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Bond Rating Agency Trends

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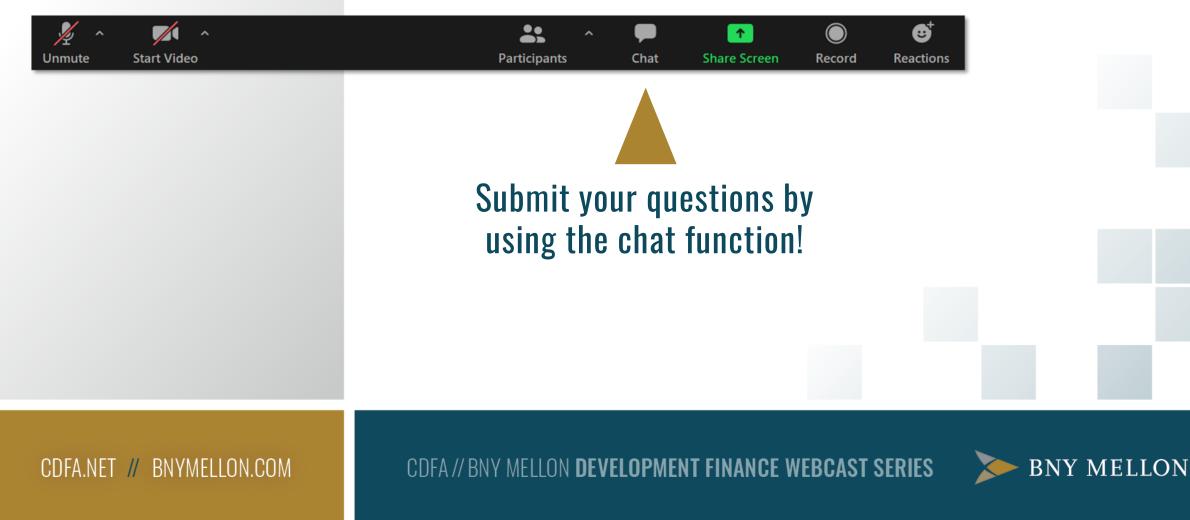


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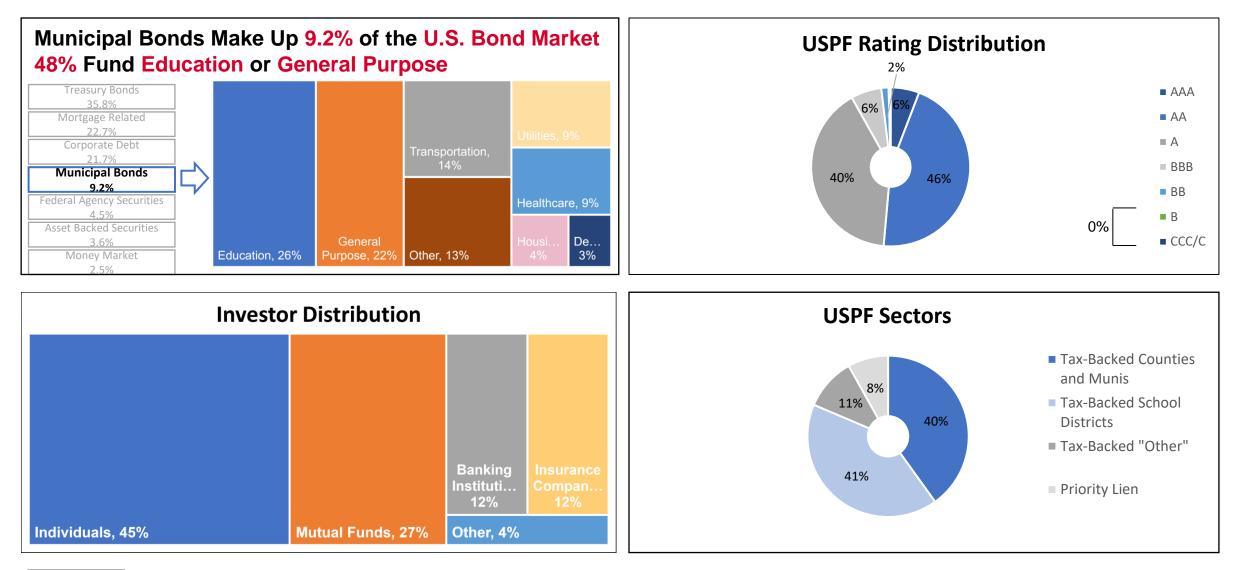
CDFA // BNY Mellon Development Finance Webcast Series: Bond Rating Agency Trends





Jane Ridley Sector Leader, U.S. Local Governments August 8, 2023

USPF Market Overview



USPF 2023 Midyear Outlook

What we're watching

- Higher interest rates and inflation continue to be headwinds for most issuers from a debt issuance and operating and capital budget perspective
- Summer storm and fire season heightens the possibility of catastrophic events that require swift response and resource allocation

