TABLE OF CONTENTS
FOR
AUDIT, COMPLIANCE, AND RISK MANAGEMENT
COMMITTEE

Committee Meeting: 4/30/2018

Board Meeting: 5/1/2018
Houston, Texas

David J. Beck, Chairman
Ernest Aliseda
Kevin P. Eltife
R. Steven Hicks
Janiece Longoria
Rad Weaver

1. **U. T. System Board of Regents: Discussion and appropriate action regarding Consent Agenda items, if any, assigned for Committee consideration**

RECOMMENDATION

No Consent Agenda items assigned for review by this Committee.

2.   U. T. System: Report on U. T. Systemwide Intrusion Detection System

<u>REPORT</u>

The U. T. Systemwide Intrusion Detection System (IDS) has been in place since 2009 (funded by U. T. System and managed by U. T. Austin). The service has reliably served U. T. institutions in detecting and reporting system compromises, high-risk vulnerabilities, and data exfiltration events.

Chief Information Security Officer Mohrmann and Mr. Cam Beasley, Chief Information Security Officer at U. T. Austin, will highlight the attack surface observed by this service, note gaps in visibility, and elaborate on threats to U. T. System intellectual property and confidential data from dedicated attackers and nation-state actors. A PowerPoint presentation is set forth on the following pages.

U. T. System Network Protection

Mr. Cam Beasley, Chief Information Security Officer, U. T. Austin
Ms. Helen Mohrmann, Chief Information Security Officer, U. T. System

U. T. System Board of Regents' Meeting
Audit, Compliance, and Risk Management Committee
April/May 2018

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Modern Information Security Architectures

- Assume you are compromised
- Use layered, defense-in-depth strategies
- Strengthen detection and remediation capabilities

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The Intrusion Detection System (IDS) Scans Internet Traffic
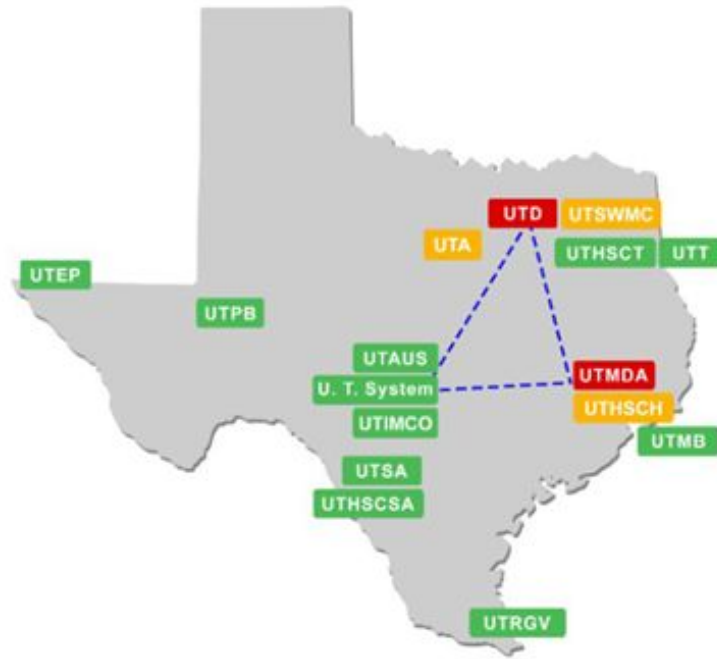
Cyber Criminals Continually Perform Reconnaissance

15M external attacks occur daily, most of which originate from China and Russia

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Events Detected by the IDS

- Malware signals from infected machines
- Unencrypted transfers of confidential data
- Vulnerabilities

