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Forecasting the Bond Market Amid the Recovery

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Malcolm Guy

Coordinator, Government & External Affairs
Council of Development Finance Agencies
Columbus, OH

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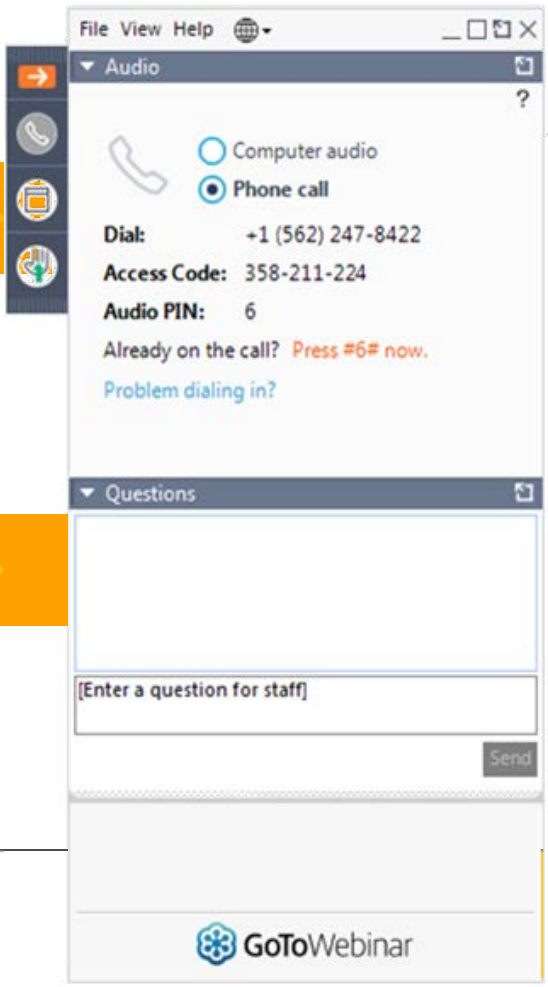
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Panelists

James Young, *Moderator*

Vice President, Corporate Trust
The Bank of New York Mellon

Eric Kazatsky

Head of Municipal Strategies
Bloomberg Intelligence

Amy Laskey

Managing Director
Fitch Ratings

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James Young

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The Bank of New York Mellon

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What to Expect from the 2021 Muni Market

-The municipal market in 2021 is one that will be defined by four major themes

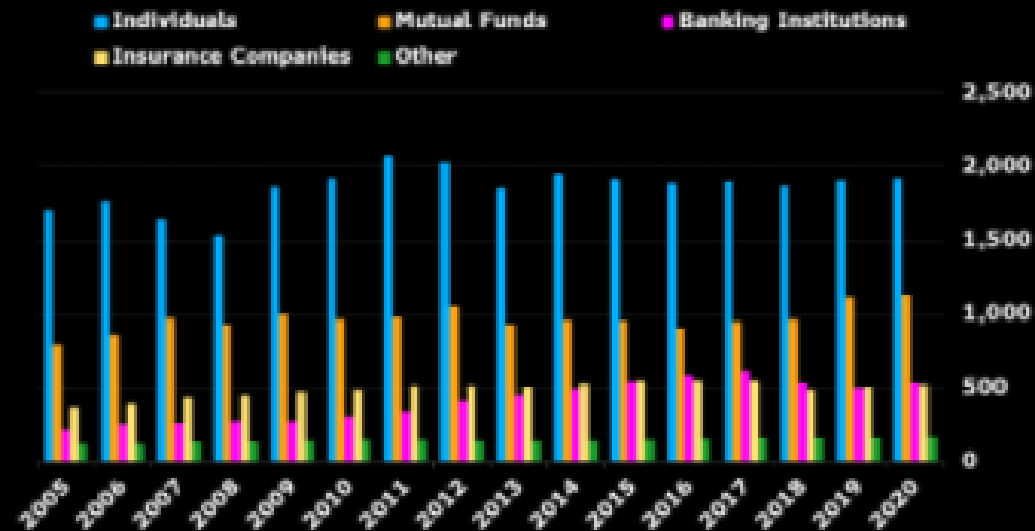
1) COVID

2) Stimulus

3) Supply

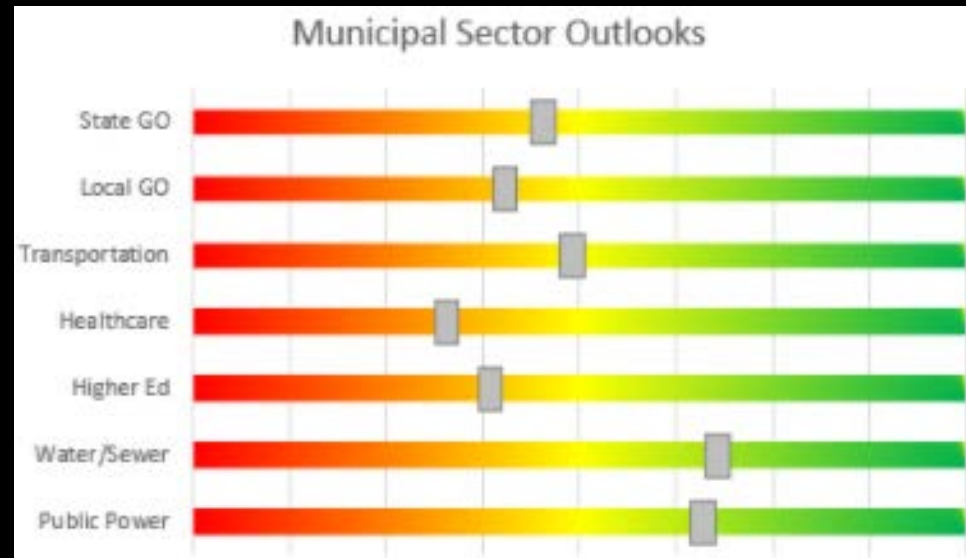
4) Transformation

Holder of U.S. Municipal Securities 2005-20



Credit Still A Big Unknown for 2021

- * Municipal credit has weakened due to Covid-19 but it's far from broken
- * Sectors with identifiable revenue streams are favored vs. stand-alone general-obligation pledges ahead of another virus surge and economic uncertainties
- * Sectors with identifiable revenue streams are favored vs. stand-alone general-obligation pledges ahead of another virus surge and economic uncertainties



Biden \$1.9 Trillion Stimulus Plan Has Munis on The Mind

- \$350 Billion for State/Local Govs and Territories
- \$20 Billion for Public Transit
- \$170 billion for Schools
 (\$135 Billion for K-12 and \$35 Billion for Higher Education)

