

Anirban Basu & The Chamber of Data



Photo: Fandom

Toward the Post-Pandemic World

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On Behalf of
The Mid-Atlantic CIO Forum

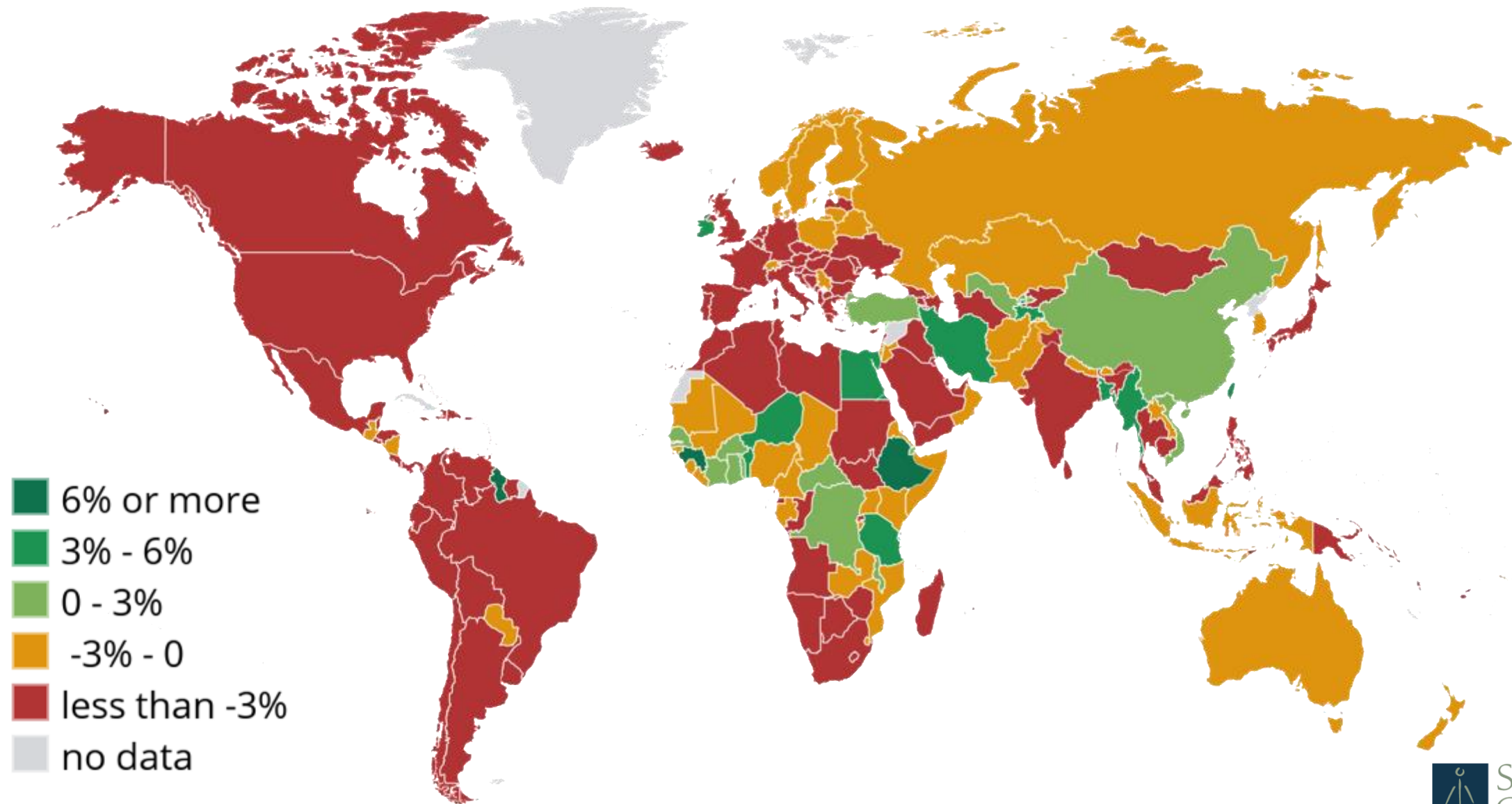
December 16th, 2021

The Prisoner of My-house-kaban



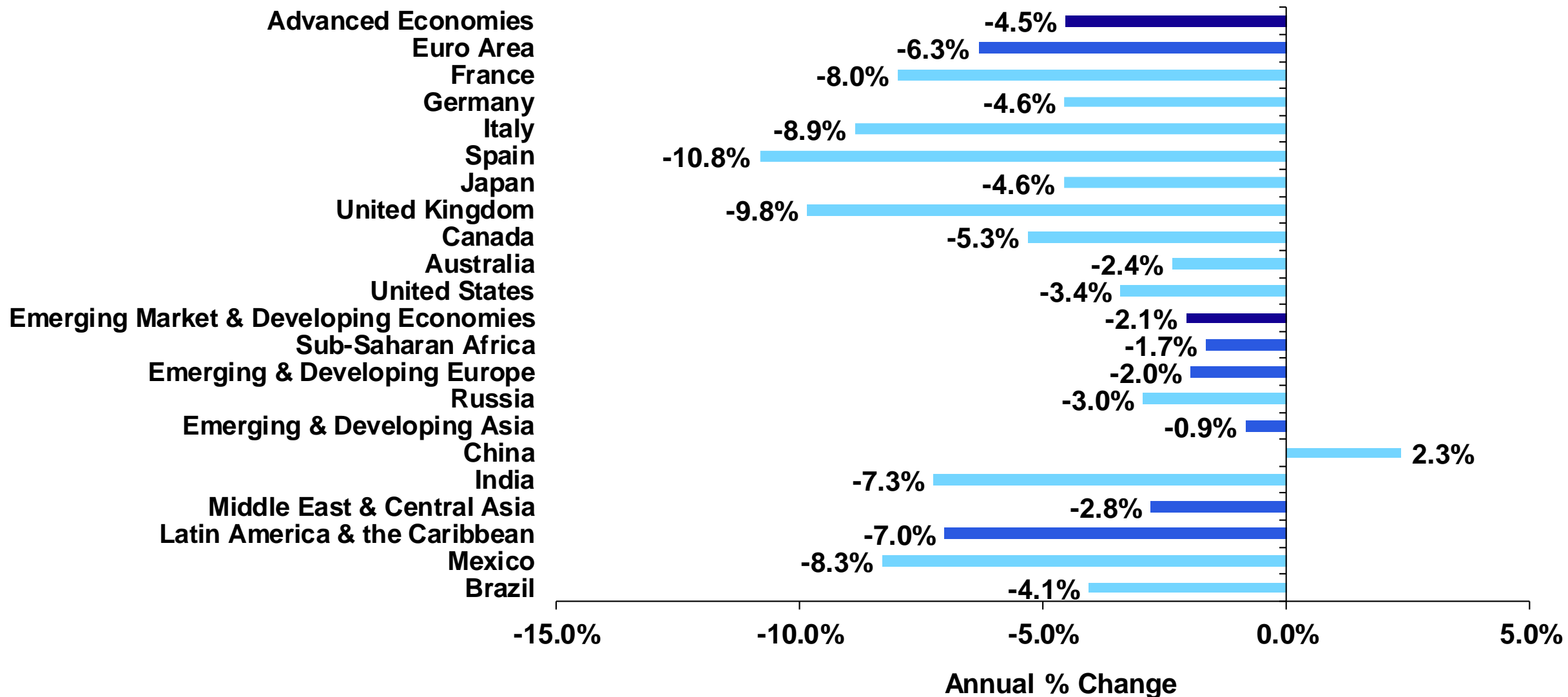
A Global Economy Transfigured

Real GDP Growth 2020, Estimated Annual Percent Change



Economicus Destructus!

Estimated Growth in Output by Select Global Areas, 2020



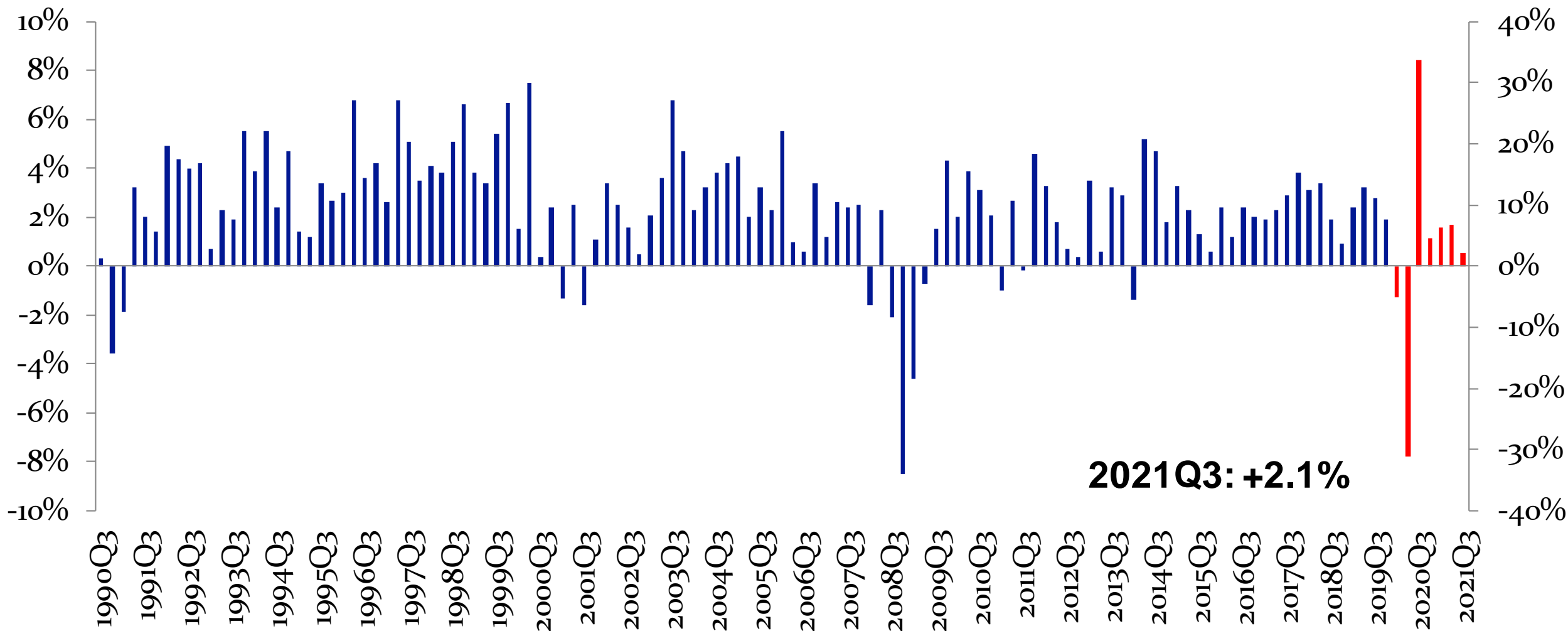
2020 Global Output Growth: -3.1%

Gross Domestic Product 1990Q3 – 2021Q3*

% Change from Preceding Period (SAAR)