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Volume of Events Per Year

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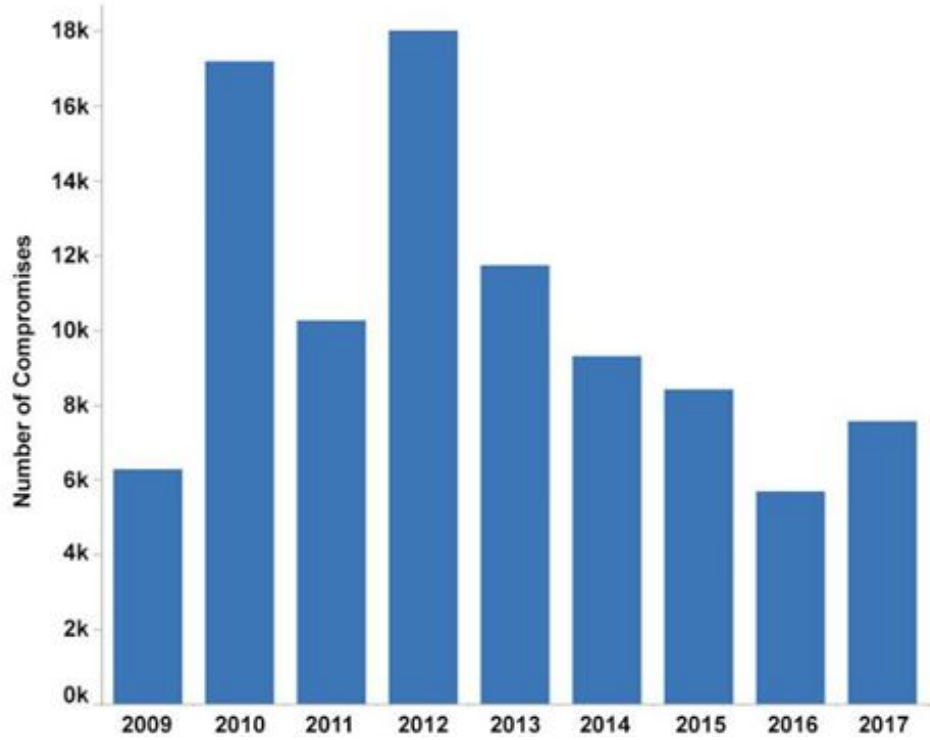
Major Malicious Code Variants Detected
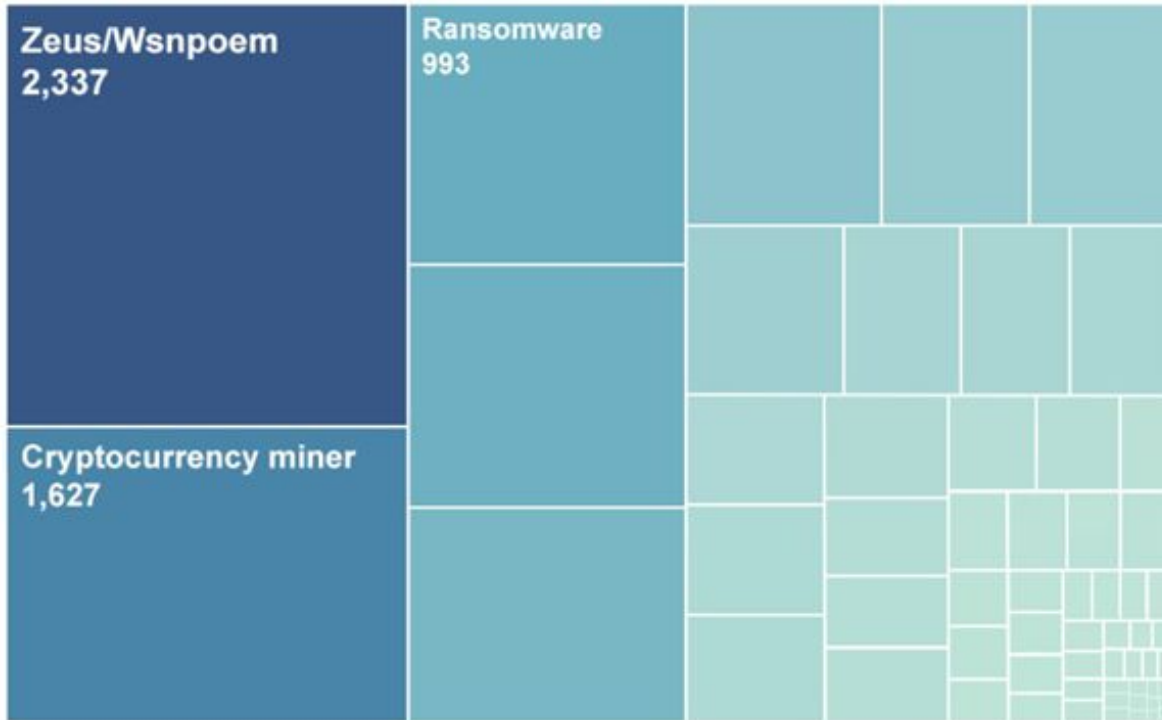
- Since 2016, over 60 malicious code variants have been detected in the UT System environment.

- In total, these malware have compromised over 13,000 information systems.

- The top three are:
    - **Zeus/Wsnpoem**
      2,337 compromises
    - **Cryptocurrency miner**
      1,627 compromises
    - **Ransomware**
      993 compromises

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Institutions Receive Real-time Alerts

THE FOLLOWING ALERT IS THE PRODUCT OF A DISTRIBUTED IDS SERVICE SPONSORED BY U. T. SYSTEM.

==

The Information Security Office at the University of Texas at Austin has found the following machine to be infected with an unknown variant of an IRCbot, HTTPBot, or worm and is currently being remotely controlled:

HOST:
PORT:
DATE: 2018-03-26 14:33:32 CDT/CST

REMOTE HOST: 91.243.81.13 [vadimsha12i5.example.com]
REMOTE PORT: 443 (TCP)

This system is infected with a variant of Zeus/Wsnpoem

LIKELY ATTACK VECTOR: Falling victim to a recent phishing e-mail.

ADDITIONAL DETAILS: http://www.threatexpert.com/report.aspx?md=1489

We strongly recommend reformatting your hard drive and reinstalling the operating system as the only method to completely ensure that the malicious code is removed from this system.

3. **U. T. System: Discussion and appropriate action regarding request for additional funding of $7,000,000 from Available University Funds (AUF) to refresh and enhance data loss and intrusion detection capabilities in U. T. System networks, and finding that expenditure of AUF for this purpose is appropriate**

RECOMMENDATION

The Chancellor concurs in the recommendation of the Deputy Chancellor and the Chief Compliance and Risk Officer that the U. T. System Board of Regents approve additional funding in the amount of $7,000,000 from Available University Funds (AUF) to upgrade the capacity of the intrusion detection system for the wide area network and add new data loss detection capabilities to institution networks.

