State Debt Structure Analysis

In response to a legislative inquiry, the Legislative Research Unit recently analyzed the structure of the state’s general obligation (GO) bond issues in 2003 and 2004. The analysis looked at each issue’s maturity, repayment structure, and costs for principal and interest over its lifetime. The LRU also compared the lifetime costs of those bonds to those of earlier bond issues.

Illinois’ outstanding GO debt is up some $11 billion since the end of 2002—due mostly to a $10 billion issue to fund state retirement systems. The newly issued bonds will mature later than they would have under previous practices, increasing their total cost of repayment by about $6.4 billion.

This analysis made no attempt to compare the values of amounts of money at different future times. See “Note on Interpretation of Total Payments Over Time” on page 3.

Debt Repayment Structures

Two of the most common bond repayment structures are “level principal repayment” and “level debt service.” With the first, bond maturities are spread evenly over the years until the last bonds come due, so the same amount of principal is repaid each year. Debt service costs are highest in the beginning and decline gradually, so this structure is sometimes described as “front-loaded debt service.”

Under the second structure (level debt service), annual debt service is equal over the years until the last bond matures (as is true of most home mortgages). Rates of principal repayment are initially low but gradually rise as interest costs decline. These are only two of the most common bond repayment structures; other structures are possible.

Other significant aspects of bond repayment structure are the times until maturity of (1) the average bond and of (2) the last bond. The first of those, called “average life,” is important because federal tax law limits the types of capital projects that can be funded with tax-exempt bonds with longer average lives. The LRU review found that most Illinois GO bond issues for capital projects since the 1970s had final maturities 20 to 25 years after their issuance. State law requires only that GO bonds mature within 30 years after issuance.

Analysis of 2003 and 2004 Bond Issues

The state has issued four series of GO bonds since the end of 2002:

<table>
<thead>
<tr>
<th>Series</th>
<th>Amount (millions)</th>
<th>Issue date</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 2003</td>
<td>$ 460</td>
<td>June 4</td>
</tr>
<tr>
<td>Pension Funding Series of June 2003</td>
<td>10,000</td>
<td>June 12</td>
</tr>
<tr>
<td>Series A and B of October 2003</td>
<td>963</td>
<td>October 30</td>
</tr>
<tr>
<td>Series A and B of March 2004</td>
<td>829</td>
<td>April 1</td>
</tr>
</tbody>
</table>

Proceeds of the so-called “June $460” bonds were used for state capital projects. The June pension bonds were used to fund or reimburse a portion of the state’s pension obligations. The October and March bonds were used for state capital projects and to refund part of the state’s outstanding GO bonds. This analysis does not address the structure of the refunding portion of those October and March bonds.

June $460 Million Bonds

The June $460 million bonds are to mature in fiscal years 2007 to 2028; their debt service is to be essentially level starting in fiscal year 2007. For the first 3 years the state pays only interest, so debt service in those years is slightly lower. Total debt service cost for this issue will be $832.9 million.

If the bonds had a 25-year, level principal repayment structure, total debt service over their lives would be about $755 million—some $77.9 million less.

(continued to p. 2)
June Pension Bonds

The June pension bonds are to mature in fiscal years 2008 to 2033. Their structure is neither level debt service nor level principal. Instead, the amount of principal to be paid will rise rapidly as final maturity approaches. Total debt service for this issue is expected to be almost $21.934 billion.

If the bonds had a 25-year, level principal repayment structure with $400 million maturing each year, total debt service would be $15.915 billion—about $6.0 billion less. Figure 1 shows actual and hypothetical debt service by fiscal year.

