

Pandemic and the Economy



*Preliminary Outlook on COVID-19
potential long-term impact to
Socioeconomic Forecast*

February 25, 2021

Atlanta Regional Commission
Research and Analytics Group

Agenda



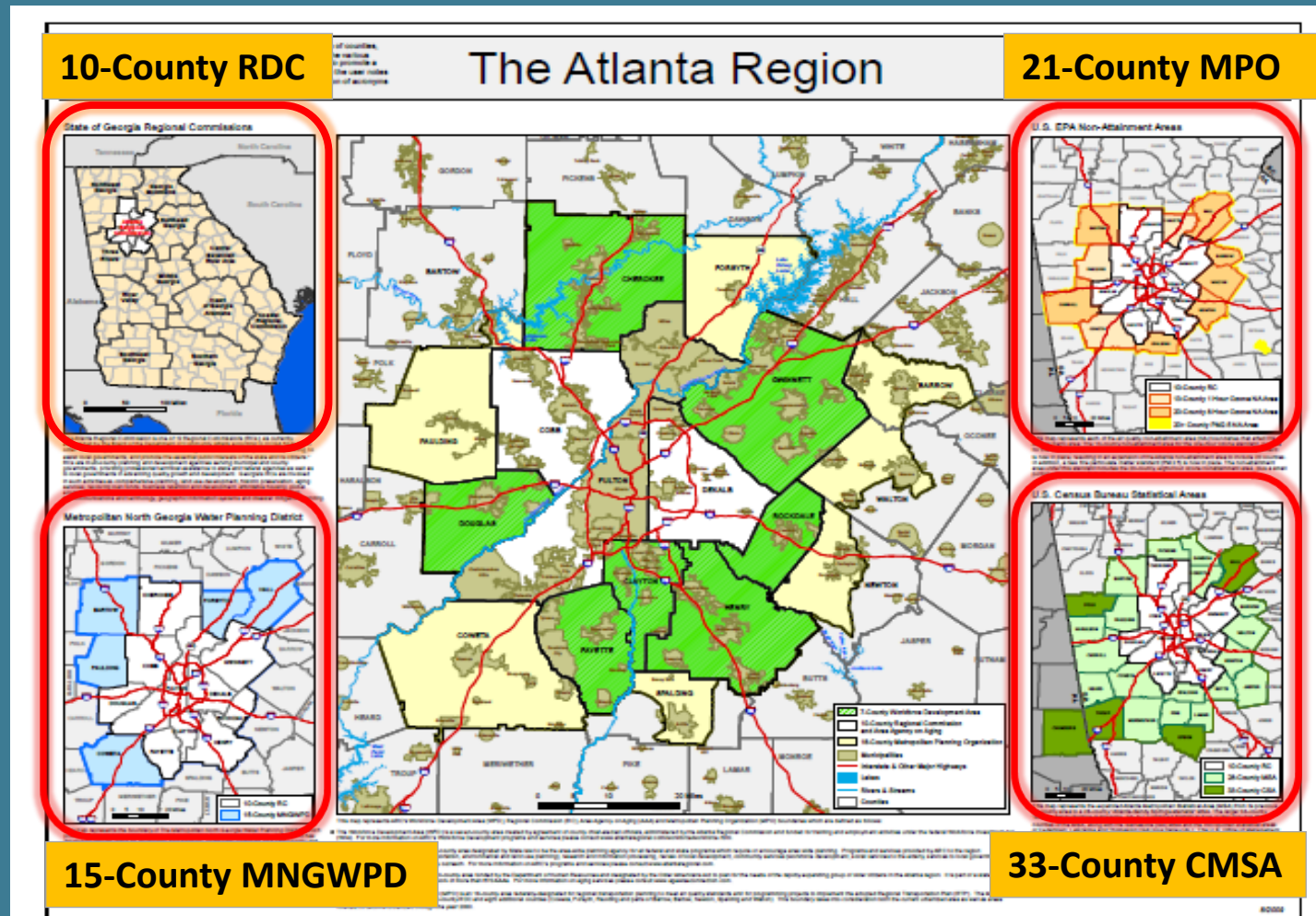
ARC Organization

39 ⇔ 10 Chairmen,
12 Mayors, 1 Councilmember,
15 Citizens, 1 DCA



~200 staff

The Atlanta "Region"



ARC Objectives

- Purpose

- Produce long-range demographic, employment and economic forecasts for the 21-county ARC region

- Intent

- Informing public and private policy decisions
- Orient stakeholders and decision makers on socio-economic and transportation impacts to our Region

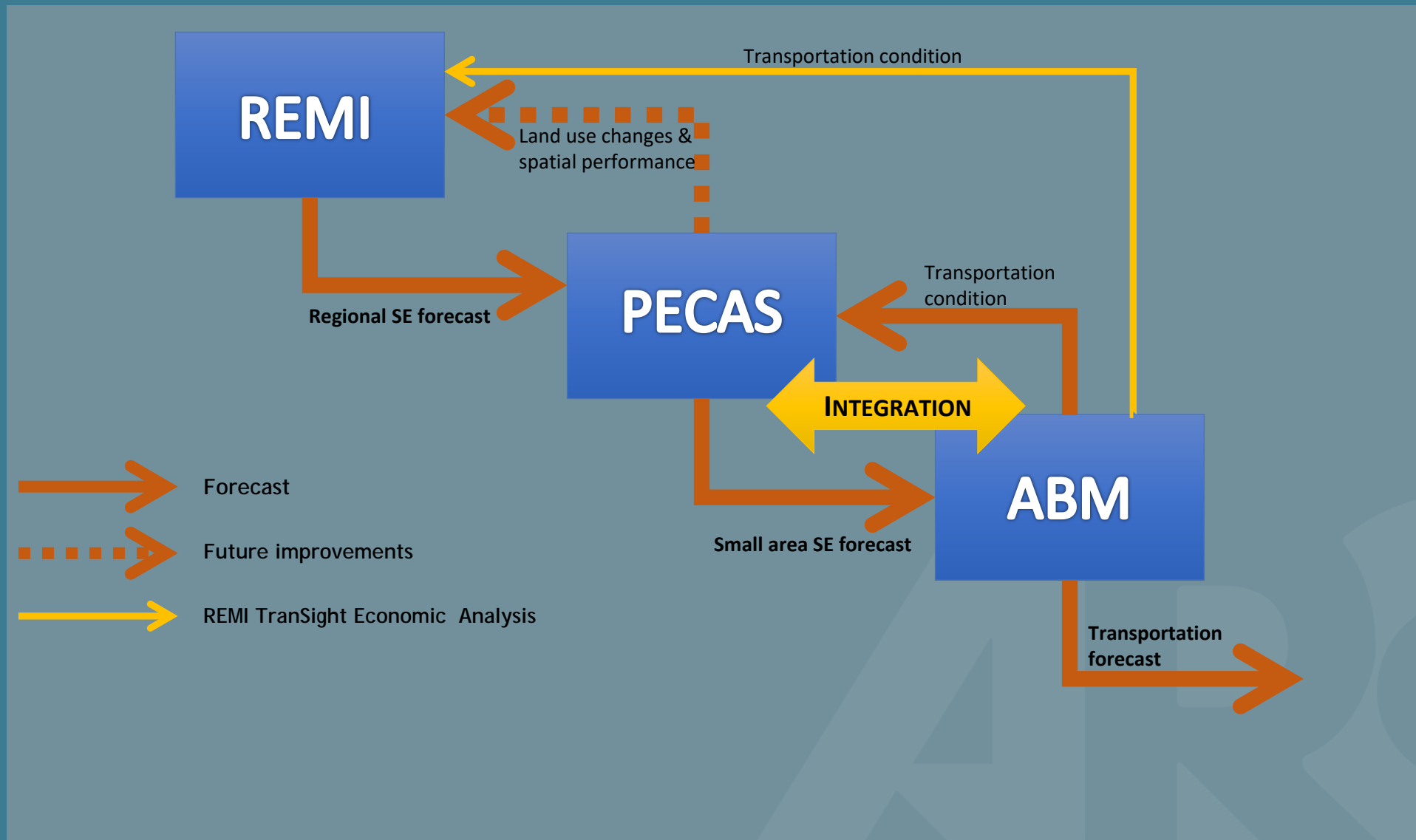
- Goal

- Continue to lead in regional forecasting and policy analysis
- Provide economic and transportation impact plans and assess travel demand changes in the region

Why REMI?

- Requirement for dynamic economic analysis
- Economics and demographics of a region are changing over time
- Scoring projects based on travel demand and economics as a complete system
- Every region's travel network and economy is different

ARC Forecast Integration workflow



Background

- Novel coronavirus first confirmed case in US on Jan. 21, 2020; first death reported in US on Feb. 29, 2020 and on Mar. 11, 2020, the virus was named COVID-19 and branded as a pandemic [WHO]
- A national task force was formed, and prevention measures were implemented to counteract the spread of coronavirus
- Federal government respond through fiscal and monetary policy
- State entities enacted protective responses to combat exposure to the coronavirus
- Numerous updated national forecast scenarios have been published from various outlets, e.g., Moody's, IHS, RSQE
- These outlets released national GDP growth assumptions ranging from 0% to -1.5% annual decline

Methodology

- Modify REMI National forecast baseline reflecting national slowdown and potential recession scenarios
- Utilize University of Michigan RSQE's Economic Outlook for 2020-2022
 - An interim update to calibrate national landscape and
 - Drive state new alternate controls and regional forecast and scenarios
- Additional adjustments [calibrations and assumptions] for state and region
- Analysis focus was Q2, 2020, but concluded in 2021 with extrapolation based on modeling convergence from 2022 to forecast horizon

Assumptions

- Case fatality rates were consistent with CDC's 2009 Influenza pandemic and used to update survival rates
- Latest federal stimulus response, Phase 1, was incorporated into the simulations
- Sectoral distress and surges were derived from most current output and employment responses weighted by output demand in respective industries
- Trade restrictions on exports and demand for imports were factored using U.S. DoT and Census data

Contributing Factors

- **Labor Force participation**
 - Deaths, hospitalizations, and preventive measures
 - Voluntary, mandatory business closures
- **Supply and Demand**
 - Critical supply chain interruptions
 - Drop in demand and sectoral distress and surges
- **Behavioral influence**
 - Avoidance and physical distancing
 - Panic purchasing
 - Consumption reallocation
- **Policy Intervention**

