Audit & Compliance Committee

September 2018

September 13, 2018
11:00 a.m. - 12:30 p.m.

Boardroom, McNamara Alumni Center
1. 2018-19 Committee Work Plan
   Docket Item Summary - Page 3
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2. National Audit Trends and Landscape in Higher Education
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3. Overview of Audit Results: Trends and Opportunities
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AGENDA ITEM: 2018-19 Committee Work Plan

☐ Review  ☐ Review + Action  ☐ Action  ☒ Discussion

☐ This is a report required by Board policy.

PRESENTERS: Regent Linda Cohen
Gail Klatt, Chief Auditor

PURPOSE & KEY POINTS

The purpose of this item is to review and discuss the committee’s 2018-19 work plan.

BACKGROUND INFORMATION

Board of Regents Policy: Board Operations and Agenda Guidelines describes the role of the Audit & Compliance Committee as follows:

The Audit & Compliance Committee oversees the University’s system of risk assessment and internal controls, audits, financial reporting practices, and the institutional compliance program. The committee is to assist the Board in discharging its oversight responsibilities related to the audit and compliance functions by:

- promoting the development of an effective, efficient, and continuously improving control environment, in concert with the administration, to achieve the institution’s objectives through an appropriate system of risk assessment and internal control;
- overseeing the University’s integrated framework of internal control, risk management practices, and institutional compliance program to ensure that the administration executes the provisions of Board of Regents Policy: Internal Control;
- serving as an informed voice on the Board by relaying the audit and compliance perspective when related issues are brought before the Board and its standing committees; and
- providing a direct channel of communication to the Board for the chief auditor and the independent public auditor.

Consistent with Board of Regents Policy: Reservation and Delegation of Authority Article I, Section X, the Board reserves to itself authority to adopt policies regulating the audit function; approve selection of external public accountants and the chief auditor; review audit plans; and
evaluate the performance of the independent auditor and, jointly with the president, the performance of the internal audit function.

Specific duties of the Audit & Compliance Committee include the following:

(a) Oversight of the Independent Auditor. The independent auditor reports directly to the Board through the Audit & Compliance Committee. The committee shall recommend for Board approval the engagement and related fees of the independent auditor to perform the annual financial statement and federal compliance audits. The committee shall approve in advance all audit and non-audit services provided by the independent auditor with a value greater than $100,000 or that may impair the audit firm’s independence regarding the University. Such impairment of independence is currently limited to prohibited non-audit services as defined in the United States General Accounting Office Government Auditing Standards. Engagements not requiring approval by the Board shall be reported to the Audit & Compliance Committee at the next scheduled meeting of the committee. The committee shall annually review and evaluate the independent auditor’s performance, independence, and effectiveness of coordination with other assessment activities, including internal audit.

(b) Oversight of the Internal Audit Function. The Audit & Compliance Committee shall recommend for Board approval (1) the appointment or removal of the chief auditor, (2) changes to the Office of Internal Audit’s charter, and (3) any material revisions to internal audit plans or budgets. In consultation with management and the chief auditor, the committee shall review the annual internal audit plan and the extent to which it addresses high risk areas.

(c) Review of Financial Statements. The Audit & Compliance Committee shall review, in advance of final issuance, the proposed formats and wordings of the annual financial report, including the management’s discussion and analysis, financial statements, footnotes, statistics, and disclosures.

(d) Review of Audit Results. The Audit & Compliance Committee shall review the internal and external audit results and discuss significant issues of internal control and compliance with the independent auditor, chief auditor, and management. The committee shall monitor management’s progress in addressing audit recommendations.

(e) Investigation of Reported Concerns Regarding Accounting or Auditing Matters. The Audit & Compliance Committee shall be apprised of investigations conducted under administrative policy.

(f) Requests for Audits. The Audit & Compliance Committee is authorized to request supplemental reviews or other audit procedures by the chief auditor, the independent auditor, or other advisors.

(g) Approval of Engagements of Audit Firms Other Than the University’s Principal External Auditors. The Audit & Compliance Committee shall approve all engagements of external audit firms to perform work or provide services with a value greater than $100,000 or that may impair the audit firm’s independence regarding the University. Such impairment of independence is currently limited to prohibited non-audit services.
as defined in (a) of this section. Engagements not requiring approval by the Board shall be reported to the committee at the next scheduled meeting of the committee.

(h) This committee provides additional oversight of compliance initiatives and enterprise risk management processes, including risk identification and mitigation.

