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Summary and Overview

Current Status: Infographics

Current Status: Financial Framework

Current Status: Environmental Scan

Background Packet
The value of MSU academic programs continues to appreciate at the state, national and international levels. Our reputation grows as a top-100 global university, committed to student success, advancing Michigan communities, and research with global impact.

- Ongoing monitoring of MSU financial health; assets increased by approximately $150M in FY19, current bond rating at/exceeds Big Ten median, challenged by impact of legal settlement

- OPEB liability reduced by over $350M, approximately 20% of FY18 total due to changes in actuarial formula; additional reduction possible due to Medicare Advantage

- Flat-rate tuition structure introduced for 2019-20 academic year, anticipated to reduce time-to-degree, limit student debt

- MSU sponsored awards and expenditures at record levels, MSU’s three-year rate of change best in the Big Ten

- Fall 2019 entering class amongst largest in history, included record level of domestic non-residents, monitoring national demographic trends and international enrollment

- Priorities in MSU’s long-term financial framework support transformational efforts in academic quality, financial aid, teaching and laboratory facilities

- Auxiliary units, including Athletics, Residential & Hospitality Services, and the MSU Health Team monitor emerging local, regional, and national issues to inform long-range strategic planning efforts

- MSU formed private insurance captive for majority of insurance needs, sexual assault and traumatic brain injury risks outside of captive
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Summary and Overview

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Background Packet
Michigan ranks 40th nationally for ten-year change (2009-2019) in state appropriations funding, -5.2%

Funding at the national average of 12.2% would result in approximately $61M in additional funding for MSU

MSU appropriations lag the Big Ten and Carnegie average by approximately $2,000 per student, reflecting an overall resource deficit of over $90M when compared to peers

MSU exceeds the Big Ten average for resident undergraduate enrollment by 15%

By mimicking the Big Ten average, MSU could generate over $80M in tuition & fee revenue annually from non-resident students

Forecasted Federal revenues anticipated to increase 4.5% and 5.5% in FY20 and FY21

Disposable income growth outpaces inflation estimate
Sponsored Awards

MSU sponsored awards exceed $660M annually, an increase of 57% over ten years and 250% since 2000-01.

R&D Expenditures

MSU sponsored expenditures exceed $700M annually, ranking MSU 32nd nationally and 7th in the Big Ten, an increase of 6 and 3 places over three years.

Federal Awards

Federal sponsored awards approximate $470M, an increase of $230M over ten years.

Research Per Faculty

Sponsored awards per faculty member exceed $335K, an increase of approximately 67% over ten years.
Endowment

MSU total endowment market value exceeds $3B, 6th in the Big Ten

Endowment Performance

MSU outperforms the 1, 3, 5, and 10 year benchmark for investment returns

70% MSCI AWCI/ 30% Bgg BG Agg.

Donor Provided Aid

MSU lags the Big Ten average for donor provided financial aid by over $500 per student, equivalent to more than $23M in total resources

Annual Giving

MSU ranks 11th in the Big Ten for annual giving (2018 VSE data)

Recent capital campaign exceed giving goal, $1.8B, from over 250K donors
MSU Bond Rating

MSU bond rating affirmed at AA2/Aa level in recent ratings review, exceeds/at Big Ten median

MSU outperforms Moody’s peers in 76% of ratings metrics

Outstanding Debt

Outstanding debt approximates $1.9B, includes recent issuance for ISTB, STEM Teaching and Learning, legal settlement, etc.

Composite Financial Index

MSU CFI values impacted by OPEB and legal settlement

When adjusted for OPEB and legal, values consistent with historical norms, reflecting strong financial health

Ratio Performance

Many financial ratios impaired due to OPEB and settlement accrual

FY20 OPEB accrual adjustment due to potential retiree health plan change may normalize ratio performance to peers
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Summary and Overview

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Background Packet
10 Year Financial Framework: Recurring Resource Needs

**Academic Competitiveness**

- **Total Resource Need:**
  - Global Impact (1): $15M (complete)
  - Global Impact (2): $3M (FY21), TBD thereafter (Planning Process)
  - Course Demand: TBD