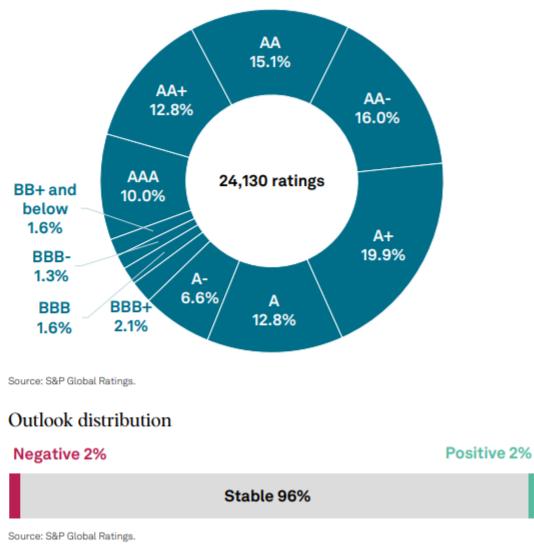
Trends

- Credit conditions have been largely stable, and upgrades have exceeded downgrades this year for most sectors
- The U.S. economy has been resilient despite 500 basis points of official rate increases and recent market stresses such as the U.S. debt ceiling negotiations and banking sector uncertainty
- Federal stimulus and healthy financial reserves continue to provide significant flexibility

Rest of year expectations

 Our baseline U.S. economic forecast is now for a shallower but more protracted slowdown rather than a recession; however, we don't expect this to disrupt credit stability for most issuers

U.S. Public Finance Ratings Distribution



S&P Global Ratings' U.S. Economic Forecast Overview Key indicators

	2019	2020	2021	2022	2023f	2024f	2025f	2026f
Real GDP (annual average % change)	2.3	-2.8	5.9	2.1	1.7	1.3	1.5	1.8
Real consumer spending (annual average % change)	2.0	-3.0	8.3	2.8	2.0	1.2	1.4	2.1
Real equipment investment (annual average % change)	1.3	-10.5	10.3	4.3	-0.7	1.4	2.0	2.7
Real nonresidential structures investment (annual average % change)	2.3	-10.1	-6.4	-6.5	8.0	0.2	-0.3	1.1
Real residential investment (annual average % change)	-1.0	7.2	10.7	-10.5	-11.5	1.1	4.4	1.8
Core CPI (annual average % change)	2.2	1.7	3.6	6.2	5.0	3.3	2.4	2.2
Unemployment rate (%)	3.7	8.1	5.4	3.6	3.5	4.0	4.5	4.6
Housing starts (annual total in mil.)	1.3	1.4	1.6	1.6	1.4	1.3	1.4	1.4
Light-vehicle sales (annual total in mil.)	17.0	14.5	15.0	13.8	15.1	15.1	15.9	16.0
10-year Treasury (%)	2.1	0.9	1.4	3.0	3.7	3.6	3.4	3.3

As of June 15, 2023. All percentages are annual averages, unless otherwise noted. Core CPI is consumer price index excluding energy and food components. f--forecast. Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, The Federal Reserve, Oxford Economics, S&P Global Economics' forecasts.

USPF 2023 Midyear Sector Summary Local government

What we're watching

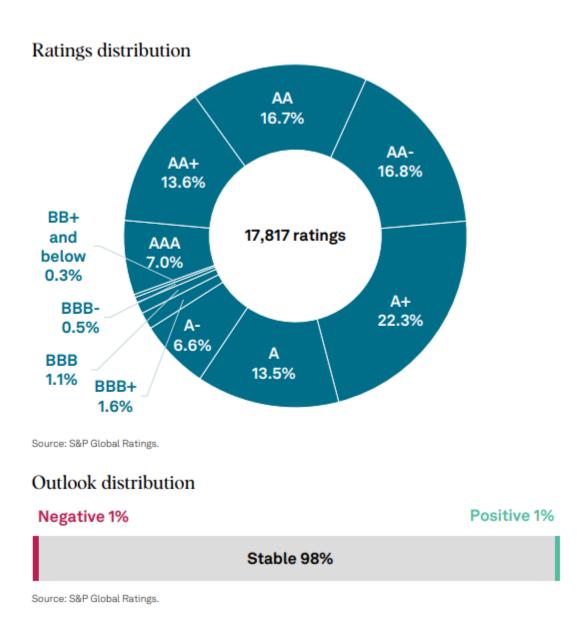
- Any pressures related to inflation or the potential for lower consumer spending that could affect collections of economically sensitive revenues
- Credit strength/stability of state governments, particularly for local governments dependent on state aid or state revenue sharing

