Discussion of "Assessing Maximum Employment: A Flow Based Approach"

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Thomas Laubach Conference

Federal Reserve Board

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Overview

- I agree strongly with the points Aysegul made regarding the usefulness of a flow-based framework to evaluate real-time short falls from maximum employment.

- My goal is to provide some complementary discussion.

- Launching off point for my comments:
  - Job finding and job filling are done by both the unemployed (U-E flows) and by the employed (*E-E flows*).

- *If we want to learn about future real wage and inflation pressures, the composition between E-E hires and U-E hires can be informative.*

Comment 1:
Caution against blindly using V/U ratio in New Keynesian models

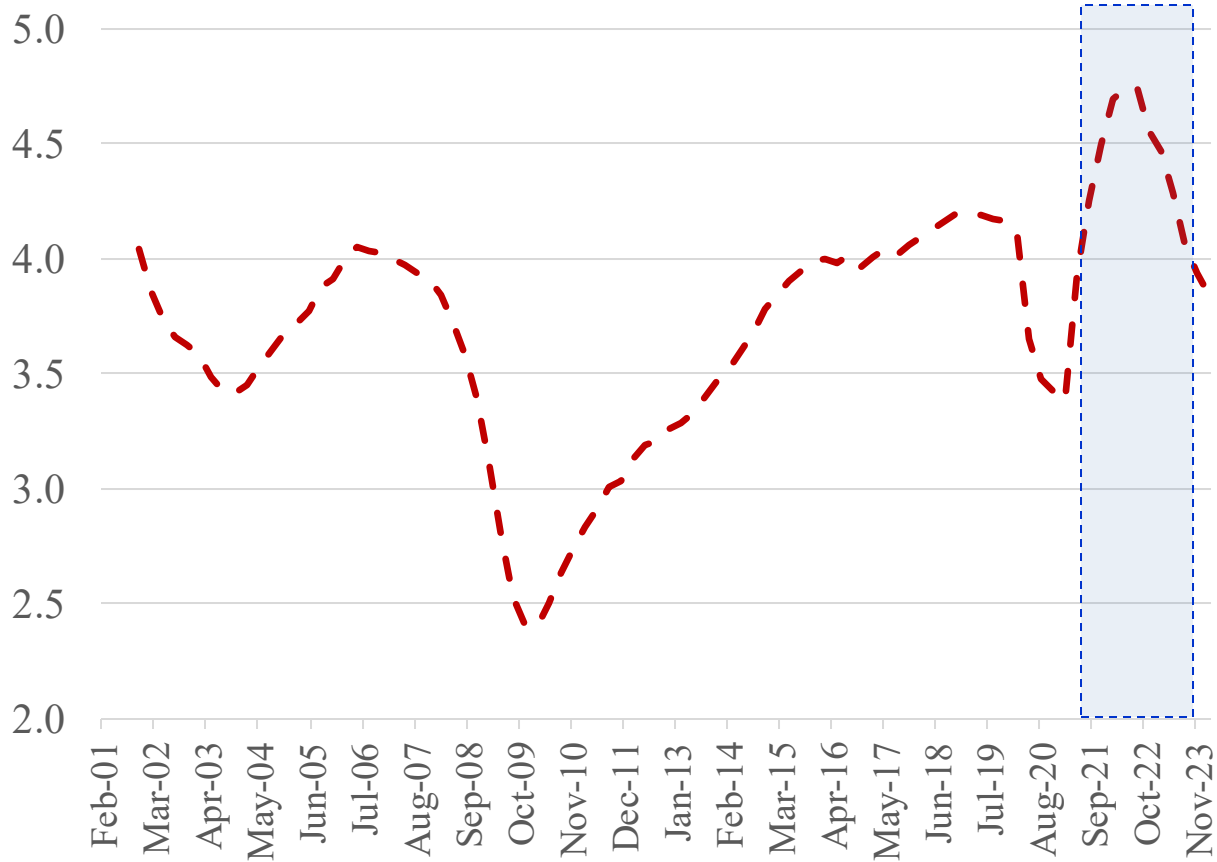
Echo Aysegul and Stefano's Comment from Paper

