J O L T S

Job Openings and Labor Turnover Program

State Estimates

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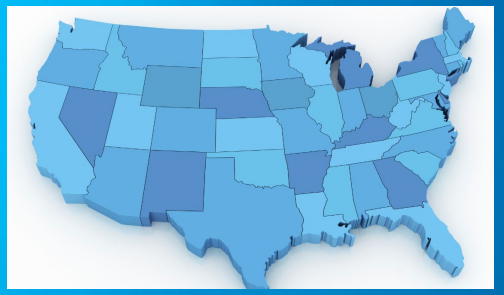
Economist



JOLTS State Estimates

- Overview
- Methodology
- State Estimates Highlights
- Additional Economic Measures

JOLTS State Estimates

Release History

- The first release of experimental estimates released to public on May 24th, 2019
  - Official publications of JOLTS state estimates began in October 2021; a few weeks after JOLTS national release

JOLTS State Estimates
Data Series Features

- Geographical Detail: 50 states and DC
- Levels and Rates: JO, H, TS, Q, L&D (No Other Separations)
- Industry Detail: Total nonfarm (only)
- Error Measures: Median standard errors
- Seasonality: Seasonally adjusted and not seasonally adjusted
- Data Availability: Official BLS website
  https://www.bls.gov/jlt/jlt_statedata.htm

JOLTS State Estimates

Methodology

ESTIMATION MODEL

FINAL ESTIMATE (Level) =

CES STATE EMP×((Final weight JOLTS rate×CMW)+(Specific Model rate×CMW))

- Model Inputs:
  - JOLTS microdata records
  - All weights from JOLTS estimation (final weights that account for a sampling weight, nonresponse adjustment factor (NRAF), agg-codes, etc.)
  - JOLTS published regional rates estimates (regional JO, H, Q, LD, and TS rates)
  - CES state-supersector employment
  - QCEW-based modeled rates

JOLTS State Estimates Methodology

- Definitions:
  - CES State EMP = CES Monthly State Employment
  - Final weight JOLTS rate = Weights from JOLTS estimation (weights that account for sampling weight, NRAF, agg-codes
  - CMW = Composite Model Weight is based on the count of respondents in the state-supersector cell the JOLTS respondent belongs
    1. If the count is>30, then the CMW for the respondent data=1. The CMW for the model estimate=0.
    2. If the count<5, then the CMW for the respondent data=0. The CMW for the model estimate=1.
    3. If the count is 5–30, then the CMW for the respondent data=n⁄30, where n is the number of respondents. The CMW for the model estimate=1-n⁄30.
  - Specific Model Rate (Synthetic QCEW Rate or Regional Rate) = JOLTS published regional rates or QCEW Modeled Rate estimates (JO, H, Q, LD, and TS rates)

JOLTS State Estimates
Methodology

RATE CALCULATONS

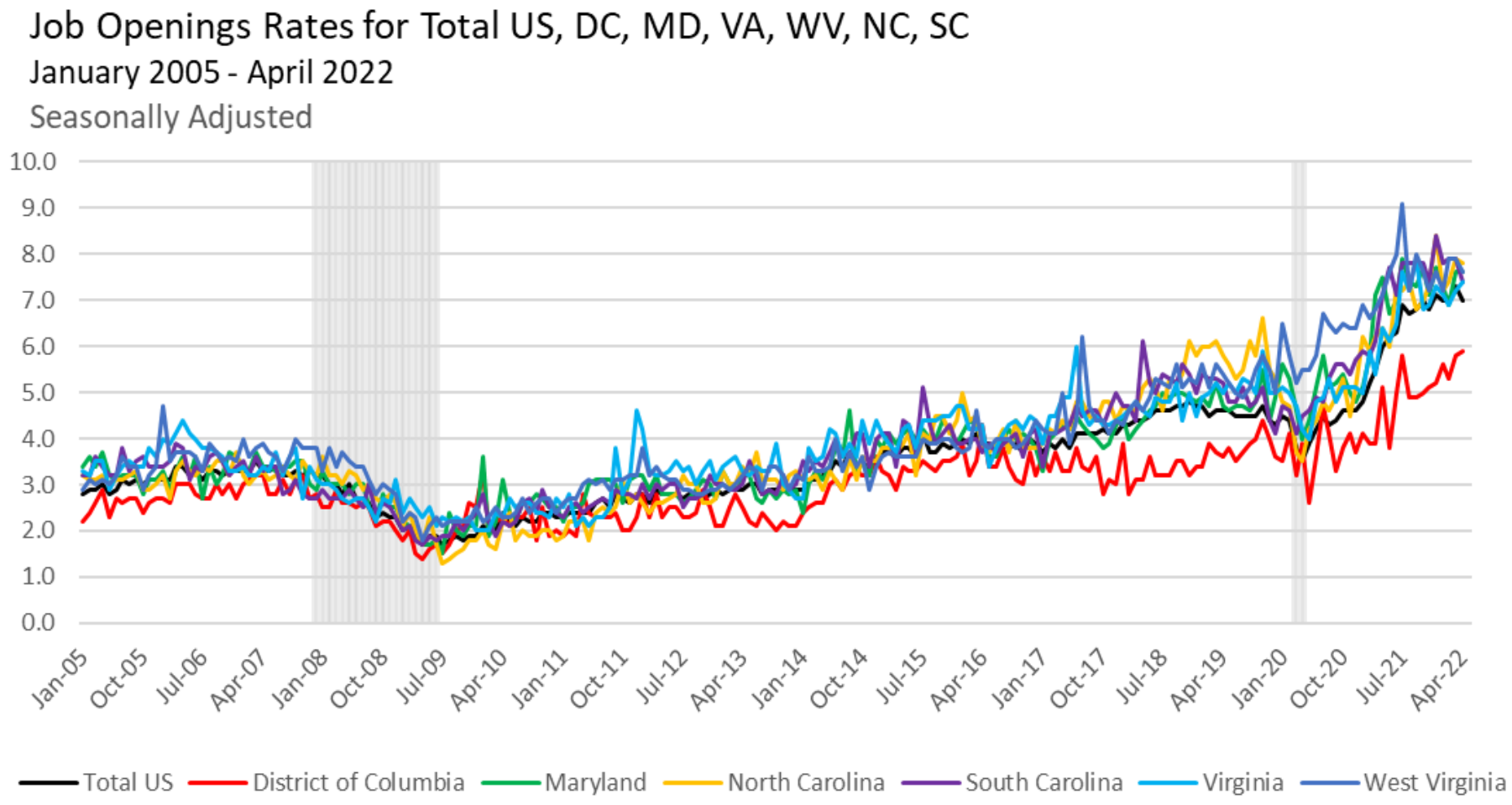
- Job Openings (JO) Rate = JO Level / (CES Employment + JO Level)
- Hires rate = Hires Level / CES Employment
- Layoffs & Discharges (LD) Rate = LD Level / CES Employment
- Quits Rate = Quits Level / CES Employment
- Total Separations (TS) Rate = TS Level / CES Employment
  - Other Separations are not published