Trends

- Reserve growth has been supported by good revenue collections and ongoing tax base growth
- Pandemic-related federal stimulus is helping to support capital needs and offset rising operating costs

Rest of year expectations

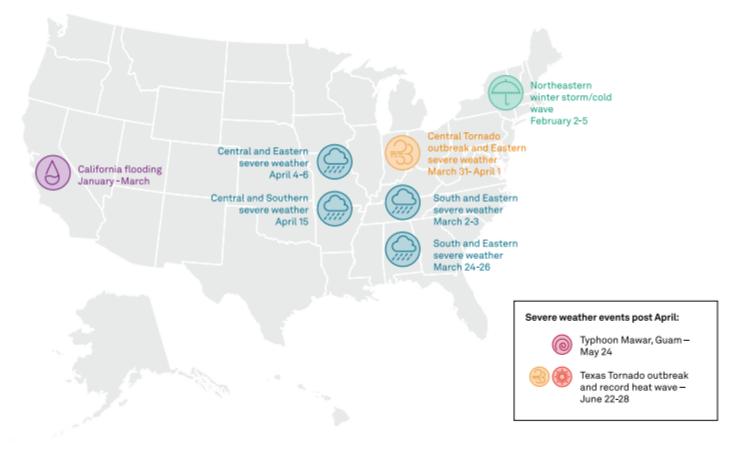
- Credit quality and stability will continue to be supported by federal stimulus dollars, which many local governments have yet to spend
- Summer storm season increases the possibility of catastrophic events; governments unprepared for the unexpected are more likely to experience credit impacts



Extreme Weather: Key Risk

- Extreme weather events, including hurricanes, droughts, and flooding remain one of the key emerging risks we're watching for U.S. governments and not-for-profit enterprises
- Through April 30, 2023, the National Oceanic and Atmospheric Administration reported seven separate \$1 billion events, leading to almost \$24 billion in costs
- These seven events exclude Typhoon Mawar that hit Guam in May as a Category 4 storm and the extreme heat and tornados affecting Texas in June
- Although we incorporate an entity's risk management plans and financial readiness to respond to these events into our credit analysis, in some cases, the effects from the event can lead to rating pressure
- For example, following Typhoon Mawar, we revised the outlook on A.B. Won Pat International Airport Authority, Guam to negative from stable and affirmed the 'BB' longterm rating, given the expected disruption in tourism from damage and power outages on the island that could affect enplanements
- The airport was already lagging its U.S. peers in demand recovery from the pandemic due to protracted travel restrictions in its key Asia-Pacific markets

U.S. 2023 billion-dollar weather and climate disasters



Note: this map denotes the approximate location of the seven separate billion-dollar weather and climate disasters that impacted the United States through April 2023. Source: National Oceanic and Atmospheric Administration.

Top 10 Management Characteristics Of Highly Rated Borrowers: Updated

Key Takeaways



We've observed some distinct commonalities in the management and governance practices of highly rated U.S. public finance government issuers over the years. There is considerable overlap between these factors and how we evaluate environmental, social, and governance (ESG) risks and opportunities.



When coupled with structural issues including those presented by ESG factors, a government's management and administrative characteristics can move credit quality up or down significantly and sometimes swiftly.



The strongest issuers generally engage in long-term planning practices including proactive budget management and debt/liability planning, strong liquidity management, and the establishment of reserves. If planning is done but not utilized—or if management lacks the willingness to make difficult decisions--plans are likely to wind up being ineffectual.



Top 10 Management Characteristics Of Highly Rated Borrowers: Updated

		Е	S	G
♪	1. Focus on structural balance	\oslash	\oslash	\oslash
•••	2. Strong liquidity management	\oslash	\oslash	\oslash
\searrow	3. Regular economic and revenue updates to identify shortfalls early	\oslash	\odot	\oslash
	4. An established rainy day/budget stabilization reserve	\oslash	\oslash	\oslash
	5. Prioritized spending plans and established contingency plans	\oslash	\oslash	\oslash
<u>ک</u>	6. Strong long-term and contingent liability management	\oslash		\oslash
	7.Comprehensive multiyear financial planning	\oslash	\oslash	\oslash
	8. A formal debt management policy	\oslash	\oslash	\oslash
\bigcirc	9. A capital planning process, including risk mitigation	\oslash	\oslash	\oslash
٩	10.A well-defined and coordinated economic development strategy	\oslash	\oslash	\oslash

Source: S&P Global Ratings.

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1. Focus on structural balance

- ✓ Balanced budget = recurring revs match recurring exps
- Optimistic revenue or expenditure assumptions include
 - Reliance on debt restructuring for budgetary savings
 - Regular deferral of expenditures or infrastructure requirements
 - Insufficient retirement liability funding
 - Unrealistic expenditure savings assumptions



Budget planning that incorporates an issuer's specific environmental or social demographic challenges that may require including contingency planning for severe weather events or considering revenue raising flexibility if the population is declining.