"Lastly, in our view the vacancy rate, on its own, should not be interpreted as a pure measure of labor demand since its fluctuations also reflect changes in job-filling and worker turnover rates. Therefore, using V/U, as recently has been suggested, as a better measure of labor market tightness could be misleading.." (page 29)

- New Keynesian researchers have been pushing the use of the V/U rate in Phillips curve models. $\uparrow V/U \rightarrow \uparrow W/P \rightarrow \uparrow \pi$ *(with sticky prices)*

- Macro-Labor researchers have been consistently warning against using V/U in such a way. See: Afrouzi, Blanco, Drenik and Hurst (2025), Moscarini and Postel-Vinay's (2023), Bagga, Mann, Sahin and Violante (2025), and Cheremukhin and Restrepo-Echaverria (2023)

Quarterly E-E Flows Since 2000 (LEHD)



- In 2022, the E-E rate was at its highest level since 2000.
- In 2022, the E-E rate was about 20% higher than prior peeks.
- In 2022, not much change in the U-E rate relative to pre-2020 periods (or flows to/from out of labor force).

Potential Drivers of Increasing E-E Flows Relative to UE Flows

1. *Sectoral productivity shifts*: Some sectors get more productive than others (spirit of Moscarini and Postel-Vinay) ↑ ***Real Wage & Price Pressure***

2. *Sectoral amenity shifts*: Some employers allow working from home. Workers re-sort within labor market in response to some employers allowing this option. (Bagga et al.). ↓ ***Real Wage & Price Pressure***

3. *The inflation itself causes additional churn*: Models of worker sorting with sticky wages implies that bursts of inflation cause additional worker E-E flows. (Afrouzi et al.). ↔ ***Real Wage & Price Pressure***

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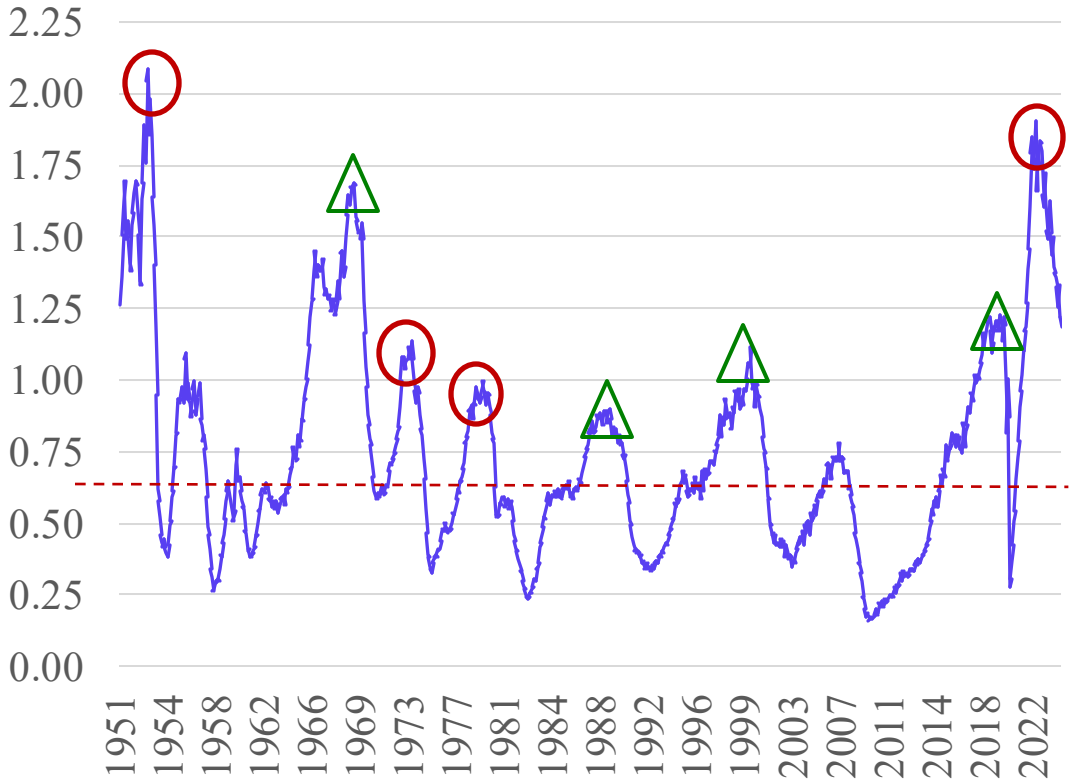
- *Data suggests that stories (2) and (3) were important during the recent 2021-2023 period.*

