CALL TO ORDER
Tom Cabaniss, Chair of Committee

ROLL CALL
Tom Cabaniss, Chair of Committee

READING OF STATE GOVERNMENT ETHICS ACT CONFLICT OF INTEREST STATEMENT
Tom Cabaniss, Chair of Committee

1. APPROVAL OF MINUTES
   Approval of February 18, 2016 Minutes

2. ACTION ITEMS
   A. Approval of Internal Audit Plan for Fiscal Year 2017
      (NC State Policy 01.05.1, Appendix 1, I.a.ii)
      Office of Internal Audit
      Cecile Hinson, Director, Internal Audit

3. INFORMATIONAL REPORTS
   A. Internal Audit Update
      (NC State Pol 01.05.1, Appendix 1, I.a.iii, I.a.iv, I.a.v)
      Office of Internal Audit
      Cecile Hinson, Director, Internal Audit
   B. Finance/Budget and Legislative Update
      (UNC Pol, Ch. 100.1, Appendix 1 (V) (NC State Pol 01.05.1, Appendix 1, I.b, I.d.i)
      Office of Finance and Administration
      Scott Douglass, Vice Chancellor for Finance and Administration
      Mary Peloquin-Dodd, Associate Vice Chancellor for Finance and Administration
      and University Treasurer

✓ Denotes full Board approval required
C. Annual Review of Associated Entities 4.3C
   (NC State Policy 01.05.1, Appendix 1, I.a.ix)
   Office of University Treasurer
   Mary Peloquin-Dodd, Associate Vice Chancellor for Finance and Administration
   and University Treasurer

D. University Debt Update 4.3D
   (NC State Pol 01.05.1, Appendix 1, I.b, I.d.i)
   Office of University Treasurer
   Lori Johnson, Director, Strategic Debt and Financial Management

E. Enterprise Risk Management and Compliance Update 4.3E
   (NC State Pol 01.05.1, Appendix 1, I.a.vii, 1.c.i, 1.c.ii)
   Strategic Risk No. 4: Faculty Loss
   Office of the Provost
   Warwick Arden, Provost and Executive Vice Chancellor

4. COMMITTEE DISCUSSION

5. ADDITIONAL INFORMATIONAL MATERIALS

A. NC State Investment Fund Performance Review 4.5A
   (NC State Pol 01.05.1, Appendix 1, I.d.i)

B. NC State Intermediate Term Fund Performance Review 4.5B
   (NC State Pol 01.05.1, Appendix 1, I.d.i)

ADJOURN

✓ Denotes full Board approval required
Meeting of Audit, Risk Management and Finance Committee  
North Carolina State University  
Board of Trustees  
February 28, 2016

Chair Cabaniss opened the meeting at 1:00 p.m. in the Winslow Hall Conference Room. Committee members present for the meeting were:

Mr. Tom Cabaniss, Chair  
Mr. Chip Andrews  
Mr. Khari Cyrus  
Ms. Susan Ward  
Mr. Dewayne Washington  

Others present were:

Mr. James W. Owens, BOT Chair  
Dr. Warwick Arden, Provost and Executive Vice Chancellor  
Mr. Steven Arndt, Associate Vice Chancellor, Facilities Division  
Ms. Angkana Bode, Staff Senate  
Mr. Jack Colby, Assistant Vice Chancellor for Facilities Operations  
Mr. Scott Douglass, Vice Chancellor, Office of Finance and Administration  
Ms. Eileen Goldgeier, Vice Chancellor and General Counsel, Office of General Counsel  
Ms. Wyona Goodwin, Staff Senate Chair  
Ms. Cecile Hinson, Director of Internal Audit  
Dr. Marc Hoit, Vice Chancellor, Office of Information Technology  
Mr. Robert Hoon, Deputy General Counsel, Office of General Counsel  
Mr. Calvin Jackson, Technology Support Analyst, Technology Support Services  
Ms. Leanne McLoughlin, Assistant State Auditor, Office of State Auditor  
Ms. Kimberly Miller, Assistant Controller, Controller’s Office  
Ms. Barbara Moses, Interim Associate Vice Chancellor for Finance and Resource Management  
Ms. Amy Mull, Director of Planning and Communication, Office of Finance and Administration  
Ms. Mary Peloquin-Dodd, Associate Vice Chancellor for Finance and Business and University Treasurer  
Dr. Alan Rebar, Vice Chancellor, Office of Research, Innovation and Economic Development  
Mr. David Price, University Controller, Controller’s Office  
Ms. Jill Tasaico, Senior Director, Foundations Accounting and Investments  
Ms. PJ Teal, Assistant to the Chancellor, Chancellor’s Office  
Mr. Brad Trahan, University Compliance Manager, Office of General Counsel  
Ms. Beth Wood, State Auditor, Office of State Auditor

Chair Cabaniss reminded all members of their duty to avoid conflicts of interest and appearances of conflicts of interest under the State Government Ethics Act and inquired as to whether there were any known conflicts of interest or appearances of conflict with respect to any matters coming before the Committee at this meeting. There being none, the meeting continued.

Chair Cabaniss asked if there were any changes to the minutes from the November 12, 2015 meeting as presented. Ms. Susan Ward made a motion to accept the minutes and Dewayne Washington seconded. The minutes were approved.
Chair Cabaniss asked everyone to introduce themselves. He introduced Scott Douglass, the new Vice Chancellor for Finance and Administration. Mr. Douglass presented information to the committee on the University’s organizational chart as well as the Office of Finance and Administration.

Chair Tom Cabaniss recognized State Auditor, Beth Wood, who reported on the University’s financial audit. The State Auditor complimented the University on its clean audit opinion as of June 30, 2015. They saw no deficiencies in internal controls. The auditors highlighted the significance of there being no reportable findings, as well as the efforts of staff in this accomplishment.

Associated Vice Chancellor for Finance and Administration and University Treasurer, Mary Peloquin-Dodd, discussed the various elements that comprise the University’s 2015 Financial Report. Ms. Peloquin-Dodd stated that the report is prepared by the University Controller’s office and the financial statement and accompanying notes are audited. She highlighted components of the report, including the Statement of Net Position, Statement of Revenues, Expenses, and Changes in Net Position, and Statement of Cash Flows. She explained that University Controller David Price would provide further detail but wanted to familiarize the committee with aspects of the report.

University Controller David Price provided highlights from the Financial Report, addressing income statement, balance sheet, and accounting standards that impact the financial statements. The University’s total net position remained at $1.92 billion for fiscal 2015. Total revenues ended the year at $1.42 billion, and total expenses were $1.35 billion with a net income before capital items of $70 million. Mr. Price discussed two new accounting standards that will impact financial results. All governmental entities and public universities were required to implement GASB 68 in fiscal year 2015. Effective fiscal year 2018, GASB 75 will be required.

Cecile Hinson, Director of Internal Audit, discussed the mid-year summary of Internal Audit activities provided in the Committee’s materials and including an overview of fiscal year 2016 Internal Audit Division engagements (audits, investigations, follow-ups, consulting projects, and special assignments) in relation to the fiscal year Audit Plan. As of January 21, 2016 there were 22 engagements in process, nine (9) engagements closed, three (3) completed, and five (5) not begun.

Ms. Hinson then provided an update of specific engagements since the September meeting including a discussion of a recently completed audit, Data Security Controls Related to Peripheral Devices. One issue was reported regarding maintaining a comprehensive inventory of devices and the need to secure erasure of stored data on the devices being retired or transferred to new locations. She also updated the status of current activities in progress: 6 reports, 3 audits, and 10 follow-ups to prior year issues reported.

Mr. Douglass and Ms. Peloquin-Dodd provided the Committee with an overview of the economic and fiscal outlook for the State of North Carolina. The State’s economy is on target for moderate, steady growth. The job market is stronger, with an unemployment rate of 5.6%, but wages are stagnant. The state’s revenue estimates are 1.2%, or $120 million, above its targets through December 2015.

The University’s fiscal 2016 projected operating budget is $1.48 Billion and the top three revenue resources are State Appropriations; Contracts and Grants; and Tuition and Fees. Key areas of expenditures are Instruction; Organized Research; and Institutional/Facilities Support. Salaries and benefits account for 62% of the total budget.
Legislative priorities cause concerns for fiscal year 2017 with the possibility of a large management flex cut, possibly $10 Million recurring and a possible cut in state appropriations for development salaries, which could be in the range of $5.8 Million. Current language in the legislature caps the use of general fund appropriations for campus advancement activities at $1 Million per campus. There is also concern about the North Carolina Guaranteed Admissions Program (NCGAP) and the limiting impact it will cause.