A structurally balanced budget would include incorporating escalating pension contributions if funding requirements are increasing as a result of changing plan assumptions.

2. Strong liquidity management

- Essential to ensure full and timely payment of debt service
- ✓ When SLGS encounters credit distress it is often accompanied with, or exacerbated by, liquidity issues
- ✓ Importance of understanding and managing liquidity risk exposure from variable-rate debt and alternative financings



Acute physical risks stemming from several weather events including hurricanes, wildfires, or other hazards like tornados require a greater level of liquidity for issuers exposed to these risks. Although FEMA has historically covered a large percentage of these costs, issuers typically have immediate clean-up or overtime expenditures that draw on liquidity.

Limited; although higher liquidity may be required if health and safety risks disrupt revenue collections or lead to economic contraction.



Cybersecurity incidents stemming from more sophisticated bad actors may require governments to maintain higher liquidity as these events could disrupt revenue collections, particularly if online collection mechanisms are targeted. Furthermore, management teams may need to immediately hire outside contractors to recover technology systems or pay ransomware should a government choose to do so.

3. Regular economic and revenue updates to identify shortfalls early

- ✓ Formal mechanism to monitor and review
- ✓ States and local governments address this differently
- ✓ Historical trends help identify leading or lagging indicators
- ✓ Monitoring allows potential issues to be caught sooner

Likely more limited unless chronic environmental risks related to a greater frequency or intensity of wildfires or severe weather events lead to a pattern of revenue or expenditure volatility.



Demographic shifts can lead to rapid or sustained changes in revenue or expenditures unrelated to an economic downturn. Social unrest and community health and safety risks may lead to unanticipated public safety costs, information technology investments, or facility modifications that were unbudgeted.



Advanced acknowledgement of trends can be critical for appropriate management of resources in order to avoid credit deterioration. One example is mid-year state aid cuts resulting from state statutory changes, or flexibility for the state to reduce distributions to local governments in the event of financial pressures that we capture in our Institutional Framework. In addition, in some cases regular budget monitoring is required by the governance structure or an oversight mechanism provided by the state to local governments.

4. An established rainy day/budget stabilization reserve

- ✓ Reserves important for budget shortfalls or unexpected environmental events
- No one level or type of reserve is considered optimal; size depends on determining your own needs
- ✓ Reserve sizing considerations
 - Cash flow needs
 - Contingent liquidity provisions
- Revenue/expenditure volatility
- Formal sizing & replenishment



Similar to liquidity, reserves and contingency planning provide an important cushion for credit stability when exposed to chronic or acute environmental risks as well as other hazards such as natural disasters.

Some governments with weaker demographic characteristics may build reserves over time rather than rely on large tax rate increases. Furthermore, service demands stemming from serving populations with higher housing or food insecurity may require higher reserves for one-time programming requirements.

Comprehensive risk mitigation and ability to respond to various risks may require higher reserve levels. A proactive approach to reserve increases or maintenance, including established reserves dedicated for specific environmental or social risks would be viewed favorably.

5. Prioritized spending plans & established contingency plans

- Used to address changing economic conditions, intergovernmental fund shifts, budgetary imbalance, or other emerging risks that may require resources
- Regular monitoring of long-term plans can help governments respond to changes quickly



Planning for environmental risks includes hardening structures against physical risks, regionally coordinating emergency planning, and practicing planning efforts to determine where improvements may be necessary.

Gradual shifts in demographics may not lead to significant changes in the short term but could require facility, infrastructure, or services that require changes to operations over a longer-term horizon. Planning designed to address future needs for population or socioeconomic modifications is important for stability over time.

Planning and mitigating for a cyber-attack can mean cyber-hardening systems, prioritizing system upgrades, and creating contingency plans in the event of an attack. Furthermore, pro-active partnering with FEMA or the Corps of Engineers to mitigate environmental risks is frequently incorporated into our view of highly rated management teams who face those kinds of risks.

6. Strong long-term and contingent liability management

- ✓ Top of the List: Pension & OPEB management
- Differentiate when long-term liabilities are large and growing, especially when and contributions are less than required and there's limited action on reform
- \checkmark Look at pressures outside the general fund
 - > Stadiums, convention centers, health care operations
 - Other enterprise operations



While deferred maintenance may not be considered a traditional contingent liquidity risk, the liability associated with not funding regular improvements to facilities or roads may grow for issuers who face a catastrophic weather event that destroys infrastructure. In some cases, retrofitting facilities or using certain materials for road construction could harden them against these risks, and more stringent building codes requirements could mitigate the risk and liability.



