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## Research:

**University of Michigan; Health Care, Hospital; Health Care, Physician Groups & Faculty Practice Plans; Health Care, System; Higher Education, CP; Higher Education, Private Coll/Univ - General Obligation; Higher Education, Public Coll/Univ - Unlimited Student Fees**

**Publication date:** 31-Jan-2005  
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## Credit Profile

US\$42. mil gen rev fxd rate bnds (University Of Michigan) ser 2005A due 04/01/2018 AAA  
 Sale date: 08-FEB-2005  
 US\$48. mil gen rev bnds (University Of Michigan) ser 2005B due 04/01/2035 AAA/A-1+  
 Sale date: 14-FEB-2005

### AFFIRMED

**University of Michigan Brd of Regents, Michigan**  
 \$150.000 mil. University of Michigan Brd of Regents (Univ Of Michigan) cml pap prog A-1+

### UPGRADED

	To	From
<b>University of Michigan Hosp, Michigan</b> University of Michigan Hosp, Michigan		
\$44.670 mil. Regents Of The Univ Of Michigan Hosp	AA+/A-1+	AA
\$87.620 mil. Univ Of Michigan Hosp hosp rfdg rev bnds ser 2002	AA+	AA
<b>University of Michigan Hosp, Michigan</b> University of Michigan Brd of Regents, Michigan		
\$18.995 mil. Univ Of Michigan Brd Of Regents (Univ Of Michigan Hosp)	AA+	AA
<b>University of Michigan Brd of Regents, Michigan</b> University of Michigan Hosp, Michigan		
\$156.000 mil. Univ Of Michigan Brd Of Regents (Univ Of Michigan Hosp)	AA+/A-1+	AA
<b>University of Michigan Brd of Regents, Michigan</b> University of Michigan Med Svc Practice Plan, Michigan		
\$11.409 mil. Univ Of Michigan Brd Of Regents (Univ Of Michigan Med Svc Practice Plan)	AA+	AA
\$50.800 mil. Univ Of Michigan Brd Of Regents (Univ Of Michigan Med Svc Practice Plan)	AA+/A-1+	AA
<b>University of Michigan Brd of Regents, Michigan</b> University of Michigan Brd of Regents (Univ Of Michigan) gen rev bnds ser 2002	AAA/A-1+	AA+
\$12.725 mil. Univ of Michigan Brd of Regents (Univ Of Michigan) hsg	AA+	AA
\$90.145 mil. Univ of Michigan Brd of Regents (Univ Of Michigan) std fee	AAA	AA+
<b>University of Michigan Med Svc Practice Plan, Michigan</b> University of Michigan Med Svc Practice Plan, Michigan		
\$38.385 mil. Univ Of Michigan Med Svc Practice Plan	AA+/A-1+	AA

**OUTLOOK:** STABLE

## ■ Rationale

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Standard & Poor's Ratings Services raised its rating on the University of Michigan's outstanding bonds secured by general revenues to 'AAA' from 'AA+' and its rating on the university's outstanding bonds secured by more narrow system revenues to 'AA+' from 'AA'. General revenues include unlimited student fees, constituting the university's broadest and strongest pledge. More narrow system revenues include those from hospitals, patient care, and housing, and either have access to legally available funds or carry a covenant of legally available funds.

At the same time, Standard & Poor's assigned its 'AAA' rating to the university's \$42 million general revenue bonds series 2004A and its 'AAA/A-1+' rating to the university's \$48 million general revenue bonds series 2005B.

In addition, Standard & Poor's affirmed its 'A-1+' short-term rating on the university's CP program, secured by its general revenues.

The upgrade and the new ratings reflect the following:

- The university has a national reputation for excellence in academics and research, ranking number two among public universities and number three among all universities in research dollars by the National Science Foundation.
- Financial liquidity is strong, demonstrated by unrestricted net assets (including expendable endowment funds of \$1.6 billion) that total \$4.5 billion and represent 116% of operating expenses, 618% of total debt outstanding, and 564% of pro forma debt.
- Endowment totals \$4 billion, which is the 11th largest among U.S. higher education institutions and fourth largest among public universities.
- The university has a strong record of fund-raising, demonstrated by an ongoing \$2.5 billion capital campaign that was publicly launched in May 2004 and has attained \$1.5 billion, or 60%, of its goal.
- The university enjoys a premiere standing within the state funding hierarchy, coupled with reduced dependence on state support from Michigan ('AA+') for general operations and capital projects. State support now accounts for just 9% of operating revenues (as adjusted).
- Investment performance has historically been good, with strong financial operations, demonstrated by the consistent generation of operating surpluses even in fiscal years threatened by state appropriation cutbacks and health care industry pressures.
- The balance sheet is strong, with continued positive and improving financial performance at the University of Michigan Hospitals and Health Centers (UMHHC). With the exception of a small operating loss of \$1.2 million in 1996, UMHHC financial performance has been positive, despite a less-than-favorable environment for health care in general. UMHHC has generated positive operating margins, averaging \$19.7 million, or 1.8%, in each of the last five years.
- The debt burden and 10-year capital plan are manageable.