Inflation and Labor Market Flows: An Identification Problem

- **Common narrative**: Labor market flows predict upward pressure on wages and prices. ($\uparrow V/U \rightarrow \uparrow \pi$)
- **Reverse causality**: Inflation causes upward pressure on labor market flows. ($\uparrow \pi \rightarrow \uparrow V/U$)
- **Intuition for the latter**: Endogenous worker flows with sticky wages. Inflation lowers real wages incentivizing workers to search for a new job.
- *This is the framework in Afrouzi et al. (2025). Identification problem is much worse during periods of "aggregate supply shocks".*

Comment 2:
Flow data can be useful in identifying underlying shocks driving the aggregate economy.

Vacancy-to-Unemployment Rate Over Time



- Use vacancy data from Conference Board's Help Wanted Index for 1951-2000 (Barnichon (2010))
- 9 periods since 1950 with spikes in the V/U rate

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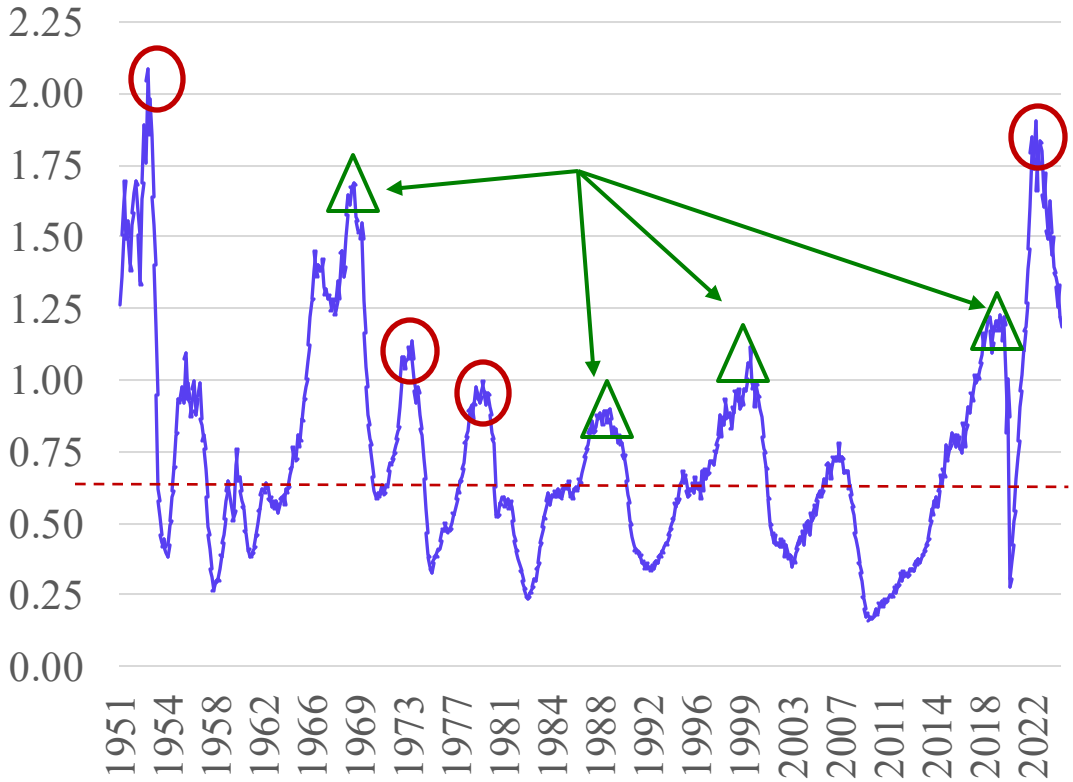

- **Green triangles**: Periods where the economy:
  - **Is moving along a relatively stable Beveridge curve.**
  - Has a sharply declining unemployment rate as the V/U rate increased sharply.
  - Has low and relatively stable inflation throughout the period when V/U was increasing.

