



**BetaShares**

Exchange Traded Funds



# **BETASHARES MODEL PORTFOLIO REPORT**

QUARTER ENDING IN  
SEPTEMBER 2021

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## Contents

1.	INTRODUCTION TO THE BETASHARES ASSET ALLOCATION AND MODEL PORTFOLIO REPORT	2
2.	MARKET AND PORTFOLIO REVIEW: SEPTEMBER QUARTER 2021	3
2.1.	Market Review	3
2.2.	Balanced Model Portfolio Review	4
2.3.	Market Outlook and Portfolio Positioning	5
2.4.	Thematic Tilts – Banks and Quality	6
3.	MODEL PORTFOLIO PERFORMANCE REVIEW	8
4.	MODEL PORTFOLIOS: AS AT 30 SEPTEMBER 2021	10
4.1.	Strategic and Dynamic Model Portfolios	10
4.2.	Dynamic Income Model Portfolios	11
4.3.	Pension Risk-Managed Model Portfolios	12
5.	TECHNICAL APPENDIX: ASSET CLASS ASSUMPTIONS - AS AT DECEMBER 2020	13
5.1.	Benchmark Strategic Asset Allocation Weights	15
5.2.	Dynamic Asset Allocation Ranges	16

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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: SEPTEMBER QUARTER 2021

### 2.1. Market Review

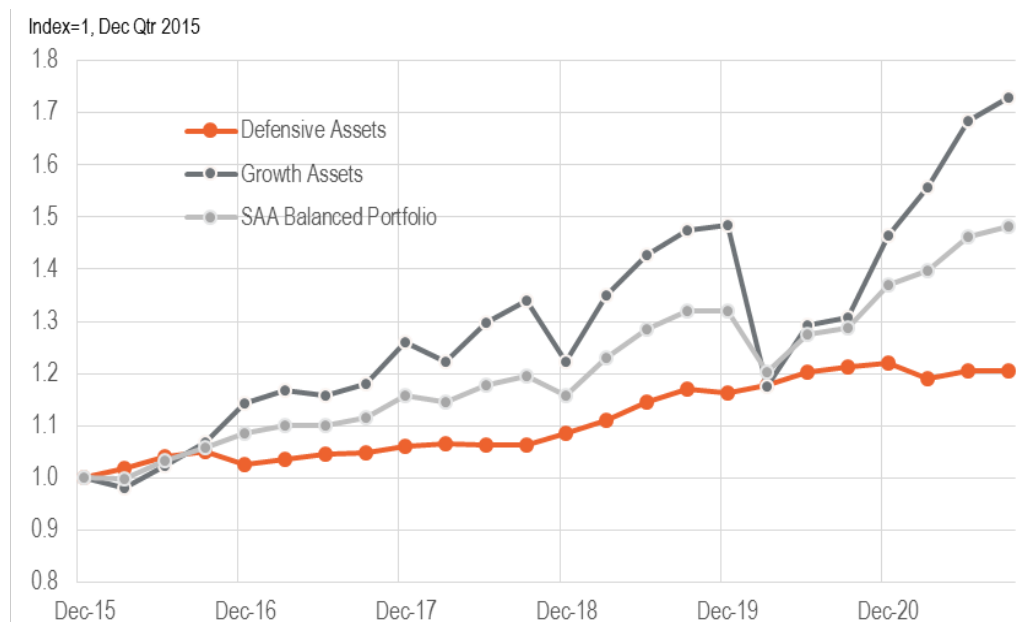
Growth assets again outperformed defensive assets over the September quarter. While global equities overall fell modestly in local currency terms, a weaker \$A supported returns on an unhedged basis. Australian equities and listed property also produced positive returns.

The main source of global equity concern in the quarter was a rebound in bond yields, following indications from the U.S. Federal Reserve that it would begin a scaling back or ‘tapering’ of bond purchases from November. Persistent cost pressures relating to supply-chain disruption, the COVID delta-variant, and debt problems faced by one of China’s largest property development companies also weighed on sentiment.