In addition, the Board is asked to find that expenditure of AUF for this purpose is appropriate under the U. T. System's responsibilities to oversee and coordinate the activities and operations of the U. T. institutions, with the intent that the expenditure will benefit a broad number of U. T. institutions, including all academic and health institutions.

BACKGROUND INFORMATION

Information security is a significant high risk compliance area within the U. T. System. As discussed under Item 2 on Page 40, the Systemwide Intrusion Detection System (IDS) has reliably served U. T. institutions in detecting and reporting system compromises, high-risk vulnerabilities, and data exfiltration events. The requested $7,000,000 will be used to upgrade existing IDS information security capabilities provided by U. T. System and managed by U. T. Austin and to add additional enhancements to institutional security operations as needed.

4. **U. T. System: Report on the Risk Finance and Risk Control Programs administered by the Office of Risk Management**

REPORT

Chief Compliance and Risk Officer Dendy will report on the property and casualty Risk Finance and Risk Control Programs administered or coordinated by the Office of Risk Management (ORM), including property conservation, environmental health and safety, and emergency management. A PowerPoint presentation is set forth on the following pages.

BACKGROUND INFORMATION

The mission of ORM is to provide high quality risk management services, resources, and leadership that create value and support U. T. System's mission of excellence in education, research, health care, and public service. The framework of the U. T. System risk management program consists of assessment, control, finance, communication, and monitoring. The program is governed by executive leadership and direction from the Risk Management Executive Committee.

This report will provide a summary of the following self-insured and commercial insurance programs:

- Comprehensive Property Protection Plan

- Rolling Owner Controlled Insurance Program

- Cyber Liability Plan

- Directors and Officers Liability Plan

- Workers' Compensation Insurance

- Unemployment Compensation Insurance

- International Risk Management

The report will also provide an overview of the Risk Control Programs, including Environmental Health and Safety, Emergency Management, and Property Conservation.

Office of Risk Management
Risk Finance and Risk Control Programs

Mr. Phillip Dendy, Chief Compliance and Risk Officer

U. T. System Board of Regents' Meeting
Audit, Compliance, and Risk Management Committee
April/May 2018

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Operational Exposures (FY 2017)

- Employee headcount - 121,647

- Enrollment - 228,343

- Outpatient visits - 7.3 million

- Hospital stays - 1.5 million

- Total Insured Values - $36.2 billion

- Gross square feet - 106 million

- Construction values in progress - $2 billion

- Faculty/staff/student international trips - 17,000

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Risk Finance Programs

- Administration of Risk Financing Programs
    - Automobile, Property, and Liability (APL)
    - Comprehensive Property Protection Plan (CPPP)
    - Rolling Owner Controlled Insurance Program (ROCIP)
    - Builder's Risk (BR)
    - Director's and Officer's/Employment Practices Liability (D&O/EPL)
    - Cyber Liability Program (CLP)
    - Unemployment Compensation Insurance (UCI)
    - Workers' Compensation Insurance (WCI)

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CPPP: How It Works

- Fire and All Other Perils (AOP)
  - $1.3 billion limit
  - $5 million deductible

- Named Windstorm
  - $250 million limit
  - $50 million or 5% deductible
  - Texas Windstorm Insurance Association (TWIA) and National Flood Insurance Program (NFIP) losses erode CPPP deductible

2017 – 2018 CPPP Master Program

$1.3B	**FIRE + AOP EXCLUDING NAMED WINDSTORM**
$250M	**FIRE + AOP INCLUDING NAMED WINDSTORM**
$50M	**NAMED WINDSTORM DEDUCTIBLE**
$5M	**FIRE + AOP DEDUCTIBLE**
$250K	**INSTITUTIONAL DEDUCTIBLE**

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4
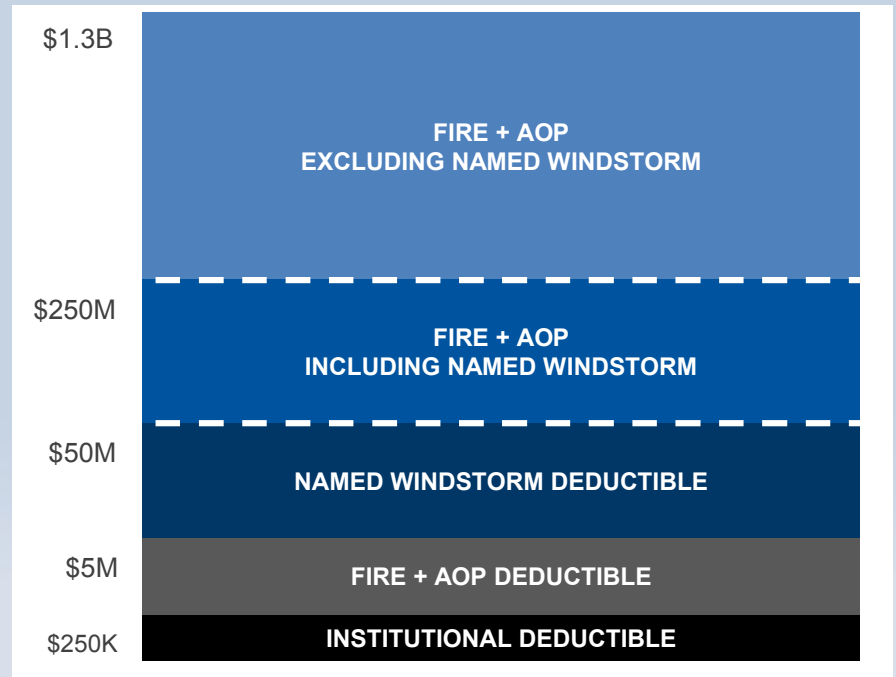
Named Windstorm & Resulting Flood Limits

