

Variance within the Producer Price Index (PPI) is a measure of the uncertainty caused by the use of a sample of producer prices instead of the complete universe of producer prices in the U.S. economy. The most commonly used measure of variability is the standard error of the estimate—the square root of the variance. The standard error of the percent change in PPI can be used to construct confidence intervals and to determine whether the percent change for a particular PPI series is significantly different from zero.

For example, the 1-month median absolute percent change for the final demand producer price index in 2025 was 0.28 percent, and the 1-month median standard error (SE) was 0.33 percent. (See table 1 of the 2025 PPI variance data release.) Margins of error for a point estimate are commonly expressed as plus and minus two standard errors. The margin of error for the 1-month final demand index in 2025 is approximately 0.28 percent plus and minus 0.66 percent (2×0.33 percent). Therefore, in a typical 1-month period in 2025, the percent change in the final demand index was likely between -0.38 percent and 0.94 percent. On a 12-month basis in 2025, the median absolute percent change for the final demand index was 3.09 percent, and the median SE was 0.48 percent. Margins of error for the 12-month period can be calculated in the same way as for the 1-month period.

Table 1 provides variance estimates for 1-month and 12-month percent changes for the Final Demand-Intermediate Demand Producer Price Indexes.

Table 2 provides variance estimates for selected 1-month and 12-month percent changes for the commodity-based Producer Price Indexes.

Table 3 provides variance estimates for selected 1-month and 12-month percent changes for the industry-based Producer Price Indexes.

With the release of data for February 2025, the Bureau of Labor Statistics updated the PPI structure of the crude petroleum and natural gas extraction industries to reflect 2022 North American Industry Classification System (NAICS) definitions. This update resulted in PPI variances not being calculated for Crude petroleum extraction (NAICS 211120) and for Natural gas extraction (NAICS 211130) for 2025. PPI industry-based data are the source data for commodity-based PPIs, which in turn are the source data for Final Demand-Intermediate Demand (FD-ID) PPIs. As a result, variance measures for 5 industry-based price indexes, 9 commodity price indexes, and 15 FD-ID price indexes are unavailable for 2025. (See list below.)

2025 Industry-based PPI variances, unavailable	
Code	Index Title
OMIN	Total mining industries
211	Oil and gas extraction
2111	Oil and gas extraction
211120	Crude petroleum extraction
211130	Natural gas extraction

2025 Commodity-based PPI variances, unavailable	
Code	Index Title
05	Fuels and related products and power
053	Gas fuels
0531	Natural gas
053101	Natural gas
0532	Natural gas liquids
053201	Natural gas liquids
056	Crude petroleum (domestic production)
0561	Crude petroleum (domestic production)
056101	Crude petroleum (domestic production)

2025 Final Demand-Intermediate Demand PPI variances, unavailable	
Code	Index Title
ID52	Stage 2 intermediate demand
ID521	Inputs to stage 2 goods producers
ID5211	Inputs to stage 2 goods producers, goods
ID52112	Inputs to stage 2 goods producers, energy
ID59211	Total goods inputs to stage 2 intermediate demand
ID59215	Total energy goods inputs to stage 2 intermediate demand
ID62	Unprocessed goods for intermediate demand
ID622	Unprocessed nonfood materials
ID6221	Unprocessed nonfood materials except fuel
ID62211	Unprocessed nonfood materials except fuel to manufacturing industries
ID6222	Unprocessed fuel
ID62221	Unprocessed fuel to manufacturing industries
ID62222	Unprocessed fuel to nonmanufacturing industries
ID69211	Unprocessed materials less agricultural products
ID69212	Unprocessed energy materials