Alternate Scenarios Framework

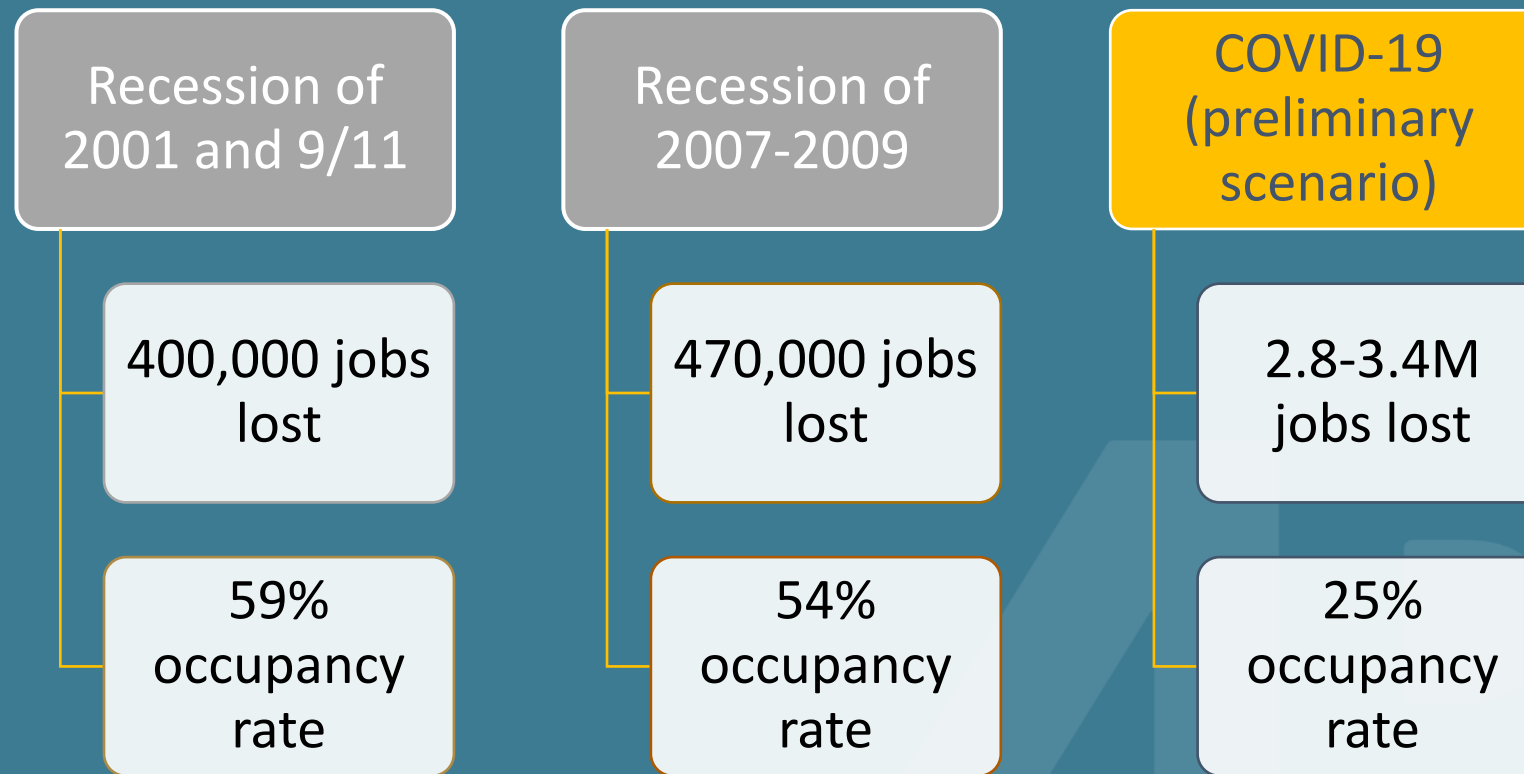
Event	Assumption	Conditions	Outlay	Production/Trade	Class
Delayed relief response [Moderate case]	Peak in new COVID-19 cases for U.S. as a whole by mid-April [May 2020 reboot]	Gradually resumes in May 2020	Contraction	Gradual to Slow	Quick recovery
Economic burden [Severe case]	Peak in new COVID-19 cases for U.S. will take place in early May [V-shape summer]	Deep economic contraction	Stagnation but measured	Still contraction in consumption and production	V-shaped recovery
Enduring fallout [Critical case]	Government policies such as physical distancing assist “flattening the curve” [Extended weakness]	Economic weakness to Q32020	Rapidly eroding but bottoming	Positioned and prepared for recovery	U-shaped recovery

Scenario Timelines

		Economic Disruption range			
Event	Assumption	Brief	Moderate	Prolonged	Status
Delayed relief [Moderate case]	Peak in new COVID-19 cases for U.S. by mid-April [May 2020 reboot]	1 Quarter [2020 Q2]	No influence	No influence	Quick recovery
Economic burden [Severe case]	Peak in new COVID-19 cases for U.S. will take place in early May [V-shape summer]	2020 Q2	2 Quarters [2020 Q2-Q3]	No influence	V-shaped recovery
Enduring fallout [Critical case]	Government policies such as physical distancing assist “flattening the curve” [Extended weakness]	2020 Q2	2020 Q3	4 Quarters [2020 Q2-2021 Q1]	U-shaped recovery

Industry-Specific Measures

- Oxford Economic study, "Impact on Hotel Room Demand and Total Job Loss: Comparison Between 9/11, Recession And Early Stage Of Coronavirus Pandemic" depicts the severity



Source:

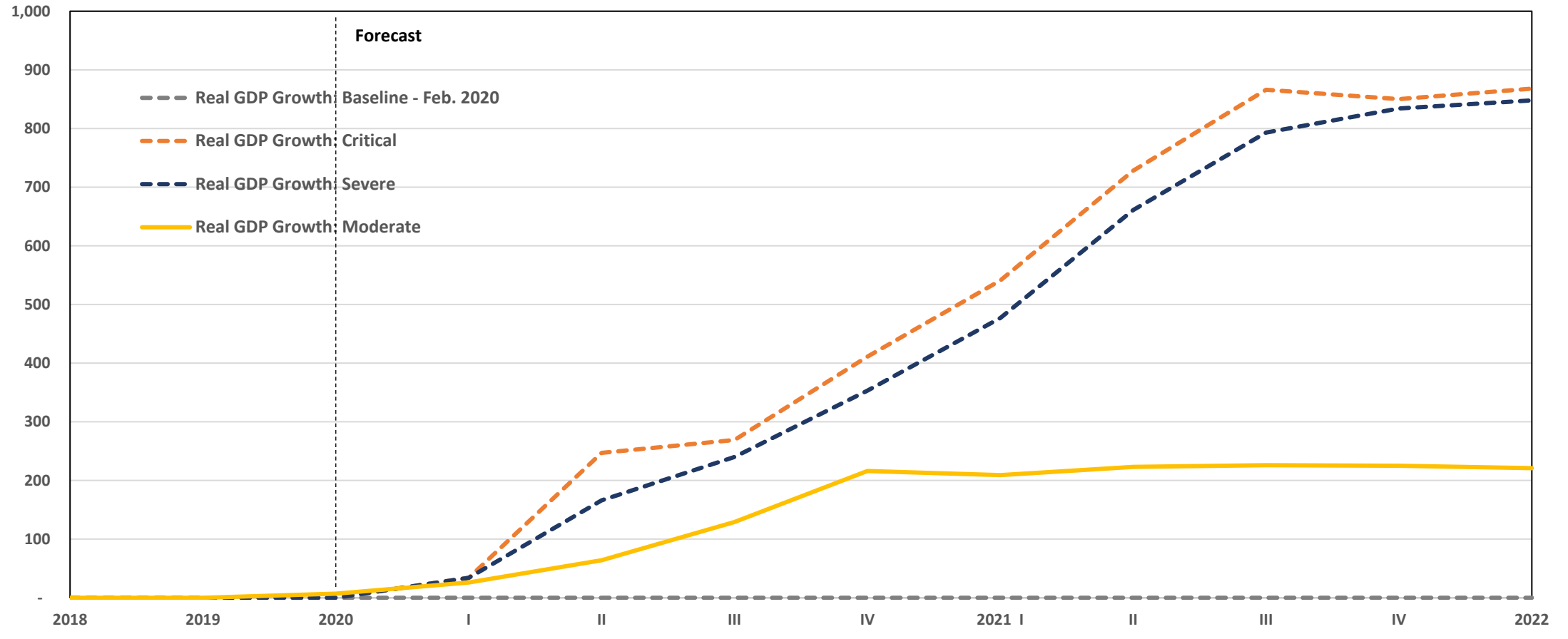
STR, Bureau of Economic Analysis (BEA), Bureau of Labor Statistics (BLS), Oxford Economics (mid March 2020)

American Hotel and Lodging Association, Interviews and Video recordings with leading hospitality firms

Quarterly State Case Fatality Response (CFR)