This committee also reviews:

- The annual financial statements, prior to issuance.
- Semi-annual controller reports.
- The independent auditor’s annual audit and management letter.
- The chief auditor’s annual audit plan.
- Responses to questions regarding audit issues, reports on enterprise systems, administrative program reviews, investigations conducted under administrative policy, and other items relevant to the audit function.
- Semi-annual institutional compliance reports.
- The institutional conflict of interest report.
- External auditor engagements not requiring approval by the Board. Any engagements shall be reported to the Audit & Compliance Committee at the next scheduled meeting of the committee.
## Audit & Compliance Committee
### 2018-19 Work Plan

<table>
<thead>
<tr>
<th>Date</th>
<th>Topics</th>
</tr>
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<tbody>
<tr>
<td><strong>2018</strong></td>
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| September 13-14 | • **2018-19 Committee Work Plan**  
The committee will discuss the work plan agenda items for the 2018-19 meetings.  
• **National Audit Trends and Landscape in Higher Education**  
  Deloitte consultants will join the committee for a conversation about national trends in higher education. The item will include benchmarking with peer institutions.  
• **Overview of Audit Results: Trends & Opportunities**  
  The committee will review history and trends in Internal Audit findings. The item will provide the committee with a high-level overview of audit results, complementary to single audit reports and quarterly Internal Audit Updates. |
| October 11-12   | • **Internal Audit Update**\*  
  This item provides an update on Internal Audit activities, results, and observations, including the status of outstanding audit recommendations.  
• **Institutional Risk Profile**  
  After the completion of the University’s risk profile in 2017-18, the committee will revisit the profile to ensure it still accurately reflects and addresses risk.  
• **Update on Employment Eligibility Verification (I-9) Audit Findings**  
  The committee will discuss the findings of the internal audit of Employment Eligibility Verification (I-9). |
| December 13-14  | • **External Auditor Report**\*  
  The purpose of this item is to communicate and discuss the results of the FY 2017 external financial statement and federal award audits.  
• **Compliance Initiatives: Calculating the Cost of Compliance**  
  The Chief Compliance Officer will provide the committee with an overview of a recent report from Vanderbilt University on the cost of compliance.  
• **University Ethics Programming**  
  The committee will discuss the University’s ethics programming.  
• **Information Items:**  
  Institutional Compliance Officer Semi-Annual Report  
  Institutional Conflict of Interest Report\*  
  Semi-Annual Controller's Report\* |
<table>
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<th>2019</th>
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| **February 7-8** | • **External Auditor’s Review of Completed Audit Work and Letter to Management**  
The external auditors will share any recommendations regarding the University’s financial statement/reporting practices as a result of their audit.  
• **Update on the Remediation of Twin Cities Undergraduate Admissions Audit Findings**  
This committee will discuss outstanding audit recommendations related to the audit issued in October 2017.  
• **[Institutional Risk Profile: Mitigation Plans]**  
After the completion of the University’s risk profile in 2017-18, the committee will discuss progress on mitigation plans for the greatest risks facing the University.  
• **Internal Audit Update***  
This item provides an update on Internal Audit activities, results, and observations, including the status of outstanding audit recommendations. |
| **May 9-10** | • **Review of External Auditor Relationship and Services Provided**  
This item will communicate and discuss the scope of work and fees paid for all engagements of external auditors for the last fiscal year, and a review of the University's official external auditor's performance.  
• **External Audit Plan**  
The external audit firm will present its proposed plan for FY 2018 audit engagement including the financial statement audit and the federal uniform audit.  
• **Compliance Initiatives: Compliance Risk Review Process**  
The Chief Compliance Officer will provide an overview of the compliance risk review process, using a recent review as a case study example.  
• **Information Item:**  
Institutional Compliance Officer Semi-Annual Report |
| **June 13-14** | • **Internal Audit Plan**  
The committee will review and discuss the internal audit work plan for FY 2019.  
• **Internal Audit Update***  
This item provides an update on Internal Audit activities, results, and observations, including the status of outstanding audit recommendations.  
• **Information Item:**  
Semi-Annual Controller’s Report* |

*Report required by Board policy.*
AGENDA ITEM: National Audit Trends and Landscape in Higher Education

☐ Review  ☐ Review + Action  ☐ Action  ❌ Discussion

☐ This is a report required by Board policy.

PRESENTERS:  Gail Klatt, Chief Auditor
               Katie Knudtson, Partner, Deloitte & Touche
               Cole Clark, Managing Director, Deloitte & Touche

PURPOSE & KEY POINTS

The purpose of this item is to discuss national audit trends and topics in higher education. Deloitte & Touche will lead a discussion informed by their higher education industry practice. The discussion will cover two topics that are receiving national attention and affect institutions similar in size and scope to the University of Minnesota:

1. Cyber threats in higher education, focusing on intellectual property, sponsored research and a university systems approach to managing risks.
2. Resource planning, management and allocation in higher education.