The CP program authorization totals \$150 million. The university currently has \$126 million outstanding under the authorization. Proceeds of the series 2005A and B bonds will fund renovations to the school of public health buildings and literature, science, and arts building; an electrical substation and distribution system, the U-M Dearborn Engineering Laboratory Building; and various other capital projects of, or for the benefit of, the university. The issuer will also refund various CP and bond issues. The series 2005A bonds will be issued as fixed rate bonds while the initial tranche of the series 2005B bonds will be issued as variable rate bonds with a interest rate set weekly. The series 2005B bonds can convert to a daily rate, CP mode, term rate, fixed rate, or SAVRS rate.

Overall, the university's revenue streams are fairly diverse due to expansive research and hospital operations. Adjusted revenues indicate that total health care revenue (hospital and other clinical activity) represents the largest share of operating activity revenue (43%), followed by government sponsored programs (20%), tuition and fees (15%), and state appropriations (9%). The university receives the largest percentage (19%) of total state appropriations among Michigan's higher education institutions.

Tuition and state appropriations are the primary sources of funding for the university's academic programs. The downturn in state tax revenues has put pressure on the state budget in recent years. However, the university has dealt well with these pressures and appropriation cutbacks. General state appropriations to the university decreased by \$14.5 million, or 3.5%, to \$401 million in 2003. Again in 2004, the university's appropriation was impacted as—after the December reduction—the university received \$356.9 million, which was 11% less in state appropriations from the appropriation for fiscal 2003. Despite the cutback in state appropriations, operating results for 2004 and 2003 were positive—

helped by tuition increases and improved investment returns as well as expense cutbacks.

For 2004, the university's total net operating results (adjusted to include state appropriations, gifts, investment income, and patient care revenues) showed a surplus of \$49.7 million; and net assets increased by \$769.7 million, to \$7.7 billion. This increase reflects, in part, strong investment performance. The University of Michigan's unrestricted net assets totaled \$2.9 billion for 2004, equal to 75% of operating expenses (\$3.9 billion) and 399% of outstanding debt (\$730.5 million in 2004). Adjusted to include expendable endowment assets of \$1.6 billion, these unrestricted net assets represent 116% of operating expenses and an impressive 618% of total debt. Under GASB 35, depreciation is now an operating expense, and is a significant charge of \$246 million. The total net operating results (adjusted) showed a slight surplus in 2003 of \$10 million. Adjusted unrestricted net assets for 2003 accounted for 572% of outstanding debt.

For 2005, the university is expecting a balanced budget. State appropriations are budgeted at \$367 million—an increase of \$10 million over what the university actually received in 2004 but below the \$416 million the university received in 2002. It is expected that the total 2005 general fund budget for the Ann Arbor campus—composed of state appropriations, tuition, and indirect cost recovery on sponsored research—will increase 3% from fiscal 2004. Increases in enrollment and research activity are expected to drive this growth. However, the 2005 budget also includes \$44.2 million in necessary cost increases and essential initiatives, including a modest salary program for faculty and staff, utilities, insurance, union contracts, staff benefits, inflation on purchased supplies, compliance with increasingly stringent research regulations, and responding to information technology security challenges. When combined with the \$6.5 million cut in state funding to the Ann Arbor campus, the campus faced a budget gap of \$50.7 million for 2005. The university has closed this gap by cutting \$19.8 million in recurring expenditures from the general fund budget, raising tuition, and increasing activity. All cuts were made with the goal of preserving the excellence of academic programs.

## ■ Outlook

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The stable outlook on the long-term ratings reflects the expectation that the university will retain its position in Michigan's state funding hierarchy and maintain strong financial operations despite the current state appropriation environment.