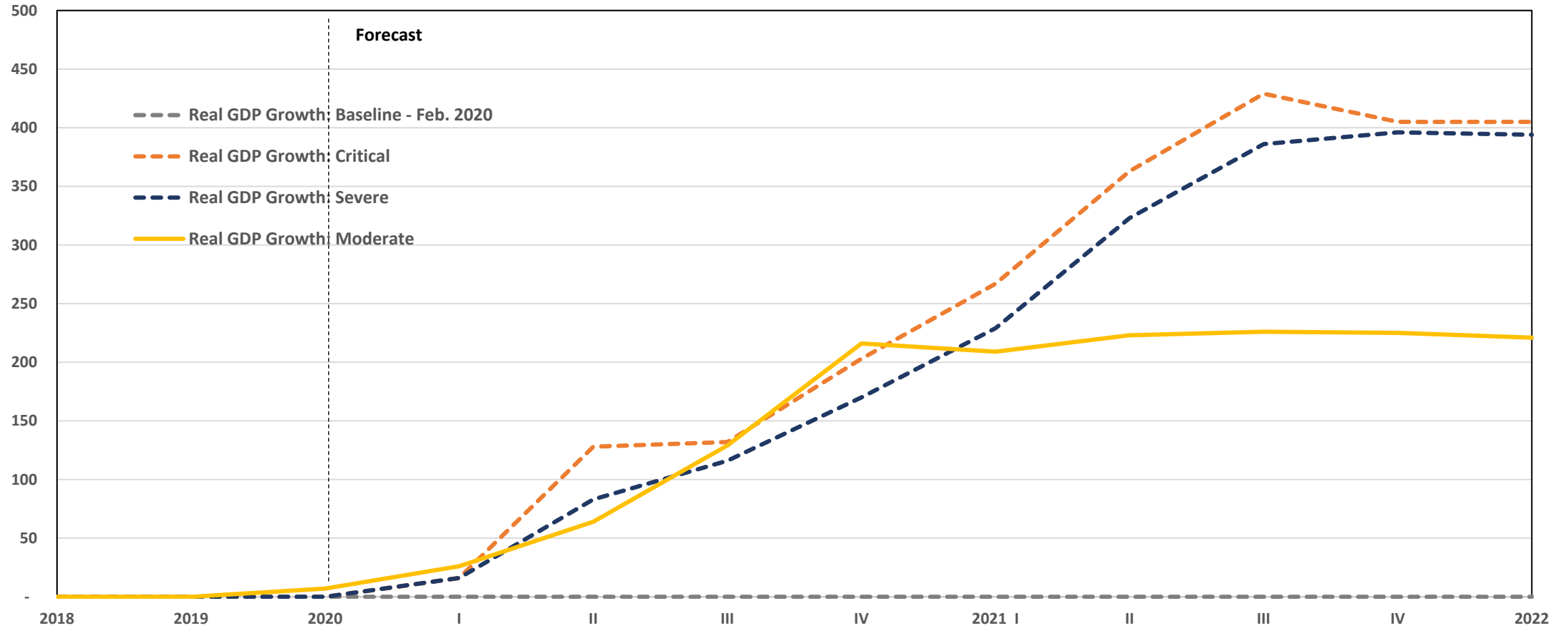
2020q1-2022

Deaths



Quarterly Metro Atlanta Case Fatality Response (CFR) 2020q1-2022

Deaths



Scenario Simulations

Event	Severity	Vulnerable	Neutralize	Production/Trade	Outcome
Delayed relief response [Moderate case]	Critical prolong exposure & increase cases with stimulus stalemate	Yes	No	Disruption	Deferred
Economic burden [Severe case]	Central accord of economic and public health experts on current conditions and events	Yes	No	Congested	Worse
Enduring fallout [Critical case]	Administrative roadblocks and loose oversight or implementation	Yes	No	Gridlock	Adverse

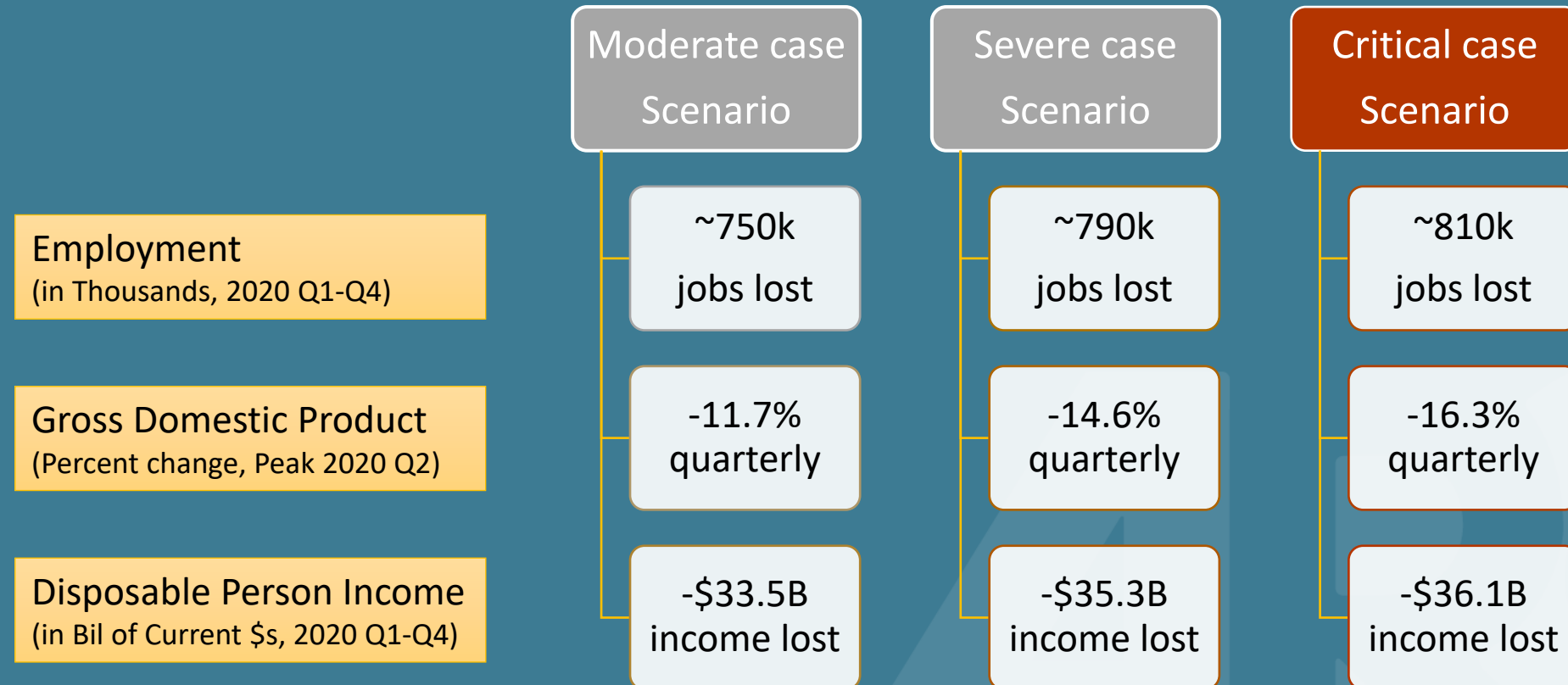
Notes:

- Vulnerable is defined as continued avoidance practices and remote working environments
- Neutralize relates to treatment measures for the virus, i.e., vaccinations or prophylactics
- Consensus community consists of NABE experts and University of Michigan RSQE expert short-term implications

Georgia Economic Outlook

[Aggregate impacts]

- Figure displays alternate regional forecast comparative statistics for State of Georgia as an aggregate of quarters 1 through 4 in 2020



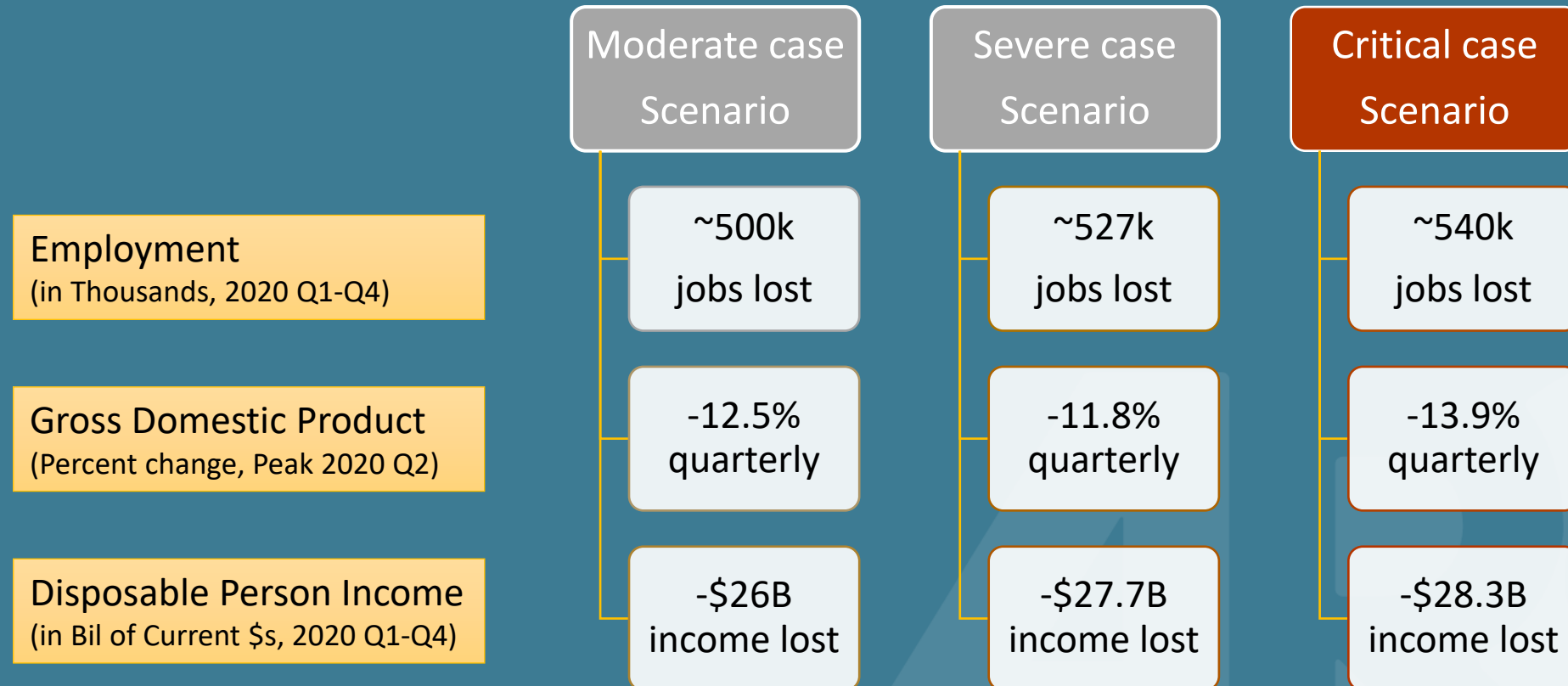
Source:

Regional Economic Models Incorporated (REMI), TranSight Model version 4.3.4, Atlanta Area build
Atlanta Regional Commission, Center for Livable Communities, Research and Analytics Group, Economic Analysis Program

Atlanta MPO Economic Outlook

[Aggregate impacts]

- Figure displays regional forecast comparative statistics for Atlanta 21-County Metropolitan Planning Organization (MPO) as an aggregate of quarters 1 through 4 in 2020