The committee heard an information report from Associate Vice Chancellor for Facilities, Steve Arndt, regarding an overview of utilities on campus. There are three transmission level substations on campus. On Main Campus there is a 50 MW substation that the university owns but contracts with Duke Energy Progress for maintenance. All major building have university sub-meters. Stand-alone buildings are fed from Duke Energy Progress and metered separately.

Mr. Arndt addressed the risks of electric utility disruption and various mitigation actions taken in response to the risk. Four major risk mitigation strategies include highly reliable transmission grade service that has 99.99% availability, redundant transformer banks at Centennial and Main Campus, looped distribution cables and switches that isolate faults quickly and spare equipment stocks for immediate replacement. In addition NC State has a mutual assistance agreement with UNC-Chapel Hill. The university has 129 emergency standby generators that would provide some level of standby power for building activities such as research.

Deputy General Counsel, Robert Hoon, introduced Brad Trahan as the new University Compliance Manager and referenced the position description in the committee materials. Mr. Trahan provided an update on compliance and demonstrated the new compliance website. He highlighted the compliance and integrity program, and provided an overview of the accountability expectations for compliance owners and partners. He also shared reporting resources such as the Compliance Hotline and other ways individuals can report concerns and complaints.

Ms. Peloquin-Dodd reported on the University endowment which reported to NACUBO was a value of $984 million at the close of fiscal 2015 and a total combined investment return for all University-related endowment of 8.34%. This performance compared favorably with results for 814 endowments in the annual NACUBO survey. NC State had an increase in market value of 11.2%, which is the largest among our peers.

Chair Cabaniss referenced informational materials provided to the committee. These included organizational charts for the University and the reference to the University’s updated credit ratings of “AA” and “Aa1”.

With no further business, the Committee adjourned at 2:35 p.m.

Submitted by ____________________________________
Secretary to the Committee

Approved _____________________________________
Chair of the Committee
NORTH CAROLINA STATE UNIVERSITY
INTERNAL AUDIT DIVISION

AUDIT PLAN
FISCAL YEAR 2017

Photo by Nancy Burgart
# Audits

<table>
<thead>
<tr>
<th>Audits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title IX</td>
<td>The objective of the audit is to assess the University’s compliance to the federal Office of Civil Rights Title IX requirements relating to sexual violence in the student population.</td>
</tr>
<tr>
<td>Clery Act</td>
<td>The objective of the audit is to assess compliance with elements of the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act (Clery Act) which requires institutions of higher education to prepare and make accessible policy statements and statistics about specific crimes committed on campus.</td>
</tr>
<tr>
<td>Non-Salary Year End Transfer of Expenses</td>
<td>The objective of the audit is to test non-salary year end transfer of expenses for allowability, allocability, and appropriateness.</td>
</tr>
<tr>
<td>Assessment of Colleges’ Research Support Structure</td>
<td>The objective of the audit is to assess the research support structures at each of the University’s Colleges. Particular focus will be given to the efficiency and effectiveness of customer support and ability to adapt to the growing and changing University research environment.</td>
</tr>
<tr>
<td>University Business Operations Division Travel Center Process Pilot</td>
<td>The objective of the audit is to assess the travel center process currently being piloted by the University Business Operations Division for potential expansion campus-wide. This will include testing of internal controls, appropriateness of assigned roles and accountability, comprehensive guidance and training, and review of proposed campus-wide rollout.</td>
</tr>
<tr>
<td>Information Technology Network Infrastructure Maintenance</td>
<td>The objective of the audit is to assess the Office of Information and Technology’s practices for maintaining the University’s network device infrastructure.</td>
</tr>
<tr>
<td>Security Applications and Technology (SAT) Services</td>
<td>The objective of the audit is to assess the processes and related controls governing the system used by SAT in providing physical access controls for campus locations.</td>
</tr>
</tbody>
</table>
Fiscal Year 2016 Audits Carried Forward

The Audit Plan includes estimated time for audits that are still in process as of July 1, 2016.

Investigations

The Audit Plan includes estimated time for due diligence and investigation of allegations reported through the Internal Audit Division Hot Line, the Office of the State Auditor Hot Line, or other internal and external sources.

Follow-up Audits

IAD performs follow-up audits on all audit issues subsequent to the issuance of audit reports by our office or the Office of the State Auditor. As of March 8, 2016, corrective actions for issues noted in the following audit reports will be followed up in fiscal year 2017:

| College of Sciences – Mathematics Grant Funds Investigation |
| Controls over Purchase Cards (PCards) |
| Data Security Controls Related to Peripheral Devices |
| Division of Academic and Student Affairs – Information Technology General Controls |
| Non-Instructional Summer Salary Performance Audit – Effectiveness of Faculty Training |
| Office of the State Auditor Information Technology – Audit Letter Issued to the Vice Chancellor for Information Technology |
| Office of Information Technology – Infrastructure, Systems, and Operations: Virtual Computing Services |
| Office of Information Technology – WolfTech Active Directory: Security and Operational Controls |
| Office of the State Auditor Fiscal Year 2014/2015 Financial Statement Audit, Information Technology Controls Segment |
| University Network Firewall Protection Service Audit |
### Consulting

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athletics Summer Camps and Clinics – Financial Record Reporting</td>
<td>As recommended in Athletic’s NCAA required, “Review of Certain Components of the Athletics Department’s Compliance Program,” Internal Audit will consult with the Compliance Program to analyze the completion and submission rate of financial record reporting forms required of the privately owned summer camps and clinics.</td>
</tr>
<tr>
<td>College of Sciences Audit of Department of Mathematics Grant</td>
<td>Internal Auditor is consulting with College of Sciences in their internal review of Mathematics grant resulting from the College of Sciences – Mathematics Grant Funds Investigation (see Follow-Up Audits section above).</td>
</tr>
<tr>
<td>Office of Information Technology Security Roadmap</td>
<td>Director and Information Technology Auditor are providing advisory and consulting services for Office of Information Technology Security and Compliance to assist in the development of the Security Roadmap.</td>
</tr>
<tr>
<td>Power America Institute</td>
<td>Director and Information Technology Auditor are consulting with the Office of Research, Innovation and Economic Development and Power America Institute regarding governance, business operations, compliance, and security.</td>
</tr>
<tr>
<td>Student Development, Health, and Wellness Risk Management Consultation</td>
<td>Director and Operational Audit Manager are consulting with the Vice Provost of Student Development, Health and Wellness to evaluate strategic risk within the Department.</td>
</tr>
<tr>
<td>Various Minor Consulting Activities</td>
<td>Time is allowed on the Audit Plan for consulting activities lasting less than 1 hour and up to 3 days.</td>
</tr>
</tbody>
</table>
### Special Assignments

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revise Information Technology (IT) Governance Steering Committee</td>
<td>Director is on the steering team to redesign the Office of Information Technology University-wide IT governance structure.</td>
</tr>
<tr>
<td>University Information Technology Strategic Advisory (ITSAC) Committee and Security Subcommittees</td>
<td>Director is a member of the ITSAC, the University-wide, top-level committee of non-Information Technology personnel whose intended focus is to ensure that the University makes the best possible decisions in advancing the use of technology to meet its mission, vision and goals. Additional consulting activities are performed by the Information Technology Auditor who provides objective, independent input to several of the ITSAC subcommittees.</td>
</tr>
<tr>
<td>University-wide Information Technology Risk Assessment</td>
<td>Director and Information Technology Auditor are working with the Office of Information Technology Security and Compliance to ensure a comprehensive risk assessment of the University Information Technology environment.</td>
</tr>
</tbody>
</table>
NCSU Internal Audit Division
Continuous Risk Assessment and Audit Planning Process

Audit Risk Universe
Current best practices relating to development of the audit universe contend that a risk-based internal audit function considers all risks that affect their enterprise, not just the "auditable risks." Specifically, at NCSU, this broader concept of the audit universe begins with the core elements of the NC State Mission: academics, research, and engagement. The NC State Internal Audit Division (IAD) identifies three integral activities necessary for the achievement of our mission:

1) **Governing** - performed by our University leadership team and the Board of Trustees who set the direction and ethical expectations for University constituents
2) **Doing** - performed by our faculty, engagement agents, and staff around the globe
3) **Supporting** - performed by University units through various processes and practices carefully designed to manage risk and ensure the University meets its goals, objectives, and requirements

The risks involved in mission-critical activities and the ways in which they are mitigated are the focus of our Risk Assessment (RA) Process that leads to the development of our Audit Risk Inventory and our Audit Plan. (See Audit Risk Universe, page 7).

