

Bracing for Impact: Coronavirus on Regional Economy

Exploring Speculative Outcomes to an Unknown Economic Impact
and Uncertain Regional Predicaments

October 29, 2020

**Atlanta Regional Commission
Research and Analytics Group
Economic Analysis Program**



Background

- Novel coronavirus first confirmed case in US on Jan. 21; first death reported in US on Feb. 29 and on Mar. 11, the virus was named COVID-19 and branded as a pandemic [WHO]
- Initial national task force formed, and prevention measures were implemented to counteract the spread of coronavirus
- Federal government reacts through fiscal and monetary policy
- State entities have 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 exogenous assumptions ranging from 0% to -1.5% annual decline

Methodology

- Modify REMI baseline National forecast 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 modifications [calibrations and assumptions] for state and region
- Analysis concludes 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

Sectoral alignment

<u>Contracting Industries</u>	<u>Expanding industries</u>
Air transportation (481)	Wholesale trade (42)
Transit and ground passenger transportation (485)	Retail trade (44-45)
Scenic and sightseeing transportation; Support activities for transportation (487-488)	Couriers and messengers (492)
Performing arts, spectator sports, & rel activities (711)	Warehouse and storage (493)
Museums, historical sites & similar institutions (712)	Data processing, hosting & related services; other info services (518-519)
Amusement, gambling & recreation industries (713)	Rental & leasing services; Lessors of nonfinancial intangible assets (532-533)
Accommodation (721)	Ambulatory health care services (621)
Food services and drinking places (722)	Hospitals; private (622)
Religious, grantmaking, civic, professional & similar orgs (813)	Miscellaneous manufacturing (339)

Contributing Factors

- Labor Force participation
 - Deaths, hospitalizations, and preventive measures
 - Voluntary, mandatory business closures
- Supply and Demand
 - Critical inputs interruption
 - Drop in demand for output and sectoral distress and surges
- Behavioral influence
 - Avoidance and physical distancing
 - Panic purchasing
 - Consumption reallocation



Over 10 million Americans applied for unemployment benefits as the economy collapsed

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THU, MAR 26 2020, 10:22 AM EDT

A record 6.65 million people filed a new jobless claim in



The New York Times

The Coronavirus Outbreak > **LIVE** Latest Updates Maps and Case

America's Economy as Pandemic Measures

The fast-spreading virus has put a strain on the economy and other economic activity, prompting some economists to predict a U.S. recession.

Patch

GA Unemployment Claims Reach Record High In March: Coronavirus

Kathleen Sturgeon · 4/16/2020



GEORGIA — The number of initial unemployment claims has reached an all-time high in Georgia, according to State Labor Commissioner Mark Butler. March 2020 labor statistics released Thursday also revealed that the over-the-month increase for the unemployment rate was the largest on record for Georgia.



1982 record of 695,000

The health crisis has increasingly become an economic one.



By Catherine Thorbecke

March 26, 2020, 4:22 PM • 6 min read



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Policy Involvement

➤ Monetary implications

- Reducing the Federal Funds Rate as a response to the crisis
- Immediate liquidity for banks, lenders, and borrowers
- Concentrate on modified quantitative easing with emphasis on business recapture

➤ Fiscal implications

- Phasing of relief packages to lessen distressed supply chains, business operations, and employee layoffs
- Stop-gap resources addressing supply and demand-side shocks and counter unemployment challenges
- Buoy vulnerable small-businesses in keeping operations afloat and businesses open
- Provide relief to critical and threatened industries and mitigate deepening recessionary trough

➤ Behavioral implications

- Promote physical “social” distancing, vigorous sanitation protocols, and non-essential travel
- Enforce shelter-in-place guidance or stay-in-place orders and essential work/occupation only travel
- Encourage transitioning to and support of organizational telework, virtual workspace, flexible working hours, or remote working policies
- Continue risk messaging focused on avoidance, deterring, and aversion observances

Scenarios Simulations

Event	Severity	Vulnerable	Neutralize	Production/Trade	Outcome
Effective containment [Low]	Mild & Coordinated response with immediate stimulus relief	No	No	Delayed	Best
Collaborative intervention [Mild]	Mild to critical with delayed stimulus relief	Yes	No	Disruption partial	Marginal
Enduring fallout [Moderate]	Prolong exposure & increase cases with stimulus stalemate	Yes	No	Disruption	Worse

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

Scenario Simulations

Event	Severity	Vulnerable	Neutralize	Production/Trade	Outcome
Enduring fallout [Moderate case]	Critical prolong exposure & increase cases with stimulus stalemate	Yes	No	Disruption	Worse
Economic tendency [Severe case]	Central accord of economic and public health experts on current conditions and events	Yes	No	Congested	Argumentative
Delayed relief response [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

Alternate Scenarios Framework

Event	Assumption	Conditions	Outlay	Production/Trade	Class
Enduring fallout [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 tendency [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
Delayed relief response [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

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

Vulnerable Scenario	Moderate case	Severe case	Critical case
• Ages 0-4	0.0000225	0.0000383	0.000090
• Ages 5-14	0.0000225	0.0000383	0.000090
• Ages 15-19	0.0000225	0.0000383	0.000090
• Ages 20-24	0.0000225	0.0000383	0.000090
• Ages 25-34	0.0000225	0.0000383	0.000090
• Ages 35-44	0.0000450	0.0000642	0.000175
• Ages 45-54	0.0000450	0.0000642	0.000175
• Ages 55-64	0.0000450	0.0000642	0.000175
• Ages 65+	0.0000900	0.0000900	0.000375