Decision-making to ensure elected boards and management teams agree on financial support for certain projects or enterprises could alleviate governance risks for contingent liabilities. Furthermore, plan governance for pensions and OPEB, particularly alongside conservative assumptions that rely less on investment returns to achieve full funding of the actuarily determined contribution, is typically viewed favorably.

7. Comprehensive multiyear financial planning

- Out-year budget imbalances can be hindered by limitations on raising revenue or cutting expenditures
- ✓ Understand plans are subject to change, but they still provide a way to evaluate how budget plans affect revenues, spending and reserves

Understanding what environmental mitigation or adaptation strategies are necessary and when they must be addressed is critical to ensuring balanced operations over time.



A long term change in demographics or services based on dependent or vulnerable populations should also be incorporated into financial planning to ensure adequate resources or the need to reallocate resources. Further, annual personnel costs, particularly if related to multi-year settled or unsettled labor contracts, should be included in expenditures.



Favorable governance aspects of multi-year planning include potential for escalating pension or other postemployment benefit contributions, consideration of historical state aid reductions that could occur again during times of fiscal stress, or changes to other statutory requirements that may result in higher expenditures.

8. Formal debt management policy

- ✓ Generally include implications of existing and proposed debt on the government's future financial profile, including
 - Variable rate debt, contingent liabilities/bank debt, swaps
 - Refunding savings, amortization
 - Debt affordability measures
 - Allowable uses of debt



Capital projects that help mitigate acute or chronic physical risks are typically expensive given their size and scope, and frequently span regionally or require cross-jurisdictional participation. As a result, these projects have the potential to require substantial debt issuance. Management teams may need to annually review and reprioritize projects to keep debt loads affordable or consider how debt costs may escalate if projects are not undertaken to mitigate risks.

Substantial population growth may require major infrastructure investments in roads, schools, or facilities. Furthermore, declining population trends may lead to challenges in funding deferred maintenance requirements. Long-term capital planning allows management teams to layer in debt in a manner that matches resources and projects.

Transparency and reporting of debt metrics to monitor compliance with a debt policy is nearly as important to credit quality as adoption of such a policy. Regular reporting and monitoring allow for improved decision making, which we believe is key to good governance.



9. Capital planning process, including risk mitigation

- ✓ Focus on addressing needs in a cost-effective way
- Neglecting capital needs now can lead to higher future costs and impede economic growth
- ✓ Important to include both sources and uses of funds

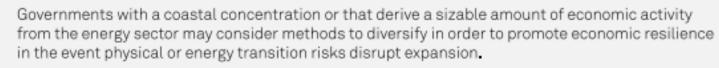


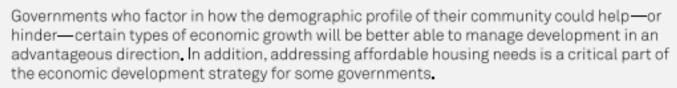
We view long-term capital planning hand-in-hand with regular reporting and monitoring of a debt policy and multiyear financial planning. All three work together to ensure credit stability in the face of evolving conditions, particularly when consider ESG risks.



10. Well-defined, coordinated economic development strategy

- Economic growth prospects are likely to affect future revenue-generating capacity
- ✓ Strategies often have long time horizon
- Cost benefit analysis and tracking outcomes can be helpful in determining resource allocation







Management teams focused on good governance practices typically understand their statutory options to facilitate development, conservatively utilize debt issuance to fund projects, employ feasibility studies to support growth projections, and limit risky debt structures or repayment sources to insulate credit quality.

Discussion Topics





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FitchRatings



Bond Rating Agency Trends

Emily Wadhwani, Senior Director

August 8, 2023

2Q23 USPF Rating Actions Summary

Upgrades Outpaced Downgrades

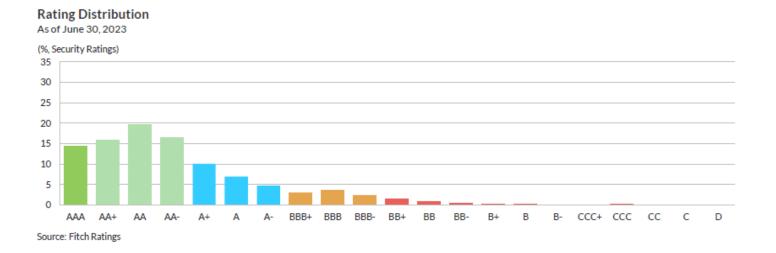
 Positive rating momentum continued in 2Q23 for the U.S. Public Finance sector despite high inflation, persistent labor shortages and elevated costs of capital.

Fitch's Rating Outlooks Remain Stable

- The distribution of Rating Outlooks, despite largely deteriorating sector outlooks, continues to reflect credit stability even in the face of weaker operating conditions.