Risk Assessment Process
IAD continuously perform risk assessment activities across the Audit Risk Universe to identify areas of high risk to the University “enterprise” in relation to its achieving both its strategic and tactical goals and objectives. These risks are tracked in the Audit Risk Inventory. The RA process is at the core of our audit and consulting engagements and is used as an objective tool in the development of our risk-based Audit Plans. Our Audit Risk Inventory is composed of exposures relating to the University’s governance, operations, and information systems and touch on such components as the:

- Reliability and integrity of financial and operational information
- Effectiveness and efficiency of operations
- Safe-guarding of assets
- Compliance with University and UNC System policy
- Compliance with legal, regulatory, and contractual obligations
- Detection and prevention of fraud

Audit Plan Development
All objective and subjective information and data gathered through our continuous RA process is analyzed when received and again every six months. This on-going analysis process allows IAD to determine areas that may need immediate attention, areas that are potential near-term or future audits, and areas that we will continue to watch and monitor through our process.

Our Audit Plan reflects the results of our continuous assessment and analysis process as of the end of the first quarter of each calendar year. Each year’s Plan is presented for approval at the regularly scheduled April meeting of the NC State Board of Trustees and is implemented at the start of the new fiscal year on July 1. (See Risk Inventory and Audit Plan Development, page 8).
NCSU Internal Audit Division
Continuous Risk Assessment and Audit Planning Process
Audit Risk Universe
NCSU Internal Audit Division
Continuous Risk Assessment and Audit Planning Process
Risk Inventory and Audit Plan Development

- Risk Inventory Meetings
- Informal Conversations
- Out of scope items from audit fieldwork
- Allegations/Hotline
- State & Federal Audits
- Trends in Higher Education

Audit Planning Begins in February

Risk Ranking
- Risk Criteria
  - Compliance
  - Financial
  - Fraud
  - Operational
  - Reputational
  - Security
- Likelihood & Impact Severity Analysis (1 – 5)
- Final Score for each Potential Audit (0 – 60)

Capacity Analysis
- Estimate Project Hours per Potential Audit
- Estimate hours for follow-ups, investigations, etc.
- Estimate FTE Resources

Audit Plan
- Potential Audits with highest risk scores within capacity
NCSU Internal Audit Division
Staff Bios

**Director**

Cecile M. Hinson, CFE, CISA

Cecile joined the Internal Audit Division in February 2001. Prior, she worked for Lockheed Martin and PricewaterhouseCoopers, LLP, in the areas of financial, operational, and information technology auditing. Cecile received her Bachelor of Science in Business with an emphasis in Accounting from Meredith College. She is a Certified Information Systems Auditor (CISA) and a Certified Fraud Examiner (CFE). She is also a graduate of the NC State Equal Opportunity Institute and holds an Information Technology Audit Certificate from the MIS Training Institute.

**Operational Audit Manager**

Marie C. Knobloch, CPA, MBA

Marie joined the Internal Audit Division in November 2014. She comes with Internal Audit and Six Sigma experience in the private sector having worked for ABB, Quest Diagnostics, Talecris Biotherapeutics and Farmers Insurance among others. Marie has a Bachelor of Science in Business Administration with a concentration in Accounting from Boston University and a Master of Business Administration in International Management from Thunderbird Global School of Management. Marie is a Certified Public Accountant.

**Staff**

Nancy L. Burgart, CFE, CISA

Nancy re-joined the Internal Audit Division in October 2010. Nancy started her career at NC State working in various departments across campus, including Telecommunications, NCSU Libraries, and Internal Audit. Prior to re-joining Internal Audit, she worked as an IT Compliance Auditor in the NC Office of the State Chief Information Officer. Nancy has a Bachelor of Science in Accounting from East Carolina University. She is a Certified Information Systems Auditor (CISA) and a Certified Fraud Examiner (CFE).

S. Neil Holloway, PMP, CGFM, CFE

Neil joined the Internal Audit Division in February 2015. Previously, he worked as a financial management consultant for IBM and a performance auditor for the U.S. Department of Defense, Office of the Inspector General. Neil earned his Bachelor of Science in Accounting from Juniata College. He is a Project Management Professional (PMP), a Certified Government Financial Manager (CGFM), and a Certified Fraud Examiner (CFE).

M'Shiela R. Hawthorne

M'Shiela joined the Internal Audit Division in December 2014. She has a Bachelor of Science Degree in Accounting with a concentration in Internal Audit from NC State University.

Denise W. Hall

Denise joined the Internal Audit Division in September 2012. Prior, she worked for the Office of General Counsel on the NC State campus as an Administrative Assistant. Denise is a Certified Paralegal, a Notary, and a graduate of the NC State Equal Opportunity Institute.
January 22, 2016

Via E-Mail
Heather Hummer
UNC-General Administration
140 Friday Center Drive
Chapel Hill, NC 27517

SUBJECT: Audited Financial Reports for University Associated Entities

Dear Ms. Hummer:

In accordance with UNC Policy 600.2.5.2 [R], we have forwarded electronically to you the Fiscal Year 2015 audited financial reports of the following associated entities which support university activities:

The North Carolina Agricultural Foundation, Inc.
NC State Engineering Foundation, Inc.
NC State Investment Fund, Inc.
NC State Natural Resources Foundation, Inc.
North Carolina State University Foundation, Inc. (includes NC State Executive Education, LLC)
North Carolina State University College of Sciences Foundation, Inc.
North Carolina Textile Foundation, Inc.
North Carolina Tobacco Foundation, Inc.
North Carolina Veterinary Medical Foundation, Inc.
NC State University Alumni Association, Inc.
NC State University Partnership Corporation and Affiliates (includes NC State University Centennial Development, LLC; NC State Upfit, LLC; Bell Tower Holdings, LLC; NC State CC Holdings I, LLC; NC State CBC Land I, LLC; and Leaders in Innovation and Nonwovens Commercialization, LLC)
NCSU Student Aid Association, Inc. (includes Wolfpack Club Student Housing Foundation, LLC)

The North Carolina State University Club and the NC State Alumni Club, Inc. have a December 31 year end and once their audits are completed, they will be forwarded to you.

Sincerely,

W. Randolph Woodson
Chancellor

cc:   James W. Owens, Chair, Board of Trustees
      Scott Douglass, Vice Chancellor for Finance and Administration
      Mary Pelouquin-Dodd, Associate Vice Chancellor for Finance and Administration and University Treasurer
      Jill Tasaico, Senior Director, Foundations Accounting & Investments
      Cecile Hinson, Director of Internal Audit
      Jonathan Pruitt, Vice President for Finance, UNC GA
### INVESTMENT ENTITY:

<table>
<thead>
<tr>
<th>Entity Name</th>
<th>Total Net Assets June 30, 2015 (in 000's)</th>
<th>Unqualified Audit Opinion</th>
<th>Management Letter</th>
<th>Signed Operating Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>NC State Investment Fund, Inc.</td>
<td>$848,143</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### FUNDRAISING ENTITIES:

<table>
<thead>
<tr>
<th>Entity Name</th>
<th>Total Net Assets June 30, 2015 (in 000's)</th>
<th>Unqualified Audit Opinion</th>
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</tr>
</thead>
<tbody>
<tr>
<td>The North Carolina Agricultural Foundation, Inc.</td>
<td>151,994</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>NC State University Alumni Association, Inc.</td>
<td>32,898</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>NC State Engineering Foundation, Inc.</td>
<td>87,997</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>NC State Natural Resources Foundation, Inc.</td>
<td>32,274</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>North Carolina State University Foundation, Inc.</td>
<td>340,352</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>NC State Executive Education, LLC (a, d)</td>
<td>-</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>North Carolina State University College of Sciences Foundation, Inc.</td>
<td>21,554</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>NCSU Student Aid Association, Inc.</td>
<td>84,340</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Wolfpack Club Student Housing Foundation, LLC (a)</td>
<td>-</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Blue Ridge Trinity, LLC (a, b)</td>
<td>-</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>North Carolina Textile Foundation, Inc.</td>
<td>44,015</td>
<td>Yes</td>
<td>No</td>
<td>Yes*</td>
</tr>
<tr>
<td>North Carolina Tobacco Foundation, Inc.</td>
<td>10,328</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>North Carolina Veterinary Medical Foundation, Inc.</td>
<td>72,448</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### SOCIAL CLUB ENTITIES:

<table>
<thead>
<tr>
<th>Entity Name</th>
<th>Total Net Assets June 30, 2015 (in 000's)</th>
<th>Unqualified Audit Opinion</th>
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</tr>
</thead>
<tbody>
<tr>
<td>North Carolina State University Club (c)</td>
<td>5,499</td>
<td>Yes</td>
<td>No</td>
<td>Yes*</td>
</tr>
<tr>
<td>The NC State Alumni Club, Inc.(c)</td>
<td>47</td>
<td>Yes</td>
<td>No</td>
<td>Yes*</td>
</tr>
</tbody>
</table>

### OTHER ENTITIES:

<table>
<thead>
<tr>
<th>Entity Name</th>
<th>Total Net Assets June 30, 2015 (in 000's)</th>
<th>Unqualified Audit Opinion</th>
<th>Management Letter</th>
<th>Signed Operating Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>NC State University Partnership Corporation</td>
<td>1</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>NC State University Centennial Development, LLC (a, e)</td>
<td>16,198</td>
<td>N/A</td>
<td>N/A</td>
<td>Yes</td>
</tr>
<tr>
<td>NC State Upfit, LLC (a,e)</td>
<td>2</td>
<td>N/A</td>
<td>N/A</td>
<td>Yes</td>
</tr>
<tr>
<td>NC State CC Holdings I, LLC (a, e)</td>
<td>317</td>
<td>N/A</td>
<td>N/A</td>
<td>Yes</td>
</tr>
<tr>
<td>NC State CBC Land I, LLC (a, e)</td>
<td>2</td>
<td>N/A</td>
<td>N/A</td>
<td>Yes</td>
</tr>
<tr>
<td>Bell Tower Holdings LLC (a, e)</td>
<td>(186)</td>
<td>N/A</td>
<td>N/A</td>
<td>Yes</td>
</tr>
<tr>
<td>Leaders in Innovation and Nonwovens Commercialization, LLC (a, e)</td>
<td>2,108</td>
<td>N/A</td>
<td>N/A</td>
<td>Yes</td>
</tr>
</tbody>
</table>

(a) LLC’s are wholly owned by aforementioned entity
(b) LLC was officially dissolved effective October 10, 2014
(c) December 31 year end; numbers are as of December 31, 2014
(d) Operating Agreement is between LLC and NC State University Foundation
(e) Operating Agreements are between LLCs and NC State University Partnership Corporation

N/A: Not applicable

*Updated agreements per amended UNC-GA Reg. 600.2.5.2[R] dated June 8, 2015 in process.
Annual Review of Associated Entities

Mary Peloquin-Dodd
Associate Vice Chancellor for Finance and Business and University Treasurer

Board of Trustees
Audit, Risk Management & Finance Committee

April 21, 2016
NC State University Associated Entities

• Annual Reporting
  • Per UNC-GA Policy 600.2.5.2 [R]

• Operating Agreements
  • UNC-GA Policy updated June 8, 2015
  • Governs University Associated Entity relationships

• Activities
  • Fundraising
  • Operations
## NC State University Associated Entities
### Total Net Assets vs. Endowments as of June 30, 2015

<table>
<thead>
<tr>
<th>Organization</th>
<th>Total Net Assets in 000's</th>
<th>Endowments in 000's</th>
</tr>
</thead>
<tbody>
<tr>
<td>NC State Investment Fund, Inc.</td>
<td>848,143</td>
<td></td>
</tr>
<tr>
<td>North Carolina State University Foundation, Inc.</td>
<td>340,352</td>
<td>$242,700</td>
</tr>
<tr>
<td>The North Carolina Agricultural Foundation, Inc.</td>
<td>151,994</td>
<td>96,300</td>
</tr>
<tr>
<td>NC State Engineering Foundation, Inc.</td>
<td>87,997</td>
<td>69,200</td>
</tr>
<tr>
<td>NCSU Student Aid Association, Inc.</td>
<td>84,340</td>
<td>26,400</td>
</tr>
<tr>
<td>North Carolina Veterinary Medical Foundation, Inc.</td>
<td>72,448</td>
<td>47,700</td>
</tr>
<tr>
<td>North Carolina Textile Foundation, Inc.</td>
<td>44,015</td>
<td>43,400</td>
</tr>
<tr>
<td>NC State University Alumni Association, Inc.</td>
<td>32,898</td>
<td>33,800</td>
</tr>
<tr>
<td>NC State Natural Resources Foundation, Inc.</td>
<td>32,274</td>
<td>27,200</td>
</tr>
<tr>
<td>North Carolina State University College of Sciences Foundation, Inc.</td>
<td>21,554</td>
<td>14,500</td>
</tr>
<tr>
<td>NC State University Partnership Corporation</td>
<td>18,440</td>
<td></td>
</tr>
<tr>
<td>North Carolina Tobacco Foundation, Inc.</td>
<td>10,328</td>
<td>4,700</td>
</tr>
<tr>
<td>North Carolina State University Club</td>
<td>5,499</td>
<td></td>
</tr>
<tr>
<td>The NC State Alumni Club, Inc.</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td>The Endowment Fund</td>
<td>---</td>
<td>378,100</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>$1,750,329</strong></td>
<td><strong>$984,000</strong></td>
</tr>
</tbody>
</table>
Questions?
University Debt Update

North Carolina State University
Audit, Risk Management and Finance Committee
April 21, 2016

Lori Johnson
Director, Strategic Debt and Financial Management
Debt Outstanding
10 year history
Debt Outstanding by Type
June 30, 2016

FY2015 Cost of Funds = 3.65%
Debt Outstanding by Purpose
June 30, 2016

- Athletics
- Centennial Campus
- Central Stores
- Dining
- Thompson Theater
- Student Health
- Housing
- Carmichael
- Transportation
- Terry Hospital
- Talley Student Union
- Energy Savings

- Housing, 41.1%
- Energy Savings, 14.7%
- Talley Student Union, 19.9%
- Athletic, 6.5%
- Other, 5.6%
- Other, 2.0%
- Other, 1.0%
- Other, 0.2%
- Other, 1.0%
- Other, 1.3%
- Other, 2.4%
Recent Activity

- Hired Financial Advisor
- Updated Debt Guidelines
- Replaced Bond Trustee
- Rate Modification on Energy Loan
- Replaced Liquidity Provider on 2003 Bonds
- Refunded 2008 Bonds with Private Placement Loan
- Created Internal Loan Application and Agreement
- System Wide Debt Capacity Study
## Upcoming Borrowing
(Estimates as of March, 2016)

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost (millions)</th>
<th>Debt (millions)</th>
<th>Date</th>
<th>Source of Repayment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phytotron*</td>
<td>$6.0</td>
<td>$6.0</td>
<td>2017</td>
<td>Energy Savings</td>
</tr>
<tr>
<td>Carmichael Locker Rooms*</td>
<td>$7.6</td>
<td>$7.6</td>
<td>2017</td>
<td>Student Fees</td>
</tr>
<tr>
<td>Reynolds Coliseum*</td>
<td>$35</td>
<td>$31</td>
<td>2017</td>
<td>WPC / University Funds</td>
</tr>
<tr>
<td>Carmichael Renovation</td>
<td>$45</td>
<td>$43</td>
<td>2017</td>
<td>Student Fees</td>
</tr>
<tr>
<td>Case Commons</td>
<td>$15</td>
<td>$13</td>
<td>2017</td>
<td>WPC</td>
</tr>
<tr>
<td>Engineering Oval</td>
<td>$154</td>
<td>$47-61**</td>
<td>Est 2020</td>
<td>Gifts /Energy Savings</td>
</tr>
<tr>
<td>Plant Sciences</td>
<td>$160</td>
<td>$53-72**</td>
<td>Est 2020</td>
<td>Gifts</td>
</tr>
</tbody>
</table>