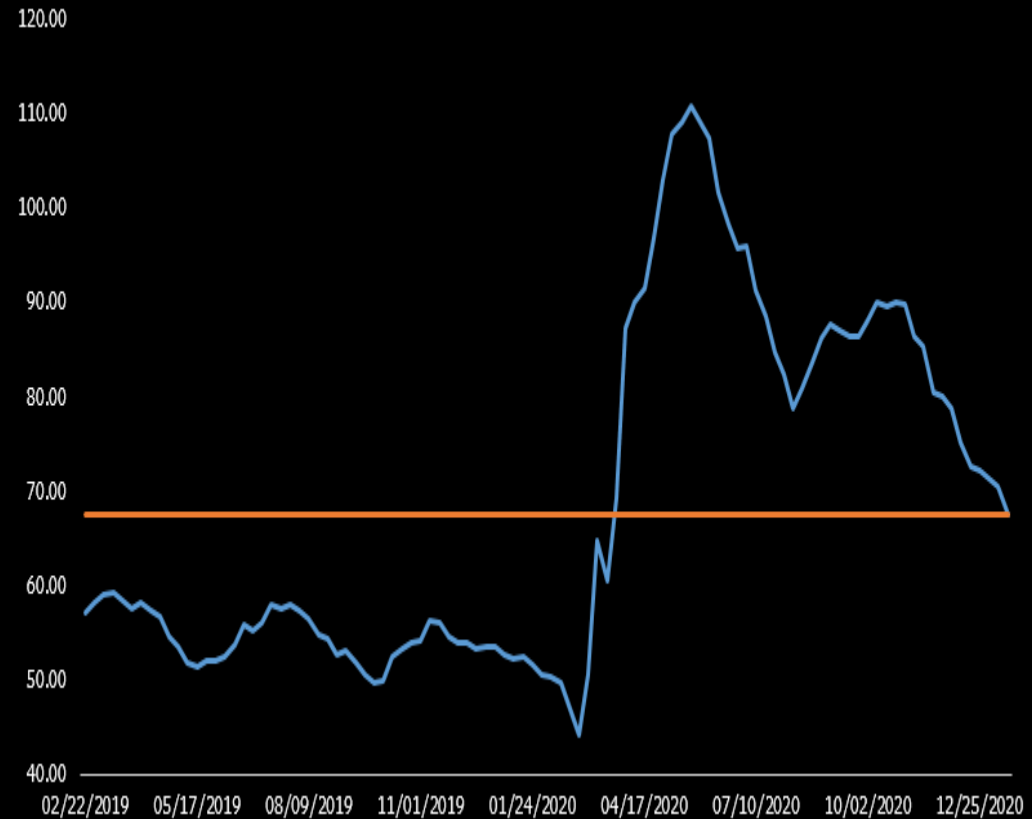
Despite the Pandemic, Municipals had a strong performance in 2020 and had better than expected tax collections

View	Generic Returns				As of	12/31/20
Index Name	Ticker	1D Rtn	MTD Rtn	YTD Rtn	Members	
[-] Municipal Bond family						
[-] Main Indices						
[-] Municipal Bond Index	LMBITR	0.00%	0.61%	5.21%	55,701	☆
[-] Muni High Yield (non-Investment Grade)	I22329US	0.01%	1.87%	4.89%	4,891	☆
[-] Taxable Municipal Bond Index	BTMNTR	0.11%	1.08%	10.52%	7,506	★
[-] Municipal Short-Term Index	I28275US	0.07%	0.03%	1.00%	4,107	☆

Additional Stimulus Could Further Distort Credit Risk

Based on OAS for the Bloomberg Barclays Muni Index, one could hardly tell that there is a global pandemic still raging outside of our doors

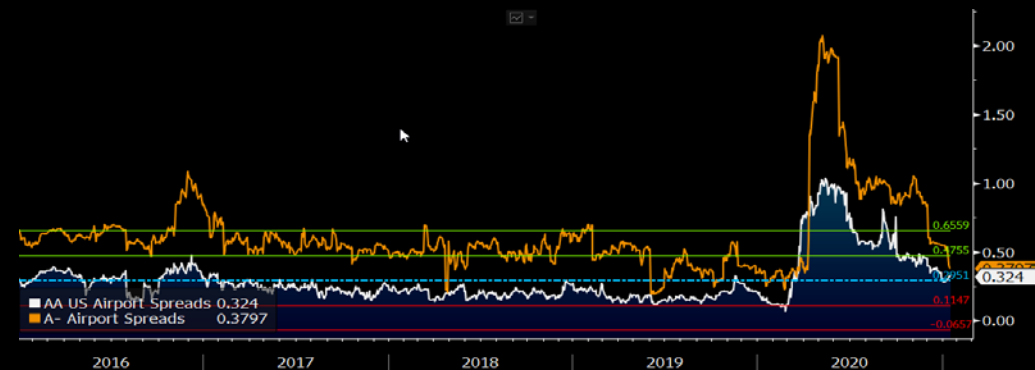
Option-adjusted spreads for the Bloomberg Barclays Municipal Bond Index (LMBITR Index) are the lowest in almost a year, and back at historical averages



Further Reversion of Risk Premium in Lower Credit

Credit risk premium is being compressed across the spectrum and in various sectors

Spreads for BBB munis and “A” rated airports are flagging little risk to buyers



Expectations for Issuance In 2021

-Assuming no change in investor appetite for municipal bonds, the market would need about \$440 billion of supply to meet current demand.

-Combined principal and interest projected to flow back to bondholders is \$359 billion (\$224 billion principal, \$135 billion interest). The biggest reinvestment flows come in the typically heavy June-August period, with \$127 billion returning to investors.

\$359 Billion Coming Back to Investors

Month	Total Debt Service (\$millions)	Principal Payment to Bond Holders (\$millions)	Interest Payment to Bond Holders (\$millions)
Jan-2021	\$25,442	\$12,348	\$13,093
Feb-2021	\$31,647	\$18,501	\$13,146
Mar-2021	\$25,011	\$17,119	\$7,893
Apr-2021	\$20,186	\$11,214	\$8,972
May-2021	\$26,596	\$15,435	\$11,161
Jun-2021	\$44,279	\$30,461	\$13,818
Jul-2021	\$37,428	\$24,150	\$13,278
Aug-2021	\$45,630	\$32,380	\$13,249
Sep-2021	\$20,449	\$12,904	\$7,544
Oct-2021	\$25,228	\$16,400	\$8,828
Nov-2021	\$26,353	\$15,548	\$10,805
Dec-2021	\$30,958	\$17,849	\$13,109
TOTAL	\$359,206	\$224,309	\$134,897

