

Core Risk-Based ETF Model Portfolio Allocations

ETF Holdings & Weights

ETF Ticker	ETF Models					
	Dynamic Aggressive (70/15/15)	Dynamic Growth (60/25/15)	Multi-Asset Risk Strategy (50/30/20)	Dynamic Growth & Income (50/35/15)	Dynamic Conservative (30/55/15)	Risk Managed Dynamic Income (15/80/5)
DGRW	17%	15%	13.5%	12%	7.5%	5%
GDX	3%	3%	2.5%	3%	2.5%	1%
SPMD	10%	8%	2.5%	7%	4.5%	3%
MNA	1%	1%	2.5%	1%	1%	—
BTAL	6%	6%	7.5%	6%	5.5%	2%
MCHI	3%	2%	3.0%	2%	1%	—
IHDG	10%	9%	6.0%	7%	4.5%	3%
VMBS	—	2%	3.0%	3%	5%	8%
GLDM	6%	6%	7.5%	6%	6%	2%
DGRE	10%	8%	8.0%	7%	4%	3%
SPAB	4%	8%	12.0%	14%	23.5%	34%
USMV	5%	5%	3.0%	4%	1.5%	—
VOT	4%	4%	3.5%	3%	3%	2%
QLTA	2%	4%	4.0%	5%	8.5%	14%
LQD	3%	4%	4.0%	5%	9%	14%
VTIP	2%	2%	—	3%	5%	8%
PFF	4%	3%	2.5%	2%	1.5%	1%
SPDW	10%	9%	6.0%	7%	4.5%	2%
CQQQ	3%	2%	3.0%	2%	1%	—
SPSM	3%	3%	3.0%	2%	1%	—
XME	—	—	1.5%	—	—	—
PICK	—	—	1.5%	—	—	—
Total	100%	100%	100%	100%	100%	100%

Source: Astoria Portfolio Advisors. ETF holdings and weights as of January 20, 2021.

Valuation Data

Asset Allocation Bands

Model	Bonds	Cash	US Stocks	Non-US Stocks	Alternatives
Dynamic Aggressive	9.5%	0%	42%	33.5%	15%
Benchmark (70%/15%/15%) ¹	15%	0%	40%	30%	15%
Dynamic Growth	19.5%	0%	36.5%	29%	15%
Benchmark (60%/25%/15%) ²	25%	0%	34%	26%	15%
Multi-Asset Risk Strategy	23%	0%	29.5%	27.5%	20%
Benchmark (50%/30%/20%) ³	30%	0%	29%	22%	20%
Dynamic Growth & Income	30%	0%	30%	25%	15%
Benchmark (50%/35%/15%) ⁴	35%	0%	29%	22%	15%
Dynamic Conservative	51%	0%	19%	15%	15%
Benchmark (30%/55%/15%) ⁵	55%	0%	17%	13%	15%
Risk Managed Dynamic Income	77%	0%	10.5%	7.5%	5%
Benchmark (15%/80%/5%) ⁶	80%	0%	9%	6%	5%

Source: Astoria Portfolio Advisors. ETF holdings and weights as of January 20, 2021. 1. Dynamic Aggressive Model: 70% MSCI All Country World Index (NDUEACWF), 15% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 15% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST). 2. Dynamic Growth Model: 60% MSCI All Country World Index (NDUEACWF), 25% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 15% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST). 3. Multi-Asset Risk Strategy: 50% MSCI All Country World Index (NDUEACWF), 30% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 20% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST). 4. Dynamic Growth & Income Model: 50% MSCI All Country World Index (NDUEACWF), 35% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 15% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST). 5. Dynamic Conservative Model: 30% MSCI All Country World Index (NDUEACWF), 55% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 15% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST). 6. Risk Managed Dynamic Income Model: 15% MSCI All Country World Index (NDUEACWF), 80% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 5% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST).