* Some or all already in Commercial Paper
** Borrowing dependent on timing of pledge receipts
Debt Outstanding
10 year history + 10 year plan

Millions


$273 $260 $266 $580 $570 $560 $566 $601 $616 $605 $746 $724 $712 $704 $668 $632 $594

$0 $100 $200 $300 $400 $500 $600 $700 $800
Measuring the Ten Year Capital Borrowing Plan

Actual Debt Service to Operations (%)

Policy: Less than 4%

<table>
<thead>
<tr>
<th>Year</th>
<th>Actual debt service to operations (%)</th>
<th>Moody's FY2014 Aa1 Median</th>
<th>Moody's FY2014 Aa2 Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>2.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>2.1</td>
<td></td>
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<tr>
<td>2009</td>
<td>2.0</td>
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<tr>
<td>2010</td>
<td>2.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>2.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>2.7</td>
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<tr>
<td>2013</td>
<td>2.3</td>
<td></td>
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<tr>
<td>2014</td>
<td>1.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>3.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>3.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>3.1</td>
<td></td>
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</tr>
<tr>
<td>2018</td>
<td>3.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>3.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>4.1</td>
<td></td>
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<tr>
<td>2021</td>
<td>4.0</td>
<td></td>
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<tr>
<td>2022</td>
<td>4.0</td>
<td></td>
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<tr>
<td>2023</td>
<td>4.0</td>
<td></td>
<td></td>
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<tr>
<td>2024</td>
<td>3.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2025</td>
<td>3.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2026</td>
<td>3.8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
UNC System Debt Capacity Study

- G.S.116D amended
  - Requires each campus provide an annual report on current and anticipated debt levels
  - Requires System provide annual study incorporating these reports and provide advice on estimated debt capacity

- General Administration Methodology
  - Only special obligation debt reported
  - No aggregation of debt systemwide
  - Five Year Proforma
  - Four ratios
    - Debt to Obligated Resources
    - Five Year Payout Ratio
    - Expendable Resources to Debt
    - Debt Service to Operating Expenses
North Carolina State University
Debt Management Guidelines
Revised August 2015

Summary
Debt financing, especially tax-exempt debt, provides a low-cost source of capital for the University to fund capital investments to achieve its mission and strategic objectives. Indeed, as the economic landscape continues to evolve and change, the use of debt will become an increasingly important tool that enables our institution to move its strategy forward. In this environment, appropriate financial leverage plays a key role and is considered a long-term component of the University’s balance sheet. Given that the University has limited debt repayment resources, the allocation of and management of debt is a limited resource. The guidelines provided in this document are the framework by which decisions will be made regarding the issuance of debt to finance particular capital improvements.

Authority
North Carolina General Statutes Chapter 116D Article 3 authorize the Board of Governors of the University of North Carolina (the Board) to issue special obligation bonds for improvements to the facilities of the University of North Carolina System.

Prior to a bond issue, the Board designates the capital improvements financed as “special obligation bond projects” and the University’s Board of Trustees approves the issuance of special obligation bonds for those projects.

The State Energy Conservation Finance Act, Article 8 of Chapter 142 of the North Carolina General Statutes authorizes the Board to solicit and, through G.S. 143-64.17A, finance guaranteed energy conservation measures. These financing agreements must have the approval of the Office of State Budget and Management, the State Treasurer, and Counsel of State prior to closing.

Criteria
The University’s debt capacity is a limited resource. Only projects that relate to the mission of the University, directly or indirectly, will be considered for debt financing. In general, projects that will be approved are broader in scope than college, or unit-based projects. However, certain mission-critical school-based projects can also receive approval. Before beginning the planning for fundraising process for any project which might require debt financing, the approval of the Vice Chancellor for Finance and Administration and the Vice Chancellor for University Advancement is required.

Projects financed through a bonding program will have received approval through the NC State Legislature annual non-appropriated capital improvements bill and will have been designated as “special obligation projects” by the North Carolina Board of Governors. Energy conservation measures will have received state agency approval as required.

A project that has a related revenue stream (self-liquidating project) will receive priority consideration. For these projects, the use of debt must be supported by an achievable financial plan that includes servicing the debt, including interest expense, financing related infrastructure and utilities, meeting any new or increased operating costs (including security applications), and providing for appropriate replacement and
renovation costs. Energy conservation measures must show that savings will be adequate to service the debt and all annual monitoring costs. Other projects funded by budgetary savings, gifts, and grants will be considered on a case by case basis. Any projects that will require gift financing, or include a gift financing component, must be jointly approved by the Vice Chancellor for University Advancement and the Vice Chancellor for Finance and Administration before approaching any prospective donors about gifts to the project. Because of the ancillary costs of projects, the amount of gifts raised must also include an associated endowment for any projects that are to be 100% gift financed. In all cases, institutional strategy and not donor capacity must drive the decision to build a project.

Maintenance of Credit Rating

Maintaining a high credit rating will permit the University to continue to issue debt and finance capital projects at favorable interest rates while meeting its strategic objectives. While the University’s decision to issue additional debt will be primarily focused on the strategic importance of the new capital improvement(s) the potential impact of a change in credit rating will also be reviewed. The University recognizes that external economic, natural, or other events may from time to time affect the creditworthiness of its debt. Nevertheless, the University is committed to ensuring that actions within its control are prudent. Management will provide the rating agencies with full and timely access to required information.

Methods of Sale

The standard methods of sale are competitive, negotiated and private placement. University management will evaluate each method of sale and determine the best type for each bond issue.

Financing Team Professionals

Selection of financing team professionals will be accomplished based on guidance from UNC General Administration. Bond Counsel, Financial Advisor (if needed) and Underwriter pool will be selected using the RFP (request for proposals) method.

General Revenue Pledge

The University will utilize general revenue secured debt (available funds pledge) for all financing needs, unless for energy conservation measures or other certain projects where management desires to structure specific revenue pledges independent of general revenue projects. The general revenue pledge provides a strong, flexible security that captures the strengths of not only auxiliary and student related revenues, but of the University’s research programs. General revenue bonds price better than corresponding auxiliary or facilities and administrative cost recovery bonds. In addition, on general revenue debt, the University has, historically, been subject to fewer operating or financial covenants and coverage levels imposed by the market and external constituents.

Refunding

Refunding and/or restructuring opportunities will be evaluated on a regular basis. Costs incurred by the refunding activity will be taken into consideration with a target of 3% present value savings. The University will also consider refinancing for other strategic
reasons including the elimination of certain limitations, covenants, payment obligations or reserve requirements that reduce flexibility.

Types of Instruments

Tax-exempt debt – The University recognizes the benefits associated with tax-exempt debt, and therefore will manage the tax-exempt portfolio to maximize the use of tax-exempt debt subject to changing conditions and changes in tax law.

Taxable debt – The University will manage its debt portfolio to implement taxable strategies based on private use considerations, tax law, and current market conditions. Taxable debt is likely to be a perpetual component of the University’s liabilities. Taxable debt will be utilized to fund projects ineligible for tax-exempt financing.

Commercial paper – The University recognizes that a commercial paper (CP) program can provide low-cost working capital and provide bridge financing for projects. However, as with other debt structures, the level of CP outstanding impacts the University’s overall debt capacity.

Variable rate debt – Variable rate debt is a desirable component of a debt portfolio as it provides typically lower rates. The use of variable rate debt does expose the debt portfolio to interest rate fluctuations and often comes with liquidity needs. Therefore, the University will balance the mix of variable and fixed rate debt so that variable is between 20%-50% of the total debt portfolio and will include variable interest rate instruments and products when advantageous.

Derivatives – The use of derivative products can be appropriate and advantageous for the purposes of limiting interest rate exposure and reducing debt service costs. The use of swaps will be employed primarily to enhance the University’s financial strategy and to manage variable rate exposure. Derivative products can help the University lock-in a favorable cost of capital for a future project or to ensure a specific level of cash flow savings for a refinancing. The University’s strategic objectives would determine the appropriate approach.

The University will evaluate potential derivative instruments through evaluation of its variable rate allocation, market and interest rate conditions, and the compensation for undertaking counterparty exposure. The University will evaluate each transaction relative to counterparty, basis, and termination risk. No derivative transaction will be undertaken that is not fully understood by the University or that imposes inappropriate risk on the University.