BACKGROUND INFORMATION

Deloitte is the University of Minnesota’s external auditor of record. In addition to reporting on the results of audit and non-audit engagements performed for the University, the firm periodically joins the Audit & Compliance Committee for topical discussions.
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• Introductions

• Cyber Threat in Higher Education: Intellectual Property, Sponsored Research and a University Systems’ Approach

• Resource Planning, Management, and Allocation In Higher Education

• Closing remarks / Q&A - ALL
Cyber Threat in Higher Education: Intellectual Property, Sponsored Research and a University Systems’ Approach
Stanford University data glitch exposes truth about scholarships

By Nanette Asimow | November 30, 2017 | Updated: November 30, 2017 6:11pm


STANFORD — The fallout from the huge data breach at Stanford University’s Graduate School of Business has cost the chief digital officer his job.


U.S. Discovery of Iranian Cyberattack Doesn’t Seem to Alarm Universities

By Paul Basken | MARCH 25, 2018


By the numbers, the Iranian attack against American research universities sounds startling: a computer hack of more than 140 institutions, 3,700 professors, and $3 billion in data.


How one graduate student allegedly stole Duke research to create a billion-dollar Chinese company


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An Increasingly Typical Year: 2017-2018

2017 Security Breaches: Frequency and Severity on the Rise
Revision/Legal, March 7, 2018/by John DiGiacomo
https://revisionlegal.com/

- Jan. 2017: The Big Asian Leak: 185 billion customers were affected by these hacks. Technically, these hacks took place from October 2015 to the end of 2016. However, the data was first offered for sale on the dark web in January 2017 by the vendor “DoubleFlag.” See report here.

- May 2017: WannaCry Ransomware: While not a data breach, no 2017 cyber-attack list would be complete without listing WannaCry. The ransomware infected computers and servers in 74 countries, millions of users across the world, and, affected hospitals, businesses like Fedex, rail stations, universities, at least one national telco, etc. See report here.

- Sept. 2017: Equifax: 143 million customers of the credit reporting service had their personal and financial information stolen. The hack occurred over several weeks in May and June 2017 and was disclosed in late July. Since the first reports, Equifax has reported an additional 2 million customers were affected by the hack. See here.

- May 2018: Chinese IP theft from a federal government contractor, stealing massive amounts of highly sensitive data related to undersea warfare - including secret plans to develop a supersonic anti-ship missile for use on US submarines by 2020.
Targeting Higher Ed R&D
Cyber Criminals, College Credentials, And The Dark Web


The average cost per compromised record at U.S. education organizations is $245, compared with an average cost of $225 across all U.S. organizations


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CHART 08 RANKINGS OF HEIs WITH HIGHEST R&D EXPENDITURE RATE VS. RANK OF SCHOOLS WITH CREDENTIALS ON THE DARK WEB

<table>
<thead>
<tr>
<th>2015 R&amp;D EXPENDITURE RANKING</th>
<th>2015 R&amp;D EXPENDITURE (DOLLARS)</th>
<th>INSTITUTION</th>
<th>CREDENTIALS ON THE DARK WEB RANK</th>
<th>STOLEN E-MAIL ACCOUNTS (MARCH 2017)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$2,305,679</td>
<td>Johns Hopkins University</td>
<td>93</td>
<td>28,544</td>
</tr>
<tr>
<td>2</td>
<td>$1,369,278</td>
<td>University of Michigan, Ann Arbor</td>
<td>1</td>
<td>122,556</td>
</tr>
<tr>
<td>3</td>
<td>$1,180,563</td>
<td>University of Washington, Seattle</td>
<td>19</td>
<td>71,817</td>
</tr>
<tr>
<td>4</td>
<td>$1,126,620</td>
<td>University of California, San Francisco</td>
<td>7</td>
<td>74,000</td>
</tr>
<tr>
<td>5</td>
<td>$1,101,466</td>
<td>University of California, San Diego</td>
<td>44</td>
<td>46,011</td>
</tr>
<tr>
<td>6</td>
<td>$1,069,077</td>
<td>University of Wisconsin-Madison</td>
<td>21</td>
<td>66,800</td>
</tr>
<tr>
<td>7</td>
<td>$1,036,698</td>
<td>Duke University</td>
<td>38</td>
<td>52,244</td>
</tr>
<tr>
<td>8</td>
<td>$1,022,551</td>
<td>Stanford University</td>
<td>36</td>
<td>52,645</td>
</tr>
<tr>
<td>9</td>
<td>$1,021,227</td>
<td>University of California, Los Angeles</td>
<td>18</td>
<td>72,622</td>
</tr>
<tr>
<td>10</td>
<td>$1,013,753</td>
<td>Harvard University</td>
<td>19</td>
<td>80,100</td>
</tr>
</tbody>
</table>

