

AXS Astoria Inflation Sensitive ETF (PPI) Portfolio Construction



AXS Astoria Inflation Sensitive ETF (Ticker: PPI) Portfolio Manager: John Davi



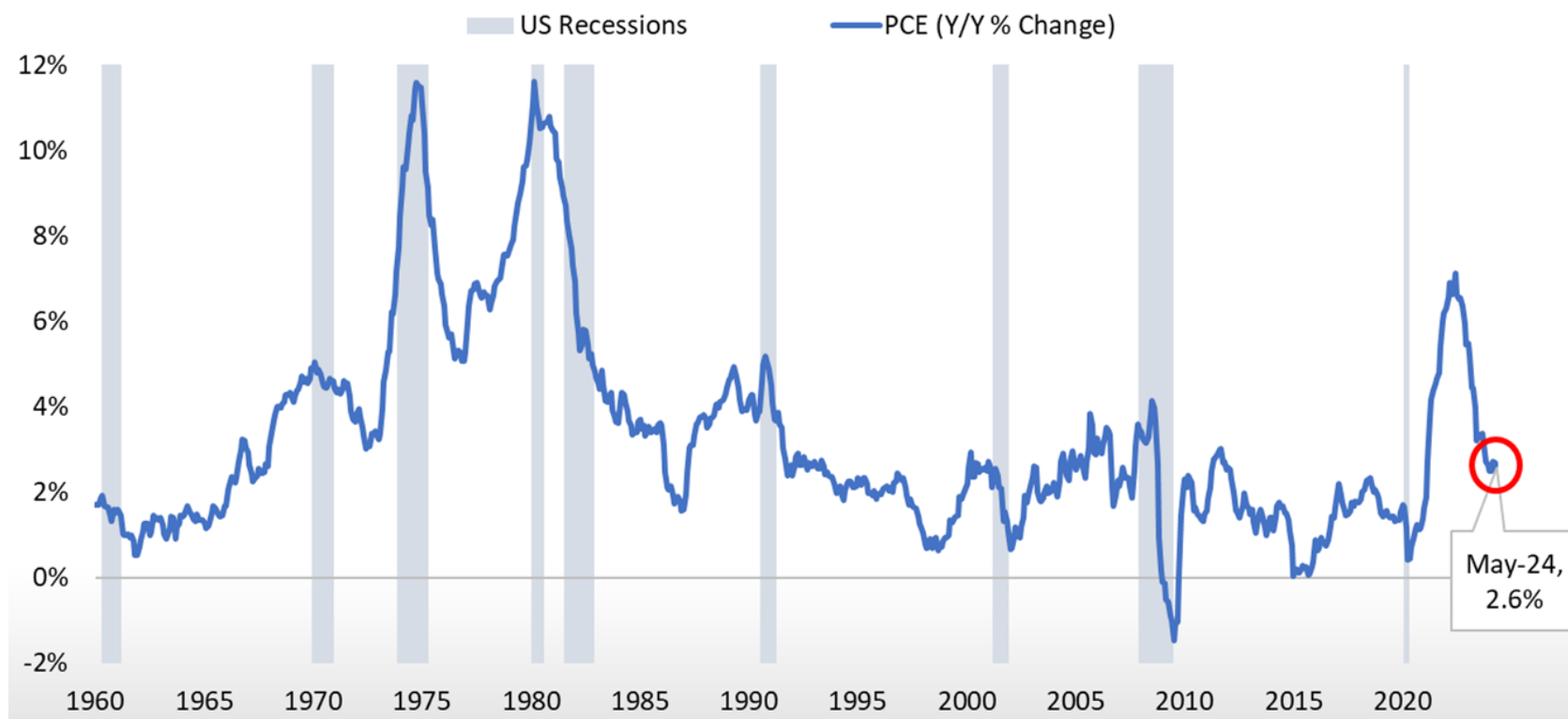
John Davi
Founder, CEO and CIO
Astoria Portfolio Advisors

- Award-winning authority on ETF investing
- 25+ years of portfolio construction experience for institutions and advisors
- Industry thought leader in multi-asset class & quantitative ETF research
- Frequent go-to contributor for financial media