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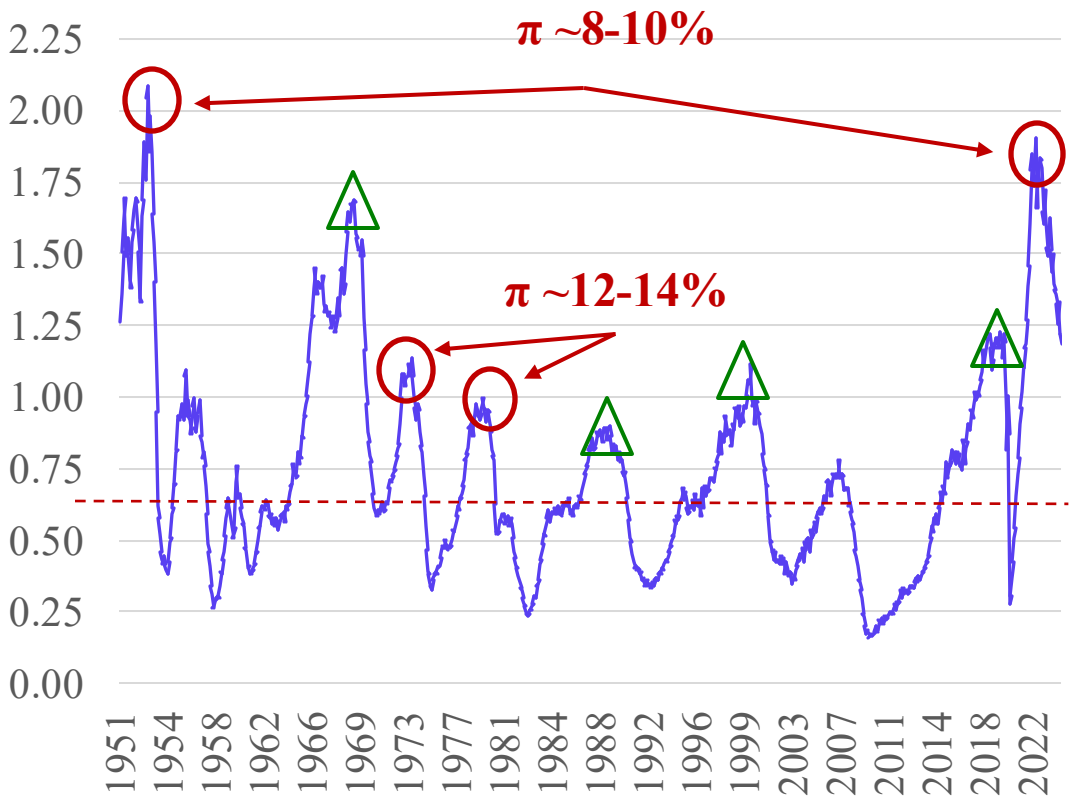


- **Red Circles**: Periods where:
  - **The Beveridge curve shifted upward**
  - Unemployment declined only slightly while the V/U rate was increasing sharply.
  - Inflation was rising sharply at the same time that V/U was increasing. (Inflation rates in all these periods exceeded 8% at some point)