Public Private Partnerships - Given limited debt capacity and substantial capital needs, opportunities for alternative and non-traditional transaction structures may be considered, including off-balance sheet financings. These transactions are generally more expensive than traditional debt structures. Because investors view them as inherently riskier transactions, the cost of capital can be higher than traditional University debt and the costs of structuring the transactions are high. Chief considerations in deciding whether to pursue a Public Private Partnership are whether a third party financing model can produce results that are: (1) faster; (2) better; or (3) cheaper. Non-traditional structures can be considered when the economic benefit and likely impact on the University’s debt capacity and credit have been determined and the benefits of the potential transaction outweigh the costs. If it is determined that the use of third party financing or public private partnerships is closer to University debt than predicted, or if it is perceived to be University debt by University auditors, we will endeavor to use traditional financing methods. For this reason,
any public private partnership projects that occur on University-or Endowment-owned land must include the involvement of the University Treasurer. Our debt guidelines anticipate that rating agencies will consider any debt that is built on state-owned or university-owned land for purposes similar to that which is typically financed by special obligation debt to be virtually the same as debt of the University. Economic interest and control drive whether a project is considered to be debt of the University. If the university has an economic interest (i.e. gains the net operating income or participates in the income or losses) and control, then the project is considered by most financing professionals to be materially tied to the University. Ultimately, pursuing this type of financing is also a function of regulations—a project may be feasible but may not be allowed under existing regulations.

Maturity and Debt Service

The useful life of the capital project financed will be taken into consideration when determining the length of financing. No capital project will be financed for more than 120% of its useful life. Call features should be structured to provide the highest degree of flexibility relative to cost. Structure of debt service will take into consideration existing debt and future capital plans. In addition, the University’s amortization of debt service may be spread along the full yield curve depending on market conditions.

Disclosures and Compliance

Annually, the University will review compliance with covenants and requirements under outstanding bond indentures. The University will continue to meet its ongoing disclosure requirements in accordance with SEC rule 15c2-12. The University will submit financial reports, statistical data, and any other material events as required under outstanding bond indentures. The University will comply with arbitrage requirements on invested bond funds. The University will comply with Internal Revenue Service rules related to private use and use of proceeds on tax-exempt debt.

Use of Benchmarks and Debt Ratios

In order to maintain an understanding of the University’s standing in comparison to other like institutions, analysis using standard ratios and benchmarks must be made comparing the University to others in its peer group. This analysis can be used as an ongoing tool in determining trends, weaknesses and target strengths relating to the debt portfolio and the health of the institution. On a regular basis, the University will review its ratios and compare them to published benchmarks from the rating agencies and others in its peer group. The University uses the following key ratios to provide a quantitative assessment of debt affordability and debt capacity.

Debt Service to Operations: This ratio measures the University’s debt service burden as a percentage of total university expenses. The target for this ratio is intended to maintain the University’s long-term operating flexibility to finance existing requirements and new initiatives. Our current guideline of 4% is designed to preserve inter-generational equity. The Vice Chancellor for Finance and Administration has the ability to approve a higher level of debt service burden on a case-to-case basis. The measure is based on aggregate operating expenses as opposed to operating revenues because expenses typically are more stable and better reflect the operating base of the University. This ratio is

North Carolina State University
adjusted to reflect any non-amortizing or non-traditional debt structures that could result in significant single year fluctuations including the effect of debt refunding.

\[ \text{Annual Debt Service} \]
\[ \text{Total Operating Expenses} \]

**Expendable Resources to Debt:** This ratio indicates one of the most basic determinants of financial health by measuring the availability of liquid and expendable net assets to aggregate debt. The ratio measures the medium to long-term health of the University’s balance sheet and debt capacity and is a critical consideration of universities with the highest credit quality. The ratios and limits are not intended to track to a specific rating, but rather to help the University maintain a competitive financial profile while funding for capital needs as they arise. Our current guideline of 100% is designed to ensure that the University is maintaining an appropriate level of financial resources, relative to our institutional peers. The Vice Chancellor for Finance and Administration has the ability to override this ratio, should it fall below the 100%, or 1.0 times threshold.

\[ \frac{\text{Unrestricted Net Assets} + \text{Restricted Expendable Net Assets}}{\text{Aggregate Debt}} \]

**Indirect Debt**

The University understands that debt issued by affiliated foundations can have an effect on the University’s bond rating. University management will take steps to be aware of, and participate in, debt discussions and new borrowings undertaken by those affiliated entities. As per Operating Guidelines for Associated Entities all debt that exceeds $500K for major associated entities and $100K for minor associated entities must be approved by the Vice Chancellor for Finance and Administration.

**Centralized Lending and Blended Portfolio**

The University has adopted a central loan program under which it provides funding for projects under the guidance of the Vice Chancellor for Finance and Administration and the University Treasurer. The benefits of this program include: (i) structuring of transactions on an aggregate, rather than by project, basis, (ii) continual access to capital for borrowers, (iii) predictable financial terms for borrowers, (iv) minimizing interest rate volatility, (v) permitting prepayment of loans at any time without penalty, and (vi) equity for borrowers through a blended rate.

The University charges a blended rate to its borrowers based on its cost of funding. This interest rate may change periodically to reflect changes in the University’s average aggregate expected long-term cost of borrowing. The blended rate may also include a reserve for interest rate stabilization purposes.

Each borrower is responsible for the repayment of all funds borrowed from the central loan program, plus interest, regardless of the internal or external source of funds. The University provides for flexible financing terms in order to accommodate individual entities as determined by the project scope and repayment source. The Director of Strategic Debt Management is the primary contact for divisional and auxiliary loans.
<table>
<thead>
<tr>
<th>Risk Ranking</th>
<th>Risk</th>
<th>Risk Score</th>
<th>Effectiveness</th>
<th>Risk Owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Data or Cyber Security Breach</td>
<td>15.65</td>
<td>2.92</td>
<td>VC OIT</td>
</tr>
<tr>
<td>2</td>
<td>Reduced State Funding</td>
<td>14.81</td>
<td>3.00</td>
<td>EVC &amp; Provost&lt;br&gt;VC University Advancement&lt;br&gt;Asst. to the Chancellor for External Affairs&lt;br&gt;VC ORIED</td>
</tr>
<tr>
<td>3</td>
<td>Decline in Minority Enrollment</td>
<td>14.17</td>
<td>2.75</td>
<td>EVC &amp; Provost&lt;br&gt;VC DASA</td>
</tr>
<tr>
<td>4</td>
<td>Faculty Loss</td>
<td>13.36</td>
<td>3.00</td>
<td>EVC &amp; Provost</td>
</tr>
<tr>
<td>5</td>
<td>Sexual Violence or Other Clery Crime</td>
<td>12.54</td>
<td>3.67</td>
<td>EVC &amp; Provost&lt;br&gt;VC GC&lt;br&gt;VC F&amp;A</td>
</tr>
<tr>
<td>6</td>
<td>IT System Outage</td>
<td>11.96</td>
<td>3.50</td>
<td>VC OIT</td>
</tr>
<tr>
<td>7</td>
<td>Student Misconduct Involving Health or Safety</td>
<td>11.88</td>
<td>3.25</td>
<td>VC DASA</td>
</tr>
<tr>
<td>8</td>
<td>Loss of Research Grants</td>
<td>11.67</td>
<td>3.25</td>
<td>VC ORIED</td>
</tr>
<tr>
<td>9</td>
<td>Loss of Key Administrative Leaders</td>
<td>11.25</td>
<td>2.92</td>
<td>Chancellor&lt;br&gt;EVC &amp; Provost&lt;br&gt;VC F&amp;A</td>
</tr>
<tr>
<td>10</td>
<td>Employee Misconduct</td>
<td>9.97</td>
<td>3.33</td>
<td>Chancellor&lt;br&gt;VC GC</td>
</tr>
</tbody>
</table>
**Factors Common to Recruitment and Retention**

**Workplace Factors**
- Level of salary and benefits
- Support infrastructure (physical and administrative)
- Available resources
- Level of administrative barriers/support to get work done
- Sense of value, recognition and reward
- Opportunities for faculty/leadership development
- Opportunities for collaboration
- University/college/department culture (welcoming, supportive, diverse)
- University vision and leadership
- Clear Strategic Plan
- Transparency and accountability
- University momentum
- University and disciplinary reputation
- Colleagues (quality and critical mass)
- Student quality
- Educational benefits for employee children