Demand for Municipal Bonds Continues

Fund Inflows continue to be strong with billions coming into market each week

This has helped fuel some of the spread compression as well



Inauguration Tail Risk Has Muted New Sales

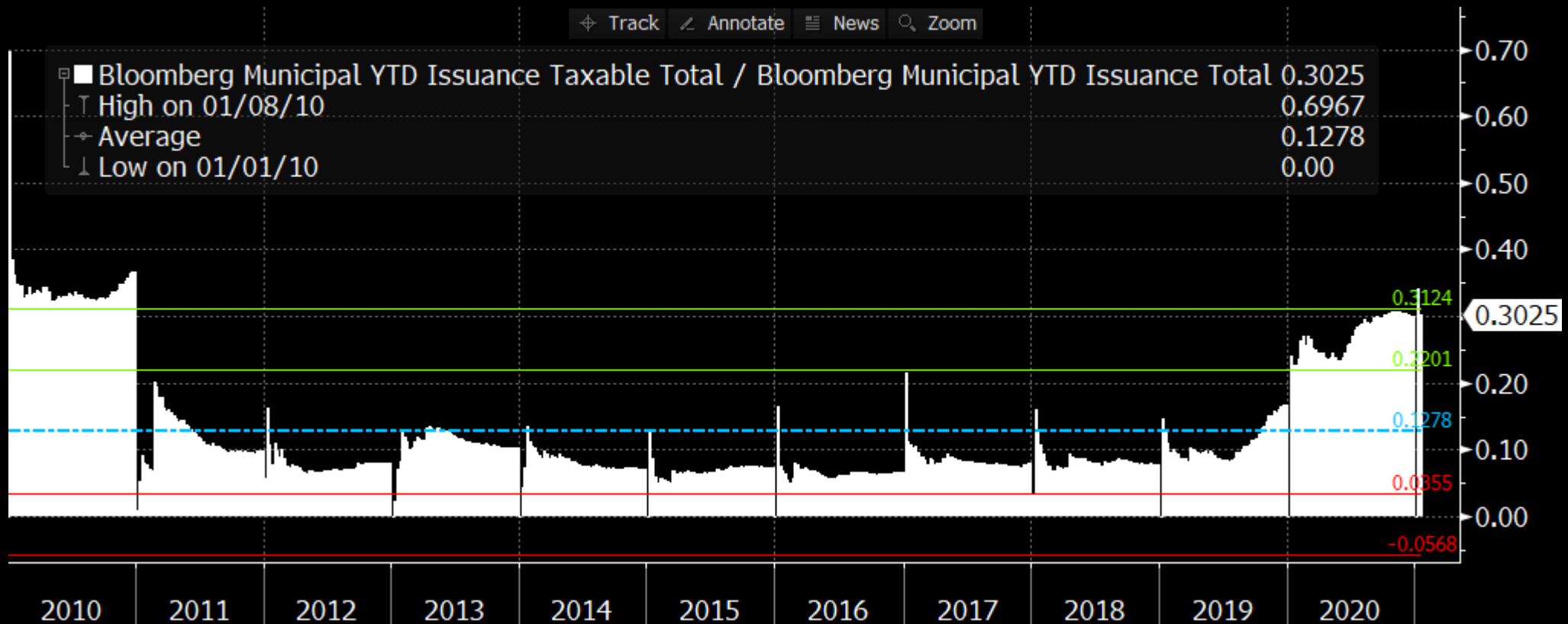
New Sales Volumes are below average

Pipelines should begin to fill after January 20th



The Municipal Market Is Shifting Quickly

- Elimination of Advanced Refundings and Low UST rates have spiked use in alternatives
- Usage of Taxable munis is at highest levels in a decade



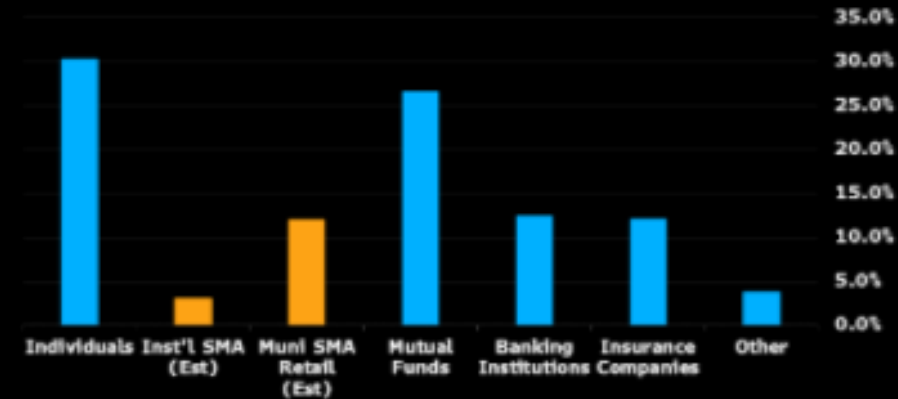
Buyer Base is Moving Away From Mom and Pop

According to data from Cerulli Associates, which captures just retail accounts, the total market for SMAs, including unified managed accounts, is close to \$1.7 trillion, up from \$1.4 trillion in 2019

Of that, Cerulli estimates municipal assets account for 33%, or about \$560 billion.

We can estimate the total amount in SMAs to be about \$630 billion

Muni SMA Assets About \$630 Billion

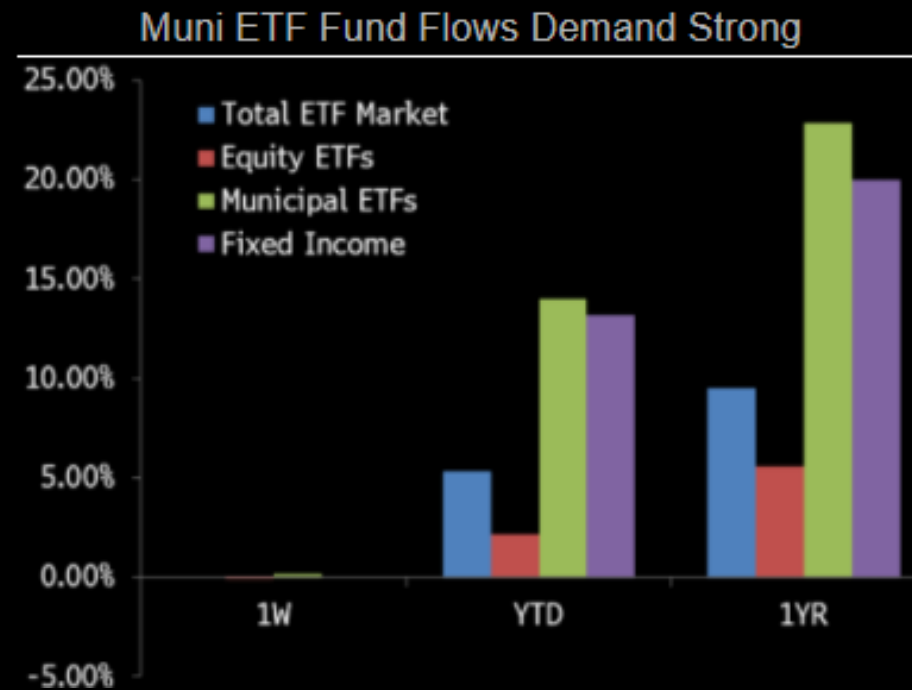


Cheap ETF Snacks Continue to Lure Muni Cash

Tax-exempt exchange-traded funds have added \$14 billion in assets over the past year, largely because of their lower costs

The asset-weighted industry average cost is just 13.7 bps, down again from 2019. The attraction of passive ETF products is obvious as they charge about half the fees of active bond funds, for which asset-weighted fees are close to 31 bps

Both MUB and the Vanguard Tax-Exempt Bond Index (VTEB) have driven almost half of the past year's sector inflows



Downward Dealer Trend Continues Uninterrupted

Not only has the type of municipal customer been shifting, but so too has the landscape of those who sell and provide liquidity

The total number of registered dealers declined to 1,237 in 2019, falling by almost 50% over the past 10 years. The drop can be traced to the decline in variable-rate demand note trading as well as industry consolidation, capital regulations and shrinking fees -- exacerbated by disruptive technologies