Core PCE (Personal Consumption Expenditure) Y/Y print for May suggest inflation has eased but remains elevated

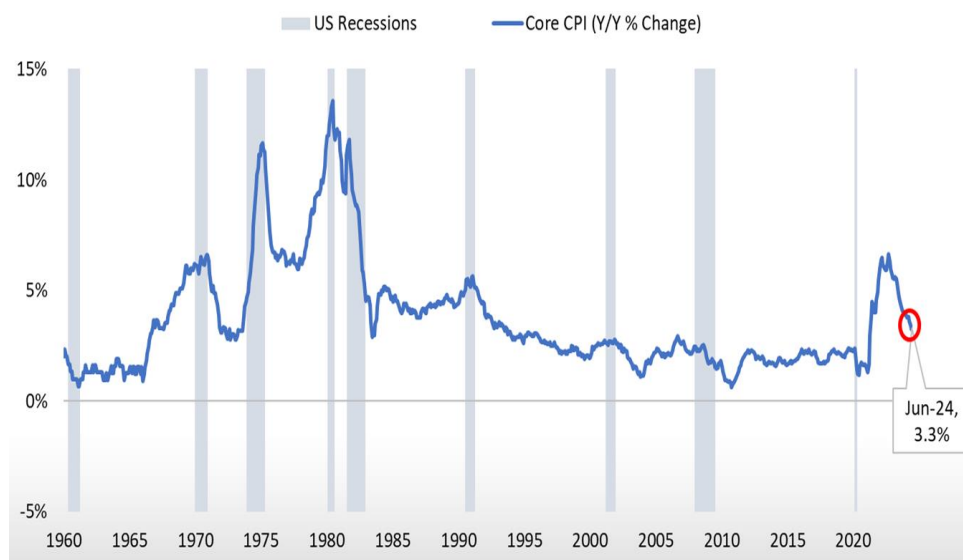
Core Personal Consumption Expenditures Index



Source: FactSet, U.S. Bureau of Economic Analysis, Astoria Portfolio Advisors. Core PCE (Personal Consumption Expenditure) excludes the prices of food and energy. Data as of June 28, 2024. Past performance is not a guarantee of future results.

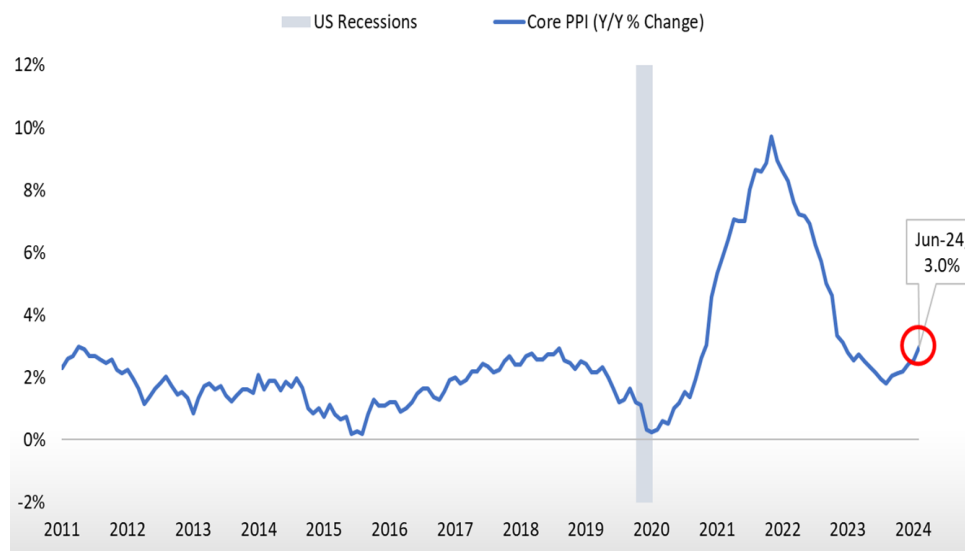
Core CPI (Consumer Price Index) Y/Y for June also remains well above the Fed's 2% target while Core PPI (Producer Price Index) Y/Y has reaccelerated in recent months

Core Consumer Price Index



Source: FactSet, U.S. Department of Labor, Astoria Portfolio Advisors. Core CPI (Consumer Price Index) excludes the prices of food and energy. Data as of July 11, 2024. Past performance is not a guarantee of future results.

