The Regents of the University of California

COMPLIANCE AND AUDIT COMMITTEE
March 15, 2017

The Compliance and Audit Committee met on the above date at UCSF–Mission Bay Conference Center, San Francisco.

Members Present: Regents Brody, Makarechian, Pérez, Sherman, and Zettel; Advisory member Chalfant; Chancellor Gillman; Staff Advisor Valdry

In attendance: Regent Blum, Assistant Secretary Lyall, General Counsel Robinson, Interim Chief Compliance and Audit Officer Lohse, Executive Vice President and Chief Operating Officer Nava, Vice Presidents Andriola, Duckett, and Holmes-Sullivan, and Recording Secretary Johns

The meeting convened at 1:30 p.m. with Committee Chair Zettel presiding.

1. **APPROVAL OF MINUTES OF PREVIOUS MEETING**

Upon motion duly made and seconded, the minutes of the meeting of January 25, 2017 were approved.

2. **RESOLUTION TO REAFFIRM THE UNIVERSITY OF CALIFORNIA ETHICS AND COMPLIANCE PROGRAM**

The Chair of the Compliance and Audit Committee recommended that the Committee recommend to the Regents that the following resolution be approved:

WHEREAS, the Regents of the University of California made the decision in May 2006 to establish a university-wide program of corporate compliance and established the new position of Senior Vice President – Chief Compliance and Audit Officer, an officer of the corporation, by amending the Bylaws and Standing Orders accordingly; and

WHEREAS, President Napolitano strongly endorses and recommends that the University of California have a robust ethics and compliance program; and

WHEREAS, the structure for an effective Ethics and Compliance Program for the University has been established and implemented; and

WHEREAS, voluntary adoption of such a program is considered a best business practice that will serve to enhance the public trust and meet the expectations of the Regents and external stakeholders by demonstrating the Regents' commitment to good stewardship of federal, state and private resources; and

WHEREAS, the ethics and compliance program, in partnership with the campuses, has implemented an effective Ethics and Compliance Program that includes but is not limited to the following requisite elements:

A. Written standards of conduct as well as appropriate policies and procedures;

B. Program oversight is guided by the Regents Committee on Compliance and Audit and the Senior Vice President – Chief Compliance and Audit with the primary management responsibility for the campus ethics and compliance activities assumed by the Chancellors and delegated to the Campus or Medical Compliance Officer, as appropriate. Advice on compliance matters and risk mitigation activities will be provided by the campus risk committee and UC Ethics and Compliance Risk Council

C. Development and implementation of regular, effective education and training programs, as well as mandated education such as sexual harassment prevention, cybersecurity, conflicts of interest, ethics and compliance, and other areas of concern,

D. Effective communication and processes maintained for reporting of potential and/or perceived compliance issues or improper governmental activities with timely responses while allowing the complainant to remain anonymous and free from retaliation;

E. Development and maintenance of compliance systems and controls that can be objectively assessed monitored and audited for effectiveness;

F. Assurance that management is enforcing appropriate disciplinary action for those who have violated University policies, procedures or applicable legal requirements; and

G. Assurance that management is taking appropriate corrective action and remedial measures when problems are identified to resolve and prevent reoccurrence of those issues; and

WHEREAS, the Senior Vice President – Chief Compliance and Audit Officer and the Office of Ethics, Compliance and Audit Services are primarily responsible to assure that campus responsibilities are executed related to ethics and compliance matters and to assess and monitor that campus compliance systems and controls are effective; and

WHEREAS, the ethics and compliance program infrastructure includes a broad cross-section of stakeholders from all University locations and specific risk areas; and

WHEREAS, performance metrics continue to assess and evaluate identified risks and the operation of related compliance systems to ensure rules, regulations, Regental and UC policies and other compliance requirements are met;

NOW, THEREFORE, BE IT RESOLVED, that the Regents of the University of California do today approve and reaffirm the structure of the UC Ethics and Compliance Program as shown in the "University of California Ethics and Compliance Program Plan" in Attachment 1.

[Background material was provided to Regents in advance of the meeting, and a copy is on file in the Office of the Secretary and Chief of Staff.]

Interim Chief Compliance and Audit Officer Lohse recalled that in May 2006, the Regents approved establishment of a systemwide program of corporate compliance. In July 2008, the Regents approved an Ethics and Compliance Program plan to provide structure and guidance. The current action being proposed would approve an updated Ethics and Compliance Program plan that reflects the current program structure and it would reaffirm the Regents' support for the program. The goals of an effective ethics and compliance program include ensuring the presence of appropriate internal policies and controls, timely and relevant education and training, a system of monitoring programs and activities, and an effective process to investigate allegations of misconduct. Deputy Compliance Officer David Lane stated that UC's ethics and compliance structures reflected industry best practices and federal guidance and outlined the ramifications of the UC program.

Committee Chair Zettel asked about a recent opinion according to which the Regents might have responsibility for any fraudulent actions of the University. Mr. Lane responded that U.S. Department of Justice Deputy Attorney General Sally Quillian Yates had issued a memorandum in September 2015 titled "Individual Accountability for Corporate Wrongdoing." In the compliance field, this memorandum has been interpreted to indicate that individual members on the board of an organization can be held liable if these individual members have been negligent. Committee Chair Zettel asked if this memorandum was issued in response to a particularly egregious matter. Mr. Lane confirmed that this was the case; the incident in question involved a publicly held corporation.

Regent Makarechian noted that corporations have liability insurance. He asked about indemnity for the Regents. General Counsel Robinson responded that the University has policies to indemnify members of the Board of Regents and senior UC officials with respect to third-party liability. Through the Office of Risk Services, UC has directors' and officers' liability insurance. Individual Board members might be subject to action if they were found to have failed to discharge their fiduciary responsibilities, but such actions were rare and it is difficult to prove that individual members of a board are not discharging their responsibilities.

Upon motion duly made and seconded, the Committee approved the Chair of the Compliance and Audit Committee's recommendation and voted to present it to the Board.

3. **APPROVAL OF EXTERNAL AUDIT PLAN FOR THE YEAR ENDING JUNE 30, 2017**

The President of the University recommended that the PricewaterhouseCoopers external audit plan and fees for the University for the year ending June 30, 2017, as shown on pages 3 and 15 of Attachment 2, respectively, be approved.

[Background material was provided to Regents in advance of the meeting, and a copy is on file in the Office of the Secretary and Chief of Staff.]

Associate Vice President Peggy Arrivas presented the PricewaterhouseCoopers (PwC) external audit plan for the University for the year ending June 30, 2017. There were no new reporting requirements, so UC management was recommending the same scope as for the previous year's audit. She recalled that UC was in the second year of its three-year contract with PwC.

PwC representative Michael MacBryde explained that in developing the current audit plan, PwC reflected on the audit work of the previous year. In order to respond to the requirements of auditing a highly complex organization like UC, PwC brings in a cadre of specialists and subject matter experts. In total, PwC engages about 400 individuals in its audit of the University.

Committee Chair Zettel asked if auditing of medical center revenue and receivables included billing. Mr. MacBryde responded in the affirmative. PwC audits the individual medical centers, and one of the risk areas it examines is the revenue and receivables cycle. Ms. Arrivas explained that this area is particularly complex because the amount billed is not the amount that medical centers receive. The medical centers work through an extensive process to estimate how much they will receive. Medical center staff and auditors spend a fair amount of time ensuring that these estimates are reasonable.

Committee Chair Zettel asked if PwC would meet with the University's new cyber security team. Mr. MacBryde responded that PwC would assess the information technology control environment to the extent that it supports the audit. PwC was not carrying out a cyber security audit, but wished to understand the risks in that area and how these risks might affect the financial statement audit. PwC brings in its own information technology risk assurance professionals to participate in the audit.

Chancellor Gillman asked if the ongoing deployment of the UCPath payroll system would complicate or simplify PwC's activity, and if PwC would evaluate the UCPath system itself and provide commentary or advice. Ms. Arrivas recalled that during the year ended June 30, 2017, only the Office of the President would be using UCPath. This would be a significant topic for the 2018 audit, when several campuses were scheduled to switch to using UCPath. The University had begun conversations with PwC about risks and risk mitigation. Mr. MacBryde emphasized that information technology environments are not stagnant. Every year, as part of its audit activity, PwC endeavors to understand what changes have occurred and the resulting changes in risk. Regarding

UCPath operations at the Office of the President, payroll costs were in the scope of the audit and would be examined from a design assessment perspective. In 2018, as UCPath is deployed at more locations, controls on the entire information technology environment would be within the audit scope. Ms. Arrivas clarified that the conversion to UCPath was not within the scope of the audit, but that the external auditor would examine the UCPath system in operation after it has been deployed, to determine if information was being protected and if the system was producing high-quality and accurate data for the financial statements.

Regent Makarechian recalled that the University was engaging in public-private partnership financing for many of its capital projects due to the lack of general obligation bonds. He requested an explanation of the latest rules regarding these liabilities, and how UC might structure the liabilities to avoid adding them to UC's balance sheet. He asked about Governmental Accounting Standards Board (GASB) Statements Nos. 74 and 75, which pertained to accounting and financial reporting for postemployment benefit plans other than pension plans. Ms. Arrivas responded that the rules surrounding public-private partnership financing are very complex; it was becoming increasingly difficult to keep these transactions off UC's balance sheet in the current environment. When a transaction is being developed, the UC administration evaluates the project in order to provide guidance to the campus as to whether it is on or off the balance sheet. As a rough rule of thumb, she indicated that if the University retains control or oversight of or is significantly involved in a project, that transaction would be on the University's balance sheet; if a project is outsourced to a third party and the University has limited control, the transaction might be off the balance sheet.

Regent Makarechian recalled that for some UC capital projects, a third-party developer is responsible for financing, design, and management; UC receives some portion of the cash flow but has limited control. The University should have guidelines for structuring these transactions so that the liabilities are not counted against UC. Ms. Arrivas responded that some UC transactions were off the balance sheet. The debt for the Bowles Hall project at UC Berkeley would not be on the University's balance sheet. This was a public-private partnership transaction.

In response to Regent Makarechian's question about the new GASB Statements, Ms. Arrivas explained that under current rules, a portion of the University's liability for retiree health benefits is on its balance sheet. Under the new GASB Statements, the entire liability will be recorded on UC's balance sheet. The University's current annual pay-as-you-go costs for retiree health benefits were approximately \$300 million. The University's liability for current and projected health benefits, for those who have earned these benefits and to which the University was committed, was estimated at about \$21 billion. UC medical centers would also carry their share of the retiree health liability on their balance sheets. The University would be recalculating its liability as of June 30, 2017, and the recalculated amount would then appear on the balance sheet. Almost \$11 billion was already on the balance sheet.

Regent Makarechian asked how this would affect the University's credit ratings and its capacity for debt. Ms. Arrivas recalled that when UC made changes to its accounting for pension liabilities, this did not affect its credit ratings because the information was already available and known to the rating agencies. Likewise, the rating agencies were already aware of the amount of the University's retiree health benefit liability.

Regent Sherman described this change as an accounting exercise. In fact the actual cash liability of the University had not changed. UC's obligations and annual cost would remain the same, other than possible effects on UC's bond ratings. Ms. Arrivas concurred that this was an accounting change more than a financial change, and noted that cash flow was not expected to change.

Regent Sherman asked about changes in UC's obligations for retiree health benefits in recent years. Ms. Arrivas responded that UC's retiree health benefit plan had not been changed since 2010. The University would need to change the discount rate and some actuarial methods in measuring this liability. In determining the discount rate, UC would look to a market rate because this was an unfunded plan. A market rate would be lower than the rate UC had been using. The discount rate is determined using the expected return on plan assets, to the extent that there are assets to fund the benefits. When there are no plan assets to fund benefits, a market rate must be used. Because UC has only about $65 million in its retiree health benefit plan, it would run out of funds within weeks. Therefore UC must move to a market rate; otherwise it would be funding these benefits out of its operating budget.