2020-2021

1990-2019



2021Q3: +2.1%

The Goblet of Lost Jobs



Help
Not
Wanted

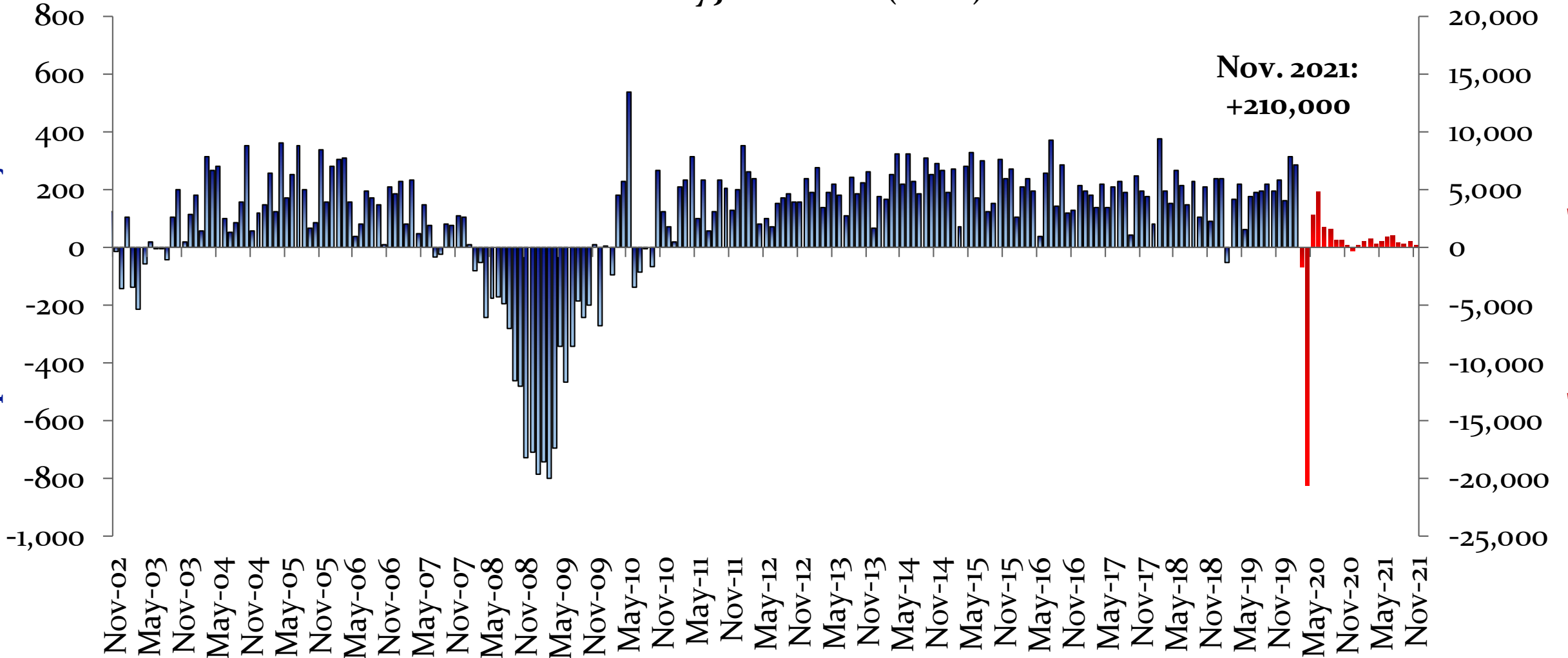


Sage Policy
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Net Change in U.S. Jobs

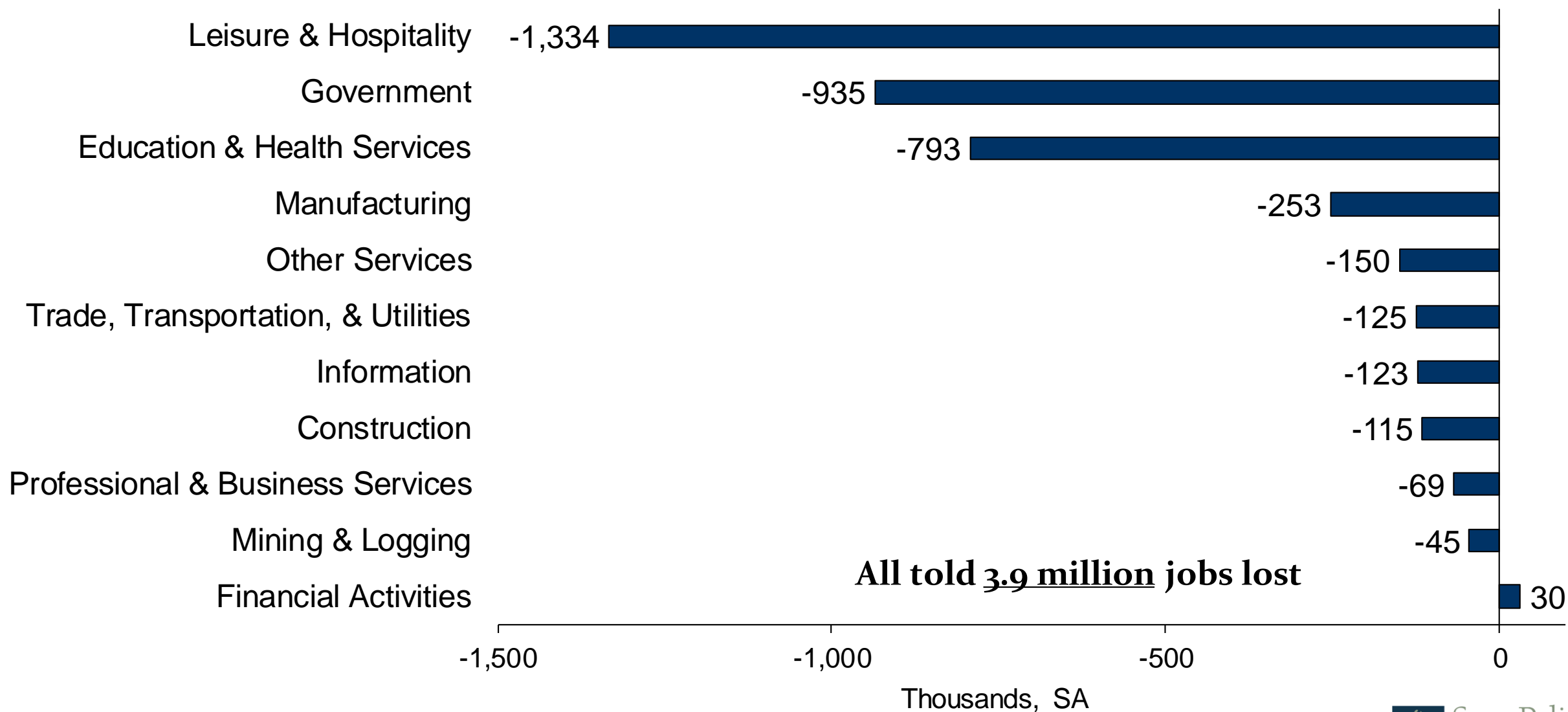
November 2002 – November 2021

Monthly Job Growth (ooo's)



U.S. Nonfarm Employment by Industry Sector

February 2020 v. November 2021



Employment Growth, 25 Largest Metros (NSA)

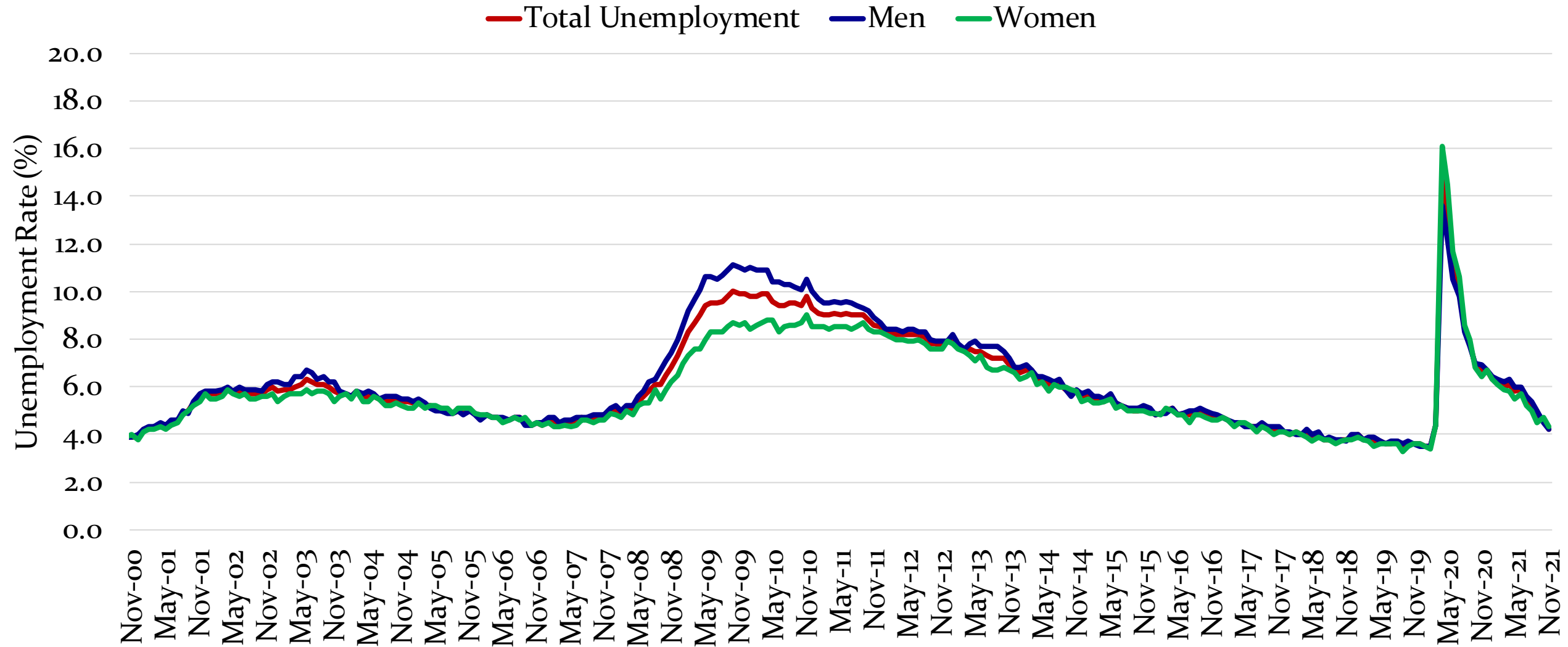
February 2020 v. October 2021 Percent Change