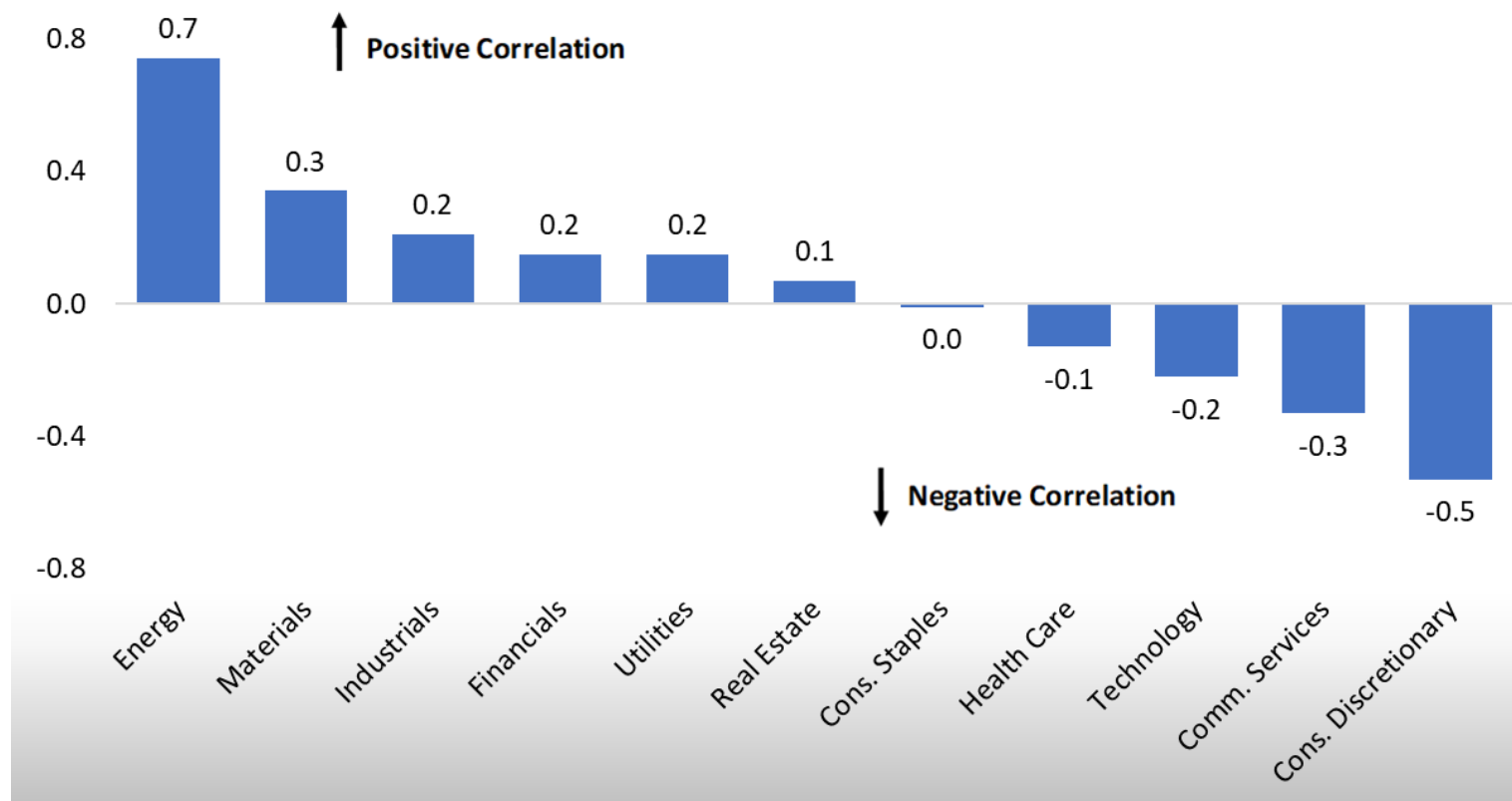
Core Producer Price Index



Source: FactSet, U.S. Department of Labor, Astoria Portfolio Advisors. Core PPI (Producer Price Index) excludes the prices of food and energy. Data as of July 12, 2024. Past performance is not a guarantee of future results.