JOLTS State Estimates
Methodology

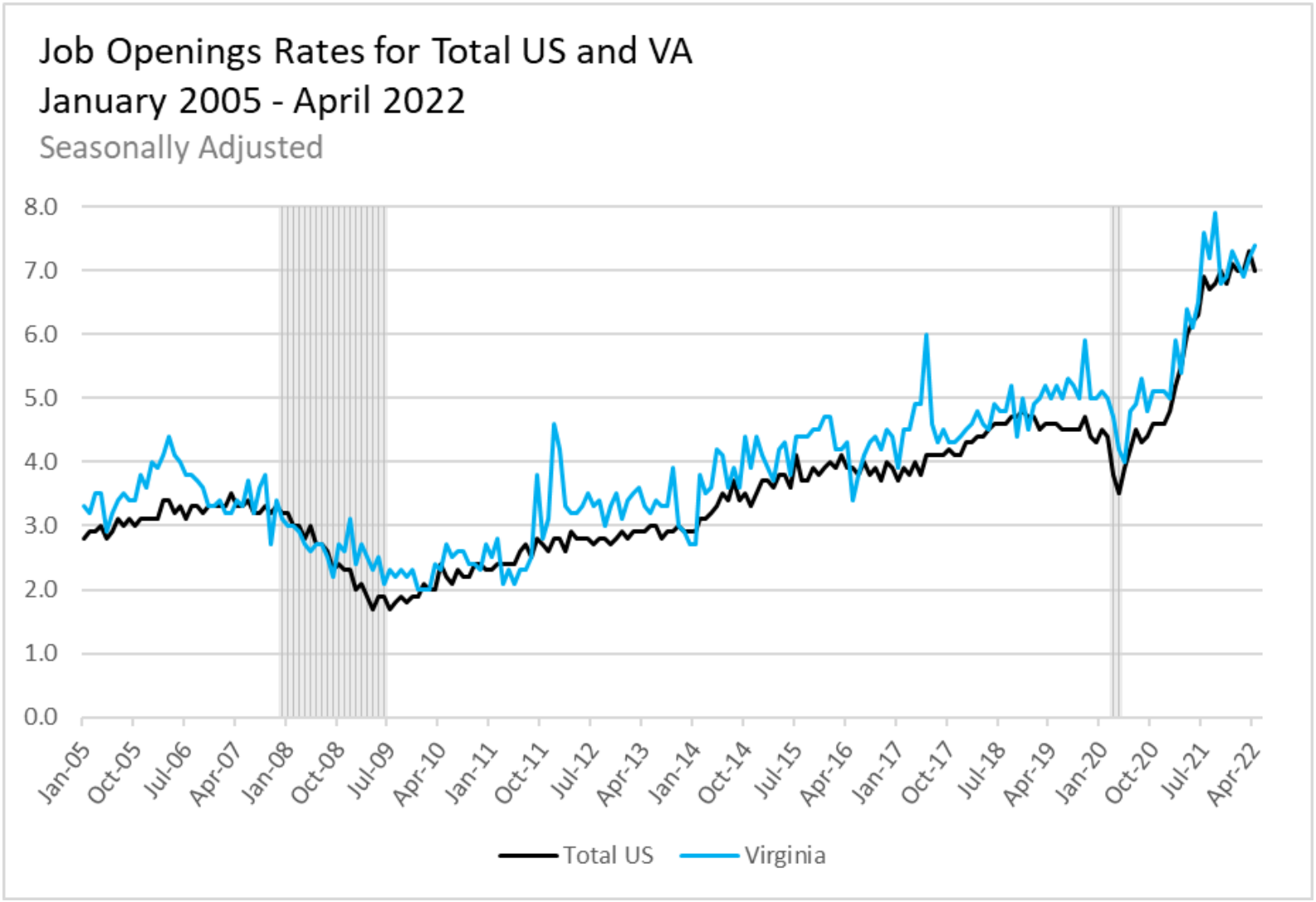
- Additional models utilized:
  1. Composite Regional model - uses the weighted microdata, published regional estimates and CES employment estimates.
  2. Synthetic model - derived from monthly employment changes in microdata from the QCEW.
  3. Extended Composite Synthetic model - produces the most recent month-year of estimates by extending the Composite Synthetic model estimates for the most recent publication year.