Valuations & Probability

Model	Price/Earnings	Price/Book	Price/Sales	Net margin	ROE	ROA
Dynamic Aggressive	21.0	3.1	2.0	15%	22%	8%
Benchmark (70%/15%/15%) ¹	24.0	2.6	2.0	14%	20%	7%
Dynamic Growth	21.1	3.1	2.1	15%	22%	8%
Benchmark (60%/25%/15%) ²	24.0	2.6	2.0	14%	20%	7%
Multi-Asset Risk Strategy	20.8	3.2	2.1	16%	22%	8%
Benchmark (50%/30%/20%) ³	24.0	2.6	2.0	14%	20%	7%
Dynamic Growth & Income	21.1	3.1	2.1	15%	22%	8%
Benchmark (50%/35%/15%) ⁴	24.0	2.6	2.0	14%	20%	7%
Dynamic Conservative	21.5	3.1	2.2	15%	21%	8%
Benchmark (30%/55%/15%) ⁵	24.0	2.6	2.0	14%	20%	7%
Risk Managed Dynamic Income	21.6	3.7	2.4	17%	26%	9%
Benchmark (15%/80%/5%) ⁶	24.0	2.6	2.0	14%	20%	7%

Source: Vanguard. Fundamental data as of December 31, 2020. 1. Dynamic Aggressive Model: 70% MSCI All Country World Index (NDUEACWF), 15% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 15% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST). 2. Dynamic Growth Model: 60% MSCI All Country World Index (NDUEACWF), 25% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 15% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST). 3. Multi-Asset Risk Strategy: 50% MSCI All Country World Index (NDUEACWF), 30% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 20% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST). 4. Dynamic Growth & Income Model: 50% MSCI All Country World Index (NDUEACWF), 35% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 15% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST). 5. Dynamic Conservative Model: 30% MSCI All Country World Index (NDUEACWF), 55% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 15% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST). 6. Risk Managed Dynamic Income Model: 15% MSCI All Country World Index (NDUEACWF), 80% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 5% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST).

Credit Quality Breakdown

Model	AAA	AA	A	BBB	BB	B	Below B	NR/NA
Dynamic Aggressive	46%	6%	31%	17%	0%	0%	0%	0%
Benchmark (70%/15%/15%) ¹	44%	16%	19%	22%	0%	0%	0%	0%
Dynamic Growth	52%	5%	27%	15%	0%	0%	0%	0%
Benchmark (60%/25%/15%) ²	44%	16%	19%	22%	0%	0%	0%	0%
Multi-Asset Risk Strategy	59%	5%	23%	14%	0%	0%	0%	0%
Benchmark (50%/30%/20%) ³	44%	16%	19%	22%	0%	0%	0%	0%
Dynamic Growth & Income	56%	5%	25%	15%	0%	0%	0%	0%
Benchmark (50%/35%/15%) ⁴	44%	16%	19%	22%	0%	0%	0%	0%
Dynamic Conservative	55%	5%	25%	15%	0%	0%	0%	0%
Benchmark (30%/55%/15%) ⁵	44%	16%	19%	22%	0%	0%	0%	0%
Risk Managed Dynamic Income	56%	5%	25%	15%	0%	0%	0%	0%
Benchmark (15%/80%/5%) ⁶	44%	16%	19%	22%	0%	0%	0%	0%

Source: Vanguard. Fundamental data as of December 31, 2020. 1. Dynamic Aggressive Model: 70% MSCI All Country World Index (NDUEACWF), 15% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 15% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST). 2. Dynamic Growth Model: 60% MSCI All Country World Index (NDUEACWF), 25% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 15% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST). 3. Multi-Asset Risk Strategy: 50% MSCI All Country World Index (NDUEACWF), 30% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 20% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST). 4. Dynamic Growth & Income Model: 50% MSCI All Country World Index (NDUEACWF), 35% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 15% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST). 5. Dynamic Conservative Model: 30% MSCI All Country World Index (NDUEACWF), 55% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 15% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST). 6. Risk Managed Dynamic Income Model: 15% MSCI All Country World Index (NDUEACWF), 80% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 5% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST).

Interest Rate Risk

Model	Average effective maturity	Average weighted coupon
Dynamic Aggressive	9.19	2.84%
Benchmark (70%/15%/15%) ¹	9.12	2.51%
Dynamic Growth	8.68	2.96%
Benchmark (60%/25%/15%) ²	9.12	2.51%
Multi-Asset Risk Strategy	8.14	2.86%
Benchmark (50%/30%/20%) ³	9.12	2.51%
Dynamic Growth & Income	8.44	2.91%
Benchmark (50%/35%/15%) ⁴	9.12	2.51%
Dynamic Conservative	8.52	2.93%
Benchmark (30%/55%/15%) ⁵	9.12	2.51%
Risk Managed Dynamic Income	8.46	2.92%
Benchmark (15%/80%/5%) ⁶	9.12	2.51%