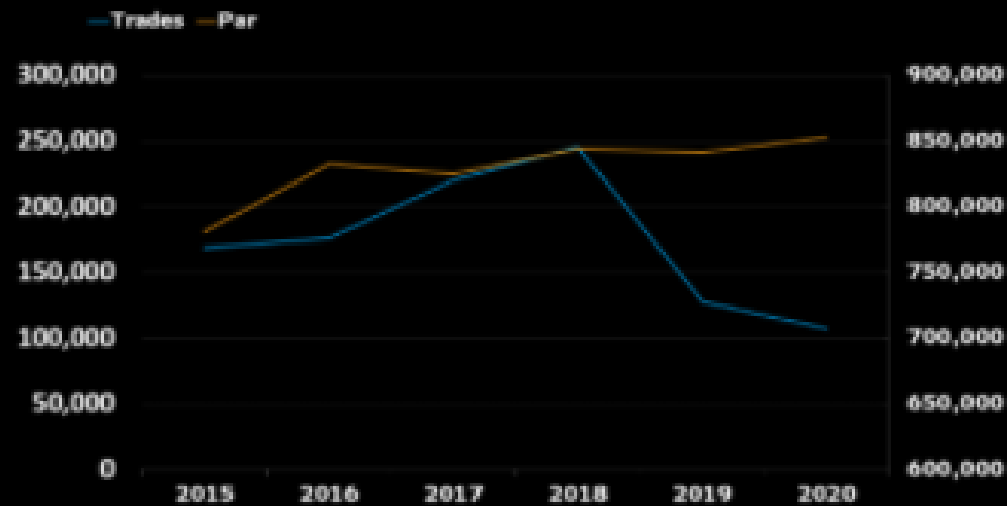
Source: Bloomberg Intelligence

Market Moving Toward Bigger Blocks

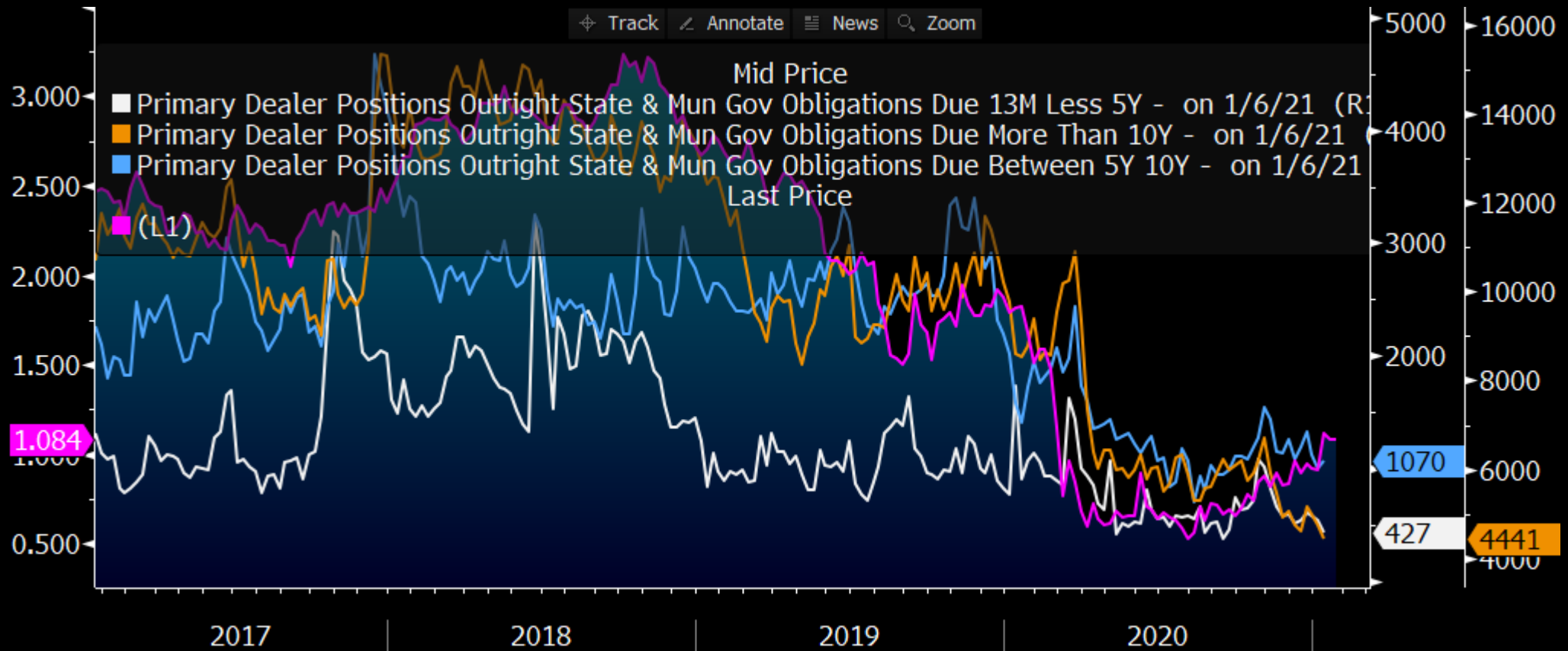
The muni market is clearly migrating toward an environment where larger blocks of bonds dominate the tale of the tape, based on trade and market data from 2020

The number of trades declined by 308,000 from 2019, after the 2019 total fell 1.4 million from 2018. Meanwhile, more par value was traded in 2020, pointing to higher per-trade volume, a trend that's been developing over the past few years

Number of Trades Declining



These Factors Have Contributed to Lower Liquidity



Opportunities for Buyers

- Spreads for taxable municipal bonds have begun to converge with lower corporate spreads as the trade has become more crowded
- Lower rates/tighter spreads for exempts have driven values higher making them less attractive for go anywhere investors
- Areas of greater focus have included munis with lower credit quality and longer duration, but may also include muni debt subject to the Alternative Minimum Tax. Buyers exposed to this tax have declined significantly since 2017, to 200,000 from about 5 million



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Amy Laskey

Managing Director
Fitch Ratings

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2021 Outlook – US States and Local Governments

Amy Laskey – Managing Director

CDFA//BNY Mellon Development
Finance Webcast

January 19, 2021



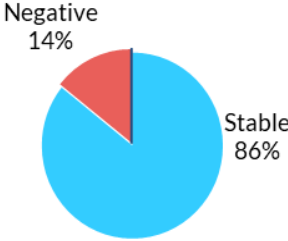
Agenda

1. 2021 Outlook for State and Local Government Credit
2. U.S. Economic Outlook
3. Personal Income Trends
4. Labor Market Performance
5. Federal Stimulus

Stable 2021 Sector Outlook for U.S. States and Local Governments

U.S. States - Ratings Outlook/Watch

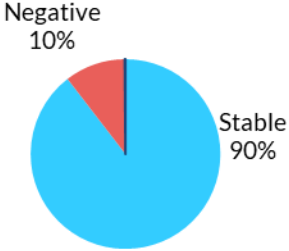
(As of Dec. 31, 2020)



Public General Obligation and Issuer Default ratings only.
Source: Fitch Ratings

Local Tax-Supported - Ratings Outlook/Watch

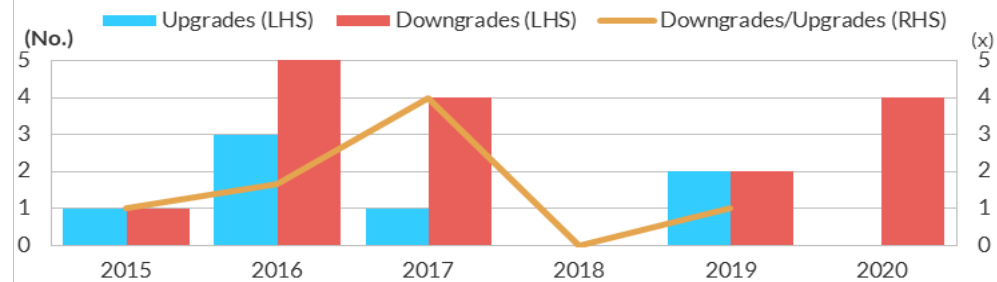
(As of Dec. 31, 2020)



All public security ratings.
Source: Fitch Ratings

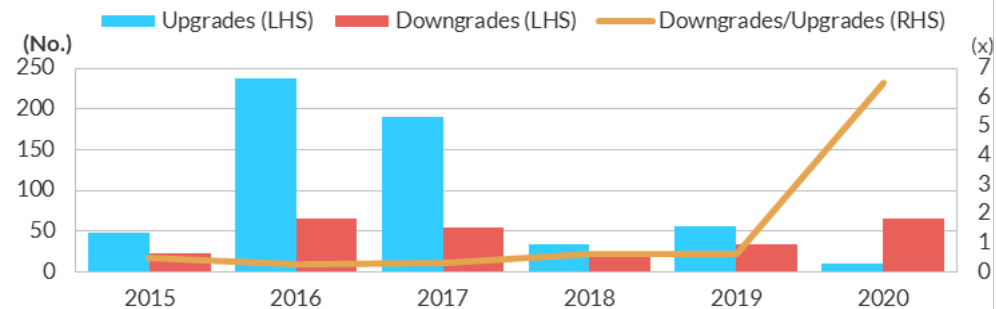
State and Local Governments 2020 Rating Actions

U.S. States - Rating Changes



Public General Obligation and Issuer Default ratings.
Source: Fitch Ratings.

