



Investment Process

Who is Astoria Portfolio Advisors?



Who We Are

Astoria Portfolio Advisors is an investment management firm that specializes in research driven, cross asset, ETF and thematic equity portfolio construction. Our core services include investment management, research and sub-advisory services.



Investment Philosophy & Approach

Astoria brings institutional caliber investment strategies and utilizes ETFs to build wealth management solutions for investors. When formulating our ETF portfolios, we utilize a risk based, quantitative investment approach.



Astoria's Solutions

Astoria's strategies are strategically constructed to their respective benchmarks and then actively managed through research driven factor tilts and the use of alternatives to dampen portfolio volatility and drive excess returns.



What We Can Deliver

Astoria delivers passive strategies with a dynamic overlay in a liquid, transparent and tax efficient manner.

John Davi has been one of the Industry's Thought Leaders in Cross Asset & Quantitative ETF Research and Portfolio Construction

Analyst – ML Equity Derivatives / Index Research	Coverage of ETFs and Research on Quant/ Equity Derivatives	Head of ML's Delta 1 Research	ML and MS Equity Derivatives & ETF Solutions	MS ETF Product Group	Begin to Manage Money Using Cross Asset, Quant Driven ETF Portfolios	Head of Institutional ETF Strategy at MS	Astoria Portfolio Advisors
2000	2001	2002-2007	2007-2009	2010	2010	2012	2017
Astoria's founder begins his career as an analyst in Merrill's Highly Ranked Quantitative Equity Derivatives Research Group	Begin constructing Quantitatively Driven ETF portfolio solutions. Executed and raised several billion in transactions	Continued research and advisory work for hedge funds, asset managers, pension funds, and endowments	Structured Equity Derivatives solutions for institutional investors.	Produced Macro & Quantitative ETF Strategy reports and advised institutional investors on ETF portfolio solutions	Our founder begins to manage his family office money using Cross Asset & Quantitatively driven ETF portfolios	Our founder pioneers Cross Asset ETF Content where over 10,000 institutional investors globally follow his content. Extensive world travel	Our founder creates an LLC, engineers cross asset & factor based, ETF investment solutions for RIAs, family offices, and pensions & endowments

Source: Astoria Portfolio Advisors LLC

Assets Under Management/Advisement



AUM and AUA as of September 30, 2021.

Astoria's ETF Investment Management Process

A Differentiated, Value-Added Process



Dynamic, quantitatively driven portfolios with a purpose

- Purposefully designed to help reduce portfolio risk during periods of higher volatility and to participate in capital appreciation when markets are more conducive.



Markets evolve, your allocations should adapt

- Astoria's Investment Committee utilizes a Cross Asset & Quantitative Research Process to make overlay decisions in response to changing macro-economic conditions and fundamentals.



Improve your ETF portfolio with multi-asset class exposure

- Using rigorous selection criteria, Astoria actively manages a broad universe of ETFs within Equity, Fixed Income and other asset classes such as Commodities, Liquid Alternatives and Cash.

