Assessing the Affordability of State Debt

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Views expressed are the author’s and are not necessarily those of the Federal Reserve Bank of Boston or the Federal Reserve System.
Motivation

- State governments issue debt in the form of notes and bonds primarily to fund capital projects like roads and schools.
- In the wake of the Great Recession, conflicting views on state debt emerged:
  - On the one hand, low interest rates and federal subsidies (e.g. BABs) argue for more debt issuance.
  - On the other, fiscal crisis generating questions about states’ ability to meet financial obligations.
- How can states gauge what is an affordable level of debt?
What is debt affordability and why does it matter?

• Refers to a state’s ability to meet debt service requirements **without:**
  • Raising tax rates to uncompetitive levels
  • Negatively impacting provision of ongoing public services

• Has implications for:
  • Fiscal sustainability
  • Economic competitiveness
  • Credit ratings
Assessing affordability: Debt burden

- Can be described as a simple ratio:

\[
\text{Debt burden} = \frac{\text{Debt}}{\text{Resources}}
\]

- Issues to resolve:
  - What should be included as state debt?
  - Should it be measured as a stock (outstanding debt) or flow (debt service)?
  - What should be included as resources?
Defining state debt: Classifying obligations

- Several ways to classify bonded debt, including, but not limited to:
  - **By issuer:** primary state government, state agency, public authority
  - **By security/pledge:** general obligation, revenue, hybrid
  - **By revenues:** general taxes, dedicated taxes, user fees
  - **By purpose:** public, private (conduit debt)
Illustrative comparison of debt definitions

Source: Author’s calculations using state CAFR, U.S. Census Bureau and U.S. BEA data.
Note: General obligation and primary government debt for FY 2012 year-end; Census data for FY 2011 year-end.
Does not include local government debt.
Defining state debt: Which debt should be counted?

- Common focus on debt directly supported by state taxes
  - Excludes self-supporting and contingent debt
  - Competes most directly for scarce tax dollars
- Arguments for also considering a broader definition
  - A default on other types of state debt may still have negative implications for state’s credit rating
  - All draw on same pool of resources for repayment
Debt outstanding versus debt service?

- Level of debt outstanding
  - Stock variable
  - Influenced by economic, political, institutional, and service demand factors
- Annual debt service
  - Flow variable
  - Influenced by: level of debt, speed of amortization, and interest rates
Measuring resources

- Resources available under current policy
  - Revenues
  - Expenditures
- Underlying resource base
  - Population
  - Personal income
  - State GDP
  - Value of property
  - Revenue capacity
Commonly-used debt burden ratios

<table>
<thead>
<tr>
<th>Metric</th>
<th>States Employing Metric as Limit or Guideline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt Service-to-Revenues</td>
<td>AK, DE, FL, GA, HI, LA, ME, MD, MA, NH, NY, NC, OH, OR, RI, SC, TN, TX, VT, VA, WA, WV</td>
</tr>
<tr>
<td>Debt Service-to-Expenditures</td>
<td>IL, MA (pre-2013)</td>
</tr>
<tr>
<td>Debt-to-Revenues</td>
<td>CT, DE, FL, MS, PA, VA</td>
</tr>
<tr>
<td>Debt-per-Capita</td>
<td>GA, VT, WV</td>
</tr>
<tr>
<td>Debt-to-Personal Income</td>
<td>GA, MD, MN, NY, NC, RI, VT, WV</td>
</tr>
<tr>
<td>Debt-to-Value of Property</td>
<td>NV, NM, UT, WI, WV, WY</td>
</tr>
</tbody>
</table>
## Multiple metrics can offer different perspectives

<table>
<thead>
<tr>
<th>Debt service-to-revenues: Captures near-term affordability</th>
<th><strong>Pros</strong></th>
<th><strong>Cons</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Includes principal and interest costs</td>
<td>• Annual debt service affected by term of bonds and structure of payments</td>
</tr>
<tr>
<td></td>
<td>• Most relevant to budget discussions</td>
<td>• Revenue dependent on current policy choices and poses measurement issues</td>
</tr>
<tr>
<td></td>
<td>• Policymakers control numerator and denominator</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Debt-to-personal income: Captures longer-term affordability</th>
<th><strong>Pros</strong></th>
<th><strong>Cons</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Not dependent on bond term or payment structure</td>
<td>• Only captures principal component of debt</td>
</tr>
<tr>
<td></td>
<td>• Denominator better reflects long-term ability to pay</td>
<td>• Less relevant to budget discussions</td>
</tr>
<tr>
<td></td>
<td>• Personal income consistently measured across states</td>
<td>• Personal income does not include all types of income that may generate state revenues</td>
</tr>
</tbody>
</table>
## Approaches to assessing affordability using debt burden metrics