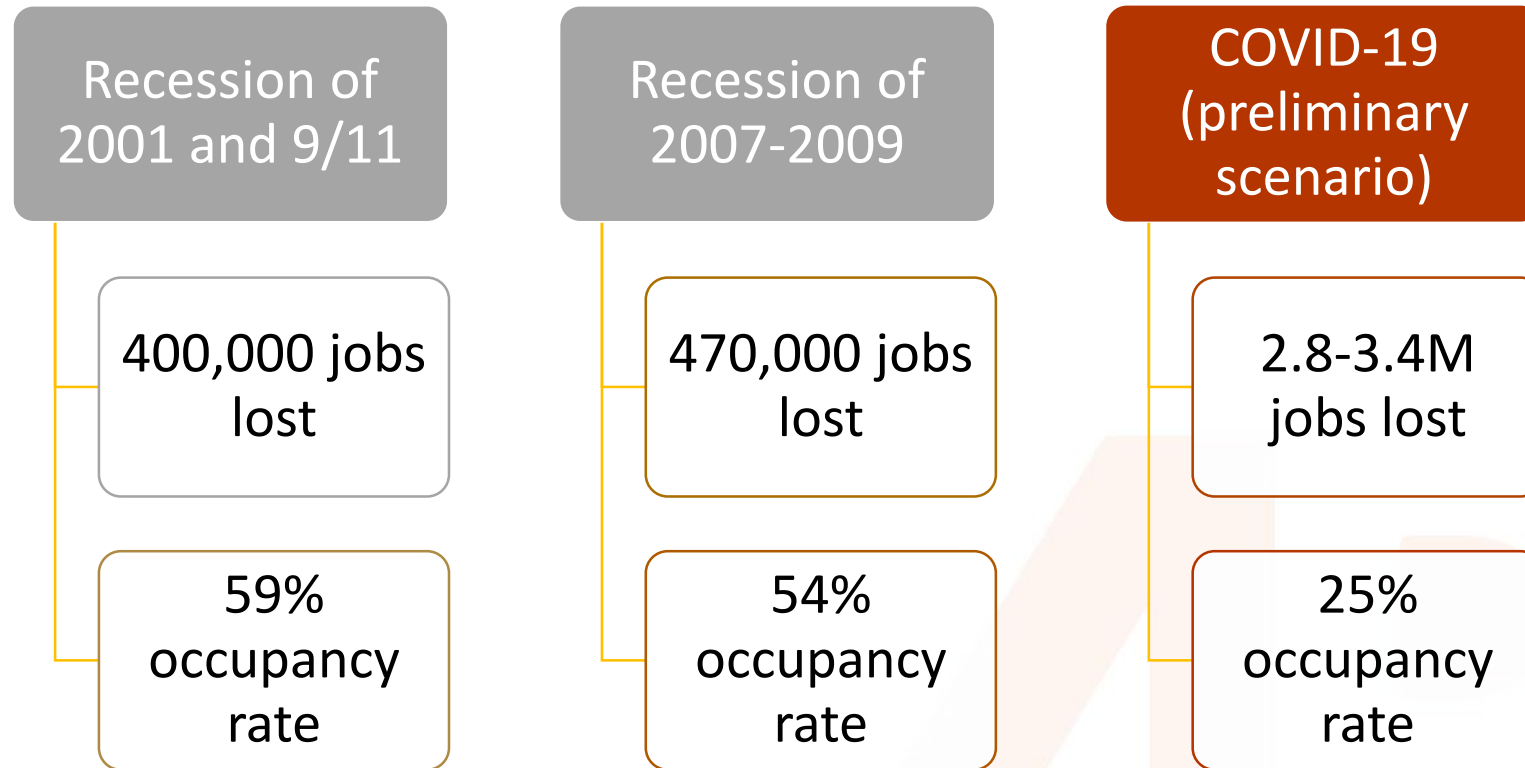
Containment Scenario	Moderate case	Severe case	Critical case
• Ages 0-4	0.0000125	0.0000383	0.000090
• Ages 5-14	0.0000125	0.0000383	0.000090
• Ages 15-19	0.0000125	0.0000383	0.000090
• Ages 20-24	0.0000125	0.0000383	0.000090
• Ages 25-34	0.0000125	0.0000383	0.000090
• Ages 35-44	0.0000125	0.0000383	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

Scenario Timelines

Event	Assumption	Economic Disruption range			Status
		Brief	Moderate	Prolonged	
Enduring fallout [Moderate case]	Peak in new COVID-19 cases for U.S. as a whole by mid-April [May 2020 reboot]	1 Quarter [2020 Q2]	No influence	No influence	Quick recovery
Economic tendency [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
Delayed relief response [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:

Swedish Twin Registry (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

Industry-Specific Measures

- ▶ Travel spending losses for the week ending on March 28th reached \$3.4 billion in the Northeast, \$2.6 billion in the Midwest, \$6.3 billion in the South, and \$5.5 billion in the West
- ▶ Through March 28th, the cumulative losses for the month tallied \$8.6 billion for the Northeast, \$6.1 billion for the Midwest, \$14.2 billion for the South, and \$13.4 billion for the West
- ▶ The Northeast leads all regions in percentage losses for the week with an 83% decline; percentage lost among other regions for the week was 78% for the Midwest, 80% for the South, and 82% for the West
- ▶ Hawaii surpassed New York with the greatest percentage decline of any state, registering a loss of 90%

TOTAL WEEKLY TRAVEL SPENDING (\$ MILLIONS)								
WEEK ENDING	2/8	2/15	2/22	2/29	3/7	3/14	3/21	3/28
Georgia	557.0	577.0	569.0	582.0	558.0	479.0	212.0	135.0
YEAR-OVER-YEAR NET CHANGE IN WEEKLY TRAVEL SPENDING (\$ MILLIONS)								
Georgia	-28.0	-7.0	-15.0	-2.0	-60.0	-139.0	-405.0	-483.0

