

Dynamic Strategic Multi-Factor ETF Model Portfolio Allocations

ETF Weight

ETF Ticker	Model					
	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%	15%	12%	9.5%	9.5%
GDX	2.5%	2.5%	2.5%	2.5%	2.5%	1%
QUAL	4%	3.5%		3%		
USMF	10%	8%		7%	5%	
MNA	1%	1%	2.5%	1%	1%	
BTAL	5.5%	5.5%	7.5%	5.5%	5.5%	2%
EES	3%	2.5%	3%	2%		
MCHI	3.5%	3%	4%	2.5%		
IHDG	19%	17%	12%	14%	8.5%	4.5%
VMBS		2%	3%	3%	5%	7.5%
GLDM	6%	6%	7.5%	6%	6%	2%
DGRE	9.5%	8%	8%	7%	5.5%	3%
JQUA			5%			
SPAB	4%	8.5%	13%	15%	25%	39%
USMV	6%	5.5%	4%	5%	3.5%	
QLTA	2%	3.5%	3.5%	4.5%	8%	11.5%
LQD	2%	3.5%	3.5%	4.5%	8%	11.5%
VTIP	1.5%	2%	3%	3%	5%	7.5%
PFF	3.5%	3%	3%	2.5%	2%	1%
Total	100%	100%	100%	100%	100%	100%

Source: Astoria Portfolio Advisors. ETF holdings and weights as of August 5, 2020.

Valuation Data

Asset Allocation Bands

Model	Bonds	Cash	US Stocks	Non-US Stocks	Alternatives
Dynamic Aggressive	9.5%	0%	43.5%	32%	15%
Benchmark (70%/15%/15%) ¹	15%	0%	40%	30%	15%
Dynamic Growth	19.5%	0%	37.5%	28%	15%
Benchmark (60%/25%/15%) ²	25%	0%	34%	26%	15%
Multi-Asset Risk Strategy	26%	0%	30%	24%	20%
Benchmark (50%/30%/20%) ³	30%	0%	29%	22%	20%
Dynamic Growth & Income	30%	0%	31.5%	23.5%	15%
Benchmark (50%/35%/15%) ⁴	35%	0%	29%	22%	15%
Dynamic Conservative	51%	0%	20%	14%	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: Vanguard, Astoria Portfolio Advisors. ETF holdings and weights as of August 5, 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).

Valuations & Probability

Model	Price/Earnings	Price/Book	Price/Sales	Net margin	ROE	ROA
Dynamic Aggressive	18.8	3.0	1.8	16%	25%	9%
Benchmark (70%/15%/15%) ¹	19.8	2.3	1.7	16%	21%	8%
Dynamic Growth	18.9	3.0	1.8	16%	25%	9%
Benchmark (60%/25%/15%) ²	19.8	2.3	1.7	16%	21%	8%
Multi-Asset Risk Strategy	18.6	2.8	1.7	16%	25%	9%
Benchmark (50%/30%/20%) ³	19.8	2.3	1.7	16%	21%	8%
Dynamic Growth & Income	18.9	3.0	1.8	16%	25%	9%
Benchmark (50%/35%/15%) ⁴	19.8	2.3	1.7	16%	21%	8%
Dynamic Conservative	18.5	3.1	2.0	16%	25%	9%
Benchmark (30%/55%/15%) ⁵	19.8	2.3	1.7	16%	21%	8%
Risk Managed Dynamic Income	19.5	3.4	2.0	17%	28%	10%
Benchmark (15%/80%/5%) ⁶	19.8	2.3	1.7	16%	21%	8%