## ■ Endowment and Capital Campaign

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The University of Michigan's endowment ranks as the 11th largest among U.S. higher education institutions and fourth largest among public universities, with a market value of \$4.2 billion as of June 30, 2004, or more than \$87,000 per full-time-equivalent student. The university has investment pools that include a long-term portfolio (LTP) and a university investment pool (UIP), with assets totaling more than \$6 billion. The LTP, with assets totaling a market value of \$4.3 billion as of June 30, 2004, is the investment vehicle for the university's long-term, core endowment; has a diversified set of equity and equity-like investments; and seeks to maximize the total return at the appropriate level of risk. For the one-year period ending June 30, 2004, the LTP produced a return 20.7%, and for the last five years ended June 30, 2004, it returned an annual average of 10.5%. The UIP portfolio, with assets of \$1.5 billion, invests in high-quality, fixed-income securities and invests the university's working capital and construction funds. For the year ended June 30, 2004, the UIP produced a return of 1.5%, and 6.6% on a five-year annualized basis.

The University of Michigan is an impressive fund-raiser. The Michigan Difference campaign was publicly launched on May 14, 2004, with a \$2.5 billion goal in gifts, pledges, and bequest intentions. Since launching the quiet phase of the campaign in 2000, the university has raised \$1.5 billion, or 60% of its goal. The campaign is scheduled to end in fall 2008.

## ■ Liquidity

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Liquidity for note rollovers is provided directly by the university, which had over \$1.2 billion of cash equivalents, U.S. Treasury bills and notes, and U.S. government agency securities in its investment pool and long-term portfolio at the end of November 2004. These funds also provide put liquidity for \$427 million in total variable-rate demand obligations. Lines of credit are also available for the variable-rate debt of the university. The University of Michigan has a \$200 million liquidity agreement with Mellon Bank to facilitate the availability of funds from government securities and a \$140 million line of credit with Helaba Bank for liquidity for variable-rate bonds.

## ■ State Support

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While state appropriations remain an important component of the university's budget, the university has become less reliant on state appropriations over time. The state appropriation share of university revenues has declined from 14% in 1994 to 9% in 2004. State budgetary concerns remain, although thus far the university has managed these pressures quite well. Although a national economic recovery is underway, the state's economic recovery has been slower. In December 2003, Michigan's GO debt

rating was lowered to 'AA+' from 'AAA' and its appropriation-backed debt rating was lowered to 'AA' from 'AA+', reflecting the practical elimination of the state's reserve position in the face of significant near-term fiscal pressures and ongoing economic uncertainty.

The state's financial pressures have resulted in appropriation cuts to higher education institutions in the state, including the University of Michigan in 2003 and 2004. In 2003 the University of Michigan received a \$15 million cut from initial appropriations, and in 2004 the university absorbed what amounted to an \$18.7 million appropriation cut for all three University of Michigan campuses. After the reduction, the 2004 appropriation totaled \$356.9 million, compared with appropriations in 2003 and 2002 of \$401 million and \$416 million, respectively. State appropriations for 2005 are budgeted at \$367 million—an increase of \$10 million over what the university actually received in 2004 but below the \$416 million the university received in 2002.

It remains to be seen how the state will address an expected 2005 budget gap; however, it is expected that higher education will be spared major cuts given the governor's 2005 appropriation incentive. For 2005, the governor proposed an appropriations incentive for universities that limits tuition increases to the rate of inflation. The state returned 3% of the midyear funding cut to universities, adhering to the tuition increase guidelines. The state incentive meant that Michigan public universities, which saw a 10% cut in their base appropriation in fiscal 2004, experienced an additional, but more moderate, cut of 2% for fiscal 2005.

In compliance with this guideline, on July 15, 2004, the University of Michigan Board of Regents approved a 2.8% tuition increase for in-state undergraduate students at the Ann Arbor campus. This rate is consistent with the recent revision of the Detroit CPI at the state's May 13 revenue estimating conference. However, the university made it clear that the tuition rate will be contingent both on the state's ability to restore a portion of the base funding that was cut midyear in 2004 and on the tuition restraint incentives formally established by the legislature.

Standard & Poor's expects that the university's revenue diversity, exceptional student demand characteristics, and liquidity levels will position it well to manage through the current state operating cuts.

## ■ Debt

Expected maximum debt service is low at less than 2.5% of budget. The university has drafted a new capital plan that spans 10 years and is estimated to cost \$4.8 billion. New projects in planning over the next 10 years include a new cardiovascular center, new children's and women's hospital, housing, infrastructure/renovation projects, and a football stadium renovation. In total, the university anticipates additional debt issuance backed by general revenues (\$485 million) and hospital revenues (\$300 million) will be issued. If all planned projects are completed, the university estimates that debt outstanding will total \$1.3 billion in fiscal 2009 before tapering back down to \$1 billion in fiscal 2014. It is expected that several of these projects will be funded with a combination of sources, including bonds and fund-raising.