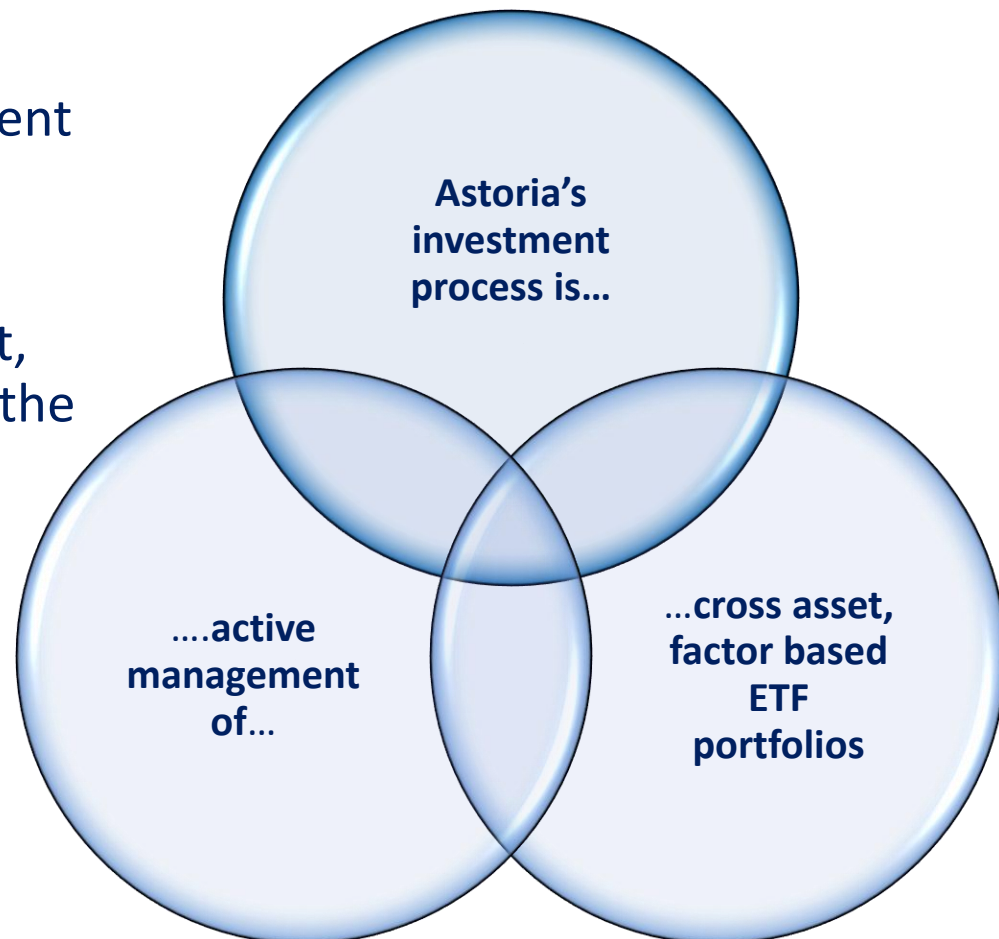


Open-architecture Process

- Intense focus on picking the right ETFs which match the desired outcome from the investment process. Astoria employs an open architect process amongst all ETF issuers.

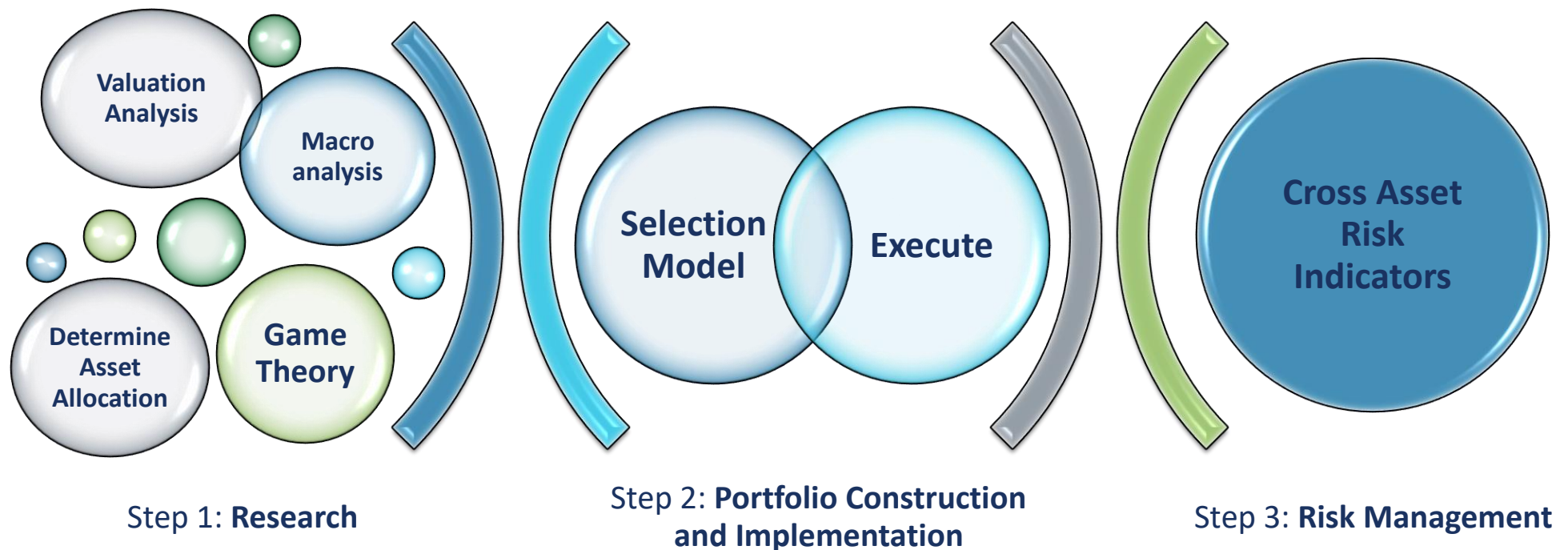
Philosophy: Astoria Extracts Risk Premia via Factor Analysis. We Believe Blending *Active* and *Passive* is the True Sweet Spot for Active Management

