NCSL’s Fiscal Institute Symposium 2023
Rating in Times of Volatility

November 16, 2023
1:30 – 2:10 p.m.

Geoffrey Buswick
Managing Director &
U.S. Governments Sector Lead
Understanding S&P Global’s Ratings

- An issuer’s *ability* and *willingness* to pay debt in a *timely* manner
- Credit ratings are *forward looking*
- S&P Global ratings are *opinions*, not guarantees of credit quality or exact measures of the probability that a particular issuer or particular debt issue will default
- The Ratings scale *is relative* and based on the creditworthiness of an issuer or credit quality of an individual debt issue, from strongest to weakest, within a universe of credit risk
- Criteria provide the analytic framework to derive the rating opinion
Ratings 101 | S&P Global’s Ratings Scale

**Investment-Grade**
- AAA → Strongest
- AA+ → Very Strong
- AA → Strong
- AA- → Strong
- A+ → Strong
- A → Strong
- A- → Strong
- BBB+ → Adequate
- BBB → Adequate
- BBB- → Adequate

**Speculative-Grade**
- BB+ → Least Speculative
- BB- → Least Speculative
- B+ → Speculative
- B- → Speculative
- CCC → Highly Speculative
- CC → Highly Speculative
- C → Highly Speculative
- D → In Default

Short-term U.S. Public Finance note ratings: SP-1+, SP-1, SP-2 & SP-3
U.S. Public Finance (USPF) Q4 2023 Sector Summary -- States

What we’re watching

- With revenues slowing and inflationary pressures holding, we’re watching for current and out-year budgetary challenges
- Federal criticism of Medicaid redetermination actions in some states could force a change in eligibility rolls

Trends

- Reserves holding steady at all-time highs or even increasing in fiscal 2024
- Jobs are still hard to fill, and retention actions like benefit enhancements and across-the-board wage increases could have long-term budgetary impacts

Rest of year expectations

- The national economy will feel the effects of labor shortage and work stoppages and growth will slow, affecting state revenue collections
- Continued credit stability with some strengthening possible, as ratings on seven states have a positive outlook

Source: S&P Global Ratings.

Outlook distribution

- Stable: 86%
- Positive: 14%
- Negative: 0%

Source: S&P Global Ratings.
What we’re watching
• Higher interest rates and inflation remain headwinds for most issuers from a debt issuance and operating/capital budget perspective
• Extreme weather events continue, requiring swift response and resource allocation. Cost and availability of property insurance are emerging as a challenge

Trends
• Credit conditions have been largely stable, and upgrades have exceeded downgrades this year for most sectors
• The U.S. economy has been resilient, but we expect slower growth ahead. Federal budget deliberations and increased geopolitical tensions could further limit growth
• 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
# S&P Global Ratings' U.S. Economic Forecast Overview