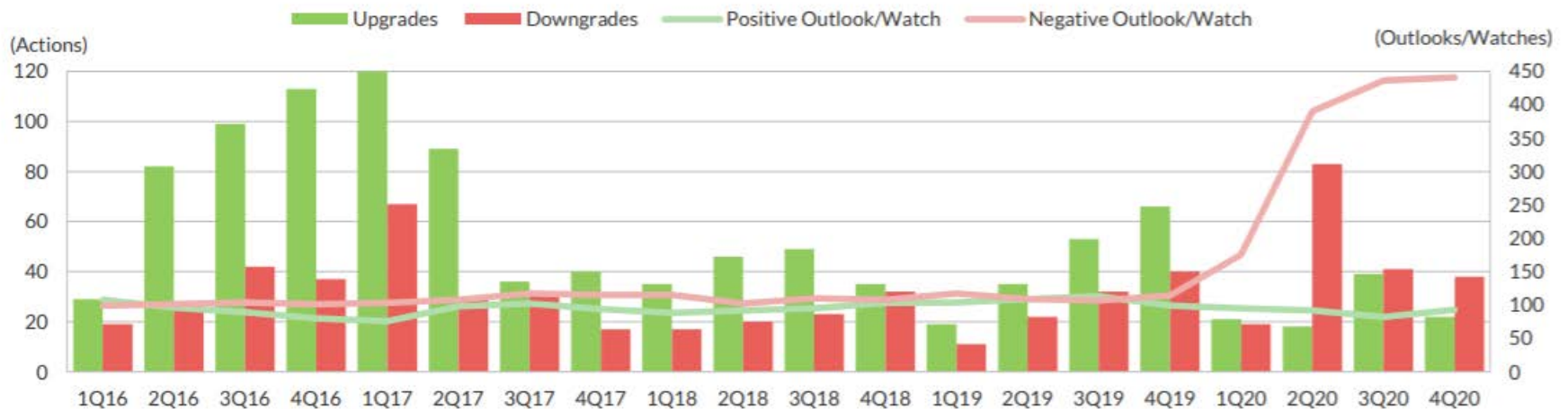
Local Tax-Supported - Rating Changes



All public security ratings.
Source: Fitch Ratings.

U.S. Public Finance 2020 Rating Actions

U.S. Public Finance Security Rating Actions and Outlooks



U.S. Public Finance Sector Outlooks

USPF	Sector Outlook	Rating Outlook
State & Local Governments	Stable	Stable
Hospitals	Stable	Stable
Life Plan Communities	Stable	Stable
Higher Education & Nonprofits	Worsening	Negative
Housing	Evolving	Negative
Public Power	Stable	Stable
Water & Sewer	Stable	Stable

US GDP: Expected to Rebound in 2021

Fitch Estimates from December 2020 Global Economic Forecast

United States - Forecast Summary

(%)	Annual Avg. 2015-2019	2019	2020F	2021F	2022F
GDP	2.5	2.2	-3.5	4.5	3.5
Consumer spending	2.9	2.4	-3.6	5.0	3.7
Fixed investment	3.3	1.9	-2.7	4.4	3.7
Net trade (contribution pp)	-0.4	-0.2	0.0	-0.9	-0.2
CPI inflation (end-year)	1.6	2.3	0.6	0.7	1.2
Unemployment rate	4.4	3.7	8.1	6.5	5.6
Policy interest rate (end-year)	1.23	1.75	0.25	0.25	0.25
Exchange rate, USDEUR (end-year)	0.89	0.89	0.85	0.85	0.85

Source: Fitch Ratings

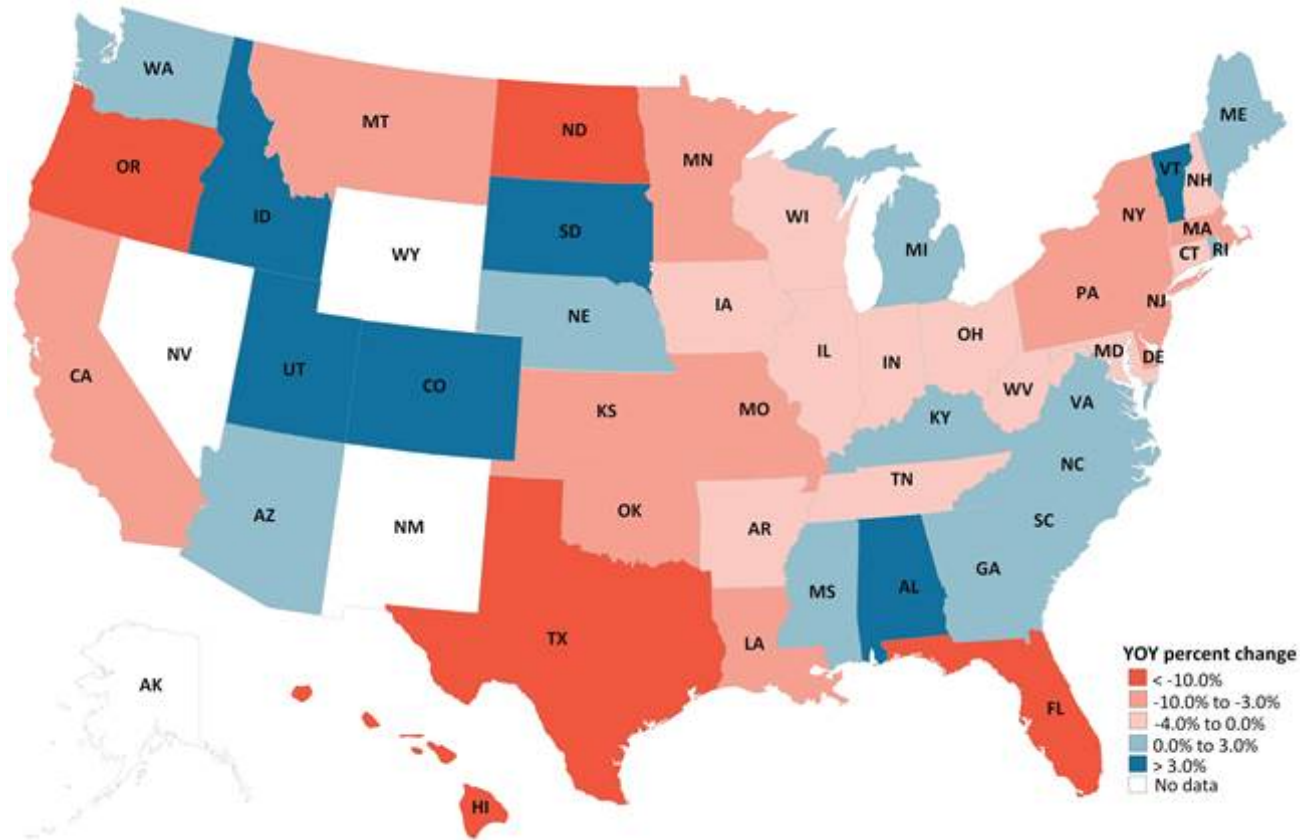
Appendix 1

Quarterly GDP QOQ

(%)	3Q19	4Q19	1Q20	2Q20	3Q20	4Q20	1Q21	2Q21	3Q21	4Q21
US	0.6	0.6	-1.3	-9.0	7.4	1.2	0.0	1.4	1.7	1.6

How Will Tax Revenues Fare in the New Year?