- We believe this is an **ideal environment** for active management
- **Active management** of cross asset, factor based ETFs offers investors the best of both worlds



Source: Astoria Portfolio Advisors LLC

Process: Astoria Runs a Disciplined Cross Asset, Risk Premia Based Investment Management Process



Continuous Feedback Loop Between Research, Portfolio Management and Risk Management

Process: Astoria Utilizes Various Risk Models & Factor Tools in order to Stress Test our Portfolios & Understand our Risk Premia Exposures



In-depth Overview of our Macroeconomic Models and Cross Asset Risk Indicators is Available Upon Request.

Astoria Offers a Range of ETF Strategic Solutions. We will hold a variety of asset classes including stocks, bonds, and a modest amount of alternatives.

We list the target equity ranges below. The balance is allocated towards bonds and a modest amount towards alternatives.

Focus on long term returns

All of our strategies are based on macroeconomic & quantitative research. We utilize several risk modeling tools.

Focus on risk adjusted returns

We believe the heavy emphasis on capturing short term alpha is providing a unique opportunity in generating long term returns.

Multi-Asset Risk Allocation Strategy (MARS)*

50 – 70% equity

Benchmark: 50% ACWI

30% AGG

20% Liquid Alts

Dynamic Aggressive Model

70 – 90% equity

Benchmark: 70% ACWI

15% AGG

15% Liquid Alts

Dynamic Growth Model

60 – 80% equity

Benchmark: 60% ACWI

25% AGG

15% Liquid Alts

Dynamic Growth & Income Model

50 – 70% equity

Benchmark: 50% ACWI

35% AGG

15% Liquid Alts

Dynamic Conservative Model

30 – 50% equity

Benchmark: 30% ACWI

55% AGG

15% Liquid Alts

Risk Managed Dynamic Income Model

10 – 30% equity

Benchmark: 15% ACWI

80% AGG

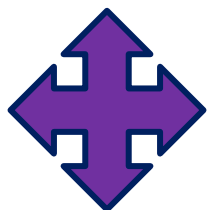
5% Liquid Alts

ETF Portfolio Construction

Concentration	10-15 ETFs. Largest weight typically 15-17% ; lowest weight typically 2-3%. Portfolio allocation: equities 40%-60%, bonds 15-20%, alternatives 15-20%. Cash is used opportunistically
Exposure	Developed and emerging market equities & FX, non traditional interest rate and credit spread products (i.e. emerging market debt, variable preferred, municipals), energy/oil, agriculture, industrial metals, gold, liquid alternatives. 100% of the exposures are ETFs
Time Horizon	1-2 years
Sector Focus	Multi Sector Focused
Market Capitalization	Vast majority of our equity exposures are large caps ETFs Small/Midcap ETFs are used opportunistically
Liquidity	Strategy is able to scale up significantly as we are using very liquid ETFs with considerable primary & secondary market liquidity Ability to liquidate fund within 1 day

Astoria's ETF Portfolio Construction Process

Five Pillars to Astoria's Investment Process



1. Make investment decisions based on **empirical evidence** and focus on **after-tax, after-inflation, and risk-adjusted returns**



2. Diversify across **global equities, across asset class, and use alternatives to soften portfolio volatility**



3. Diversify across factors: The research shows historically you have been able to get higher up on the efficient frontier when harvesting a basket of factors over long periods of time

4. Utilize portfolio construction tools and risk models to ensure the tracking error is within appropriate bands (+/- 100/200bps vs. a traditional style box)



5. Harvest losses via a **systematic tax loss harvesting program**

Astoria also Offers Thematic Strategy Solutions. These portfolios are managed around a specific outcome, factor tilt, sector tilt, or macroeconomic theme.

We list the target equity ranges below. Each portfolio is focused on a unique theme which vary its security types and risk.

Focus on long term returns

Our strategies are quantitative and systematic in nature.

Cyclicals Portfolio

100% equity

Benchmark: 100% SPY

Renaissance Risk Managed Rotation ETF Portfolio

75 – 85% equity

Benchmark: 100% SPY

Focus on secular investment trends

We believe quantitatively driven, concentrated, equally weighted portfolios offer a unique client experience and potential outcome.