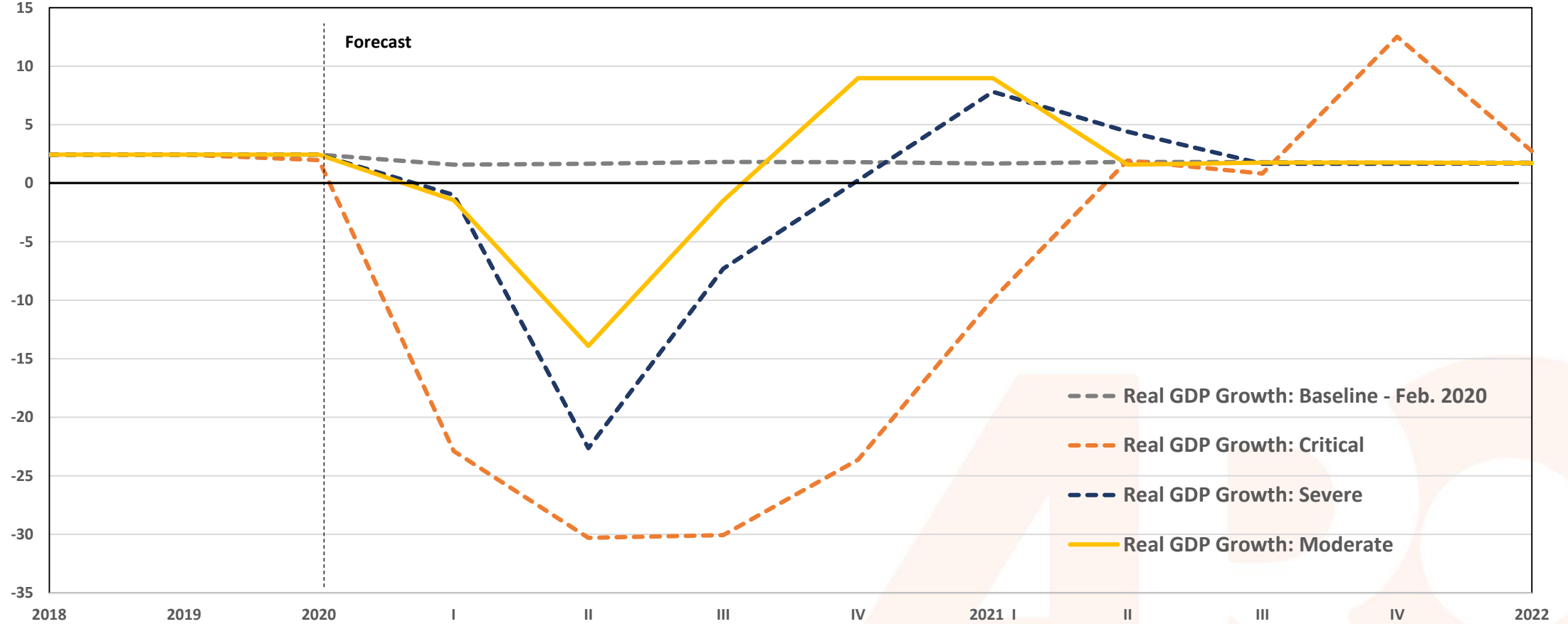
Source:

Tourism Economics, an Oxford Economics Company, with data inputs from Swedish Twin Registry (STR), Airline Data Inc, the Transportation Security Administration, and the U.S. Travel Association