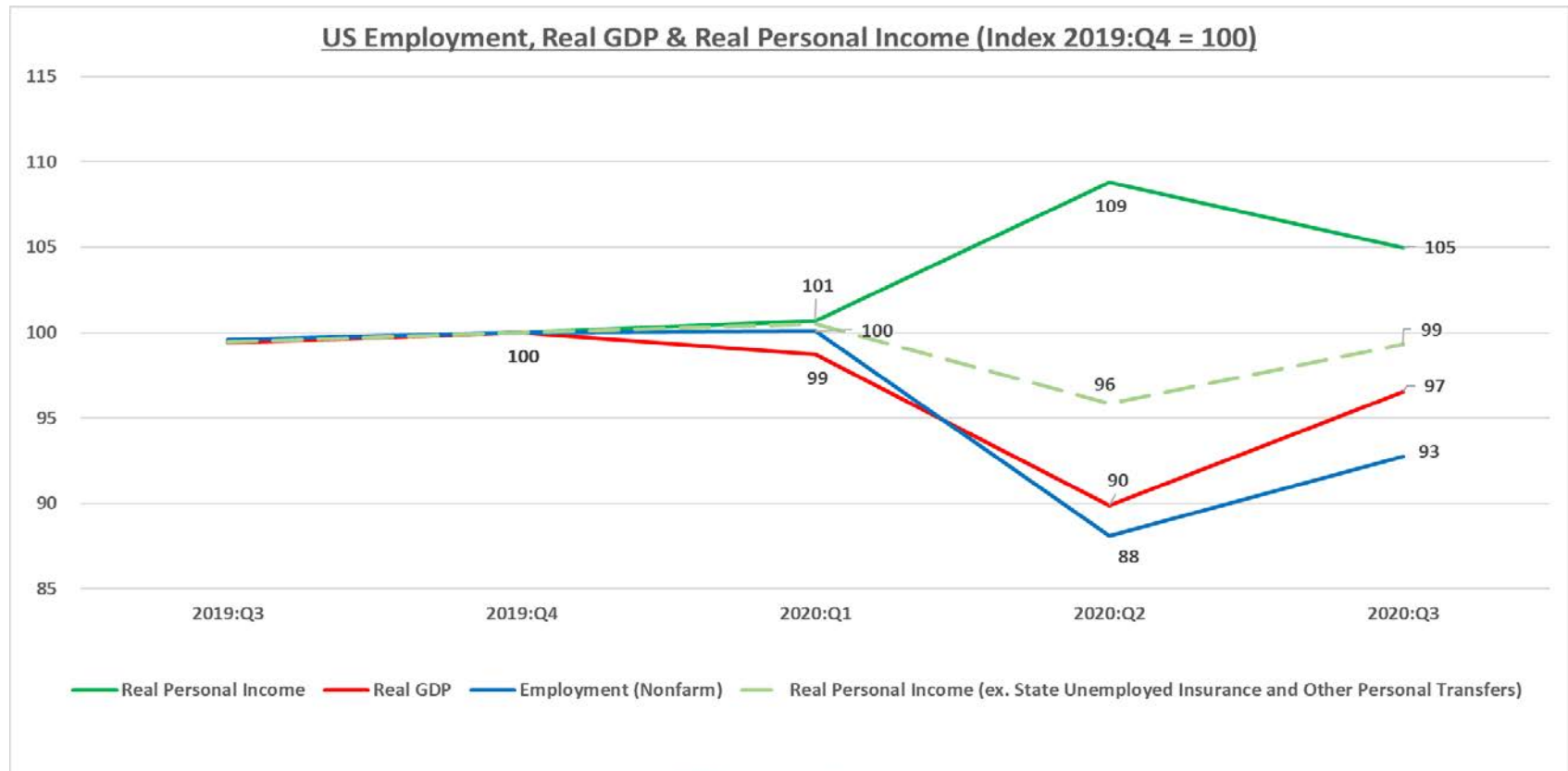
Change in Tax Revenues From April – November, 2019 to 2020 (Urban Institute, January 2021)



Source: Urban Institute (<https://www.urban.org/policy-centers/cross-center-initiatives/state-and-local-finance-initiative/projects/state-tax-and-economic-review/data-subscriptions>)

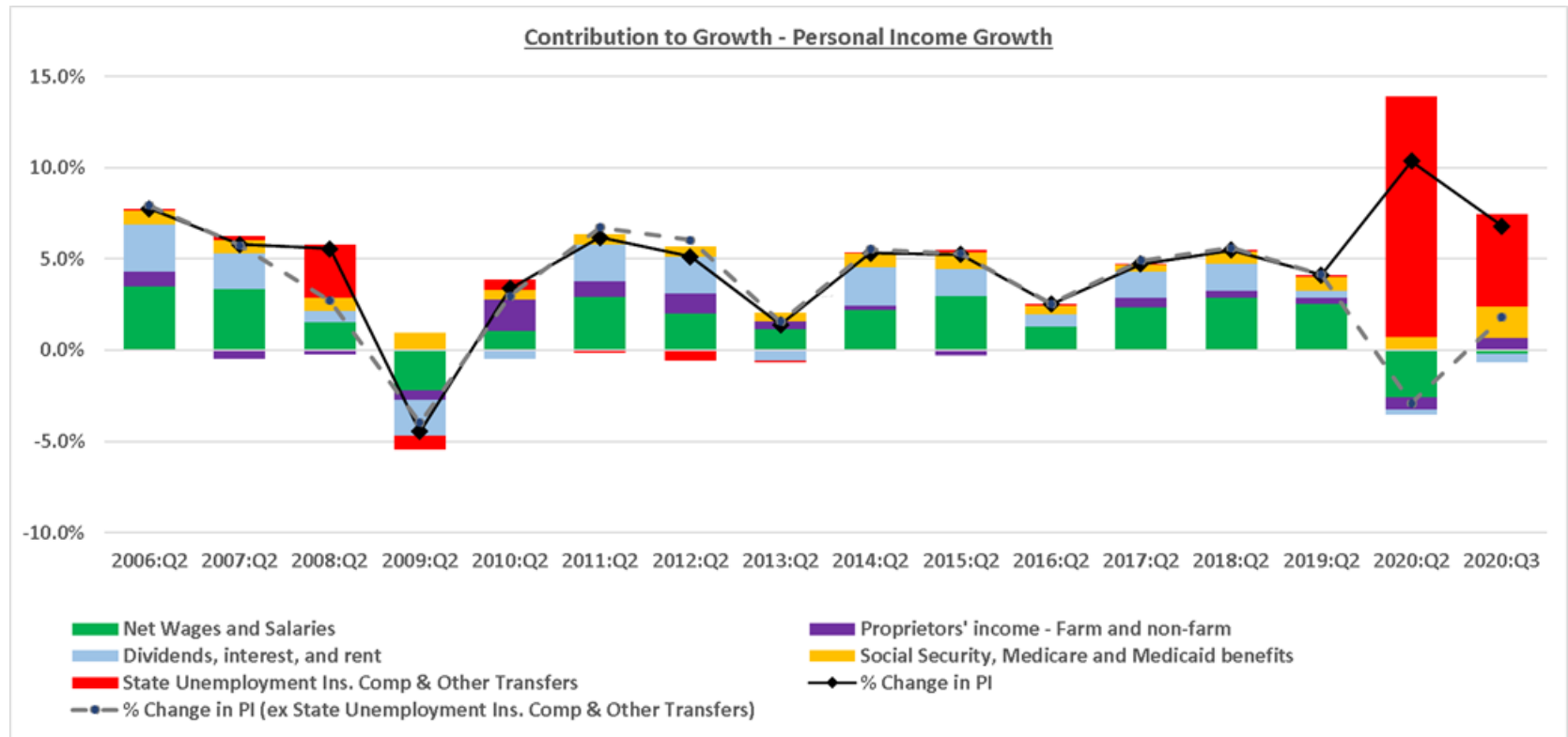
Recent Trends in Economic Indicators

Personal Transfers provided a significant boost to Personal Income



Components of Personal Income

Personal Transfers provided a significant boost to Personal Income



A Slower Recovery For Employment?