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

Major Asset Classes	Sep Qtr	Jun Qtr	6-months	12-months
<b>Defensive</b>	<b>0.1%</b>	<b>1.2%</b>	<b>1.3%</b>	<b>-0.7%</b>
Cash	0.1%	0.1%	0.2%	0.4%
Aust. Bonds	0.2%	1.8%	2.0%	-0.8%
Global bonds	-0.1%	1.0%	0.9%	-1.2%
Gold (hedged)	-1.9%	3.8%	1.8%	-9.4%
Aust. Listed Property	4.7%	10.7%	15.9%	30.4%
Aust Equities	1.9%	7.5%	9.5%	34.6%
Global Equities (unhedged)	3.0%	8.3%	11.6%	30.3%
<b>Growth</b>	<b>2.7%</b>	<b>8.2%</b>	<b>11.1%</b>	<b>31.8%</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.

Among defensive assets, a small net decline in bond yields supported a modest further gain in Australian fixed-rate bond returns, though global bond returns fell slightly. Higher bond yields hurt gold returns, while cash returns remained negligible, reflecting very low short-term interest rates.

## 2.2. Balanced Model Portfolio Review

The DAA (Balanced) Model Portfolio returned 1.6% in the quarter, compared with 1.4% for the benchmark strategic portfolio, largely reflecting our tactical overweight exposure to growth assets over defensive assets.

### SAA and DAA Balanced Model Performance

Balanced Model Portfolio Weights as at end-June 2021				
	% return Sept Qtr.	SAA	DAA	+/-
<b>Defensive Assets*</b>	<b>0.1%</b>	<b>50%</b>	<b>45%</b>	<b>-5.00%</b>
Cash (AAA)	0.1%	10.00%	11.25%	1.25%
Floating-Rate Bonds (QPON)	0.0%	6.25%		-6.25%
Aust. Government Bonds (AGVT)	0.3%	12.50%	12.50%	0.00%
Aust. Corporate Bonds (CRED)	0.3%	6.25%	6.25%	0.00%
Global Bonds (VBND)	-0.1%	15.00%	15.00%	0.00%
Gold (QAU)	-1.9%	0.00%	0.00%	0.00%
<b>Growth Assets*</b>	<b>2.7%</b>	<b>50%</b>	<b>55%</b>	<b>+5.00%</b>
Aust. Listed Property (VAP)	4.7%	2.50%	2.50%	0.00%
Aust. Equities (QOZ)	2.1%	8.75%	7.50%	-1.25%
Aust. Equities (A200)	1.7%	8.75%	7.50%	-1.25%
U.S. Equities (QUS)	3.6%	8.25%	10.25%	2.00%
U.S. Equities (VTS)	5.9%	8.25%	10.00%	1.75%
Non-U.S. Equities (VEU)	0.8%	13.50%	17.25%	3.75%
<b>Quarterly % return</b>		<b>1.4%</b>	<b>1.6%</b>	

\*Using SAA weights. 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. \*\*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.

Reflecting small differences in return performance, tilts within growth and defensive assets did not materially affect DAA relative performance in the quarter.

Within defensive assets, stronger returns from Australian fixed-rate bonds over floating-rate bonds supported relative DAA performance, though weakness in global fixed-rate bonds provided an offset.

Within growth assets, overall global equity returns were only modestly greater than Australian equity returns, with U.S. stocks performing stronger than non-U.S. stocks.

### 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	1.6%	1.4%	0.2%	0.1%	0.0%	0.0%
6-months	6.8%	6.2%	0.7%	0.5%	0.2%	0.0%
12-months	15.3%	15.2%	0.1%	0.4%	0.1%	-0.3%
Since incept. (31/12/15)	6.8%	7.1%	-0.3%	-0.6%	0.1%	0.2%

\*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.

## 2.3. Market Outlook and Portfolio Positioning

Following the September 2021 quarterly review, our major tactical themes for the coming quarter are outlined in the table below.

Investment Theme	Investment Strategy	Comment/Analysis
Early/mid-stage of the global economic cycle	Overweight growth vs. defensive assets	Despite short-term cost pressures from lingering supply chain bottlenecks as the world economy recovers from COVID, the global economy still appears 'early to mid-cycle' given spare labour market capacity and positively sloped yield curves. This continues to favour a constructive approach to growth assets, notwithstanding the risk of occasional modest pullbacks during this expansion phase.
Relatively benign local monetary conditions	Underweight floating rate and global bonds relative to fixed-rate Australian corporate bonds in defensive assets.	Despite a likely tapering of U.S. bond purchases in coming months, easing inflation concerns and steady short-term official interest rates should contain the rise in long-term bond yields. The yield pick-up of Australian corporate fixed-rate bonds offers attractive value over floating-rate bonds and global fixed-rate bonds.
Stronger global earnings	Bias to international equities over Australian equities with growth assets	A relatively strong global earnings outlook favours exposure to global over Australian equities. This in turns reflects the more defensive sector exposure of the Australian market.