State Estimates Highlights

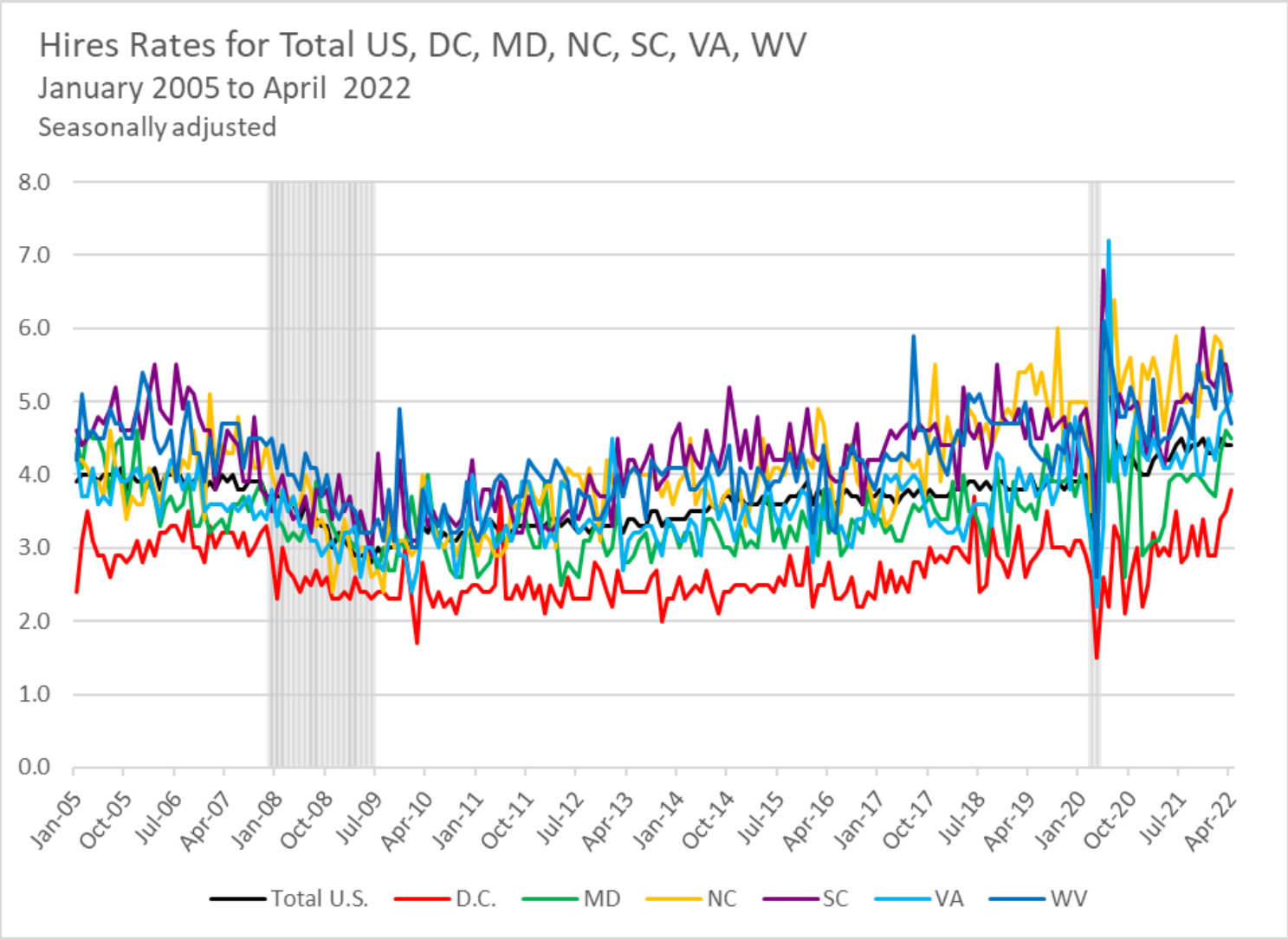
Job Openings Rates



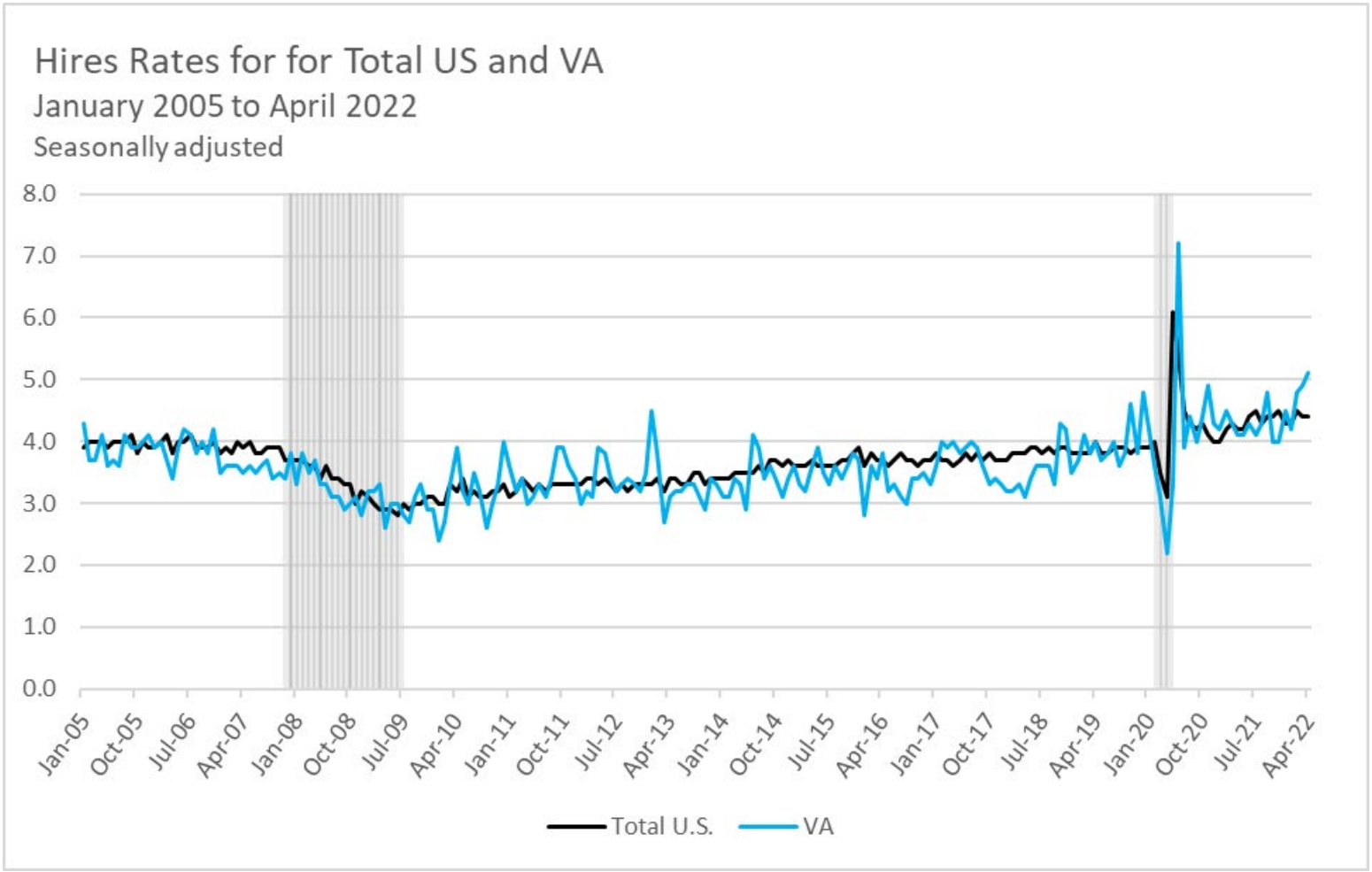
Job Openings Rates



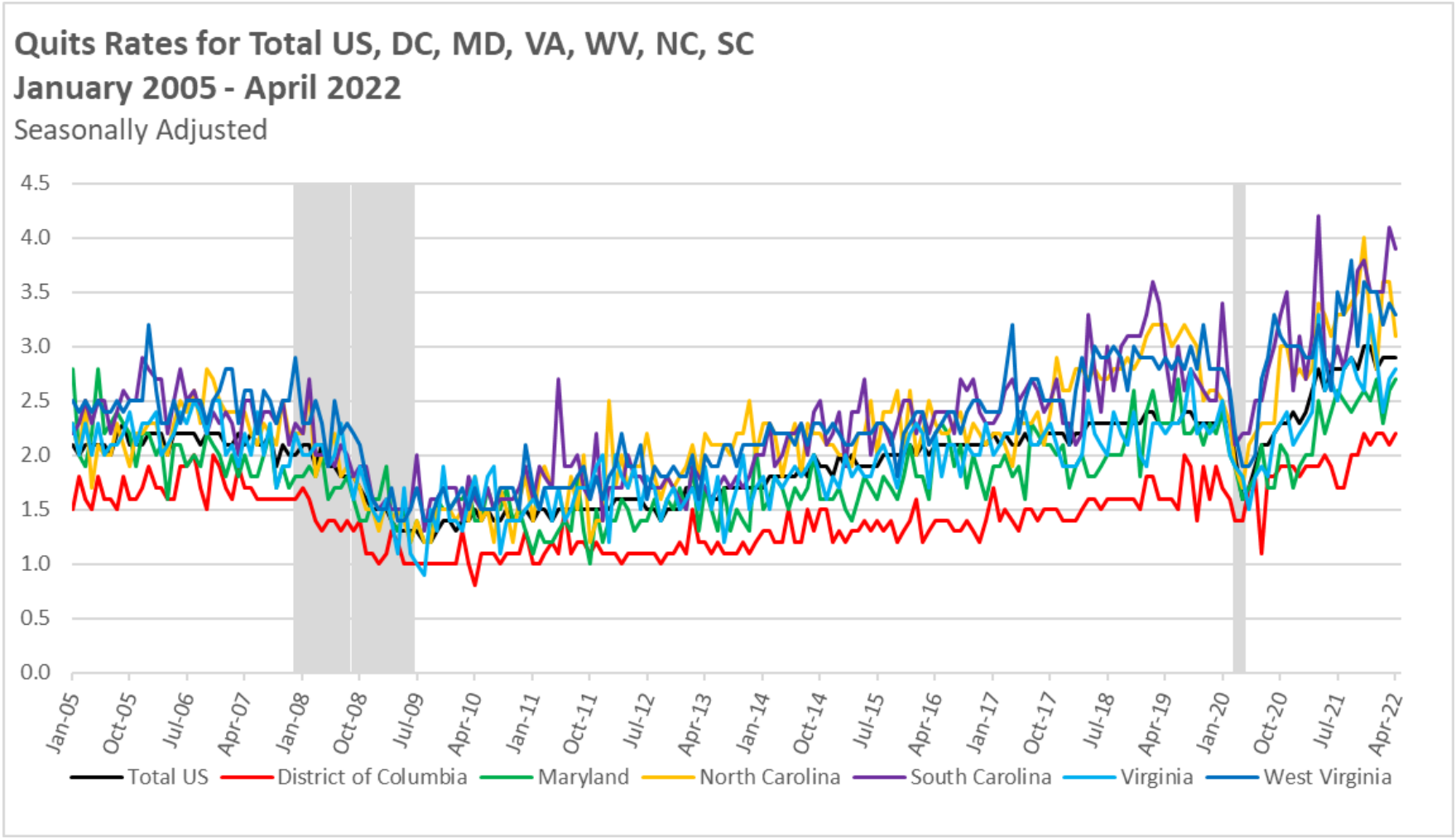
Hires Rates


Hires Rates for Total US, DC, MD, NC, SC, VA, WV
January 2005 to April 2022
Seasonally adjusted
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Jan-05
Oct-05
Jul-06
Apr-07
Jan-08
Oct-08
Jul-09
Apr-10
Jan-11
Oct-11
Jul-12
Apr-13
Jan-14
Oct-14
Jul-15