## Key indicators

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023f</th>
<th>2024f</th>
<th>2025f</th>
<th>2026f</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real GDP (annual average % change)</td>
<td>2.3</td>
<td>-2.8</td>
<td>5.9</td>
<td>2.1</td>
<td>2.3</td>
<td>1.3</td>
<td>1.4</td>
<td>1.8</td>
</tr>
<tr>
<td>Change from June (percentage point)</td>
<td>0.5</td>
<td>0.0</td>
<td>0.1</td>
<td>-0.1</td>
<td>-0.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Real GDP Q4/Q4 (annual average % change)</td>
<td>2.6</td>
<td>-1.5</td>
<td>5.7</td>
<td>0.9</td>
<td>2.2</td>
<td>1.1</td>
<td>1.6</td>
<td>1.9</td>
</tr>
<tr>
<td>Change from June (percentage point)</td>
<td>0.9</td>
<td>-0.4</td>
<td>0.0</td>
<td>0.0</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Consumer spending (annual average % change)</td>
<td>2.0</td>
<td>-3.0</td>
<td>8.3</td>
<td>2.7</td>
<td>2.5</td>
<td>1.4</td>
<td>1.5</td>
<td>2.1</td>
</tr>
<tr>
<td>Equipment investment (annual average % change)</td>
<td>1.3</td>
<td>-10.5</td>
<td>10.3</td>
<td>4.3</td>
<td>-0.8</td>
<td>1.4</td>
<td>1.7</td>
<td>2.2</td>
</tr>
<tr>
<td>Nonresidential structures investment (annual average % change)</td>
<td>2.3</td>
<td>-10.1</td>
<td>-6.4</td>
<td>-6.6</td>
<td>7.6</td>
<td>1.1</td>
<td>0.5</td>
<td>3.2</td>
</tr>
<tr>
<td>Residential investment (annual average % change)</td>
<td>-1.0</td>
<td>7.2</td>
<td>10.7</td>
<td>-10.6</td>
<td>-11.1</td>
<td>0.7</td>
<td>3.2</td>
<td>1.8</td>
</tr>
<tr>
<td>Core CPI (annual average % change)</td>
<td>2.2</td>
<td>1.7</td>
<td>3.6</td>
<td>6.2</td>
<td>4.7</td>
<td>2.6</td>
<td>2.3</td>
<td>2.3</td>
</tr>
<tr>
<td>Core CPI Q4/Q4 (annual average % change)</td>
<td>2.3</td>
<td>1.6</td>
<td>5.0</td>
<td>6.0</td>
<td>3.7</td>
<td>2.4</td>
<td>2.3</td>
<td>2.3</td>
</tr>
<tr>
<td>Unemployment rate (%)</td>
<td>3.7</td>
<td>8.1</td>
<td>5.4</td>
<td>3.6</td>
<td>3.6</td>
<td>4.1</td>
<td>4.7</td>
<td>4.8</td>
</tr>
<tr>
<td>Housing starts (mil.)</td>
<td>1.3</td>
<td>1.4</td>
<td>1.6</td>
<td>1.6</td>
<td>1.4</td>
<td>1.4</td>
<td>1.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Light vehicle sales (mil.)</td>
<td>17.0</td>
<td>14.5</td>
<td>15.0</td>
<td>13.8</td>
<td>15.2</td>
<td>15.2</td>
<td>15.5</td>
<td>15.6</td>
</tr>
<tr>
<td>10-year Treasury (%)</td>
<td>2.1</td>
<td>0.9</td>
<td>1.4</td>
<td>3.0</td>
<td>3.9</td>
<td>4.0</td>
<td>3.6</td>
<td>3.6</td>
</tr>
</tbody>
</table>

Note: All percentages are annual averages, unless otherwise noted. Core CPI is consumer price index excluding energy and food components. f—Forecast.
U.S. States | U.S. State Ratings Methodology (GO)

- **Government Framework**
  - System support
  - Intergovernmental funding

- **Financial Management**
  - FMA
  - Budget management

- **Economy**
  - Economic structure
  - Wealth and income indicators
  - Economic development

- **Budgetary Performance**
  - Budget reserves
  - Liquidity
  - Tax/revenue structure
  - Revenue forecasting
  - Service levels
  - Structural performance

- **Debt and Liability Profile**
  - Debt burden
  - Pension liabilities
  - OPEB risk assessment

- **Indicative Credit Level**
- **Overriding factors**
- **Holistic analysis**

- **State Rating**

Source: S&P Global Ratings U.S. States Ratings Methodology, October 17, 2016
## Governments | Post-COVID Landscape

### Key Risks – October 2023

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inflation</strong></td>
<td>Higher cost of living erodes income and potentially discretionary spending which could lower consumption-based taxes.</td>
</tr>
<tr>
<td><strong>Interest Rates</strong></td>
<td>Higher borrowing costs have contributed to lower debt issuance while higher mortgage rates are increasing housing costs.</td>
</tr>
<tr>
<td><strong>Federal Policy</strong></td>
<td>Diminished federal stimulus flows and the potential for a federal government shutdown loom large.</td>
</tr>
<tr>
<td><strong>Event Risks</strong></td>
<td>Cyber attacks and extreme weather events will continue to challenge management. Cost and availability of insurance are emerging as a challenge.</td>
</tr>
<tr>
<td><strong>Demographics</strong></td>
<td>The aging U.S. population will add to service delivery costs and continue to challenge government staffing.</td>
</tr>
<tr>
<td><strong>Real Estate</strong></td>
<td>Fluctuations in commercial real estate values and housing affordability present potential revenue challenges over time.</td>
</tr>
</tbody>
</table>
U.S. States | By The Numbers