Figure 1: Debt Service Comparison for $10 Billion June Pension Bonds by Year

The June pension bonds were used to fund long-term investments by the state’s five retirement systems, and to reimburse the state’s general funds for part of the state government’s retirement contributions in fiscal year 2003 and all those in fiscal year 2004. The law authorizing the bonds requires that the state’s total retirement contributions to its pension systems, plus debt service on the bonds, cannot exceed what it would have contributed to the retirement systems if no such bonds had been issued. If the bonds had been sold in a 25-year issue with level principal repayment, but subject to the same limit on state contributions, then the total cost to the state for debt service plus retirement contributions could have been no higher than it actually will be—and thus the systems would have received less in retirement contributions than they actually will. For example, for fiscal year 2005 the state’s required contribution to the systems would have been cut almost $300 million because its debt service on 25-year, level-principal bonds would have been almost $300 million higher. But it is impossible to know now whether that would have been better for the state’s taxpayers in the long run.

October Bonds

The October bonds are to mature in fiscal years 2007 and 2009 to 2034. Of the total $963 million issue, $690.6 million went for capital projects. (The remaining $272.4 million was used to refund some existing state bond issues and is not reflected in this article.) The $690.6 million of “new money” has neither level principal payments nor level debt service. Total debt service on this amount will be just over $1.303 billion over 30 years. If the bonds had a 25-year, level principal repayment structure, total debt service would be about $1.067 billion—some $236 million less.

March 2004 Bonds

The March 2004 bonds are to mature in fiscal years 2005 to 2034. Of the total $829 million issue, $484.4 million was for capital projects. (The remaining part of that issue was used to refund some existing state bond issues and is not reflected in this article.) The $484.4 million in “new money” will have approximately level debt service. Total debt service on it will be about $958.9 million over 30 years. If it had a 25-year, level principal repayment structure, total debt service would be about $797.2 million—some $162 million less.
GO Bonds Currently Outstanding

On April 2, 2004 the state had $19.618 billion of GO bonds outstanding. This was up $11.054 billion from $8.564 billion at the end of 2002—mostly due to the $10 billion June pension bond issue.

The average life of the state’s outstanding GO bonds lengthened from about 9.9 to 17.0 years. (Excluding the June pension bonds, the average life of GO bonds increased only to 11 years.) The average life of a hypothetical 25-year, level principal repayment issue would be about 13 years; but the average lives of the four issues in 2003-2004 were considerably longer:

<table>
<thead>
<tr>
<th>Issue</th>
<th>Average life (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 2003 pension</td>
<td>23.7</td>
</tr>
<tr>
<td>June 2003 $460 million</td>
<td>16.3</td>
</tr>
<tr>
<td>October 2003 (new money)</td>
<td>20.8</td>
</tr>
<tr>
<td>March 2004 (new money)</td>
<td>19.5</td>
</tr>
</tbody>
</table>

At the end of 2002, about 55% of the state’s outstanding GO bonds were scheduled to mature in the 10 fiscal years 2004 through 2013. By April 2004, only about 25% of outstanding GO bonds were scheduled to mature in those years.

Figure 2 on page 4 compares the state’s debt service schedules for fiscal years 2004 to 2034 as they looked at the end of calendar year 2002 and after the issuance of the March 2004 bonds. (The figure includes total estimated fiscal year 2004 debt service, most of which had come due by April 2, 2004.) In the past year the state’s debt service schedule has come closer to being level debt service.

Impact of Structure on Debt Service

The structure of recent issues has had a substantial impact on long-term bond debt service. The structure of the last four bond issues will make debt service lower in the next few years, but higher in later years, than if the state had issued 25-year, level principal repayment series. For example, the structure of these issues will make debt service in fiscal year 2005 some $359 million lower than if 25-year, level-principal debt had been issued. But over the next 30 years, total debt service will be approximately $6.47 billion higher than if such bonds had been issued. Of that $6.47 billion, about $6.02 billion is due to the June pension bonds; $79 million to the June $460 bonds; $206 million to the October bonds; and $162 million to the March bonds. (As with all other future numbers in this article, no attempt has been made to discount these numbers to present value.)

Figure 3 on page 4 compares the current debt service schedule to a hypothetical one in which the four bond issues of 2003 and 2004 had 25-year structures with equal principal repayments each year. (As with Figure 2, the fiscal year 2004 debt service number is the estimated total for the entire fiscal year, of which most had been paid by April.)