Sources: Dark Web ID: National Science Foundation, National Center for Science and Engineering Statistics.
*Not on of the top 300 largest HEIs in the United States.
The chief problems for institutions of higher learning is that they
- Gather and store very diverse kinds of data – including everything from medical information to financial and credit card data – on both the student and their parents.
- Have federated and shared governance models, especially in sponsored research areas, that make balancing innate decentralization with coordinated/controlled security management and controls a challenge.

...they are responsible for complying with at least five major privacy-oriented regulations:
- Family Educational Rights and Privacy Act (FERPA),
- Health Insurance Portability and Accountability Act of 1996 (HIPAA),
- Health Information Technology for Economic and Clinical Health Act (HITECH)
- Children’s Online Privacy Protection Act (COPPA),
- Payment Card Industry Data Security Standard (PCIDSS)

...as well as a host of state-by-state regulations regarding data breach notifications.

...experts estimate that, through a single incident, a college or university could be forced to contend with as many as 100 different breach notice laws.
Federal Acquisition Regulation (FAR)
The intended purpose of the rule is to provide basic safeguarding of covered contractor information systems shared by the federal government with a nonfederal entity

https://www.acquisition.gov/browsefar

While DFARS applies to DoD data, the FAR covers a wide variety of items and can include:

- Controlled Technical Information
- Patent
- Export control
- Engineering data
- Engineering drawings
- Agriculture
- Privacy
- Health Information
- Student Records
- Genetic Information
- Recorded audio meetings
- Executable code
- WebEx sessions
- Blueprints
- Meeting Minutes
NIST800-171 standards
Effective December 2017, NIST Special Publication 800-171 was introduced to define security requirements for protecting CUI in non-federal information systems and organizations.

Between 2006 and 2015, agencies reported cyber incidents increasing over 1,300%, from 5,500 annually to more than 77,000.

Top challenges
1. Lack of executive-level attention to cyber
2. Norms that encourage data sharing
3. Decentralized governance coordination

The protection of controlled unclassified information while residing in nonfederal information systems and organizations is of paramount importance to federal agencies and can directly impact the ability of the federal government to successfully carry out its designated missions and business operations.

—NIST Special Publication 800-171

NIST800-171 compliance roadmap

Analyze the impact and scope
Identify data that must be controlled

Assess the current state of security
Find CUI data and conduct gap analysis

Develop a plan to achieve compliance and mitigate gaps
Define roles and Implement gap-fix measures

Establish processes to sustain compliance
Deploy communications and training

Conduct an independent review
Review current practices

What is controlled unclassified information?

- Any data received from the federal government that is not classified
  - Controlled technical information
  - Patent information
  - Research data
  - Engineering data and drawings
  - Agricultural data
  - Privacy
  - Health records
  - Financial information (e.g., student loans)
  - Student records
  - Genetic data
Organizational Change—A bigger challenge than technology

• Every PI is their own CEO, running individual research enterprises
• Must balance innate decentralization with coordinated security
• You must know what is happening to your data
• Balancing Privacy and Protection
Texas A&M as Case Study in Risk Mitigation

- What does it mean to have a Research Security Office (RSO)?
  - A new approach – effectively a “one stop shop” for anything security related – part of Texas A&M System and serves all System entities
  - Most important: Perceived as an important part of the research teams, not just an administrative center for compliance.
  - Responsible for all kinds of research data – not just classified

- Help manage risk
  - Physical
  - Cyber
  - Information
  - Personnel

- Need for continued collaboration
  - Best practices
  - Shared information
  - Community of interest
Resource Planning, Management, and Allocation In Higher Education
Importance and influence of budget models
An effective budget model can drive positive behavior, align institutional strategies, and encourage engagement across all levels of the institution.