Among equity sectors, energy, materials, and industrials have historically demonstrated high sensitivity to inflation movements

US Sector Correlations to Inflation Movements Relative to S&P 500



Source: MarketDesk Quant Pack. Calculations based on relative year over year returns versus the S&P 500 over the last 20 years.

When comparing the historical performance of various fixed income securities during inflationary periods, TIPS have generated the only positive real return, as well as the largest hit rate

Fixed Income in Inflationary Regimes

	Specific Inflation Regimes								Combined Regimes				
	US Enters WW2	End of WW2	Korean War	Ending of Bretton Woods	OPEC Oil Embargo	Iranian Revolution	Reagan's Boom	China Demand Boom	Inflation (19%)	Other (81%)	All (100%)	Hit Rate	t-stat
Start Month	April 1941	Mar 1946	Aug 1950	Feb 1966	Jul 1972	Feb 1977	Feb 1987	Sep 2007					
End Month	May 1942	Mar 1947	Feb 1951	Jan 1970	Dec 1974	Mar 1980	Nov 1990	Jul 2008					
Total Price Level Change	15%	21%	7%	19%	24%	37%	20%	6%					
Strategy	Real Return (Total)								Real Return (Annualized)				
US Treasury 30 Year	-17%	-17%	-6%	-20%	-28%	-41%	13%	2%	-8%	5%	3%	25%	-5.0 *
US Treasury 10 Year	-11%	-17%	-6%	-13%	-12%	-31%	8%	5%	-5%	4%	2%	25%	-5.1 *
US Treasury 2 Year	-13%	-17%	-6%	-1%	-7%	-17%	11%	0%	-3%	2%	1%	13%	-5.8 *
USD Investment Grade Credit	-7%	-12%	-3%	-23%	-20%	-43%	-5%	1%	-7%	6%	3%	13%	-8.1 *
USD High Yield Credit	-4%	-11%	0%	-18%	-21%	-38%	-10%	-8%	-7%	6%	4%	13%	-7.8 *
TIPS				-3%	13%	-2%	11%	6%	2%	3%	3%	60%	-0.6

Source: Neville, Henry and Draaisma, Teun and Funnell, Ben and Harvey, Campbell R. and van Hemert, Otto, The Best Strategies for Inflationary Times (May 25, 2021). Total returns to 30-year, 10-year, and 2-year US Treasuries, and investment-grade and high-yield credit and 10-year TIPS, during eight US inflationary regimes as well as the annualized return during inflationary, non-inflationary, and all periods. In the final columns, presented is the hit rate (proportion of inflationary periods with positive returns), and the heteroskedasticity-consistent t-statistic, which tests whether the returns in inflationary and non-inflationary times are different. *Denotes significance. The data are from 1926 to 2020 for all assets other than TIPS, which are from 1959. The US Treasury only started to issue TIPS in 1997. However, data from a synthetic TIPS is available back to 1959 (Marshall 2020). The historical TIPS index is constructed by Goldman Sachs (Marshall, 2020). To transform into TIPS TR index, 10-year nominal yields are used to calculate Macaulay duration, assuming a par rate, and then the estimated real yield to calculate modified duration. To calculate the inflation accrual, the historic CPI is lagged by three months.

During inflationary periods, many commodities have historically produced both real returns and high hit rates