Rank	MSA	%	Rank	MSA	%
1	Phoenix-Mesa-Scottsdale, AZ	1.2%	13	Detroit-Warren-Dearborn, MI	-2.9%
2	Dallas-Fort Worth-Arlington, TX	1.0%	13	Houston-The Woodlands-Sugar Land, TX	-2.9%
3	San Antonio-New Braunfels, TX	0.9%	15	Chicago-Naperville-Elgin, IL-IN-WI	-3.0%
3	Tampa-St. Petersburg-Clearwater, FL	0.9%	15	St. Louis, MO-IL	-3.0%
5	Denver-Aurora-Lakewood, CO	-0.1%	17	Boston-Cambridge-Nashua, MA-NH	-3.2%
6	Atlanta-Sandy Springs-Roswell, GA	-1.0%	17	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	-3.2%
6	Charlotte-Concord-Gastonia, NC-SC	-1.0%	19	Minneapolis-St. Paul-Bloomington, MN-WI	-3.3%
8	Riverside-San Bernardino-Ontario, CA	-1.6%	20	Miami-Fort Lauderdale-West Palm Beach, FL	-4.0%
8	Seattle-Tacoma-Bellevue, WA	-1.6%	21	San Diego-Carlsbad, CA	-4.7%
10	Baltimore-Columbia-Towson, MD	-1.9%	22	Los Angeles-Long Beach-Anaheim, CA	-5.9%
11	Washington-Arlington-Alexandria, DC-VA-MD-WV	-2.1%	23	Orlando-Kissimmee-Sanford, FL	-6.1%
12	Portland-Vancouver-Hillsboro, OR-WA	-2.3%	24	San Francisco-Oakland-Hayward, CA	-6.3%
			25	New York-Newark-Jersey City, NY-NJ-PA	-6.4%

U.S. Percent Change: -2.7%

U.S. Unemployment Rate

November 2000 – November 2021



Unemployment Rates, 25 Largest Metros (NSA)

October 2021

Rank	MSA	%	Rank	MSA	%
1	Atlanta-Sandy Springs-Roswell, GA	2.4	13	Detroit-Warren-Dearborn, MI	4.5
2	Minneapolis-St. Paul-Bloomington, MN-WI	2.6	13	San Francisco-Oakland-Hayward, CA	4.5
3	Phoenix-Mesa-Scottsdale, AZ	3.2	15	Denver-Aurora-Lakewood, CO	4.6
3	St. Louis, MO-IL	3.2	15	Seattle-Tacoma-Bellevue, WA	4.6
5	Portland-Vancouver-Hillsboro, OR-WA	3.4	17	Boston-Cambridge-Nashua, MA-NH	4.7
6	Charlotte-Concord-Gastonia, NC-SC	3.6	18	Baltimore-Columbia-Towson, MD	4.9
7	Tampa-St. Petersburg-Clearwater, FL	3.8	19	Chicago-Naperville-Elgin, IL-IN-WI	5.1
8	Washington-Arlington-Alexandria, DC-VA-MD-WV	3.9	19	Philadelphia-Camden-Wilm., PA-NJ-DE-MD	5.1
9	Miami-Fort Lauderdale-West Palm Beach, FL	4.0	21	San Diego-Carlsbad, CA	5.3
10	Dallas-Fort Worth-Arlington, TX	4.2	22	Houston-The Woodlands-Sugar Land, TX	5.4
11	San Antonio-New Braunfels, TX	4.3	23	New York-Newark-Jersey City, NY-NJ-PA	6.3
12	Orlando-Kissimmee-Sanford, FL	4.4	23	Riverside-San Bernardino-Ontario, CA	6.3
			25	Los Angeles-Long Beach-Anaheim, CA	7.1

U.S. Unemployment Rate

Oct: 4.6% Nov: 4.2%

The Ministry Speaks



COVID-19 Stimulus Packages I

- **Coronavirus Aid, Relief, and Economic Security (CARES) Act (3/27/2020)**

- More than \$2T total
- Direct payments to Americans: \$1,200
- Extended/enhanced unemployment insurance program: \$600/week enhanced federal benefit
- Loans and grants for small businesses: \$377B
- Loans and grants for large businesses: \$510B
- Direct aid to state/local governments: \$150B
- Health care system: more than \$150B

- **Paycheck Protection Program and Health Care Enhancement Act (4/24/2020): \$483B**

- **Consolidated Appropriations Act, 2021 (12/27/2020)**

- More than \$900B for coronavirus assistance
- Direct payments to Americans: \$600
- Extended/enhanced unemployment insurance program: \$300/week enhanced federal benefit
- Rental assistance: \$25B and eviction moratorium extension
- Loans and grants for small businesses: Approx. \$285B for Paycheck Protection Program; \$15B in grants for theaters and other live venues
- Aid for schools and childcare: \$82B for K-12 schools and colleges; \$10B for childcare providers
- SNAP: raises benefits by 15% for 6 months
- Vaccine funding: \$28B for purchase and distribution of vaccine; \$20B to states for testing/contact tracing
- Direct aid to state and local governments: No

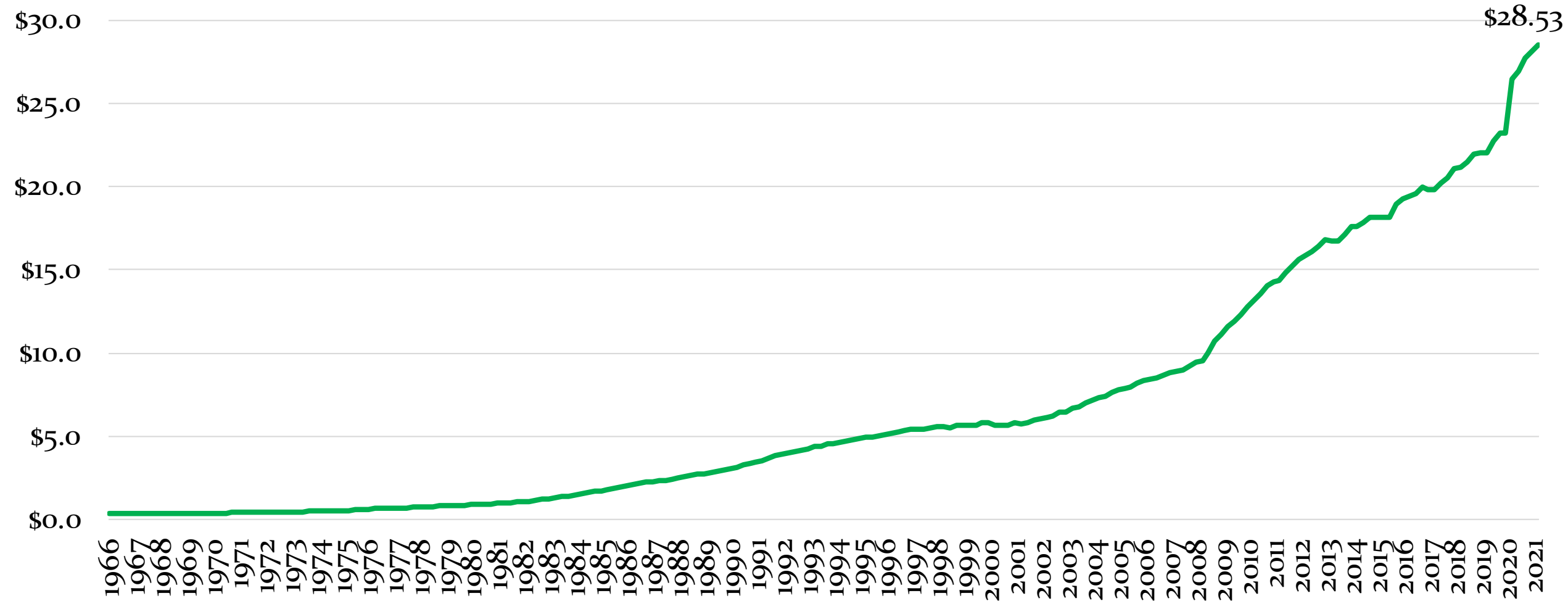
COVID-19 Stimulus Packages II: American Rescue Plan Act of 2021

- Signed into law on 3/11/2021
- Total of **\$1.9 trillion**
- Direct payments to Americans: \$1,400
- Extended federal unemployment assistance: \$300/week
- Direct aid to state and local governments: \approx \$350B
- Education: \approx \$170B for K-12 schools and higher ed
- Small businesses: \approx \$49B in loans/grants for several programs for small businesses, restaurants/bars, and venue operators
- Public health: \approx \$92B for COVID-19 vaccine, testing, and workforce efforts
- Tax provisions: expands/increases Child Tax Credit, Earned Income Tax Credit (EITC), dependent care tax credit, employee retention credit, and paid leave credits
- More: Nutrition assistance; housing aid; health insurance subsidies; changes to Medicaid/Medicare policy funding; aviation/railway/transit funding

Are We Being Dumbledore?