Legend: ■ Underlying NFIP and TWIA and Individual Policies ■ CPPP Limits

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5
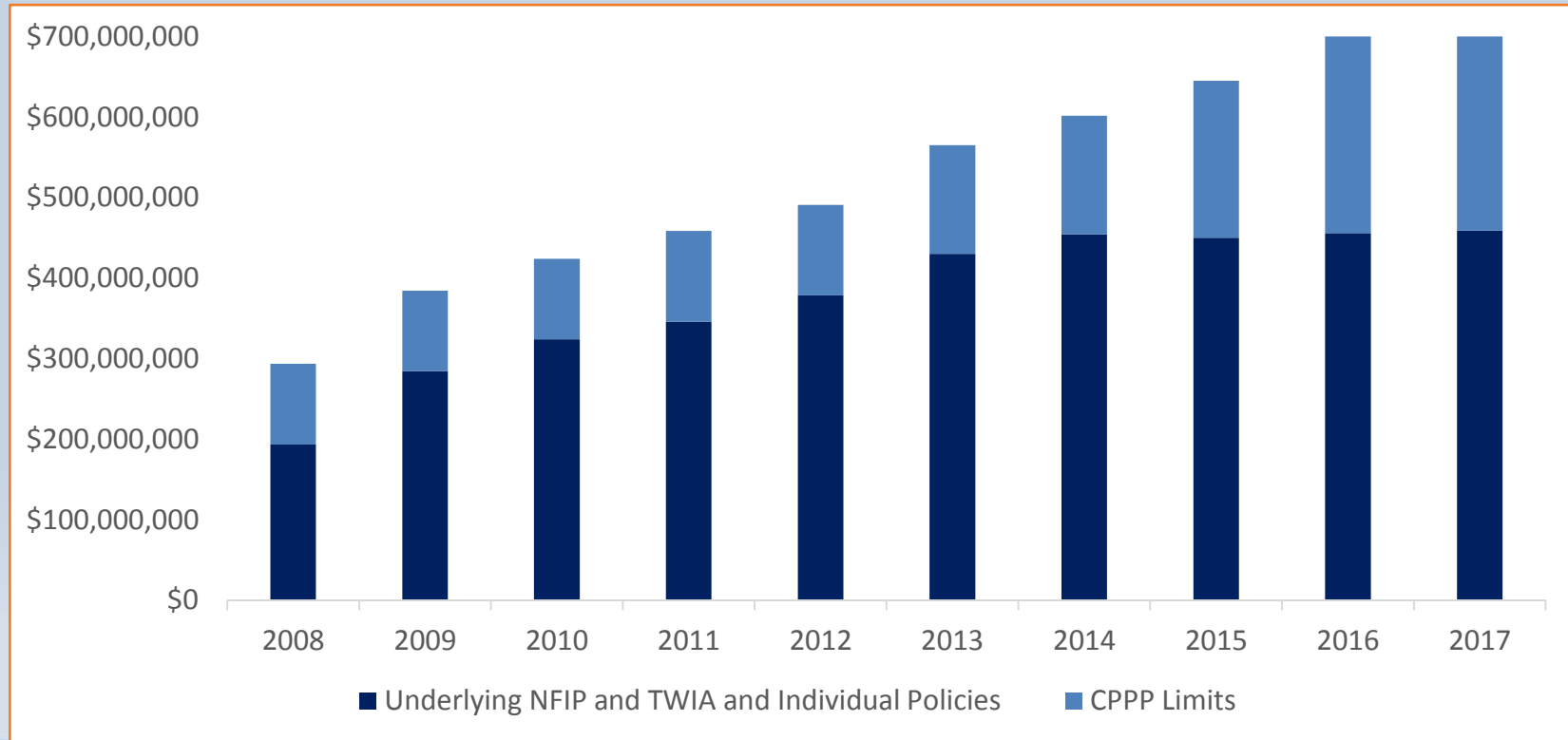
CPPP: Significant Claims in FY 2017

- January 2017

  - U. T. Medical Branch - Galveston Fire ~ $16 million

- June 2017

  - U. T. Permian Basin Hail ~ $5 million

- August 2017

  - Hurricane Harvey

  - Multiple Institutions ~ $100 million

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ROCIP and BR

- ROCIP provides Workers' Compensation, General Liability, and Excess Liability insurance coverage for designated U. T. System construction projects.

- Builder's Risk provides a type of property insurance for physical loss to U. T. System buildings while they are under construction.