<table>
<thead>
<tr>
<th>Accountability</th>
<th>Engagement</th>
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<tbody>
<tr>
<td>• Promotes monitoring and feedback loops</td>
<td>• Enables constructive dialogue on institutional priorities and activities</td>
</tr>
<tr>
<td>• Strengthens policy development and enforcement</td>
<td>• Encourages stakeholder buy-in and collaboration between faculty and staff</td>
</tr>
<tr>
<td>• Aligns financial accountability and responsibility</td>
<td>• Informs stakeholders about financial performance</td>
</tr>
<tr>
<td>• Establishes financial expectations and clarifies roles and responsibilities</td>
<td>• Provides a framework to address criticism and ideas</td>
</tr>
<tr>
<td>with unit leadership</td>
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<table>
<thead>
<tr>
<th>Incentives</th>
<th>Discipline</th>
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<tbody>
<tr>
<td>• Influences behavior to reach desired outcomes</td>
<td>• Provides stability to improve forecasting and results</td>
</tr>
<tr>
<td>• Aligns academic and administrative activities to institutional strategy</td>
<td>• Establishes frameworks through which financial and non-financial decisions can be made</td>
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<tr>
<td>• Encourages entrepreneurship and innovation</td>
<td>• Reinforces the benefits of key financial levers, such as savings, reinvestment, and re</td>
</tr>
<tr>
<td>• Vehicle to meet short-term and long-term goals</td>
<td>• Builds confidence of external stakeholders</td>
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<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Service</th>
</tr>
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<tbody>
<tr>
<td>• Enhances focus on outcomes, rather than process</td>
<td>• Incentivizes efficient administrative support</td>
</tr>
<tr>
<td>• By virtue of the model and supporting frameworks, clearly articulates the strategies of leadership</td>
<td>• Outlines service level expectations within a defined performance management framework</td>
</tr>
<tr>
<td>• Gives leadership a &quot;steering wheel&quot; to guide the institutional resources to where they are needed</td>
<td>• Enables market-based factors to influence internal cost and pricing decisions</td>
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</table>
Budget Model Development Steering Committee

A Steering Committee is generally comprised of institutional leaders that will be convened throughout the development process to provide guidance and feedback.

### Initial Phase

1. Discuss project background, scope, and timeline
2. Outline the group’s roles and responsibilities
3. Describe the strengths and weaknesses of common higher education budget models
4. Solicit preliminary ideas for guiding principles

### Roles and Responsibilities

1. Bring a university-wide perspective
2. Provide strategic guidance on options
3. Be advocates and change agents
4. Develop guiding principles

### Draft Guiding Principles

1. Fair and equitable
2. Encourages partnership and collaboration
3. Incentive-driven
4. Contains clear feedback loops
5. Drives local empowerment
6. Enables data integrity
7. Transparent

These are expected to be refined further.

### Steering Committee (Representative Roles)

<table>
<thead>
<tr>
<th>Title</th>
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<tbody>
<tr>
<td>Academic Affairs Leadership</td>
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<tr>
<td>Campus Senate Leadership</td>
</tr>
<tr>
<td>Deans from several of the schools and colleges (broad representation)</td>
</tr>
<tr>
<td>Provost</td>
</tr>
<tr>
<td>Chief Operating Officer or EVP for Administration and Finance</td>
</tr>
<tr>
<td>CFO</td>
</tr>
<tr>
<td>Controller</td>
</tr>
<tr>
<td>Student Affairs leadership</td>
</tr>
<tr>
<td>Research/Grants/Projects Administration leadership</td>
</tr>
<tr>
<td>Continuing Studies leadership</td>
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</table>
Sample Current state “themes”
While every institution has unique challenges, common themes among public universities include:

**Transactional mindset**
- Historical budgeting and financial precedent has promoted a status quo environment that continues to encourage short-term operational mindsets vs. a long-term strategic planning
- Inadequate data and visibility limits the ability of budget officers to understand the budget model and be actively engaged in the strategic planning process
- Terminology used, like “Soft” and “Hard” funds, promotes a fragmented budgeting philosophy and encourages “gaming”, such as the building of fund balances for “rainy days”
- The uncertainty of year-end reversions back to the state is paralyzing to the institution

**Sub-optimal training and reference resources and varied levels of knowledge related to budgeting**
- Knowledge related to budgeting and financial planning and how to execute those functions on both a strategic and operational level vary across campus
- Budget officers lack the training required to implement budgeting best practices
  - There are no accounting or budgeting manuals that can assist units in interpreting the chart of accounts and how to build a well-structured budget
- Without sufficient knowledge, awareness, and supporting materials, drastically changing a budget model proves challenging

**Few incentives exist to grow, or retract, core programs**
- Incentive structures are designed to encourage the growth of innovative, entrepreneurial, and priority programs but has limited impact on the growth of the core programs of the university
- What results is an environment where growth often requires new support structures, limiting the profitability of each new dollar generated
- Budgets are not directly tied to revenue
- Incentive programs are viewed as entitlements and are not perceived to be equitable
Current state example themes (cont.)