We retain our overweight growth vs. defensive asset exposure, reflecting the ongoing global recovery from the COVID crisis and our expectation that recent inflation concerns will prove transitory.

Although inflation has lifted in some countries, especially in the U.S., this still largely appears to reflect supply chain disruptions along with a shift in demand towards goods over services during the pandemic lockdowns. As supply chain bottlenecks ease and demand shifts back towards services, many of these costs pressures should dissipate.

Importantly, the bigger picture view remains that the global economy is in the midst of an upswing in a new economic cycle. While there may be setbacks along the way, the medium-term trend is likely to continue to favour growth assets, until such time as capacity constraints – such as very low unemployment – are reached. Due to still high unemployment, and ongoing structural factors such as globalisation and technology disruption, we do not anticipate a sustained increase in inflation concerns for some time.

Within growth assets, we have retained our overweight exposure to global equities over Australian equities, largely due to the former's pro-growth sector exposure and the associated stronger earnings outlook. Australia's large financial sector weight relative to cyclically-sensitive consumer and technology stocks is anticipated to continue to hold back relative earnings performance. We also judge that the Australian dollar may remain under downward pressure, on the basis of an easing back in iron-ore prices and tighter monetary conditions in the U.S.

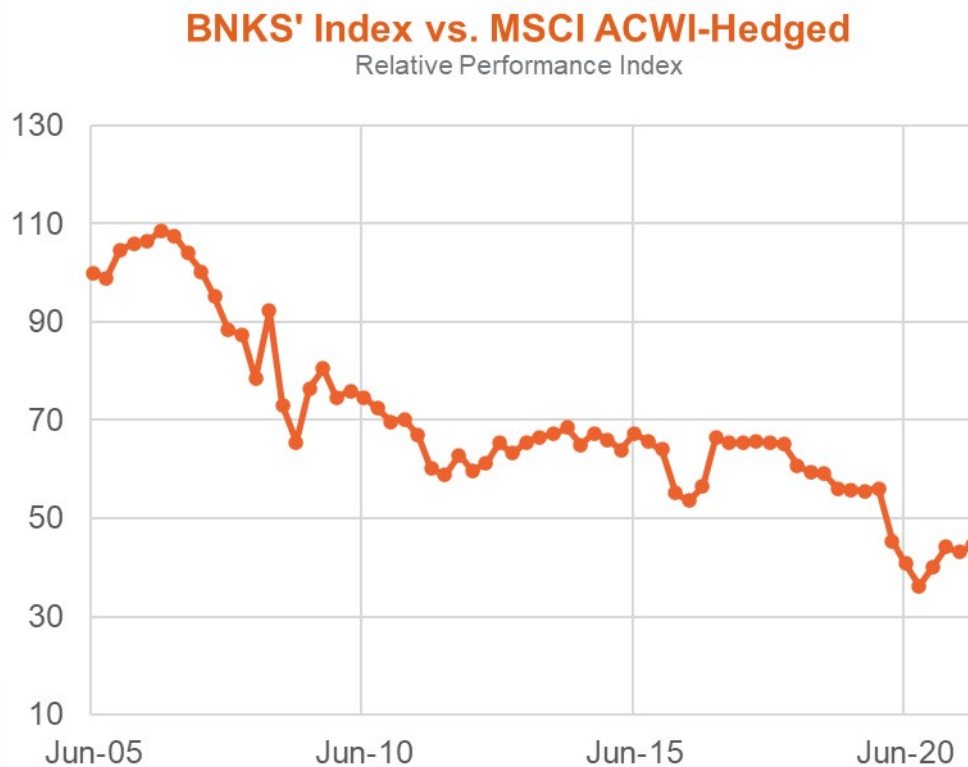
Our offsetting underweight to defensive assets is expressed largely through floating-rate bonds. Indeed, very tight credit spreads and a low short-term yield offering have led us to retain our zero weight to floating-rate bonds. That said, we have also introduced for the upcoming quarter an overweight to Australian fixed-rate corporate bonds relative to global bonds due to what is considered to be an attractive yield pick-up, and the possibility of spread compression given a tightening in U.S. monetary conditions.