Source: Vanguard. Fundamental data as of December 31, 2020. 1. Dynamic Aggressive Model: 70% MSCI All Country World Index (NDUEACWF), 15% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 15% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST). 2. Dynamic Growth Model: 60% MSCI All Country World Index (NDUEACWF), 25% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 15% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST). 3. Multi-Asset Risk Strategy: 50% MSCI All Country World Index (NDUEACWF), 30% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 20% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST). 4. Dynamic Growth & Income Model: 50% MSCI All Country World Index (NDUEACWF), 35% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 15% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST). 5. Dynamic Conservative Model: 30% MSCI All Country World Index (NDUEACWF), 55% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 15% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST). 6. Risk Managed Dynamic Income Model: 15% MSCI All Country World Index (NDUEACWF), 80% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 5% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST).

Effective Maturity

Model	1-3 years	3-5 years	5-7 years	7-10 years	10-15 years	15-20 years	20-30 years	>30 years
Dynamic Aggressive	18%	21%	11%	11%	4%	6%	25%	3%
Benchmark (70%/15%/15%) ¹	19%	18%	12%	13%	8%	6%	22%	3%
Dynamic Growth	15%	18%	10%	10%	5%	6%	32%	3%
Benchmark (60%/25%/15%) ²	19%	18%	12%	13%	8%	6%	22%	3%
Multi-Asset Risk Strategy	16%	18%	9%	10%	5%	6%	33%	3%
Benchmark (50%/30%/20%) ³	19%	18%	12%	13%	8%	6%	22%	3%
Dynamic Growth & Income	16%	18%	10%	10%	5%	6%	33%	3%
Benchmark (50%/35%/15%) ⁴	19%	18%	12%	13%	8%	6%	22%	3%
Dynamic Conservative	15%	17%	10%	10%	5%	6%	33%	3%
Benchmark (30%/55%/15%) ⁵	19%	18%	12%	13%	8%	6%	22%	3%
Risk Managed Dynamic Income	16%	17%	10%	10%	5%	6%	33%	3%
Benchmark (15%/80%/5%) ⁶	19%	18%	12%	13%	8%	6%	22%	3%

Source: Vanguard. Fundamental data as of December 31, 2020. 1. Dynamic Aggressive Model: 70% MSCI All Country World Index (NDUEACWF), 15% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 15% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST). 2. Dynamic Growth Model: 60% MSCI All Country World Index (NDUEACWF), 25% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 15% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST). 3. Multi-Asset Risk Strategy: 50% MSCI All Country World Index (NDUEACWF), 30% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 20% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST). 4. Dynamic Growth & Income Model: 50% MSCI All Country World Index (NDUEACWF), 35% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 15% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST). 5. Dynamic Conservative Model: 30% MSCI All Country World Index (NDUEACWF), 55% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 15% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST). 6. Risk Managed Dynamic Income Model: 15% MSCI All Country World Index (NDUEACWF), 80% Bloomberg Barclays Global Aggregate Bond Index (LEGATRUU), and 5% Wilshire Liquid Alternative Multi-Strategy Index (WLIQAMST).

Portfolio Construction Tilts: Country/Equity Region

Model	Country/Region Tilts (bps)			
	North America	Europe	Greater Asia	Asia EM
Dynamic Aggressive Model	-349	-198	575	635
Dynamic Growth Model	-306	-164	501	571
Multi-Asset Risk Strategy	-451	-411	880	1021
Dynamic Growth & Income Model	-287	-208	523	603
Dynamic Conservative Model	-79	-221	336	449
Risk Managed Dynamic Income Model	-38	-222	262	229

Source: Vanguard, Astoria Portfolio Advisors. Data as of December 31, 2020.

Portfolio Construction Tilts: Fixed Income Sectors

Model	Fixed Income Tilts (bps)				
	Government	Municipal	Corporate	Securitized	Duration
Dynamic Aggressive Model	-2679	-7	3244	-61	-0.47
Dynamic Growth Model	-3253	-7	2651	1035	-0.74
Multi-Asset Risk Strategy	-2874	-3	1946	1340	-1.06
Dynamic Growth & Income Model	-3015	-3	2250	1183	-0.88
Dynamic Conservative Model	-3073	-4	2358	1136	-0.83
Risk Managed Dynamic Income Model	-3012	-3	2256	1174	-0.87

Source: Vanguard, Astoria Portfolio Advisors. Data as of December 31, 2020. All data shown is expressed in basis points (bps) aside from Duration.

Best,
Astoria Portfolio Advisors Investment Committee

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