Apr-16
Jan-17
Oct-17
Jul-18
Apr-19
Jan-20
Oct-20
Jul-21
Apr-22
Total U.S.
D.C.
MD
NC
SC
VA
WV

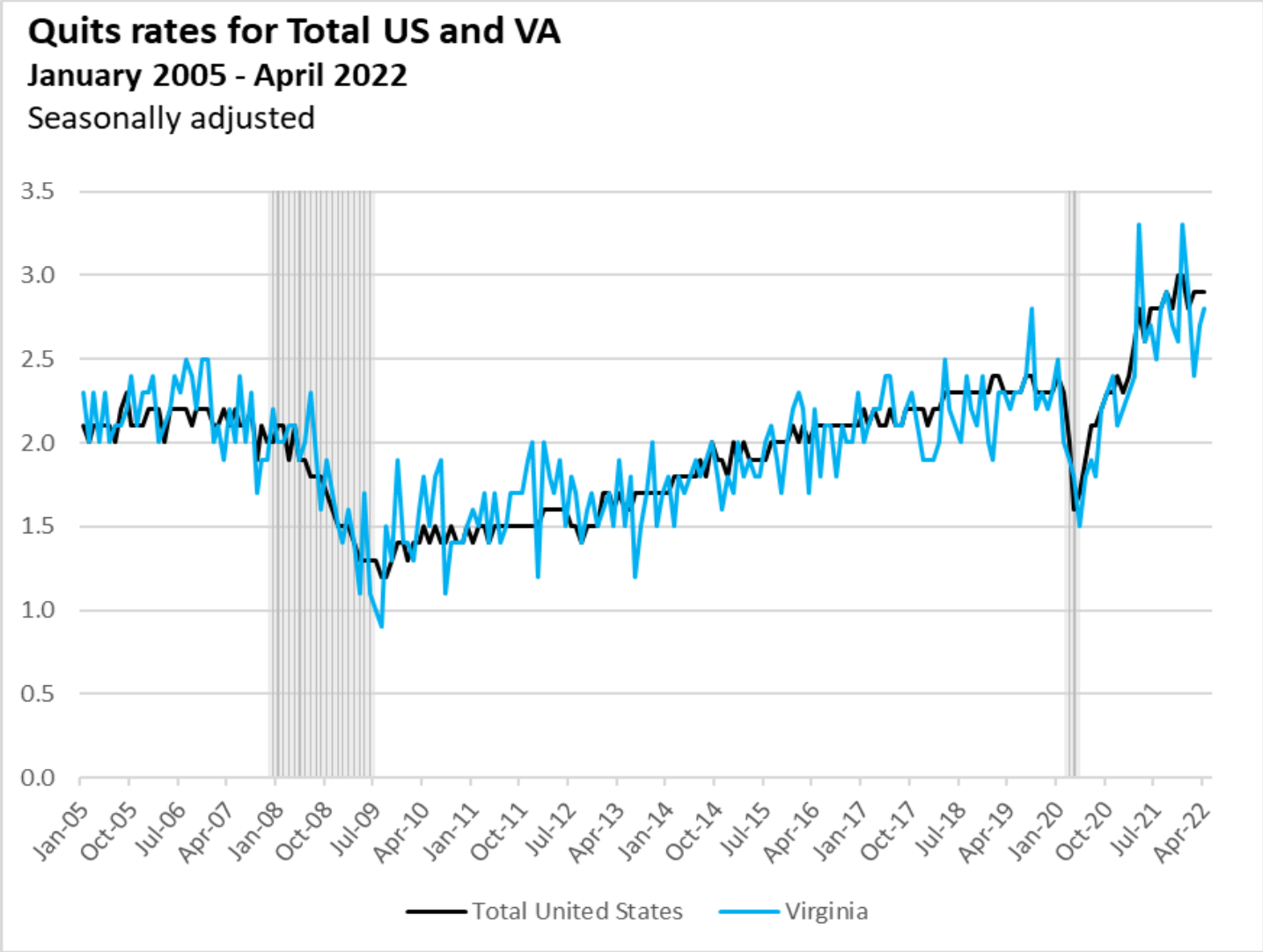
Hires Rates


Hires Rates for for Total US and VA
January 2005 to April 2022
Seasonally adjusted
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Jan-05
Oct-05
Jul-06
Apr-07
Jan-08
Oct-08
Jul-09
Apr-10
Jan-11
Oct-11
Jul-12
Apr-13
Jan-14
Oct-14
Jul-15
Apr-16
Jan-17
Oct-17
Jul-18
Apr-19
Jan-20
Oct-20
Jul-21
Apr-22
Total U.S.
VA