**Non-Workplace Factors**
- Triangle location and lifestyle
- Cost of living
- Weather/seasonal changes
- RTP and other universities (opportunities to collaborate)
- Political climate
- Spouse/partner considerations
- Family considerations
- K-12 educational system
- Desire to change sectors (to/from academics)

**Factors Specific to Recruitment**

**Workplace Factors**
- Recruitment/interview process
- Start-up packages

**Non-Workplace Factors**
- Spouse/partner employment

**Factors Specific to Retention**

**Workplace Factors**
- Salary increases
- Retention packages
- Department climate

**Non-Workplace Factors**
- Aging employees approaching retirement

**Example Actions (Preventions and Treatments)**

**Use of available resources**
- Willingness to prioritize
- Internal reallocation of resources
- Strategic Plan provides clear priorities
- Continuation of delegated authority (EHRA)

**University vision and leadership**
- Nurture a welcoming, supportive and diverse culture
- Clear and transparent internal communication
- Support competitive offers and counteroffers and think more strategically about start-ups (competitive but not duplicative)

**Physical infrastructure**
- Develop/support core facilities
- Connect grant and start-up needs with space
- Renovate and re-purpose space while rewarding innovation and new ideas

**Administrative infrastructure**
- Promote administrative agility vs. administrative burden
- Provide administrative support for faculty

**Family/spousal-partner considerations**
- Proactive spousal/partner accommodations
- Support for services such as childcare

**Quality and critical mass of colleagues; opportunities for collaboration**
- Interdisciplinary clusters
- Other ways to identify like-minded faculty
- Improved financial and administrative processes to encourage collaboration within and across departments (e.g., course credit, funding)

**Opportunities for faculty/leadership development**
- Academic lifespan program development
- Administrative leadership development (Compass, Pathways, etc.)

**Level of salary and benefits**
- Address salary market and equity issues

**Educational benefits for employee children**
- NC State Employee Dependent’s Tuition Scholarship

**Enhanced recruiting efforts**
- Chancellor’s Faculty Excellence Program

**Recognition and rewards**
- University Faculty Scholars
- Focus fundraising efforts on new endowed professorships and chairs as well as existing programs
- Celebration of Faculty Excellence event

**CONSEQUENCES:** Inability to fully deliver University mission, especially in regards to discovery and scholarship, leading to a decline in University stature.
Strategic Risk Management - Faculty Loss

ASSESSMENT OF RECRUITMENT AND RETENTION FACTORS

**Workplace Factors**

- Level of salary and benefits
- Support infrastructure (physical and administrative)
- Available resources
- Salary increases
- Administrative barriers/support to getting work done
- Opportunities for faculty/leadership development
- Opportunities for collaboration
- University/college/department culture (welcoming, supportive, diverse)
- University and disciplinary reputation
- Colleagues (quality and critical mass)
- Student quality
  - Recruitment/interview process
  - Start-up packages
  - Retention packages
  - Department climate
- University vision and leadership
- Sense of value, recognition and reward
- Clear Strategic Plan
- Transparency and accountability
- Overall funding levels
- University momentum
- Educational benefits for employee

**Non-Workplace Factors**

- Political climate
- Cost of living
- Spousal/partner considerations
- Family considerations
- K-12 educational system
- Desire to change sectors (to/from academia)
- Spousal/partner employment
- Aging employees approaching retirement
- Triangle location and lifestyle
- Weather/seasonal changes
- RTP and other universities nearby (opportunities to collaborate)

**Notes**

BLACK - Factors common to recruitment and retention
GREEN - Factors specific to recruitment
PURPLE - Factors specific to retention
<table>
<thead>
<tr>
<th>Risk: Faculty Loss</th>
<th>Risk Rank: 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk Owner:</td>
<td>Executive Vice Chancellor and Provost</td>
</tr>
</tbody>
</table>

**Description:** Inability to attract and retain faculty due to lack of competitive compensation and benefit packages and/or substandard infrastructure

**KRI:**
- Faculty turnover rates
- Number of voluntary separations (not including retirements)
- Retention data (number of pre-emptive retentions, number and nature of counteroffers, success rate, total spending on retentions)
- Market comparison on faculty salary with peer institutions
- Salary comparison versus competitive market

**Rationale (for KRI’s recommended):**
- Tracking the turnover rate, number of voluntary separations and retention metrics shows how critical a risk this is and how it is trending
- Evaluating the reasons given for separations determine what areas to adjust (as outlined in description)
- Monitoring state budget and other funding trends to determine flexibility in salary and benefits (as outlined in description)

**Preventive Response:**
- Use of available resources
  - Willingness to prioritize
  - Strategic Plan provides clear priorities
  - Continuation of delegated authority (EHRA) for setting salaries and giving raises
- University vision and leadership
  - Nurture a welcoming, supportive and diverse culture
  - Clear and transparent internal communication
  - Think more strategically about start-ups (competitive but not duplicative)
- Physical infrastructure
  - Develop/support core facilities
  - Connect grant and start-up needs with space
- Administrative infrastructure
  - Promote administrative agility vs. administrative burden
  - Provide administrative support for faculty
- Family/spousal-partner considerations
  - Proactive spousal/partner accommodations
  - Support for services such as childcare, stress/disease management and prevention, discounts and wellness info

**Reactive Response:**
- Use of available resources
  - Internal reallocation of resources
- University vision and leadership
  - Support competitive offers and counteroffers
- Physical infrastructure
  - Renovate and re-purpose space while rewarding innovation and new ideas
- Quality and critical mass of colleagues; opportunities for collaboration
  - Improved financial and administrative processes
- Level of salary and benefits
  - Address salary market and equity issues
- Enhanced recruiting efforts
  - Chancellor’s Faculty Excellence Program
## Quality and critical mass of colleagues; opportunities for collaboration
- Interdisciplinary clusters
- Other ways to identify like-minded faculty

## Opportunities for faculty/leadership development
- Academic lifespan program development
- Administrative leadership development (Compass, Pathways, etc.)

## Recognition and rewards
- University Faculty Scholars
- Focus fundraising efforts on new endowed professorships and chairs as well as existing programs
- Celebration of Faculty Excellence event

## Educational benefits for employee children
- NC State Employee Dependent’s Tuition Scholarship

## Enhanced recruiting efforts
- Chancellor's Faculty Excellence Program
- More central coordination of start-up packages

## Enhanced retention efforts
- More central coordination of pre-emptive retentions and counteroffers

## Controls:
- Track the number of interdisciplinary clusters
- Evaluate funding as part of strategic resource management initiative
- Evaluate process improvement
- Faculty climate surveys to evaluate university culture
- COACHE faculty survey
- Compensation analysis versus peers
MARKET COMMENTARY

Investment market volatility continued in the quarter ended December 31, 2015. A back-drop of slow global growth, especially in China, a steep drop in oil prices, and weakness in the US manufacturing and exports sector added to the volatility. Despite the hit on the US energy sector, the S&P 500 posted a 7.04% gain for the quarter, and pushed the index into positive territory, up 1.38% for the calendar year. In December, the Federal Reserve announced its much-anticipated interest rate hike, a contrast with the European Central Bank (ECB)'s continued support for quantitative easing. Fixed Income, as measured by the Barclays US Aggregate Bond index, posted a loss of 0.57% for the quarter, as yields rose and spreads generally widened.

In addition to widening spreads, the slide in oil prices and energy sector fears led the Barclays Capital US High Yield Index to post a 2.07% loss for the quarter. International equity markets, as measured by the MSCI ACWI Index, posted a gain of 3.24% in the quarter, but finished in the red for the year, down 5.66%. Emerging markets, as measured by the MSCI Emerging Markets index, posted a modest gain of 0.73% for the quarter, as growth slowed in China and a free fall in oil prices limited returns for the asset class. Commodities as an asset class, not just oil, fell in the fourth quarter. The S&P Goldman Sachs Commodity Index finished the quarter, and year, as the worst performing asset class with a 16.63% and 32.86% loss, respectively.

