10.00%		-8.00%	5.00%	5.00%		-6.50%	4.50%	4.50%		-4.50%				
AustBonds - Floating	QPON	9.50%	9.50%		9.50%	8.00%	8.00%		8.0%	6.50%	6.50%		6.50%	4.50%	4.50%		4.50%				
AustBonds - Fixed Govt	AGVT	19.50%	24.50%	5.00%	5.00%	17.00%	22.00%	5.00%	5.0%	13.50%	17.25%	3.75%	3.75%	9.00%	11.75%	2.75%	2.75%	10.00%	10.00%		
AustBonds - Fixed Corp	CRED	10.00%	15.00%	5.00%	-5.00%	8.00%	13.00%	5.00%	-5.00%	7.00%	10.75%	3.75%	-3.75%	4.50%	7.25%	2.75%	-2.75%				
Int bonds	VBND	26.00%	16.00%	-10.00%		22.00%	12.00%	-10.00%		18.00%	10.50%	-7.50%		12.00%	6.50%	-5.50%					
Gold (\$US)	QAU																				
Growth		20.0%	20.0%			35.0%	35.0%			50.0%	50.0%			70.0%	70.0%			90.0%	90.0%		
Aust. A-REITs	VAP									2.50%	2.50%			3.50%	3.50%			4.50%	4.50%		
Aust. Equities	QOZ	4.00%	4.00%		0.50%	7.00%	7.00%		1.00%	8.75%	8.75%		1.50%	12.25%	12.25%		2.25%	15.50%	15.50%		2.50%
Aust. Equities	A200	4.00%	4.00%		0.50%	7.00%	7.00%		1.00%	8.75%	8.75%		1.50%	12.25%	12.25%		2.25%	15.50%	15.50%		2.50%
Int. Equities	QLTY	2.50%	2.50%		-0.25%	4.25%	4.25%		-0.25%	6.00%	6.00%		-0.50%	8.50%	8.50%		-1.50%	11.00%	11.00%		-1.00%
US Equities	QUS	3.00%	3.00%		-0.25%	5.00%	5.00%		-0.50%	7.25%	7.25%		-0.75%	10.00%	10.00%		-1.00%	13.00%	13.00%		-1.25%
US Equities	VTS	3.00%	3.00%		-0.25%	5.00%	5.00%		-0.50%	7.25%	7.25%		-0.75%	10.00%	10.00%		-1.00%	13.00%	13.00%		-1.25%
Non-US Equities	VEU	3.50%	3.50%		-0.50%	6.75%	6.75%		-0.75%	9.50%	9.50%		-1.00%	13.50%	13.50%		-1.00%	17.50%	17.50%		-1.50%
Total		100.0%	100.0%			100.0%	100.0%			100.0%	100.0%			100.0%	100.0%			100.0%	100.0%		
MER <sup>1</sup>		0.21%	0.21%			0.21%	0.21%			0.21%	0.21%			0.20%	0.21%			0.20%	0.20%		

<sup>1</sup> These are the weighted average management costs of the underlying funds in the model portfolio and can be expected to change over time as asset allocations and underlying investment vehicles change. These costs do not include certain other costs, such as any transaction costs (e.g. brokerage and bid-offer spreads) that might be incurred when implementing model portfolios.

## 4.2. Dynamic Income Model Portfolios

The suite of Dynamic Income Model Portfolios is provided in the table below.



Asset Class	ETF	Conservative			Moderate			Balanced			Growth			High Growth		
		Weight	qtrly change	qtrly change	Weight	qtrly change	qtrly change	Weight	qtrly change	qtrly change	Weight	qtrly change	qtrly change	Weight	qtrly change	qtrly change
Defensive		80.0%			65.0%			50.0%			30.0%			10.0%		
Cash	AAA	12.00%	-3.50%		8.00%	-1.00%		3.00%	-0.25%							
Aust.Bonds - Floating	QPON	7.50%	7.50%		6.00%	6.00%		4.50%	4.50%		3.00%	3.00%				
Aust.Bonds - Fixed Govt	AGVT	20.00%	2.50%		17.00%	2.00%		12.25%	1.50%		7.75%	1.25%		5.00%		
Aust.Bonds - Fixed Corp	CRED	12.50%	-3.50%		10.00%	-4.00%		7.75%	-2.75%		4.75%	-2.25%				
Int. bonds	VBND	13.00%	-3.00%		9.00%	-3.00%		7.50%	-3.00%		4.50%	-2.00%				
Hybrids	HBRD	15.00%			15.00%			15.00%			10.00%			5.00%		
Growth		20.0%			35.0%			50.0%			70.0%			90.0%		
Aust. A-REITs	RINC							2.50%			3.50%			4.50%		
Aust. Equities	EINC	4.00%	0.50%		7.00%	1.00%		8.75%	1.50%		12.25%	2.25%		15.50%	2.50%	
Aust. Equities	VHY	4.00%	0.50%		7.00%	1.00%		8.75%	1.50%		12.25%	2.25%		15.50%	2.50%	
Global Equities	INCM	12.00%	-1.00%		21.00%	-2.00%		30.00%	-3.00%		42.00%	-4.50%		54.50%	-5.00%	
Total		100%			100%			100%			100%			100%		