<table>
<thead>
<tr>
<th></th>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt ceiling:</td>
<td>• Less data intensive</td>
<td>• Choice of threshold may be arbitrary</td>
</tr>
<tr>
<td></td>
<td>Compare state’s debt burden with specified numeric threshold</td>
<td></td>
</tr>
<tr>
<td>Benchmarking:</td>
<td>• Less arbitrary</td>
<td>• Requires standardized data</td>
</tr>
<tr>
<td></td>
<td>• Aligns with “competitiveness” view of affordability</td>
<td>• Does not always account for key differences across states</td>
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<td></td>
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</tbody>
</table>
### Debt ceilings in New England

<table>
<thead>
<tr>
<th>Metric</th>
<th>State</th>
<th>Ceiling</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt-per-Capita</td>
<td>Vermont</td>
<td>Mean/median of AAA-rated states</td>
<td>Guideline</td>
</tr>
<tr>
<td>Debt-to-Personal Income</td>
<td>Rhode Island</td>
<td>5.0 to 6.0%</td>
<td>Guideline</td>
</tr>
<tr>
<td></td>
<td>Vermont</td>
<td>Mean/median of AAA-rated states</td>
<td>Guideline</td>
</tr>
<tr>
<td>Debt-to-Revenues</td>
<td>Connecticut</td>
<td>160.0%</td>
<td>Statute</td>
</tr>
<tr>
<td>Debt Service-to-Revenues</td>
<td>Maine</td>
<td>5.0%</td>
<td>Guideline</td>
</tr>
<tr>
<td></td>
<td>Massachusetts</td>
<td>8.0%</td>
<td>Guideline</td>
</tr>
<tr>
<td></td>
<td>New Hampshire</td>
<td>10.0%</td>
<td>Statute</td>
</tr>
<tr>
<td></td>
<td>Rhode Island</td>
<td>7.5%</td>
<td>Guideline</td>
</tr>
<tr>
<td></td>
<td>Vermont</td>
<td>6.0%</td>
<td>Guideline</td>
</tr>
<tr>
<td>Debt Service-to-Expenditures</td>
<td>Massachusetts</td>
<td>10.0% (pre-2013)</td>
<td>Statute</td>
</tr>
</tbody>
</table>
How New England states rank:
Primary state government debt-to-personal income

Source: Author’s calculations using state CAFR (FY 2012) and U.S. BEA data.
Note: Does not include local government debt.
How New England states rank: Total state long-term debt-to-personal income

Source: Author’s calculations using U.S. Census (FY 2011) and U.S. BEA data.

Note: Does not include local government debt.
How New England states rank:
Total state & local long-term debt-to-personal income

Connecticut’s debt burden falls from top-5 to below the U.S. average when local government debt is included.

Source: Author’s calculations using U.S. Census (FY 2011) and U.S. BEA data.
How New England states rank:
Primary state government debt service-to-revenues

Relative debt burdens in New Hampshire and Maine increase when looking at debt service-to-revenues instead of debt-to-personal income.

Source: Calculations by author using state CAFR (FY 2012) data.
Note: Includes revenue from all primary government funds. Does not include local government debt.
Main take-aways

- No single way to define state debt
  - Choice of which obligations to include depends on perspective (and can lead to different conclusions)
- No single way to assess affordability
  - Commonly-used metrics and approaches each have strengths and weaknesses
What can states do?

• Report recommends that states:
  • Improve transparency surrounding state debt
  • Consider both narrow and broad definitions of debt and multiple debt burden metrics
  • Re-examine existing debt limits
  • Exercise care with benchmarking
  • View debt affordability as complement to capital planning
• An annual formal debt affordability analysis provides a venue for addressing these recommendations