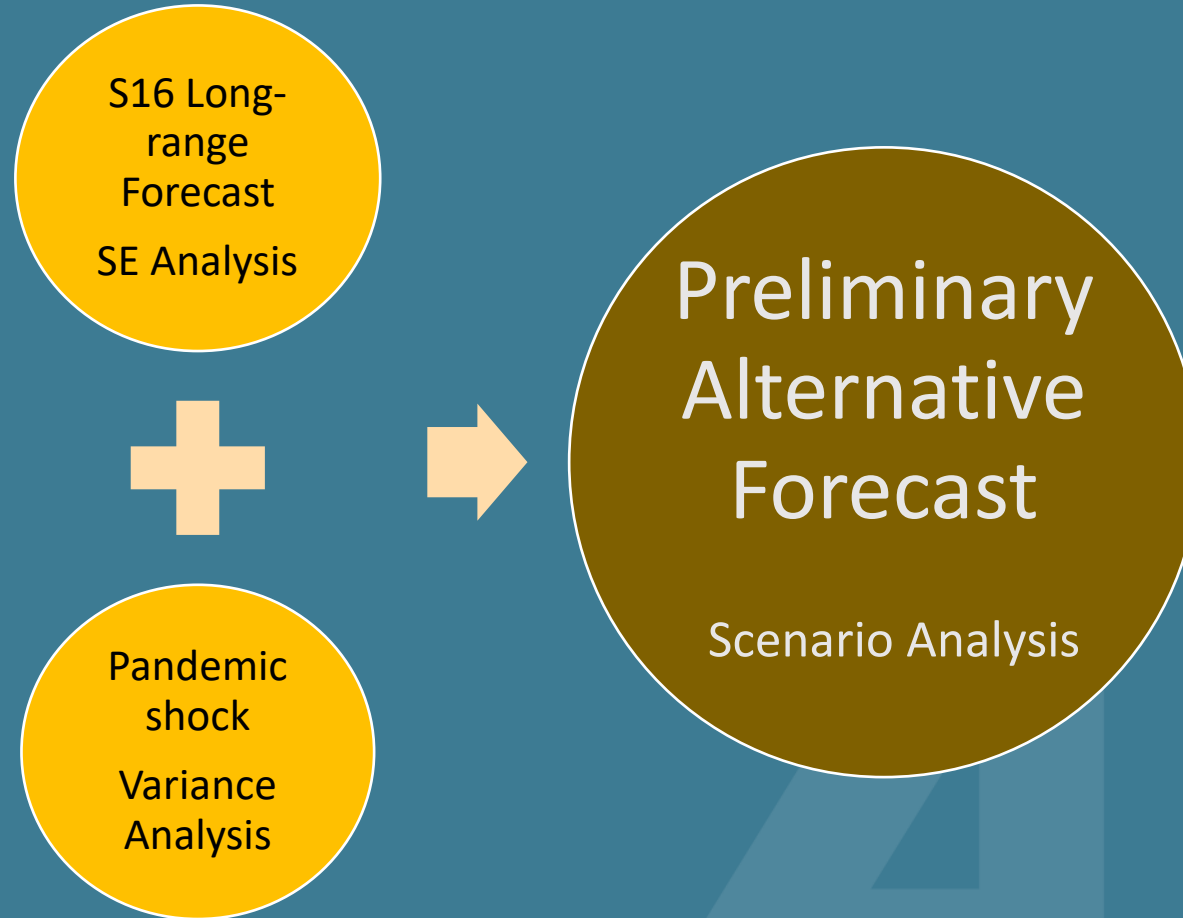
Source:

Regional Economic Models Incorporated (REMI), TranSight Model version 4.3.4, Atlanta Area build
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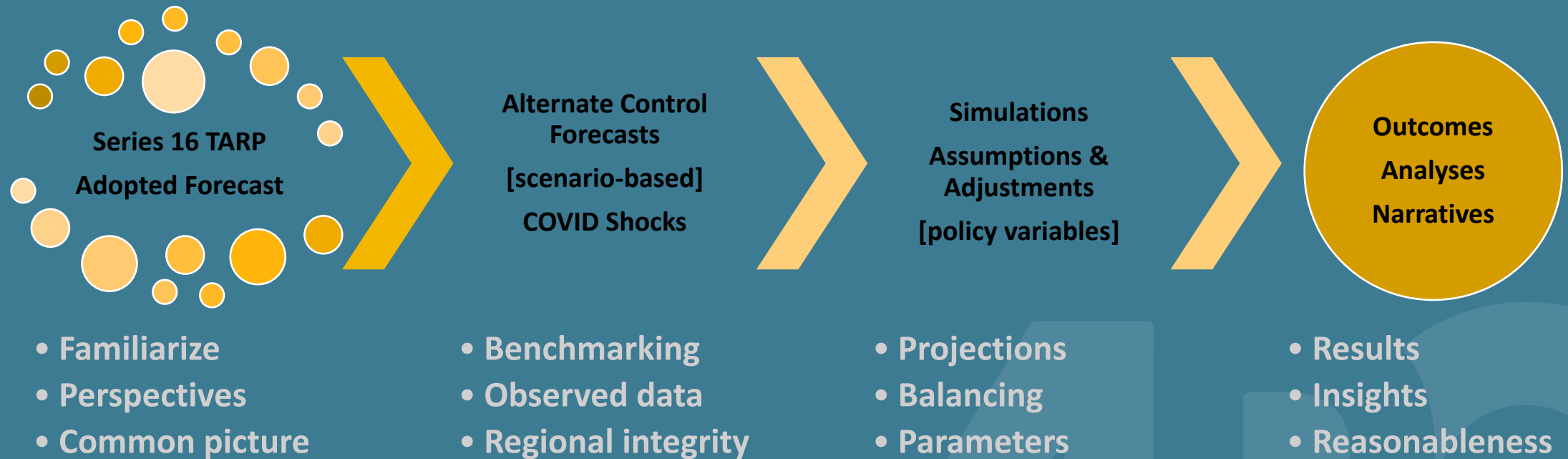
What's Next?

- Continue data collection
- Monitoring economic indicators and conditions
- Assess business restarts and reopening operations
- Pandemic “flare-ups” and classifications

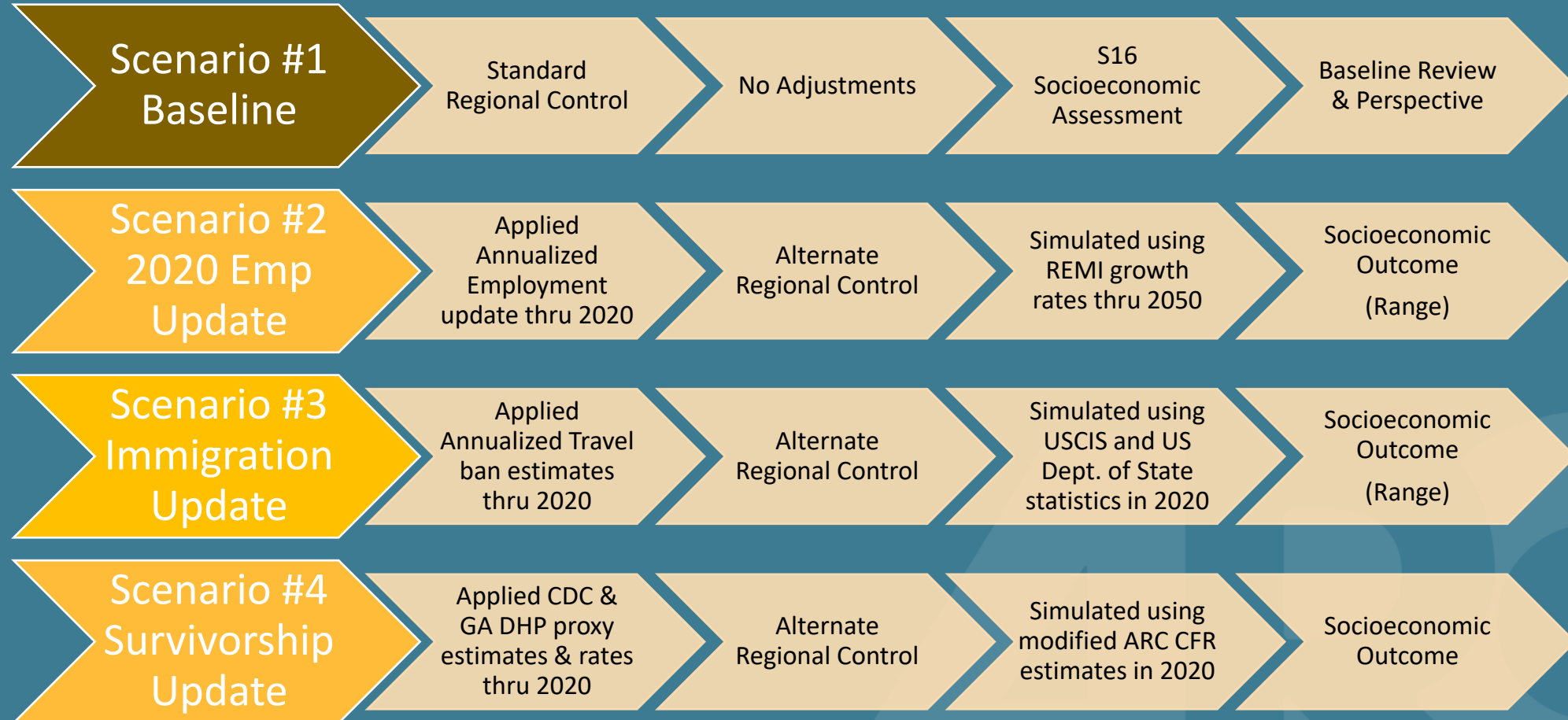
Recap Forecast Outlook



Modeling Concept & Approach



Methodologies



Assumptions

Scenario

#1

- Relative to the Nation
- No adjustments
- ARC Series 16 Adopted forecast results

Scenario

#2

- Georgia Department of Labor (GA DoL) employment statistics, and Bureau of Labor Statistics (BLS) unemployment insurance claims data
- Targeted industry-specific, COVID-related trends and supply-chain analysis to inform sector level adjustments
- REMI employment growth rates take over for the state and MPO starting in 2022 through 2050

