

COVID-19: Q&A Update

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April 2020

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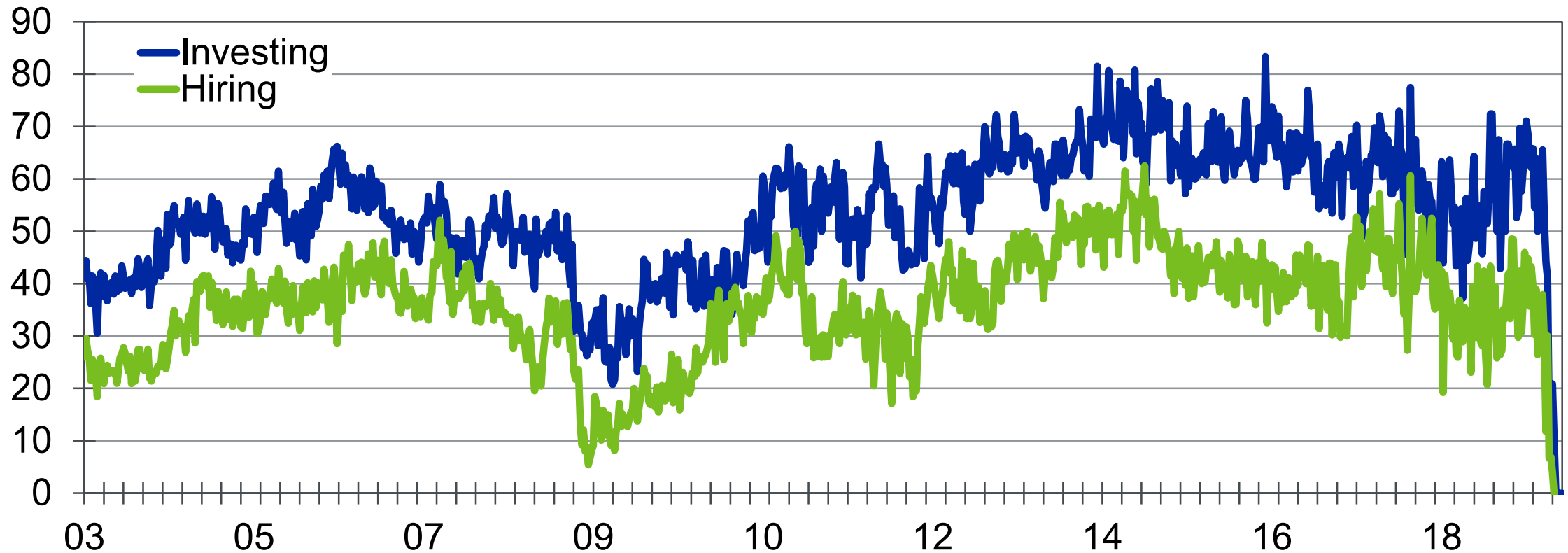


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Businesses Batten Down the Hatches

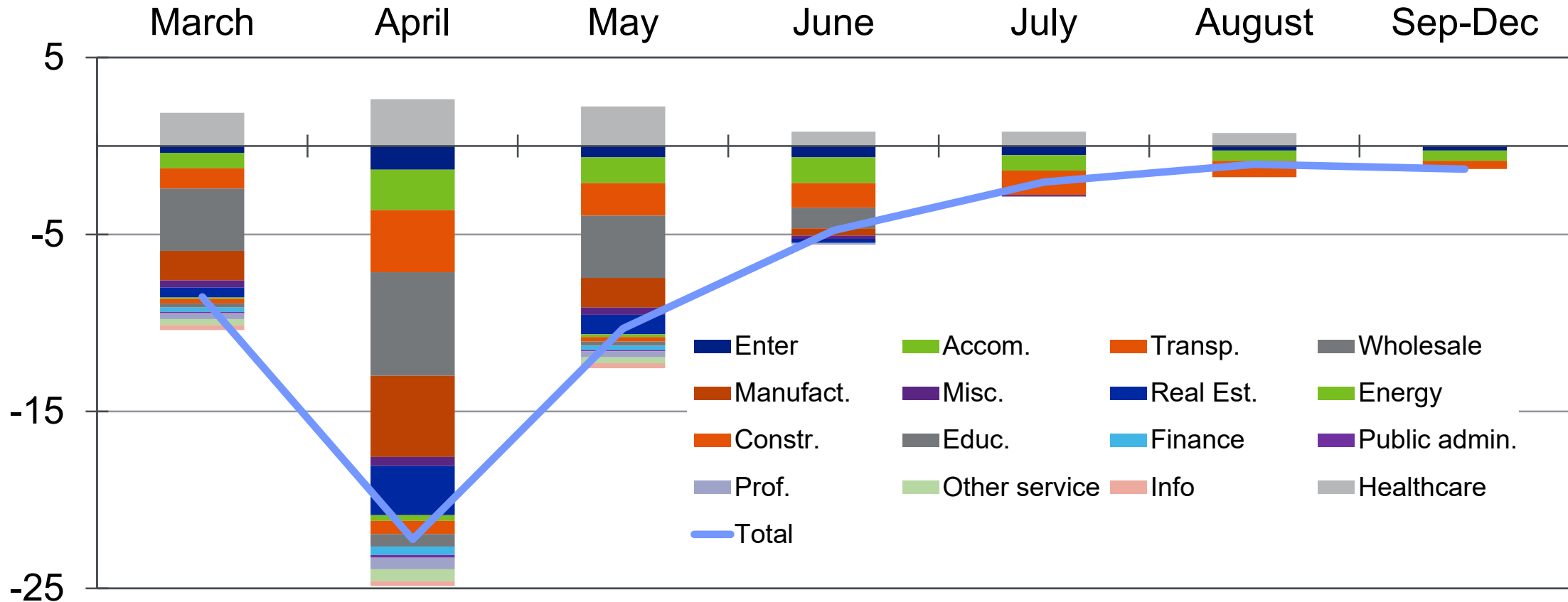
% of respondents to Moody's Analytics business survey that are ...



Source: Moody's Analytics

Business Lockdowns Hit Hard

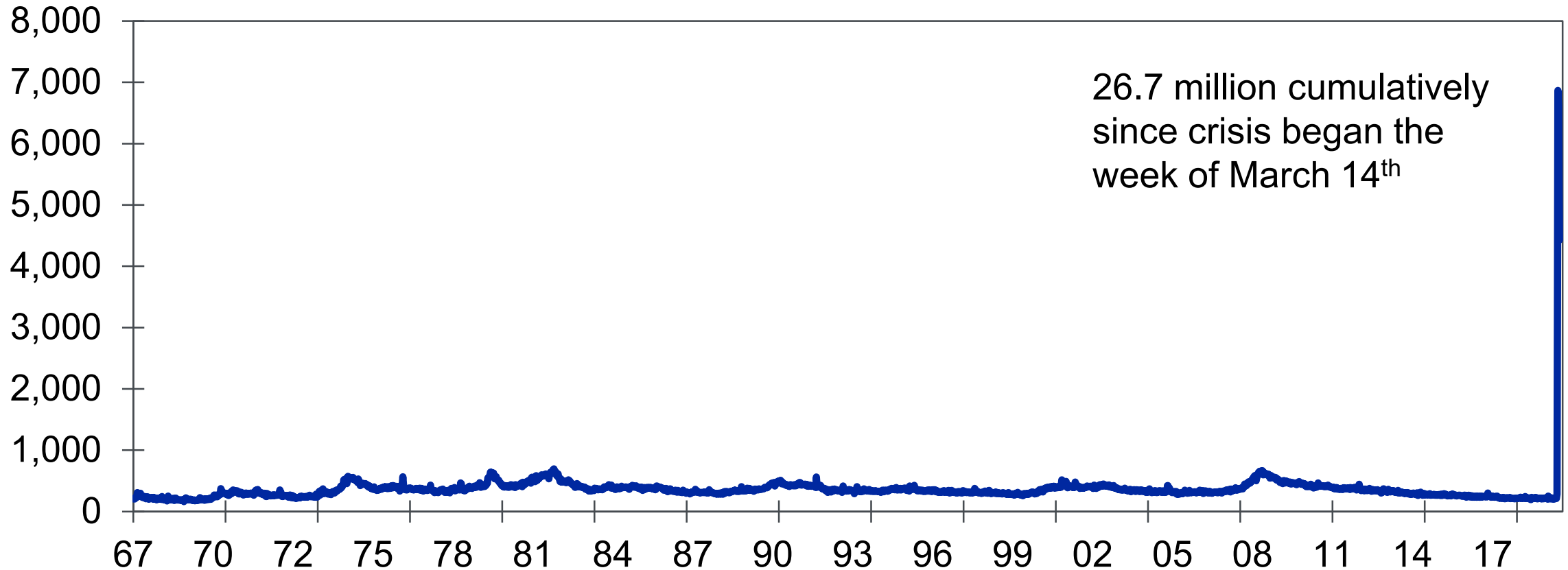
Deviation from typical U.S. GDP, ann ppts, by industry 2020