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ROCIP and BR (cont.)

Construction values in recent phases

- ROCIP IV: 2004 - 2011, $2.1 billion
- ROCIP V: 2008 - 2016, $4.2 billion
- ROCIP VI: 2013 - 2019, $3.1 billion
- ROCIP VII 2018 - 2024, Est $3 billion
- BR I: 2013 - 2016, $2.1 billion
- BR II: 2016 - 2019, $1 billion+

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ROCIP V – Financial Performance

Construction Value	$4,227,314,252
Contractor's Ins. Cost*	$100,610,079
Contributions to ROCIP Fund**	$82,432,628
Total ROCIP Cost***	$43,459,018
Cost Avoided by Project	$18,177,451
Gain to the ROCIP Fund	$38,973,610
Total Program Savings	$57,151,062

*Used CCIP market rate of 2.38% of construction value
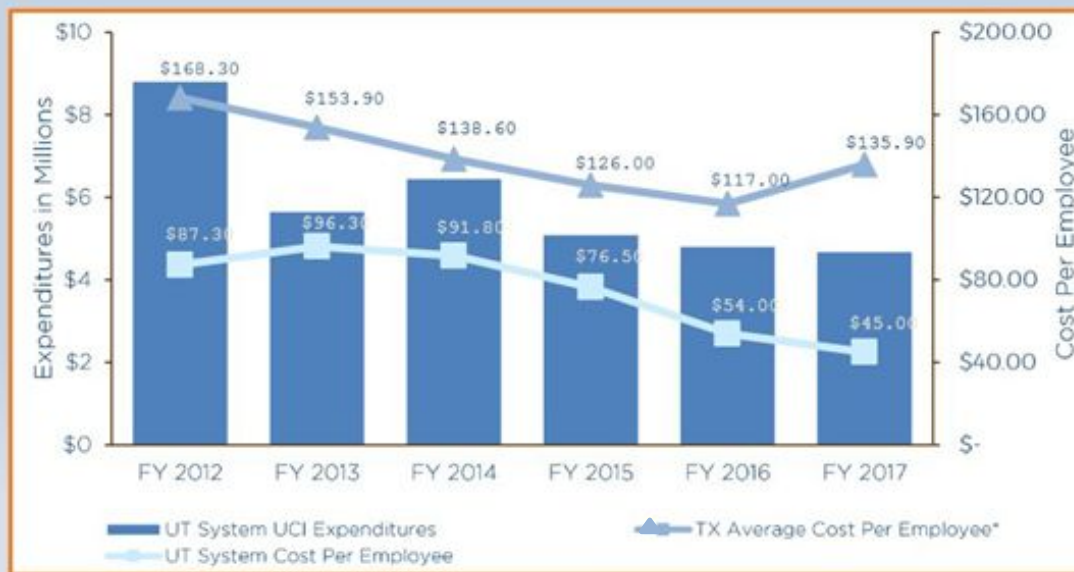
**Contribution Rate - $1.95

***Includes Incurred But Not Reported (IBNR) of $1.6 million and credit for interest earned

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Workers' Compensation Insurance

WCI is a self-insurance plan that provides medical coverage and income benefits to U. T. System employees injured on the job.

- Average cost per employee $74
- Program includes third-party administrator and certified WCI health care network
- Collaboration with loss control
- Favorable rate comparison to peers

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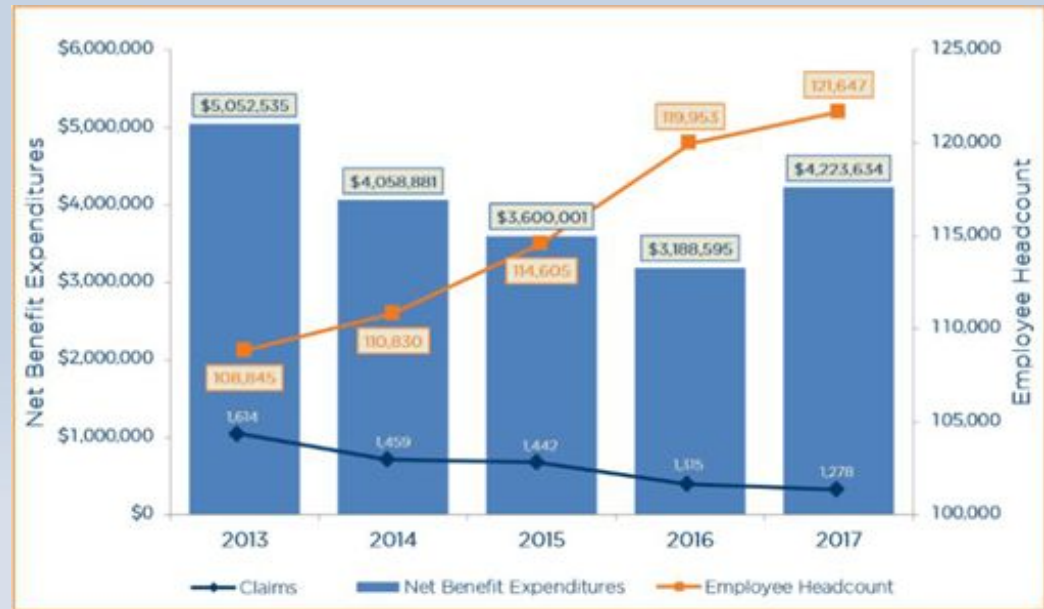
Cost of Risk

Cost of risk is a method of representing the financial performance of risk management programs.