**Authority for setting, and responsibility for spending, budgets are not aligned**
- Assigned budgets are set by central based on historical activities and do not always accurately reflect current market realities
- Meanwhile, responsibility for adhering to budgets resides within the distributed units and there are few consequences for mismanagement and paths exist for units to “game” the system
- Lack of position control capabilities puts the institution at risk and limits transparency into headcount

**Inadequate data governance and reporting capabilities**
- Formal, modern systems to forecast and review financial performance do not exist
- Significant time and resources are invested reconciling financial information due to system limitations and minimal integration between legacy institutional financial systems
- Proliferation of homegrown financial systems makes system updates difficult
- Budget officers cannot access the right data for analytical purposes. Simple questions like, “What did my unit spend on X?” cannot be answered through existing data structures and processes
- Very few budget officers know where to obtain the University’s financials
- The University’s chart of accounts is cumbersome, is state-focused, and has been adapted over time to accommodate the lowest common denominator activities which inhibits analysis

**Limited transparency, flexibility, and alignment**
- Improvements have been noted, but the budget model continues to be too rigid, incomplete, and inflexible with respect to the way it adapts to changes in market dynamics (e.g., enrollment)
- Annual budgets are a reflection of historical precedence rather than current realities
  - This results in misaligned budgets that cause units to find workarounds
  - Most “budgets” are incomplete as they only reflect “hard” money
  - All-funds budgeting is not practiced
- Budget formulas are overly complex and not well documented
Overview of common budget models
Selecting a budget model is important. They drive behavior, influence who has financial control, and, in many ways, can evolve institutional culture.

<table>
<thead>
<tr>
<th>Budget Model</th>
<th>Description</th>
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<tbody>
<tr>
<td>1. Zero-based</td>
<td>Each line item expense must be justified annually and prior year spending is not considered.</td>
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<tr>
<td>2. Incremental</td>
<td>Budget based on previous year’s budget with the addition or subtraction of incremental funding changes. Funding changes are often applied uniformly across all units and schools.</td>
</tr>
<tr>
<td>3. Formula and Incentive Based</td>
<td>Funding is based on performance measures and tied to units of input, such as research volume, or output, such as graduation rates.</td>
</tr>
<tr>
<td>4. Activity-based</td>
<td>Funding is provided to units in accordance with specific activities undertaken and specific metrics met.</td>
</tr>
<tr>
<td>5. Responsibility Centered Management (RCM)</td>
<td>Budgets are developed where revenues are generated and costs are incurred. Schools/units bear the responsibility for managing their budget performance.</td>
</tr>
<tr>
<td>6. Each-tub-on-its-own bottom (ETOB)</td>
<td>Extreme version of RCM. Schools “stand alone” financially and academically with little central support.</td>
</tr>
<tr>
<td>Hybrid (Not on graph)</td>
<td>Elements of various budget models are combined.</td>
</tr>
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</table>
**Common budget models: benefits and challenges**

No budget model is perfect; each comes with its own set of benefits and challenges which should be carefully considered prior to selection.