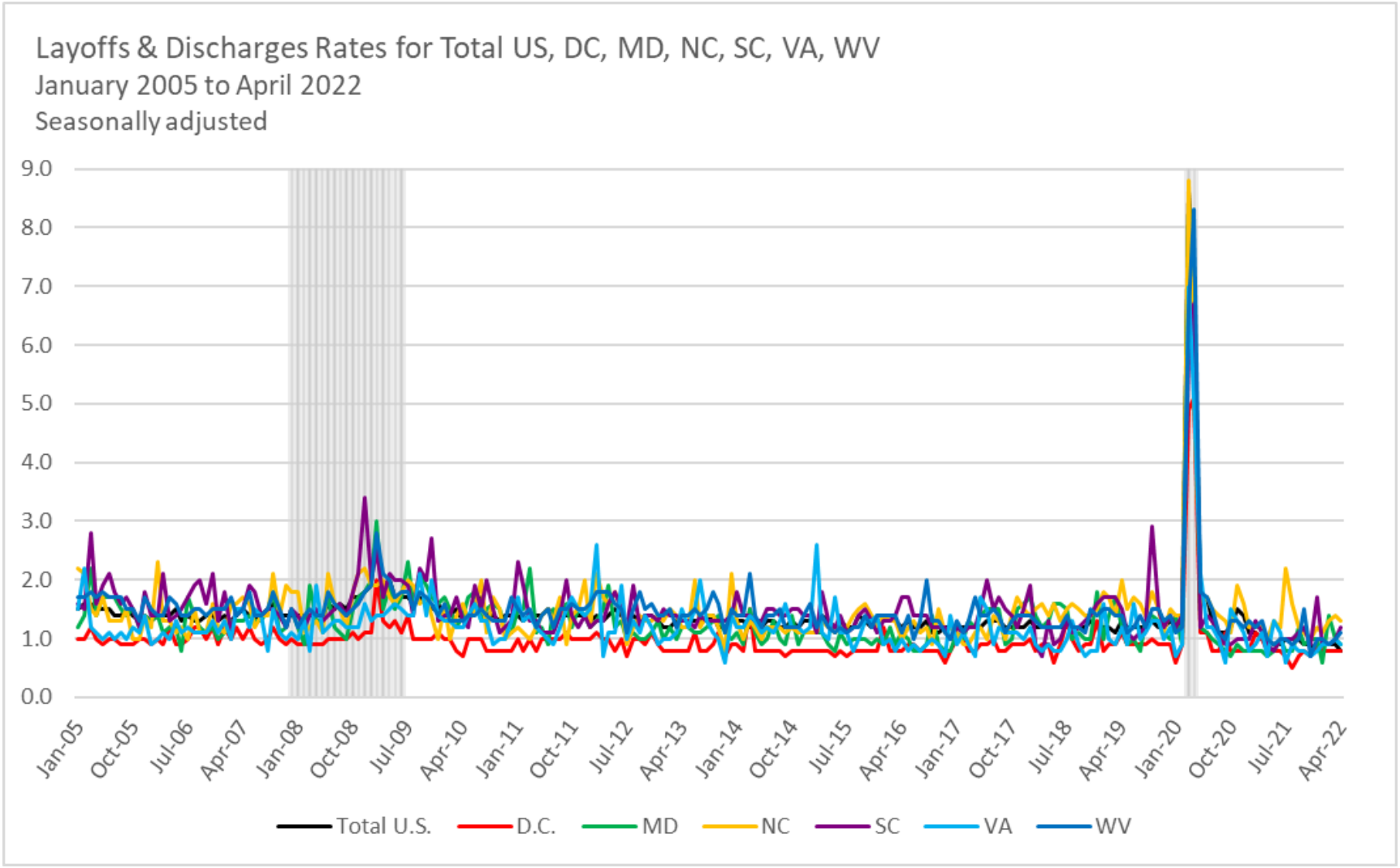
Quits Rates


Quits Rates for Total US, DC, MD, VA, WV, NC, SC
January 2005 - April 2022
Seasonally Adjusted
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Jan-05
Oct-05
Jul-06
Apr-07
Jan-08
Oct-08
Jul-09
Apr-10
Jan-11
Oct-11
Jul-12
Apr-13
Jan-14
Oct-14
Jul-15
Apr-16
Jan-17
Oct-17
Jul-18
Apr-19
Jan-20
Oct-20
Jul-21
Apr-22
Total US
District of Columbia
Maryland
North Carolina
South Carolina
Virginia
West Virginia

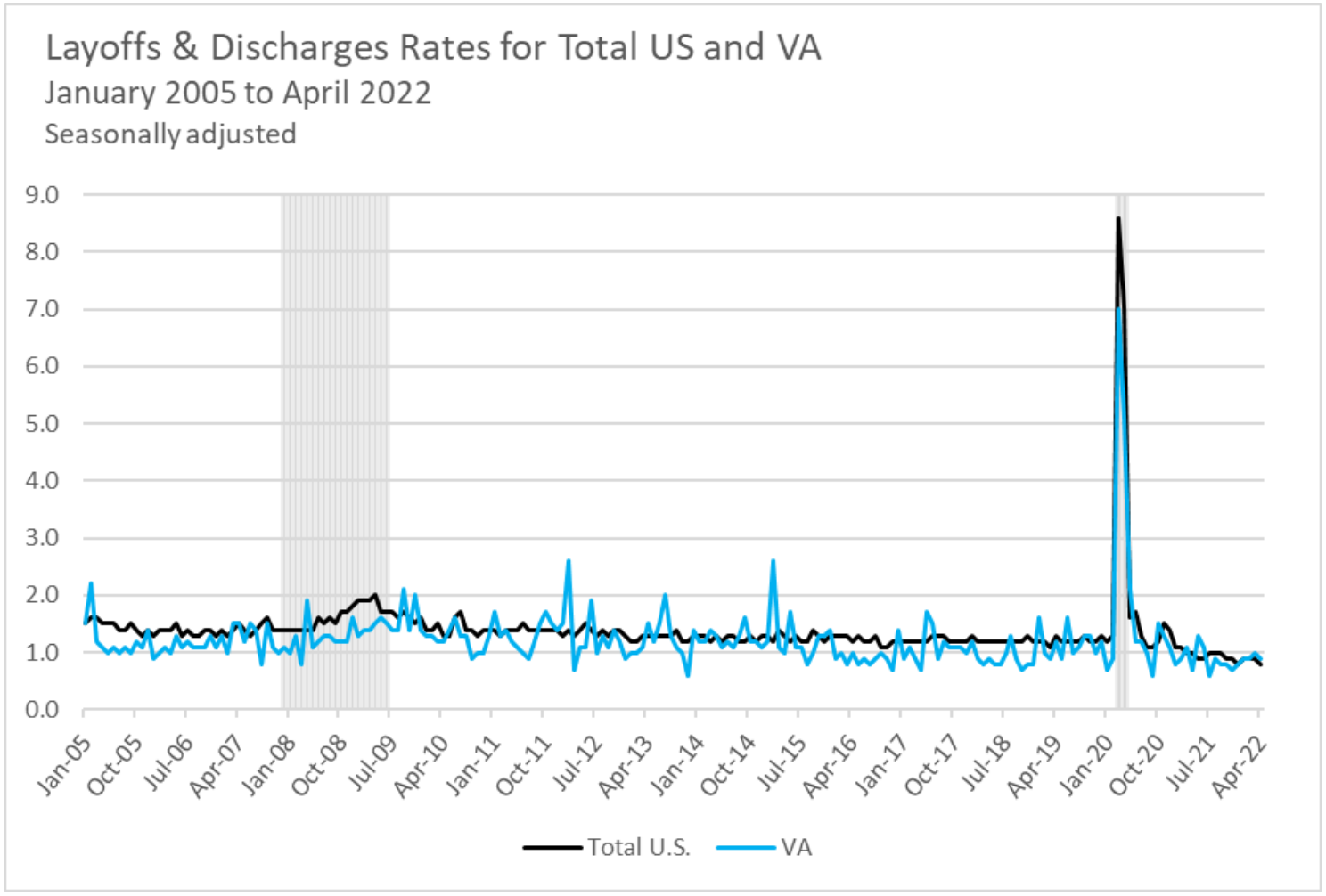
Quits Rates


Quits rates for Total US and VA
January 2005 - April 2022
Seasonally adjusted
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Jan-05
Oct-05
Jul-06
Apr-07
Jan-08
Oct-08
Jul-09
Apr-10
Jan-11
Oct-11
Jul-12
Apr-13
Jan-14
Oct-14
Jul-15
Apr-16
Jan-17
Oct-17
Jul-18
Apr-19
Jan-20
Oct-20
Jul-21
Apr-22
Total United States
Virginia