Regent Pérez observed that this change, in addition to being an accounting change, was also a recalculation. Ms. Arrivas responded that the new calculation methodology was used in the UC financial reports presented to the Regents in November 2016.

Regent Makarechian asked if this additional liability would lead to covenant violations or default. Mr. MacBryde responded that UC covenants are related to revenue and would not be affected by this accounting change. He noted that in the case of other PwC clients with other bond offerings, there were clauses stipulating that accounting changes would not affect a covenant negotiated in the past. He anticipated that the University would achieve its covenants for 2017.

Upon motion duly made and seconded, the Committee approved the President's recommendation and voted to present it to the Board.

4. **SUMMARY RESULTS OF THE UNIVERSITY'S 2016 AUDIT OF COMPLIANCE FOR FEDERAL AWARDS (UNIFORM GUIDANCE)**

[Background material was provided to Regents in advance of the meeting, and a copy is on file in the Office of the Secretary and Chief of Staff.]

Committee Chair Zettel began the discussion by explaining that the U.S. Office of Management and Budget's A-133 audit of compliance for federal awards had been changed and was now referred to as the Uniform Guidance Audit.

PricewaterhouseCoopers (PwC) representative Billy Kim confirmed that this was the first year in which PwC performed the University's audit for federal expenditures under Uniform Guidance. Uniform Guidance had not changed PwC's approach in testing. The scope of the audit included student financial assistance, research and development, and UC's Cooperative Extension programs. There was a small number of findings, but none of them indicated any systemic problems for the University. PwC had identified some significant deficiencies in internal controls, but none rose to the level of a material weakness, and there were no questioned costs. Due to the numerous requirements of the Uniform Guidance audit and its low materiality threshold of $25,000, findings are common. Overall, PwC concluded that UC was in compliance in all material respects with requirements set forth under federal regulations.

Committee Chair Zettel asked about one of the findings, in the category of student financial assistance, concerning tardy notification of changes in enrollment status. She asked if student financial aid monies might have been issued to individuals who were no longer enrolled. Associate Vice President Peggy Arrivas responded in the negative. In this case, financial assistance had been issued to the student, who then left the University. In cases like this, the University must make the individual return the aid money. Committee Chair Zettel asked if the University experiences noncompliance in these cases. Ms. Arrivas responded that the University effectively pursues collections.

Committee Chair Zettel asked about another finding concerning timely notification of federal agencies when there are changes in key personnel involved in research projects funded by federal awards. PwC representative Michael MacBryde observed that this was not an uncommon finding. Ms. Arrivas added that in almost all cases, the University had informed the federal agencies about changes in key personnel, but had not kept documentation of this notification. Without documentation, PwC was compelled to record the matter as a finding.

Committee Chair Zettel asked about another finding pertaining to access to information technology and data. She asked if UC training in this area is adequate. Mr. MacBryde responded that this item was a significant deficiency that had been identified earlier in the UC financial statement audit and carried forward into the Uniform Guidance audit. The root causes of this finding included needs for training and documentation. This was an area of focus in PwC's discussions with UC information technology personnel, and PwC would report on progress in this area as part of the 2017 audit.

5. **RESOLUTION TO EXCLUDE ACCESS TO FEDERAL CLASSIFIED INFORMATION**

The President of the University recommended that the Compliance and Audit Committee recommend to the Regents that the resolution pertaining to the University's Department of Defense Facility Security Clearance be approved as shown in Attachment 3.

[Background material was provided to Regents in advance of the meeting, and a copy is on file in the Office of the Secretary and Chief of Staff.]

Committee Chair Zettel briefly introduced the item, noting that this was a routine action to exclude access to federal classified information for Interim Senior Vice President – Chief Compliance and Audit Officer Lohse, in compliance with Regents policy.

Upon motion duly made and seconded, the Committee approved the President's recommendation and voted to present it to the Board.

The meeting adjourned at 2:10 p.m.

Attest:

Secretary and Chief of Staff

University of California

Ethics and Compliance Program Plan

INTRODUCTION

The University of California (UC) Board of Regents launched an initiative in October, 2007 to create and maintain a comprehensive Ethics and Compliance Program for UC. The voluntary implementation of an ethics and compliance program provides a foundation for UC to proactively demonstrate its adherence to its mission, as well as its commitment to ensure good stewardship of federal, state and private resources. The Regents approved the original Ethics and Compliance Program Plan in 2008 that provided structure and guidance for the Program's implementation. This document provides an update of that original Plan and the Regents affirmation of its support for this program.

MISSION

The UC Ethics and Compliance Program ("Program") enhances the University's duty to perform its public responsibilities in an ethics and compliance-based environment where applicable legal, regulatory, Regental and UC policy, and other compliance requirements are followed and in which the public trust is maintained.

FUNCTIONS

The UC Office of Ethics, Compliance and Audit Services provides direction, guidance and resource references to each UC location on how to optimize ethical and compliant behavior through an effective Program. Additionally, it provides relevant, timely, independent and objective assurances and advisory services to the UC community, including campus and the Office of the President senior leadership and the Board of Regents.

ROLE of the BOARD of REGENTS

An effective and robust Program adds valuable support to UC's mission of teaching, research, and public service excellence, and ensures that the public trust is maintained. However, to maximize the value and effectiveness of the Program, it is critical that senior leadership at each University location and the Board of Regents become active participants in executing the Program and the continued strengthening and enrichment of the Program.

Effectiveness of an ethics and compliance program is dependent upon the "tone at the top". Regental engagement in the development and oversight of the Program sends an unequivocal message that UC is resolute about "doing the right thing" and protecting the interests of the students, faculty and public. The Regents, in collaboration with the SVP/Chief Compliance and Audit Officer, set the tone from the highest governing level of the organization and create the momentum to drive the Program forward. This oversight by the Regents aligns with best practices across industry and guidance from Federal agencies.

Generally, board members have three primary fiduciary responsibilities to the organizations of which they are members. These duties are: duty of care, duty of loyalty and duty of obedience to purpose. Under cases such as *In re Caremark International Inc. Derivative Litigation* (1996) 698 A.2d 959 and *Stone v. Ritter* (2006) 911A.2d 362, the courts have established that board members of an organization must oversee the activities of their organization's ethics and compliance program. In particular, board members must assure that an effective program exists, that reporting systems are adequate to bring material compliance information to their attention in a timely manner, and that the program has the resources needed to be effective. Therefore, the Board's engagement, as well as understanding of high-level compliance risk areas and applicable action taken to prevent, detect and remediate those risks, is critical for the success and growth of the Program. In 2016, in what is known as the "Yates Memo," https://www.justice.gov/dag/file/769036/download, the Department of Justice reinforced that individual board members should be held accountable for any proven misconduct by the organization. Thus, the involvement of the UC's Board of Regents in the Ethics and Compliance Program is appropriate and necessary to comply with best practice and guidance from the Department of Justice.

The SVP/Chief Compliance and Audit Officer is an Officer of the Regents and reports to the Regents through the *Committee on Compliance and Audit.* A key element of the role of the SVP/Chief Compliance and Audit Officer is to assure the Regents that compliance controls exist in high risk compliance areas of UC operations and mechanisms to support UC's strategic goals. The Regents would look to this role to: assist with education on compliance risks; report on performance metrics of the Program; assess high priority risks to UC; and assess and evaluate management's response to mitigating high priority risks. In addition to reporting directly to the

Regents, the SVP/Chief Compliance and Audit Officer has a direct reporting role to the President. As such, the SVP/Chief Compliance and Audit Officer not only has the reporting relationship necessary to ensure the Regents are regularly updated on the efforts of the Program, but also the ability to address significant ethics and compliance issues directly with the Board. This direct line of access ensures that the Board will meet its duty of care obligation and provides an open line of communication that instills public confidence and trust that UC is committed to ethics and compliance at the highest levels.

ETHICS & COMPLIANCE PROGRAM PLAN

The Program has been designed to promote adherence to standards of conduct and to ensure compliance with legal, regulatory, Regental and UC policies that govern all aspects of UC operations *including but not limited to* the following:

1. Assisting the campuses in the development of policies, procedures and internal controls that help to reduce compliance risks in all aspects of UC operations, including but not limited to the following:
    a. Conduct of the "agents" of UC related to our business and in carrying out UC's mission
    b. Health Sciences, i.e.: reimbursement, quality of care, program initiatives and consistencies in operations and care standards, vendor relations, etc.
    c. Research Compliance, i.e.: human subjects, animal care, IRB matters, administration, extramural funds accounting, contracts and grants, conflict of interest/commitment, time and effort reporting, etc.
    d. Student Financial Aid Services, i.e.: vendor relationships, accounting and management, etc.
    e. Human Resources, i.e.: Equal Employment Opportunity and Affirmative Action, Title IX compliance, immigration and employment eligibility, labor relations, Family and Medical Leave Act (FMLA), Americans with Disabilities Act (ADA), executive compensation and benefits, etc.
    f. Campus Safety, i.e., Clery Act, sexual violence/sexual assault regulations and training, the Child Abuse and Neglect Reporting Act (CANRA), etc.
    g. Financial areas, i.e.: appropriate allocation of monies, investment compliance, travel and expenses, payroll, etc.
    h. Records retention and disposition
    i. Information Technology, Privacy and Information Security, i.e.: protection of health information, protection of personal identifiable information, protection of financial information, cybersecurity, technical and administrative and Cybersecurity.
    j. Intellectual Property, i.e.: licensing, export control, copyright, etc.
    k. Environmental Health & Safety, i.e.: radiation safety, biosafety, chemical safety, security, hazardous waste management, air and water permits, etc.
    l. International activities, i.e., export control, Foreign Corrupt Practices Act (FCPA), data security, etc.

2. Establishment of communication methodologies to effectively disseminate compliance policies to administrative and academic employees;

3. Development and implementation of a comprehensive reporting and compliance tracking mechanism for academic and administrative employees to report suspected violations of UC policies or regulatory obligations without fear of reprisal and which ensures the prompt investigation of all appropriate reports of alleged violations;

4. Development and implementation, with consideration of campus culture, of training programs, including mandatory training, utilizing the most appropriate methodologies to reach all constituent audiences to ensure that UC policies are clearly understood and faculty and staff are able to carry them out effectively;

5. Ensuring the development and implementation of ongoing audit and monitoring activities that span the scope of UC functions to assess the effectiveness of internal controls and monitor compliance with applicable UC policies and applicable standards of practice and regulatory obligations; and

6. Development and implementation of an effective system to reinforce individual accountability and responsibility for ensuring compliance to UC policies and/or regulatory obligations by the administration of equitable disciplinary actions commensurate with the severity of the infraction.

STANDARDS OF ETHICAL CONDUCT

In May 2005, the Regents adopted a Statement of Ethical Values and Standards of Ethical Conduct applicable to all UC operations. The University of California also has codes of conduct which apply to specific constituents, i.e.: faculty, health sciences, staff, and students which guide them in carrying out daily activities within appropriate ethical and legal standards. These codes, the Program and related policies and procedures codify UC's commitment to compliance with legal, regulatory, Regental Policies, UC Policies, and other compliance requirements.

COMPLIANCE COMMUNICATION STRUCTURE

Communication will flow from key compliance risk areas within the UC locations (campuses (10), Lawrence Berkeley National Laboratory (1), UCOP (including UCDC) (1) and ANR (1)) to the diverse and comprehensive Campus Ethics and Compliance Risk Committees ("Committees"), comprised of senior leadership responsible for the compliance efforts across the campuses and the health science areas, as well as Academic Senate representation. Campuses with medical centers/health science areas may have additional ethics and compliance risk committees for "campus" and "medical centers" and these committees should work to coordinate their work. Each Compliance Committee is chaired by a senior leader of the campus/medical center and/or the designated Campus Ethics and Compliance Officer (CECO) or Chief Compliance Officer for the Medical Center. Each Committee will assure that high risk compliance priorities for the campus and medical center are addressed and will provide regular communications to the UC Compliance Risk Council related to their location's compliance activities.