Scenario

#3

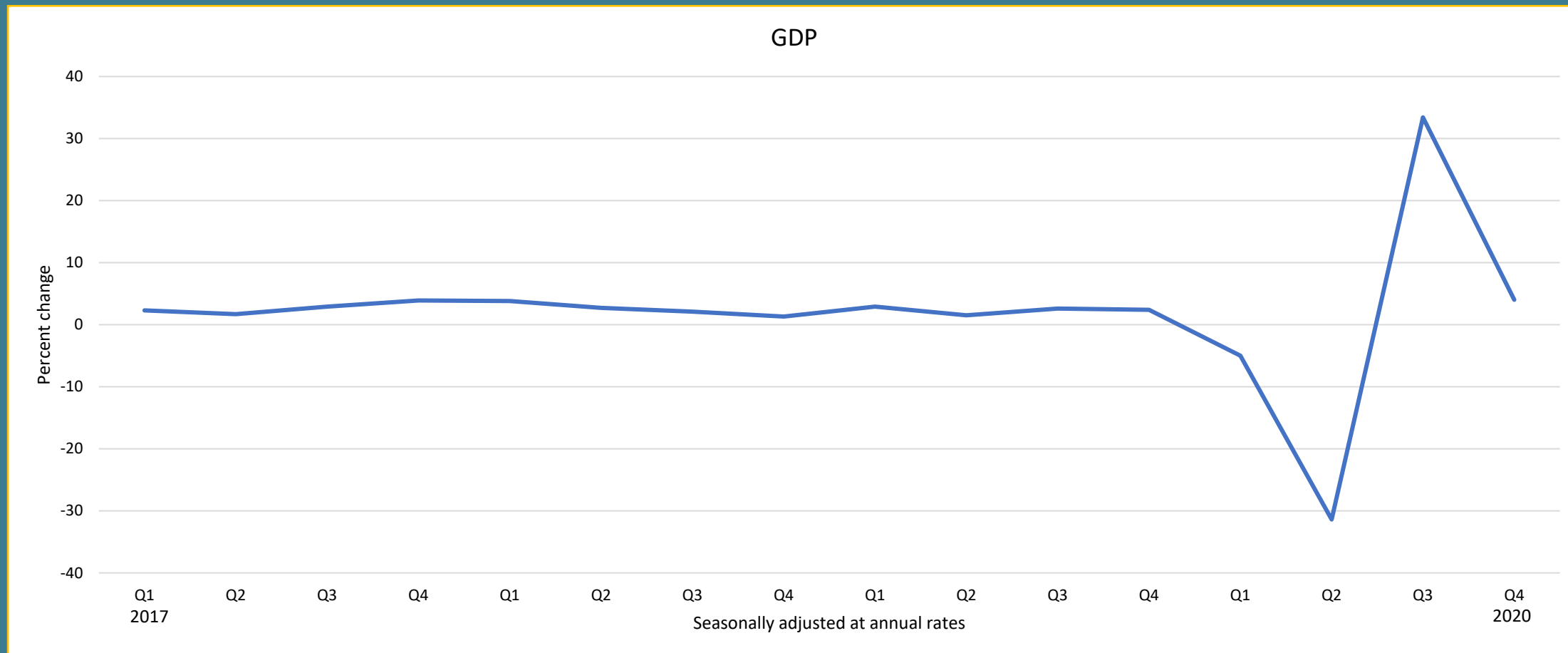
- Georgia Department of Labor (GA DoL) employment statistics, and BLS unemployment insurance claims data
- Targeted industry-specific, COVID-related trends and supply-chain analysis to inform sector level adjustments
- REMI employment growth rates take over for the state and MPO starting in 2022 through 2050
- U.S. Citizenship and Immigration Services and U.S. Department of State visa issuance data interpreted for international migration

Scenario

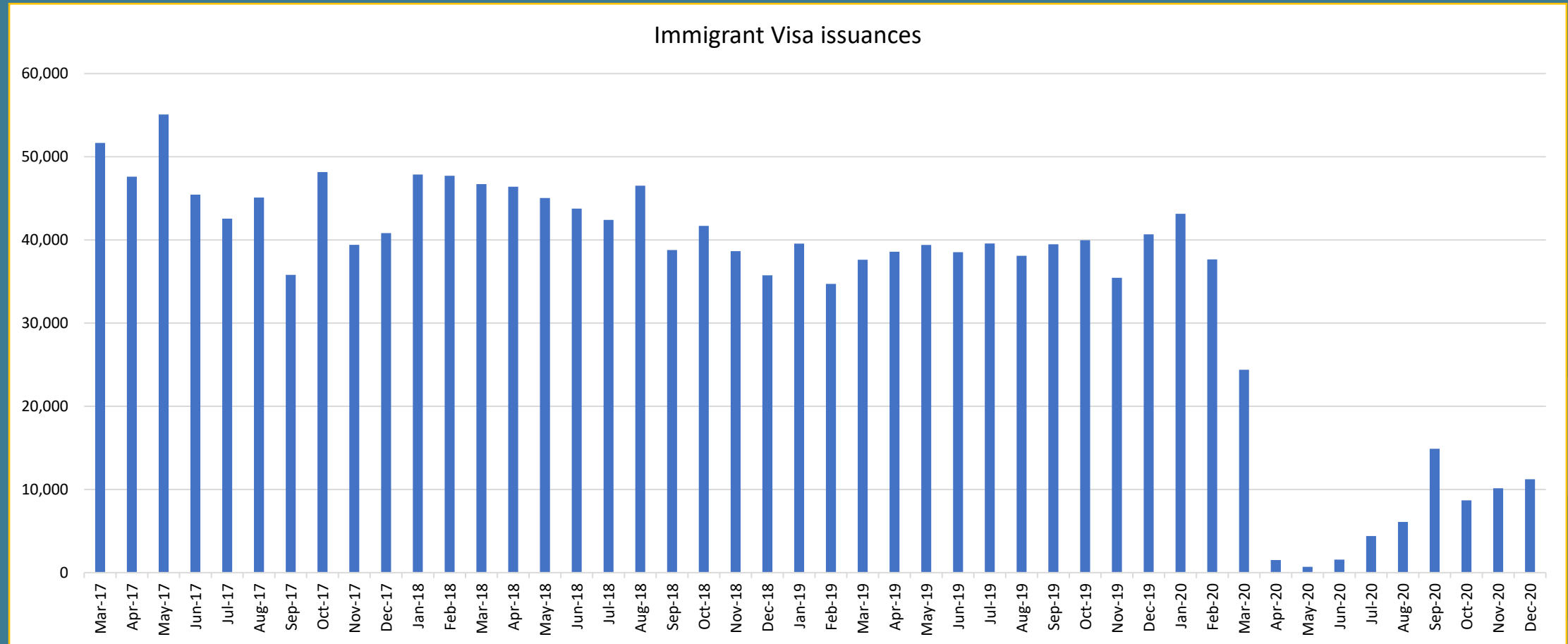
#4

- Georgia Department of Labor (GA DoL) employment statistics, and BLS unemployment insurance claims data
- Targeted industry-specific, COVID-related trends and REMI state and regional employment adjustments and rate outcomes
- U.S. Citizenship and Immigration Services and U.S. Department of State visa issuance data interpreted for international migration
- Center for Disease Control and Georgia Department of Health case fatality statistics and reporting for survival rate adjustments