Disruptive Growth ETF Portfolio

100% equity

Benchmark: 100% IVW

Inflation Sensitive ETF Portfolio

55 – 65% equity

Benchmark: 90% BCI
20% STIP

Astoria's stock portfolios are rules based, quantitatively driven, and systematic in nature.

Each portfolio has a unique focus and filter strategy. Some focus on quality, some growth, and some dividend yield.

Focus on long term returns

Our strategies are quantitative and systematic in nature.

High Growth Portfolio

100% equity

Benchmark: 100% IWF

Dividend Growers Portfolio

100% equity

Benchmark: 100% SDY

Focus on risk adjusted returns

We believe quantitatively driven, concentrated, equally weighted portfolios offer a unique client experience and potential outcome.

High Quality Portfolio

100% equity

Benchmark: 100% SPY

High Dividend Yield Portfolio

100% equity

Benchmark: 100% SDY

Step 1: What is the goal for the end client?

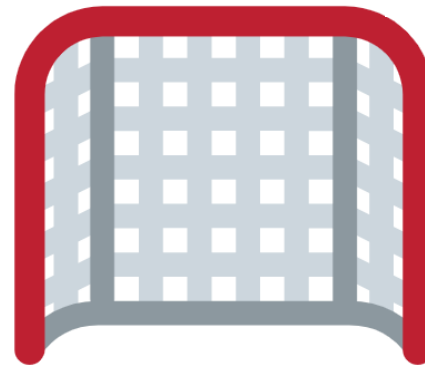
Step 1 tells us how much equity to put into the portfolio.

Growth

Income

Do we need to hedge the upside risk?

?



Step 2: How much risk can the client take?

Step 2 tells us how if we need to utilize low cost ETFs or ETFs which have higher active share.

What is our Tracking Error?

- 1% Active risk winds up requiring 50%-70% core low cost ETFs
- 2-3% Active risk allows Astoria to utilize a) high active share ETFs b) modest portfolio construction tilts c) alternatives

Factors or no factors?

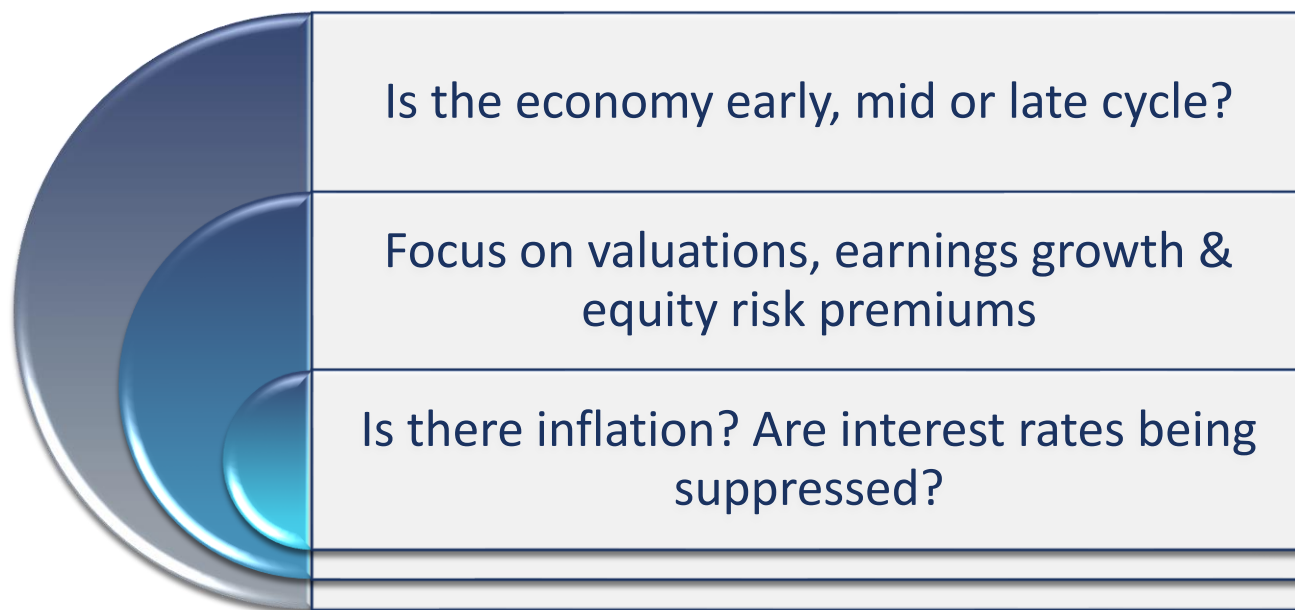
- Value vs Growth
- Quality vs Low Volatility
- Momentum? Size?