A University-wide Ethics and Compliance Risk Council ("Council") will be comprised of the campus CECOs and medical center Chief Compliance Officers, as well as other university-wide leadership and faculty representatives. Communication to and from the Campus Ethics and Compliance Committees and Council will be facilitated through the CECOs, the Chief Compliance Officers from the medical centers, and the SVP/Chief Compliance and Audit Officer. The Council will be chaired by the SVP/Chief Compliance and Audit Officer.

In addition, compliance issues will be reviewed and discussed as necessary in the President's Advisory Group (PAG). The SVP/Chief Compliance and Audit Officer is a standing member of PAG and will be responsible for raising and reporting compliance issues to the senior leadership in the Office of the President.

The SVP/Chief Compliance and Audit Officer will provide communication, metrics reports and updates to the Regents through the Board's Compliance and Audit Committee, unless it is determined that the full Board is required for a communication or report.

UC ETHICS & COMPLIANCE RISK COUNCIL--CHARTER

The Council will be chaired by the SVP/Chief Compliance and Audit Officer and will include the CECOs/Chief Compliance Officers, representatives from campus senior leadership, Office of the President leadership, and the Academic Senate. The Council will meet regularly to provide oversight and advisory services to the UC system on the Program and compliance risk areas. The Council will be charged with the following, including but not limited to:

- Providing oversight for and advice relating to the UC-wide implementation and ongoing process of the Program;
- Sharing campus information and tools for system-wide use in identifying and mitigating high risk compliance areas in the system;
- Monitoring the compliance environment, including the Systemwide Compliance Plan approved by the Regents, as it relates to the UC enterprise performance metrics;

- Making recommendations on compliance policies and best practices to be implemented at the system-wide level; and,

- Facilitating submission of campus updates and annual reports to the SVP/Chief Compliance and Audit Officer for inclusion in regular compliance reports to the Regents.

CAMPUS ETHICS & COMPLIANCE RISK COMMITTEE--CHARTER

Each Campus/Location and Medical Center compliance and ethics committee will provide Program oversight and will be advisory to the SVP/Chief Compliance and Audit Officer. The Campus/location and/or Medical Center Committee will comprise senior campus leadership responsible for various areas of campus compliance risks including internal audit, risk services, academic leadership, research, and one or more members of the UC Office of Ethics, Compliance and Audit Services. The location's Committee will be chaired by a Senior Leader and/or the CECO and/or Chief Compliance Officer. The Committee will be charged with the following, including but not limited to:

- Responsibility and support for overall Program including implementation, performance metrics and ongoing processes of the Program;

- Conducting an annual risk assessment process leading to the development of a compliance plan for each location;

- Developing risk assessment tools for campus use in identifying and mitigating high risk compliance areas;

- Advising on the need for campus-specific guidance documents, education materials, and training courses, monitoring the compliance environment as it relates to specific risk areas and recommending compliance policies and best practices for system-wide implementation; and,

- Reporting compliance risk areas of high priority and proposed risk mitigation activities to the Council, both on an ad hoc basis, and through updates and annual campus compliance reports.

• PRESIDENT'S ADVISORY GROUP (PAG)

The President's Advisory Group (PAG) is a regularly occurring meeting of the President and senior leaders at the Office of the President. During these PAG meetings, compliance issues will be reviewed and discussed as necessary. The SVP/Chief Compliance and Audit Officer is a standing member of PAG and will be responsible for raising and reporting compliance issues to the senior leadership in the Office of the President.

CAMPUS ETHICS & COMPLIANCE OFFICER--ROLE DESCRIPTION

The CECO for the campus and the Chief Compliance Officer for the medical center are senior leaders with appropriate authority to carry out the required duties and responsibilities of a compliance officer. These positions provide facilitation/leadership to the campus and/or medical center community on communication of compliance risks and, where appropriate, advice and counsel to the Chancellor and senior management on matters of compliance and advice on ethical standards of practice. Reporting to the Chancellor and to the SVP/Chief Compliance and Audit Officer, the CECO and Chief Compliance Officer will have independent authority and autonomy necessary to objectively provide a review and evaluation of compliance issues within all levels and in all subdivisions, subsidiaries and holdings of the campus. The CECO and Chief Compliance Officer will be a role model and champion for ethical and compliant conduct throughout the UC community. Specific duties of the CECO and Chief Compliance Officer include but are not limited to:

- Advising the Chancellor and the UC Office of Ethics, Compliance and Audit Services on the development, dissemination and implementation of an appropriate compliance infrastructure with performance metrics that are designed to detect and prevent non-compliant or unethical conduct throughout the campus and/or medical center.

- Facilitating a compliance risk assessment process and development of an annual compliance plan and annual compliance report for the location.

- Working with senior leadership from the location and the Committee designed to provide oversight, assistance and direction to the CECO and/or Chief Compliance Officer on the operation of and communication around the campus-wide or medical center-wide Program.

- Serving as a campus representative at the Council meetings.

- Coordinating ethics and compliance activities and Program initiatives with the Chancellor and/or Chief Executive Officer of the Medical Center and SVP/Chief Compliance and Audit Officer.

AUDITING AND MONITORING

The auditing function and certain monitoring activities of the Program will be conducted by the UC Internal Auditors at each of the respective campuses and Lawrence Berkeley National Laboratory. The SVP/Chief Compliance and Audit Officer will lead an annual risk assessment for compliance and internal audit and determine the high-risk priorities for the audit and compliance auditing and monitoring plan from a system-wide perspective. Each campus will also provide its individual campus risk areas to be audited on the overall plan.

Compliance will assist in determining several university-wide audits which will be conducted each year based on high priority compliance risks identified through the risk assessment process and through further vetting with the location's Committees, Council and the Regents.

Monitoring will be done primarily through the management functions of each UC location and will be tracked by the respective Committees and Council. Over time, as the compliance monitoring activities carried out by management mature and become more robust, the role of the UC Internal Auditors will shift from one of auditing and monitoring to assess UC's state of compliance, to auditing the effective execution of the compliance activities within functional areas. However, as new high risk compliance areas are identified, Internal Audit and Compliance will continue to work together in a manner to assure the risks are being mitigated appropriately through either auditing and/or monitoring.

INVESTIGATIONS

Assuring effective stewardship of UC's resources by guarding against misuse and/or waste of federal, state and other sources of funds is a priority shared by the Regents, faculty, administrative management and staff of the UC system, as well as the citizens of California. The UC Whistleblower Hotline ("Hotline") allows interested parties to report, confidentially and anonymously, instances where UC funds may have been misapplied or misused. The Hotline may also be used to report alleged instances of potential and/or actual non-compliance with UC policies and procedures and allegations of suspected Improper Governmental Activity.

The investigations function is responsible for coordination, tracking, investigating (where applicable) and managing complaints of suspected improper governmental activity made under the UC Whistleblower Policy and the Program. This process is carried out through a comprehensive program at all UC locations to ensure compliance with federal and state whistleblower laws and to provide a communication mechanism for all constituents within the UC environment to report real and/or potential non-compliant behavior. Information of suspected improper governmental activity and real and/or potential compliance matters are received through a variety of reporting channels to include an independently operated anonymous hotline service. All reports are investigated as appropriate and through the Program are coordinated with the Office of General Counsel to ensure that there is no duplication of effort and investigative services are optimized. Additionally, advice from leaders in risk management, areas of specialty law and human resources, or other specialty areas, are provided, as appropriate.

The Program will continue to review existing whistleblower training, informational and educational programs as well as deliver training to provide assurance that the UC Whistleblower Policy and the Policy for the Protection of Whistleblowers from Retaliation is understood, system-wide. The investigations function will conduct system-wide investigations in circumstances where the investigation process requires independence and objectivity, both in fact and appearance. All substantiated reports and subsequent resolution data will be tracked, aggregated and trended to enhance system-wide process improvement activities.

RESPONSE AND PREVENTION

The response and prevention function of the Program will be managed in a distributed and collaborative framework. Working within the communication structure of the Program, non-compliant events and trends will be analyzed by the Committees and reported to the SVP/Chief Compliance and Audit Officer (within or outside formal Council meetings, as appropriate). Response to non-compliance will be the responsibility of the campus Chancellor and managed at the campus level in consultation with the UC Ethics and Compliance Program leadership. All actions in response to non-compliance will follow UC policy.

The SVP/Chief Compliance and Audit Officer (and other designees as appropriate) will work with the location’s Committees, Council, and other appropriate UC leadership, including Academic Senate leadership, to analyze non-compliant trends from a system-wide perspective and to recommend revisions to policy, as needed, to provide consistent responses to specific violations.

Prevention of non-compliance will be the responsibility of the Chancellor and addressed directly at the campus level, with assistance from the Program, through efforts and resources committed to enhance education/training and monitoring/auditing functions. Prevention of non-compliance or reoccurrence of non-compliance on a system-wide basis will also be addressed through targeted training and auditing efforts generated from the advice of the Committees, Council and the Program leadership.

ANNUAL EVALUATION

The United States Federal Sentencing Guidelines ("FSG") were revised in November 2004 to include a "periodic measurement of program effectiveness" among the criteria for an effective ethics and compliance program (U.S.S.G. §8B2.1 (b) (5) (B)) and to "assess their risk" in an effort to identify operational gaps that might put the organization at greater compliance risk and to then develop and implement processes to remediate that risk. One of the goals of an effective compliance program is to effectuate the change needed to improve operational processes to ensure compliance with regulatory requirements. The change or process improvement effort should include an evaluation element to determine the effectiveness of the change that was made in an effort to re-focus future activities and distribute limited resources in the most efficacious manner.

Annually, the SVP/Chief Compliance and Audit Officer is responsible for developing a report of Program activities to present to the *Committee on Compliance and Audit* of the Regents. That annual report will include the measurement of the system-wide office and the individual campuses to pre-established performance metrics and outline key observations and recommendations for ongoing Program improvement.

The metrics used to measure the Program will be consistent with those typically used by the compliance industry. The compliance industry often measures program effectiveness by assessing a compliance program's integration of each of the seven elements of an effective compliance program, and may include the following analyses:

1. Conducting an employee survey to gauge the employees' understanding of how compliance is integrated into their daily job functions and their ability to identify potential compliance issues and to respond according to policy;

2. Summarizing the numbers, categories and attendance rates at mandatory compliance education offerings;

3. Identifying trends in investigation and audit/monitoring activities and whether or not performance improvement activities occurred to mitigate the identified risks;

4. Measuring the effectiveness of compliance program structures, such as local and system-level compliance committees through an analysis of outcomes against pre-established performance/measurement criteria; and,

5. Developing or revising policies and procedures to address identified compliance risks.

SUMMARY

This Updated Program Plan is provided as a high-level summary of the Program's purpose and mission, roles and responsibilities of the Regents, campus leadership and respective Committees and structure and elements of the Program. This Program Plan was originally established in 2008 as an effective means to add value to and protect UC's mission of teaching, research and public service excellence in the complex and highly regulated higher education environment. The Program Plan achieved success in establishing an effective Compliance and Ethics Program through the Regents participation in oversight; the accountability and ownership of UC's leadership at each of the UC locations and the ability of the UC system to provide the necessary direction, resources, references and guidance. It is the goal of this Program Plan to sustain the continued development of an effective UC Ethics and Compliance Program by detecting and preventing improper governmental activity and promoting UC's compliance with legal, regulatory, Regental policies, UC policies and other compliance requirements.