Shifts in "Price Phillips Curve" and Shifts in Beveridge Curve

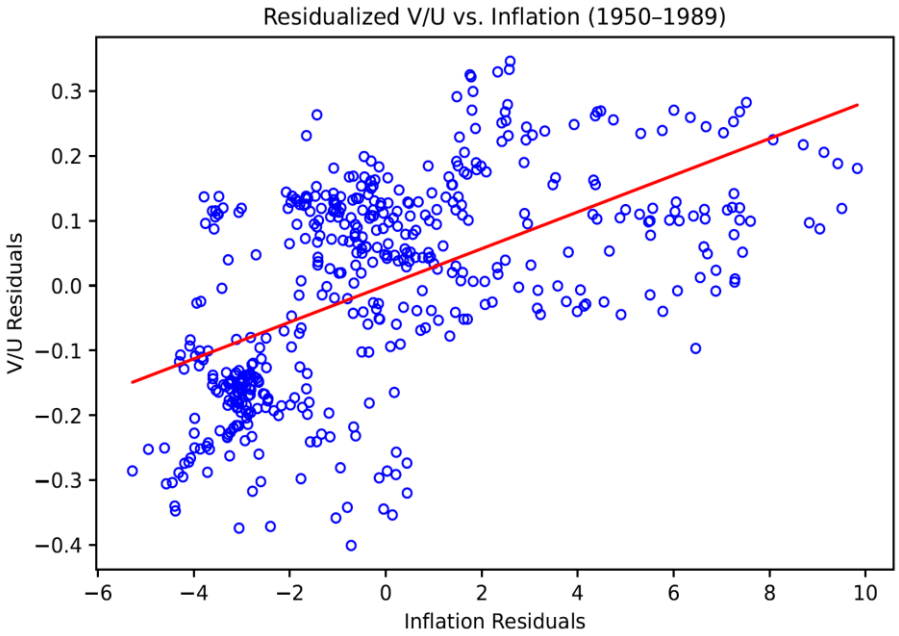
- Estimate the following two simple regressions on data from a given period:

  1. $\pi_t = \alpha_\pi + \beta_1 u_t + \beta_2 u_t^2 + \varepsilon_\pi$ (Simple "Phillips Curve")
  2. $v/u = \alpha_{v/u} + \gamma_1 u_t + \gamma_2 u_t^2 + \varepsilon_{v/u}$ (Beveridge Curve)

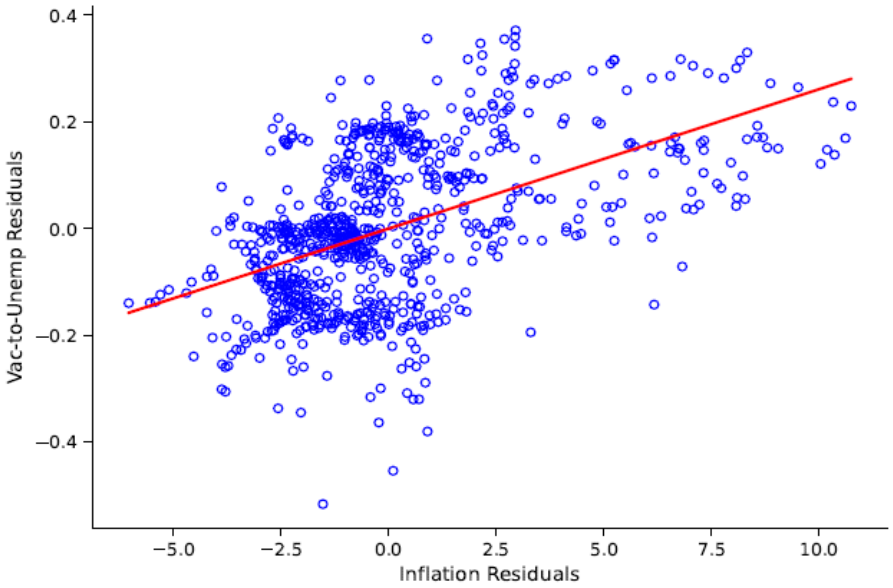
- Take residuals from both equations – represent "shifts" in the respective curves.

- ***Ask the questions***: *(i) Are the ε_π's and the $\varepsilon_{v/u}$'s correlated?*
  (ii) Can "aggregate supply shocks" explain some of the correlation?