MER <sup>1</sup>	0.32%	0.36%	0.41%	0.45%	0.49%
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<sup>1</sup>These are the weighted average management costs of the underlying funds in the model portfolio and can be expected to change over time as asset allocations and underlying investment vehicles change. These costs do not include certain other costs, such as any transaction costs (e.g. brokerage and bid-offer spreads) that might be incurred when implementing model portfolios.

### 4.3. Pension Risk-Managed Model Portfolios

The suite of Pension Risk-Managed Model Portfolios is provided in the table below. These models are rebalanced quarterly and subject to annual strategic review.

**Defensive**  
Growth



Asset Class	ETF	Moderate		Balanced	
		Weight	qtrly change	Weight	qtrly change
<b>Defensive</b>		<b>65%</b>		<b>50%</b>	
Cash	AAA	10.0%		5.0%	
Aust.Bonds - Floating	QPON	10.0%	-20.00%	7.5%	-12.50%
Aust.Bonds - Fixed Govt	AGVT	20.0%	15.00%	15.0%	10.00%
Aust.Bonds - Fixed Corp	CRED	10.0%	5.00%	7.5%	2.50%
Hybrids	HBRD	15.0%		15.0%	
<b>Growth</b>		<b>35%</b>		<b>50%</b>	
Aust. Equities	AUST	8.5%		13.0%	
Aust. Equities	HVST	5.5%		7.0%	
Global Equities	WRLD	21.0%		30.0%	
<b>Total</b>		<b>100%</b>		<b>100%</b>	
<b>MER <sup>1</sup></b>		<b>0.40%</b>		<b>0.45%</b>	

## 5. TECHNICAL APPENDIX: ASSET CLASS ASSUMPTIONS - AS AT DECEMBER 2021

Our suite of SAA Model Portfolios are based on the following long-term asset class assumptions. These assumptions are reviewed on an annual basis.

### Projected Long-term Benchmark Asset Class Returns (p.a.)

Investment Exposure	Benchmark	Yield	Capital	Total Return	Comment
Cash	Bloomberg Bank Bill Index	2.75%	-	2.75%	Assumed 0.25% above the RBA's long-run 'neutral' cash rate of 2.5%. This assumes a neutral real rate of zero.
Aust. Fixed-Rate Bonds	Bloomberg Australian Composite Bond Index	3.00%	-	3.00%	Based on an assumed long-run risk premium for bonds of 0.5% over the neutral cash rate.
Int. Fixed-Rate Bonds	Bloomberg Global Aggregate Bond Index	3.00%	-	3.00%	Based on an assumed long-run global bond risk premium of 1% above the neutral U.S. Federal Funds rate of 2%.
Aust. Property	S&P/ASX 200 Listed Property Index	5.00%	2.50%	7.50%	Income yield assumed at 1% margin above the S&P/ASX 200 plus capital growth in line with inflation.
Aust. Equities	S&P/ASX 200 Index	4.00%	4.00%	8.00%	Grossed-up dividend yield of 4%, plus capital returns just under nominal GDP growth of 5.25% reflecting higher dividends than global peers.
Int. Equities	MSCI All World Equity Index	2.50%	5.50%	8.00%	Yield return of 2.5% plus capital returns around nominal growth in global GDP.
Gold	Gold bullion spot price in \$US	-	3.00%	3.00%	Gold is projected to grow 1% in real terms above 2% price inflation.



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### Optimisation Constraint: APRA/FSC/ASFA Standard Risk Measure

#### Optimisation Constraint: APRA/FSC/ASFA Standard Risk Measure

Risk Band	Portfolio Risk Profile	Risk Label	Est # of negative returns years every 20 years
2	Conservative	Low	0.5 to 1
3	Moderate	Low to medium	1 to 2
4	Balanced	Medium	2 to 3
5	Growth	Medium to high	3 to 4
6	High Growth	High	4 to 6

The Standard Risk Measure (SRM) is calculated by BetaShares. The SRM is based on industry guidance to allow investors to compare investment options that are expected to deliver a similar number of negative annual returns over any 20-year period. The SRM is not a complete assessment of all forms of investment risk, for instance it does not detail what the size of a negative return could be or the potential for a positive return to be less than an investor may require to meet their objectives. Further, it does not take into account the impact of administration fees and tax on the likelihood of a negative return. Investors should ensure they are comfortable with the risks and potential losses associated with their chosen investment option.