Attachment 2

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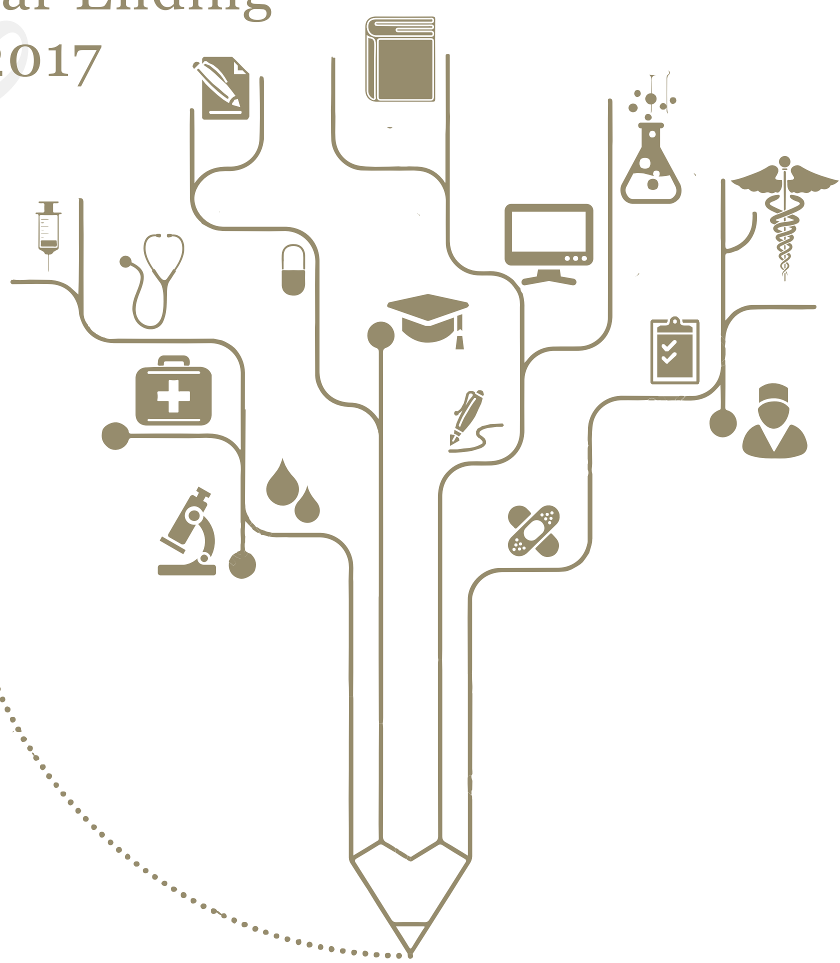
University of California
Audit and Communication Plan

For the Year Ending
June 30, 2017



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Members of The Regents
Committee on Compliance and Audit
University of California

February 14, 2017

Dear Members of the Committee:

We are pleased to have the opportunity to meet with you on March 15, 2017 to present our 2017 Audit Plan for the University of California (the "University"). This report presents to you our audit and communications plan as well as a summary of our understanding of expectations and responsibilities between the University and us, our audit approach, service deliverables, audit and reporting timetable and other matters. This document outlines our audit strategy and approach for the 2017 audit of the University and is provided to give the Committee on Compliance and Audit (the "Committee") the opportunity to review, discuss and comment on our plan. Discussion of our plan with you ensures our engagement team members understand your concerns, and that we agree on mutual needs and expectations to provide the highest level of service quality. Our plan has been developed to provide the University with an efficient, high quality audit which addresses the key risks and business issues of the organization.

The higher education environment continues to be complex, with continued expectations about institutional performance and accountability from many different constituents, including faculty, staff, students, parents, regulators, donors, and federal and state governments. Our goal has and continues to be understanding and delivering upon your expectations and providing you with the best possible service and value.

In addition, we have included our most recent thought leadership publications that we believe you will find helpful – *Perspectives in Higher Education 2016* as an attachment to this plan. It provides a summary of the more pressing issues impacting the higher education sector as the U.S. government is in a transition phase with a new administration including from potentially revised regulations, governmental oversight, financial scrutiny, and on-campus student activism.

We are pleased to be serving you as the University's independent auditor. We appreciate the opportunity and look forward to meeting with you to present this report, address your questions and discuss any other matters of interest to the Committee on Audit and Compliance. Please feel free to contact Mike Schini at (408) 817-4345 or Mike MacBryde at (415) 498-7140 with any questions you may have.

Very truly yours,

PricewaterhouseCoopers LLP

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Executive Summary

This executive summary is provided to highlight the key points in this service plan including about new matters impacting the 2017 audit. The University of California system and its stakeholders expect us to deliver a high quality audit and that is our number one goal as your auditor. PwC has a significant focus on audit quality and continuous improvement in our audit processes -- we are continually standardizing, simplifying and automating through technology to enhance audit quality while improving the experience for you as well.

You also expect an audit that makes the best use of your time. To this end, we are continuously looking at how we can improve auditing more efficiently while delivering quality and keeping you apprised of the audit and financial reporting impacts caused by changes to your organization, operating environment, regulatory developments and new accounting standards.

Current Year Considerations. What's New for 2017?

As we reflect on the 2016 audit, which was the first year we returned as your auditors since our two year break in service, we acknowledge that we have gained a refreshed and deeper understanding of the University's processes. Combined with our understanding of the higher education industry, we have identified the following new areas of focus and improvement that will impact our audit approach and overall service plan in the current year.

Planning, Phasing and Project Management

- A value added planning phase including a shift in earlier timing to have more time to plan for improvements in phasing of work including engagement staffing, coordination, audit approach and plan, and client service.
- Enhanced project management and techniques that will be consistently used across our teams to manage our audits more effectively which will be driven and led by an overall dedicated project manager.
- Accelerating our *Uniform Guidance* federal award audit procedures to align with our financial statement audit timing, better leverage the compliance work into our financial statement audit and to ensure a succinct conclusion to the *Uniform Guidance* audit.

Significant implementations, transactions and activities

- Fiat Lux, the Captive Insurance Company, a component unit of the University will have an expansion of what is covered by the University and therefore, will increase the scope of work the audit of this entity and impact the overall University financial statements.

- Significant IT implementations, such as UCPath, which is in process for system-wide implementation. During and after any implementation for in scope locations, we will hold discussions and perform procedures, as applicable, to ensure the effectiveness of IT controls and consider the level of reliance we can derive for audit support.

- Significant transactions, including affiliation or joint venture type relationships including the accounting and reporting implications. We will advise you of the accounting and reporting impacts of such transactions so you can make more informed decisions and eliminate surprises.

Changing regulations, accounting pronouncements and economic environment

- The University will experience continued impact from the changing regulatory environment affecting higher education and healthcare, including from the impact of the new administration, such as the the potential repeal and replacement of the Affordable Care Act.

- There are numerous new Governmental Accounting Standards Board (GASB) pronouncements that will the University will adopt in 2017. In fiscal year 2017, the University has planned to implement GASB 74, '*Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*' and GASB 75, 'Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions' which we cover in more detail in section 'Relevant Pronouncements and External Guidance'. For all future pronouncements, refer to Appendix A. We will continue to work with you to implement and assess the impacts of these new GASB pronouncements on your financial reporting as part of our audit plan.

- The continued effect of the ever changing economic environment on the University, especially as it relates to the affordability of higher education, and the related impact on the University's budget, operations and strategic initiatives.

PwC Services and Related Deliverables to the University

In conjunction with our service in providing audit services to the University, we also provide certain other assurance services to the University. Refer to the table below for a listing of services and related deliverables we expect to provide. Prior to commencing any non audit related services, we are required to obtain preapproval from the Committee or the Committee's designee pursuant to the University's preapproval policy for its independent auditor. For audit objectives and responsibilities and communication plan, please refer to **Appendix B.**

Audit Opinions	■ Report on the financial statements of the University of California ■ Report on the financial statements of the five Medical Centers ■ Report on the University of California Retirement System ■ Report on the University of California Cash Contributions to the Retirement System ■ Reports in accordance with OMB Uniform Guidance, including: ○ Internal Control over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards* ○ Compliance with Requirements That Could Have a Direct and Material Effect on Each Major Program and on Internal Control Over Compliance
Internal Control Observations	■ Report to the Committee on control and process deficiencies and observations, including material weaknesses and significant deficiencies (Regents Letter) ■ Reports to the campus Chancellors on control and process deficiencies and observations (Chancellor Letters)
Agreed-Upon Procedures	■ Agreed-upon Procedures related to the University's Mortgage Origination Program and Supplemental Home Loan Program ■ Agreed-upon Procedures on Intercollegiate Athletic Departments (NCAA requirements) for seven campuses
Other Services	■ Review of consolidated Form 990-T of the Regents of the University of California and University of California Retirement Plan ■ Reviews in connection with bond offerings ■ Accounting consultations and other assistance associated with emerging accounting and reporting issues and complex transactions ■ Financial reporting observations
Committee Reporting	■ Audit and communications plan ■ Results of audits and required communications

Service Commitments for 2017 Audit

To provide a high quality and efficient audit, we must understand the University's needs and expectations. Our ongoing meetings with management and the Committee are a key part of the audit process in ensuring we obtain that understanding. In preparing for this year's audit, we have listened to your input on what is most important to you as it relates to your needs and expectations for the audit. Below is a summary of those key ongoing expectations and our related responses based on initial discussions with management of the University and our existing knowledge of the University. We welcome your feedback on how we can best work together.

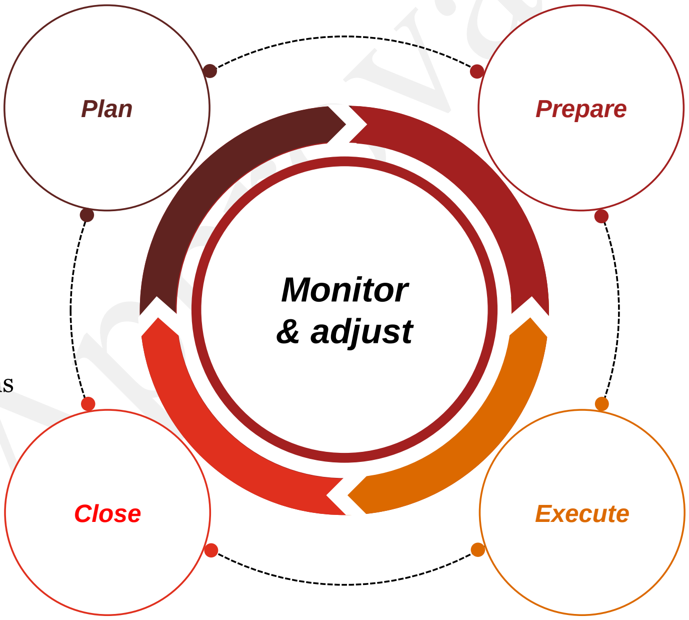
What we heard about your needs and expectations	***Our commitment to the University of California***
Provide the highest quality audit and exceptional service	■ We support the Committee in achieving its objectives through robust dialogue surrounding issues and expectations, providing independent views on internal controls, technical and business matters. ■ The University operates in a complex environment, requiring additional expertise beyond traditional resources. During the course of the audit, we will utilize our functional experts to evaluate key areas of your business risks. Drawing upon their best practice knowledge, our team will provide points of view related to your business, industry and regulatory compliance. All subject matter specialists are partners, directors or managers and will assist in audit planning and execution as needed. Such specialists engaged as part of the on-going audit process are outlined in the "Use of Specialists" section below. ■ We focus our audit efforts on those areas considered to be higher risk and material to the University including – investment valuation, grants and contracts, educational activities and patient service revenue. ■ We will ensure the work performed is appropriately phased starting with planning through interim to year end in order to minimize the impact the audit has on University staff and management and to reduce the 'year-end crunch'. ■ We will strive to build in continuous improvements into our audit through the use of a dedicated project manager and through the use of various project management tools at our disposal. ■ We will include our national higher education leader, John Mattie, and healthcare services leader, Tim Weld, on our audit team to provide industry perspectives to our team and your management team. ■ We will leverage Martha Garner, who serves as National Technical Accounting Director for Higher Education and Healthcare and has been exclusively servicing higher education and healthcare entities in her national role for more than 25 years, to provide technical advice and advice on emerging GASB pronouncements and ensure the timely resolution of technical issues for the University. ■ Will will leverage Ralph DeAcetis, who services as our Higher Education and Uniform Guidance Regulatory Managing Specialist in our Uniform Guidance audit and also share with management on a timely basis on any updates for Uniform Guidance or other related regulatory topics.