Commodities in Inflationary Regimes

	Specific Inflation Regimes								Combined Regimes				
	US Enters WW2	End of WW2	Korean War	Ending of Bretton Woods	OPEC Oil Embargo	Iranian Revolution	Reagan's Boom	China Demand Boom	Inflation (19%)	Other (81%)	All (100%)	Hit Rate	t-stat
Start Month	April 1941	Mar 1946	Aug 1950	Feb 1966	Jul 1972	Feb 1977	Feb 1987	Sep 2007					
End Month	May 1942	Mar 1947	Feb 1951	Jan 1970	Dec 1974	Mar 1980	Nov 1990	Jul 2008					
Total Price Level Change	15%	21%	7%	19%	24%	37%	20%	6%					
<u>Strategy</u>	<u>Real Return (Total)</u>								<u>Real Return (Annualized)</u>			Hit Rate	t-stat
Industrials				115%	38%	-6%	306%	3%	19%	4%	7%		
Precious				28%	29%	185%	-27%	33%	11%	-2%	1%	80%	1.7
Agris		12%	6%	-23%	197%	-21%	6%	33%	7%	-3%	0%	71%	1.8
Softs				-41%	243%	15%	11%	15%	8%	-3%	-1%	80%	1.6
Livestock				69%	-21%	35%	97%	-23%	7%	1%	2%	60%	1.1
Energies	-3%	2%	-6%	-16%	264%	57%	201%	68%	41%	-1%	3%	100%	1.7
Gold					166%	154%	-18%	27%	13%	-1%	1%	67%	1.6
Silver				9%	99%	210%	-41%	36%	12%	-5%	0%	80%	1.8
Commodities Aggregate		12%	6%	26%	85%	38%	84%	21%	14%	1%	4%	100%	3.1 *

Source: Neville, Henry and Draaisma, Teun and Funnell, Ben and Harvey, Campbell R. and van Hemert, Otto, The Best Strategies for Inflationary Times (May 25, 2021). Total returns to six baskets of commodity futures, as well as gold and silver individually, and an equal-weighted, monthly rebalanced basket of all commodities, during the eight US inflation regimes already defined, as well as the annualized return during inflationary, non-inflationary, and all periods. Returns in grey italics are spot returns prior to the existence of a liquid futures contract. These are not included in the aggregate calculations. All other returns are funded. In the final columns, presented is the hit rate (proportion of inflationary periods with positive returns) and the heteroskedasticity-consistent t statistic, which tests whether the returns in inflationary and non-inflationary times are different.

*Denotes significance. The starting point for the data varies from 1946 (agris) to 1979 (energies) and runs through to 2020 at monthly periodicity.

Overview/Summary of Strategy

Asset Allocation

US & Non-US Equities
(stocks)

Commodity ETFs

Fixed Income ETFs
(TIPS)

Stock Screening

Constraints

- Minimum Free Float Share Percentage
- Minimum Market Value
- Minimum Volume over the Past 6 Months

5-Factor Model

- i. Valuation
- ii. Momentum
- iii. Growth
- iv. Quality
- v. Sensitivity to CPI

- **One screen for each sector**, using **metrics that best define the factors for the respective sector**, historically
 - *[Energy, Industrials, and Materials]*
- Metrics are adjusted to country (and former universe constraints)
 - Median for each metric is calculated by country and subtracted from original metric
- The adjusted metrics are ranked in deciles
- **7-8 best US stocks** and **7-8 best non-US stocks** are chosen within each screen = **45 high conviction stocks**

Stock Selection Universe

All primary listings across 16 countries

United States	Norway
United Kingdom	Germany
Switzerland	Australia
Japan	Belgium
Netherlands	Canada
South Africa	Italy
France	Austria
Spain	Ireland