At the present time, the university has two interest rate swaps to hedge the interest rate risk of the variable rate debt. In connection with the issuance of the series 1998A-2 hospital revenue refunding bonds and the series 1998A-1 medical service plan revenue bonds, the university entered into floating-to-fixed interest rate swap agreements for notional amounts tied to the outstanding balance of the bonds. The swap agreements convert the floating variable rates on these hospital (notional amount \$44.7 million) and medical service plan (notional amount \$38.3 million) bonds to fixed rates of 4.705% and 4.685%, respectively, through December 2024 and December 2021, the final maturity dates of the underlying bonds. The counterparty for both swaps is Morgan Guaranty Trust Co. of New York—now JP Morgan Chase Bank NA (rated 'AA-'). The university makes fixed rate interest payments to the counterparty and receives a variable rate payment based on the floating Bond Market Association Municipal Swap Index. The counterparty has the option of terminating the swaps if for any 180-day period the average variable rate is more than 7%. The estimated fair value of the interest rate swaps was a liability of \$7.3 million at June 30, 2004. The fair value represents the estimated amount that the university would pay to terminate the swap agreements at the valuation date, taking into account current interest rates and creditworthiness of the underlying counterparty. The university's net variable rate exposure on a pro forma basis is 61%. These swaps are valued monthly and could be valued on any date if required. All swaps associated with debt issues have to be approved by the Regents of the University of Michigan. The university swap policy is included in the internal policy for bond issues approved by the executive vice president and CFO.

For both swaps, the University of Michigan achieved a Debt Derivative Profile (DDP) score of '2' on a scale of '1' to '5' with '1' being the lowest risk and '5' the highest. The university's DDP score of '2' reflects Standard & Poor's view that the swaps do not pose a significant risk to credit quality. Key determinants behind the DDP score include an economically viable swap structure and the remoteness

of counterparty and termination risks. The university's formal swap and debt management policies and procedures were also factored into the DDP score.

## ■ Demand

With campuses in Ann Arbor, Flint, and Dearborn, the University of Michigan's enrollment totals more than 54,300. Ann Arbor is the largest campus, with a student population of 39,533. Graduate students make up 32% of this total for the three campuses. Due to strong national demand for extensive undergraduate, graduate, and professional programs, the Ann Arbor campus is very selective for a public university. On average, between 49%-63% of the freshmen that apply are accepted, with about 43% matriculating. Student quality is very high, evidenced by an average ACT score of 28, which is well above the national average. The Dearborn and Flint campuses are smaller, with headcounts of 8,631 and 6,188, respectively. Both Dearborn and Flint are more oriented toward undergraduates and are less selective, accepting, on average, more than 64% and 78%, respectively, but enjoy very high average matriculation rates in excess of 39% and 49%, respectively.

For fall 2004, student undergraduate applications for the Ann Arbor campus fell from almost 26,000 applicants in fall of 2003 to 21,293 applicants. University officials attribute this decline to a revised application with more required essays subsequent to the Supreme Court ruling on affirmative action. Despite the decline in applications, the University of Michigan accepted just 62% of applicants. As of January 2005, the university has received 2,100 more applications over the same time in 2004—a 13% increase. Total applications received at this point are 18,019. The university has done a preliminary analysis of quality and believes that it is receiving a larger number of applications from the highest quality students this year. The university expects this trend of continuing modest improvement in academic quality indicators to continue.

## ■ The University of Michigan Hospitals and Health Centers

The 'AA+' rating on debt issued for the UMHHC by the board of regents reflects good financial performance, strong liquidity, and an exceptional medical staff. In addition, the rating incorporates the University of Michigan's legally available funds, which, while not pledged, provide substantial liquidity. The university reserves the right, but is not required, to use other funds legally available for the purpose of paying principal and interest on the hospital bonds. Ongoing credit concerns for the 865-licensed-bed academic medical center include managed care and reimbursement pressures and the hospital's higher cost structure. The biggest financial challenges confronting UMHHC in the nearterm include pressure from commercial and governmental payers to reduce the rate of increase in payments to providers; continued expense pressure, particularly due to the nursing shortage and pharmaceutical costs; maintaining and increasing volume; and potential stock-market volatility. UMHHC operates in the competitive southeast Michigan health care market.