Correlation of Errors in Phillips Curve (ε_π) and Beveridge Curve ($\varepsilon_{v/u}$)



Time Period: 1950-1989



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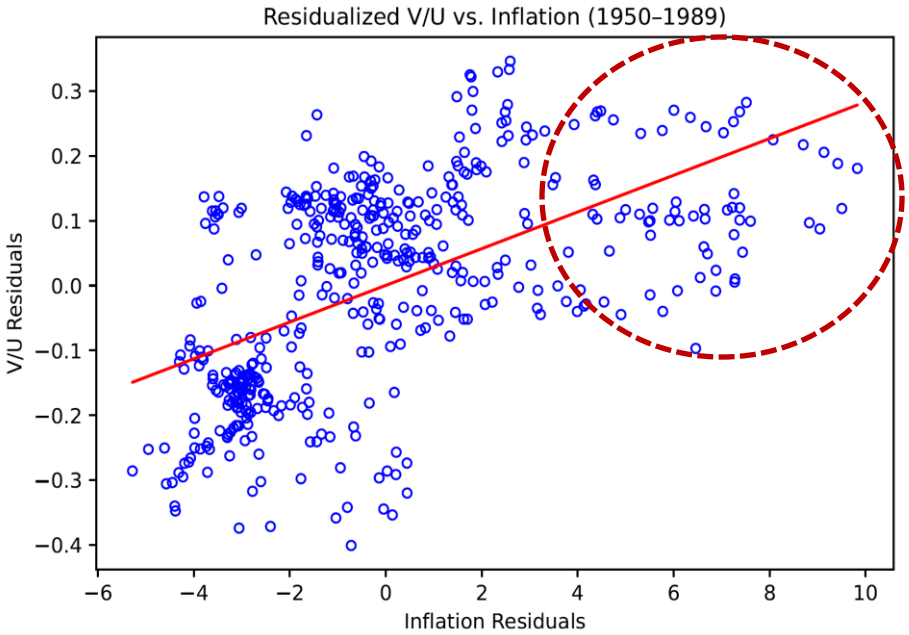

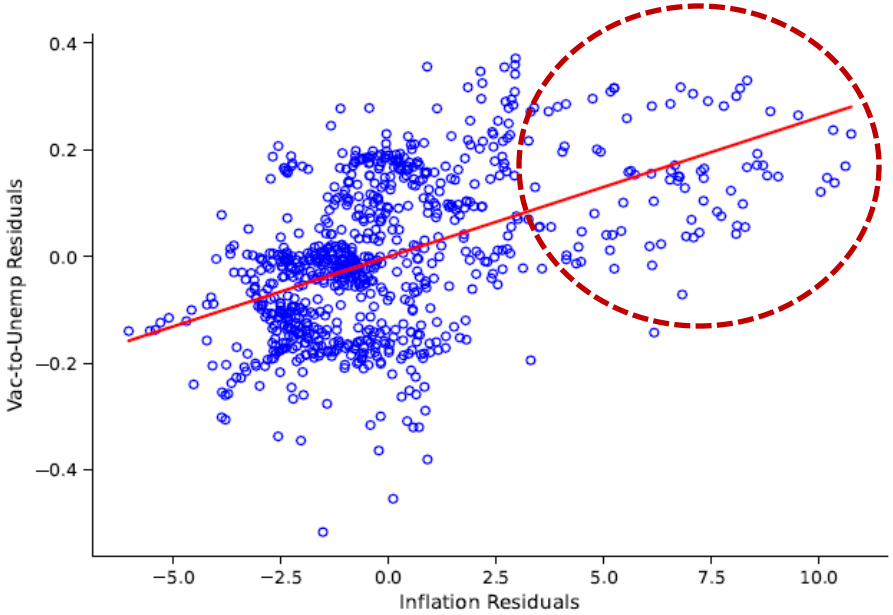

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Time Period: 1950-2019

Red Circles Contain Points from early 1950s, mid-1970s, and late 1970s

"Supply Shocks" Systematically Cause Shifts in Both the Philips Curve and the Beveridge Curve

	1950-1989		1950-2024	
	OLS	IV	OLS	IV
Inflation Residual	0.028 (0.002)	0.015 (0.004)	0.035 (0.002)	0.021 (0.005)