Gross Domestic Product

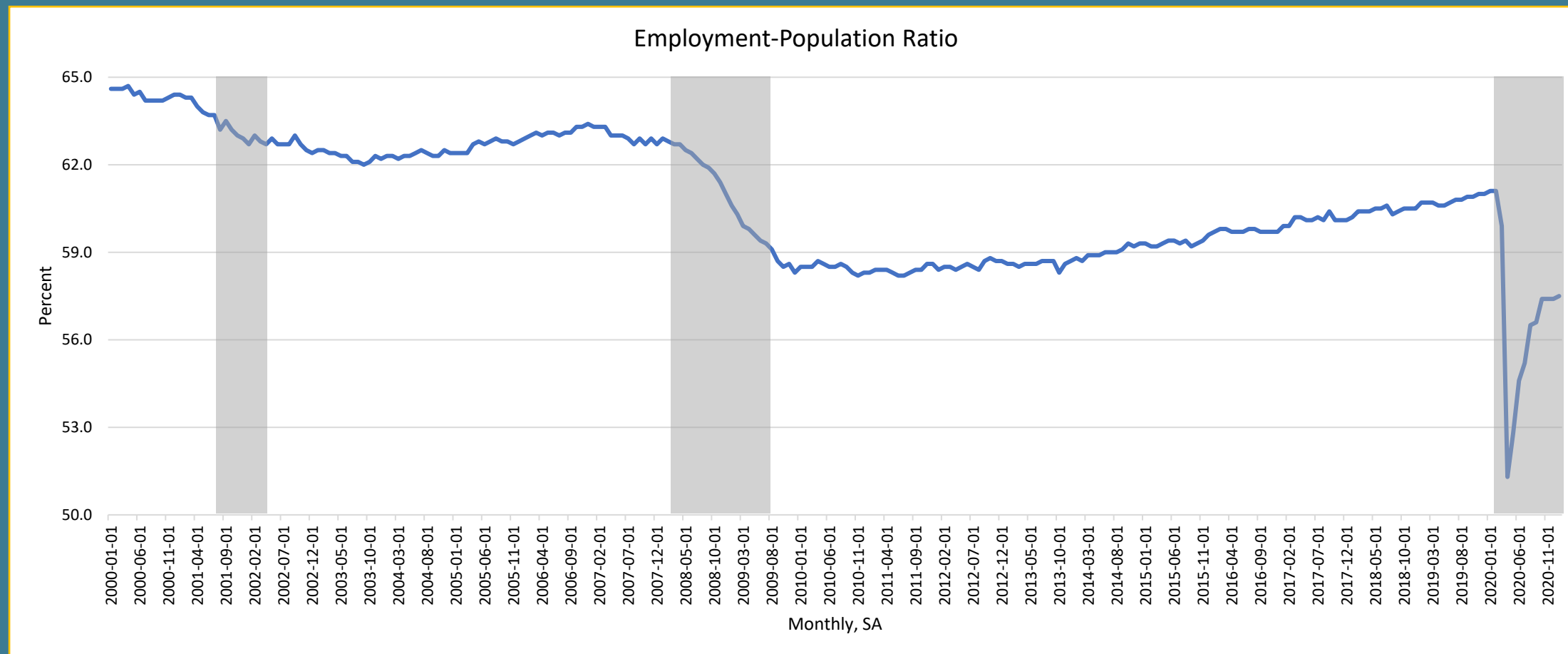


Global slowdown



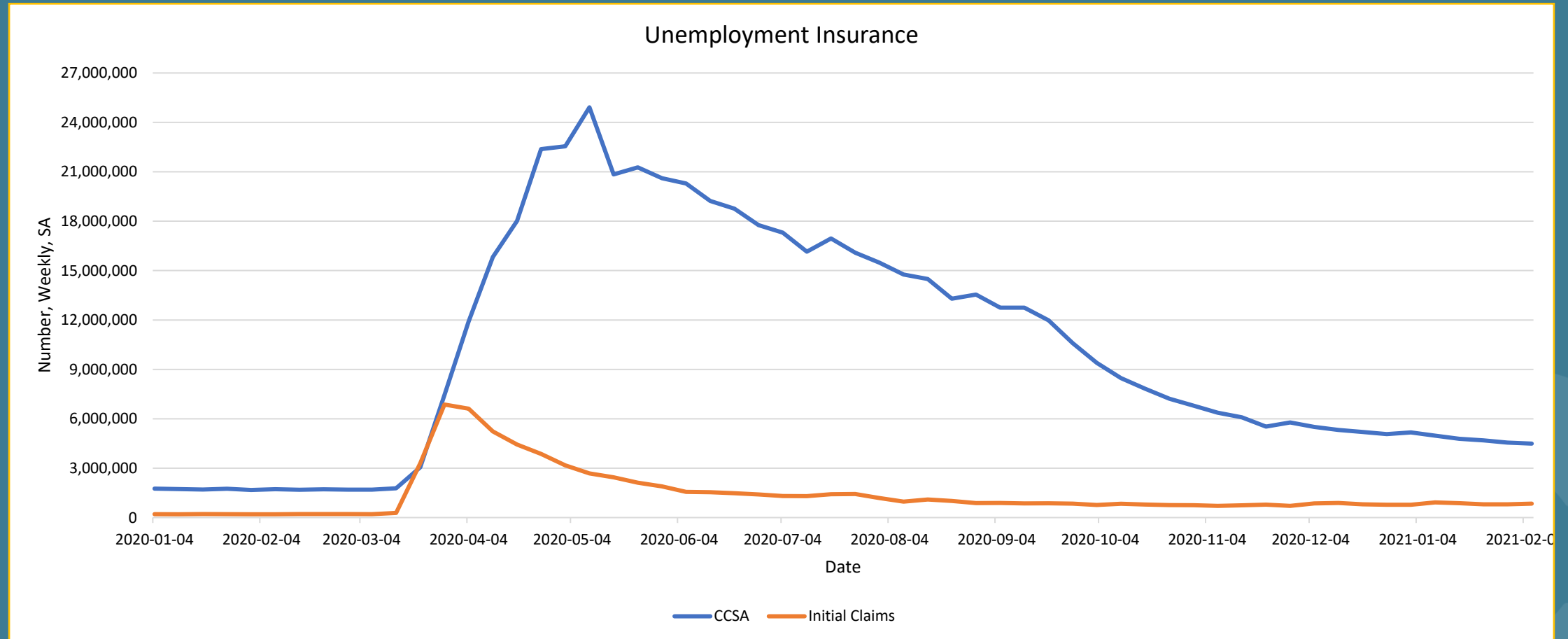
Sources: U.S. Department of State, Bureau of Consumer Affairs; <https://travel.state.gov/content/travel/en/legal/visa-law0/visa-statistics/immigrant-visa-statistics/monthly-immigrant-visa-issuances.html>.

Labor market activity



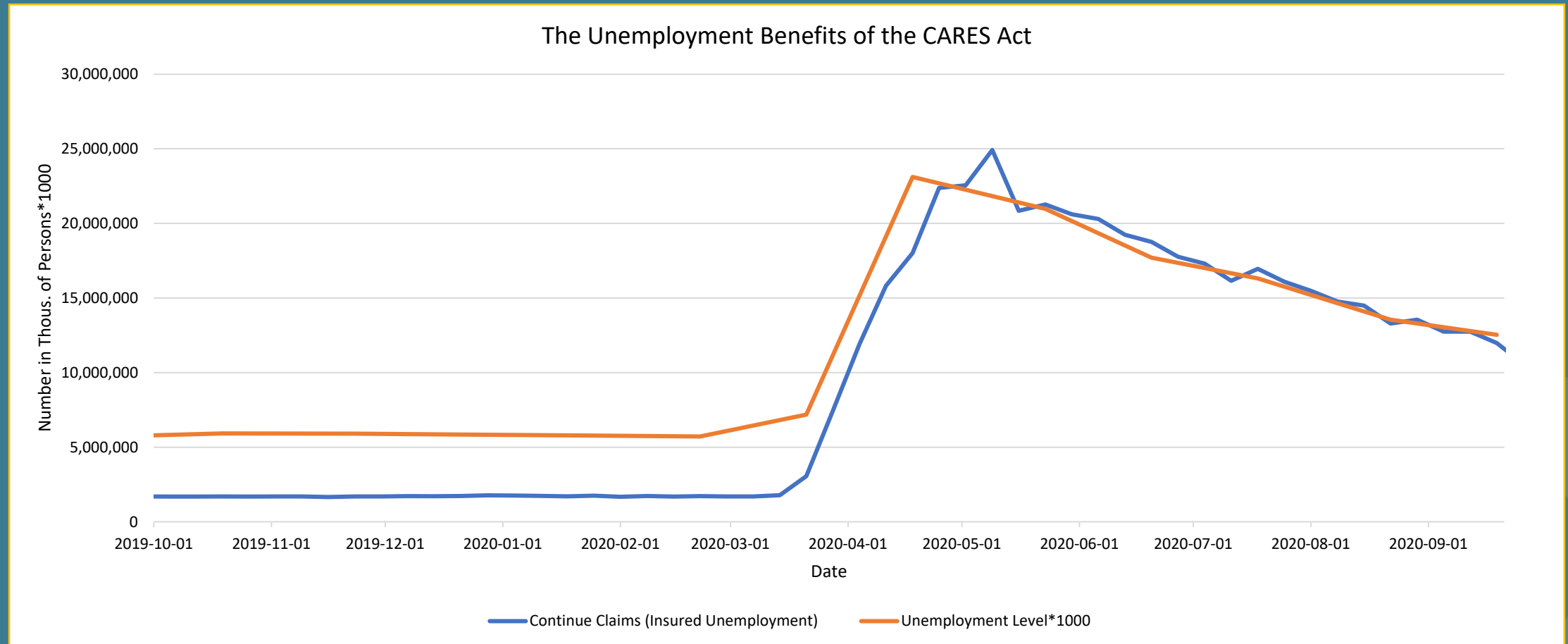
Sources: U.S. Bureau of Labor Statistics, Employment-Population Ratio [EMRATIO], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/EMRATIO>, February 2021; NBER recession data are available at <http://www.nber.org/cycles/cyclesmain.html>.

UI Weekly Claims

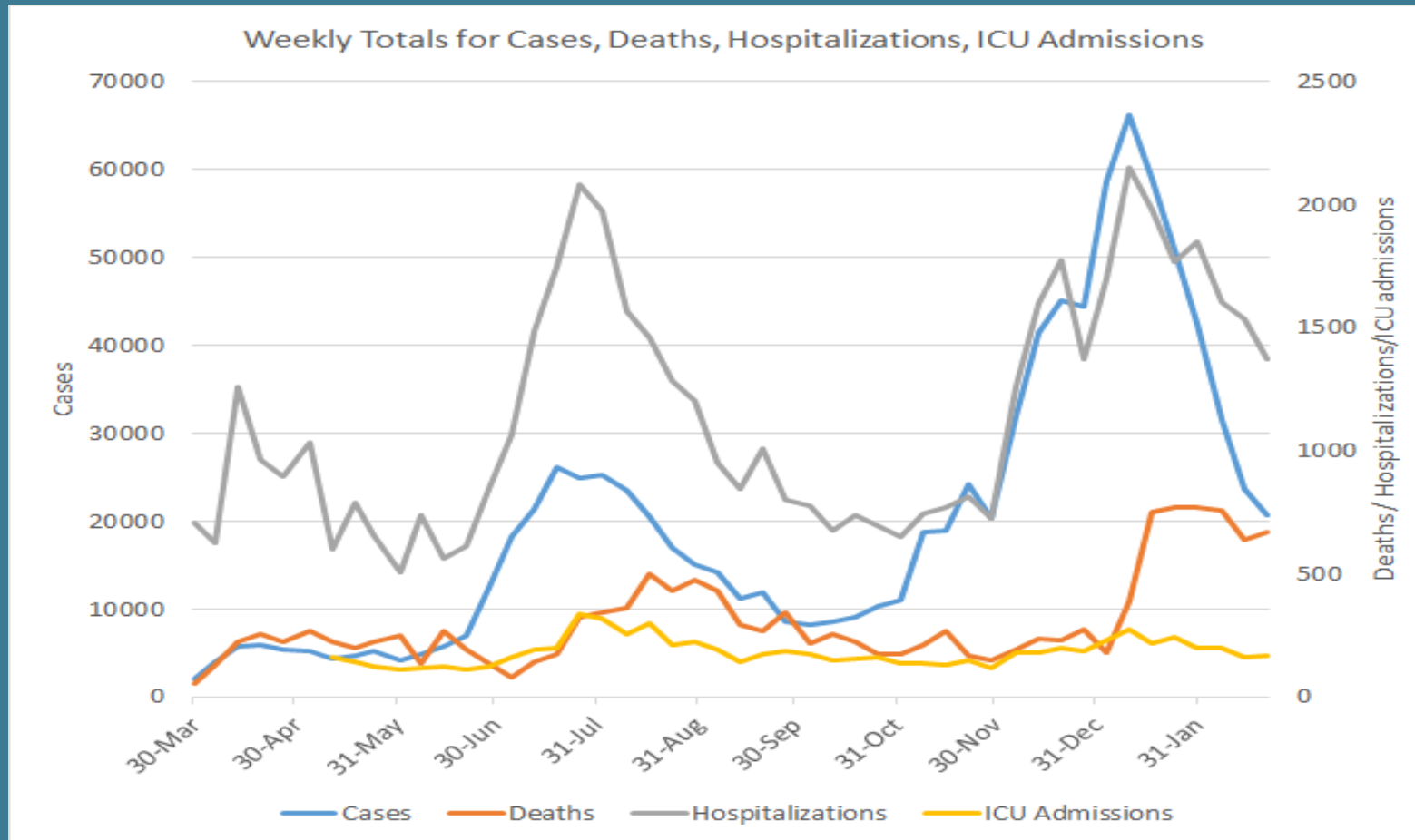


Sources: U.S. Employment and Training Administration, Initial Claims [ICSA] and Continued Claims (Insured Unemployment) [CCSA], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/ICSA>, February 2021.