U.S. Federal Debt (Total Public Debt), 1966 – 2021

Federal Debt: Total Public Debt (\$ Trillions)



COVID's Commercial Curse



Large Retail Bankruptcies in the U.S. in 2020

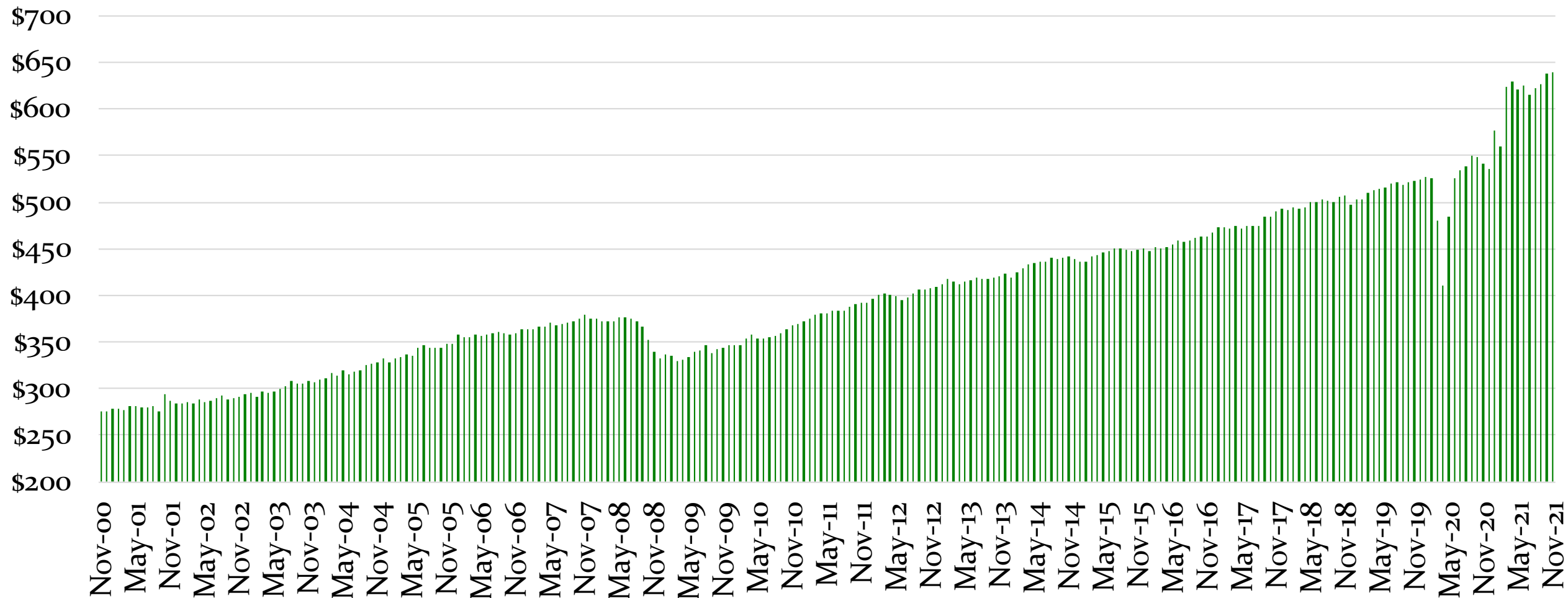
Retailer/Company	Date	Retailer/Company	Date	Retailer/Company	Date
Francesca's	12/3/20	Brooks Brothers	7/8/20	Rubie's Costume Co.	4/30/20
Guitar Center	11/21/20	Lucky Brand	7/3/20	Roots USA	4/29/20
Furla	11/6/20	Old Time Pottery	6/28/20	N B L Textiles	4/24/20
Furniture Factory Outlet	11/5/20	BHS Foodservice Solutions	6/26/20	True Religion	4/13/20
Emerald Health Bioceuticals	10/20/20	GNC	6/23/20	Castella Imports	4/13/20
Century 21	9/10/20	Fairn & Swanson	6/2/20	Donghia	3/30/20
Interstate Commodities	8/26/20	Liftopia	6/2/20	CHIEF Supply	3/20/20
Stein Mart	8/12/20	Libbey Glass	6/1/20	Paddle8	3/16/20
Lord & Taylor	8/2/20	Tuesday Morning	5/27/20	Generation Zero Group	3/13/20
Tailored Brands	8/2/20	Centric Brands	5/18/20	Modell's Sporting Goods	3/11/20
Ascena	7/23/20	J.C. Penney	5/15/20	Bluestem Brands	3/9/20
NTS W. USA	7/22/20	Stage Stores	5/10/20	Art Van Furniture	3/8/20
Occasion Brands	7/22/20	Neiman Marcus	5/7/20	Pier 1 Imports	2/17/20
The Paper Store	7/14/20	John Varvatos	5/6/20	The Worth Collection	2/14/20
RTW Retailwinds	7/13/20	CD II Fashions	5/4/20	Must Cure Obesity	1/31/20
Muji USA	7/10/20	J. Crew	5/4/20	Papyrus	1/23/20
Sur La Table	7/8/20	J. Hilburn	4/30/20	Armadio	1/15/20

Source: S&P Global Market Intelligence. Notes: 1. S&P Global Market Intelligence's bankruptcy coverage is limited to public companies or private companies with public debt where either assets or liabilities at the time of bankruptcy filing are greater than or equal to \$2 million, or private companies where either assets or liabilities at the time of bankruptcy filing are greater than or equal to \$10 million.

U.S. Retail Sales

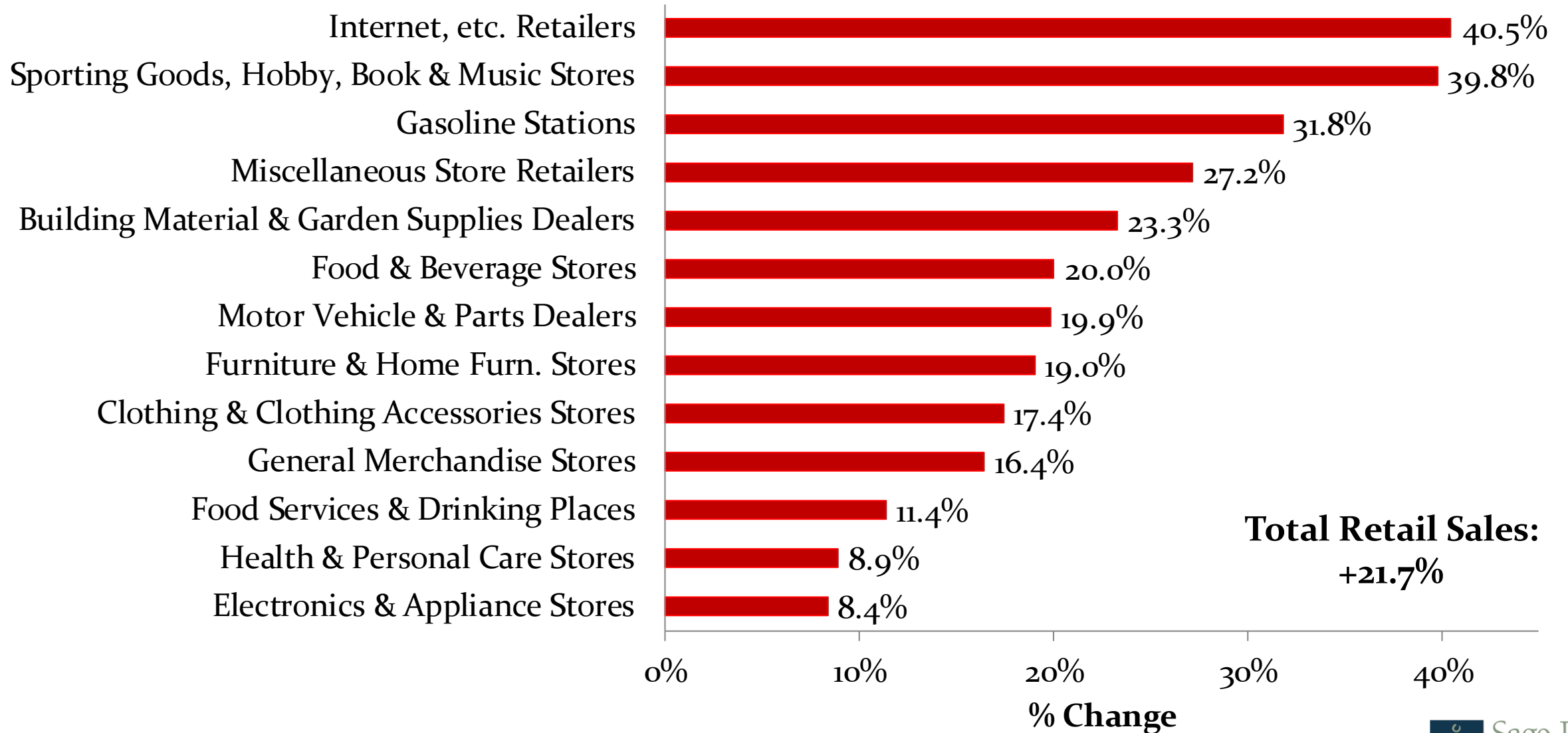
November 2000 – November 2021

Retail Sales (\$Billions)