Quarterly U.S. Real GDP Growth

2020q1-2022

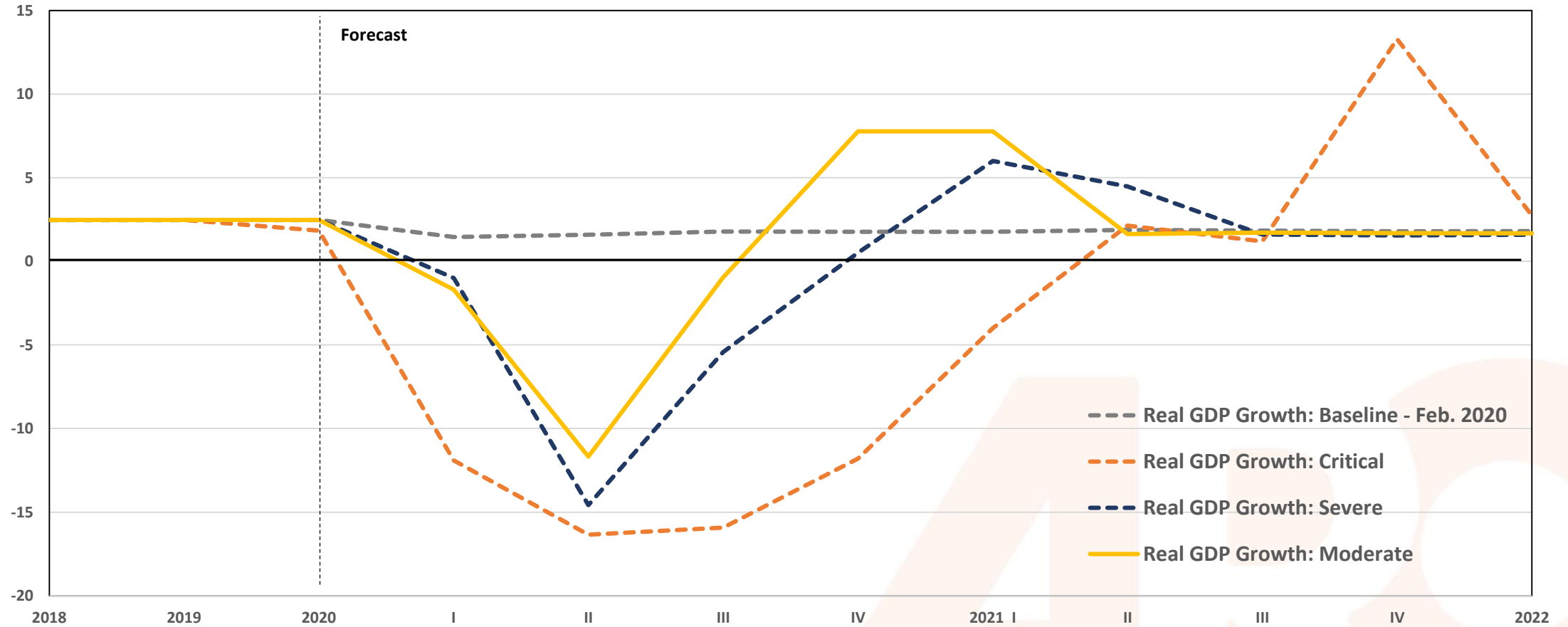
Percent, SAAR



Quarterly Georgia Real GSP Growth

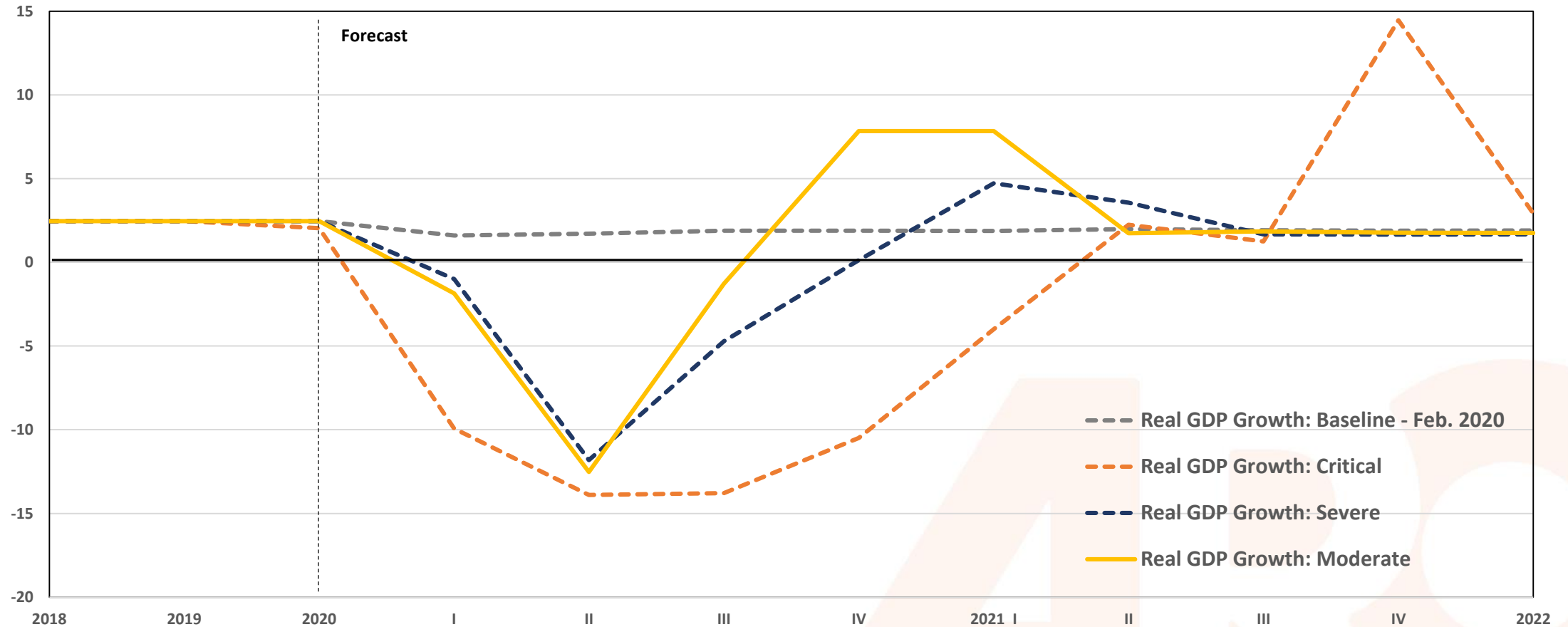
2020q1-2022

Percent, SAAR