Energy

**Sectors that have historically
demonstrated high sensitivity to
inflation**

Industrials

Materials

% of Free Float Shares > 25%

Current Market Value > \$5 bln

Avg. Volume in Past 6 Months > \$50 mln

Sector Screening

SECTOR ANALYSIS

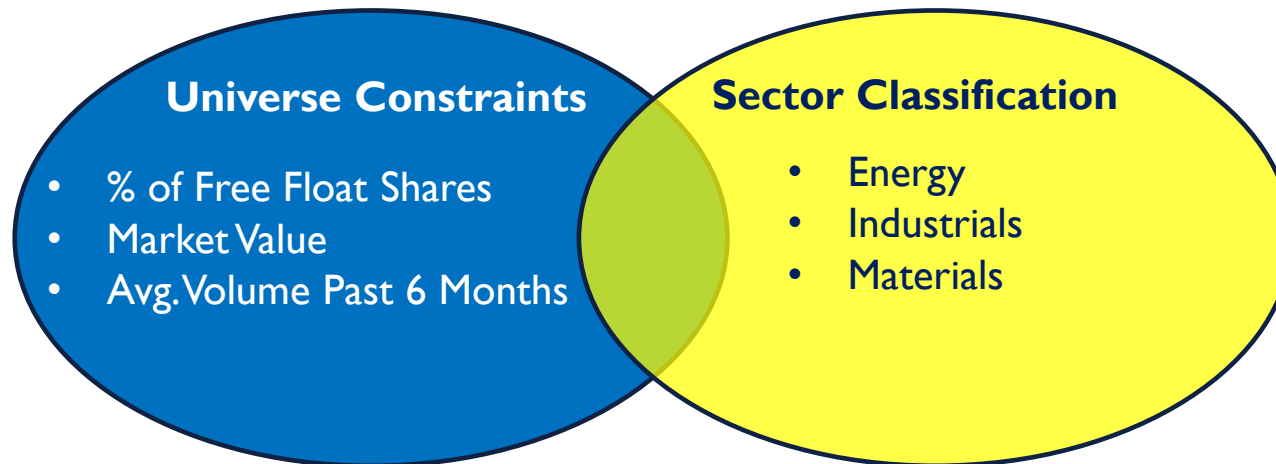
Valuation Momentum Growth Quality Inflation-Sensitivity

INFLATION-SENSITIVE SECTORS: Energy + Industrials + Materials

The metrics used for each sector depend on which ones historically best captured the factor for that sector

Adjusted Metrics

- Prior to ranking, each metric is adjusted on a universe constraint/sector/country basis
- As each sector has its own separate screen, each screen pulls companies that satisfy the following:

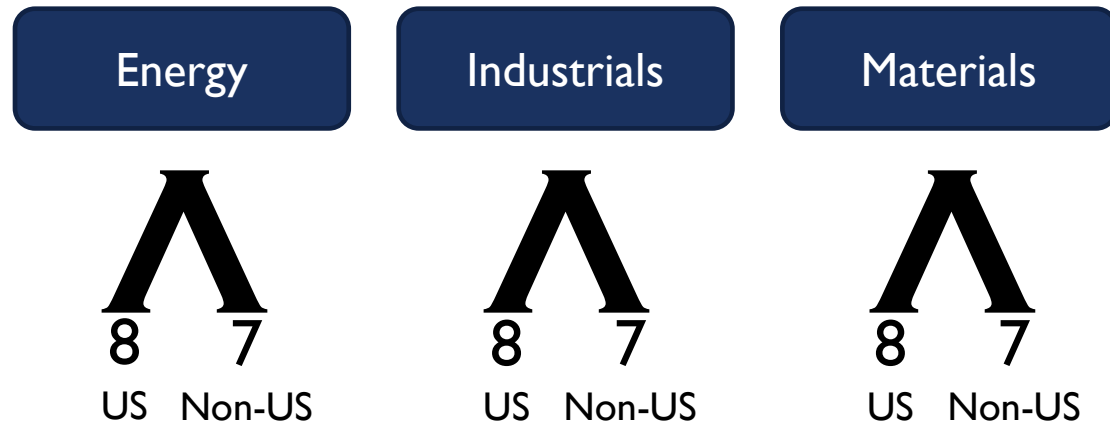


- Using all the companies that pass each screen, the adjustment is calculated on a country of domicile basis:
 - The median value for each metric is calculated for each country based on all companies within the screen
 - The median value according to the stock's country of domicile is then subtracted from the original metric
- The adjusted metric is used in the ranking process