- FY19: $2.5M
- FY20: $3.2M (Course demand)
- FY21: $3M (Global Impact FY21), Ongoing initiative, funding variable based on resource availability and prioritization

- **Notes**
  - Initial phase of Global Impact Initiative provided $15M in recurring funding for 100 research-intensive faculty
  - To date, approximately 90 faculty hired, start-up and space needs ongoing

**Technology Infrastructure**

- **Total Resource Need:** (Under Review)

- FY19: $3.5M
- FY20: $6.5M
- FY21-FY22: $3M (FY21), $3M (FY22)

- Initial $27M recurring phase concludes in FY22

- **Notes**
  - Initial Deloitte study indicated approximately $27M in recurring needs
  - To date, recurring funding of $21M provided
  - $10M savings recovery and timing to be determined

**Financial Aid**

- **Total Resource Need:**
  - $23M donor aid
  - $20M class composition

- FY20: $2M
- FY21-FY25: Variable by plan

- Ongoing, variable by year

- **Notes**
  - Completed capital campaign made progress towards goal, reliant on realization of deferred giving and endowment payout
  - Tuition waivers and grants targeted to increase domestic non-resident enrollment

**Health Care**

- **Total Resource Need:**
  - Difference between inflation and actual cost increases
  - Unit cost at or below 3%

- FY21-FY25: TBD

- Continuously monitored

- **Notes**
  - Increasing numbers of active employees and retirees drive costs
  - Potential savings for retirees may eases overall cost growth rate
  - Incorporate MSU Health Care, Inc. into service offerings for faculty and staff

---

**Notes**

- Existing values largely consistent with previous drafts, update pending completion of university strategic planning effort

**MSU Financial Health | University Operating Environment**
### Critical Space Infrastructure

- **Total Resource Need:** $450M-$550M
  - $110M – STEM/Innovation (funded)
  - $100M – ITSB (funded)
  - $6.0M – Greenhouse match (pending)
  - TBD – Multicultural Center (proposed)

  Ongoing, project and resource dependent

### Technology Infrastructure (Under Review)

- **Total Resource Need:** $50M-$125M+
  - FY16-FY19: $84M
  - FY20-FY22: $40M+(SIS)
  - FY21-FY25: TBD

  Initial projects funded, future needs and timing under review

### Power & Utilities

- **Total Resource Need:** $125M-$200M+
  - $48M – RICE (Funded)
  - $16M – Boiler (Estimate)
  - $21M – Water quality (Funded)
  - $70M – HVAC replacement (Estimate Funded)

  Ongoing, project and resource dependent

### Capital Renewal

- **Total Resource Need:** $230M-$330M+ general fund
  - FY19: $31.4M
  - FY20: $23.8M
  - FY21-FY25: $40M-$45M annual - project and funding dependent

  Ongoing, project and resource dependent

### Notes

- ISTB/STEM backfill - associated lab renovations appx $15M – funds allocated in FY20 and FY21
- ICE CUBE funding $6M
- Potential future projects include: Engineering, Plant Biology, Large Animal BME, Clinical Center
- HR/CRM replacement under review
- SIS replacement
- CRM, data center, ICER, network upgrade, student success, travel, other projects funded to date
- Explore alternate funding models
- Initial phase of RICE natural gas engines
- Long-term HVAC replacement funding appx $7M annually
- Broader plant review ongoing
- Project funding and priorities determined annually based on risk assessment and available funds
- Includes MRR (Fuel Acct.), Infrastructure Reserve, ECM, and Facility Reserve sources
- Needs outpace available funding

Existing values largely consistent with previous drafts, update pending completion of university strategic planning effort.
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Background Packet
University Rankings

90 U.S. News and World Report
Best Global Universities, 2019

93 Times Higher Education (London)
World University Rankings, 2019

11 Programs in the top 25 globally

National Rankings:
MSU has 9 programs ranked #1 nationwide and a total of 30 undergraduate and graduate programs/schools ranked in the top 25 nationwide