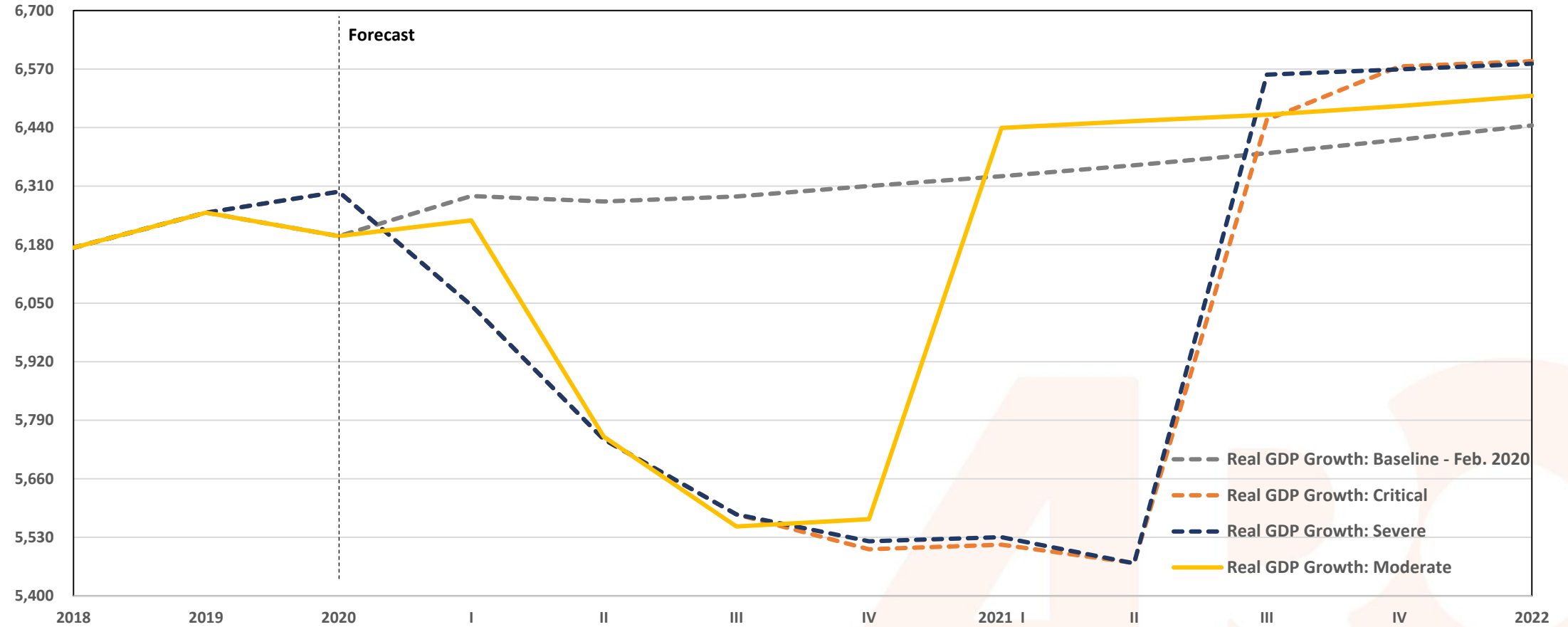
Quarterly Metro Atlanta Real GRP Growth 2020q1-2022

Percent, SAAR



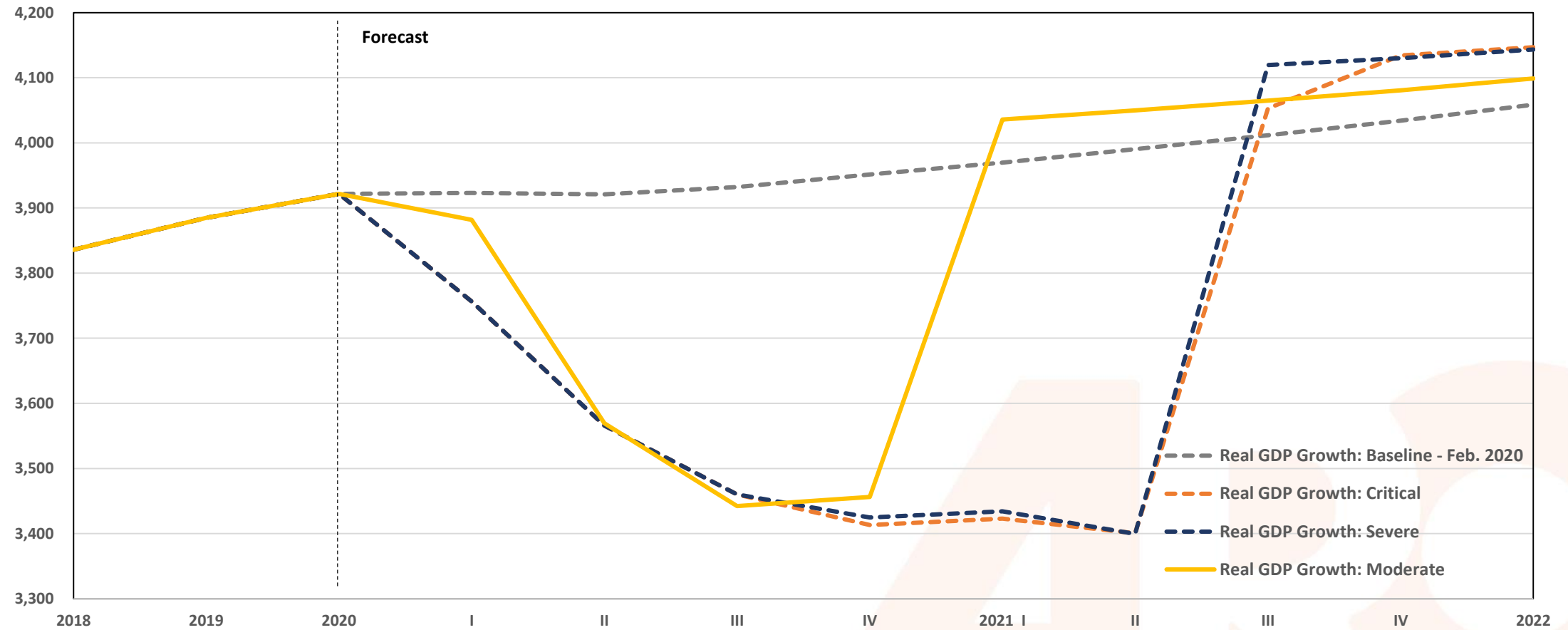
Quarterly State Employment (Total) 2020q1-2022