Rank Logic

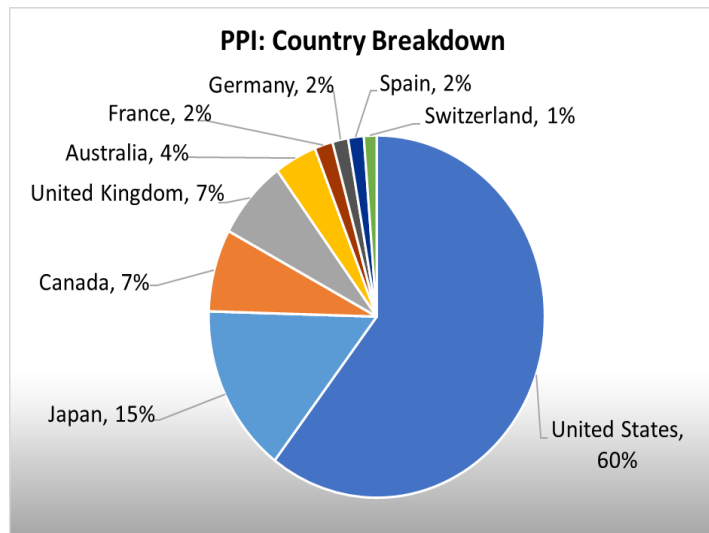
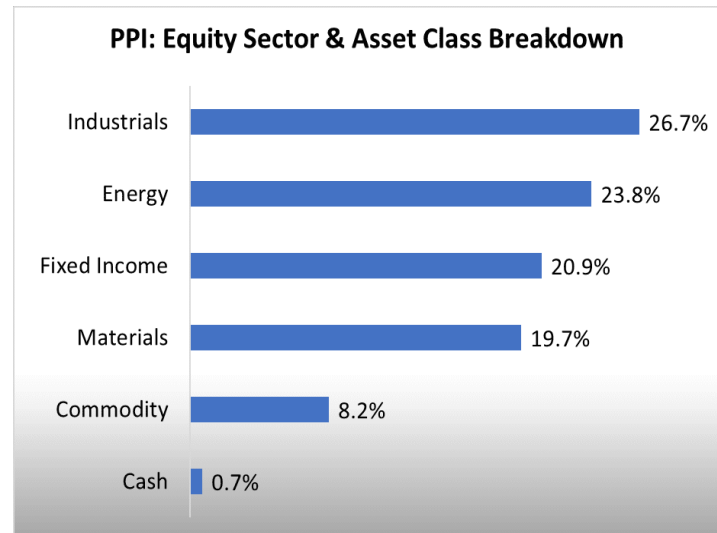
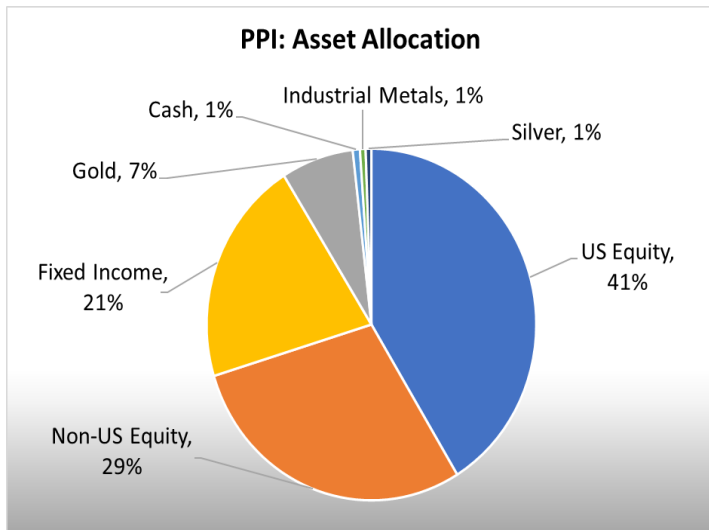
- Securities are ranked on a sector-by-sector basis, not the whole universe
- A weighting is assigned to each of the 5 factors
- If a factor has two underlying components, each will have a 50% sub-weight
 - Example: If Growth is made up of Growth Estimates and PEG Estimates, the sub-weighting of each will be 50%. The weighted average of the two will make up the Growth factor, which is used in the overall ranking process
- Ranks are calculated in deciles
- Ranks are applied so that the best values associated with each factor return a “1” and the worst values associated with each factor return a “10”
 - Example: Lowest values associated with Forward P/E and Price / Cash Flow (the Valuation factor) will be ranked 1 while highest values associated with ROIC and 1YR ROE (the Quality Factor) will be ranked 1
- A weighted average of the ranks for all 5 factors will be the overall deciding rank

Security Selection



FOR EACH SECTOR, THE HIGHEST-RANKING US AND NON-US SECURITIES ARE CHOSEN FOR THE FINAL LIST

Portfolio Characteristics



Source: Astoria Portfolio Advisors. All data is as of July 5, 2024.