<table>
<thead>
<tr>
<th>Budget Model</th>
<th>Benefits</th>
<th>Challenges</th>
</tr>
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<tbody>
<tr>
<td>Zero-based</td>
<td>• Budgets track strategic goals&lt;br&gt;• Challenges held assumptions&lt;br&gt;• Requires justification of “need”</td>
<td>• Time consuming to execute&lt;br&gt;• Ignores historical trends&lt;br&gt;• Requires knowledge of drivers</td>
</tr>
<tr>
<td>Incremental</td>
<td>• Easier to implement&lt;br&gt;• Provides consistency to units&lt;br&gt;• Enables multi-year planning</td>
<td>• Budgets become entitlements&lt;br&gt;• Budgets aren’t market driven&lt;br&gt;• Reliance on current budget can obscure poor allocation and weak fiscal management</td>
</tr>
<tr>
<td>Formulaic</td>
<td>• Easy to understand and transparent&lt;br&gt;• Tends to be more objective&lt;br&gt;• Promotes data-driven mindset</td>
<td>• Formulas are hard to perfect, not all activities lend themselves to inputs/outputs&lt;br&gt;• Outputs may be hard to enforce&lt;br&gt;• Easier to “game” the system</td>
</tr>
<tr>
<td>Activity-based</td>
<td>• Budgets and costs linked&lt;br&gt;• Facilitates better margin mgmt.&lt;br&gt;• Enables robust P&amp;L tracking</td>
<td>• Extensive data collection and maintenance required&lt;br&gt;• Perfection is hard to achieve</td>
</tr>
<tr>
<td>Responsibility Centered Management (RCM)</td>
<td>• Aligns revenues with costs&lt;br&gt;• Drives entrepreneurship/innovation&lt;br&gt;• Provides an incentive for strong budget management</td>
<td>• Allocation rules are hard to perfect&lt;br&gt;• Can create a divisive and competitive culture&lt;br&gt;• Unit-level decisions are not always tied to institutional priorities</td>
</tr>
<tr>
<td>Each-tub-on-its-own bottom (ETOB)</td>
<td>• Greater nimbleness for units&lt;br&gt;• Accountability and responsibility aligned to units</td>
<td>• Central has limited “steering power”&lt;br&gt;• Breeds cultural and data siloes&lt;br&gt;• Limited incentives to collaborate&lt;br&gt;• Often creates duplication of support services</td>
</tr>
<tr>
<td>Hybrid Decentralized</td>
<td>• Highly customizable; enables institutions to implement only the features of models that work best for them&lt;br&gt;• More easily adaptable</td>
<td>• Hard to see how the model works&lt;br&gt;• May require significant system support&lt;br&gt;• Can be designed subjectively</td>
</tr>
</tbody>
</table>
Budget models in Higher Education

The majority of the Big 10 have moved to responsibility-center models, but across public higher ed, incremental budgeting is the prevailing approach.

<table>
<thead>
<tr>
<th>Type of Model</th>
<th>Big 10 Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incremental</td>
<td>Michigan State University, Penn State University, University of Illinois, University of Maryland, University of Nebraska, University of Wisconsin</td>
</tr>
<tr>
<td>Responsibility Centered</td>
<td>Indiana University, Northwestern University, Ohio State University, Purdue University, Rutgers University, University of Iowa, University of Michigan, University of Minnesota</td>
</tr>
</tbody>
</table>

Note: Data used to classify institutions derived from publicly available sources.

Source: 1) 2017 NACUBO Business Officers Survey, 2) Institutional Websites
AGENDA ITEM: Overview of Audit Results: Trends and Opportunities

☐ Review  ☐ Review + Action  ☐ Action  ☒ Discussion

☐ This is a report required by Board policy.

PRESENTERS: Gail Klatt, Chief Auditor

PURPOSE & KEY POINTS

The purpose of this item is to review trends in internal audit findings from the last three years. The committee will also discuss specific activities that present opportunities for overall improvement in the University’s control environment.
Overview of Audit Results:
Trends & Opportunities

Board of Regents Audit and Compliance Committee
September 13, 2018
Objectives

- Analyze audit findings for the last three years.
- Identify activities that generate the preponderance of audit findings.
- Determine the systemic nature of categories of audit findings.
Objectives

• Highlight the 10-15 activities that could be improved by systemic control improvements.
Level Setting

• The University is generally well controlled.
Overall Control Evaluation

- Control Environment
- Monitoring
- Information & Communication
- Risk Assessment
- Administration
- HR Processes
- Procurement Process/Spex
- IT Security/Operations
- Sponsored Projects
- Regulatory
- Finance/Cash Rec/ISO/ESC
- Safety of Minors
- Student

Legend:
- Adequate Control
- Significant Control Issue(s)
- Essential Control Issue(s)
# Audit Assessments FY 16-18