in Thousands



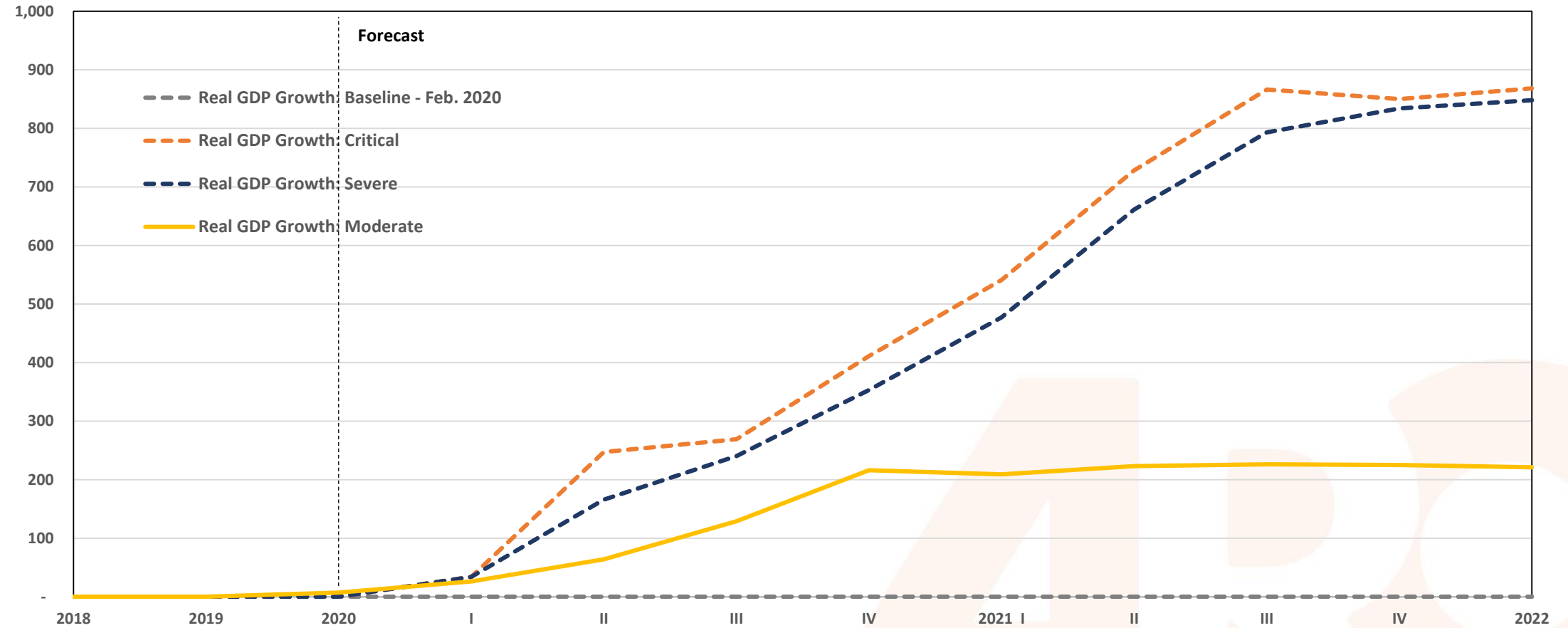
Quarterly Metro Atlanta Employment (Total) 2020q1-2022

in Thousands



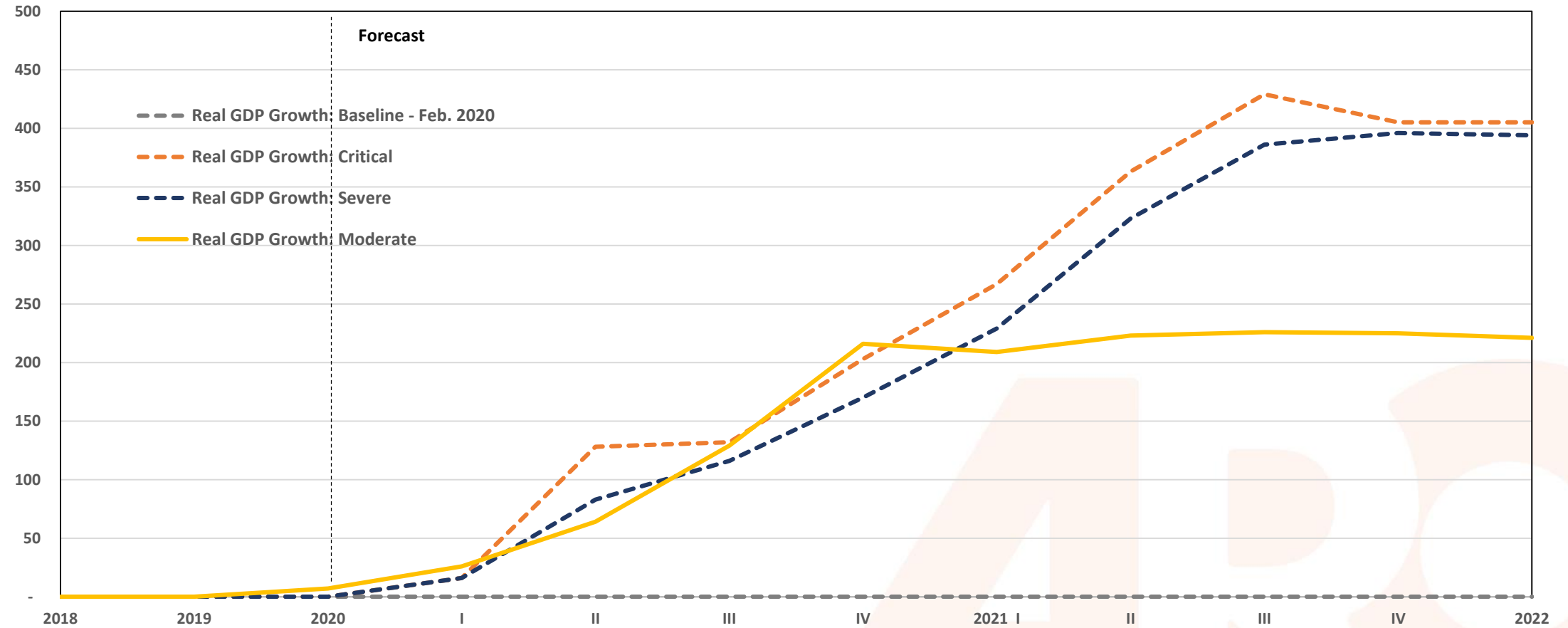
Quarterly State Case Fatality Response (CFR) 2020q1-2022