Projections for Future Bond Issues

If in fiscal 2005 the state issues $1.5 billion in GO bonds at 5% interest, with level debt service over 30 years, the state’s debt service will be lower in the first 13 of those years than it would be for a 25-year issue with level principal payments. For example, debt service will be about $37 million lower in the first year. But total debt service over the life of those issues will be about $450 million more than it would have been for a 25-year issue with level principal payments.

Note on Interpretation of Total Payments Over Time

This article makes no attempt to “discount” the worth of future amounts of money to their present values. Such discounting is required to make an accurate comparison of the effects of paying different numbers of dollars over different time periods. However, it is impossible to know for certain what discount rates to use for future periods. Thus the fact that the state must pay more total dollars in years farther into the future than it could have paid in the nearer future under a different bond structure does not necessarily mean that the state’s taxpayers or economy will be worse off. Such a determination is inherently speculative—depending principally on future inflation rates and future real rates of return on available investments, which can be only guessed at.

Alexis M. Sturm
Senior Research Associate

Sources and Methodology

The analysis in this article is based primarily on reviews of the Official Statements that accompany the bond issues discussed in the article. (Official Statements are the offering documents—similar to prospectuses—that accompany public bond issues, and are published by the Governor’s Office of Management and Budget.) Those statements list new issues’ maturity schedules and debt service, and show total existing state debt. The Comptroller’s office also provided information related to outstanding bonds and debt service.

To estimate hypothetical debt service for the alternative bond issues, the LRU assumed repayment of an equal amount of the total principal issued over 25 years, using the interest rates actually offered on the state bond issues. For years with no bonds maturing, the LRU used the interest rates for the nearest year.
State Debt Structure Analysis  (continued from p. 3)

Figure 2: General Obligation Bond Debt Service Comparison

Figure 3: Total Debt Service Schedule Comparison
How States Compare in Debt Per Capita

The Legislative Research Unit was asked to compare tax-supported debt per capita in Illinois and other states. (Such debt excludes revenue bonds, which are not a claim on tax revenues.) The comparison showed Illinois with the fifth-highest debt per capita among 18 surveyed states. Figure 1 below and Table 1 on the next page show the amount of tax-supported debt per resident that was outstanding, at the beginning of each fiscal year from 2000 to 2003, in Illinois and the 18 states in the Legislative Research Unit’s multistate survey list (the 10 most populous states other than Illinois, neighboring states, and regional representatives).

Figure 1: Net Tax-Supported Debt Per Capita in Surveyed States, FYs 2000-2003

Notes: Debt per capita for fiscal year 2000 is based on state populations in the 2000 Census; for fiscal years 2001 and 2002 it is based on Census Bureau estimates of state populations in those years. For 2003 it is based on the Census Bureau’s estimated state populations in 2002; no estimates are available for 2003.

How States Compare in Debt Per Capita  
(continued from p. 5)