What we heard about your needs and expectations	*Our commitment to the University of California*
Focus audit on current issues and concerns based on discussions with management and the Committee	■ We will continue to attend all applicable meetings of the Committee throughout the year. We are available to attend all meetings at your request. ■ We will provide guidance to management and the Committee related to various accounting and reporting matters, such as the implementation of technical guidance on emerging GASB pronouncements. Those pronouncements identified as having an impact on the University in 2017 and beyond are outlined in the "Relevant Pronouncements and External Guidance" section below. ■ We will provide guidance and insight to management and the Committee in relation to changes seen as a result of the recent change in the federal government and any potential reforms in regulatory policies including the potential repeal and replacement of the Affordable Care Act and the impact this could have on the University and its operations. ■ We will provide ongoing points of view, thought leadership and personalized education sessions on various accounting and industry issues throughout the year, including our on any regulatory issues impacting the higher education industry.
Avoid surprises and unexpected significant year-end adjustments. Timely communication with the Committee and management.	■ Our job is to support the Committee as it fulfills its responsibilities to the University's stakeholders. We will pursue an effective relationship with the Committee while maintaining objectivity, acting independent of management, and have direct, candid and timely discussions. ■ Our team emphasizes prompt and personal communication with the University and will be available to management throughout the fiscal year. We will collaboratively work with management to ensure early identification of complex technical matters and communicate timely the impact that any changes have on our audit scope. ■ We will hold internal weekly audit update meetings (during interim and year end field work) with the various component teams, as well as holding regular weekly meetings with University management at the system-wide and local levels, providing real time updates on the status of key issues as needed. ■ Beyond the scheduled meetings with the Committee, we will maintain timely communication with the Committee throughout the year particularly if significant issues should arise.
Assess our performance and yours	■ We will solicit feedback on our performance to ensure all needs and expectations continue to be met and we will provide our perspectives on management's performance and potential areas of improvement.

Building Continuous Improvement Into the Audit Process

We're continuing to standardize, simplify and automate to enhance audit quality while improving the experience for the University. One way we're doing this is through our Engagement Performance & Quality (EPQ) continuous improvement framework. We apply elements of Six Sigma, Lean and Total Quality Management practices to improve overall project management, timing and standardization.

We use EPQ to help ensure we do the right work at the right time, reduce inefficiencies in the process, improve overall project management and communications, and minimize time the University spends supporting the audit.



For the University, this leads to earlier identification and resolution of matters, more even distribution of work throughout the year, and more time to focus on items of greatest risk. As part of our commitment to continuous improvement and the implementation of this EPQ framework, we have an EPQ manager who assists the teams in analyzing and keeping track of different key metrics to ensure that we can continually and consistently monitor progress of the audit against plan, so that we are being proactive in managing the overall audit.

Client Service Team

Your service team is comprised of very experienced professionals, reflective of the stature and importance of the University as a leading higher education client of PwC. Your service team continues under the direction of **Mike Schini**, who is responsible for ensuring the overall quality of the PwC audit engagement and who will sign the overall University financial statement audit opinion. Mike will be your primary point of contact and speaks for the firm for all technical decisions and matters related to the audit. Mike will meet with the Committee and be in frequent contact with Office of the President management.

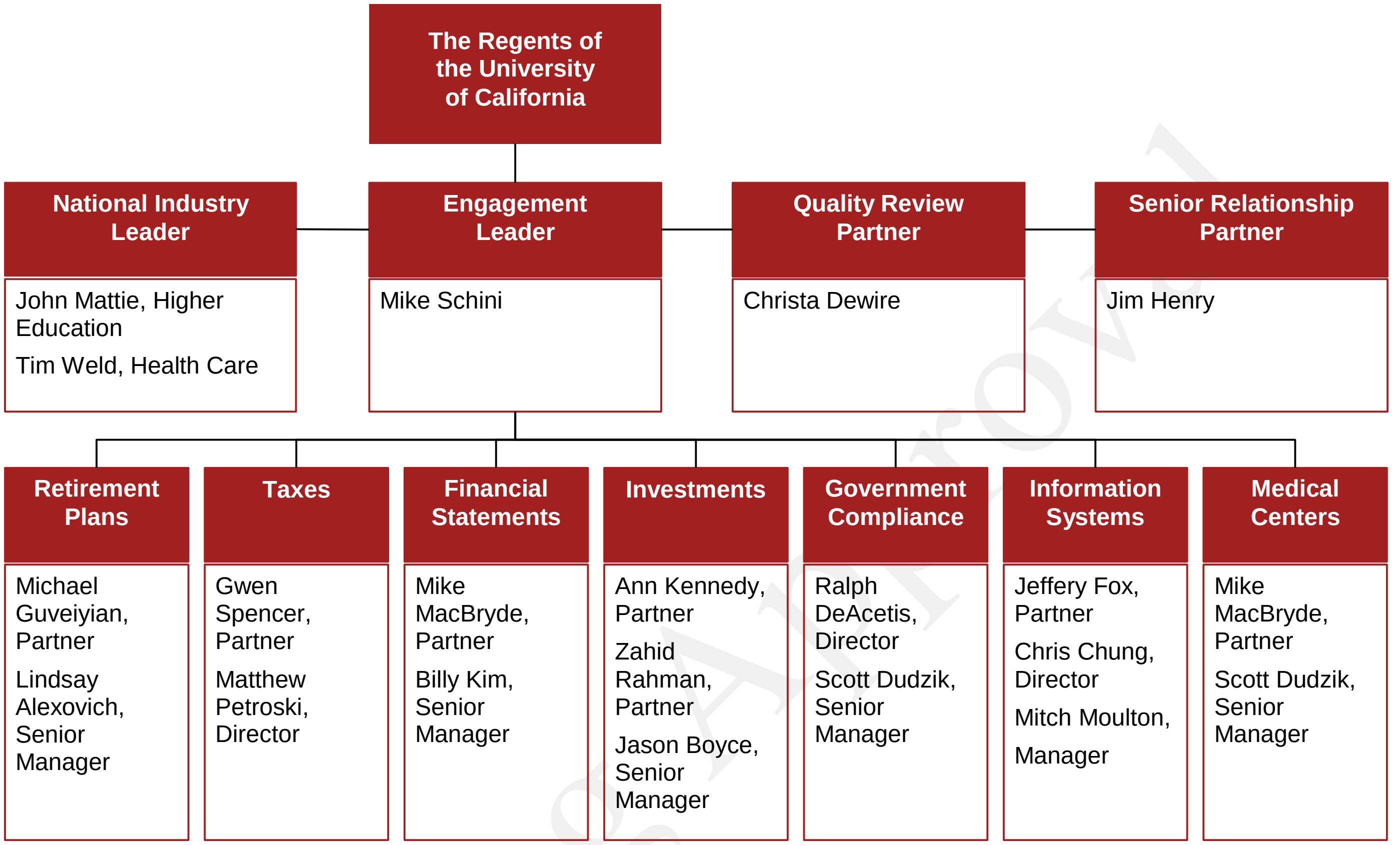
Mike MacBryde will continue to serve in his role as the Coordinating Audit Partner & Overall Medical Center Audit Partner and work to support Mike Schini and the overall University engagement team by focusing on identifying and implementing ways to enhance the effectiveness and efficiency of the audit. In addition, Mike will lead the Medical Center audit teams and be the focal point through which all Medical Center matters are addressed and resolved. Mike and the Medical Center teams will work closely with Mike Schini on specific Medical Center-related issues as they arise. He will also regularly meet with the Committee and be in frequent contact with Office of the President management.

Ann Kennedy and Zahid Rahman will lead the investments team that serves the Office of the Chief Investment Officer. This team is responsible for performing all audit procedures over the investment portfolios managed by the Office of the Chief Investment Officer. Ann, Zahid and their team will work closely with Mike Schini on investment issues that may affect the University and UCRS audits.

Jeffrey Fox will continue to lead the IT Controls team. This team is responsible for addressing risks associated with your IT systems and controls, as well as identifying areas within your IT environment that can assist with enhancing the quality and efficiency of our audit.

Christa Dewire will resume her role as the Quality Review Partner of the University. In this role, she will provide an independent view of the engagement team's judgments related to auditing and technical accounting matters and leverage her Higher Education sector experience and expertise. She will independently assess the audit plan and its execution, including the quality of the financial statements and the appropriateness of our reports.

In selecting our team, we focused on those team members with significant, relevant industry experience in areas that are important to the University, the Medical Centers and the benefit plans. All partners and managers below have relevant higher education and/or healthcare experience from past University audits, were all involved in the prior year audits and other services and, in almost all cases, other relevant experience.



In addition, for the Medical Center audits, we have a total of ***3*** partners and ***6*** managers involved in serving as your overall Medical Center audit team.

For the audit work performed at each Campus, we have a total of ***6*** partners and ***10*** managers in serving as your overall Campus audit team.

In total, we have over ***400*** people involved in serving the University in audit and audit related services.

Relationship Support

Jim Henry, Senior Relationship Partner and PwC's U.S. Leadership Team Member- A member of the firm's U.S. Leadership Team and Strategy Committee and current Market Managing Partner for PwC's Northern California practice, Jim will resume serving as the Senior Relationship Partner on the University engagement. Jim provides the University with access to an independent leadership resource.

John Mattie, PwC's U.S. Higher Education Leader and Tim Weld, PwC's U.S. Healthcare Leader - John and Tim will be resources to you and your engagement team on complex industry issues as well as to be available to the Committee and management to discuss national trends and hot topics.

Use of Specialists

The University operates in a highly complex environment, requiring additional expertise beyond traditional audit resources. During the course of the audits, we will utilize our functional experts to evaluate key areas of your business risks— such as the valuation of self-insured risks and insurance accruals, the valuation of pension and postemployment benefit obligations, valuation of certain investments, and third party settlements. Drawing upon their best practice knowledge, our team will provide points of view related to your business, industry and regulatory compliance.

These specialists also will ensure that we have the right resources to achieve our audit objectives. Accordingly, our PwC engagement team will include the following specialists who will work with our audit teams and management at your business units to assist us in executing our audit:

Area of expertise	Description of service
Financial Services Valuation	Assistance with the evaluation of the fair value of investments and related disclosures
Self-Insurance	Review of actuarially determined balances and actuarial models involving self-insurance reserves
Compensation and Benefit Plans	Review actuarial assumptions related to compensation programs and benefit plans
Healthcare Reimbursements	Review third party account transactions subject to complex rules and interpretation
Information Technology	Review and testing of IT and application controls
Healthcare Compliance	Provide guidance to Medical Center audit teams and the University regarding healthcare compliance requirements
Regulatory Compliance	Review the University's Uniform Guidance report and provide perspective on federal agencies' monitoring and expectations of award recipients

Audit Scope Highlights

Significant Risks

We have identified certain audit areas as subject to significant judgment or risk, based on our knowledge of the University and the industries in which it operates. Such audit areas are subject to inherent or specific risks and complexities, critical accounting policies and/or significant judgments and estimates, as further described in the University's consolidated financial statements, and are key considerations as we develop our current year audit approach. We identified the following significant risks which are consistent with the prior year:

- **Management override of controls -** This is an area of presumed significant risk on all audit engagements. We perform testing on the appropriateness of journal entries and other adjustments, significant accounting estimates, and significant and/or unusual transactions to address this risk. This continues to be an area of focus and feedback by regulatory bodies and we continue to expand our procedures to address these requirements.

- **Fraud risk in revenue -** As discussed in this document, in the section titled, *Perspectives on Fraud Risk and Responsibilities*, we have a presumption to consider the fraud risk in revenue as significant, which includes grants and contracts, educational activities and patient service revenue.

- **Valuation of alternative investments -** The University has complex investments that are recorded at fair value. The underlying assumptions used to value certain of these investments may be judgmental and subject to risk that amounts received in settlement differ significantly from fair value measurements.

For further information on the implications on our audit associated with these risks, refer to Appendix C.

Other Areas of Audit Focus

In addition to the significant risks identified above, we have identified the areas below that are not considered significant or elevated risks but are areas of focus during the audit due to materiality of the balance or complexity/judgment involved in the accounting. Such audit areas are subject to material accounting policies and/or judgments and are considerations as we develop our current year audit approach.