Regress: $\varepsilon_{v/u} = \psi_0 + \psi_1 \varepsilon_\pi + \eta$

Instrument: *Use oil price movements to instrument for* ε_π

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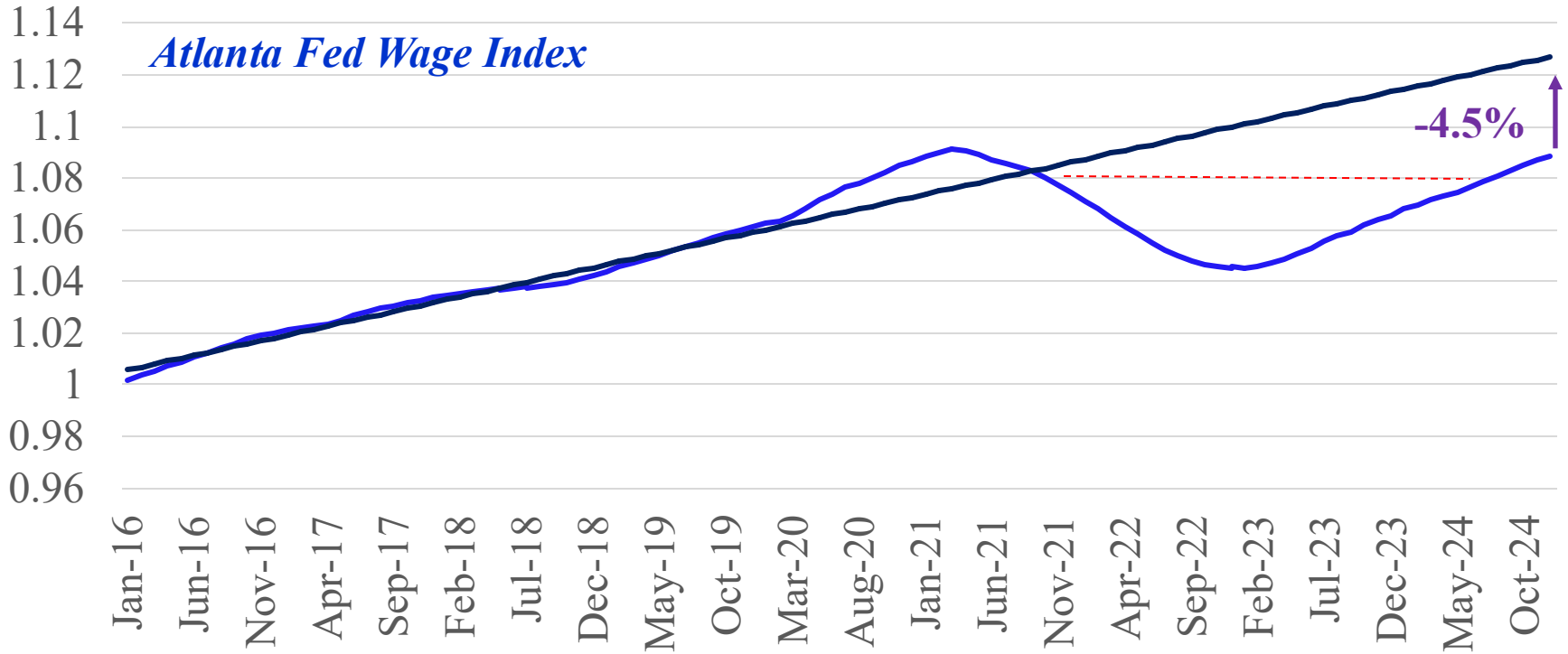
Conclusion: *Periods of supply shocks are associated with shifts in both Phillips Curve and Beveridge Curve*