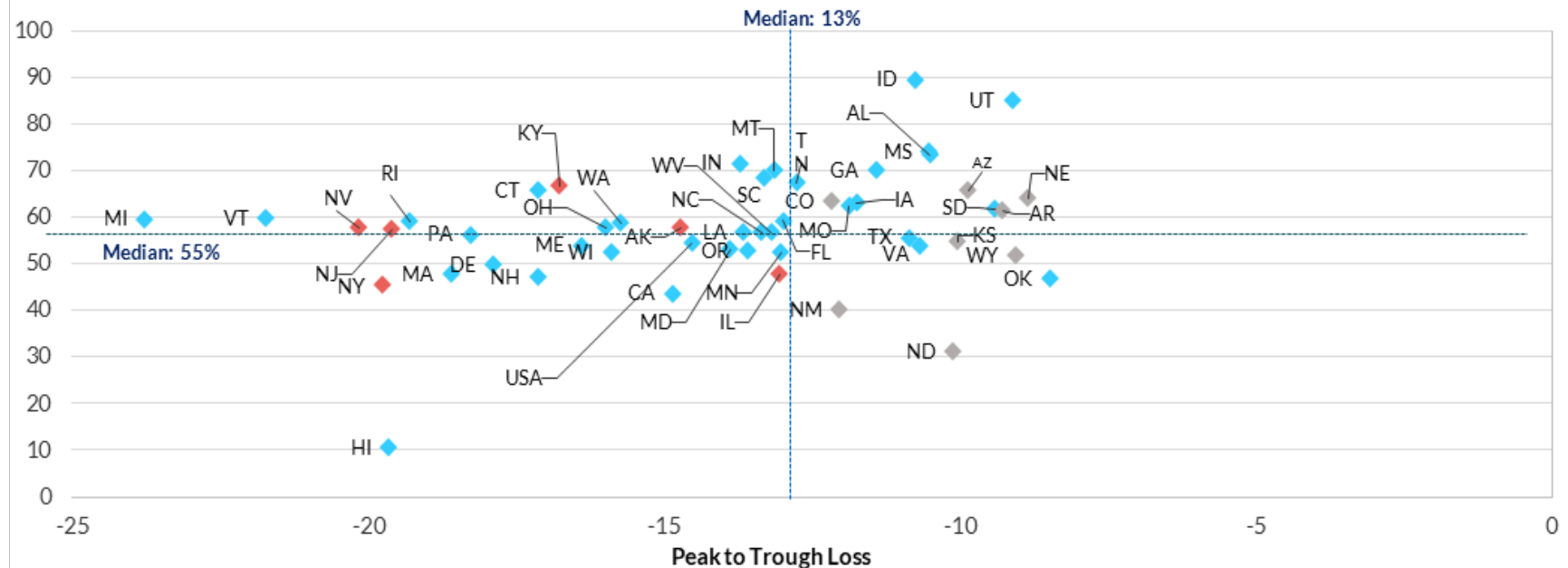
Employment recovery - notable variation across states

Peak to Trough 2020 State Employment Loss & Recovery Since Trough

(As of Oct. 2020)

(%, Employment Recovery)

◆ Stable Rating Outlook ◆ Negative Rating Outlook ◆ No Public Fitch Rating

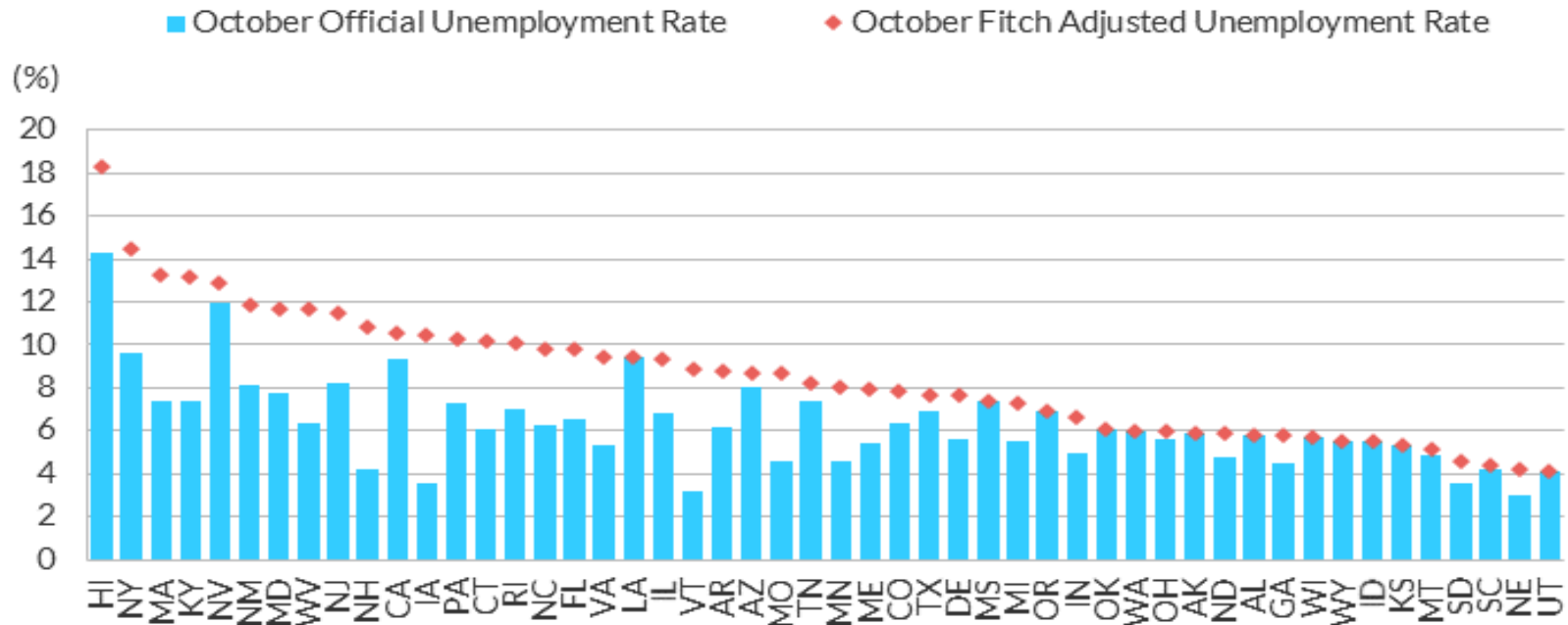


Source: Bureau of Labor Statistics.

A Slower Recovery For Employment?