- Accounting and reporting for actuarially determined estimates (retirement plans and retiree health benefit obligations).

- Determination of which entities are to be included as component units under GASB reporting guidelines due to their significance and the nature of the University's relationship with the entities.

- Accounting for receivables and allowances such as pledges and medical center receivables.

- Capitalization of fixed assets, particularly related to construction activity.

- Notes, bonds payable and commercial paper liabilities.

- Presentation and disclosure of the financial statements.

- Treatment of related party transactions with the University, as applicable to the separately-issued financial statements of the medical centers and benefit plans.

Uniform Guidance Reporting and Compliance Risk

Although not considered a significant risk from a financial reporting standpoint, we also focus our audit procedures on regulatory compliance, including healthcare reimbursements, federal grants, and continued focus on compliance processes and controls over the University's federally sponsored research and financial aid programs. These procedures are performed in connection with our OMB Uniform Guidance audit due to the reputational risk and potential regulatory ramifications associated with non-compliance.

Additional procedures are required for performing an audit of compliance with requirements applicable to each major federal program in accordance with *Government Auditing Standards*. At the time of preparing this report, we expect that three major programs (research and development and student financial aid clusters as well as the Title IV-E Foster Care program) will be subject to our OMB Uniform Guidance audit for the year ending June 30, 2017. We expect that one or two additional Type B programs (non-major program less than $15 million) requiring audit as part of the 2017 Uniform Guidance work will be identified when the draft 2017 Schedule of Expenditures and Federal Awards is available for review.

Refer to Appendix C for a summary of how we develop our audit strategy and execute our audit.

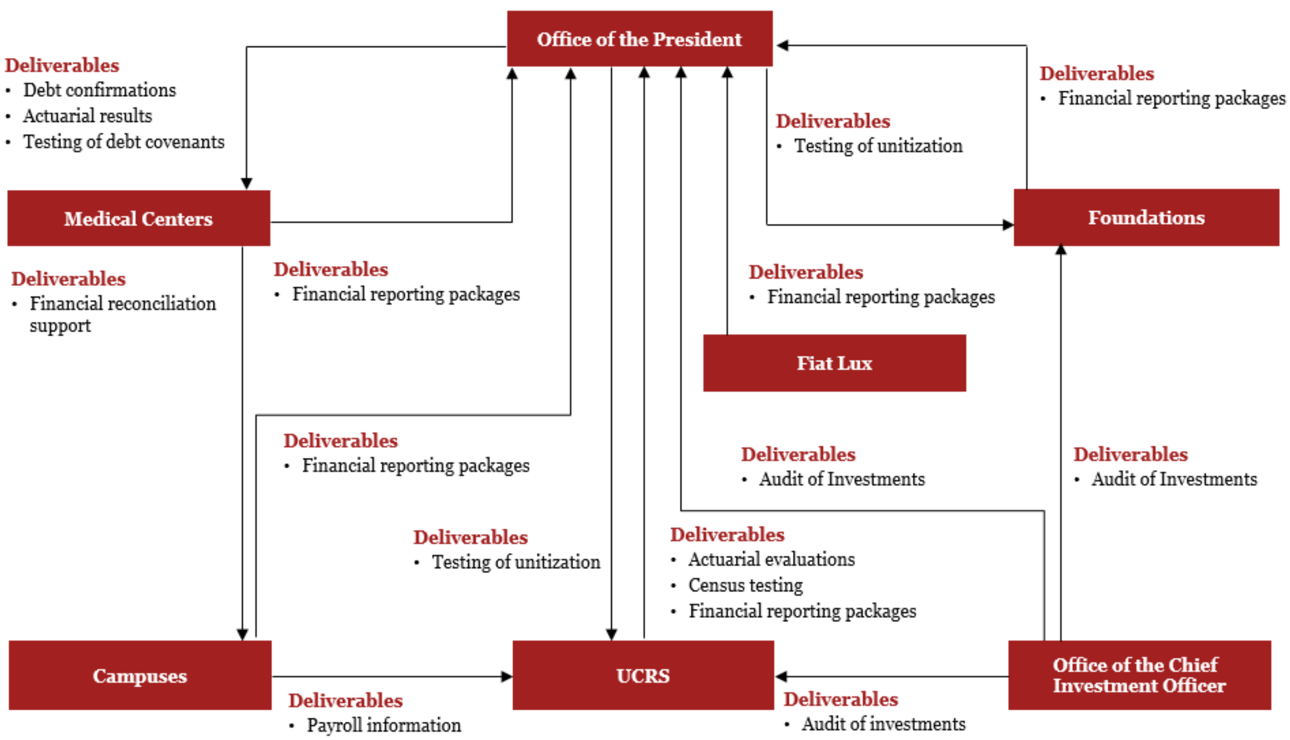
Multi-location Audit Coordination

PwC has adopted a consistent approach for our audit procedures at all University and University related entities. We have developed standardized reporting templates and common audit programs and approaches to achieve consistency and effectiveness. As a result, our reporting structure allows for local teams who understand the unique aspect of each entity but who work within the framework of a common reporting structure.

We have taken the following steps to ensure the overall quality of audit engagement:

- Prepared and communicated a centrally determined audit scope and plan.
- Established a framework for continuous communications throughout our engagement teams.
- Adherence to engagement timelines to achieve your reporting objectives.

The multi-location engagement team is aligned to the University's geographical organization and mirrors the management control structure of your organization. This structure, coupled with centralized engagement management, leverages the expertise of our local professionals who can respond directly to questions at each location. The following depicts the organization and flow of information among the different component audit teams.



For every deliverable, a set of instructions is issued communicating a particular scope of work, materiality and timing.

Office of the President and Office of the Chief Investment Officer– Audit procedures are performed as necessary at these locations in order to opine on the financial statements of the University. We also take into consideration in our audit scope for these locations the requirements of the medical centers audits, the UCRS audit and the audits of the campus foundations. In particular, the investment work we perform at the Office of the *Chief Investment Officer* has a wide-sweeping impact on the various University components.

Medical Centers and UCRS - As described throughout this document, we perform audits of the stand-alone financial statements for the five medical centers and the University Retirement System which consists of multiple benefit plans. We rely on those stand-alone audits for purposes of the audit of the University's consolidated financial statements and fiduciary fund financials.

Campuses – We perform specific audit procedures at the campus locations as needed to achieve sufficient coverage to express an opinion on the University's financial statements. We are in the process of determining which locations we will be attending.

Foundations – The audits of the campus foundations are performed by separate foundation audit teams. However, as the combined financial statements of the campus foundations are presented discretely in the University's financial statements, we coordinate with and rely upon the work performed by the campus foundation teams.

Regardless of the extent of audit procedures performed at a location, each location has an assigned partner and manager. Accordingly, our engagement teams have established local points of contact to facilitate the completion of scheduling and planning to support local audit requirements as well as discussion of issues of local interest.

Refer to Appendix C for a summary of how we develop our audit strategy and execute our audit.

Audit Timeline

We have developed the following reporting timeline that facilitates the University meeting all of its legal and regulatory requirements. As you can see below, this timeline spans the entire year and represents our commitment to the University throughout the year.

Key Procedures Performed	*Timing of Procedures*
Planning and Audit Management	
Meet with management to understand the University's activities and assess risk; and obtain update of operating plans and activities	Ongoing throughout the year
Assess significant audit risks and materiality	December 2017
Complete preliminary scoping of accounts, processes and locations	December – January 2017
Meet with the Committee to discuss service plan	March 15, 2017
Coordinate with PwC engagement teams and issue instructions for the audits of the University and Medical Center financial statements and benefit plans and Uniform Guidance testing procedures	March– April 2017
Execution and Audit Management	
Provide consultations on major issues and developments	Ongoing throughout the year
Perform updates to understanding and testing of internal controls	April – May 2017
Evaluate nature, timing and extent of substantive procedures based on controls testing	April – May 2017
Perform audit procedures at interim for both financial statements and Uniform Guidance audits	May – June 2017
Perform audit procedures at year end for both financial statements and Uniform Guidance audits	August – October 2017
Completion and Audit Management	
Issue audit opinions and related financial statements	October 2017
Meet with the Committee to communicate results of year-end audit and internal control recommendations	November 2017
Agreed-upon Procedures related to the sale of Mortgage Origination Program and Supplemental Home Loan Program loans	October 2017
Agreed-upon Procedures on Intercollegiate Athletic Departments	November 2017
Issue Report on Uniform Guidance Compliance	February 2018

2017 Proposed Fees

The University is an important client of PwC, and our fees reflect our commitment to our long-term relationship with the University. Our deep understanding of higher education organizations and more specifically, of the University, enable us to perform the audit efficiently and effectively. These factors contribute to a competitive, cost effective audit. Our 2017 proposed fees are listed below and are inclusive of all out-of-pocket expenses.

Deliverable	***June 30, 2017 Proposed Fees***	
Financial Statement Audit	$	1,504,829
Federal Grants and Contracts		510,123
NCAA Agreed-Upon Procedures		206,921
Consolidated Form 990T		11,303
Medical Center Audits		1,735,770
Retirement Plan Cash Contributions		6,101
Retirement System Audits		264,997
Mortgage Origination Program Agreed-Upon Procedures		40,182
Total	**$**	**4,280,226**

Required Communications With the Audit Committee

Matter to be communicated	*Auditor's response*
Relationships between PwC (or any affiliates of the Firm) and the University(and its affiliates) and other matters that might reasonably be thought to bear on independence	We carefully monitor the independence of our team members. Should we become aware of an independence breach or new circumstance that would affect our ability to complete the audit, we will inform you on a timely basis. There were no relationships or other matters identified that might reasonably be thought to bear on independence.
Communications plan	Our communications plan described in Appendix B provides an overview of the form, timing and expected general content of communications with management and the Committee on Compliance and Audit.
Significant issues discussed with management prior to appointment or retention	There were no significant issues discussed with management in connection with the retention of PwC.
Terms of the audit engagement	The terms of the audit engagement, including the objective of the audit and management's and our responsibilities, are set forth in our engagement letter dated February 14, 2017.
Obtain information relevant to the audit	We will inquire of the Committee on Compliance and Audit about whether it is aware of matters relevant to the audit and about the risks of material misstatement.
Summary audit strategy	We will communicate to the Committee on Compliance and Audit the planned audit strategy, including the timing of the audit and the significant risks identified. Matters included in the overall audit strategy include, among other matters, involvement of specialists and the extent of use of the work of internal audit. Refer to Appendix C for a summary of our overall audit strategy.