#1
- Supply Chain**
- Curriculum & Instruction*
- Elementary Teacher Education*
- Secondary Teacher Education*
- Rehabilitation Counseling*
- Industrial/Organizational Psych* (2018)
- Nuclear Physics* (2019)

*Indicates graduate program
**Indicates both undergraduate & graduate program

2-10
- Higher Education Administration*
- Educational Administration & Supervision*
- Educational Psychology*
- Online Graduate Education*
- Education Policy*
- Criminology*
- Online Criminal Justice* (2018)
- Biological/Agricultural Engineering
- Production/Operations

11-25
- Accounting
- Management
- Management Information Systems
- Online Business (excludes MBA)* (2018)
- Production/Operations*
- Undergraduate Business Program
- Graduate Education Schools*
- Special Education*
- Biological/Agricultural Engineering*
- Econometrics*Veterinary Medicine*
- Online Graduate Nursing* (2018)
U.S. GDP growth forecasted at 1.7% in 2020 and 2021

Forecasted Chinese GDP growth approximates 5.8% in 2020 and 2021

Federal revenue projected to increase by 4.5% and 5.5% in 2020 and 2021

Disposable Income Outpaces CPI
National disposable income increased by 3.95% and 3.16% in 2018 and 2019, both in excess of CPI growth for the same two periods. Trend forecasted to continue in 2020 and 2021
State Economic Outlook

- **Michigan Payroll Jobs**: Michigan lost approximately 859K jobs from Q2 2000 to Q3 2009. Since 2010, Michigan has added approximately 676K jobs, 80% of the loss from 2000 to 2009.

- **State GFGP revenue**: Estimated to increase 0.5% and 2.1% in 2020 and 2021 respectively.

- **Personal income growth**: Estimated to exceed 3.5% annually in 2020 and 2021.

- **U.S. light vehicle sales**: Forecasted slightly below 17m units, Detroit market share slightly below 41% - light trucks, a majority of Big Three sales add more economic value than sedans.
Total national high school graduates approximate 3.3M annually, anticipate 6% growth by 2029 over 2013 baseline.

Predominance of growth in Western and Southern regions of the country, Midwest and Eastern regions forecasted to decline over period.

Big Ten state – Michigan, Ohio, Illinois, Pennsylvania, Wisconsin all forecasted to decline through 2029.

**Michigan Public High School Graduates**

Public high school graduates in Michigan forecasted to decline by approximately 20% by 2029.
International Enrollment

2018-19 international enrollment approximates 872k, a decline of 3% from 2016-17 peak (does not include OPT)

7 Big Ten schools among the top 25 nationally for international enrollment, MSU ranks 25th

Over 300k students study abroad from U.S. institutions annually

52% of international students come from China and India.

Source: Open Doors, 2019
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Summary and Overview

Current Status: Infographics

Current Status: Financial Framework

Current Status: Environmental Scan

Background Packet
## Significant All Funds Activities

<table>
<thead>
<tr>
<th>Activity Type</th>
<th>Amount</th>
<th>Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Fund</td>
<td>$1.50B</td>
<td>BOT approved each June</td>
</tr>
<tr>
<td>Expendable Restricted</td>
<td>$0.80B</td>
<td>BOT approved grant-by-grant as received, endowment by spending policy – MSUE/AgBio each June</td>
</tr>
<tr>
<td>Auxiliary Activities</td>
<td>$0.45B</td>
<td>Athletics BOT approved each June, RHS each April</td>
</tr>
<tr>
<td>Designated</td>
<td>$0.30B</td>
<td>Clinical and fee-for-service operations differentially</td>
</tr>
</tbody>
</table>

Includes major instructional and administrative activities of the university.

Includes sponsored activities and restricted endowment and gift accounts.

Comprised primarily of Residential & Hospitality Services and Athletics.

Comprised primarily of clinical operations and other activities.