Source: Moody's Analytics

Unemployment Surges

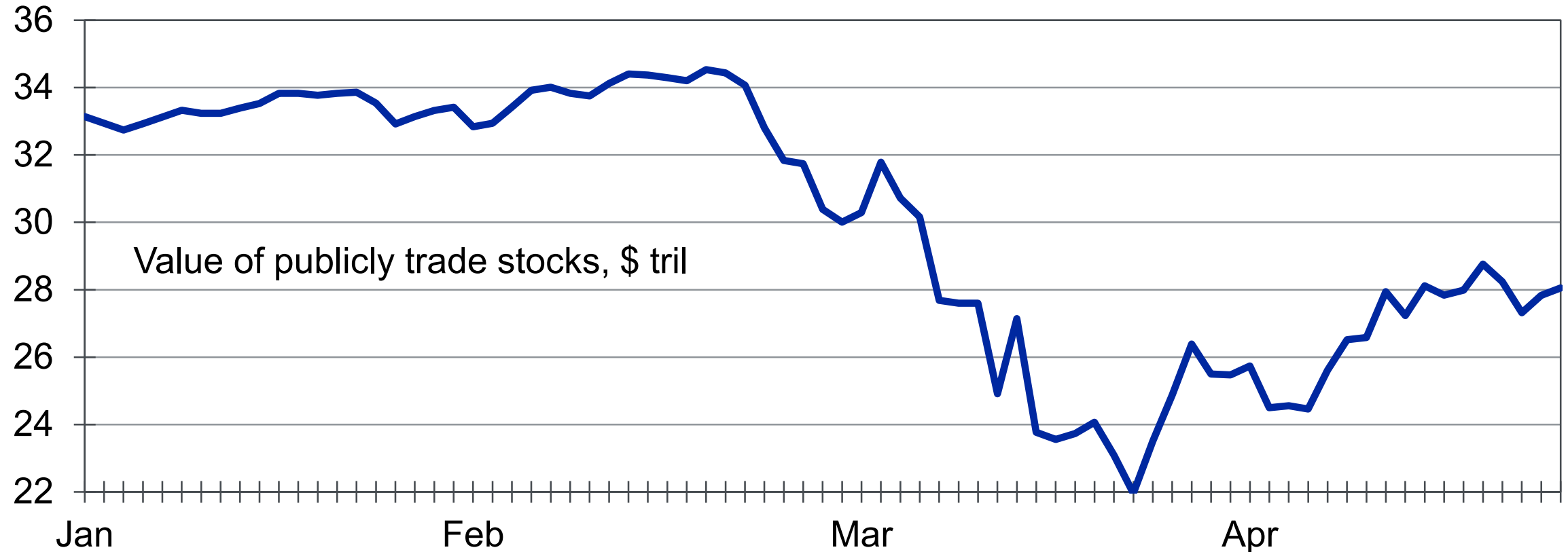
Unemployment insurance claims, ths



Sources: Employment & Training Administration, Moody's Analytics

Smaller Nest Eggs

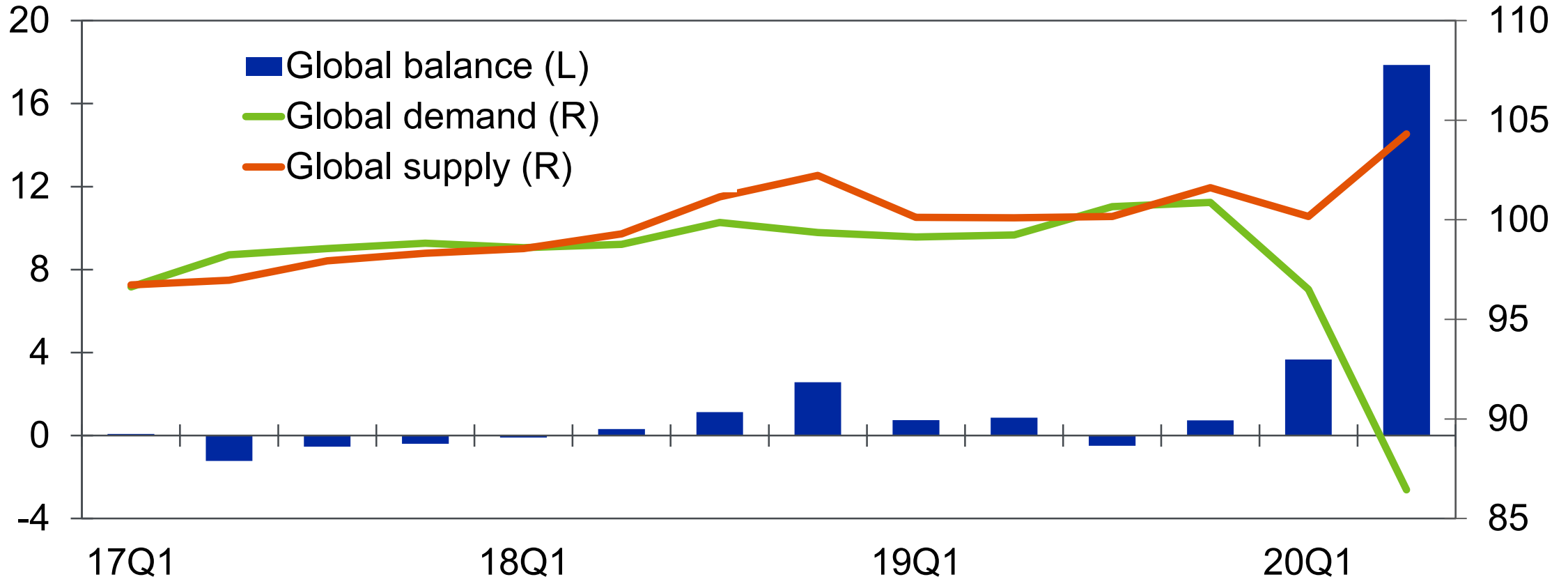
Wilshire 5000



Sources: Wilshire 5000, Federal Reserve, Moody's Analytics

Global Oil Glut

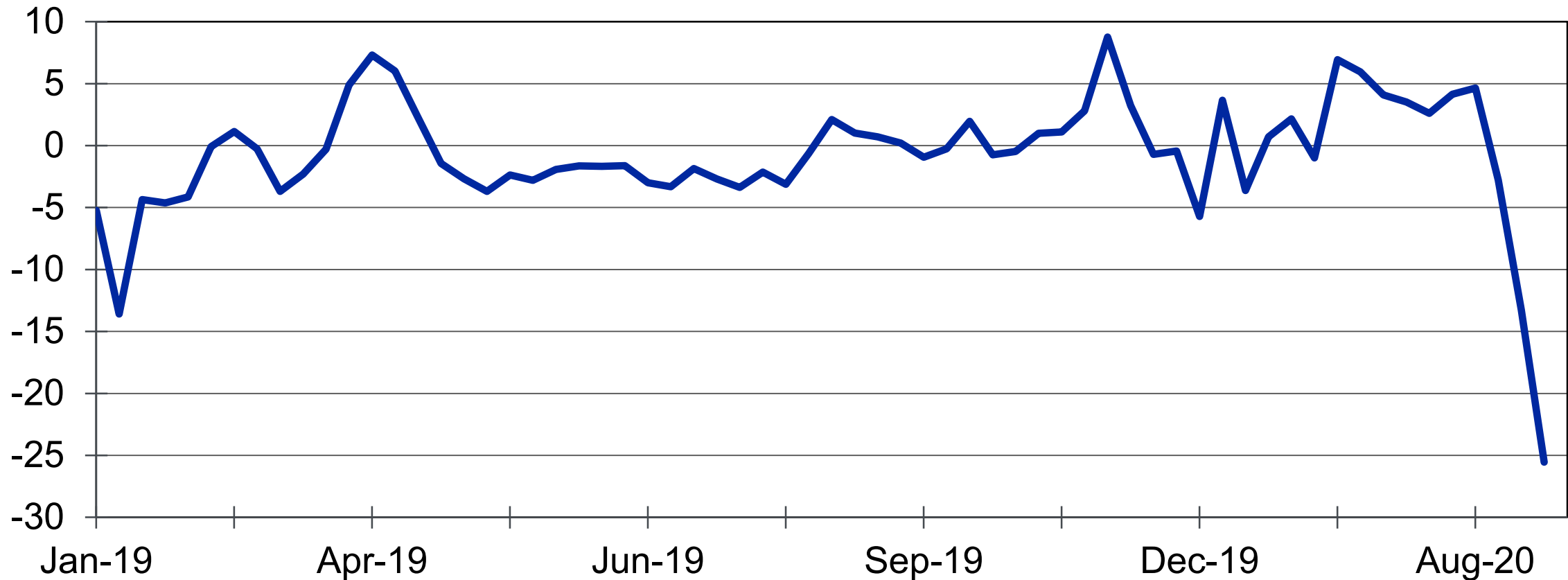
Mil barrels per day



Sources: International Energy Agency, Moody's Analytics

Business Start Ups Plunge

Start ups with high propensity to hire, % chg yr ago



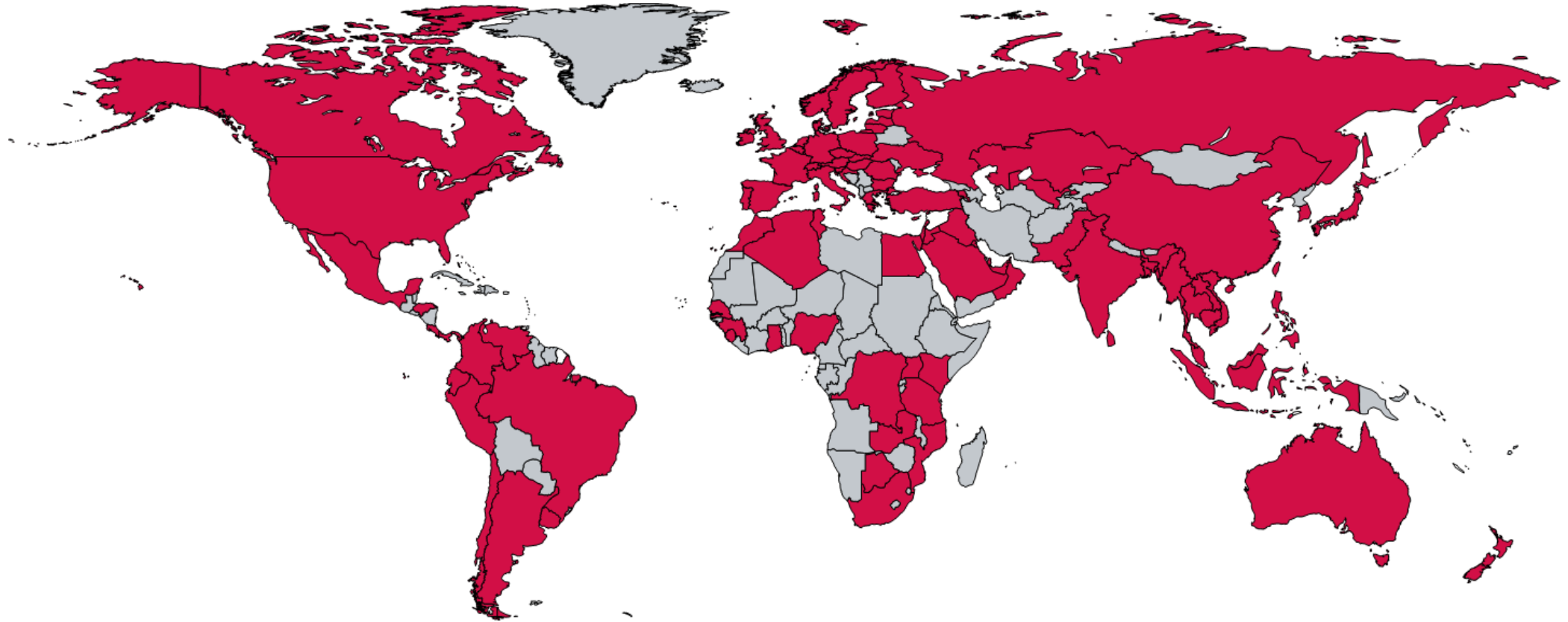
Sources: Census Department, Moody's Analytics

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Global Recession

Unprecedented Global Economic Downturn...