<table>
<thead>
<tr>
<th>Academic</th>
<th>Finance</th>
<th>Information Technology</th>
<th>System Campuses</th>
<th>Human Resources</th>
<th>Student</th>
<th>Other</th>
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</thead>
<tbody>
<tr>
<td>CEMS</td>
<td></td>
<td>ETHOS</td>
<td>UMD Housing &amp; Residential Life</td>
<td>FMLA</td>
<td></td>
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<tr>
<td>CCAPS</td>
<td></td>
<td>School of Public Health IT</td>
<td>UMD NRRI</td>
<td>Admissions</td>
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<td>CEHD</td>
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<td>University Information Security</td>
<td>University of Minnesota Morris</td>
<td>GPS Alliance</td>
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<tr>
<td>IMA</td>
<td></td>
<td>Exec, Regent &amp; Eastcliff Expenses</td>
<td></td>
<td>Scholarships and Fellowships</td>
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<tr>
<td>Neurosurgery</td>
<td></td>
<td></td>
<td></td>
<td>Faculty Start Ups</td>
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<tr>
<td>School of Math</td>
<td></td>
<td></td>
<td></td>
<td>NCAA - Volleyball</td>
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<tr>
<td>School of Nursing</td>
<td></td>
<td></td>
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<td>Public Safety</td>
<td></td>
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<td>Humphrey School of Public Affairs</td>
<td></td>
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<td>Athletics Exec &amp; Senior Staff Rev</td>
<td></td>
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<tr>
<td>Radiology and CMRR</td>
<td></td>
<td></td>
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<td>Bookstores</td>
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<table>
<thead>
<tr>
<th>Fiscal Year 2017</th>
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<tbody>
<tr>
<td>School of Dentistry</td>
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<tr>
<td>Epidemiology</td>
</tr>
<tr>
<td>Surgery</td>
</tr>
<tr>
<td>College of Biological Sciences</td>
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<tr>
<td>CFANS Financial Cluster</td>
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<tr>
<td>Earth Science</td>
</tr>
<tr>
<td>MN Geological Survey</td>
</tr>
<tr>
<td>CLA</td>
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</table>

<table>
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<tr>
<th>Fiscal Year 2016</th>
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<tbody>
<tr>
<td>CSE Deans Office</td>
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<tr>
<td>CFANS Deans Office</td>
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<tr>
<td>College of Pharmacy</td>
</tr>
<tr>
<td>College of Design</td>
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<tr>
<td>Law School</td>
</tr>
<tr>
<td>Department of Medicine</td>
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<tr>
<td>Cancer Center</td>
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<tr>
<td>ECE</td>
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<thead>
<tr>
<th>Good</th>
<th>Adequate</th>
<th>Needs Improvement</th>
</tr>
</thead>
</table>

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*University of Minnesota*

*Driven to Discover*
Audit Coverage (FY16-18)
Unit Audits

Colleges Limited Scope
- Medical – Neurosurgery
- Medical – Medicine
- Medical – Radiology
- Medical – Surgery
- CSE – Math
- CSE – Earth Sciences
- CSE – Electrical & Computer Engineer
- CSE – Dean’s Office
- SPH – IT
- SPH – Epidemiology
- CFANS – Dean’s Office
- CFANS – Financial Cluster

Colleges Full Scope
- CEHD
- Nursing
- CCAPS
- Humphrey
- Dentistry
- CBS
- CLA
- Pharmacy
- Design
- Law

System Campus
- Morris
- UMD – CEHSP
- UMD – SCSE
- UMD – Residential Life
- UMD – Athletics
- UMD - NRRI
Audit Coverage (FY16-18) Unit Audits

Athletics
- Administration
- Finance & Operations
- IT
- Volleyball
- Basketball M & W
- Leadership Expenses

Other Health Care
- Boynton
- CUHCC
- Masonic Cancer Center
- Clinical
- Translational Science Institute

Other Academic
- Global Programs
- McNamara Advising Center
Audit Coverage (FY16-18)
Process Audits

Operations
- Accounts Receivable Services
- Vendor Payments
- PCI
- PCard
- Use of Federal and State Contracts
- Consulting Contracts
- OHR Operations
- FMLA
- PeopleSoft IT Management
- Executive and Regent Expenses

Academic
- Admissions International Admissions Scholarships
- UMD Grad Waivers
- Campus Solutions
- Faculty Start-Up Funding

Compliance
- Export Controls
- Ethos
- Sponsored Financial Reporting
- Sponsored Project
- Sub awards
- Human Research
- Participant Protections

Audit Coverage (FY16-18)
Process Audits

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Compliance
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- Sub awards
- Human Research
- Participant Protections
Level Setting

• The University is generally well controlled.
Level Setting

• The University is generally well controlled.
• There are pockets of activities which could benefit from control improvements.
Level Setting

- Process audit findings generally have greater impact than unit audit findings.
- The same audit finding across multiple unit audits indicates a potential systemic issue.
Level Setting

• Decentralized activities are more difficult to consistently control.
• System controls/edits can be very effective for controlling decentralized activities.
• Decentralized activities benefit from robust centralized monitoring.
Top Opportunities

Human Resources

- Payroll Actions/Processing Errors
- Background Checks
- Vacation & Approval Monitoring

IT

- User Access
- Authentication
- Logging & Monitoring
- Vendor Management
Compliance

• Reporting misconduct
• Safety of Minors
• Registry of International Travel
• Controlled Substances

Financial

• Contracting

Student

• Scholarships
Questions?