All funds activities also include the student loan, endowment (principal), plant fund, and retirement and insurance funds.
MSU All Funds Revenue 2019-2009

- Tuition and Fees: $867,905
- Sponsored Programs: $528,216
- Auxiliary Activities: $411,632
- State Appropriations: $286,274
- Departmental Activities: $282,912
- Investment Income: $246,962
- Agbio/MSUE: $64,429
- University Advancement: $60,746
- Other Revenue: $2,872

2019 ALL FUNDS REVENUE: $2.8B
2009 ALL FUNDS REVENUE: $1.4B

MSU All Funds Revenue Change 2019-2009

Source: MSU Financial Statements
2019 ALL FUNDS EXPENSE: $2.8B

2009 ALL FUNDS EXPENSE: $1.4B

MSU All Funds Expense 2019-2009

- Instruction: $783,859
- Research: $410,887
- Auxiliary Enterprise: $362,462
- Public Service: $344,030
- Depreciation: $178,729
- Institutional Support: $178,709
- Op/Main of Plant: $135,552
- Academic Support: $133,419
- Financial Aid: $73,431
- Other: $65,905
- Student Support: $57,635

MSU All Funds Expense Change 2019-2009

- Student Support: 83%
- Other: 122%
- Financial Aid: 80%
- Academic Support: 74%
- Instruction: 42%
- Research: 57%
- Auxiliary Enterprise: 41%
- Public Service: 62%
- Depreciation: 97%
- Institutional Support: 98%

Source: MSU Financial Statements
**National Funding for Higher Education 2009-2019**

Michigan ranks **40th** nationally for change in appropriations funding - 2009-2019, **-5.2%**

From 2009-2019 average funding for higher education appropriations increased 12.2 %

MSU appropriations funding equivalent to 1990-91 in real dollars, lowest since prior to 1970-71 when adjusting for inflation

- **Michigan, -5.17%**
- **Ohio, -8.01%**
- **Iowa, -12.79%**
- **Pennsylvania, -21.67%**
- **Illinois, 43.30%**
- **Maryland, 25.51%**
- **Wisconsin, 21.77%**
- **Nebraska, 20.48%**
- **Indiana, 11.59%**
- **New Jersey, 8.57%**
- **Minnesota, 3.44%**

Source: Grapevine Higher Education Survey
### Appropriations – % of Revenue

<table>
<thead>
<tr>
<th>MSU Value</th>
<th>% of Revenue</th>
<th>Trend (2008-09)</th>
<th>Big Ten Min</th>
<th>Big Ten Median</th>
<th>Big Ten Max</th>
<th>Carnegie Min</th>
<th>Carnegie Median</th>
<th>Carnegie Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>$281M</td>
<td>10%</td>
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<td></td>
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</tr>
</tbody>
</table>

### Appropriations – Per Student

<table>
<thead>
<tr>
<th>MSU Value</th>
<th>Per Student</th>
<th>Trend (2008-09)</th>
<th>Big Ten Min</th>
<th>Big Ten Median</th>
<th>Big Ten Max</th>
<th>Carnegie Min</th>
<th>Carnegie Median</th>
<th>Carnegie Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>$281M</td>
<td>$6.1k</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: IPEDS, 2018
**Tuition & Fees – % of Revenue**

<table>
<thead>
<tr>
<th>MSU Value</th>
<th>% of Revenue</th>
<th>Trend (2008-09)</th>
<th>Big Ten Median</th>
<th>Carnegie Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>$868M</td>
<td>31%</td>
<td>-</td>
<td>+</td>
<td></td>
</tr>
</tbody>
</table>

Source: IPEDS, 2018

**Tuition & Fees – Per Student**

<table>
<thead>
<tr>
<th>MSU Value</th>
<th>Per Student</th>
<th>Trend (2008-09)</th>
<th>Big Ten Median</th>
<th>Carnegie Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>$868M</td>
<td>$18.7k</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
</tbody>
</table>

Source: IPEDS, 2018
Appropriation and Tuition & Fees – % of Revenue

- **MSU Value**: $1,149M
- **% of Revenue**: 20%
- **Trend (2008-09)**: +
- **Big Ten Median**: —
- **Carnegie Median**: —

Source: IPEDS, 2018

Appropriation and Tuition & Fees – Per Student

- **MSU Value**: $1,149M
- **Per Student**: $24.8k
- **Trend (2008-09)**: +
- **Big Ten Median**: +
- **Carnegie Median**: +

Source: IPEDS, 2018
Financial Aid Summary

Total support for financial aid grew **48.4%** between 2008 and 2018, increasing from **$473M** to **$701M** over the period.