Source: Vanguard, Astoria Portfolio Advisors. Fundamental data as of July 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	47%	6%	30%	16%	0%	0%	0%	0%
Benchmark (70%/15%/15%) ¹	46%	15%	19%	21%	0%	0%	0%	0%
Dynamic Growth	53%	6%	27%	15%	0%	0%	0%	0%
Benchmark (60%/25%/15%) ²	46%	15%	19%	21%	0%	0%	0%	0%
Multi-Asset Risk Strategy	59%	5%	22%	14%	12%	0%	0%	0%
Benchmark (50%/30%/20%) ³	46%	5%	24%	14%	0%	0%	0%	0%
Dynamic Growth & Income	56%	5%	24%	14%	0%	0%	0%	0%
Benchmark (50%/35%/15%) ⁴	46%	15%	19%	21%	0%	0%	0%	0%
Dynamic Conservative	55%	5%	25%	14%	0%	0%	0%	0%
Benchmark (30%/55%/15%) ⁵	46%	15%	19%	21%	0%	0%	0%	0%
Risk Managed Dynamic Income	56%	5%	24%	14%	0%	0%	0%	0%
Benchmark (15%/80%/5%) ⁶	46%	15%	19%	21%	0%	0%	0%	0%

Source: Vanguard, Astoria Portfolio Advisors. Fundamental data as of July 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	8.88	2.98%
Benchmark (70%/15%/15%) ¹	8.94	2.60%
Dynamic Growth	8.45	3.12%
Benchmark (60%/25%/15%) ²	8.94	2.60%
Multi-Asset Risk Strategy	7.96	3.02%
Benchmark (50%/30%/20%) ³	8.94	2.60%
Dynamic Growth & Income	8.24	3.08%
Benchmark (50%/35%/15%) ⁴	8.94	2.60%
Dynamic Conservative	8.31	3.09%
Benchmark (30%/55%/15%) ⁵	8.94	2.60%
Risk Managed Dynamic Income	8.26	3.08%
Benchmark (15%/80%/5%) ⁶	8.94	2.60%

Source: Vanguard, Astoria Portfolio Advisors. Fundamental data as of July 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	17%	18%	9%	10%	4%	6%	33%	3%
Benchmark (70%/15%/15%) ¹	19%	17%	12%	13%	7%	6%	23%	3%
Dynamic Growth	15%	18%	10%	10%	4%	6%	33%	3%
Benchmark (60%/25%/15%) ²	19%	17%	12%	13%	7%	6%	23%	3%
Multi-Asset Risk Strategy	16%	18%	9%	10%	4%	6%	34%	3%
Benchmark (50%/30%/20%) ³	19%	17%	12%	13%	7%	6%	23%	3%
Dynamic Growth & Income	16%	18%	9%	10%	4%	6%	33%	3%
Benchmark (50%/35%/15%) ⁴	19%	17%	12%	13%	7%	6%	23%	3%
Dynamic Conservative	16%	18%	9%	10%	4%	6%	33%	3%
Benchmark (30%/55%/15%) ⁵	19%	17%	12%	13%	7%	6%	23%	3%
Risk Managed Dynamic Income	16%	18%	9%	10%	4%	6%	33%	3%
Benchmark (15%/80%/5%) ⁶	19%	17%	12%	13%	7%	6%	23%	3%

Source: Vanguard, Astoria Portfolio Advisors. Fundamental data as of July 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: Equity Region, Country, and Factor Exposure



Source: Vanguard, Astoria Portfolio Advisors. Data accessed on July 31, 2020.

Portfolio Construction Tilts: Fixed Income Sectors

Model	Fixed Income Tilts (bps)				
	Government	Municipal	Corporate	Securitized	Duration
Dynamic Aggressive Model	-2828	-9	3247	-248	-0.55
Dynamic Growth Model	-3265	-8	2702	666	-0.78
Multi-Asset Risk Strategy	-2881	-5	1987	954	-1.07
Dynamic Growth & Income Model	-3027	-5	2290	822	-0.9
Dynamic Conservative Model	-3086	-5	2399	778	-0.86
Risk Managed Dynamic Income Model	-3025	-5	2294	817	-0.89

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

Best,
 Astoria Portfolio Advisors Investment Committee

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