## 2.4. Thematic Tilts – Banks and Quality

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)

We have shifted our first suggested tilt from global income (INCM ETF) to global banks (BNKS ETF) on the view that upward risks to global bond yields and steeper yield curves may support margin expansion and hence bank earnings. Global banks typically do relatively well in a rising yield environment, as most recently seen from mid-2020 to earlier this year. Some defensive income exposures, like utilities, within the INCM ETF could face pressure if bond yields rise.



Source: Bloomberg, BetaShares. Quarterly data ending at 30 September 2021. 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.



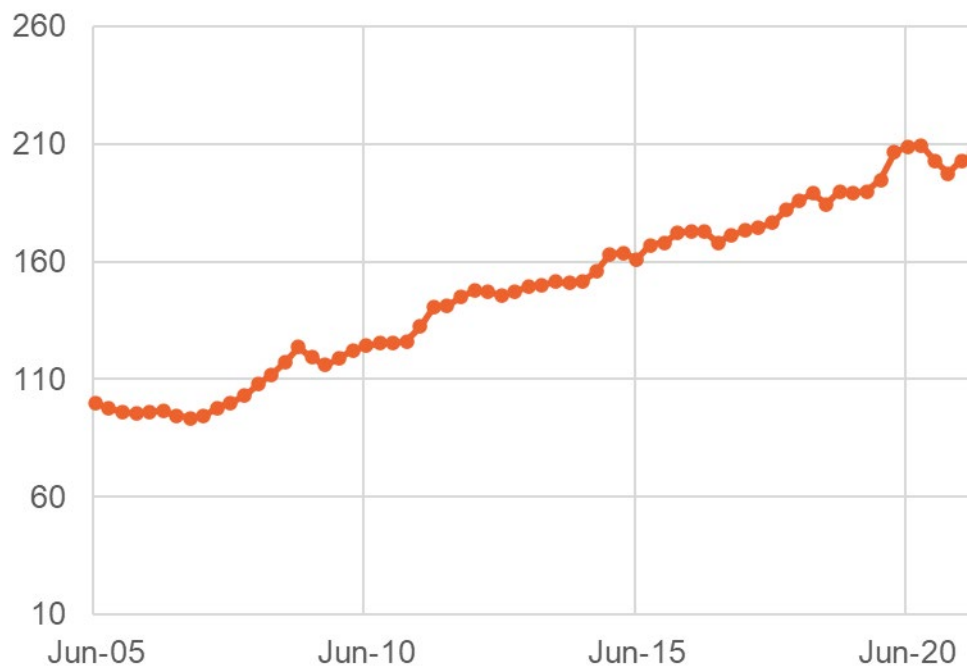
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## Theme 2: Global Quality (via the QLTY/ HQLT ETFs)

After some underperformance associated with the rebound in value stocks from mid-2020, quality has since held up reasonably well. We retain exposure to this thematic, as it may offer both defensive properties in the event of market turbulence, and long-term growth potential. The BetaShares global quality exposure was first launched in a currency unhedged form (QLTY ETF), but is now also available on a hedged basis (HQLT) for investors with either a particularly bullish view on the \$A or a desire to hedge against risk of currency movements either way.