Economies in red are expected to suffer a recession in 2020



Source: Moody's Analytics

...That Is Intensifying

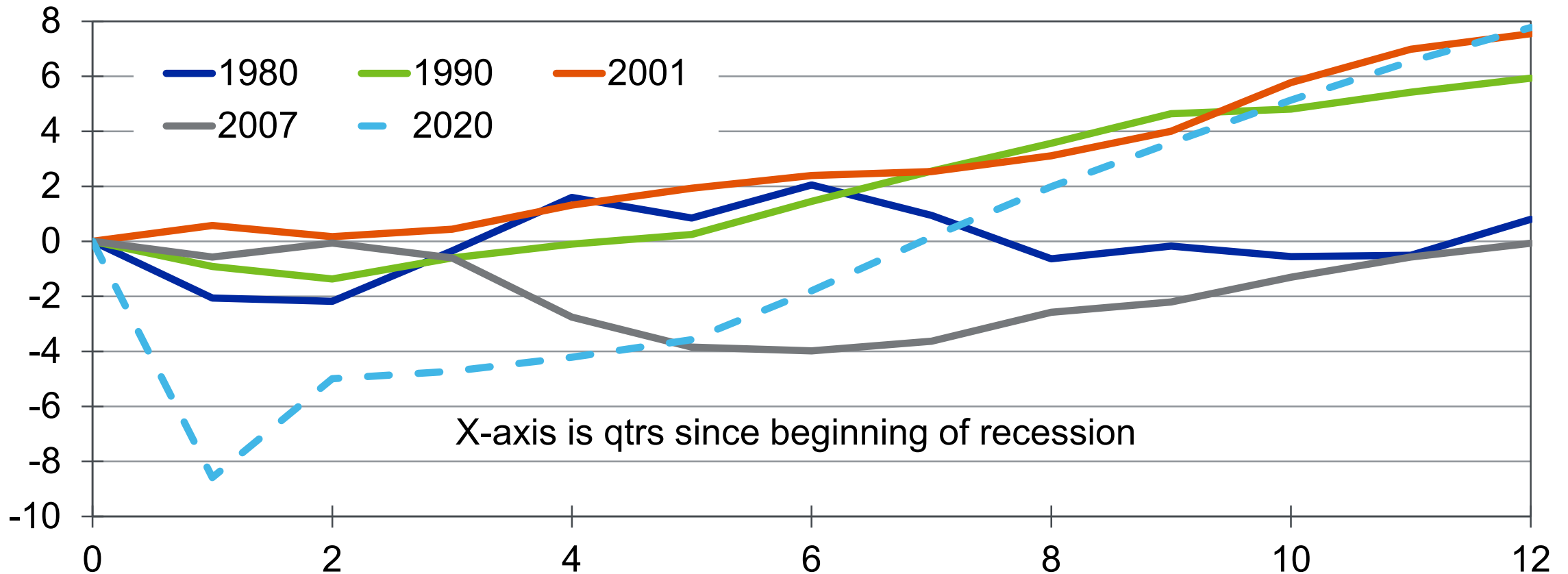
Real GDP growth, annualized % change

		2020Q1	2020Q2	2020Q3	2020Q4	2019	2020
World	January base	2.7	2.9	2.7	2.6	2.5	2.6
	March base	0.7	1.6	3.5	2.8	2.4	1.9
	April base	-10.9	-22.1	19.9	4.5	2.4	-4.2
United States	January base	1.5	2.2	1.5	1.2	2.3	1.8
	March base	1.1	-0.4	1.7	2.4	2.3	1.3
	April base	-8.1	-30.2	16.6	0.4	2.3	-5.8
China	January base	7.2	6.6	5.5	5.8	6.1	6.2
	March base	-0.9	5.1	11.4	5.8	6.1	4.4
	April base	-29.0	14.9	27.7	13.0	6.1	-0.1
Brazil	January base	2.0	2.4	2.5	2.6	1.1	2.2
	March base	1.3	2.0	2.5	2.6	1.1	2.0
	April base	-8.8	-24.3	0.4	7.0	1.1	-6.1
United Kingdom	January base	1.2	1.1	1.1	1.1	1.3	1.0
	March base	0.6	0.5	1.2	1.1	1.4	0.7
	April base	-3.0	-36.7	25.8	5.8	1.4	-5.6
Euro Zone	January base	1.4	1.5	1.8	1.4	1.2	1.3
	March base	0.7	0.8	1.2	1.3	1.2	0.8
	April base	-14.8	-40.0	59.3	1.6	1.2	-7.0

Source: Moody's Analytics

A Swoosh Recovery

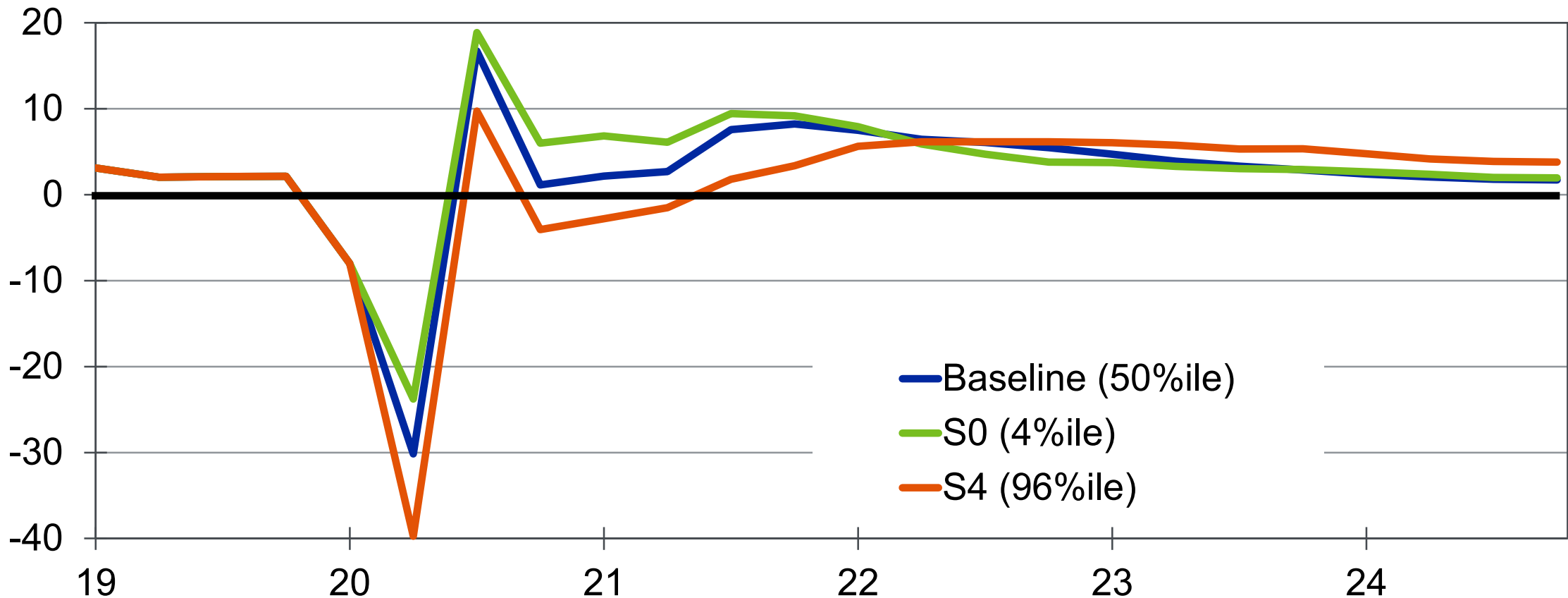
Real GDP, % change since beginning of recession...



Sources: BEA, Moody's Analytics

Output to Collapse With Gradual Recovery

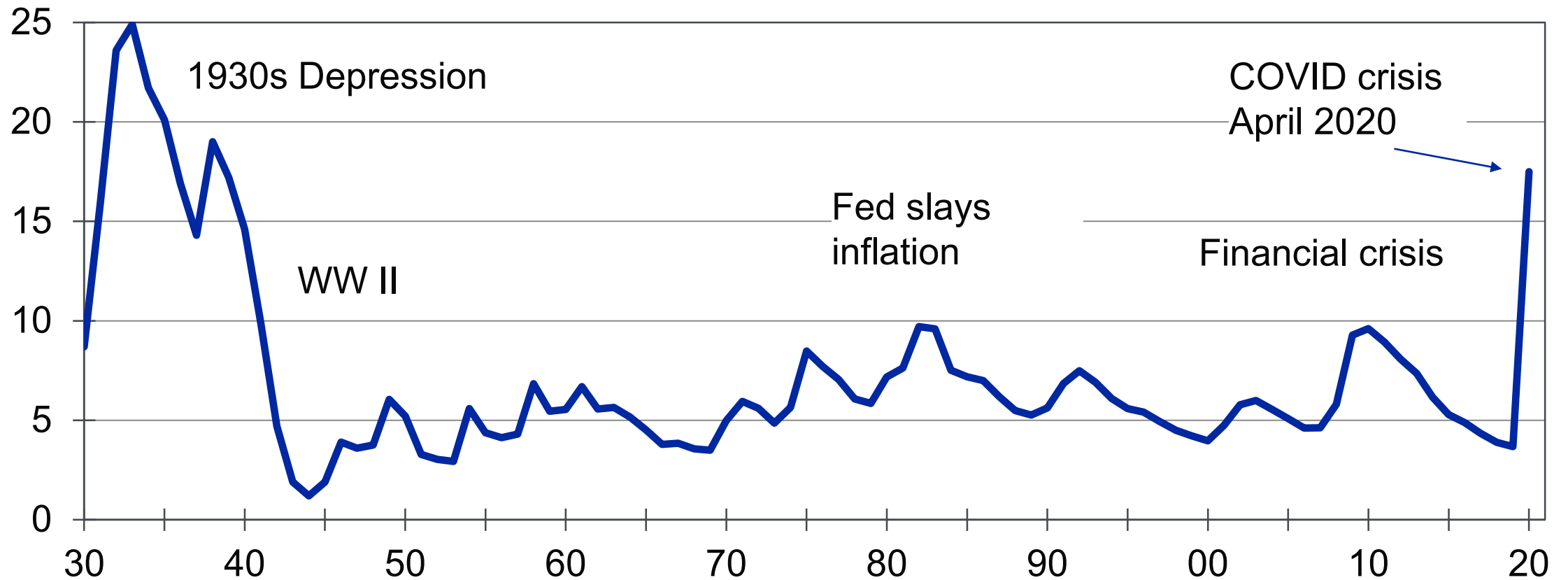
Inflation adjusted GDP, % annualized quarterly growth