Table 1: Net Tax-Supported Debt Per Capita in Surveyed States, FYs 2000-2003

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
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<tr>
<td>Massachusetts</td>
<td>$2,540</td>
<td>$2,933</td>
<td>$3,227</td>
<td>$3,298</td>
<td>$758</td>
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<tr>
<td>New Jersey</td>
<td>1,746</td>
<td>1,913</td>
<td>2,024</td>
<td>2,110</td>
<td>364</td>
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<tr>
<td>Illinois</td>
<td>736</td>
<td>808</td>
<td>895</td>
<td>1,040</td>
<td>304</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>672</td>
<td>853</td>
<td>822</td>
<td>958</td>
<td>286</td>
</tr>
<tr>
<td>Washington</td>
<td>1,243</td>
<td>1,294</td>
<td>1,339</td>
<td>1,502</td>
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<tr>
<td>Arizona</td>
<td>327</td>
<td>369</td>
<td>472</td>
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<tr>
<td>California</td>
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<td>718</td>
<td>767</td>
<td>810</td>
<td>170</td>
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<td>819</td>
<td>862</td>
<td>917</td>
<td>985</td>
<td>166</td>
</tr>
<tr>
<td>New York</td>
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<td>2,026</td>
<td>2,095</td>
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<td>446</td>
<td>433</td>
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<tr>
<td>Pennsylvania</td>
<td>587</td>
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<td>106</td>
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<td>North Carolina</td>
<td>326</td>
<td>334</td>
<td>363</td>
<td>429</td>
<td>103</td>
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<tr>
<td>Ohio</td>
<td>662</td>
<td>695</td>
<td>745</td>
<td>750</td>
<td>88</td>
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<tr>
<td>Indiana</td>
<td>220</td>
<td>281</td>
<td>292</td>
<td>300</td>
<td>80</td>
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<td>Iowa</td>
<td>104</td>
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<tr>
<td>Virginia</td>
<td>551</td>
<td>528</td>
<td>549</td>
<td>546</td>
<td>-5</td>
</tr>
<tr>
<td>Texas</td>
<td>284</td>
<td>245</td>
<td>224</td>
<td>246</td>
<td>-38</td>
</tr>
</tbody>
</table>

Sources: Same as for Figure 1 on page 5.

Nicole Babcook  
Research Associate

Abstracts of Reports Required to be Filed with the General Assembly  (continued from p. 5)

sold or conveyed 7 State properties that were designated as surplus. CMS listed 6 properties as surplus as of August 2003. The audit makes 9 recommendations to CMS to improve its Space Utilization Program. (Legislative Audit Commission Resolution 126 (2002); Feb. 2004, 132 pp.)

Board of Education

Charter schools annual report, 2002-2003
Illinois had 22 charter schools in 2002-2003 serving approximately 8,500 students. Charters were not renewed for two schools after 2002-2003, four others applied for and received charter reauthorization. Eleven charter schools had higher rates of students meeting or exceeding state standards than the average of other schools within their districts as measured by the PSAE or ISAT. Report contains suggestions submitted by charter schools for changes in charter school law including: increasing funding, extension of charter to 10 years, allowing ISBE to grant charters without first presenting to local districts, and increasing the cap to allow more charter schools to open. (105 ILCS 5/27 A-12; Jan. 2004, 19 pp.)

Board of Higher Education
Budget recommendations, FY 2005
Total general fund recommendations for operations and grants was $2.3 billion, a decrease of $79.8 million from FY 2004. Major allocations to colleges and universities: U of I (three campuses), $696.9 million; SIU (two campuses) $217.2 million; NIU, 101.8 million; ISU, $80.5 million; WIU, 56.1 million; EIU $47.6 million; Northeastern Illinois, $39.1 million; Chicago State, $38.3 million; Governors State, $24.2 million; community colleges, $283.4 million. Other major allocations: Illinois Students Assistance Commission, $389.0 million; State University Retirement System, $257.8 million; adult education programs, $45.3 million; Illinois Mathematics and Science Academy, $15.8 million; Health Insurance Reserve Fund, $14.8 million; workforce and development programs, $14.3 million; access and diversity programs, $10.1 million. Total recommended for capital improvements was $341.6 million. (110 ILCS 205/8; Feb. 2004, 143 pp.)

Central Management Services
Bilingual needs and pay survey, 2003
Of 47 responding agencies, 31 reported bilingual needs and had a total of 1,392 employees in bilingual positions. Several agencies reported the number of bilingual positions needed: Children and Family Services (250); Corrections (145); Employment Security (152); Human Services (811); and Public Aid (111). Agencies also reported the number of employees in bilingual positions: Children and Family Services (178); Corrections (52); Employment Security (123); Human Services (874); and Public Aid (63). (20 ILCS 415/9(6); Jan. 2004, 7 pp.)
leave a gathering while intoxicated is unconstitutional because it would subject the host to prosecution for unlawful restraint; (2) Criminal Code’s child pornography definition, including computer-generated images that do not depict real children, violates First Amendment; (3) act on parentage of children born due to artificial insemination does not address all situations that may arise, or prevent establishment of paternity and child support under common-law principles.