- Includes fixed costs such as commercial and self-insurance premiums
- The cost of risk in FY 2017 was approximately $34 million, an 8% decrease from 2013

UT System Exposure Metrics FY 2013-2017
Percent increase (decrease) over baseline year 2013
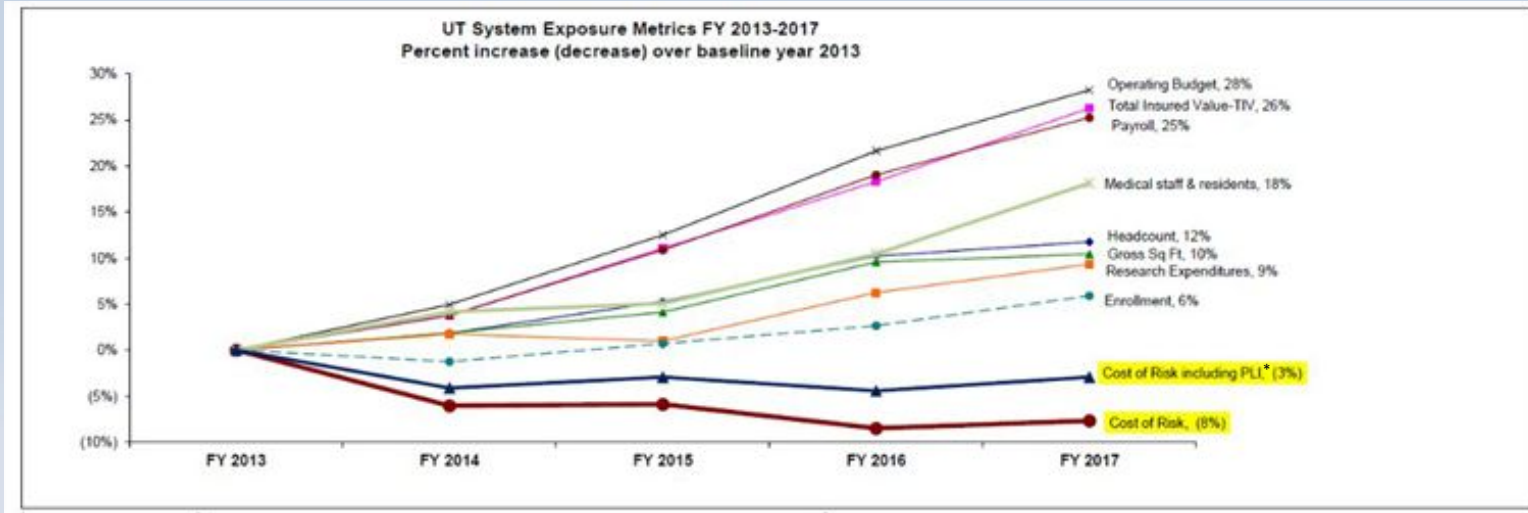
* Professional Liability Insurance

5. **U. T. System: Discussion and appropriate action regarding transfer of $24,000,000 to rebate to institutions surplus premium contributions paid in Phase V of the Rolling Owner Controlled Insurance Program (ROCIP)**

RECOMMENDATION

The Chancellor concurs in the recommendation of the Chief Compliance and Risk Officer and the Risk Management Executive Committee chaired by the Executive Vice Chancellor for Business Affairs and comprised of the Deputy Chancellor, the Executive Vice Chancellor for Health Affairs, the Executive Vice Chancellor for Academic Affairs, and the Vice Chancellor and General Counsel to rebate to the U. T. institutions the surplus premium contributions paid in Phase V of the U. T. System Rolling Owner Controlled Insurance Program (ROCIP) as set forth below.

Institution	Rebate Amount
U. T. Arlington	$ 1,286,643
U. T. Austin	5,377,053
U. T. Dallas	1,535,445
U. T. El Paso	808,691
U. T. Permian Basin	664,975
U. T. Rio Grande Valley	322,825
U. T. San Antonio	761,935
U. T. Tyler	97,167
U. T. Southwestern Medical Center	3,058,042
U. T. Medical Branch - Galveston	4,166,775
U. T. Health Science Center - Houston	894,432
U. T. Health Science Center - San Antonio	879,536
U. T. M. D. Anderson Cancer Center	3,948,976
U. T. Health Science Center - Tyler	197,505
Total	$24,000,000

BACKGROUND INFORMATION

The ROCIP provides workers' compensation, general liability, and excess liability coverage for contractors working on designated U. T. System construction projects, under one master program. The program not only ensures better, more consistent coverage, but also creates economies of scale by purchasing insurance in bulk rather than in the bids of individual contractors.

The surplus amount was actuarially determined and reflects better than expected claim experience. The allocation to each institution was agreed to by a task force of institutional representatives and considers premiums paid into the fund as well as the individual institution's losses in the phase.