UMHHC operates three hospitals, 30 health centers, and 120 outpatient clinics. UMHHC is an integral part of the university's health system, which incorporates the university's medical school; Michigan Health Corp., a wholly owned corporation created to pursue joint-venture and managed care initiatives; and M-CARE, a wholly owned health maintenance organization. The board of regents has the ultimate responsibility for UMHHC, and, as part of the university, the balance sheet, revenue, expenses, and changes in the net assets of the hospitals and health centers are included in the university's combined financial statements. Financials for the hospitals and health centers are reported separately. With the exception of a small operating loss of \$1.2 million in 1996, UMHHC's financial performance has been positive, despite a less-than-favorable environment for health care in general. UMHHC has generated positive operating margins, averaging \$19.7 million, or 1.8%, in each of the last five years.

Most of UMHHC's operating revenue comes from patient care services (99%), with the remainder coming from nonpatient receipts associated with UMHHC operations. Patient care service revenue increased by 11.5% in 2004 to \$1.18 billion, as a result of growth in patient volume and increased reimbursement rates. Operating expenses increased 9.5% to \$1.14 billion (including interest expense), driven by growth in salary and wages (10.0%) and benefits (16.6%). Approximately half of the growth in expense is related to the higher patient volume levels, as UMHHC added nursing and other health professionals and expended more for medical supplies and pharmaceuticals to meet greater patient demand. Supplies increased by 7.6%, due in part to patient volume growth as well as cost inflation and newer, more expensive technologies. In 2004, UMHHC generated a \$48.3 million operating margin (4%) that compares favorably with operating margins in 2003, 2002, and 2001 of 2.19% (\$23.4 million), 1.04% (\$10.1 million), and 1.40% (\$12.4 million), respectively.

Overall, UMHHC's financial position improved in fiscal 2004, as measured by a \$124.4 million increase in net assets. This compares with a \$4.7 million increase in net assets in 2003. Currently, hospital operations are performing ahead of a budgeted 4% margin for 2005.

Although UMHHC's number of days' cash on hand has declined to 322 in 2004 from 416 in 2001 as a

result of investment losses and transfers to the medical school, the balance sheet remains strong, and debt to capitalization is low at 20%. Debt service coverage (for hospital debt) in 2004 was strong at almost 11x. UMHHC continues to enjoy a strong regional presence as a tertiary/quaternary provider.

Inpatient discharges grew by 3.4%, to 42,345, over the preceding year, a continuation of a trend that, over the past four years, has resulted in a 11% increase in inpatients. Outpatient visits grew by 3.6% over the preceding year, increasing a total of 7.5%, to 1,575,900, over the last four years. The majority of patient care revenue is received under contractual arrangements with governmental payors and private insurers. Blue Cross represents 27% of the gross charges, Medicare represents 26%, and M-CARE represents 11%.

### ■ The University of Michigan Medical Service Plan

The 'AA+' ratings on debt issued for the University of Michigan Medical Service Plan (MSP) by the board of regents reflect MSP's interrelationships with 'AA+' rated UMHHC and the 'AAA' rated University of Michigan, as well as strong patient service revenue. The rating incorporates the University of Michigan's legally available funds, which, while not pledged, provide substantial liquidity. The university reserves the right, but is not required, to use legally available funds for the purpose of paying principal and interest on the bonds. The close operating and financial relationships to UMHHC, as well as the availability of the university's legally available funds for debt service, warrants a rating for MSP equal to that of UMHHC's.

The medical school's clinical practices were formally organized as a medical service plan in 1973 to provide a mechanism for managing the clinical practice activities of the medical school's faculty. The clinical practices now operate as part of the medical school. In March 1996, MSP was reorganized to better coordinate and align professional faculty activities, and changed its operating name to Faculty Group Practice (FGP). FGP established a board of directors, which is chaired by the dean of the medical school, and appointed an executive medical director as part of its governance.

There are no separate audited financial statements for FGP, and its activity is included in the activity of the medical school, which is included in the university's audited financial statements. However, an internal income statement for the year ended June 30, 2004, shows net patient revenue of \$319 million, total revenue of \$345 million, and pledged patient revenue of \$302 million. In fiscal 2004, FGP recorded a surplus of \$17 million before investment income and transfers (less expenses, including the total MSP debt service payments).

As of June 2004 there were 1,243 attending physicians with active status, of whom 1,083, or 87%, were board-certified in their respective specialties. The attending physicians are salaried, full-time employees of the university and are required to have faculty appointments at the medical school. In addition, there were 209 community physicians who serve in an educational/clinical capacity and receive faculty appointment.

The financial strength of FGP is demonstrated by its consistent track record of growing net assets, despite pressures by third-party payors on clinical revenue; its strong collaborative operating and financial arrangements with UMHHC; and by the medical school's significant interrelationship with the university.

### ■ Contacts

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