The NCSIF (Fund) is invested with several managers in a wide variety of asset classes. The Fund closed the quarter with a market value of $687 million. The largest manager for the Fund, UNCMC, managed 89.4% of the Fund’s assets. UNC Investment Fund (UNCIF) produced a 1.9% return for the three months and 5.7% return for the 12 months ended December 31, 2015. The NCSIF employs additional private equity managers, who oversee 3.7% of the portfolio. This portion of the Fund produced a strong three month return of 1.4% and a 12 month return of 12.4% for the period ended December 31, 2015. The Fund’s Liquid Policy Portfolio (LPP), another 6.4% of the portfolio, is managed by Blackrock. This investment returned 3.1% for the three months and -1.1% for the 12 months ended December 2015.

PERFORMANCE

<table>
<thead>
<tr>
<th>Performance</th>
<th>QTD</th>
<th>FYTD</th>
<th>1 Year</th>
<th>3 Year</th>
<th>5 Year</th>
<th>10 Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCSIF</td>
<td>1.9%</td>
<td>-0.2%</td>
<td>5.5%</td>
<td>10.2%</td>
<td>8.7%</td>
<td>4.8%</td>
</tr>
<tr>
<td>Policy Index (1)</td>
<td>1.0%</td>
<td>-1.6%</td>
<td>0.6%</td>
<td>6.9%</td>
<td>7.7%</td>
<td>5.9%</td>
</tr>
<tr>
<td>Global Index (2)</td>
<td>3.4%</td>
<td>-3.1%</td>
<td>-1.3%</td>
<td>5.9%</td>
<td>5.4%</td>
<td>5.0%</td>
</tr>
<tr>
<td>BNY E&amp;F Universe (3)</td>
<td>2.1%</td>
<td>-2.9%</td>
<td>-0.4%</td>
<td>7.0%</td>
<td>6.6%</td>
<td>5.7%</td>
</tr>
<tr>
<td>UNCIF</td>
<td>1.9%</td>
<td>-0.2%</td>
<td>5.7%</td>
<td>10.2%</td>
<td>8.6%</td>
<td>7.4%</td>
</tr>
<tr>
<td>NCSIF Private</td>
<td>1.4%</td>
<td>6.6%</td>
<td>12.4%</td>
<td>15.7%</td>
<td>15.3%</td>
<td>6.4%</td>
</tr>
<tr>
<td>BlackRock LPP</td>
<td>3.1%</td>
<td>-3.2%</td>
<td>-1.1%</td>
<td>7.0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note 1: Policy Index= NCSIF’s Strategic Investment Policy Portfolio Index (SIPP). For the 10 year period, Policy Index = Blended Historical Benchmark.

Note 2: Global Index= 70% ACWI; 30% Barclay’s Aggregate

Note 3: BNY Mellon Endowment & Foundation Universe Median Return—150 portfolios

RISK METRICS

<table>
<thead>
<tr>
<th>3 Year Period</th>
<th>Fund</th>
<th>UNCMC</th>
<th>Policy Index</th>
<th>MSCI ACWI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annualized Return</td>
<td>10.2%</td>
<td>10.2%</td>
<td>6.9%</td>
<td>7.7%</td>
</tr>
<tr>
<td>Annualized Volatility</td>
<td>4.6%</td>
<td>4.7%</td>
<td>4.1%</td>
<td>10.9%</td>
</tr>
<tr>
<td>Annual Sharpe Ratio (1)</td>
<td>2.22</td>
<td>2.17</td>
<td>1.67</td>
<td>0.70</td>
</tr>
<tr>
<td>Correlation to Global Index</td>
<td>87.9%</td>
<td>86.6%</td>
<td>92.8%</td>
<td>99.4%</td>
</tr>
<tr>
<td>Max Drawdown</td>
<td>-3.8%</td>
<td>-4.1%</td>
<td>-3.2%</td>
<td>-11.7%</td>
</tr>
</tbody>
</table>

Note 1: Sharpe Ratio: Excess return per unit of risk

HISTORY OF THE FUND

The NC State Investment Fund, Inc., (Fund) was established in April 1999 to combine NC State University’s and its affiliated entities’ endowments in an external pooled investment vehicle. The goal of the investment program for the Fund is to provide a real total return from assets invested that will preserve the purchasing power of Fund capital, while generating an income stream to support the spending needs of the University. Effective July 2008, the Fund partnered with UNC Management Company (UNCMC) to invest in the UNC Investment Fund (UNCIF), with the remaining investments committed to a Liquid Policy Portfolio (LPP) of Exchange Traded Funds (ETF’s), and to 3 private equity managers which includes an allocation for cash to fund capital calls. The transition of assets to UNCMC was completed December 2009.
INVESTMENT STRATEGY

The Fund is managed as a broadly diversified portfolio with exposure to seven primary asset classes and many sub-strategies within each asset class. The Fund seeks to diversify exposure to the sub-strategies through the use of multiple investment managers that utilize a variety of investment approaches. The purpose of diversification is to provide reasonable assurance that no single security, class of securities, or investment manager has a disproportionate impact on the Fund’s aggregate results. At times, the Fund invests in passive strategies. In working toward the Fund’s investment strategy, through UNCMC, the Fund invests in a number of niche managers that can employ different types of hedging strategies such as short-selling and derivative investing to help reduce the volatility of the Fund. The focus on controlling volatility preserves capital and benefits Fund participants through the power of compounding.

ASSET ALLOCATION

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long Biased Equity</td>
<td>27.9%</td>
</tr>
<tr>
<td>Long/Short Equity</td>
<td>17.3%</td>
</tr>
<tr>
<td>Diversifying</td>
<td>6.3%</td>
</tr>
<tr>
<td>Fixed Income</td>
<td>9.2%</td>
</tr>
<tr>
<td>Cash</td>
<td>6.3%</td>
</tr>
<tr>
<td>Private Equity</td>
<td>6.6%</td>
</tr>
<tr>
<td>Real Estate</td>
<td>22.2%</td>
</tr>
<tr>
<td>Energy &amp; Natural Resources</td>
<td>5.9%</td>
</tr>
</tbody>
</table>

UNC MANAGEMENT COMPANY

The UNCMC was established on January 1, 2003 as an exempt 501 (c)(3) organization. It is a professionally-staffed asset management company created to provide investment services to the University of North Carolina at Chapel Hill and its affiliated entities, to the constituent institutions of the UNC system and system affiliated foundations, associations, trusts, and endowments. With nearly 40 employees, UNCMC has two teams, Investment Management and Operations. The Investment Management team manages all public and private investments of the UNCIF. Their responsibilities include evaluating and monitoring investment managers, recommending changes to investment objectives and asset allocation, monitoring risk, and implementing investment decisions approved by Chapel Hill Investment Fund’s (CHIF) Executive Committee. The Operations Team performs all administrative, legal, compliance, accounting, and performance reporting duties.

This report is based on information available at the time of distribution. The information comprising this report has not been audited and is subject to change.

Second Quarter Fiscal Year 2016
NC State Intermediate Term Fund

As a pooled fund for the collective investment of operating funds, the NC State Intermediate Term Fund (ITF) consists of Participants’ excess cash balances, which are defined as funds not needed for normal operating purposes. Generally, the ITF will not include operating funds needed within the next year, endowed funds or those funds that are specifically excluded by law or contractual agreement.

The decision to invest funds takes into account various factors including duration, credit, concentration, and manager risk, along with total return, suitability, and the experiences, quality and capability of external managers.

The primary investment objectives of the ITF are: 1) Preservation and safety of principal; 2) Liquidity; and 3) Maximization of returns within acceptable levels of risk. Because of concerns about potential changes in monetary policy and rising interest rates, duration is limited. The investment policy calls for an average weighted maturity between one and five years, with an overall credit rating in general of A+/A as rated by a nationally-recognized rating agency. However, for any mutual funds selected by the ITF, their respective approved investment policy guidelines supersede those of the ITF.

The ITF was established on July 3, 2014 with an initial investment of $122 million. Additional investments were made during the year bringing the total invested to $173.83 million. The ITF can be compared with the State Treasurer’s Short-Term Investment Fund (STIF) on both a total return and on an SEC yield basis. The cash return on the ITF is higher than other operating cash for the University and other participants.

In order to provide a buffer for changes in the NAV of the different investments, some of the excess earnings are being used to create a loss reserve. FMV fluctuates on a day-to-day basis.

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