Matter to be communicated	***Auditor's response***
Perspectives on fraud risks	We will inquire of the Committee on Compliance and Audit to obtain its views on the risk of fraud and whether the Audit Committee has knowledge of any fraud, alleged fraud, or suspected fraud affecting the entity. We will discuss how the Committee exercises oversight of the entity's assessment of the risks of fraud and the entity's antifraud programs and controls (specifically as it relates to the potential for management to override controls). As you are aware, an audit conducted in accordance with generally accepted standards is designed to consider the risk of fraud that could be material to the financial statements, but it is not designed to detect all instances of fraud. From time to time, we may became aware of immaterial instances of fraud through our inquiries or other procedures. To the extent such instances are significant, we will inquire of management to ensure that these matters have been reported to you under existing reporting protocols. We will inform you of any matters of fraud that is potential material to the financial statements or those that may involve members of senior management.
Fraud	We will discuss with the Committee on Compliance and Audit identified potential or known fraud.
Illegal acts	We will discuss with the Committee on Compliance and Audit identified potential illegal acts.
Accounting policies and practices, critical accounting estimates and significant unusual transactions	We will communicate to the Committee on Compliance and Audit: ■ Significant accounting policies and practices, including: – The initial selection of and changes in significant accounting policies and practices or their application in the current period – The effect on financial statements or disclosures of significant accounting policies in controversial or emerging areas or areas for which there is a lack of authoritative guidance or consensus or diversity in practice ■ Critical accounting estimates, including: – A description of the process management used to identify and develop critical accounting estimates – Management's significant assumptions used in critical accounting estimates that have a high degree of subjectivity – Any significant changes management made to the processes used to develop critical accounting estimates or significant assumptions, a description of management's reasons for the changes, and the effects of the changes on the financial statements ■ Significant unusual transactions, including: – Significant transactions that are outside the normal course of business for the University or that otherwise appear to be unusual due to their timing, size, or nature – The policies and practices management used to account for significant unusual transactions

Matter to be communicated	*Auditor's response*
Quality of the University's financial reporting	We will communicate to the Committee on Compliance and Audit our views about qualitative aspects of the University's significant accounting policies and practices, including situations in which we identified bias in management's judgments about the amounts and disclosures in the financial statements. In addition, we will communicate: ■ The appropriateness of the significant accounting policies to the particular circumstances of the University ■ The results of our evaluation of the differences between (i) estimates best supported by the audit evidence and (ii) estimates included in the financial statements, which are individually reasonable, that indicate a possible bias on the part of the University's management ■ The basis for our conclusions regarding the reasonableness of the critical accounting estimates ■ The results of our evaluation of whether the presentation of the financial statements and the related disclosures are in conformity with the applicable financial reporting framework, including our consideration of the form, arrangement, and content of the financial statements (including the accompanying notes) ■ The issues involved, and related judgments made, in formulating particularly sensitive financial statement disclosures (for example, disclosures related to revenue recognition, going concern, subsequent events, and contingency issues) ■ The potential effect on the financial statements of significant exposures and risks, and uncertainties, such as pending litigation, that are disclosed in the financial statements
Alternative accounting treatments	We will discuss with the Committee on Compliance and Audit alternative treatments permissible under US GAAP for accounting policies and practices related to material items, including recognition, measurement, and presentation and disclosure.

Appendix A

Relevant Pronouncements and External Guidance

GASB Pronouncements

Over the course of the year, we make available to management and the Committee various publications that provide updates on relevant accounting, auditing and regulatory matters as well as reviewing managements resolution memos.

The following is a summary of latest developments on proposed standards:

Statement No. 74, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans

In June 2015, the GASB issued Statement No. 74*, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*. The objective of this Statement is to improve the usefulness of information about postemployment benefits other than pensions (other postemployment benefits or OPEB) included in the general purpose external financial reports of state and local governmental OPEB plans for making decisions and assessing accountability. This Statement results from a comprehensive review of the effectiveness of existing standards of accounting and financial reporting for all postemployment benefits (pensions and OPEB) with regard to providing decision-useful information, supporting assessments of accountability and interperiod equity, and creating additional transparency.

Statement No. 74 is effective for the University for the year ending June 30, 2017.

Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions

In June 2015, the GASB issued Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*. The primary objective of this Statement is to improve accounting and financial reporting by state and local governments for post-employment benefits other than pensions (other postemployment benefits or OPEB). It also improves information provided by state and local governmental employers about financial support for OPEB that is provided by other entities. This Statement results from a comprehensive review of the effectiveness of existing standards of accounting and financial reporting for all postemployment benefits (pensions and OPEB) with regard to providing decision-useful information, supporting assessments of accountability and inter-period equity, and creating additional transparency.

Required adoption for Statement No. 75 is the year ended June 30, 2018, however the University plans to adopt this Statement early in the year ending June 30, 2017.

In addition to GASB 74 and 75 discussed above, the following GASB pronouncements will have an effect on the University for the year ending June 30, 2018 and beyond but are not expected to have a significant impact on the University.

Statement No. 81, Irrevocable Split-Interest Agreements

In March 2016, the GASB issued Statement No. 81, *Irrevocable Split-Interest Agreements*. The objective of this Statement is to improve accounting and financial reporting for irrevocable split interest agreements by providing recognition and measurement guidance for situations in which a government is a beneficiary of the agreement. This Statement requires that a government that receives resources pursuant to an irrevocable split-interest agreement recognize assets, liabilities, and deferred inflows of resources as the inceptions of the agreement. Furthermore, this Statement requires that a government recognize assets representing its beneficial interest in irrevocable split-interest agreements that are administered by a third party, if the government controls the present service capacity of the beneficial interest. This Statement requires that a government recognize revenue when the resources become applicable to the reporting period.

Statement No. 81 is effective for the University for the year ending June 30, 2018.

Statement No. 83, Certain Asset Retirement Obligations

In November 2016, the GASB issued Statement No. 83, *Certain Asset Retirement Obligations*. This Statement addresses accounting and financial reporting for certain asset retirement obligations (AROs). An ARO is a legally enforceable liability associated with the retirement of a tangible capital asset. A government that has legal obligations to perform future asset retirement activities related to its tangible capital assets should recognize a liability based on the guidance in this Statement.

Statement No. 83 is effective for the University for the year ending June 30, 2019.

Statement No. 84, Fiduciary Activities

In Januray 2017, the GASB issued Statement No. 84, *Fiduciary Activities*. This Statement addresses the identification of fiduciary activities for accounting and financial reporting purposes and how those activities should be reported. The statement aims to enhance the consistency and comparability of fiduciary activity reporting by state and local governments. This Statement also is intended to improve the usefulness of fiduciary activity information primarily for assessing the accountability of governments in their roles as fiduciaries

Statement No. 84 is effective for the University for the year ending June 30, 2020.

Appendix B

Our Audit Objectives

As the University's auditor, we are responsible for reporting on numerous financial statements.

Our audit engagement is directed toward delivering our services at three levels:

For stakeholders	Independent opinions and reports that provide assurance on financial information released by the University
For the Committee	Assistance to the Committee in discharging its governance compliance responsibilities
For management	Observations and advice on financial reporting, accounting and internal control issues from our professionals, including sharing experience on industry best practices

In performing our audits for 2017, our primary objectives are as follows:

- Opine on the University of California financial statements, University of California Retirement System financial statements, including the University defined benefit retirement plans, University retirement savings program and report on the University of California Retirement Plan's Schedule of Cash Contributions, the University's Captive Insurance Company and each of the five University Medical Centers, in accordance with generally accepted auditing standards (GAAS) and, as applicable, *Government Auditing Standards (GAS)*.
- In connection with our audits, we will obtain reasonable rather than absolute assurance about whether the financial statements are free of material misstatement, whether caused by error or fraud.
- Perform an audit of the University's compliance with federal award requirements (OMB Uniform Guidance) in accordance with GAS.
- Communicate in writing to management and the Committee all material weaknesses and significant deficiencies identified during the audit. In addition, communicate in writing to management all deficiencies in internal control of a lesser magnitude identified during the audits.
- Pursuant to professional standards, communicate certain other matters to the Committee on a timely basis.

In meeting these objectives, we will do the following:

- Consult with management on a timely basis regarding accounting and financial reporting issues and ensure all matters of significance are reviewed and discussed at the Office of the President and the relevant location level.
- Coordinate efforts with management to ensure that all significant financial statement components are subject to sufficient audit coverage.
- Evaluate changes in the University, risk profile and internal controls to determine the nature, timing and extent of our testing of controls and substantive tests.
- Provide relevant expertise to facilitate the resolution of important issues.
- Report the results of our work to management and the Committee, including constructive observations relating to the University's financial processes and controls.

We note that the campus foundations have separate audits of their financial statements and the auditor's reporting on those foundations are directed to the individual foundation audit committees. Accordingly, this Audit and Communications Plan is not focused on the specifics of the campus foundations.

Mutual Understanding of Responsibilities

PwC Responsibilities

Our responsibility is to express opinions, based upon our audits, on the University's consolidated financial statements, the University of California Retirement System financial statements; and the five Medical Center financial statements. We conduct our audits in accordance with GAAS and GAS. Those standards require that the auditor obtain reasonable rather than absolute assurance about whether the financial statements are free of material misstatement, whether caused by error or fraud. Accordingly, a material misstatement may remain undetected. Also, an audit is not designed to detect error or fraud that is immaterial to the financial statements. An audit includes obtaining an understanding of internal control sufficient to plan the audit and to determine the nature, timing and extent of audit procedures to be performed. An audit is not designed to provide assurance on internal control or to identify all significant deficiencies. However, as your auditor, we are responsible for ensuring that Committee is aware of any significant deficiencies or material weaknesses that come to our attention.

Our responsibility with respect to other information in documents containing audited financial statements is to read such information and consider whether the information or the manner of its presentation is materially inconsistent with information appearing in the basic financial statements.

Our responsibility with respect to Committee communications is to convey those matters that have come to our attention as a result of the performance of our audit.

Our audit does not relieve management of its responsibilities with regard to the financial statements.

We also are responsible for issuing several agreed upon procedures reports, for purposes of the Mortgage Origination Program and Supplemental Home Loan Program as well as agreed upon procedures at seven of the ten campuses covering the National Collegiate Athletic Association Bylaws. These agreed upon procedures engagements and resulting reports are performed in accordance with the attestation standards established by the American Institute of Certified Public Accountants. These procedures do not constitute an examination, but rather are procedures designed in conjunction with the specified parties receiving the reports.

Management's Responsibilities

As part of the audit process, management is responsible for the following:

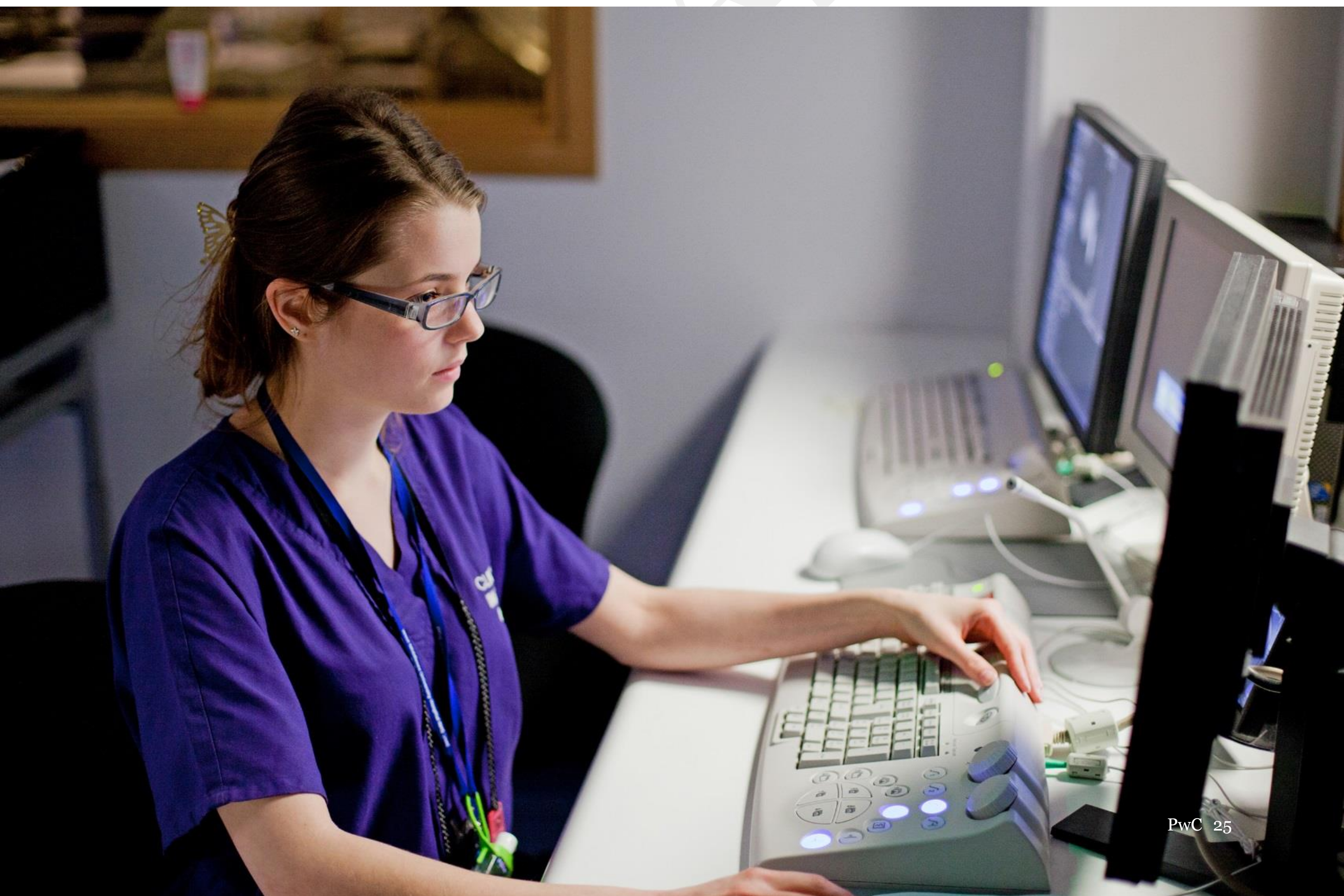
- Preparing the University's, Medical Centers', and benefit plans' financial statements in accordance with generally accepted accounting policies.
- Establishing and maintaining effective internal control over financial reporting.
- Identifying and ensuring that the University complies with the laws and regulations applicable to its activities.
- Making all financial records and related information available to PwC.
- Providing PwC with a letter that confirms certain representations made during the audits.