Source: Moody's Analytics

Not Since the Great Depression

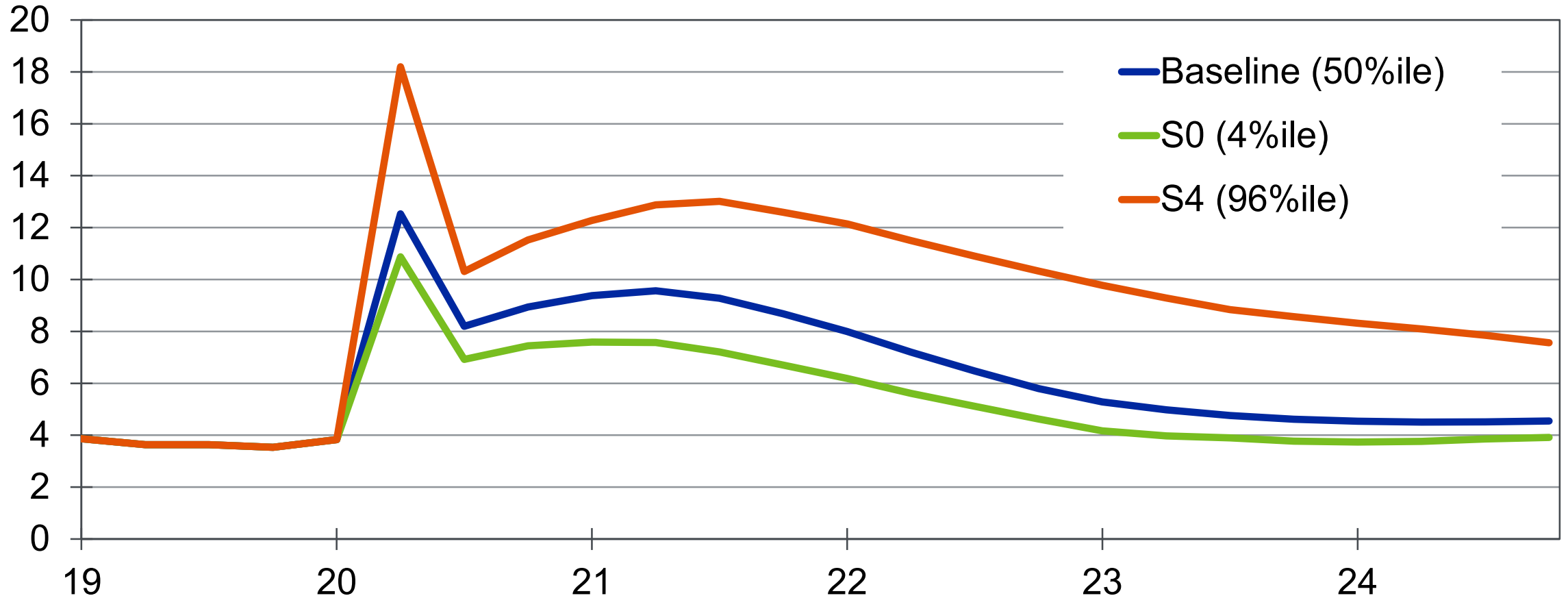
U.S. unemployment rate, %



Sources: Federal Reserve, BEA, Moody's Analytics

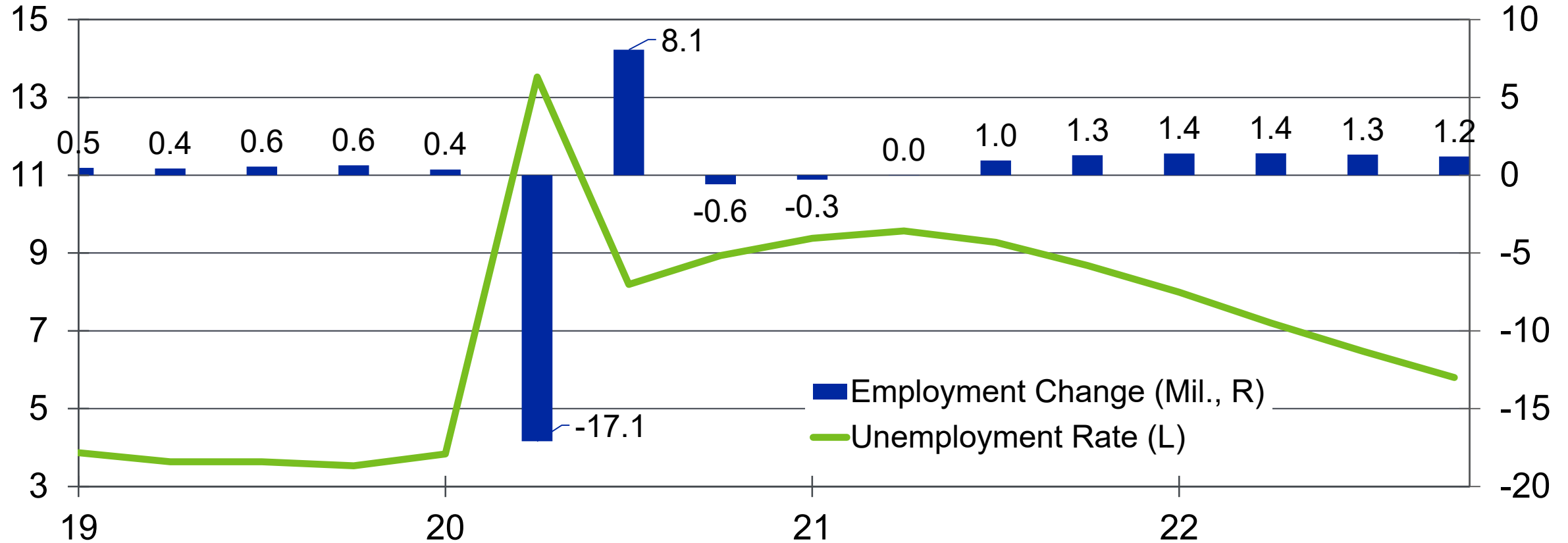
Unemployment to Spike

U-3 unemployment rate, quarterly average, %



Source: Moody's Analytics

Job Market Will Struggle to Recover




Sources: BLS, Moody's Analytics

Regional Risk Factors for COVID-19

 **Virus Exposure**

 **Demographics**

 **Tourism**

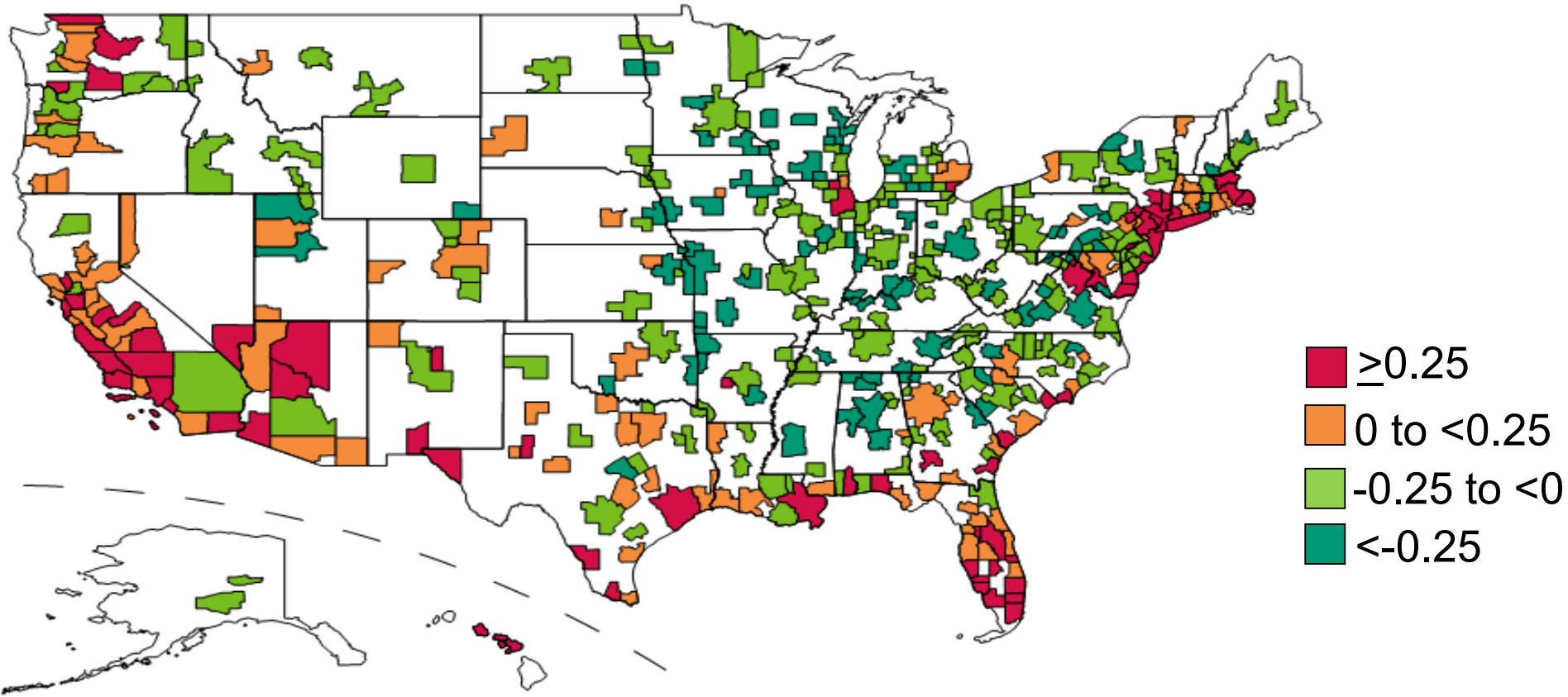
 **Global
Interconnectedness
(Trade/Travel)**