- **Aggregate reserves**: $121B, 130% higher than pre-pandemic.
- **U.S. (unadjusted) hourly wage gains in 2022**: 5.1%.
- **Average state pension funded ratio for FYE 2021**: 81.7%; expected to decline FY22.
- **States with negative outlooks**: 0.
- **States with positive outlooks**: 6.
- **Core CPI forecast (% change)**
  - FY23: 4.7%
  - 2022: 6.3%
- **Medicaid and CHIP enrollment increase (or 26.4%) between Feb. 2020 and Aug. 2022**: 18.7 mil.
- **State Fiscal Recovery funds still to be appropriated (as of Aug. 31)**: 20.8%.
- **More jobs open in Nov. than active job seekers (10.3 mil. open to 5.6 mil. actively seeking work)**: 4.7 mil.
- **Consecutive years with international migration to the U.S. declining**: 5
- **States in which deaths exceeded births in 2021**: 25

Sources: National Association of State Budget Officers; S&P Global Economics; Centers for Medicare & Medicaid Services; Federal Funds Information For States; U.S. Census Bureau; Bureau of Labor Statistics
Cyber | Headlines & Trends

Starting Dec. 18, 2023, the U.S. Securities and Exchange Commission (SEC) will require public companies to report material cyber security incidents on a Form 8-K within four business days of materiality determination.

“The global average cost of a data breaches reached $4.45 million in 2023--an all-time high and a 15% increase, compared with 2020.” IBM Security’s Cost of a Data Breach Report 2023

“74% of all breaches include the human element, with people being involved either via Error, Privilege Misuse, Use of stolen credentials or Social Engineering.” Verizon’s 2023 Data Breach Investigations Report

“69% of the 2,489 breaches reviewed in 2022 were done by organized crime (less than 10% nation-state or state-affiliated actors).” Verizon’s 2023 Data Breach Investigations Report

“Sadly, too few organizations learn how valuable MFA is until they experience a breach.” Jen Easterly, Director U.S. Cybersecurity and Infrastructure Security Agency

“Artificial intelligence and machine learning, while great for research & analytics (i.e. ChatGPT). However, AI tools can also be used by hackers for advanced attacks.” Forbes, March 5, 2023

“233 days. The average time financial institutions took to detect and address data breaches.” Cloudwards, Dec. 12, 2022

“The ransomware attack against Scripps Health that led to more than four weeks of electronic health record (EHR) downtime procedures and the theft of some patient data, resulted in $112.7 million in estimated revenue loss and incremental expenses.” Scripps, Aug. 10, 2021
Cyber & Crypto | Risk Management

Cyberattacks Increasing Across All Industries

Cryptocurrency and Decentralized Finance

Source: Check Point Research

Source: Exploring Crypto And DeFi Risks In Credit Ratings, published June 30, 2022
Disruptors | DeFi Uses Smart Contracts In Place Of Conventional Financial Risk Functions

**Traditional**
- **A**: Lender deposits fiat money to receive interest
- **B**: Central bank provides liquidity to banks and sets interest rates based on inflation and other parameters
- **C**: Interest rates on bank loans affected by interbank market
- **D**: Loan approval and interest rate for borrower depends on collateral and borrower risk profile

**Decentralized**
- **A**: Provides eligible crypto assets as liquidity
- **B**: Receives tokens as determined by protocol as form of interest
- **C**: Provides other eligible crypto assets as collateral
- **D**: Receives a borrowed amount of crypto assets

*S&P Global Ratings

*Most DeFi borrowing solutions require an overcollateralization based on a collateral factor. A few solutions offer unsecured borrowing.

Source: S&P Global Ratings.
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