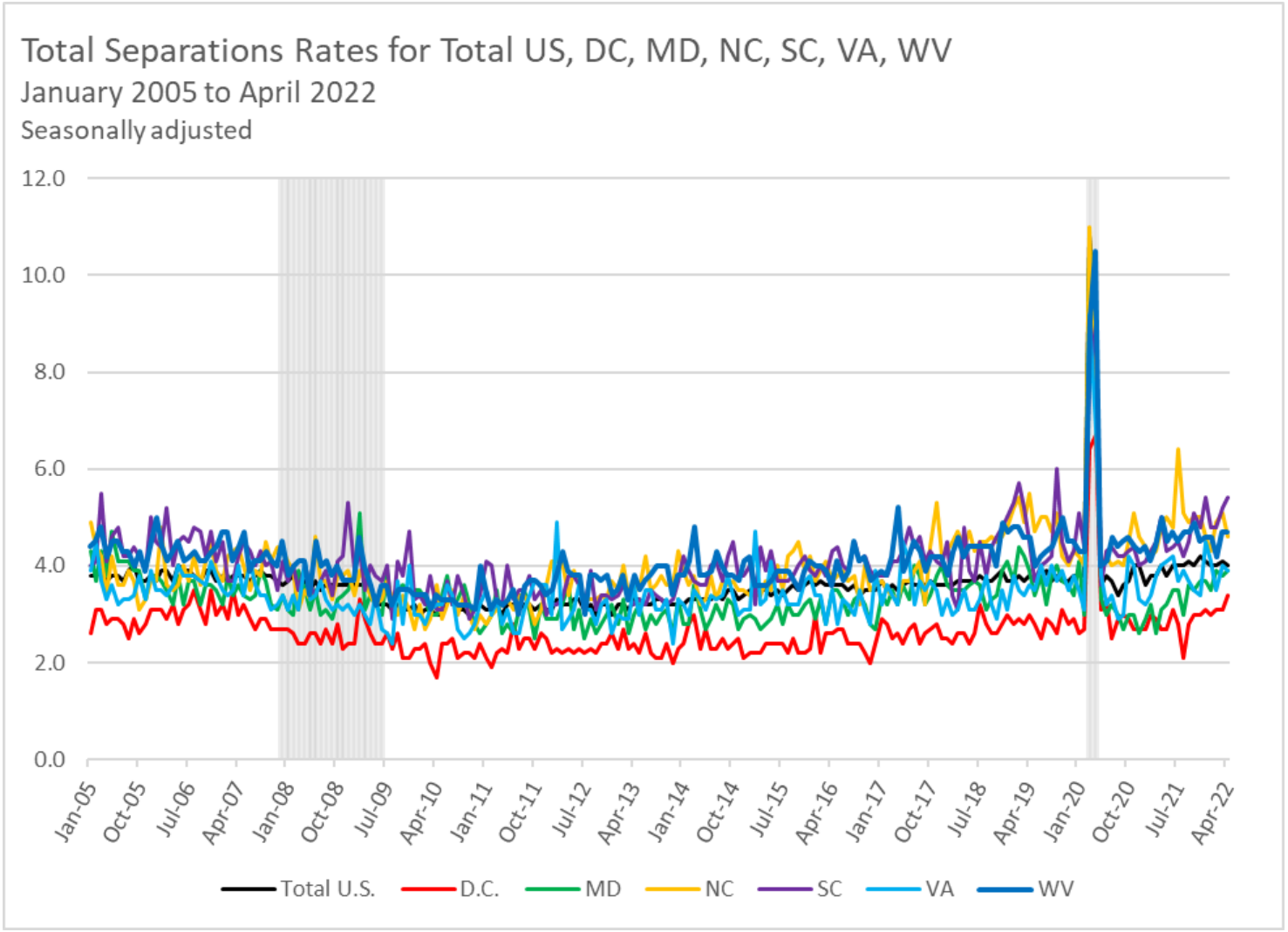
Layoffs & Discharges Rates



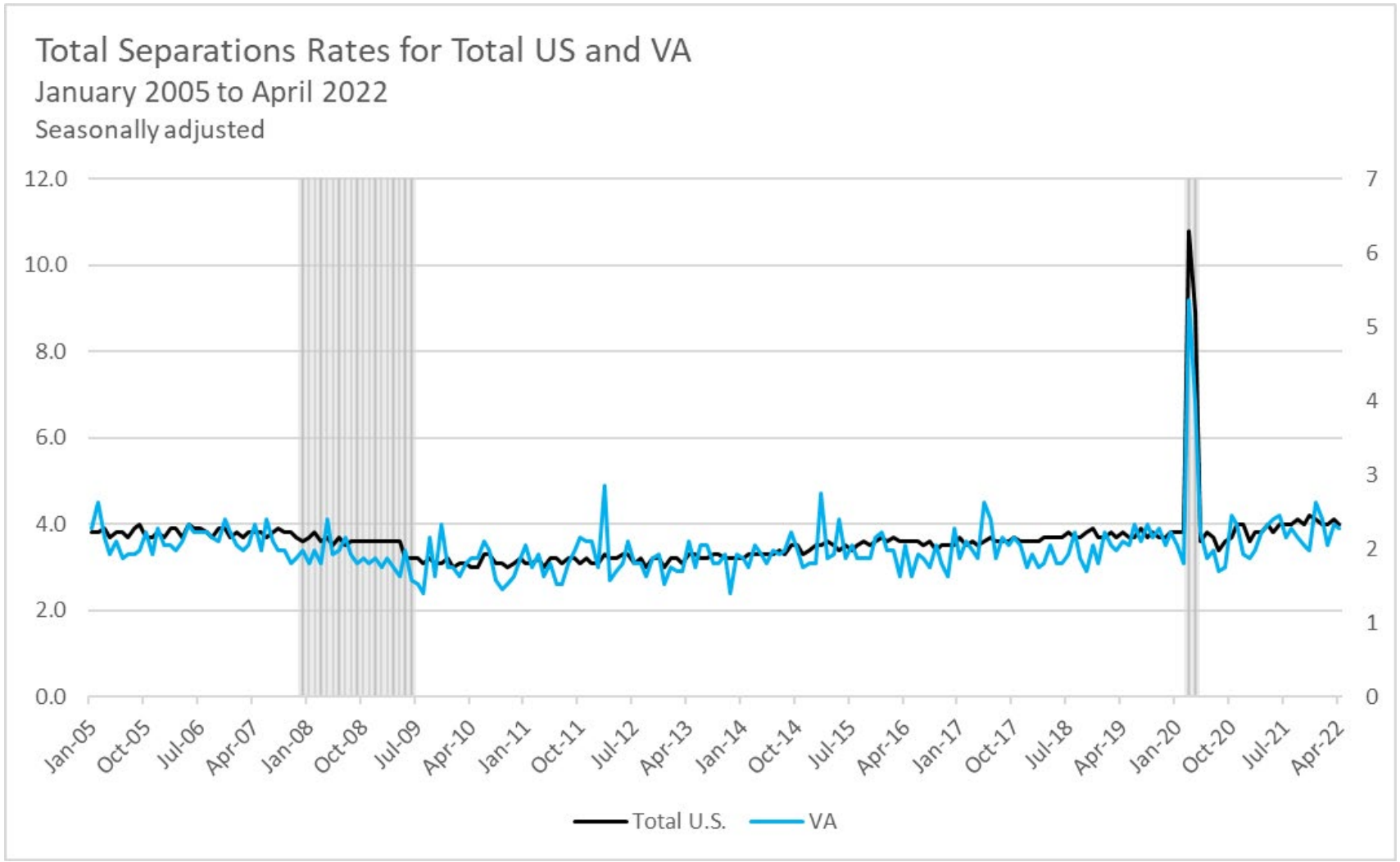
Layoffs & Discharges Rates



Total Separations Rates

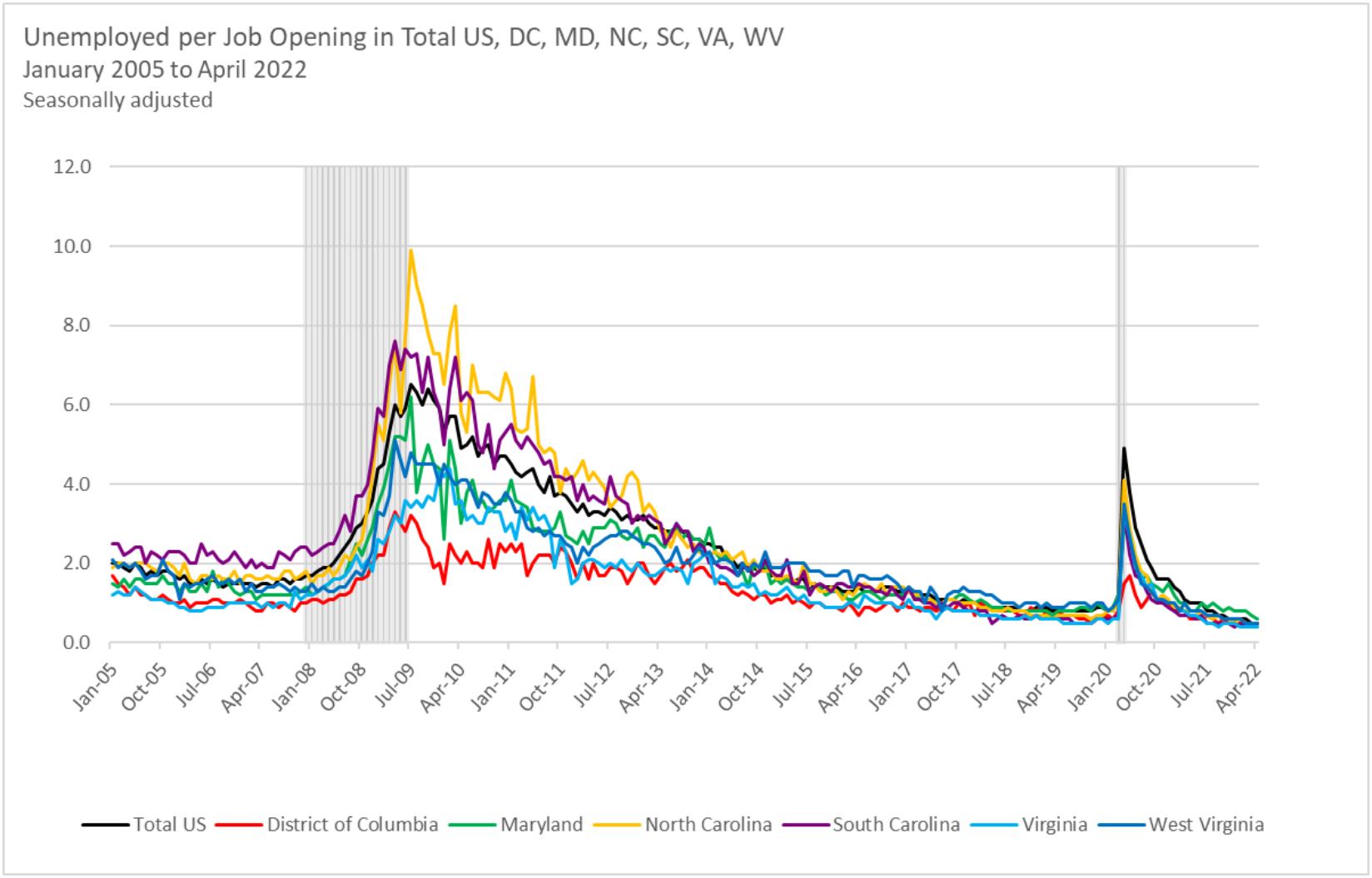


Total Separations Rates

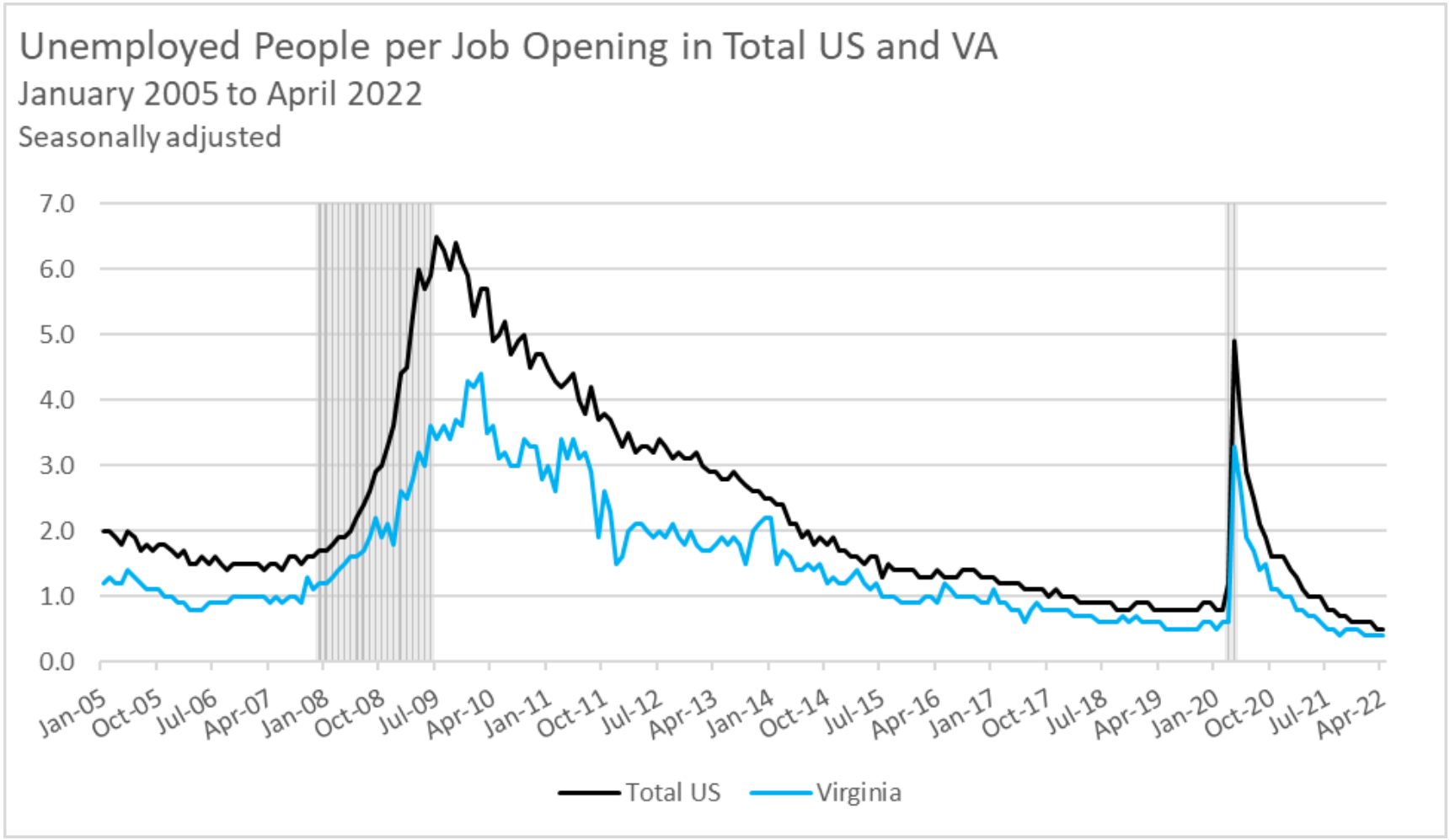


Additional Economic Measures

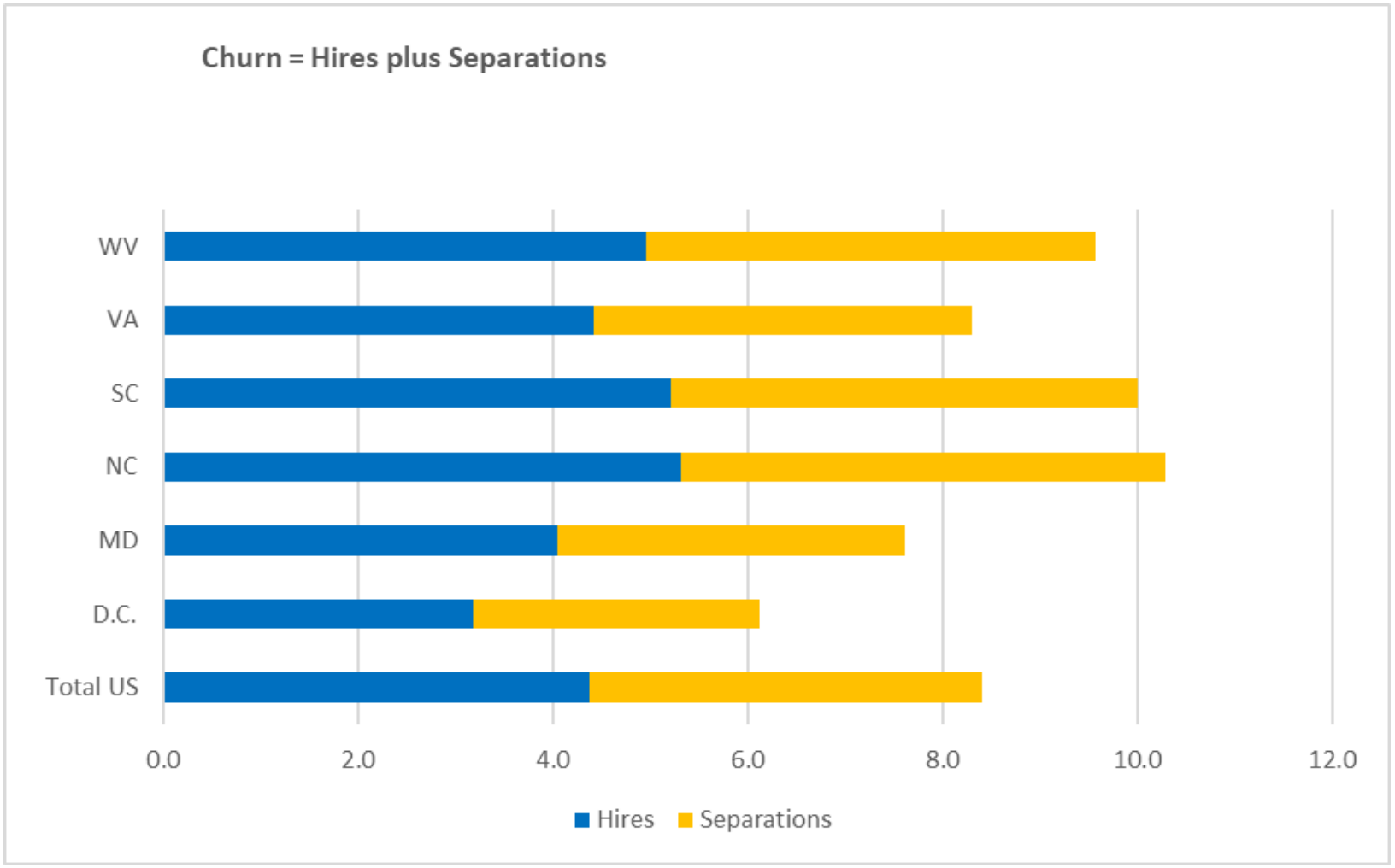
Unemployed per Job Opening



Unemployed per Job Opening



Churn, Hires, and Separations Monthly Average for the Twelve - Month Period Ending April 2022



JOLTS State Estimates
Recent Milestones

- Benchmark release - June 2022
- Annual tables for 2021 - June 2022
- UE/JO – available June 2022
- Median Standard Errors – June 2022
- New seasonal adjustment factors - available in the June 2022 release

Want to Know More?

State Estimates

- https://www.bls.gov/jlt/jlt_statedata.htm
- https://www.bls.gov/jlt/data.htm

Reference Resources

https://www.bls.gov/jlt/home.htm#data

JOLTS Publications

State Publications

- Arthak Adhikari and Tamara Mickle "What is the unemployed people per job openings ratio? A 21-year case study into unemployment trends"
- Skyla Skopovi, Paul Calhoun, and Larry Akinyooye "Job openings and labor turnover trends for States in 2020"
- Hope Allen and Skyla Skopovi "Job openings and labor turnover trends for Metropolitan Statistical Areas in 2019"

Contact Information

Job Openings & Labor Turnover Survey (JOLTS)

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