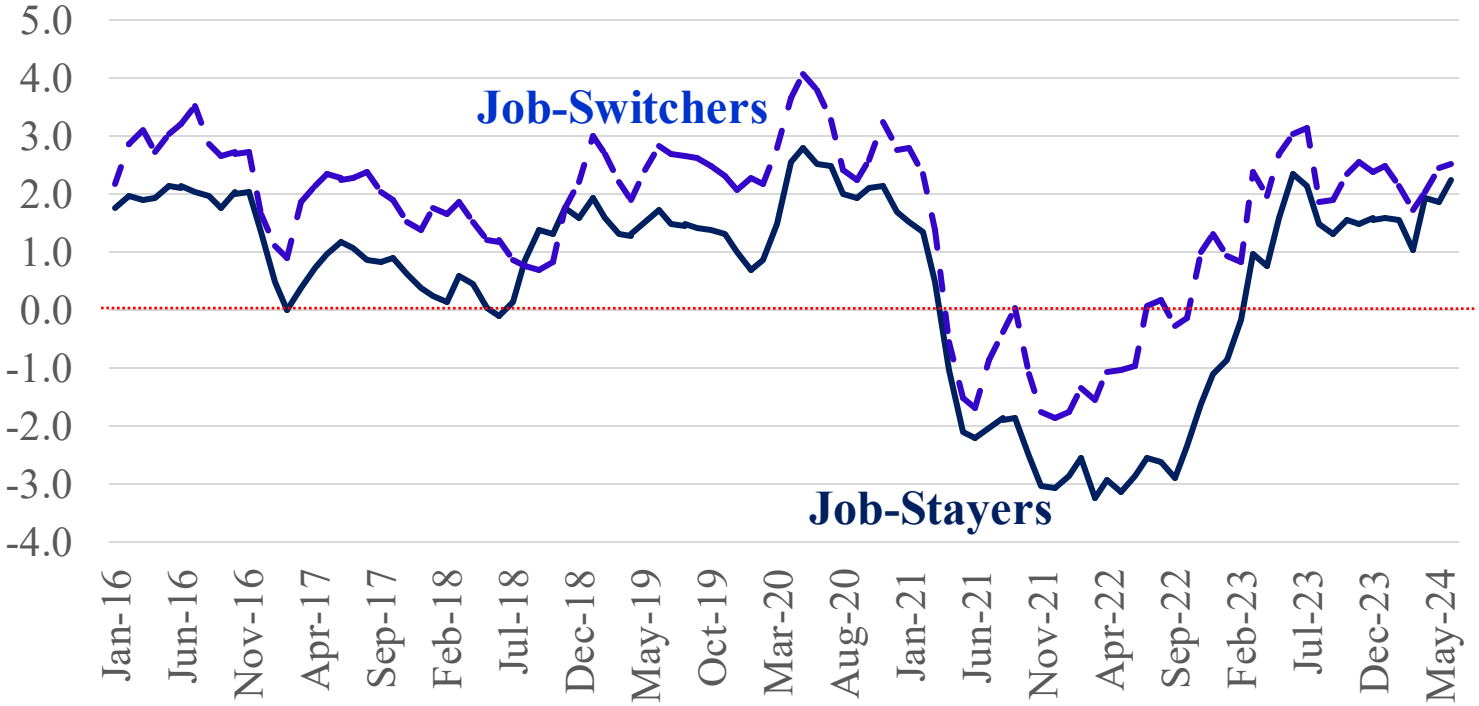
Comment 3:
Wage data can be informative about future price pressures when combined with flow data.

Real Wage Index 2016M1-2024M12



- **"Hot Labor Market"? Real wages fell sharply as V/U rate spiked!**

Real Wage Growth of Switchers vs Stayers



- *Data from Atlanta Fed Wage Tracker. Real wages of both fell – More so for job-stayers!*

Vacancy Increase and Real Wage Declines Pervasive Across Sectors

	% Change in Vacancies	% Change in Real Wages
Manufacturing	94%	-2.3%
Education and Health	76%	-3.7%
Leisure and Hospitality	64%	-1.5%
Trade and Transportation	60%	-1.6%
Construction and Mining	50%	-3.0%
Finance and Bus. Services	47%	-2.3%

- Columns 1 and 2: JOLTS Data, Compare 2016M1-2019M12 avg. to 2021M4-2023M5 avg.
- Column 3: Atlanta Fed Data, Compare 2021M4 to 2023M5

Concluding Thoughts

- Labor market flows can be informative of potential future inflationary pressures.
- Need to distinguish between E-E flows and U-E flows when thinking about potential future price pressures.
- Periods of aggregate supply shocks can cause both shifts in Phillips curves and Beveridge curves.
- Information in real wage movements (overall, by group, between job-stayers and job-changers) can help distinguish the causes of changes in labor market flows.