### HQLT's Index vs. MSCI ACWI-Hedged

Relative Performance Index



Source: Bloomberg, BetaShares. Quarterly data ending at 30 September 2021. 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	Sep 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%	0.2%	0.4%	10.0%	11.3%	3.0%	5.0%
Aust. Bonds	Aust. FRNs	QPON	0.0%	0.1%	0.8%	6.3%			20.0%
	Aust. Government	AGVT	0.3%	2.5%	-2.9%	12.5%	12.5%	9.8%	5.0%
	Aust. Corporates	CRED	0.3%	2.9%	1.8%	6.3%	6.25%	4.3%	5.0%
Int. Bonds	Int. Bonds	VBND	-0.1%	0.9%	-1.2%	15.0%	15.0%	13.0%	
Aust. Property	Aust. Listed property	VAP	4.7%	15.9%	30.4%	2.5%	2.5%		
	Real Assets	RINC	8.1%	14.3%	24.9%			2.5%	
Aust. Equity	Aust. Equities	A200	1.7%	10.3%	31.1%	8.8%	7.5%		
	Aust. Equities	QOZ	2.1%	8.8%	38.0%	8.8%	7.5%		
	Aust. Equities	AUST	1.2%	7.7%	18.8%				13.0%
	Aust. Equities	HVST	0.0%	6.3%	18.3%				7.0%
	Aust. Equities	EINC	3.2%	8.4%	30.5%			7.5%	
	Aust. Equities	VHY	-1.9%	6.1%	34.8%			7.5%	
Int. Equity	Int. Equities (US)	QUS	3.6%	12.1%	38.3%	8.3%	10.3%		
	Int. Equities (US)	VTS	5.9%	16.5%	34.2%	8.3%	10.0%		
	Int. Equities	VEU	0.8%	8.3%	23.1%	13.5%	17.25%		
	Int. Equities (non-US)	WRLD	3.5%	11.3%	19.6%				30.0%
	Int. Equities	INCM	2.4%	6.3%	23.9%			37.5%	
Commodities	Gold	QAU	-1.9%	1.8%	-9.4%				
Hybrids	Aust. Hybrids	HBRD	0.3%	1.6%	4.1%			15.0%	15.0%
Aust. Equity	S&P/ASX 200		1.7%	10.1%	30.6%				
Int. Equity	US S&P 500 (\$A)		4.5%	15.1%	29.0%				
Total						100%	100%	100%	100%
Defensive <sup>2</sup>						50%	45%	45%	50%
Growth <sup>2</sup>						50%	55%	55%	50%
Net Performance <sup>1</sup>									
Sep Qtr						1.4%	1.6%	1.3%	1.3%
6-months						6.2%	6.8%	4.6%	5.3%
12-months						15.2%	15.3%	13.8%	10.4%
3-year						7.4%	13.5%	9.8%	9.1%
Since incept. (31/12/15)						7.1%	6.8%	5.0%	4.7%
Price Return						3.2%	3.1%	0.6%	0.4%
Net Income Return						3.9%	3.7%	4.5%	4.2%
Volatility <sup>3</sup>						5.9%	5.8%	6.5%	4.6%
Maximum Drawdown <sup>3</sup>						-16.9%	-18.8%	-23.0%	-11.2%
Net Distribution Yield <sup>4</sup>						3.6%	3.2%	3.3%	1.9%
Gross Distribution Yield <sup>4</sup>						3.7%	3.3%	3.7%	2.3%

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 30 September 2021  
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 1.6% during the quarter, reflecting modest gains in growth assets.

Compared to the DAA (Balanced) Portfolio, the Dynamic Income (Balanced) Portfolio returned 1.3%, reflecting weaker returns from the high-income VHY ETF.

The Pension Risk-Managed (Balanced) Portfolio also returned 1.3% in the quarter, reflecting muted gains from floating-rate bonds (QPON) and more modest equity gains from the risk-managed equity exposures AUST and HVST.

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	0.6%	1.0%	1.4%	1.9%	2.4%
6-months	3.1%	4.6%	6.2%	8.1%	10.2%
12-months	5.6%	10.4%	15.2%	22.0%	28.9%
3-year	5.1%	6.4%	7.4%	8.8%	9.9%
Since incept. <sup>2</sup>	4.5%	5.9%	7.1%	8.4%	10.1%
Volatility <sup>2</sup>	2.7%	4.1%	5.9%	8.1%	10.9%
Net Yield <sup>3</sup>	3.5%	3.5%	3.6%	3.2%	2.8%
Gross Yield <sup>3</sup>	3.5%	3.7%	3.7%	3.5%	3.1%
<b>Dynamic ETF Model Portfolio</b>					
<i>Total Return Performance <sup>1</sup></i>					
3-months	0.7%	1.1%	1.6%	2.1%	2.6%
6-months	3.7%	5.2%	6.8%	8.8%	10.6%
12-months	5.8%	10.4%	15.3%	22.2%	29.1%
3-year	4.5%	5.7%	6.8%	8.1%	9.0%
Since incept. <sup>2</sup>	4.5%	5.7%	6.8%	8.1%	9.7%
Volatility <sup>2</sup>	2.8%	4.2%	5.8%	8.0%	10.7%
Net Yield <sup>3</sup>	2.9%	3.0%	3.2%	3.0%	2.9%
Gross Yield <sup>3</sup>	2.9%	3.1%	3.3%	3.2%	3.1%
<b>Dynamic Income Model Portfolio</b>					
<i>Total Return Performance <sup>1</sup></i>					
3-months	0.6%	0.9%	1.3%	1.7%	2.1%
6-months	2.8%	3.7%	4.6%	5.7%	6.7%
12-months	5.5%	9.6%	13.8%	19.6%	25.7%
3-year	3.2%	3.6%	3.7%	3.8%	3.8%
Since incept. <sup>2</sup>	3.9%	4.6%	5.0%	5.6%	6.0%
Price Return	0.3%	0.6%	0.6%	0.9%	0.9%
Net Income Return	3.6%	4.0%	4.5%	4.6%	5.1%
Volatility <sup>2</sup>	3.2%	4.8%	6.5%	8.9%	11.6%
Net Yield <sup>3</sup>	2.9%	3.1%	3.3%	3.2%	3.2%
Gross Yield <sup>3</sup>	3.2%	3.4%	3.7%	3.5%	3.6%
<b>Pension Risk-Managed Model Portfolio</b>					
<i>Total Return Performance <sup>1</sup></i>					
3-months	0.3%	0.9%	1.3%		
6-months	2.3%	3.9%	5.3%		
12-months	4.8%	7.6%	10.4%		
3-year	3.6%	4.2%	4.9%		
Since incept. (31/12/15)	3.4%	4.0%	4.7%		
Volatility <sup>2</sup>	2.4%	3.4%	4.6%		
Net Yield <sup>3</sup>	2.2%	1.7%	1.9%		
Gross Yield <sup>3</sup>	2.5%	2.0%	2.3%		