6.   U. T. System: Report on the State Auditor's Office Statewide Single Audit for Fiscal Year 2017

REPORT

Chief Audit Executive Peppers will report on the State Auditor's Office State of Texas Federal and Financial Portions of the Statewide Single Audit for Fiscal Year 2017. A summary is set forth on the following pages.

BACKGROUND INFORMATION

The Texas State Auditor's Office performs the Statewide Single Audit annually in accordance with the Title 2, U.S. Code of Federal Regulations, Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). The Statewide Single Audit includes a federal portion, which is an audit of compliance and controls over the State's federal awards, and a financial portion, which includes an audit of the basic financial statements for the State of Texas. These reports are submitted to the federal government to fulfill Single Audit reporting requirements.

The University of Texas System
State Auditor's Office FY 2017 Statewide Single Audit
Summary of Results

State of Texas Compliance with Federal Requirements for Federal Programs
As a condition of receiving federal funding, the Title 2, U.S. Code of Federal Regulations, Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance) requires non-federal entities that expend at least $750,000 in federal awards in a fiscal year to obtain annual Single Audits. To supplement the audit procedures performed by KPMG for the annual Single Audit of federal expenditures for the State of Texas for Fiscal Year (FY) 2017, the State Auditor's Office (SAO) audited student financial aid at U. T. Arlington, U. T. Austin, U. T. El Paso, U. T. Rio Grande Valley, U. T. San Antonio, U. T. Health Science Center at Houston, and U. T. Health Science Center at San Antonio. The SAO performs this audit every year, and institutions are chosen on a rotational basis with the size of their programs factored into the selection process. Procedures included assessing compliance with regulatory requirements and internal controls over federal funds. The SAO classifies findings identified in the samples as a significant deficiency/non-compliance or material weakness/non-compliance, the latter of which indicates a more serious reportable issue.

Compliance with Federal Requirements for the Student Financial Assistance Cluster of Federal Programs for the Fiscal Year Ended August 31, 2017[1] (February 28, 2018)
The Student Financial Assistance (SFA) Cluster audits test compliance with federal requirements in up to 12 areas, such as eligibility, cash management, and reporting. Overall, the State of Texas complied in all material respects with the federal requirements for the SFA Cluster of federal programs in FY 2017. The audit resulted in a total of 25 findings/recommendations at seven U. T. System institutions for a total questioned cost of $0, as outlined below (including institutions with questioned costs that are unknown).

- U. T. Arlington (5 findings with questioned cost: $0/Unknown)
- U. T. Austin (2 findings with questioned cost: $0)
- U. T. El Paso (5 findings questioned cost: $0/Unknown)
- U. T. Rio Grande Valley (5 findings with questioned cost: $0/Unknown)
- U. T. San Antonio (1 finding with questioned cost: $0)
- U. T. Health Science Center at Houston (5 findings with questioned cost: $0/Unknown)
- U. T. Health Science Center at San Antonio (2 findings with questioned cost: $0)

All twenty-five of the findings were primarily categorized as significant deficiencies/non-compliance and institutional management has taken action to correct errors, as needed, and responded appropriately to the recommendations with several institutions having taken steps towards implementation. There were no material weaknesses.

In addition, corrective actions were taken for several findings from the SAO's previous SFA Cluster audits, and management provided updated corrective action plans for the remaining open recommendations. Some of the open recommendations were reissued as new findings in the FY 2017 audit report.

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[1] http://www.sao.texas.gov/reports/main/18-019.pdf

The University of Texas System
State Auditor's Office FY 2017 Statewide Single Audit
Summary of Results

Compliance with Federal Requirements for the Research and Development Cluster of Federal Programs for the Fiscal Year Ended August 31, 2018
The SAO did not audit the Research and Development (R&D) Clusters for the federal portion of the statewide Single Audit for FY 2017, but it did perform work to follow up on unresolved R&D Cluster findings issued in prior year audits. Corrective actions were taken for several findings from the SAO's previous R&D Cluster audits, and management provided updated corrective action plans for the recommendations that remained open.

Compliance with Federal Requirements for Selected Major Programs for the Fiscal Year Ended August 31, 2017[2] (February 28, 2018)
U. T. Medical Branch - Galveston (UTMB) received funds from the Disaster Grants – Public Assistance (Presidentially Declared Disasters) Program. In FY 2016, UTMB had one finding (significant deficiency, questioned cost: $0) related to various general IT controls. This finding was partially implemented and was reissued in the FY 2017 audit with greater emphasis placed on segregation of duties.

State of Texas Financial Portion of the Statewide Single Audit
Report for the Year Ended August 31, 2017[3] (February 28, 2018)
The SAO did not conduct audit procedures on the U. T. System institutions' financial statements as part of the audit of the State of Texas *Comprehensive Annual Financial Report* for the Fiscal Year Ended August 31, 2017, as they relied on the external audit of the U. T. System FY 2017 financial statements, which was performed by Deloitte. However, as part of the State of Texas financial portion of the statewide Single Audit report, the SAO made recommendations related to strengthening processes to ensure the completeness, accuracy, and review of the FY 2017 Schedules of Expenditures of Federal Awards (SEFAs) to U. T. Arlington, U. T. El Paso, and U. T. San Antonio.