U.S. Retail Sales by Type of Business

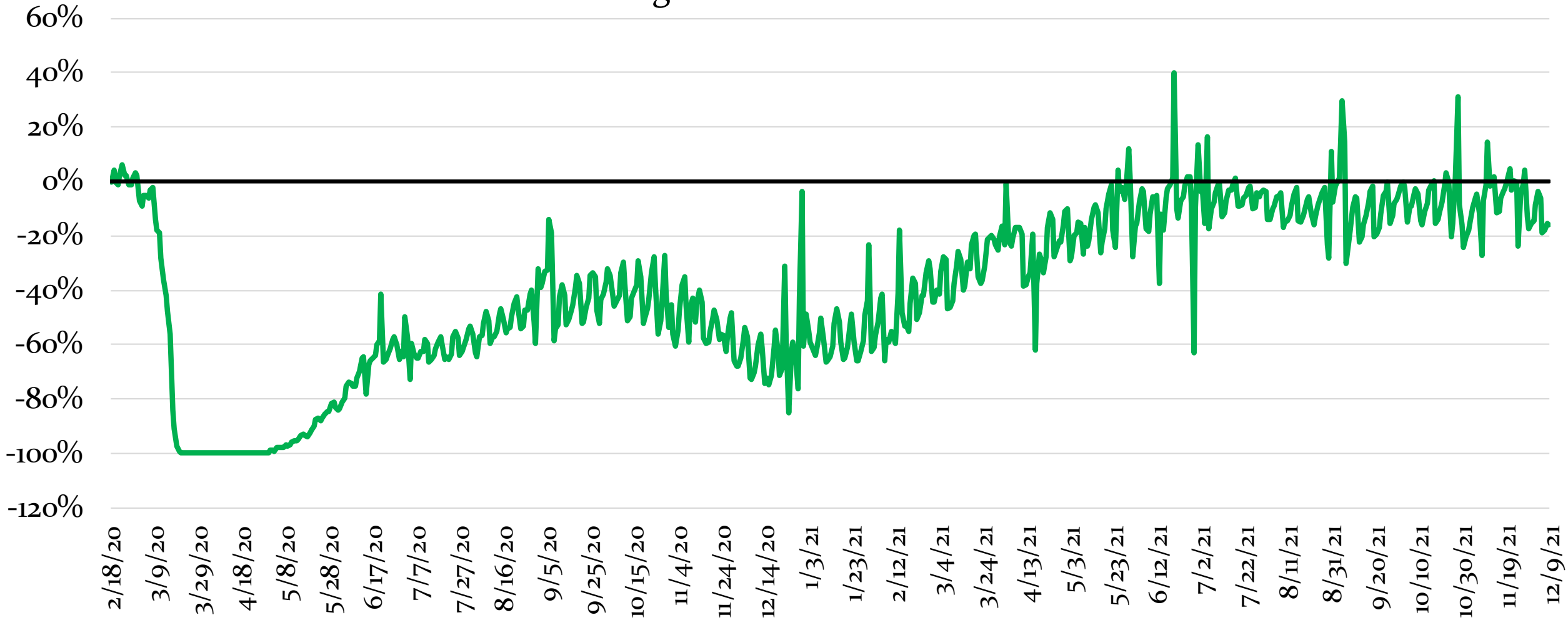
February 2020 v. November 2021 % Change



U.S. Restaurant Reservations (Seated Diners)

% Change Compared to 2019

% Change in Seated Reservations

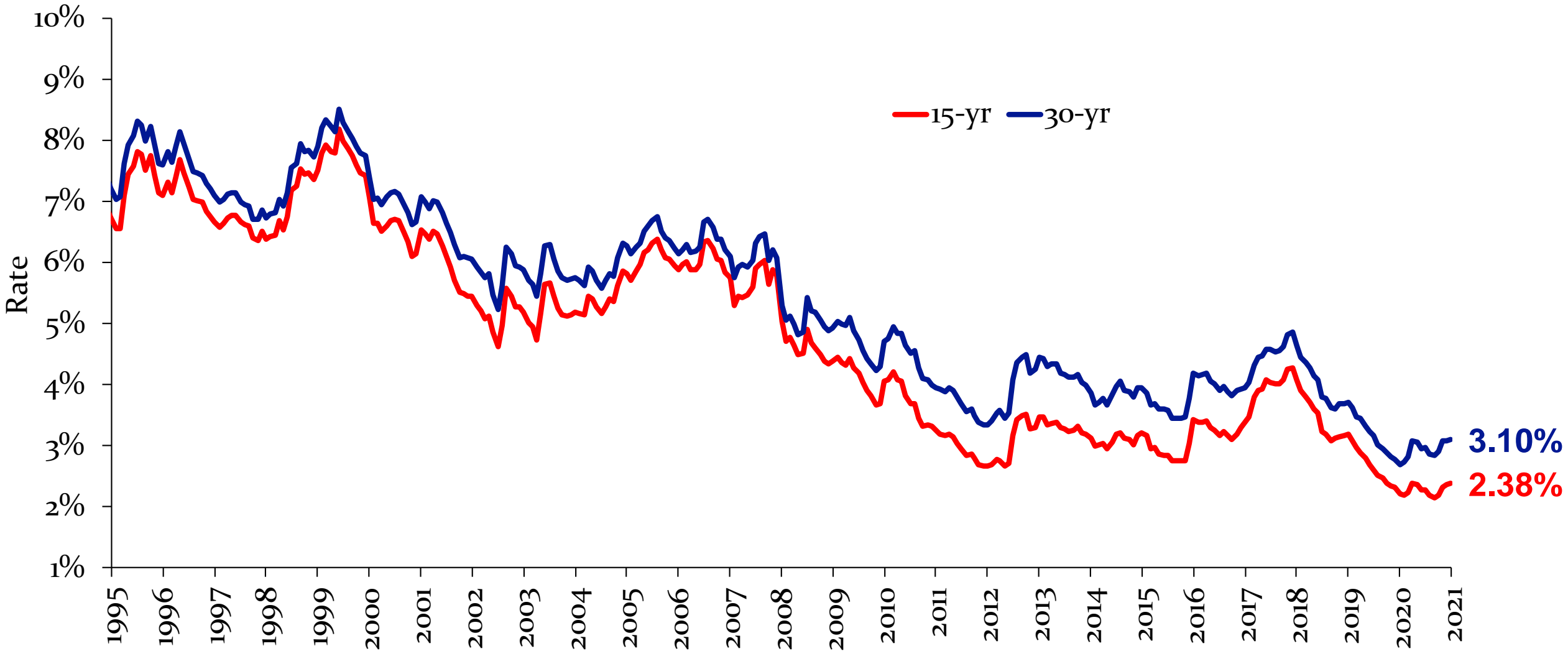


I'm in Ravenclaw
House!