 **Finance/Investment**

 **Commodities**

Large Coastal Urban Areas Are Hit Hardest

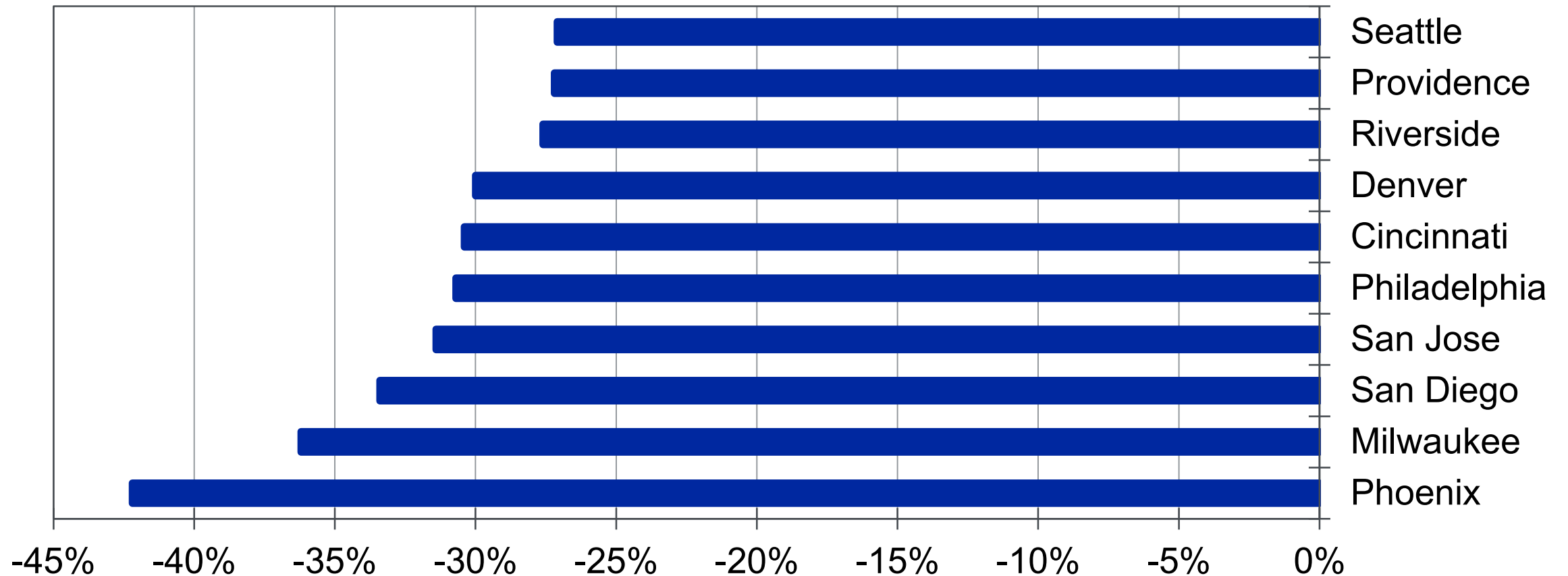
Weighted avg Z-score across rankings, 0 = metro area average



Source: Moody's Analytics

Active Listings Collapse Across Major Metros

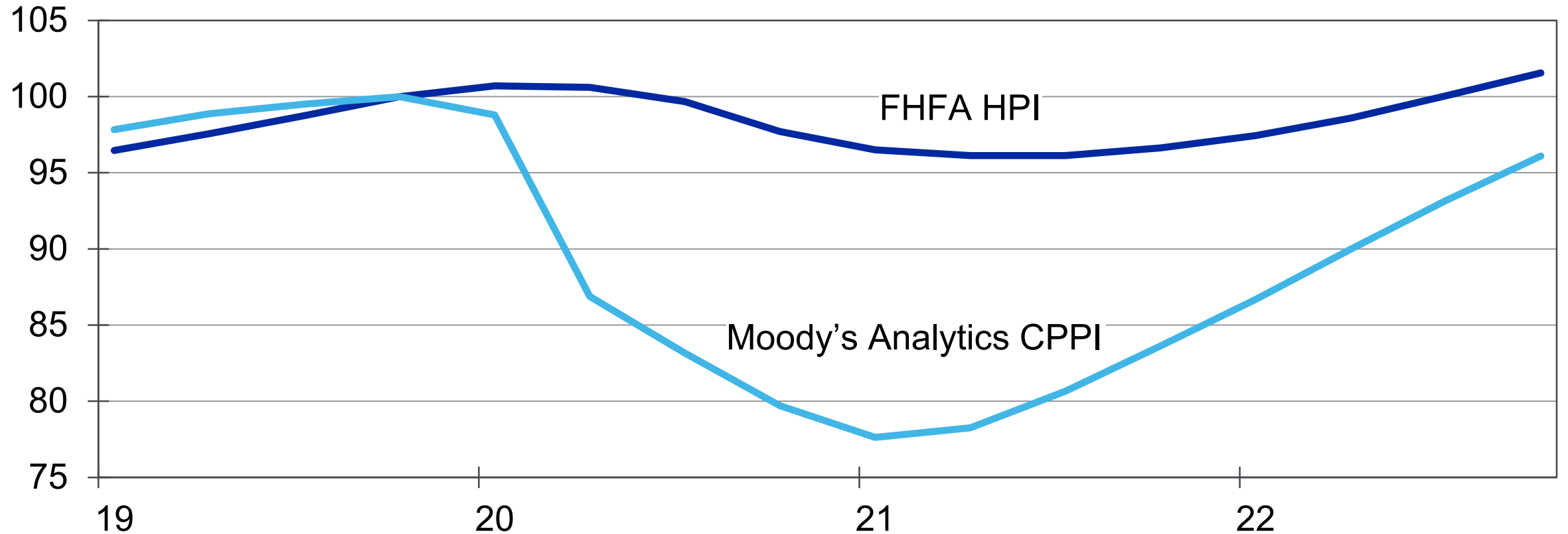
Active listing count, % yr ago



Sources: Realtor.com, Moody's Analytics

U.S. Real Estate Prices Slump

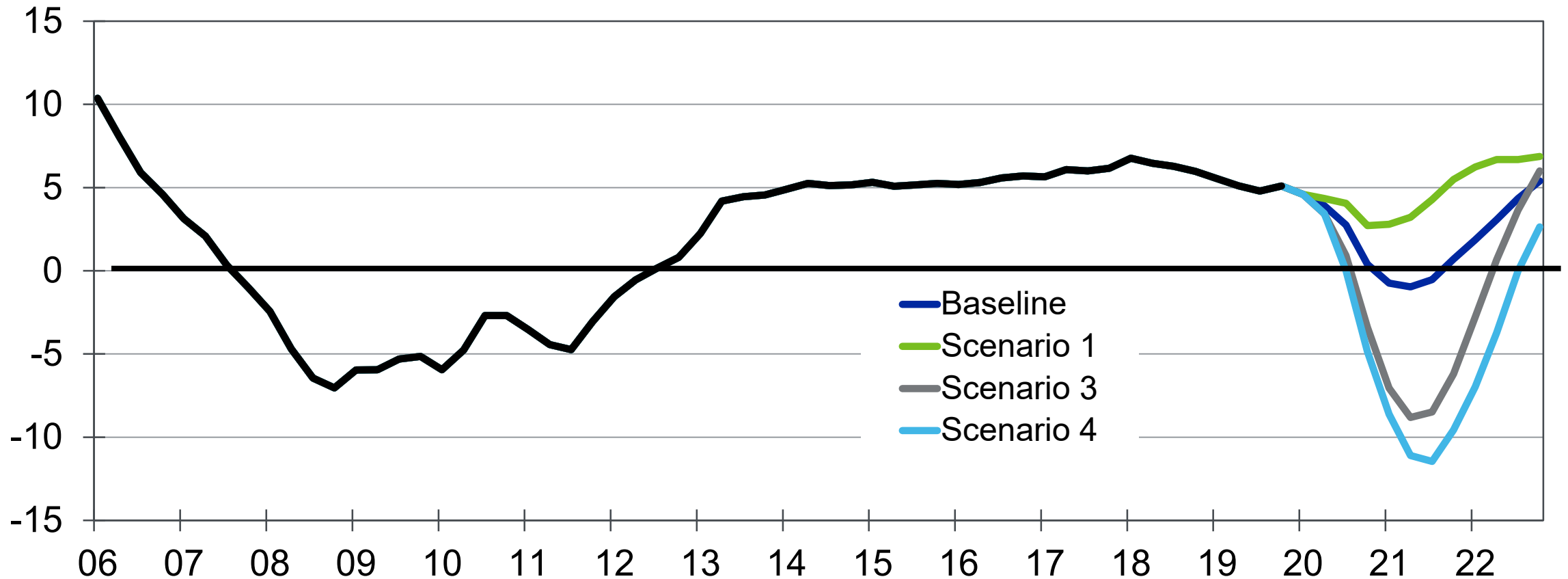
Index: 2019Q4 = 100, April baseline



Sources: FHFA, Moody's Analytics

Home Prices Could Fall Fast...

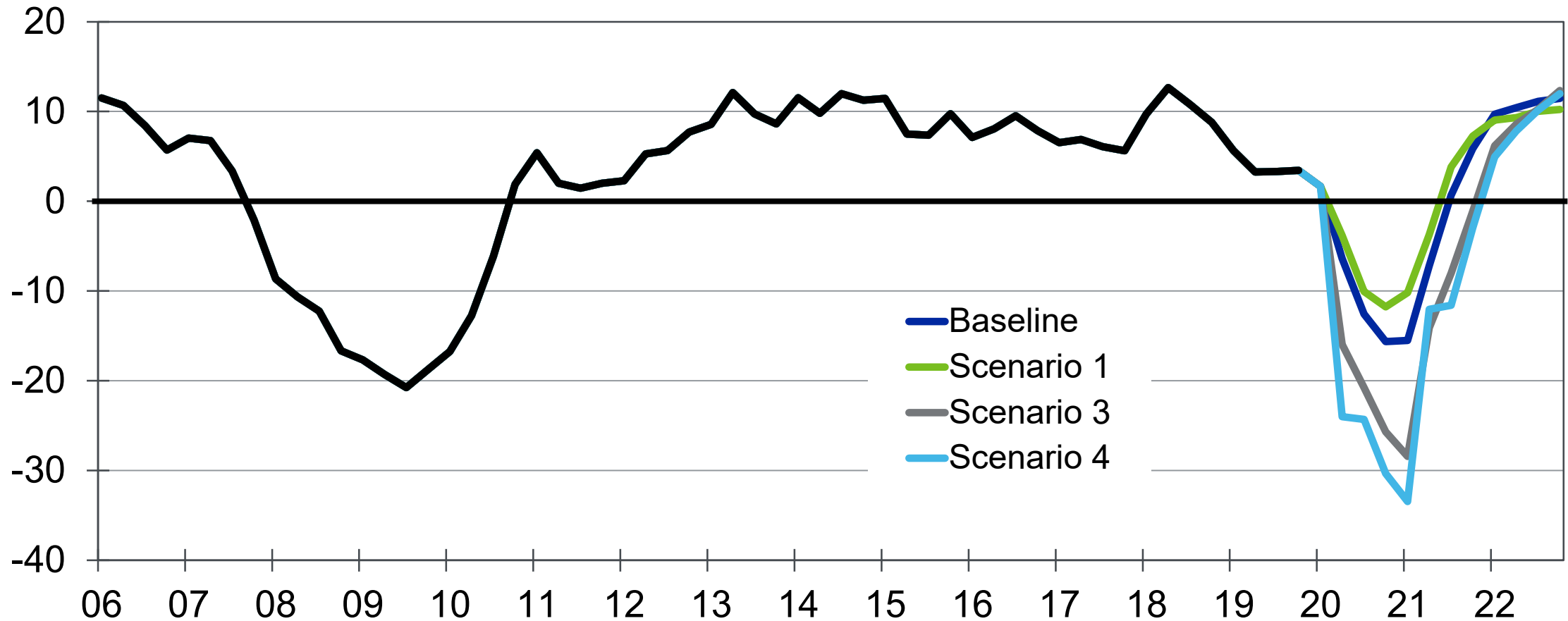
FHFA all-transactions index forecasts from March 2020 V2 vintage, % year ago