Include alternatives?

- We are not paid to take views on the Fed, oil, viruses. We are benchmark investors and the goal is to deliver the returns of the benchmark +/- a spread by
- 1) tilting the portfolio based on empirical evidence,
- 2) systematic tax loss harvesting, and
- 3) utilizing alternatives to minimize downside risk

Step 3: Where are we in economic cycle?

Step 3 tells us which
parts of the stock and
bond universe we will
tilt towards



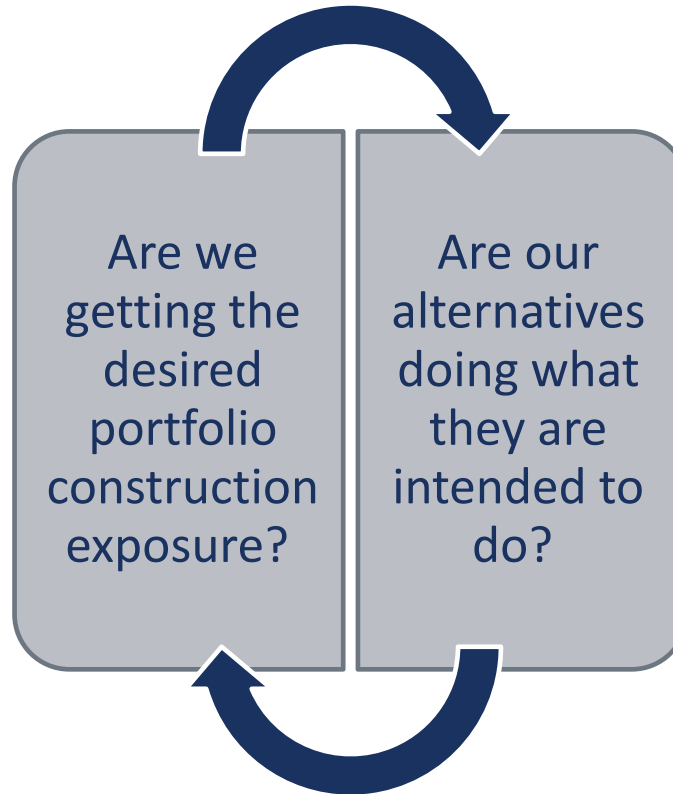
Step 4: What factors have historically worked during this stage of the cycle?

Step 4 dictates which factors we want to utilize in the portfolio.



Step 5: Load
ETFs into a
portfolio risk
tool. Rinse &
repeat until the
desired
outcome is
reached

Step 5 is truly Astoria's
edge and a key reason
why RIAs utilize
Astoria's services



Ongoing
basis:
Monitor
performance,
risk, portfolio
tilts,
attribution.
Report back
to the
advisor.



Astoria produces hundreds of pages of content regarding our investment rationale, investment policy statement, ETF due diligence, trade documentation, performance attribution, factor tilts

Astoria Has Been Highlighted on...



Astoria Portfolio Advisors' strategies can be accessed through multiple Broker Dealers (BDs) and Turnkey Asset Management Programs (TAMPs). Please see below a list of platforms where Astoria's strategies are readily available.



Astoria is a Frequent Contributor to Various Media Outlets



December 2017

"The rate of change that made me bullish in 2017 (muted inflation, tremendous liquidity, and great earnings) is going to decline on the margin in 2018. The real story for 2018 is the decline of liquidity from rate hikes, QT, and ECB tapering. My big call for 2018 is hedge risk assets, own uncorrelated assets, and diversify your portfolio." –December 2017

February 2020

"You've got to watch single-name stocks that now have supply chains in China because they're going to start to produce more guidance lower... I think that the impact is going to spread to Europe and the U.S."
–February 2020



Astoria's Team



Astoria's Investment Committee



Investment Committee



John
Davi

CEO and
CIO



Elisabetta
Basilico,
CFA, PhD

Investment
Committee
Member



Brian
Archer

Investment
Committee
Member



Marcus
Novacheck

Investment
Committee
Member



Heiko
Ebens,
PhD

Investment
Committee
Member



Michael
Stulic,
CFA, FRM,
PRM

Director of
Capital
Markets



Nick
Cerbone

Quantitative
Strategist

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