15-Year & 30-Year Fixed Mortgage Rates

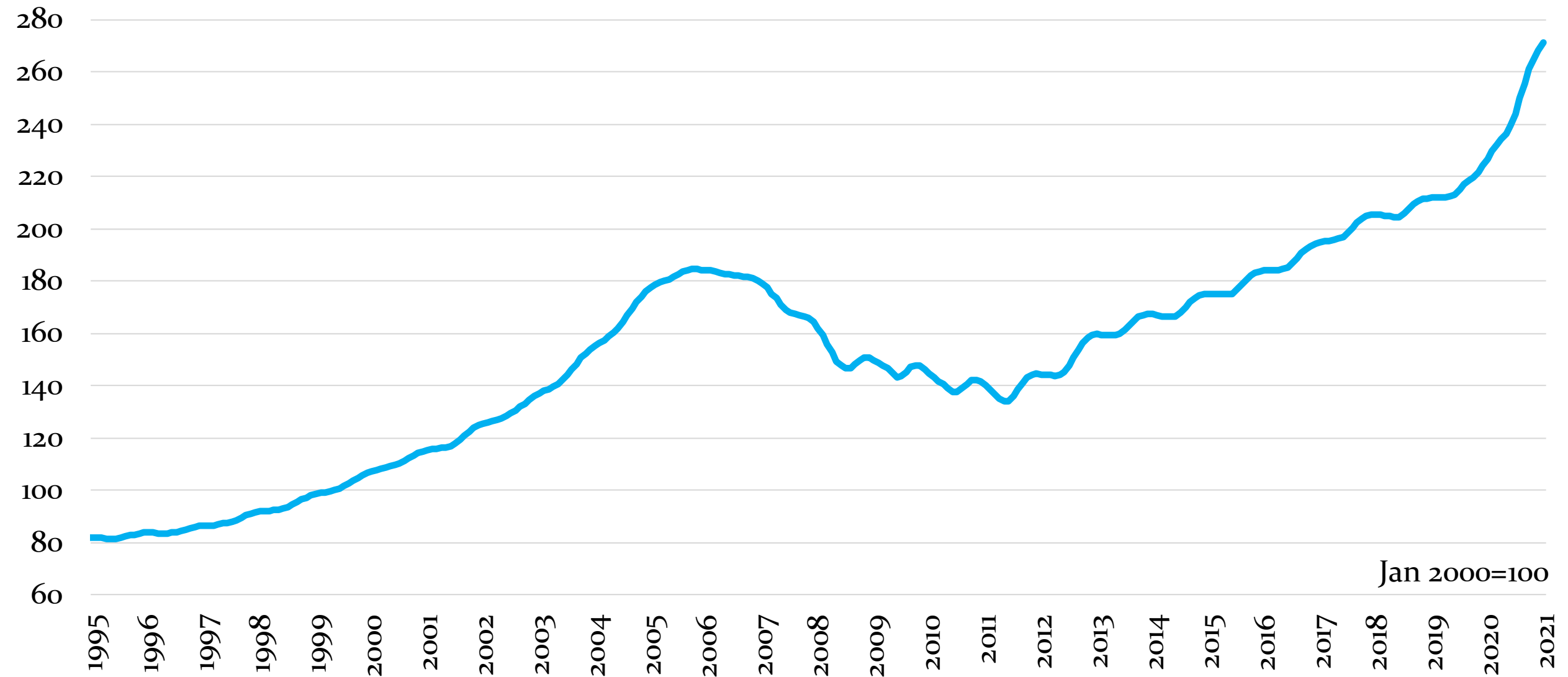
December 1995 – December 2021*



*Week ending 12/9/2021

S&P Case-Shiller U.S. National Home Price Index

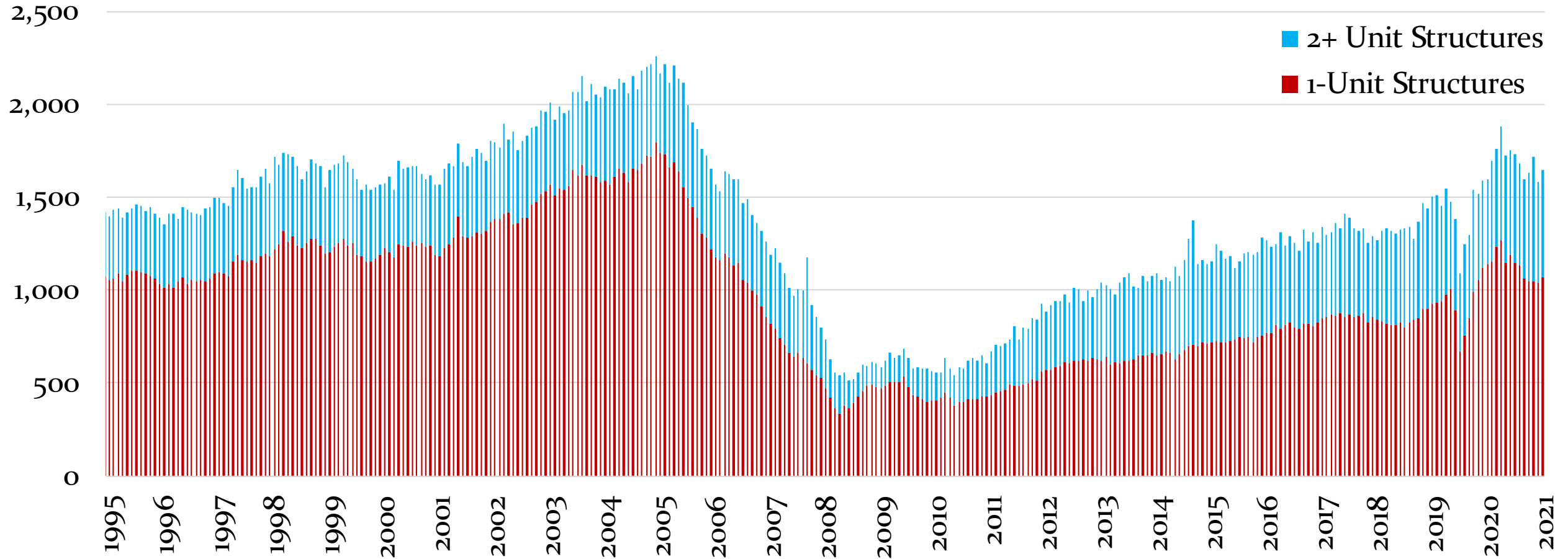
September 1995 – September 2021



U.S. Residential Building Permits

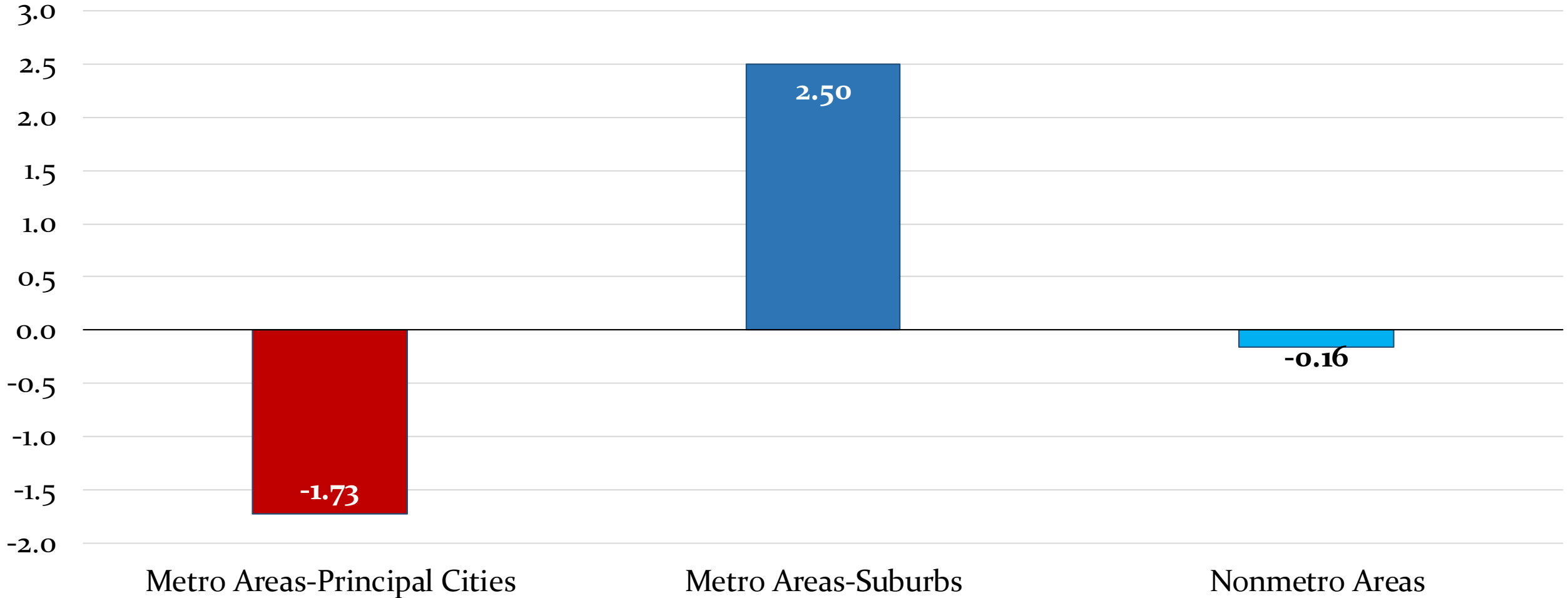
October 1995 – October 2021

Building Permits (ooo's of Units)



U.S. Net Migration in Metropolitan Areas, 2020 to 2021

2020 to 2021 net migration including movers from abroad (millions)



Observed Rent Declines in Major U.S. Cities

Rent Changes in Select U.S. Cities, March to December 2020

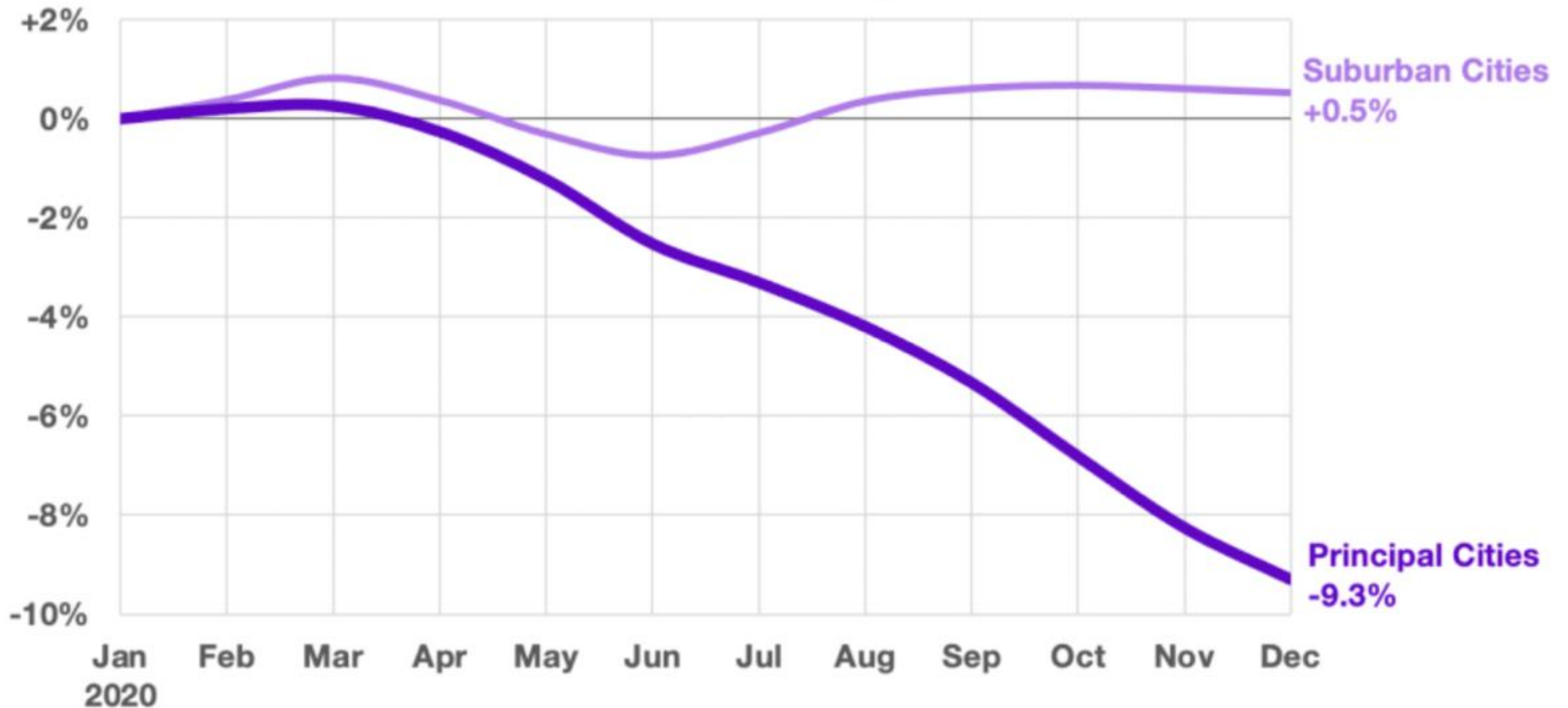
Largest Rent Declines/Increases among 50 largest U.S. cities by population

City	Rent Growth	City	Rent Growth
San Francisco, CA	-26.7%	Fresno, CA	7.9%
Seattle, WA	-22.0%	Albuquerque, NM	7.1%
Boston, MA	-20.6%	Memphis, TN	6.7%
New York, NY	-19.9%	Tucson, AZ	6.1%
Washington, DC	-15.3%	Virginia Beach, VA	5.7%
San Jose, CA	-15.2%	Las Vegas, NV	5.2%
Oakland, CA	-14.2%	Arlington, TX	4.7%
Chicago, IL	-13.2%	Colorado Springs, CO	4.4%
Minneapolis, MN	-12.8%	El Paso, TX	4.1%
Los Angeles, CA	-7.9%	Tulsa, OK	4.0%

Rent declines are concentrated in large, expensive markets, while in affordable midsize cities, rent growth accelerates...