1Q17 2Q17 3Q17 4Q17 1Q18 2Q18 3Q18 4Q18 1Q19 2Q19 3Q19 4Q19 1Q20 2Q20 3Q20 4Q20 1Q21 2Q21 3Q21 4Q21 1Q22 2Q22 3Q22 4Q22 1Q23 2Q23 Note: Data include transportation ratings. Revisions to Fitch's Tax-Supported criteria were implemented from April 2016 through April 2017. Source: Fitch Ratings

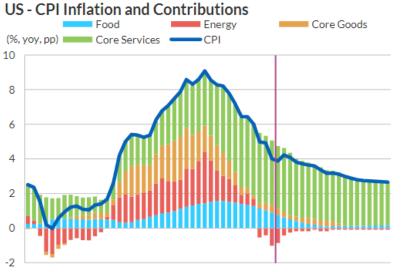


U.S. Public Finance Security Rating Actions and Outlooks

FitchRatings

U.S. Public Finance Rating Actions Report and Sector Updates: Second-Quarter 2023

U.S. States: Macro Risks Remain



Jan 20 Jul 20 Jan 21 Jul 21 Jan 22 Jul 22 Jan 23 Jul 23 Jan 24 Jul 24 Source: Fitch Ratings' calculations, BLS, Haver Analytics

United States - Forecast Summary

- Continued Federal Reserve monetary policy tightening appears likely to trigger a mild recession by the end of 2023 or early 2024.
- One more Fed rate hike expected in September.
- Inflation has cooled but remains well above the Federal Reserve's 2% target.

(%)	Annual Avg. 2018-2022	2022	2023F	2024F	2025F
GDP	2.1	2.1	1.2	0.5	2.4
Consumer spending	2.6	2.7	1.8	0.2	2.4
Fixed investment	2.5	-0.2	-1.8	-0.1	2.6
Net trade (contribution pp)	-0.6	-0.6	0.3	-0.1	-0.3
CPI inflation (end-year)	3.6	6.5	3.6	2.7	2.5
Unemployment rate	4.9	3.6	4.0	5.1	4.5
Policy interest rate (end-year)	1.40	4.50	5.75	4.25	3.25
Exchange rate, USDEUR (end-year)	0.88	0.94	0.92	0.92	0.92

U.S. States: Revenue Growth is Cooling



State Revenue Fell Below Last Year During Final Months of FY 2023

- With budget season largely complete, many states anticipate moderating growth or slight revenue declines in the next fiscal year.
- Despite slowdown, revenue collections for fiscal 2023 generally outpace budgeted projections, indicating possible revenue surpluses, dependent on the scope of supplementary budget measures.
- Sales tax revenues maintained growth this fiscal year, supported by steady labor market improvements and wage growth.

Note: Excludes Nevada and New Mexico due to lack of recent data Source: Fitch Ratings, Urban Institute.

U.S. States: Sales Tax Revenue Prospects

Revenues in States with Higher Share of Sales Taxes Fared Better

YOY growth in total state taxes for the 12-month period ending June 2023

Note: Includes states that have reported June 2023 revenue. States with no individual income tax are shaded orange. Data for Alabama covers Oct 2022-June 2023. In 2023, California's state tax filing deadline was extended to October. Source: Fitch Ratings

- States with greater reliance on tax revenues fared better in 2023
- Conservative or cautious budgeting approach to 2024
- Revenue growth rates will taper to more modest levels

U.S. States: Tax Policy Changes Still in Play

- The pace of tax policy changes slowed in 2023, but at least eight states enacted new income tax rate reductions
- Temporary measures, such as income tax rebates, pose little credit risk given their one-time nature.
- Some of the permanent measures include guardrails, or triggers (of varying effectiveness) that are intended to slow or halt phased tax reductions if revenue growth slows or reverses.
- Credit implications will depend on states' ability to manage long-term rate reductions with offsetting economic growth or expenditure adjustments.



U.S. States: Familiar Ongoing Credit Concerns, with a Federal Twist

- The inadequacy of current infrastructure funding continues to be a longterm concern, although the Infrastructure Investment and Jobs Act (IIJA) will inject nearly a trillion federal dollars (about one-half of it new funding) over the next decade.
- Medicaid remains an ongoing budgetary pressure point for all states.