Expanding the Unemployment Definition



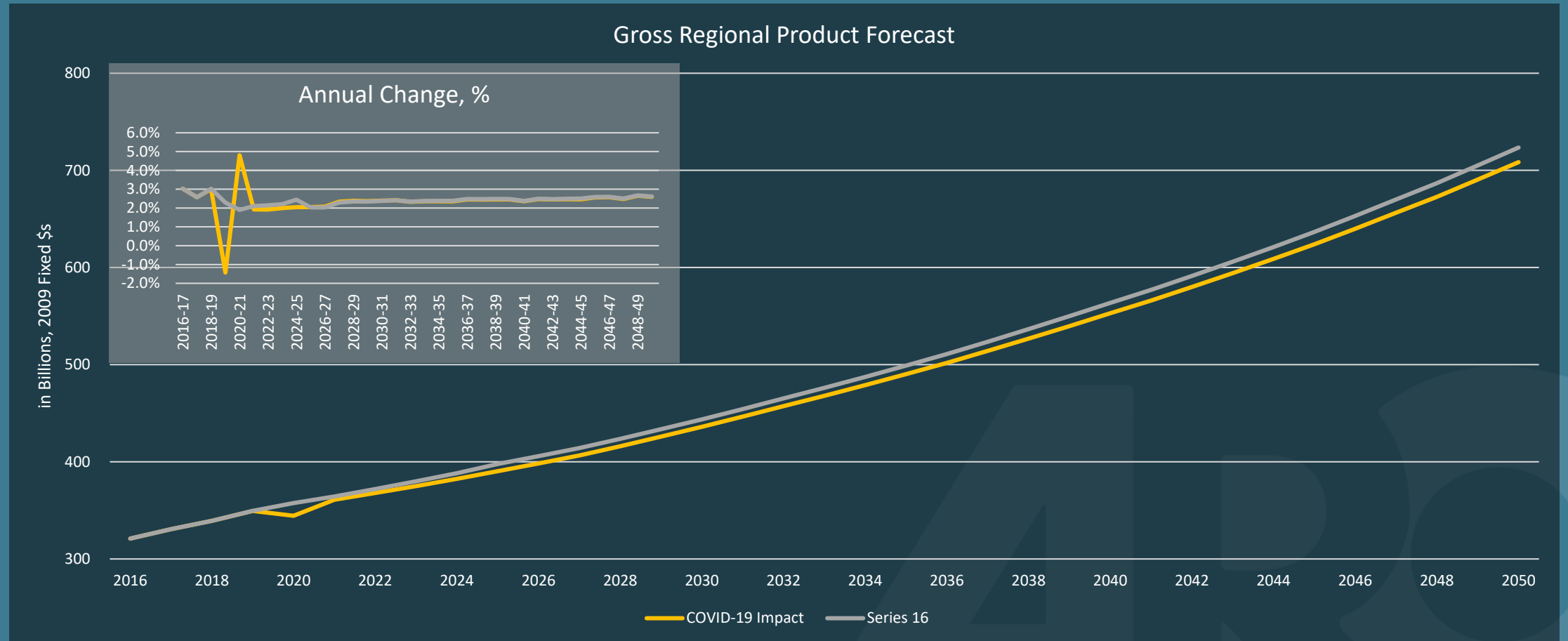
Georgia COVID-19 Snapshot



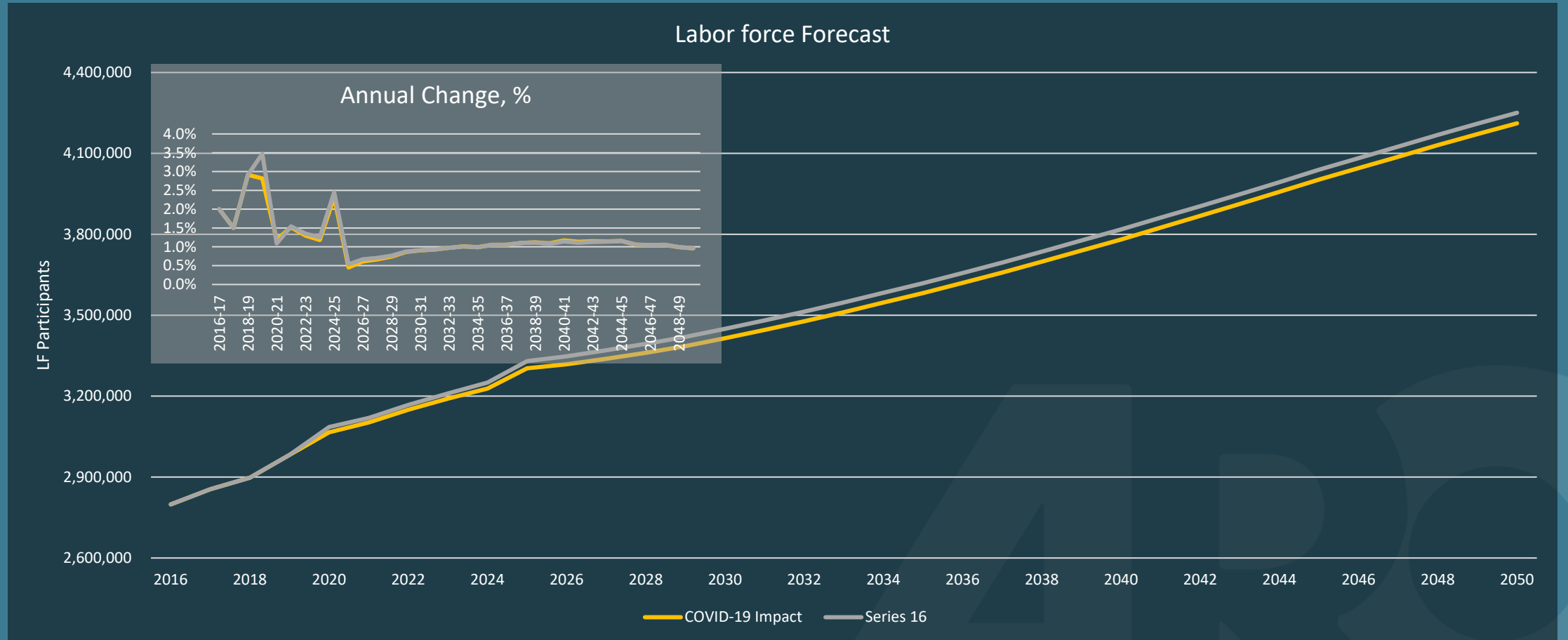
Point Estimate: Case Fatality Rate (per 1,000)

Non-White	Moderate case	Severe case	Critical case
• Ages 0-4	0.0000225	0.0000383	0.000100
• Ages 5-14	0.0000225	0.0000383	0.000100
• Ages 15-19	0.0000225	0.0000383	0.000100
• Ages 20-24	0.0000225	0.0000383	0.000100
• Ages 25-34	0.0000225	0.0000383	0.000100
• Ages 35-44	0.0000450	0.0000642	0.000275
• Ages 45-54	0.0000450	0.0000642	0.000275
• Ages 55-64	0.0000450	0.0000642	0.000275
• Ages 65+	0.0000900	0.0000900	0.000500
White			
• Ages 0-4	0.0000125	0.0000383	0.000090
• Ages 5-14	0.0000125	0.0000383	0.000090
• Ages 15-19	0.0000125	0.0000383	0.000090
• Ages 20-24	0.0000125	0.0000383	0.000090
• Ages 25-34	0.0000125	0.0000383	0.000090
• Ages 35-44	0.0000125	0.0000383	0.000090
• Ages 45-54	0.0000125	0.0000383	0.000090
• Ages 55-64	0.0000125	0.0000383	0.000090
• Ages 65+	0.0000125	0.0000383	0.000175