A significant number of people have dropped out of the labor force

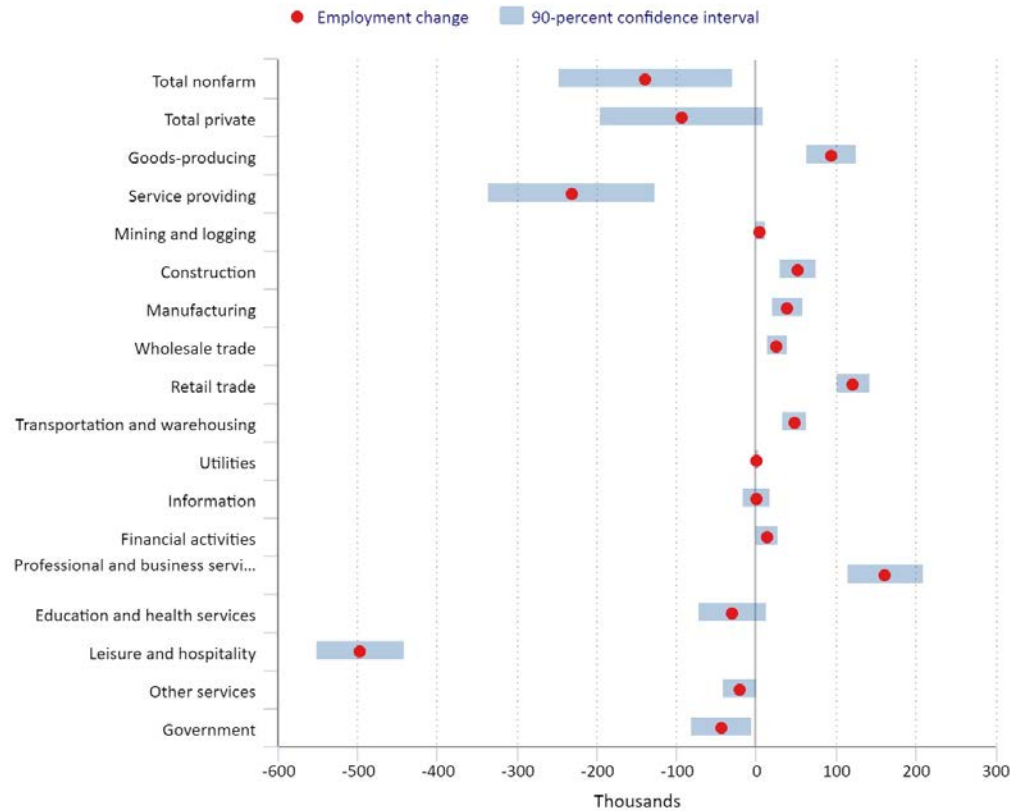
October Official Unemployment Rate vs. Unemployment Rate Assuming Change in Labor Force is Unemployed



Source: BLS, Fitch Ratings

Employment Changes by Sector

Employment change by industry with confidence intervals, December 2020, seasonally adjusted, in thousands, 1-month net change



Hover over chart to view data.

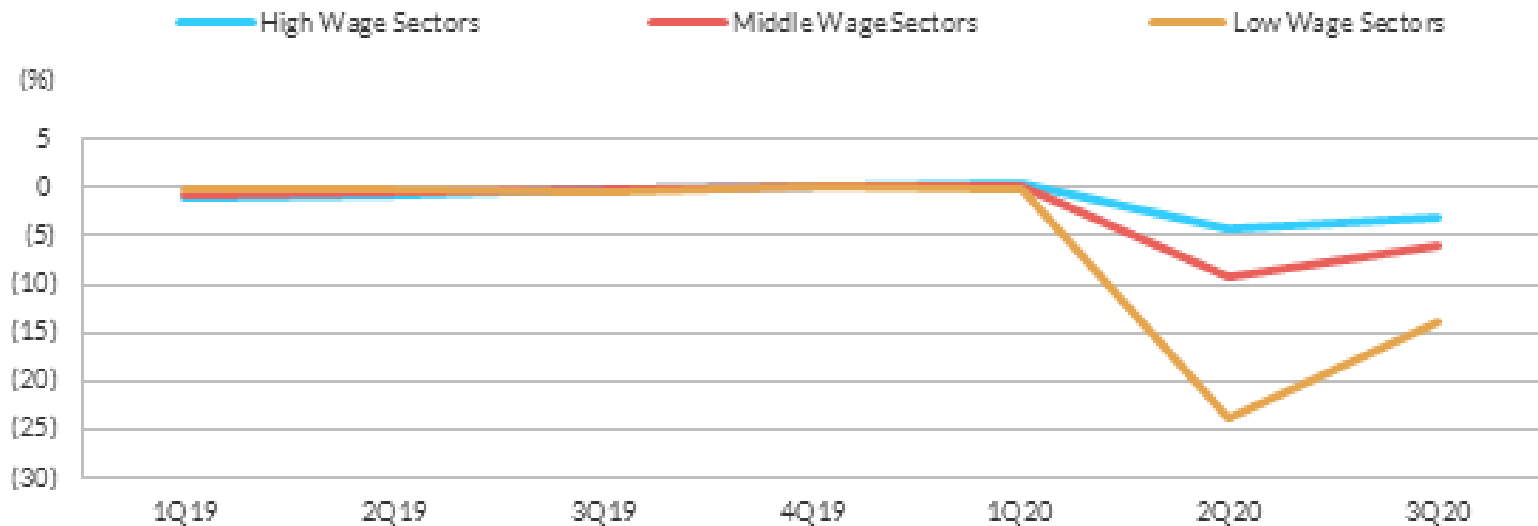
The 90-percent confidence interval represents the symmetric range of values around the estimate for which there is a 90-percent probability that the actual change is contained within that range of values. If the change is statistically significant, the blue bar does not cross the zero line.
Source: U.S. Bureau of Labor Statistics.



Minimal Employment Losses in High-Wage Sectors May Support Progressive Income Tax States

K-Shaped Employment Recovery

Employment by Wages: Indexed to 4Q19



Source: BLS, Fitch Ratings

Minimal Employment Losses in High-Wage Sectors May Support Progressive Income Tax States

Progressive Income tax states are benefiting

State	Income Tax Filers with Incomes of \$200,000 or More for 2019 (Tax Year 2018)			Comparison of Revenue Estimates (\$Millions)			
	% of Total Returns	% of State Adjusted Gross Income	% of Total State Income Tax Liability	Early Pandemic FY21 Estimate	Recent FY21 Estimate	Change	% Change
California	6.5%	44.2%	70.9%	\$ 137,719	\$ 173,464	\$ 35,745	26.0%
New Jersey	8.3%	45.2%	67.1%	\$ 33,955	\$ 36,873	\$ 2,918	8.6%
New York	7.3%	49.6%	65.1%	\$ 74,282	\$ 77,015	\$ 2,733	3.7%
Connecticut	8.4%	50.5%	57.4%	\$ 18,088	\$ 18,837	\$ 749	4.1%
Maryland	6.5%	34.1%	41.4%	\$ 17,322	\$ 18,710	\$ 1,388	8.0%

Source: State revenue and tax collection departments; Fitch Ratings

Source: CA – General Fund revenues and transfers, June 2020 California State Budget 2020-21 and November 2020 Legislative Analyst's Office California's Fiscal Outlook; NJ - May 2020 Report on the Financial Condition of the State Budget for Fiscal Years 2020-2021 and November 2020 Governor's Revenue Certification (includes \$702.7M policy actions but excludes \$4.5 billion deficit borrowing; NY – State Operating Funds, April 2020 Enacted FY 2021 Budget and Fiscal Plan and November 2020 State Comptroller Report on Estimated Receipts and Disbursements; CT - state consensus revenue forecasts for April and November 2020; MD - May 2020 Board of Revenue Estimates (BRE) Guidance and September 2020 BRE Revision; Fitch Ratings.

Federal Stimulus

- \$900 billion bill passed in December will help stabilize budgets even without direct aid to states and locals
- President-Elect Biden proposed an additional \$1.9 trillion
 - \$350 billion in direct state and local aid plus
 - \$130 billion for K-12 schools
 - \$20 billion for transit
 - Aid to individuals and businesses will benefit tax revenues
- Likely to be subject to extensive negotiation
- Not incorporated into rating analysis

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Intro Bond Finance WebCourse

February 24 – 25, 2021

12:00 – 5:00 PM Eastern

Advanced Bond Finance Course

May 24-25, 2021

12:00 – 5:00 PM Eastern

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Retroactive PACE**

January 26, 2021
2:00 PM Eastern

**CDFA Federal Financing Webinar Series:
Restoring Local Economies with Federal Partners**

February 9, 2021
2:00 PM Eastern

**Fundamentals of Economic Development
Finance WebCourse**

January 27-28, 2021
12:00 – 5:00 PM Eastern

**Rural Broadband and Telehealth
Financing**

February 16, 2021
2:00 PM Eastern

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May 18, 2021

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