Approximate **percentage** of students receiving a **Pell grant 8,539 2017-18**

Approximate **percentage** of students receiving a **Federal grant 16,397 2017-18**

Percentage of students graduating without debt, below state and national averages

<table>
<thead>
<tr>
<th>Source</th>
<th>Dollars in millions FY08</th>
<th>FY18</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSU General Fund</td>
<td>$62.30</td>
<td>$147.40</td>
</tr>
<tr>
<td>Other Loans &amp; External Awards</td>
<td>$47.80</td>
<td>$77.00</td>
</tr>
<tr>
<td>MSU Non-General Fund</td>
<td>$33.90</td>
<td>$53.50</td>
</tr>
<tr>
<td>Federal</td>
<td>$279.50</td>
<td>$417.40</td>
</tr>
<tr>
<td>State of Michigan</td>
<td>$49.50</td>
<td>$6.40</td>
</tr>
</tbody>
</table>
Federal Financial Aid – % of Tuition & Fees

<table>
<thead>
<tr>
<th>MSU Value</th>
<th>% of Tuition</th>
<th>Trend (2008-09)</th>
<th>Big Ten Median</th>
<th>Carnegie Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>$76M</td>
<td>8.75%</td>
<td>−</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Federal Financial Aid – $ Per Student

<table>
<thead>
<tr>
<th>MSU Value</th>
<th>Per Student</th>
<th>Trend (2008-09)</th>
<th>Big Ten Median</th>
<th>Carnegie Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>$76M</td>
<td>$1,639</td>
<td>+</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: IPEDS, 2018
Background Packet: Financial Aid

### Restricted Financial Aid – % of Tuition & Fees

<table>
<thead>
<tr>
<th>MSU Value</th>
<th>% of Tuition</th>
<th>Trend (2008-09)</th>
<th>Big Ten Median</th>
<th>Carnegie Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>$21.5M</td>
<td>2.5%</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: IPEDS, 2018

### Restricted Financial Aid – $ Per Student

<table>
<thead>
<tr>
<th>MSU Value</th>
<th>Per Student</th>
<th>Trend (2008-09)</th>
<th>Big Ten Median</th>
<th>Carnegie Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>$21.5M</td>
<td>$464</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: IPEDS, 2018
Unrestricted Financial Aid – % of Tuition & Fees

<table>
<thead>
<tr>
<th>MSU Value</th>
<th>% of Tuition</th>
<th>Trend (2008-09)</th>
<th>Big Ten Median</th>
<th>Carnegie Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>$115.4M</td>
<td>13.3%</td>
<td>📦</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Unrestricted Financial Aid – $ Per Student

<table>
<thead>
<tr>
<th>MSU Value</th>
<th>Per Student</th>
<th>Trend (2008-09)</th>
<th>Big Ten Median</th>
<th>Carnegie Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>$115.4M</td>
<td>$2,490</td>
<td>📦</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: IPEDS, 2018
MSU sponsored awards approximate $660m annually, an increase of 57% since 2009-10 and of over 250% since 2000-01.

MSU Federal awards exceed $470m, an increase of over 45% since 2009-10 and of over 343% since 2000-01.

Source: MSU Office of Planning and Budgets
### Sponsored Expenditures – % of Revenue

<table>
<thead>
<tr>
<th>MSU Value</th>
<th>% of Revenue</th>
<th>Trend (2008-09)</th>
<th>Big Ten Median</th>
<th>Carnegie Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>$553.8M</td>
<td>20%</td>
<td>+</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Sponsored Expenditures – Per Faculty Member

<table>
<thead>
<tr>
<th>MSU Value</th>
<th>Per Faculty</th>
<th>Trend (2008-09)</th>
<th>Big Ten Median</th>
<th>Carnegie Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>$553.8M</td>
<td>$284.4K</td>
<td>+</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: IPEDS, 2018
MSU sponsored expenditures exceed $700M annually (HERD basis), an increase of 28% over three years, first in the Big Ten by five percentage points.