Additionally, while corrective actions were taken for several findings from the SAO's previous financial portion of the Statewide Single Audit, some of the open recommendations were reissued as new findings in the FY 2017 audit report related to the SEFAs.

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[2] http://www.sao.texas.gov/reports/main/18-314.pdf
[3] http://www.sao.texas.gov/reports/main/18-555.pdf

Prepared by: System Audit Office
Date: March 2018

7.   **U. T. System: Report on the Systemwide internal audit activities and audit administrative items, including Priority Findings, Annual Audit Plan status, and Chief Audit Executive Annual Statements; and consideration and approval of Institutional Audit Committee chair changes**

REPORT/RECOMMENDATION

Chief Audit Executive Peppers will report on

a.   the status of Systemwide Priority Findings (see the PowerPoint on the following pages);

b.   the Fiscal Year 2018 Annual Audit Plan status as of February 28, 2018 [provided to the Audit, Compliance, and Risk Management Committee (ACRMC) members prior to the meeting]; and

c.   the Chief Audit Executive Annual Statements.

Mr. Peppers, on behalf of U. T. System Administration and the Presidents at U. T. Dallas, U. T. Tyler, and U. T. Southwestern Medical Center, recommends formal approval by the ACRMC of the appointment of the following individuals to serve as Chairs of the Institutional Audit Committees:

•   Ms. Lisa Choate, Co-Founder and Partner at Ultimate Health Matters, at U. T. Dallas (reappointment);

•   Mr. Wayne Barton, Partner at Squyers, Johnson, Squyers & Co, LLP, at U. T. Tyler;

•   Mr. Robert Estrada, Chairman of Estrada Hinojosa & Co., Inc., at U. T. Southwestern Medical Center (reappointment); and

•   Mr. Ken Sample, Credit Risk Director at JPMorgan Chase Bank, at U. T. System Administration.

Details on the qualifications of the new candidates were provided to the ACRMC members prior to the meeting.

BACKGROUND INFORMATION

A Priority Finding is defined as "an issue identified by an audit that, if not addressed timely, could directly impact achievement of a strategic or important operational objective of a U. T. System institution or the U. T. System as a whole." A Priority Findings Matrix is used by the chief audit executives to aid in the determination of a Priority Finding. The matrix provides three categories of standard factors to consider, each alone with the potential to result in a Priority Finding. They are: Qualitative Risk Factors (evaluates the probability and consequences across seven high risks), Operational Control Risk Factors (evaluates operational vulnerability to risks by considering the existence of management oversight and effective alignment of operations), and Quantitative Risk Factors (evaluates the level of financial exposure or lost revenue).

The Chief Audit Executive Annual Statement process is a way to routinely and consistently obtain assurance that the chief audit executives are receiving adequate support to conduct the necessary audit services and that there are institutional internal audit departmental processes for certifying compliance with the Institute of Internal Auditors' International Professional Practices Framework and internal auditor independence and objectivity. Each of the chief audit executives responded positively to the statement, noting no exceptions or requests to attend an ACRMC executive session meeting.

At the May 14, 2014 Committee meeting, the ACRMC reviewed and approved nominations from all the institutional presidents for external member chairs of their institutional audit committees. Any subsequent changes in the external member chairs are presented to the ACRMC annually for review and approval. Delegated approval was provided by the ACRMC Chairman and the Chancellor for those candidates who began terms between May ACRMC meetings.

U. T. Systemwide Priority Findings

Mr. J. Michael Peppers, U. T. System Chief Audit Executive

U. T. System Board of Regents' Meeting

Audit, Compliance, and Risk Management Committee

April/May 2018

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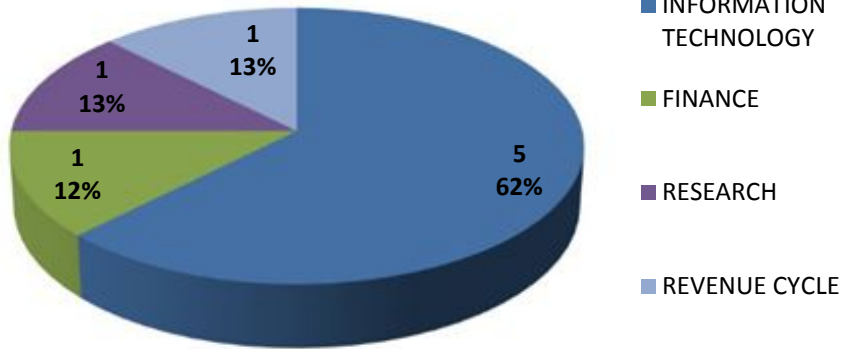
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Priority Findings Status – Changes Since Last Report

	Feb 2018	Implemented	New	May 2018	Past Due
U. T. Arlington	1	(1)	0	0	-
U. T. Austin	3	(2)	0	1	-
U. T. Permian Basin	1	0	0	1	1
U. T. Rio Grande Valley	1	(1)	0	0	-
U. T. San Antonio	2	(2)	0	0	-
U. T. Health Science Center at San Antonio	1	0	0	1	-
U. T. M. D. Anderson Cancer Center	7	(2)	0	5	-
Totals	**16**	**(8)**	**0**	**8**	**1**

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