I utilized a VAR model to forecast the year-over-year inflation for December 2026. I imposed my expectations for the path of interest rates which include two 25bp rate cuts occurring in June and August of 2026. I concluded that six is the optimal number of lags after finding that this provides the lowest RMSE for my variable of interest, Core CPI. My VAR model is the following:

$$Y_t = c + A_1 Y_{t-1} + A_2 Y_{t-2} + \ \dots \ + A_6 Y_{t-6} + u_t$$

Where:

$$Y_t = [\Delta \log(IP_t) \ \ \Delta \log(CoreCPI_t) \ \ FFR_t]'$$

- $\Delta \log(IP_t)$: Log-first difference of Industrial Production Index
- $\Delta \log(CoreCPI_t)$: Log-first difference of Core CPI
- FFR_t : Effective Federal Funds Rate

My forecasted y/y inflation for December 2026 is 2.83%. This is comparable to the Fed's Survey of Professional Forecasters' expectation for Core CPI at the end of the current year: 2.9%. Given the weakening conditions in the labor market and the Fed's responsibility of balancing their dual mandate, I incorporated two rate cuts around the middle of this year. The forecasted inflation rate at the end of the year will remain elevated above the Fed's target.