Value and Growth Measures of PPI and S&P 500 Index

PPI (AXS Astoria Inflation Sensitive ETF)

Value & Growth Measures	Investment	Cat. Average	Index
Price/Earnings	12.71	16.49	17.80
Price/Book	2.00	2.29	2.55
Price/Sales	1.09	1.84	1.87
Price/Cash Flow	6.71	10.56	11.50
Dividend Yield %	2.94	2.73	2.17
Long-Term Earnings %	9.41	9.68	11.24
Historical Earnings %	13.07	5.67	6.69
Sales Growth %	13.39	7.59	7.45
Cash-Flow Growth %	16.24	7.22	6.20
Book-Value Growth %	13.72	2.60	6.07

Investment as of Jul 19, 2024 | Category: Global Allocation as of Jun 30, 2024 |
 Index: Morningstar Gbl Allocation TR USD as of Jun 30, 2024 | Data is based on
 the long position of the equity holdings.

Source: Morningstar. Data accessed on July 19, 2024.

S&P 500 Index

Value & Growth Measures	Index
Price/Earnings	22.20
Price/Book	4.24
Price/Sales	2.74
Price/Cash Flow	15.01
Dividend Yield %	1.43
Long-Term Earnings %	11.82
Historical Earnings %	6.85
Sales Growth %	8.80
Cash-Flow Growth %	8.94
Book-Value Growth %	6.77

As of Jun 30, 2024

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- **Disclaimers | Not FDIC/NCUA Insured | Not a Deposit | May Lose Value | No Bank Guarantee | Not Insured | Past Performance is Not Indicative of Future Returns**
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- Important Risk Information
- ETFs involve risk including possible loss of principal. There is no assurance that the Fund will achieve its investment objective.
- There is no guarantee the sectors or asset classes the advisor identifies will benefit from inflation. Fund may invest a larger portion of its assets in one or more sectors than many other funds, and thus will be more susceptible to negative events affecting those sectors.
- Equity Securities Risk: Equity securities may be particularly sensitive to rising interest rates, as the cost of capital rises and borrowing costs increase. Equity securities may decline significantly in price over short or extended periods of time, and such declines may occur in the equity market as a whole, or in only a particular country, company, industry or sector of the market.
- Commodities Risk: Commodity prices can have significant volatility, and exposure to commodities can cause the value of the Fund's shares to decline or fluctuate in a rapid and unpredictable manner. The values of commodities may be affected by changes in overall market movements, real or perceived inflationary trends, commodity index volatility, changes in interest rates or currency exchange rates, population growth and changing demographics, international economic, political and regulatory developments, and factors affecting a particular region, industry or commodity.
- Futures Contracts Risk: The Fund expects that certain of the Underlying ETFs in which it invests will utilize futures contracts for its commodities investments. The risk of a position in a futures contract may be very large compared to the relatively low level of margin the Underlying ETF is required to deposit. In many cases, a relatively small price movement in a futures contract may result in immediate and substantial loss or gain to the investor relative to the size of a required margin deposit. The prices of futures contracts may not correlate perfectly with movements in the securities or index underlying them.
- TIPS Risk: Principal payments for Treasury Inflation-Protection Securities are adjusted according to changes in the Consumer Price Index (CPI). While this may provide a hedge against inflation, the returns may be relatively lower than those of other securities. Similar to other issuers, changes to the financial condition or credit rating of the U.S. government may cause the value of the Fund's exposure to U.S. Treasury obligations to decline.
- Shares of ETFs are bought and sold at market price (not NAV) and are not individually redeemed from the ETF. Brokerage commissions will reduce returns. NAVs are calculated using prices as of 4:00 PM Eastern Time. The closing price is the midpoint between the bid and ask price as of the close of exchange. Closing price returns do not represent the returns you would receive if you traded shares at other times.
- **Investors should carefully consider the investment objectives, risks, charges and expenses of AXS Astoria Inflation Sensitive ETF. This and other important information about the Fund is contained in the Prospectus, which can be obtained by visiting www.axsinvestments.com. The Prospectus should be read carefully before investing.**
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