Sources: BEA, Moody's Analytics

...As Commercial Properties Are Hit From All Sides

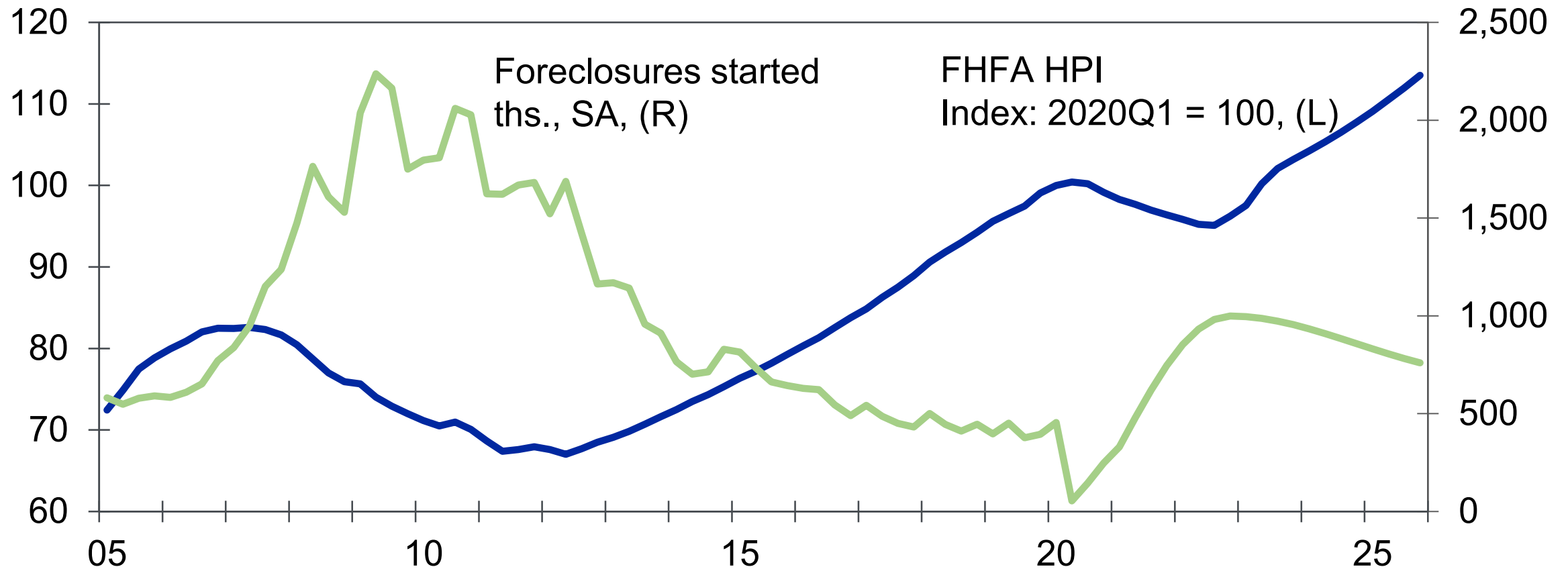
Commercial property price index, % yr ago