Observed Rent Declines in Cities v. Suburbs

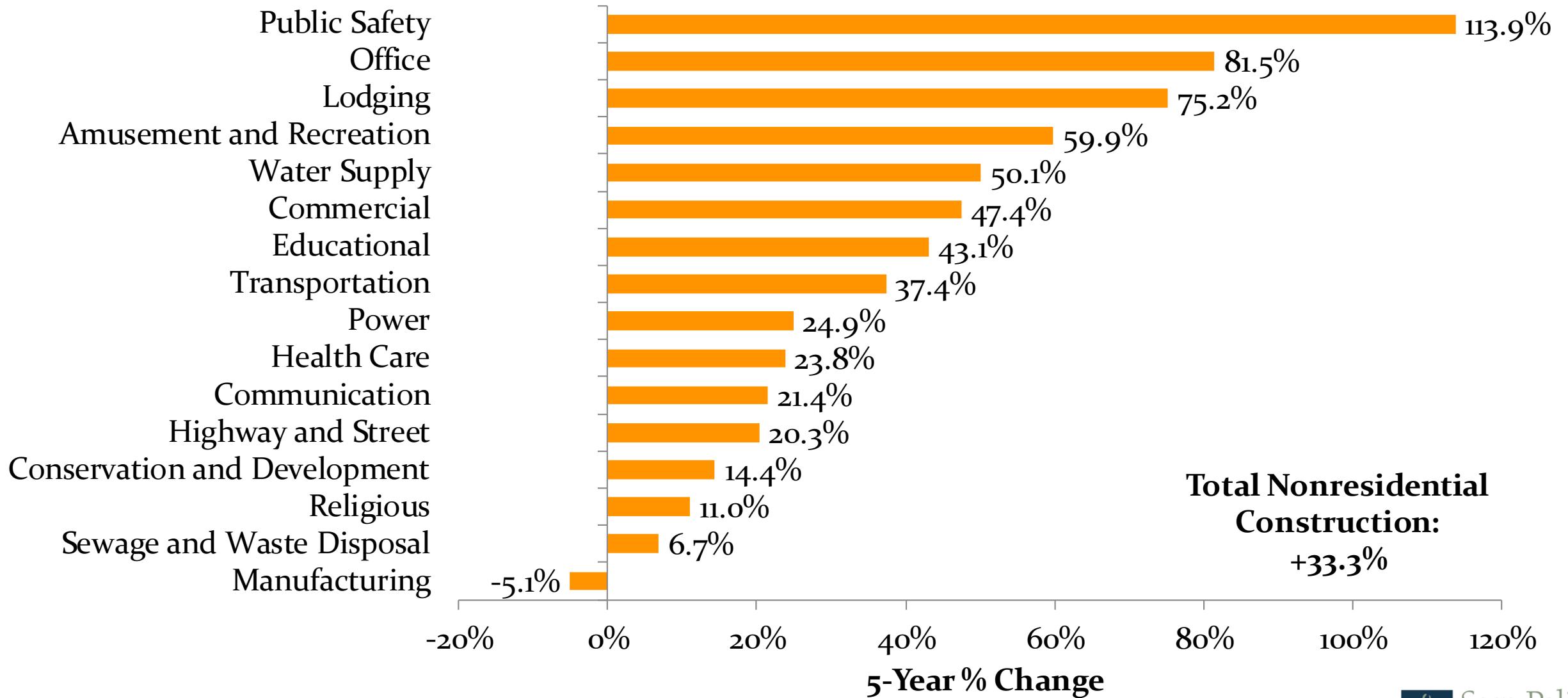
Cumulative Rent Change in 2020



Source: Apartment List. Note: rent changes are population-weighted and aggregated across principal/suburban cities within a sample of 30 large metropolitan areas.

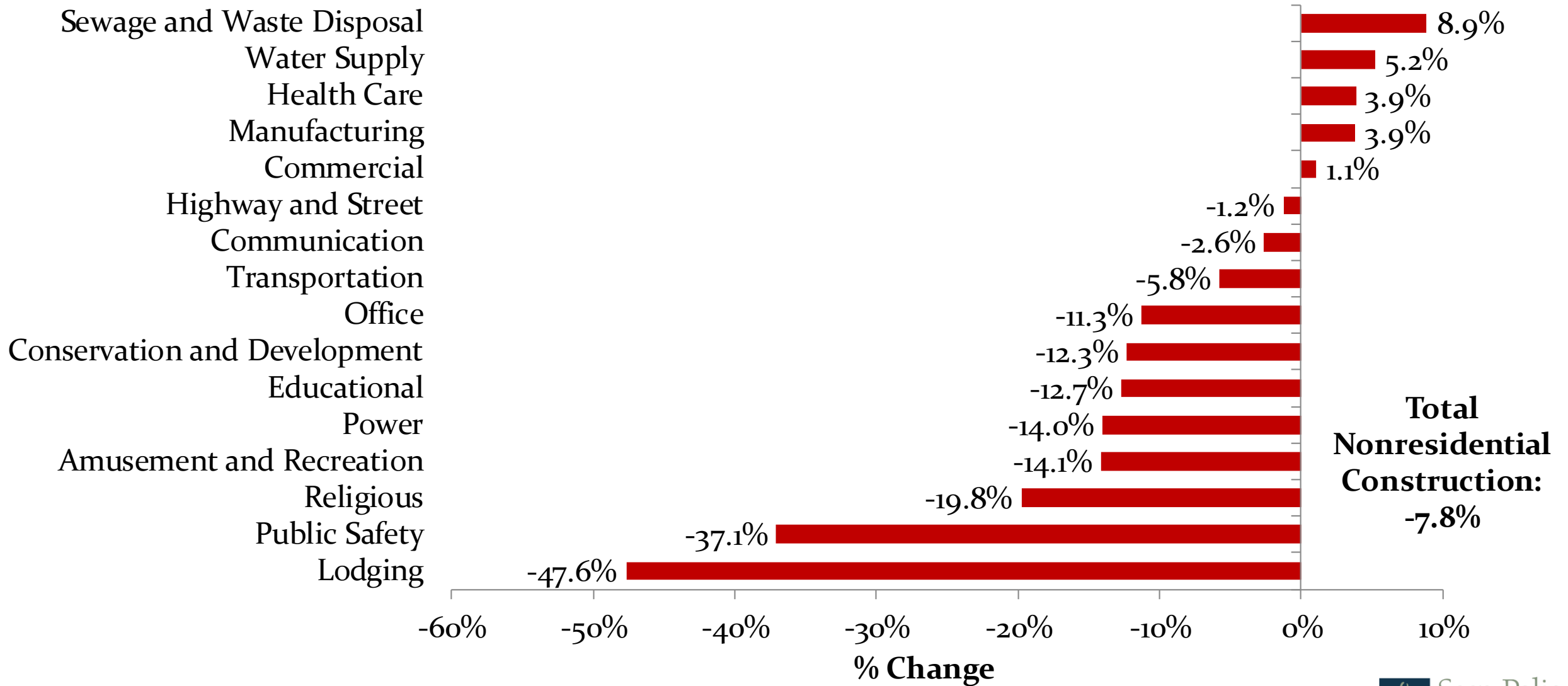
Nonresidential Construction Spending by Subsector