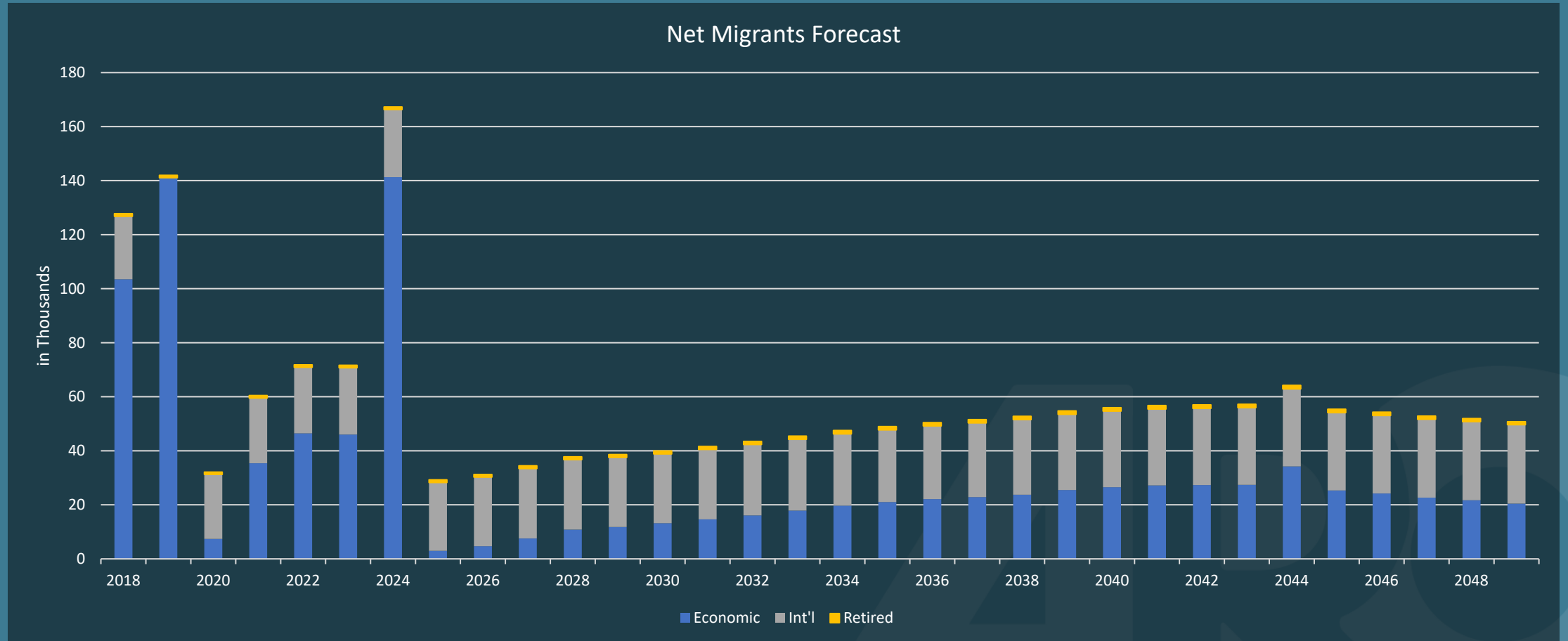
Regional Productivity



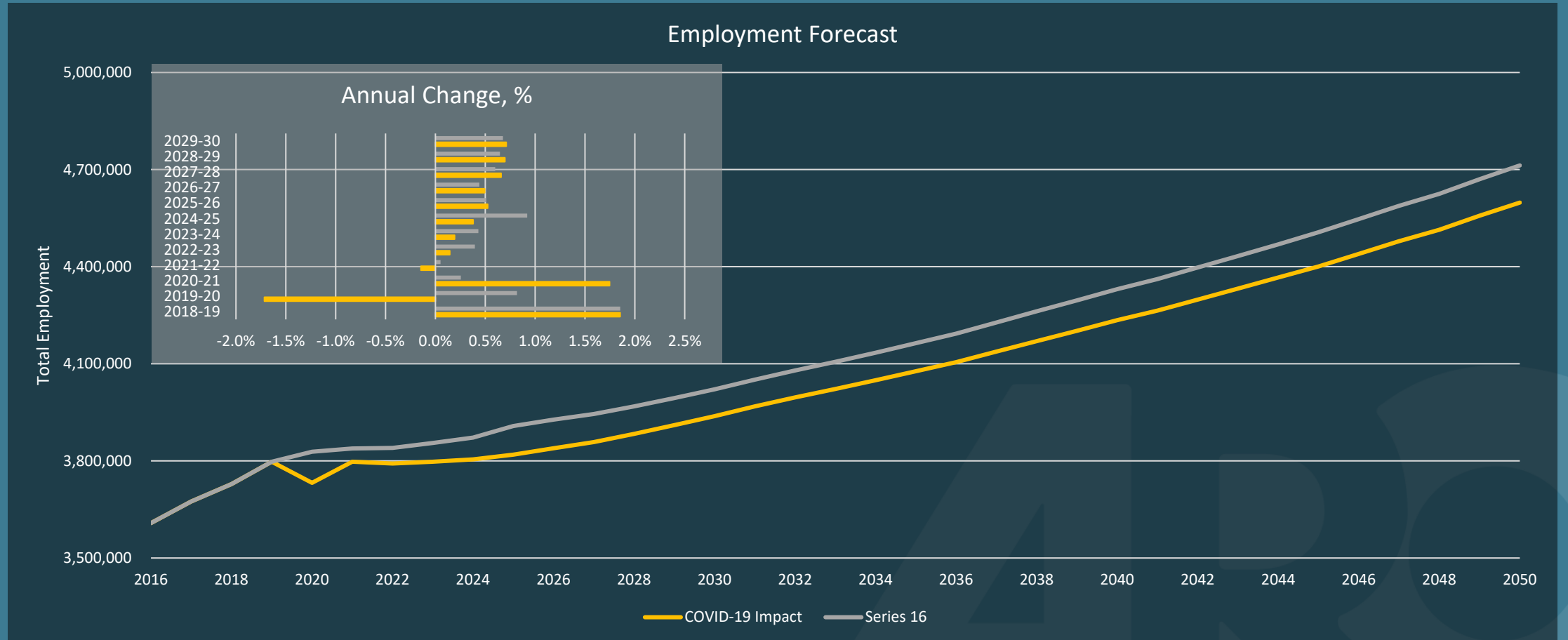
Labor force outlook



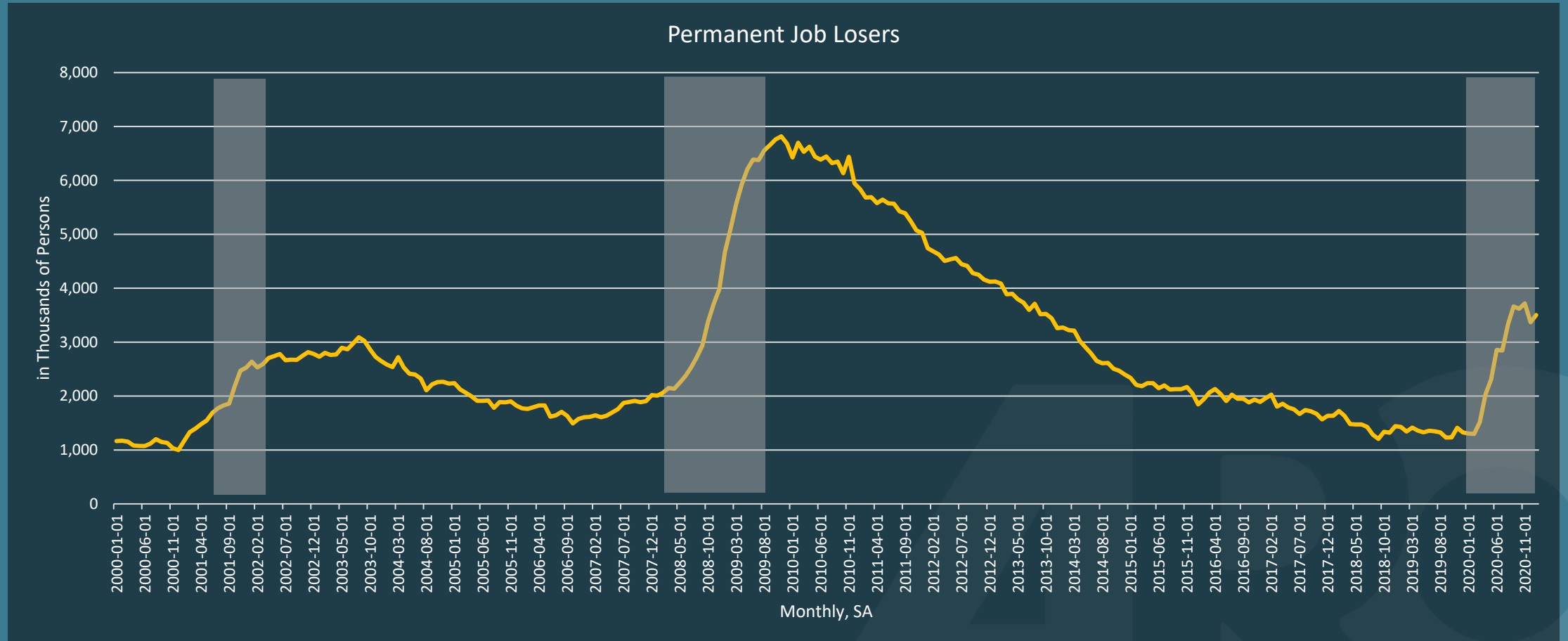
Components of Migration



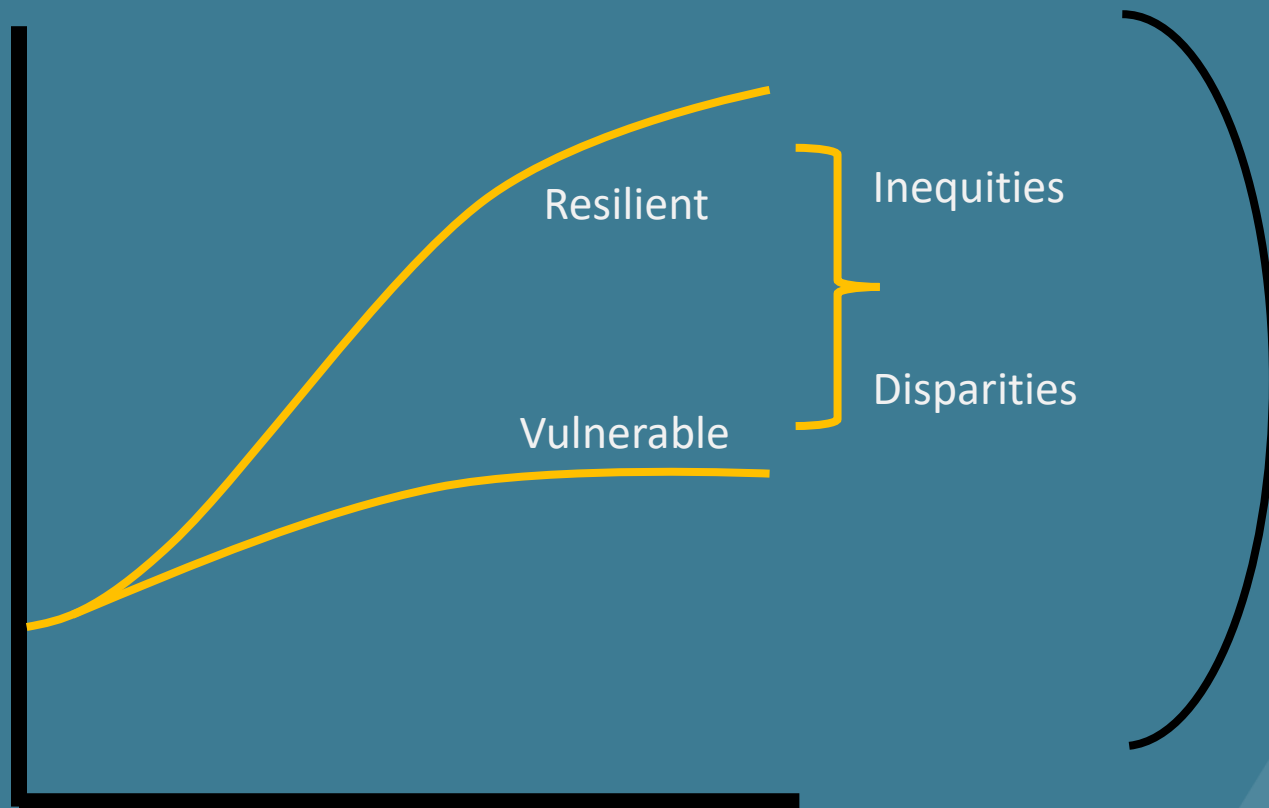
Regional Employment



COVID-specific job disruption



Slowly rebounding, “K” Scenario



Drawn not to scale (dramatized)

Health

- Substantial relief funding to state and local government; disease disproportionate effects

Housing

- Eviction on the horizon for nearly 30% of household; shared living safety

Education

- Retooling or retraining laborers in permanent job loss

Environment

- Collective public health strategy; food insecurity; climate change

Transportation

- Car-centric regions makes it hard for low wealth populations to get to work and keep jobs

Dual reality





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