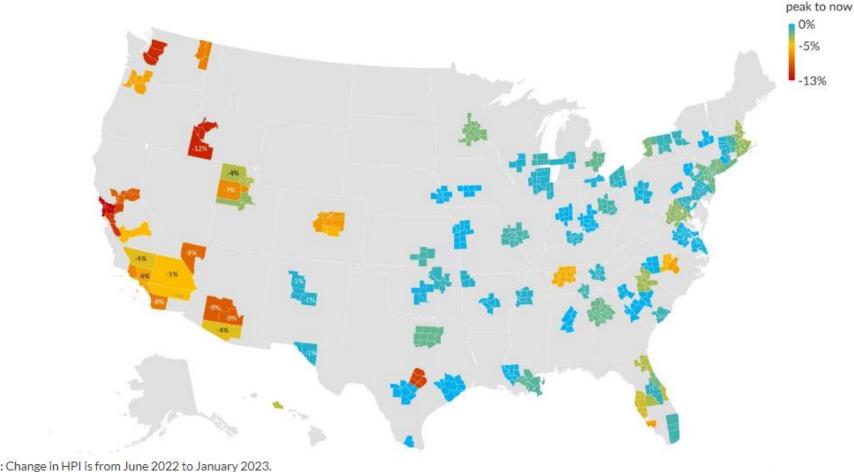
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State financial resilience remains robust despite weakening tax revenue growth or revenue declines in fiscal 2023. Looking to 2024, the abnormally high revenue growth that marked the pandemic recovery appears to be in the rearview mirror.

Tammy Gamerman, Director, USPF

U.S. Local Gov't: Home Price Growth Deceleration Continues

Change in Home Price Index for Top 100 MSAs



 Fitch's "U.S. RMBS Sustainable Home Price Report (First-Quarter 2023)" states that national home prices grew approximately 3.8% annually for January 2023, with a 0.5% monthly drop, marking the seventh consecutive month of declining prices in the U.S.

- Fitch estimates that national home prices were overvalued 7.8% for 4Q22 on a population-weighted average basis and will continue to moderate with a declining trend in home prices.
- Existing home sales increased notably in February 2023, by 14.5% month over month, representing the largest surge since July 2020.

Note: Change in HPI is from June 2022 to January 2023. Source: Fitch Ratings, CoreLogic

FitchRatings

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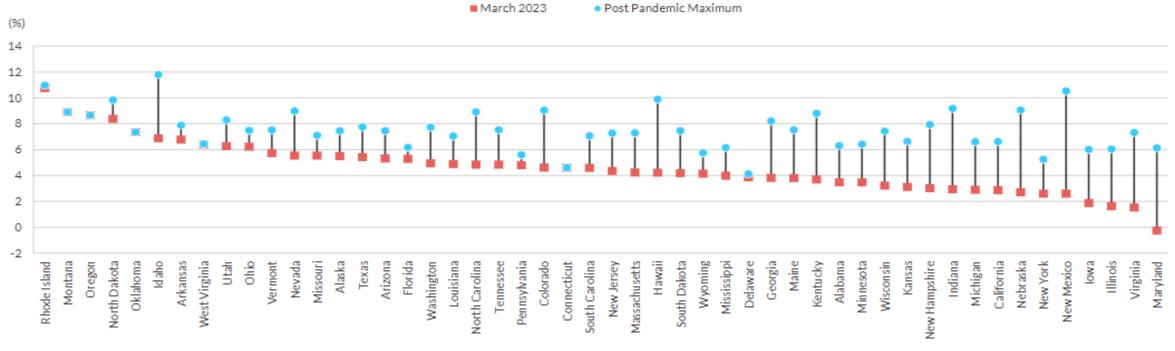
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U.S. Local Gov't: Labor Market Remains Tight

- Despite unemployment being at a 54-year low, the labor market will weaken as aggregate demand stagnates in response to higher interest rates and tightening credit conditions.
- Wage inflation will remain particularly challenging for public school districts given nationwide teacher and other school staffing shortages.
- New collective bargaining agreements will further pressure wage inflation and increase risk to budgetary instability as an expected mild recession triggers and exhaustion of stimulus funds lead to an eventual tapering of revenue growth.
- Employment levels now exceed pre-pandemic levels in all but fifteen states, while the unemployment rate is below pre-pandemic levels in 30 states.

Nominal Wage Growth – Average Hourly Earnings of All Employees

% Change from a year ago - 3 month moving average

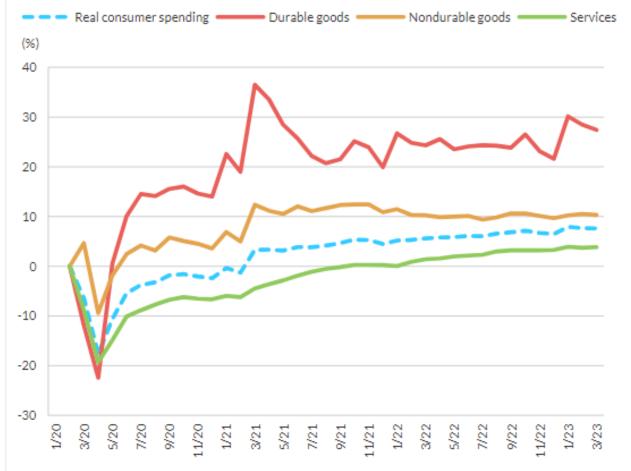


Source: Fitch Ratings, BLS

U.S. Local Gov't: Consumer Spending Remains Resilient

U.S. Consumer Spending (Real)