February 2015 v. February 2020



Nonresidential Construction Spending by Subsector

February 2020 v. October 2021

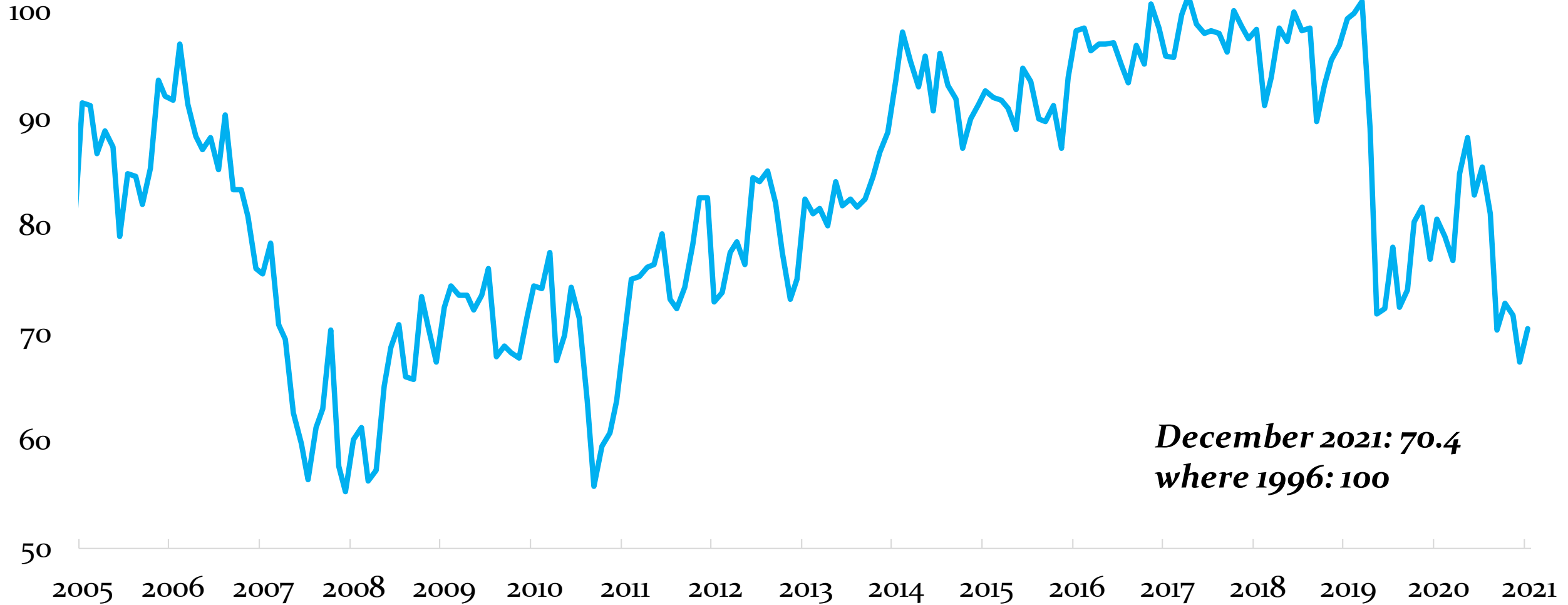


The Crystal Ball



University of Michigan Index of Consumer Sentiment

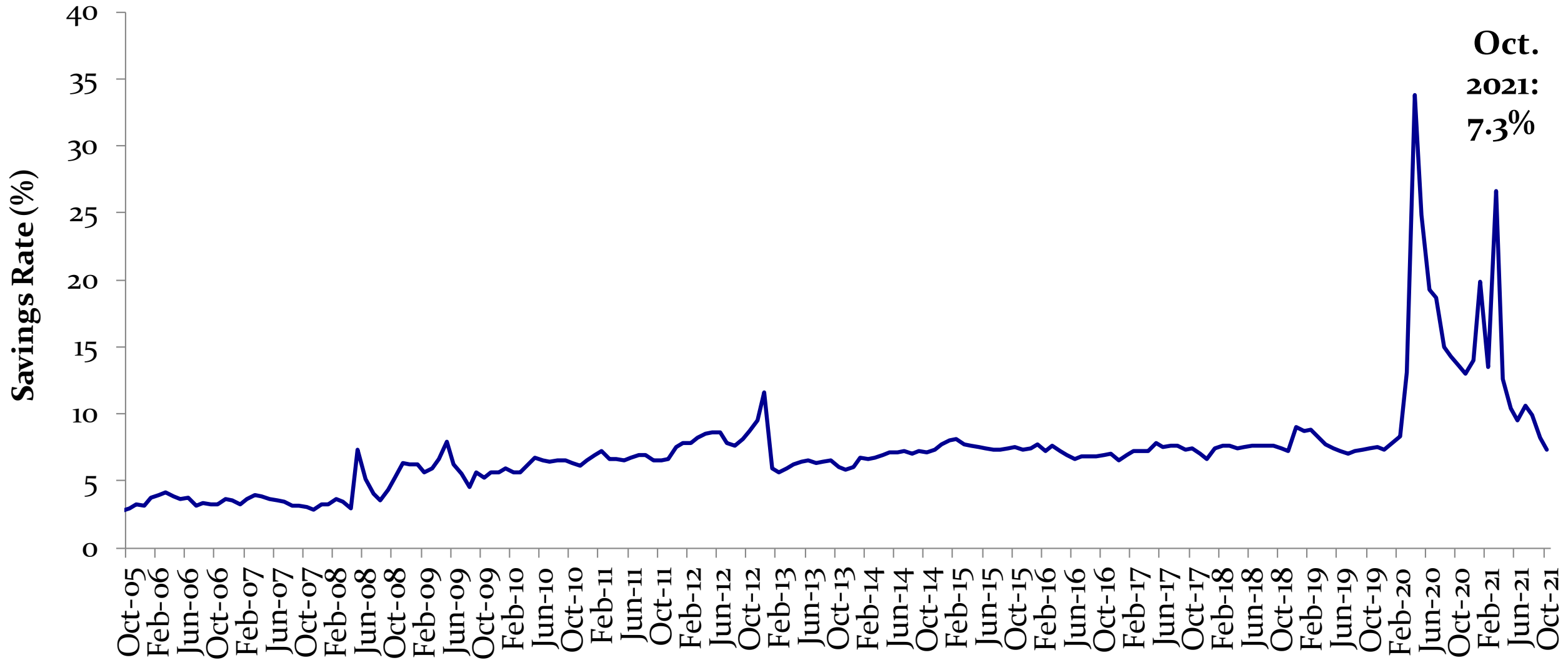
2005 – 2021



*December 2021: 70.4
where 1996: 100*

U.S. Saving Rate, October 2005 – October 2021

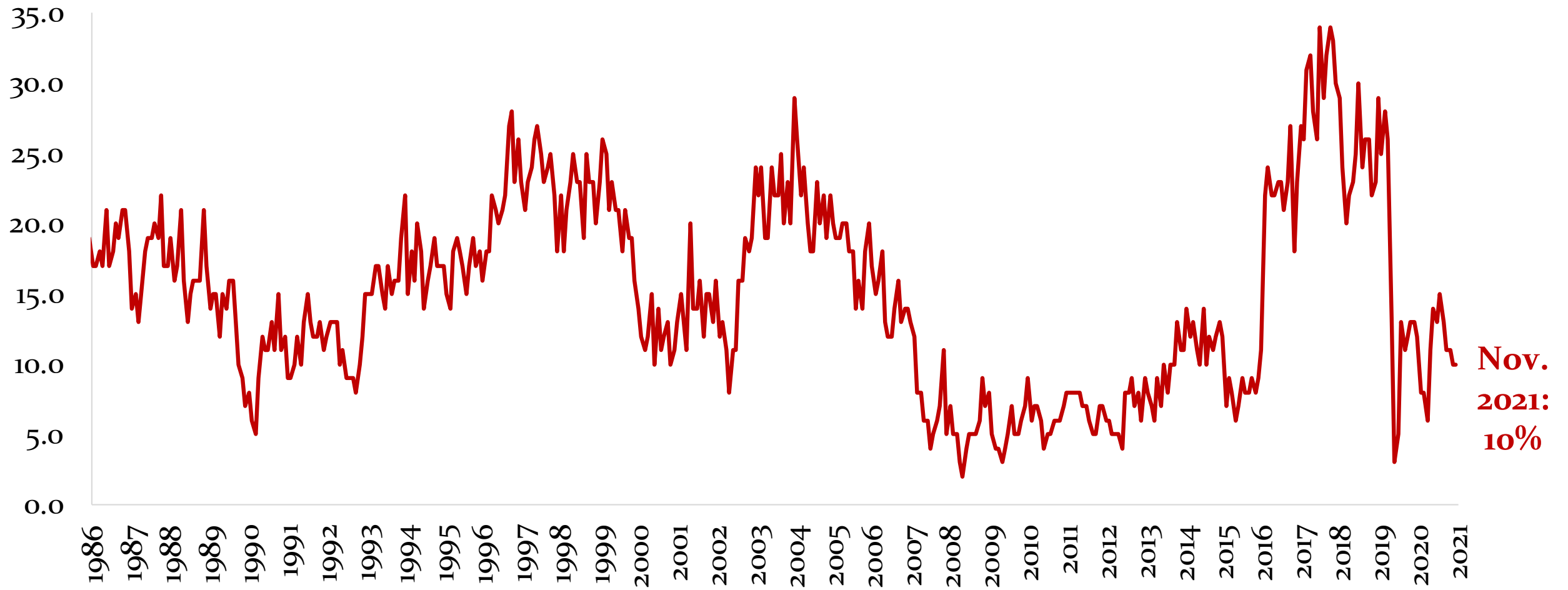
(Savings as Percentage of Personal Disposable Income)



**Oct.
2021:
7.3%**

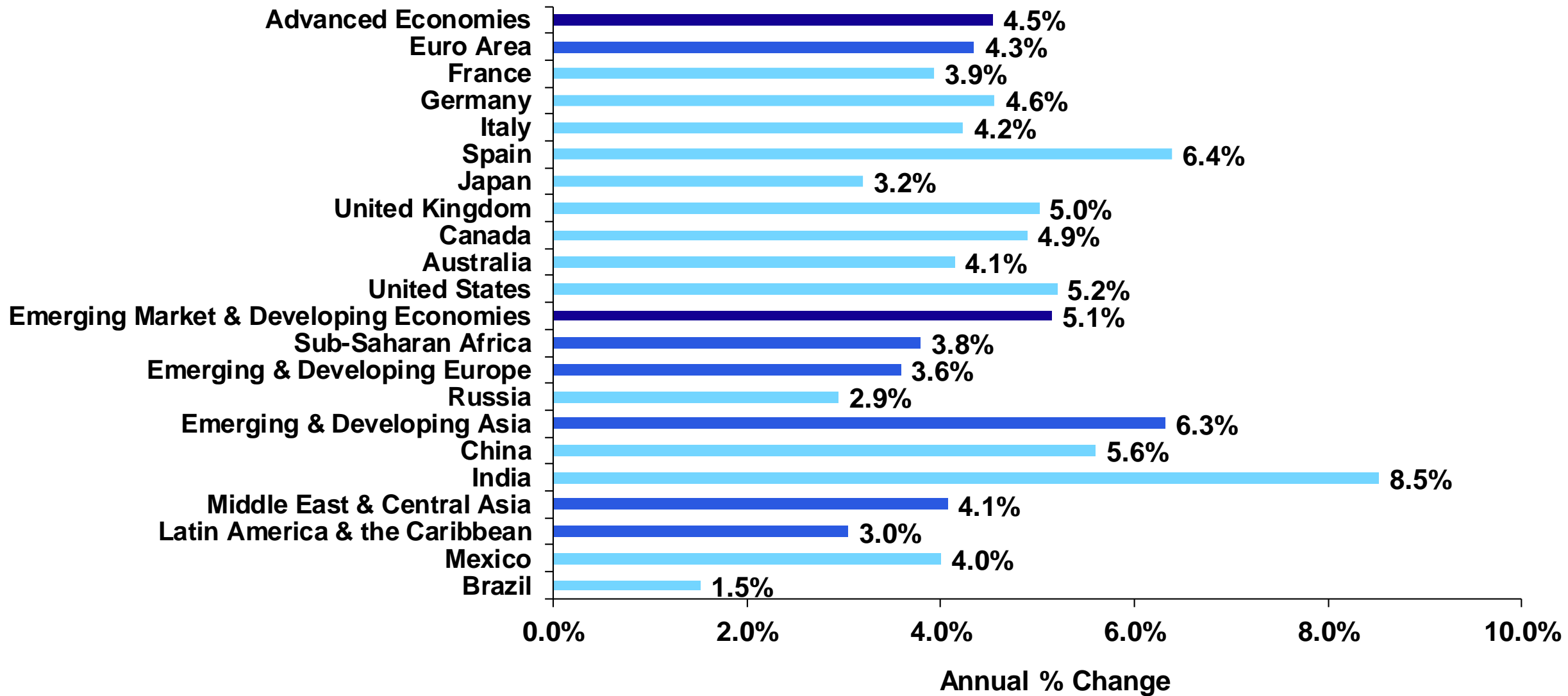
NFIB Index of Small Business Optimism: Good Time to Expand 1986 – 2021

% of respondents who think the next 3 months will be a good time to for small business to expand



Source: National Federation of Independent Business (NFIB)

Projected Growth in Output by Select Global Areas, 2022



2022 Global Output Growth Forecast: +4.9%

The Sorcerer's Outlook

- For an economy to flourish, both demand and supply sides of economy must participate.
- With ongoing stimulus, demand gets a further boost, but supply will be constrained by numerous factors, and not just in America.
- The result is that household savings will remain elevated, spring loading the economy for ongoing growth as supply chains continue to heal.
- The back half of 2021 should have been spectacular for economic growth – now only Q4:2021 will be.
- And there will be a day of reckoning as deficit hawks come back into fashion, creating the possibility of greater austerity during the years ahead.

Thank You

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