Deaths



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

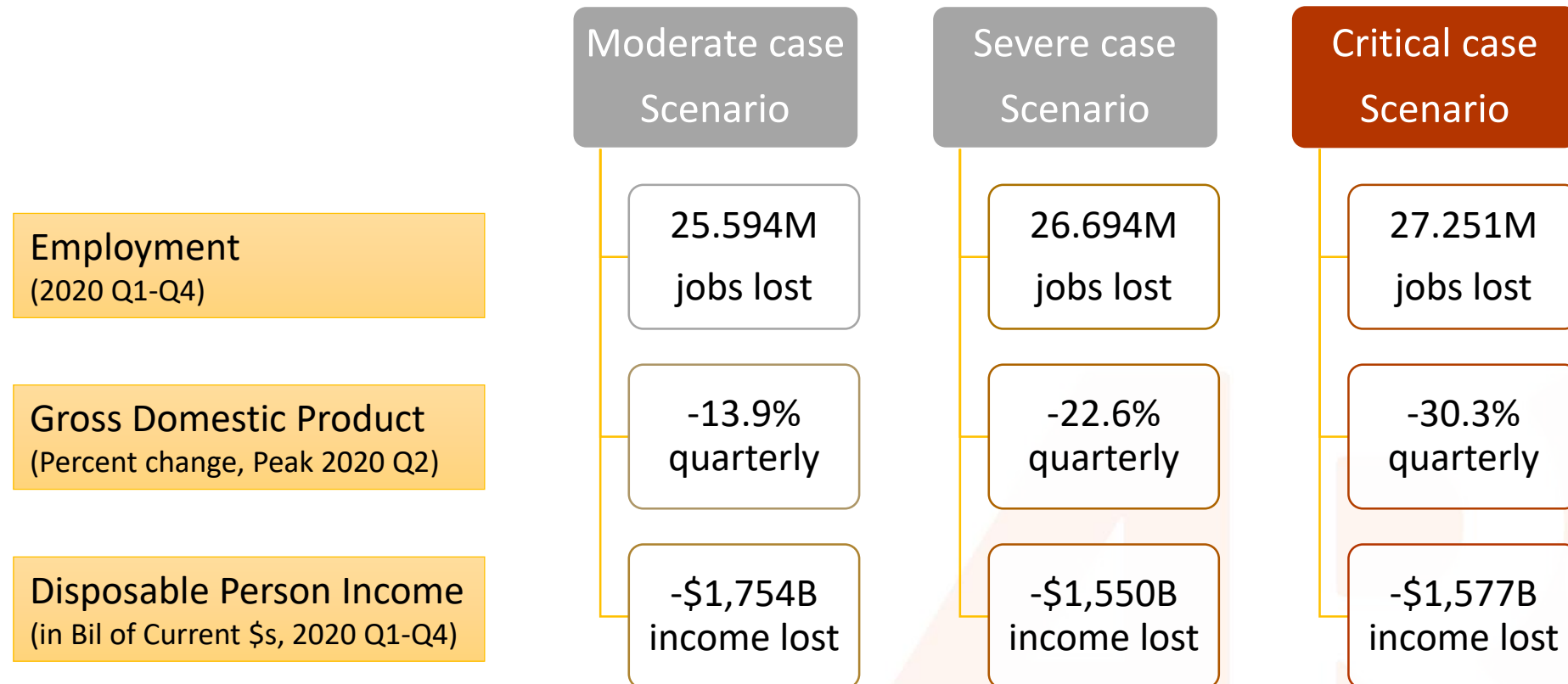
Deaths



U.S. Economic Outlook

[Aggregate impacts]

- Figure displays alternate control forecast comparative statistics from a national perspective as an aggregate of quarters 1 through 4 in 2020