1. Portfolios are rebalanced on a quarterly basis.

2. Since inception 31 December 2015

3. Trailing 12-months, as at 30 September 2021

## 4. MODEL PORTFOLIOS: AS AT 30 SEPTEMBER 2021

### 4.1. Strategic and Dynamic Model Portfolios

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

		Conservative				Moderate				Balanced				Growth				High Growth			
Asset Class	ETF	SAA	DAA	+/-	qtrly change	SAA	DAA	+/-	qtrly change	SAA	DAA	+/-	qtrly change	SAA	DAA	+/-	qtrly change	SAA	DAA	+/-	qtrly change
Defensive		80.0%	75.0%	-5.0%		65.0%	60.0%	-5.0%		50.0%	45.0%	-5.0%		30.0%	25.0%	-5.0%		10.0%	5.0%	-5.0%	
Cash	AAA	25.00%	28.75%	3.75%		15.00%	18.25%	3.25%		10.00%	11.25%	1.25%		5.00%	4.50%	-0.50%		2.50%	2.50%		
Aust.Bonds - Floating	QPON	8.75%		-8.75%		8.25%		-8.25%		6.25%		-6.25%		4.50%		-4.50%					
Aust.Bonds - Fixed Govt	AGVT	17.50%	17.50%			16.00%	16.00%			12.50%	12.50%			8.50%	8.50%			7.50%	2.50%	-5.00%	
Aust.Bonds - Fixed Corp	CRED	8.75%	18.75%	10.00%	10.00%	8.25%	18.25%	10.00%	10.00%	6.25%	13.75%	7.50%	7.50%	4.50%	12.00%	7.50%	7.50%				
Int. bonds	VBND	20.00%	10.00%	-10.00%	-10.00%	17.50%	7.50%	-10.00%	-10.0%	15.00%	7.50%	-7.50%	-7.50%	7.50%		-7.50%	-7.50%				
Gold (\$US)	QAU																				
Growth		20.0%	25.0%	5.0%		35.0%	40.0%	5.0%		50.0%	55.0%	5.0%		70.0%	75.0%	5.0%		90.0%	95.0%	5.0%	
Aust. A-REITs	VAP									2.50%	2.50%			3.50%	3.50%			4.50%	4.50%		
Aust. Equities	QOZ	4.00%	4.25%	0.25%		7.00%	6.25%	-0.75%		8.75%	7.50%	-1.25%		12.25%	11.00%	-1.25%		15.50%	14.25%	-1.25%	
Aust. Equities	A200	4.00%	4.25%	0.25%		7.00%	6.25%	-0.75%		8.75%	7.50%	-1.25%		12.25%	11.00%	-1.25%		15.50%	14.25%	-1.25%	
US Equities	QUS	3.25%	4.50%	1.25%		5.75%	7.50%	1.75%		8.25%	10.25%	2.00%		11.50%	13.50%	2.00%		15.00%	17.00%	2.00%	
US Equities	VTI	3.25%	4.25%	1.00%		5.75%	7.25%	1.50%		8.25%	10.00%	1.75%		11.50%	13.25%	1.75%		15.00%	16.75%	1.75%	
Non-US Equities	VEU	5.50%	7.75%	2.25%		9.50%	12.75%	3.25%		13.50%	17.25%	3.75%		19.00%	22.75%	3.75%		24.50%	28.25%	3.75%	
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>		0.20%	0.20%			0.20%	0.19%			0.19%	0.19%			0.18%	0.18%			0.17%	0.17%		

<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.