Major Illinois Appellate Court holdings: (1) Election Code section conferring “established party” status in a district did not apply to new districts after redistricting; (2) Municipal Code provision allowing municipalities to request court demolition orders for unsafe buildings without giving owners opportunity to repair is unconstitutional; (3) Consumer Fraud and Deceptive Business Practices Act section limiting punitive damages, and requiring prior notice, to file suit against only automobile dealers was an unconstitutional special law. (25 ILCS 135/5.05; Dec. 2003, 142 pp.)

Human Services Dept.
Inspector General’s report on domestic abuse of adults with disabilities, FY 2003
The Inspector General received 395 complaints of domestic abuse, neglect, or exploitation. Among the 361 cases eligible under the law, 164 claims were of abuse, 153 were of neglect, and 44 were of exploitation. Abuse was substantiated in 37 cases, neglect in 20 cases, and exploitation in 1. Lists offices to which reports were referred; discusses outcomes of 6 cases. (20 ILCS 2435/60; Dec. 2003, 61 pp.)

Illinois Courts Administrative Office
Court-annexed mandatory arbitration annual report, FY 2003
This program, created by the Supreme Court and General Assembly to cut civil case backlogs and resolve complaints faster, was created in 1986 and operates in 15 counties. Cases with “modest” claims (up to $20,000 in St. Clair county; $30,000 in Cook and Will counties; and, $50,000 in Boone, DuPage, Ford, Henry, Kane, Lake, McHenry, McLean, Mercer, Rock Island, Whiteside, and Winnebago counties) are automatically assigned to arbitration. If it fails, they may go to trial.

There were 32,638 cases referred to arbitration in FY 2003. Among cases on the pre-hearing calendar, nearly 61% were settled or dismissed before hearing. In 46% of post-hearing cases, one or both parties rejected the arbitration decision. Only about 3% of referred cases went to trial. (735 ILCS 5/2-1008A; Jan. 2004, 32 pp.)

Office of the State’s Attorney Appellate Prosecutor; Cook County Office of the State’s Attorney
Report of the Cook County State’s Attorney’s Office regarding monies received under the Capital Crime Litigation Trust Fund Act, 2003
The Office of the State’s Attorney Appellate Prosecutor used $218,496 in 2003 for capital litigation expenses. The office recommends statewide judicial standards by the Illinois Supreme Court for trial judges reviewing defense counsel expense requests. Also recommended is a standing sub-committee of the Capital Punishment Reform Study Committee to review the efficiency and effectiveness of the Trust Fund.

The Cook County Office of the State’s Attorney has used $6.6 million since 1999 for expenses such as personnel, training, equipment, and investigation. (725 ILCS 124/19; December 2003; 13 pp. and 6 pp.)

(continued to p. 8)
Abstracts of Reports Required to be Filed with the General Assembly

Property Tax Appeal Board
Annual report, FY 2003
Board hears property tax assessment appeals for residential, commercial, industrial, and farm property and determines the accurate assessment. Lists total reduction requests over $100,000, total cases decided, and total change in assessed value in each county for the past six years (commercial and industrial appeals only). Board decided 29,962 commercial and industrial cases from 1997-2002 and closed out 21,971 residential properties. (35 ILCS 200/16-190; Jan. 2004, 16 pp.)

Sports Facilities Authority
Annual report, 2003
Authority is to receive $10 million each year in state appropriations through 2032, with $5 million from a portion of the State Hotel Operator’s Occupation Tax and $5 million from the Local Government Distributive Fund (allocated to the City of Chicago). Authority undertook renovations to U.S. Cellular Field’s upper deck. Provided over $400 million in financing to complete the Chicago Lakefront Development Project, which included the renovations of Soldier Field. Authority’s Conference and Learning Center has hosted conferences for over 50 civic and not-for-profit groups. (70 ILCS 3205/18; undated, rec’d Mar. 2004, 25 pp.)