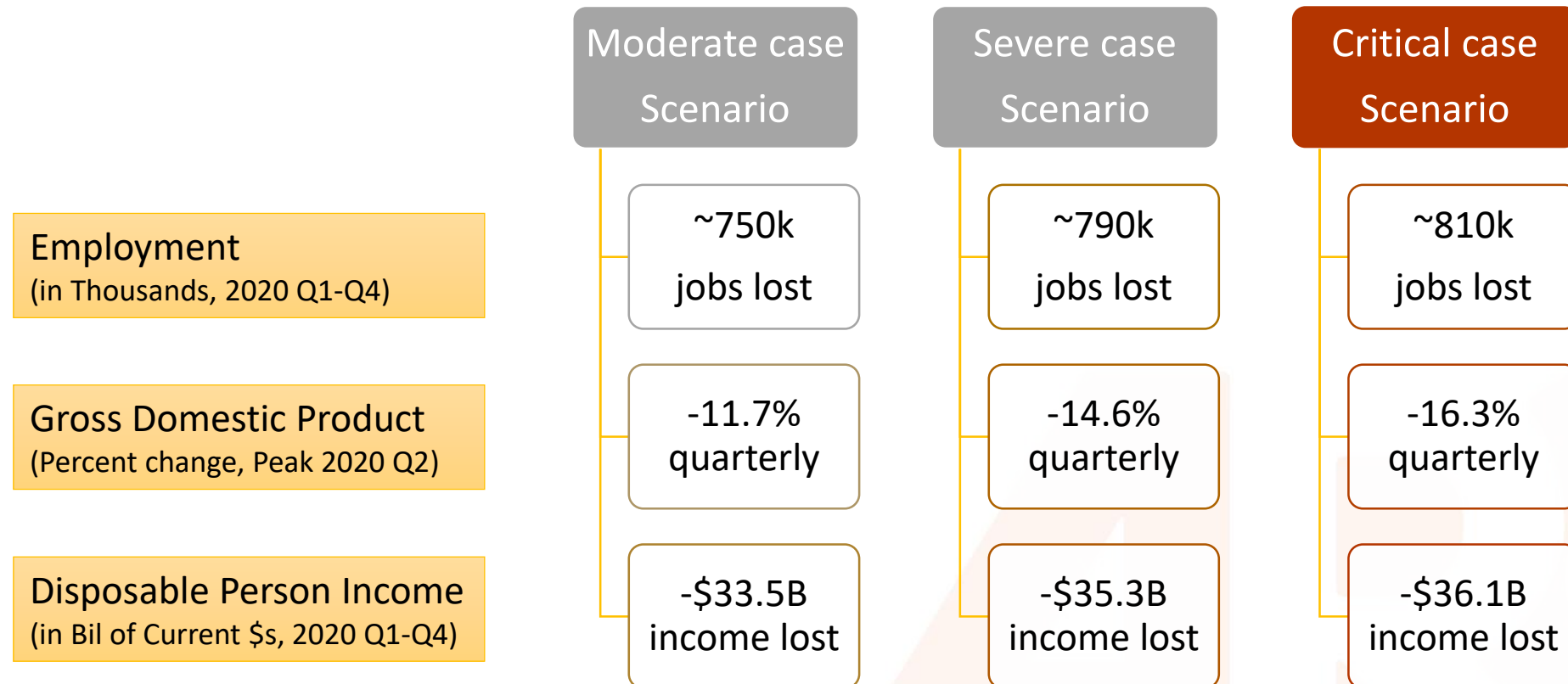
Source:

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

Georgia Economic Outlook

[Aggregate impacts]

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



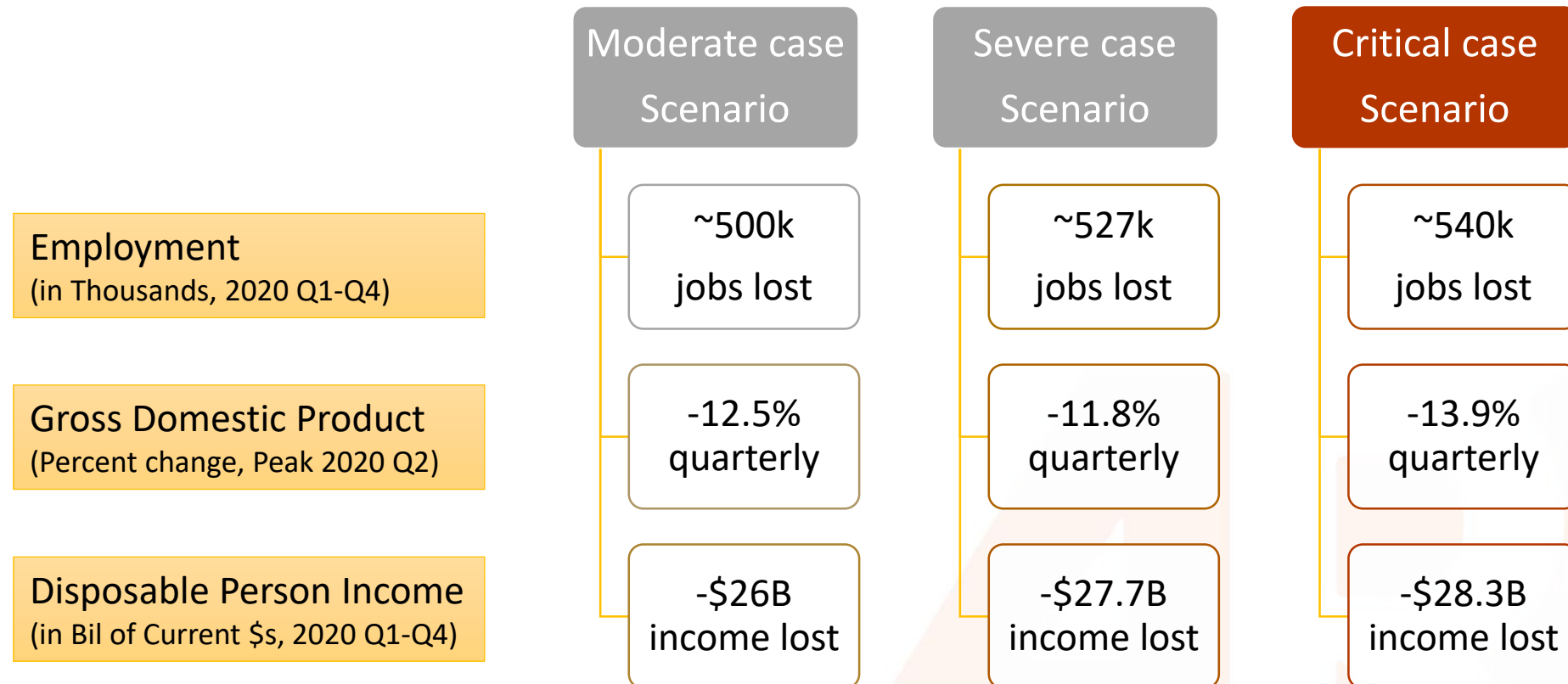
Source:

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

What's Next?

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