Defensive  
Growth



Asset Class	ETF	Conservative		Moderate		Balanced		Growth		High Growth	
		Weight	qtrly change	Weight	qtrly change	Weight	qtrly change	Weight	qtrly change	Weight	qtrly change
<b>Defensive</b>		<b>75.0%</b>		<b>60.0%</b>		<b>45.0%</b>		<b>25.0%</b>		<b>5.0%</b>	
Cash	AAA	19.75%		9.25%		3.00%					
Aust.Bonds - Floating	QPON										
Aust.Bonds - Fixed Govt	AGVT	15.50%		14.00%		9.75%		6.00%			
Aust.Bonds - Fixed Corp	CRED	14.75%	8.00%	14.25%	8.00%	9.75%	5.50%	9.00%	6.50%		
Int. bonds	VBND	10.00%	-8.00%	7.50%	-8.00%	7.50%	-5.50%		-6.50%		
Hybrids	HBRD	15.00%		15.00%		15.00%		10.00%		5.00%	
<b>Growth</b>		<b>25.0%</b>		<b>40.0%</b>		<b>55.0%</b>		<b>75.0%</b>		<b>95.0%</b>	
Aust. A-REITs	RINC					2.50%		3.50%		4.50%	
Aust. Equities	EINC	4.25%		6.25%		7.50%		11.00%		14.25%	
Aust. Equities	VHY	4.25%		6.25%		7.50%		11.00%		14.25%	
Global Equities	INCM	16.50%		27.50%		37.50%		49.50%		62.00%	
<b>Total</b>		<b>100%</b>		<b>100%</b>		<b>100%</b>		<b>100%</b>		<b>100%</b>	
<b>MER<sup>1</sup></b>		<b>0.33%</b>		<b>0.37%</b>		<b>0.42%</b>		<b>0.46%</b>		<b>0.50%</b>	

<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	qtrly change	Balanced	qtrly change
		Weight		Weight	
<b>Defensive</b>		<b>65%</b>		<b>50%</b>	
Cash	AAA	10.0%		5.0%	
Aust.Bonds - Floating	QPON	30.0%		20.0%	
Aust.Bonds - Fixed Govt	AGVT	5.0%		5.0%	
Aust.Bonds - Fixed Corp	CRED	5.0%		5.0%	
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>0.39%</b>		<b>0.45%</b>	

<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.

## 5. TECHNICAL APPENDIX: ASSET CLASS ASSUMPTIONS - AS AT DECEMBER 2020

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	25.0%	15.0%	10.0%	5.0%	2.5%
Aust bonds	35.0%	32.5%	25.0%	17.5%	7.5%
Int. bonds	20.0%	17.5%	15.0%	7.5%	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>1</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. Estimated 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.
Defensive	65.0%	80.0%	95.0%	50.0%	65.0%	80.0%	25.0%	50.0%	75.0%	5.0%	30.0%	55.0%	0.0%	10.0%	35.0%
Cash	5.0%	25.0%	45.0%	5.0%	15.0%	35.0%	0.0%	10.0%	30.0%	0.0%	5.0%	15.0%	0.0%	2.5%	15.0%
Aust. Bonds	10.0%	35.0%	60.0%	15.0%	32.5%	55.0%	10.0%	25.0%	45.0%	2.5%	17.5%	35.0%	0.0%	7.5%	20.0%
Int. Bonds	5.0%	20.0%	35.0%	5.0%	17.5%	30.0%	5.0%	15.0%	30.0%	0.0%	7.5%	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%
Growth	5.0%	20.0%	35.0%	20.0%	35.0%	50.0%	25.0%	50.0%	75.0%	45.0%	70.0%	95.0%	65.0%	90.0%	100.0%
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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