Sources: Reis, Moody's Analytics

House Prices Slump...Foreclosures Increase

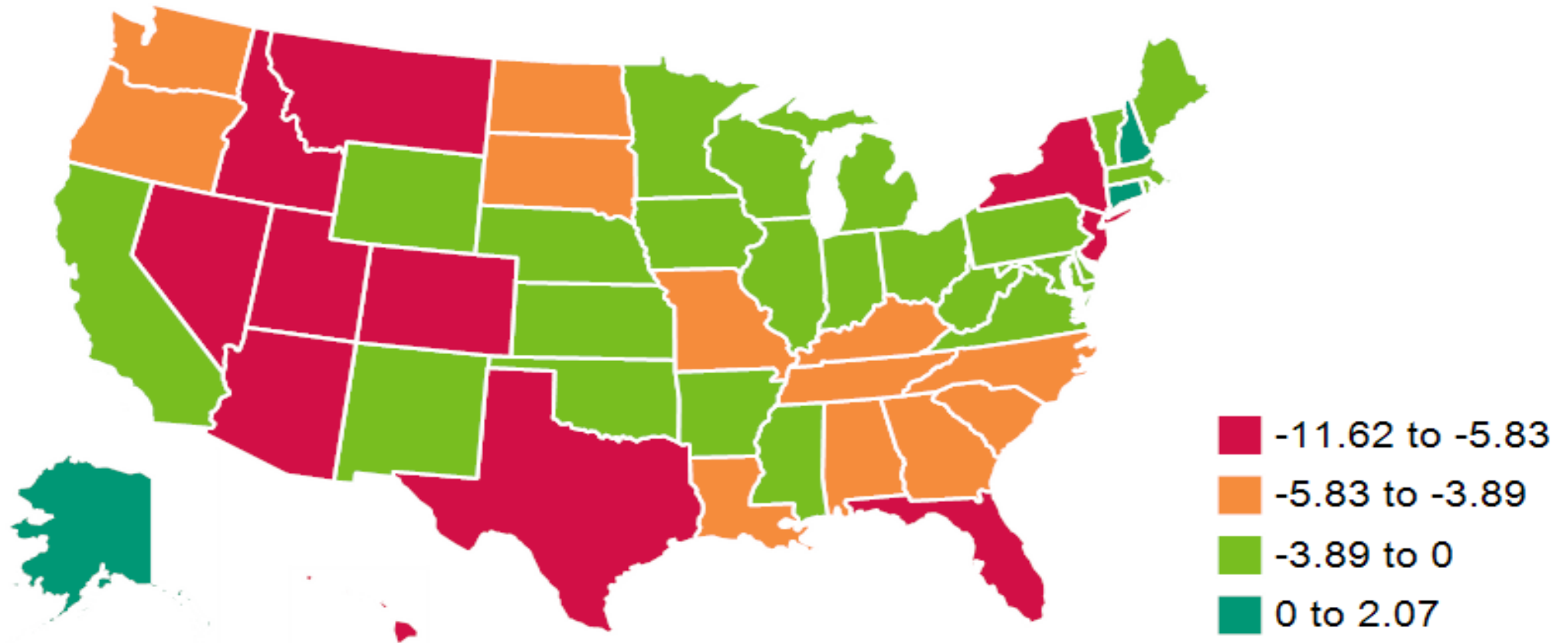
April baseline forecast



Sources: FHFA, MBA, Moody's Analytics

Price Declines Vary Throughout the Country

Baseline forecast FHFA purchase-only index for 2021Q1, % year ago



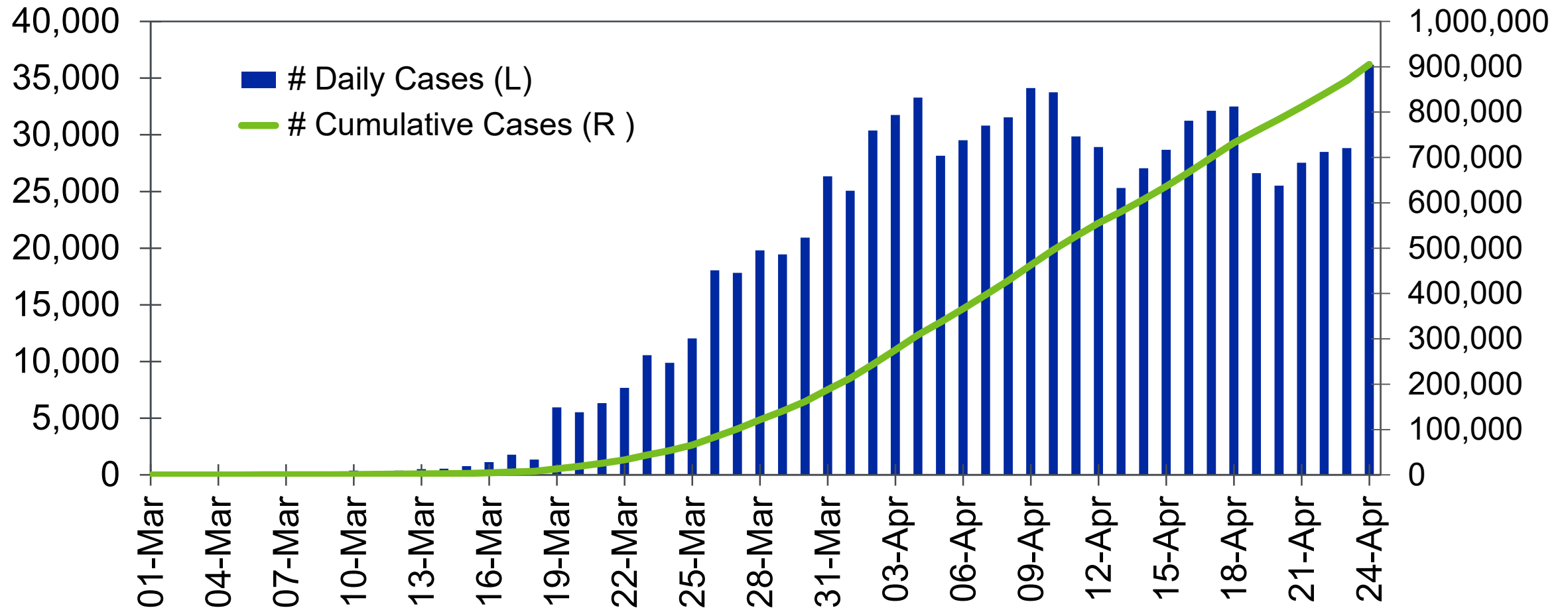
Sources: FHFA, Moody's Analytics

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Known Unknowns

U.S. New Daily Cases Hovering Around 30,000

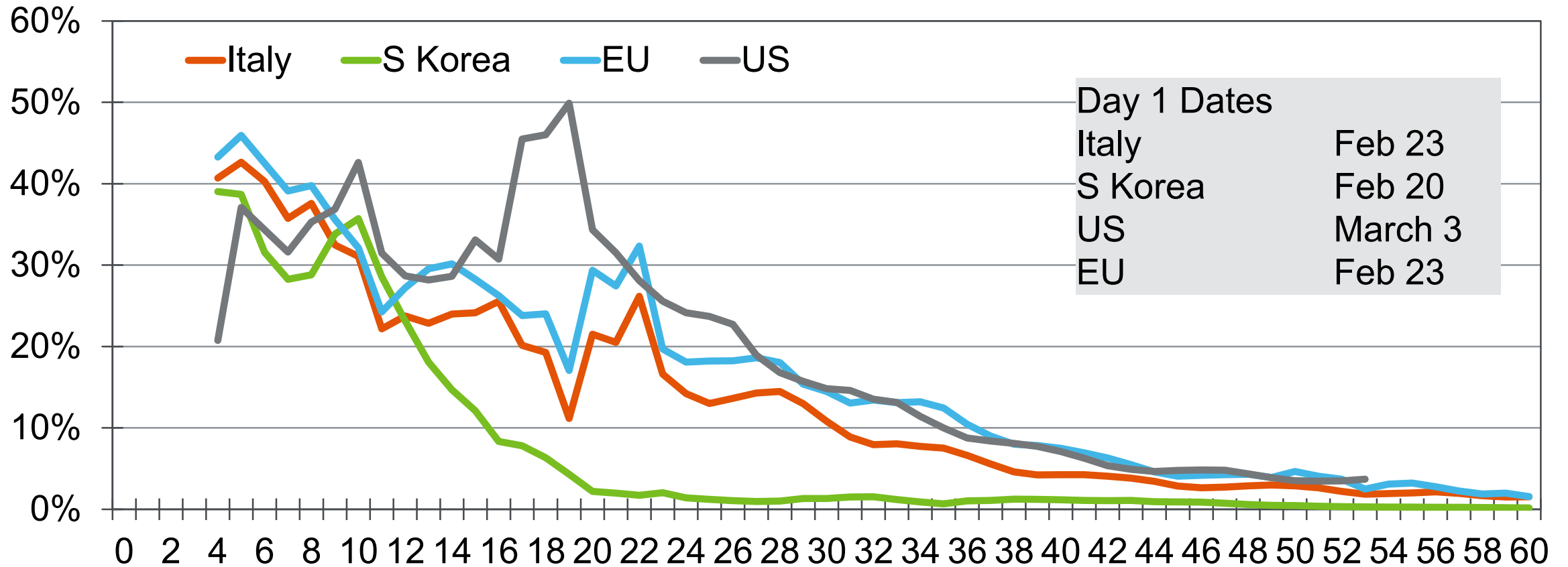
Number of confirmed COVID-19 cases



Sources: [Johns Hopkins CSSE COVID-19 Data Repository](#), Moody's Analytics

Growth Rate of COVID Cases Falling

Daily growth of COVID-19 cases, days since 100 confirmed cases, % 3-day MA



Sources: [Johns Hopkins CSSE COVID-19 Data Repository](#), Moody's Analytics

Epidemiological Assumptions

S1 Scenario

- <1 mil confirmed U.S. infections
- New infections peak in April
- 5-6% case fatality rate*
- 8% hospitalization rate
- Infections abate by June
- Surplus of hospital beds
- Surplus of ICU beds
- Surplus of ventilators

Baseline Forecast

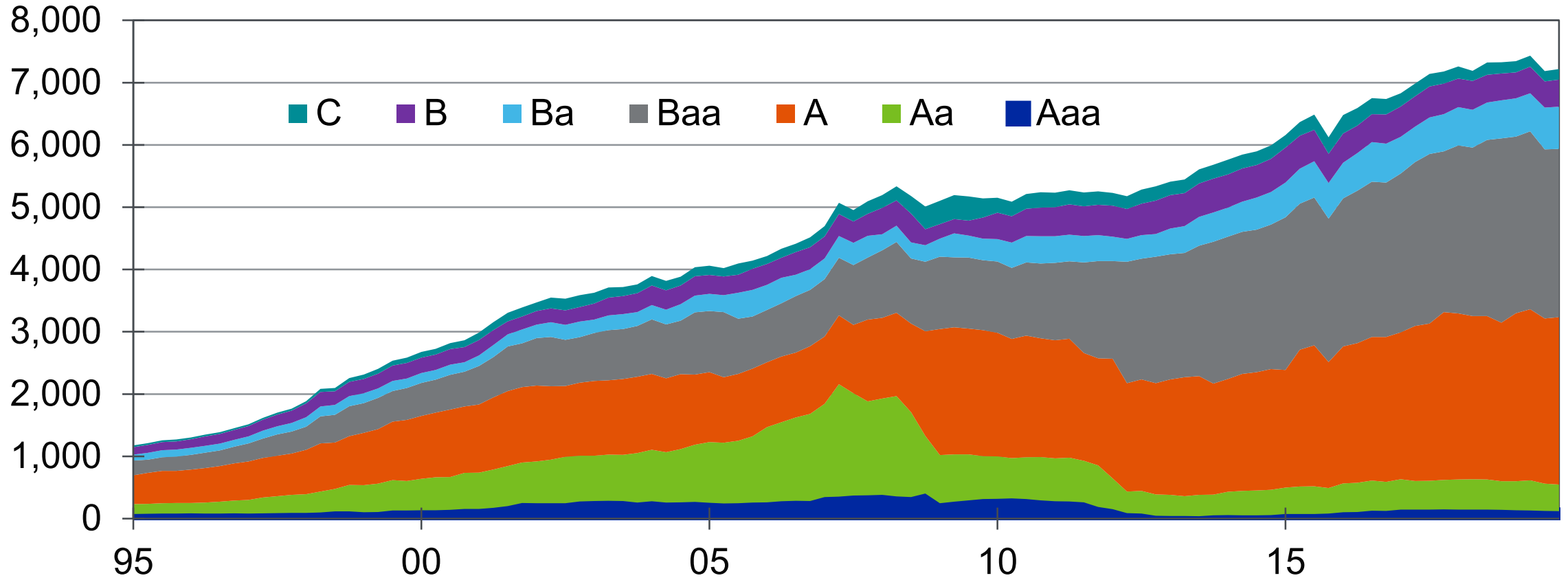
- 1-3 mil confirmed U.S. infections
- New infections peak in May
- 7-11% case fatality rate*
- 10% hospitalization rate
- Infections abate by July
- Surplus of hospital beds
- Small surplus of ICU beds
- Small surplus of ventilators

S3 Scenario

- 5-6 mil confirmed U.S. infections
- New infections peak in June
- 12-16% case fatality rate*
- 15% hospitalization rate
- Infections abate by September
- Small deficit of hospital beds
- Large deficit of ICU beds
- Large deficit of ventilators

Federal Reserve Must Shore Up the Firewall

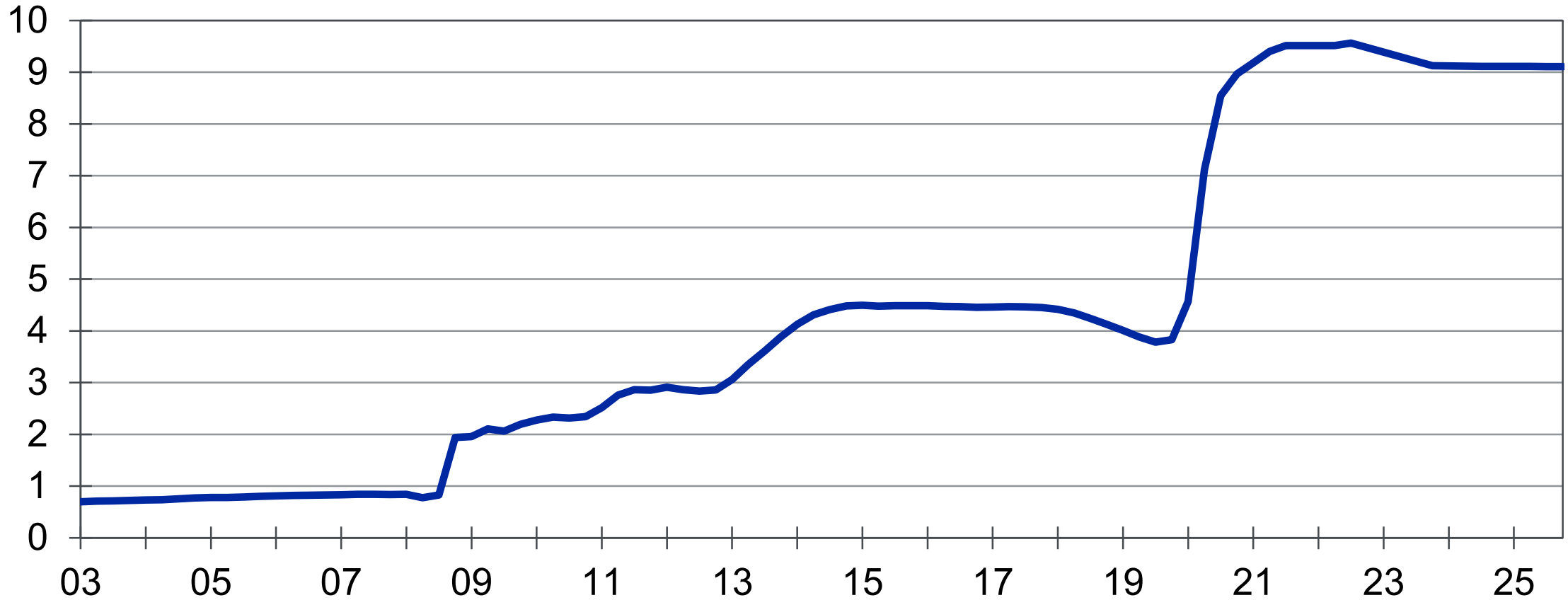
Corporate debt outstanding by rating, \$ bil