MSU ranks 32nd nationally and 7th in the Big Ten for sponsored expenditures, an improvement of 6 places and 3 places respectively.

Source: National Science Foundation Research and Development Expenditure Survey
Residential & Hospitality Services

Financial Snapshot

- FY19 Revenue $230M
- FY19 Reserves $73M (32% of operations)
- FY19 Debt Outstanding $334M

Operating Overview

- Residence Hall house count reduction due to proliferation of East Lansing off-campus private apartment development
- Maintain/repair aging residence hall and hotel facility plumbing and infrastructure
- Constrain operating expenditures to provide affordable options for students and guests
- Partnership and leadership on emerging initiatives – Grand Rapids Innovation Park and the Crescent Road Redevelopment (Spartan Village)
- Analysis of second-year, on-campus housing requirement
Department of Athletics

Financial Snapshot

- FY19 Revenue $139.7M
- FY19 Reserves $40.9M (29% of operations)
- FY19 Debt Outstanding $82.5M

Operating Overview

- Ongoing investment and utilization of resources in infrastructure, personnel, operations and financial aid to remain competitive and in balance with B1G and national institutions while creating a successful academic, athletic, leadership and social culture.

- Take reasonable and appropriate measures to deliver a safe and protected environment for students and community.

- Potential impact of national issues associated with antitrust / NIL (name, image and likeness), concussion litigation, and Federal tax reform.

- Assure student-athletes’ experiences are consistent with the MSU student body at-large.

- Chief Diversity Officer to enhance diversity efforts throughout the department and coordinate with broader campus initiatives.

- Balance higher education mission with market-driven demands of intercollegiate athletics.
## MSU Health

### Financial Snapshot

- **FY19 Revenue** $103.7M
- **FY19 Reserves** $13.6M*, ($2.3 restricted internally) 13% of operations
  *Includes $5.3m MSU Health Care, Inc.
- **FY19 Debt Outstanding** $0

### Operating Overview

- Funding of provider recruitments
- Capitalization of MSU Health Care, Inc.
- Student health care model
- Consideration of student insurance and fee-based services
- Conceptual planning for potential facility
- Innovative services to better provide for students, faculty, and staff
- Better leverage existing systems, including EMR, to improve quality and efficiency
### Long Term Credit Ratings

<table>
<thead>
<tr>
<th>AAA</th>
<th>AA+</th>
<th>AA*</th>
<th>AA-/A+/A/A-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northwestern, Indiana, Purdue, Michigan</td>
<td>Maryland</td>
<td>MSU, Minnesota, Nebraska, Ohio State, Penn State</td>
<td>Iowa (AA-), Rutgers (A+), Illinois (A-)</td>
</tr>
</tbody>
</table>

**S&P Rating – *Big Ten Median AA**

<table>
<thead>
<tr>
<th>Aaa</th>
<th>Aa1*</th>
<th>Aa2</th>
<th>Aa3/A1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indiana, Purdue, Michigan</td>
<td>Maryland, Iowa, Minnesota, Nebraska, Northwestern, Ohio State, Penn State</td>
<td>MSU</td>
<td>Rutgers (Aa3), Illinois (A1)</td>
</tr>
</tbody>
</table>

**Moody’s Rating – *Big Ten Median Aa1**

As of Nov 2019  
Wisconsin, due to state governance, not rated as an institution
Moody’s investor credit ratings

Moody’s uses a set of approximately 50 key measures organized into 6 sections to assess bond rating.

In 55% of the cases where MSU is adverse to the Big Ten median, State appropriations are a part of the calculation (38% for the Publics median).

If these instances were removed, MSU would rate favorable to the Big Ten median in 66% of the measures and Publics median in 84% of the measures.