## 5.1. Benchmark Strategic Asset Allocation Weights

Based on the above asset class assumptions, outlined below are our five SAA models. As above, these allocations are reviewed annually.

Benchmark Strategic Asset Allocation					
Asset Class	Model Weights				
	Conservative	Moderate	Balanced	Growth	High Growth
<b>Defensive</b>	<b>80%</b>	<b>65%</b>	<b>50%</b>	<b>30%</b>	<b>10%</b>
Cash	15.0%	10.0%	5.0%	0.0%	0.0%
Aust bonds	39.0%	33.0%	27.0%	18.0%	10.0%
Int. bonds	26.0%	22.0%	18.0%	12.0%	0.0%
Gold (\$US)	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Growth</b>	<b>20%</b>	<b>35%</b>	<b>50%</b>	<b>70%</b>	<b>90%</b>
Aust. A-REITs	0.0%	0.0%	2.5%	3.5%	4.5%
Aust. Equities	8.0%	14.0%	17.5%	24.5%	31.0%
Int. Equities (\$A)	12.0%	21.0%	30.0%	42.0%	54.5%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Total Return <sup>2</sup> (p.a.)	4.00%	4.75%	5.50%	6.50%	7.50%
Std. dev	2.5%	4.0%	6.0%	8.5%	11.5%
# neg yrs in 20 years	1.0	2.0	3.0	4.0	5.0
Prob. of neg. return yr	5.0%	10.0%	15.0%	20.0%	25.0%

1. Defensive assets include cash, bonds and gold

2. Estimated income and total returns are on a gross (pre-tax) basis and are based on BetaShares long-term asset class return assumptions

## 5.2. Dynamic Asset Allocation Ranges

The table below indicates the maximum and minimum allowable ranges for dynamic asset allocation tilts - relative to the strategic asset allocation – that may be set for each model portfolio by the BetaShares Model Portfolio Investment Committee on an end-of-quarter basis. Models are generally only rebalanced to desired DAA weights on a quarterly basis.

	Conservative			Moderate			Balanced			Growth			High Growth		
	Min.	Bench.	Max.	Min.	Bench.	Max.	Min.	Bench.	Max.	Min.	Bench.	Max.	Min.	Bench.	Max.
<b>Defensive</b>	<b>65.0%</b>	<b>80.0%</b>	<b>95.0%</b>	<b>50.0%</b>	<b>65.0%</b>	<b>80.0%</b>	<b>25.0%</b>	<b>50.0%</b>	<b>75.0%</b>	<b>5.0%</b>	<b>30.0%</b>	<b>55.0%</b>	<b>0.0%</b>	<b>10.0%</b>	<b>35.0%</b>
Cash	5.0%	15.0%	45.0%	5.0%	10.0%	35.0%	0.0%	5.0%	30.0%	0.0%	0.0%	15.0%	0.0%	0.0%	15.0%
Aust. Bonds	10.0%	39.0%	60.0%	15.0%	33.0%	55.0%	10.0%	27.0%	45.0%	2.5%	18.0%	35.0%	0.0%	10.0%	20.0%
Int. Bonds	5.0%	26.0%	35.0%	5.0%	22.0%	30.0%	5.0%	18.0%	30.0%	0.0%	12.0%	20.0%	0.0%	0.0%	15.0%
Gold	0.0%	0.0%	15.0%	0.0%	0.0%	15.0%	0.0%	0.0%	20.0%	0.0%	0.0%	20.0%	0.0%	0.0%	20.0%
<b>Growth</b>	<b>5.0%</b>	<b>20.0%</b>	<b>35.0%</b>	<b>20.0%</b>	<b>35.0%</b>	<b>50.0%</b>	<b>25.0%</b>	<b>50.0%</b>	<b>75.0%</b>	<b>45.0%</b>	<b>70.0%</b>	<b>95.0%</b>	<b>65.0%</b>	<b>90.0%</b>	<b>100.0%</b>
A-REITs	0.0%	0.0%	15.0%	0.0%	0.0%	15.0%	0.0%	2.5%	15.0%	0.0%	3.5%	20.0%	0.0%	4.5%	25.0%
Aust. Equities	2.5%	8.0%	20.0%	5.0%	14.0%	35.0%	7.5%	17.5%	40.0%	15.0%	24.5%	50.0%	20.0%	31.0%	60.0%
Int. Equities	2.5%	12.0%	20.0%	5.0%	21.0%	35.0%	7.5%	30.0%	40.0%	15.0%	42.0%	50.0%	25.0%	54.5%	65.0%



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