Sources: Moody's Investor Service, Moody's Analytics

Up, Up and Away

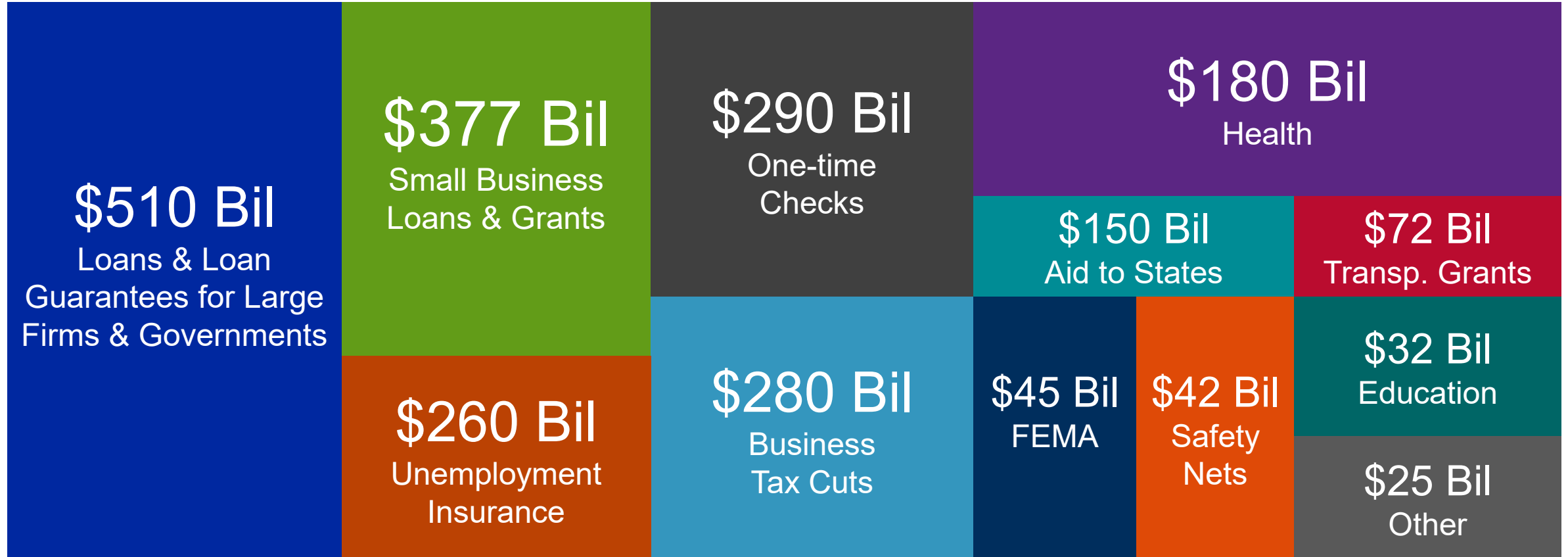
Assets held outright on the Fed's balance sheet, \$ tril



Source: Moody's Analytics

Lawmakers Act, But Need to Do More

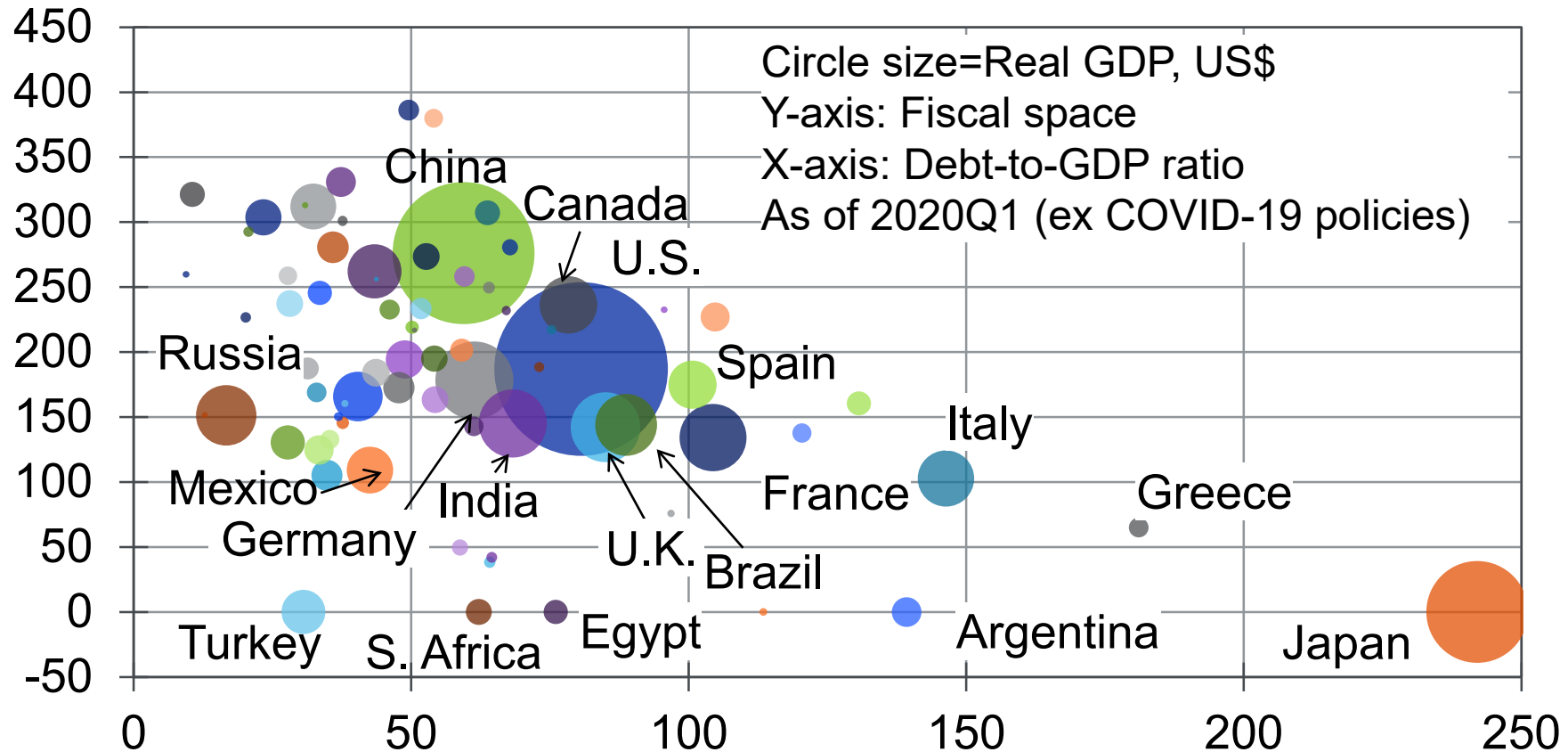
Cost of Coronavirus Aid, Relief, & Economic Security (CARES) Act



Sources: CRFB, Moody's Analytics

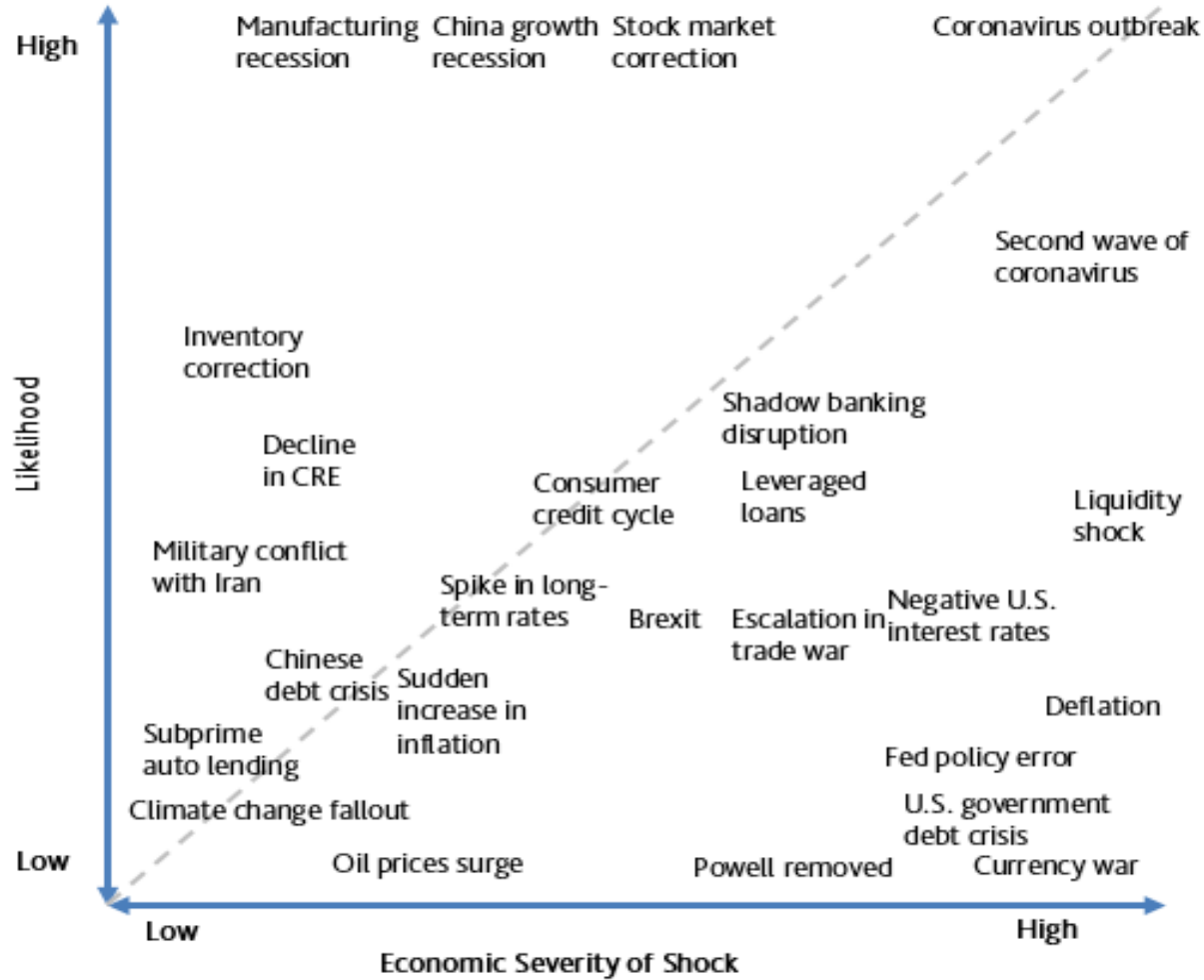
Running Out of Fiscal Space

Sovereign borrowing capacity given current yields, projected output growth and primary balance



Source: Moody's Analytics

U.S. Risk Matrix



Source: Moody's Analytics

Questions & Answers

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