<table>
<thead>
<tr>
<th>Section</th>
<th>MSU % at or Favorable to Median</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Big Ten 2018</td>
</tr>
<tr>
<td>Financial Statistics (12 Measures)</td>
<td>42% (5)</td>
</tr>
<tr>
<td>Market Ratios (7 Measures)</td>
<td>57% (4)</td>
</tr>
<tr>
<td>Capital Ratios (13 Measures)</td>
<td>31% (4)</td>
</tr>
<tr>
<td>Balance Sheet Ratios (5 Measures)</td>
<td>80% (4)</td>
</tr>
<tr>
<td>Operating Ratios (11 Measures)</td>
<td>45% (5)</td>
</tr>
<tr>
<td>Contribution Ratios (6 Measures)</td>
<td>50% (3)</td>
</tr>
<tr>
<td><strong>Total (54 Measures)</strong></td>
<td><strong>46% (25)</strong></td>
</tr>
</tbody>
</table>

*Category includes: Wells Hall addition, Plant Science Expansion, Bio-Engineering facility, Grand Rapids Research, Cyclotron office addition, Chemistry building enhancements, Power plant and utility distribution systems, Legal Settlement, and other operational improvements.

Based on FY 2018 financial statements, the most recent medians published by Moody’s.
$772M in new debt in FY19, includes funding for legal settlement, ISTB, STEM Teaching and Innovation Center, Music building addition, other

Credit rating sustained through issuance of new debt, significant capacity remains at Aa2 level, resources for additional debt service may be constrained

Debt coverage ratio adverse to peer norms

### Summary of General Revenue Debt (as of 06.30.19)

<table>
<thead>
<tr>
<th>General Fund Projects*</th>
<th>Millions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long-Term Debt**</td>
<td>$1,209.7</td>
</tr>
<tr>
<td><strong>Includes legal settlement ($491.8M)</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Revenue Based Projects

- Residential and Hospitality Services 334.2
- NSCL/Facility for Rare Isotope Beams 83.3
- Intercollegiate Athletics 62.1
- Parking Operations and Violations 51.9
- MSU College of Law 15.1
- Wharton Center 12.7
- Recycling 8.1
- South Campus Anaerobic Digester 4.3
- Executive Development Center 2.5
- College of Vet Med 2.3

### Donor Supported Projects

- Secchia Center-CHM West MI 79.3
- Broad Business College Complex Pavilion 31.7
- Intercollegiate Athletics 16.6
- Cook Hall 1.1

**Total** $1,914.9
Liquidity – Operating Cash Pool (as of 06.30.19)

MSU cash pools monitored daily to ensure adequate resource flexibility should unforeseen events arise.

MSU Liquidity Pool and Liquidity Reserve pool targeted to retain 30-60 days of operating needs – amounts to approximately $200M - $400M.

Liquidity Pool investments primarily managed by Payden & Rygel (same/next day liquidity); Liquidity Reserve allocated between Brandywine and Goldman Sachs; and operating funds trusts in MSU’s Common Investment Fund (generally $45M-$70M available each quarter).

* 30 days of operating cash is $199M
** Balance includes $75M operating line of credit implemented in Oct 2013.

Source: MSU Treasury Office
Working capital includes various operating reserves for unforeseen variance in tuition and other revenues.

Reserves are subject to dynamic performance in investments, utilities and natural gas, and indirect cost recoveries respectively.

Portions of reserves balances encumbered for capital and operations projects.

*Net of amounts detailed for Liquidity Reserve, Cash Pool, Tuition Stabilization – Balance and future proceeds largely committed. FY18 balance adjusted to remove impact of temporary project funding.

** Net of $10M minimum balance
Investment Performance (as of 06.30.19)

- MSU Common Investment Fund outperforms benchmark indicator for 1, 3, 5, and 10 year rate of change.
- Common Investment Fund market value exceeds $3.0b.
- Annual endowment spending policy currently 4.4%.

Source: MSU Investment Office
Big Ten Students, Revenues, and Net Assets

Source: IPEDS, 2018
Composite Financial Index

MSU CFI performance impacted by OPEB changes and legal settlement (2018)

2018 and 2019 CFI values, adjusted for the impact of OPEB and legal settlements consistent with historical norms, representative of strong financial health

Big Ten and Carnegie peers impacted differentially by OPEB accounting change, variable by institution and relationship with state

Source: MSU Financial Statements