Change since February 2020



Source Fitch Ratings, Bureau of Economic Analysis

- On the heels of very strong motor vehicle sales in January, real consumer spending was relatively strong during 1Q23, increasing at an annualized rate of 3.7%.
- Recent stress in the banking sector, uncertain economic conditions and collateral weakening (particularly commercial real estate) are expected to tighten credit conditions further.
- Secular changes in office policies and commuting patterns has the knock-on effect of reducing commercial property valuations, tax revenues generated by dining and entertainment activity and fare revenues of mass transit entities.

U.S. Local Gov't: Inflation Moderately Pressures Pension Liabilities

Automatic Cost-of-Living Rates as of Fiscal 2021 Sample of Major State and Local Retirement Systems

	Membership in Plan	Highest COLA	Lowest COLA
California Public Employees Retirement Fund	2,077,295	5.0%	2.0%
Texas Teachers Retirement System	1,877,919	0.0%	0.0%
Florida Retirement System	1,221,708	3.0%	0.0%
Ohio Public Employees Retirement System	1,210,293	3.0%	0.0%
New York State & Local Retirement System	1,098,842	3.0%	1.0%
California State Teachers Retirement System	980,864	2.0%	2.0%
Virginia Retirement System	754,033	5.0%	0.0%
Pennsylvania Public School Employees Retirement System	517,822	0.0%	0.0%
New Jersey Public Employees Retirement System	432,428	0.0%	0.0%
Illinois Teachers Retirement System	432,314	3.0%	0.0%
Kentucky Employees Retirement SystemNon- Hazardous	123,857	0.0%	0.0%
Connecticut State Employees Retirement System	102,597	7.5%	0.0%

Note: Note: COLA calculations usually differ within systems based on factors including retirement

date, membership tier, employment category, employer, use of a simple or compounded rate,

linkage to CPI, calculation on a fixed or variable base, etc. Lowest rate in some cases reflects CPI-

linked variable minimums that may fall to zero.

Source: Fitch Ratings, pension plan reporting.

FitchRatings

- The high inflation environment in the U.S. is likely to have only moderately negative effects on state and local government public pension plan liabilities via automatic cost of living adjustment (COLA) mechanisms,
- But, will pressure plans through weakening asset performance and rising payroll costs.
- COLA-related inflation concerns would become more pressing if state and local pension sponsors enhance automatic COLAs or otherwise reverse COLA limits adopted after the Great Recession

Speaker – Q&A



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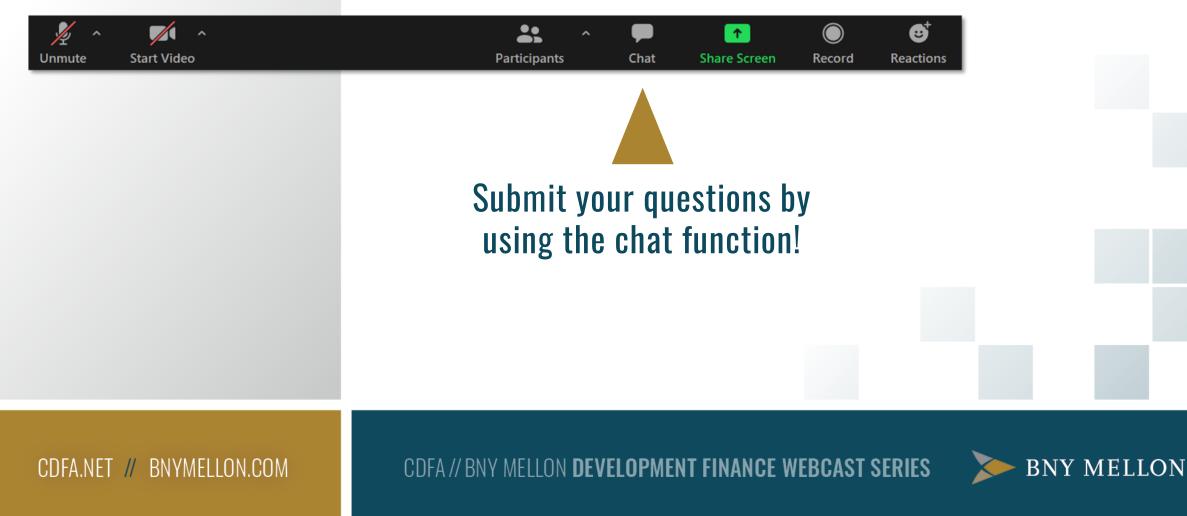
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