Adjusting the financial statements to correct material misstatements and affirming to PwC in the representation letter that the effects of any uncorrected misstatements aggregated by PwC during the current engagement pertaining to the latest period presented are immaterial, both individually and in the aggregate, to the financial statements taken as a whole.

Committee's Responsibilities

As part of the audit process, the Committee is responsible for the following:

- Oversee the reliability of financial reporting including the effectiveness of internal control over financial reporting.
- Review and discuss the annual financial statements for the University, the Medical Centers and the benefit plans and determine whether they are complete and consistent with operational and other information known to Committee members.
- Understand significant risks and exposures and management's response to minimize those risks.
- Understand the audit scope and approve audit and non-audit services.



Communications and Planned Interactions

Our Communications Plan With Management

We communicate with management both in writing and verbally continuously throughout the year. Examples of our ongoing communications include:

- Issues identification and resolution
- Meetings with management at Office of the President, Office of the *Chief Investment Officer*, local campuses and Medical Centers
- Planning and scoping discussions
- Internal Audit planning and coordination
- Discussions of interim audit findings
- Review of draft financial statements
- Year-end clearance meetings

Our Communications Plan With the Committee

Our communications with the Committee are designed to comply with standards established by the American Institute of Certified Public Accountants.

Our formal communications will occur via periodic meetings with the Committee at various stages during the year. As part of these meetings we will communicate with the Committee our service approach and audit plan, and our views on risks and controls, including those over financial reporting and governance. In addition, we will present the results of our audits upon completion.

In addition to our scheduled meetings, we are also available, at any time, to respond to Committee members' questions.

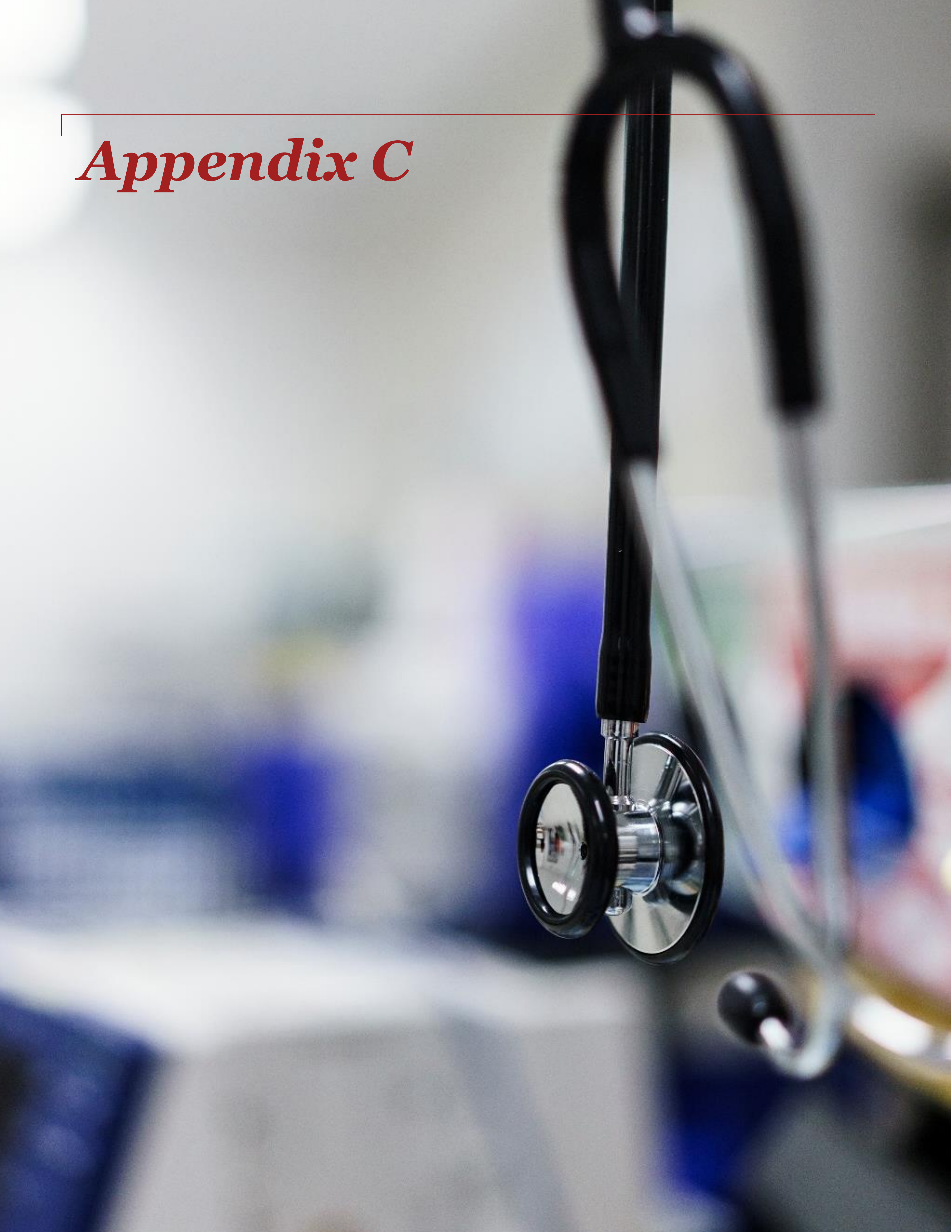
Our Interaction With Internal Audit

Although our objectives and responsibilities are necessarily different from those of Internal Audit, the efforts of both our organizations are very much complementary and provide a combined program of balanced audit coverage for the University. We will meet with Internal Audit to update our understanding of their recent activities and discuss our risk assessment and audit approach.

We consider Internal Audit to be an effective and important element in the University's overall internal control environment. We complete certain procedures when relying on their work, as follows:

- Review on a timely basis Internal Audit reports and management responses.
- Understand the Internal Audit plan, including the nature, timing and extent of work.
- Consider the impact of internal audit findings on our audits.

Appendix C



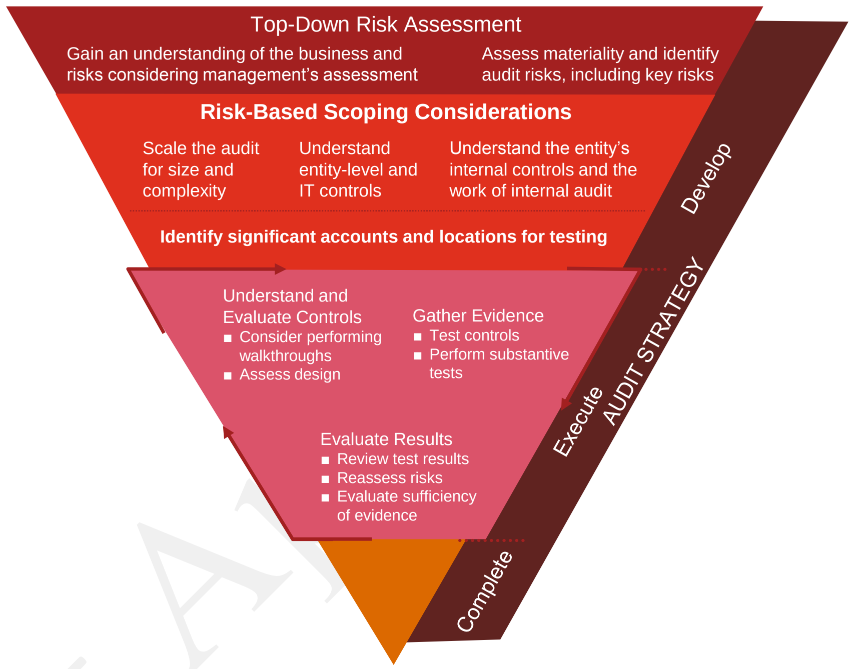
Audit Strategy

Developing Audit Strategy

Top-Down Risk Assessment

Our audit approach is based on the application of well-reasoned professional judgment. We identify audit risks first by considering the business and its environment, and then by considering the key risks related to the significant accounts and relevant assertions, locations or business units and significant processes. Key risks are audit risks that require special audit consideration.

Where applicable, we also obtain an understanding of management's risk assessment. The result is the development of an audit strategy tailored to the risk conditions of the University and focused on identifying and testing only those key controls that are relevant to preventing or detecting material misstatements of the financial statements, whether caused by error or fraud.



Opinion on the Consolidated Financial Statements

Risk-Based Scoping Considerations

Fundamental to our top-down, risk-based audit approach is an understanding of:

- The size and complexity of the business and its components.
- The existence and effectiveness of entity-level and information technology general controls ("ELCs and ITGCs") in our determination of the nature, timing and extent of testing.
- The existence and effectiveness of internal controls.

We scale our audit approach by considering the size and complexity of the business and management's monitoring of controls and business processes. By appropriately scaling the audit, we consider the control environment in which the University operates, which has a pervasive impact on our assessment of the controls necessary to address material risks of misstatement.

Early in the audit process, we assess ELCs and the University's use of IT. ELCs are controls that may be operational throughout the entire organization, both at a corporate and business unit/management unit level. Our evaluation of the effectiveness of ELCs and the level of precision at which they operate can result in increasing or decreasing the testing that we otherwise would have performed on controls at the process, transaction or application levels. Accordingly, we emphasize the upfront identification and testing of ELCs, which can have a significant impact on the nature, timing and extent of our controls testing.

Generally, IT is a critical element in developing the audit plan. The assessment of IT considers the level and complexity of controls automation, system complexity, platforms used, approach to security and the security architecture, known problems, and the nature and volume of transactions. This understanding assists in determining the approach to auditing the effectiveness of automated controls and ITGCs.

Determining Significant Accounts and Locations

Once we have completed our initial risk assessment and gained an understanding of ELCs and ITGCs, we will determine the most effective and efficient way to obtain audit evidence using well-reasoned professional judgment. This determination begins at the financial statement level by identifying significant accounts and disclosures, considering the relevant assertions related to those accounts and disclosures, and identifying the significant processes and key controls.

Determining Significant Accounts

The determination of whether an account or disclosure is significant to the audit of the financial statements is based on whether there is a reasonable possibility that the account could contain a misstatement that, individually or when aggregated with others, could have a material effect on the financial statements. In addition to quantitative metrics, risk factors such as the following contribute to our determination of the significance of an account or disclosure:

Size and composition of the account	Accounting and reporting complexities associated with the account or disclosure
Susceptibility of misstatement due to errors or fraud	Exposure to losses in the account
Volume of activity, complexity and homogeneity of the individual transactions processed through the account or reflected in the disclosure	Possibility of significant contingent liabilities arising from the activities reflected in the account or disclosure
Nature of the account or disclosure	Existence of related party transactions in the account
Changes from the prior period in account or disclosure characteristics	Knowledge obtained in prior audits

For those accounts and disclosures deemed significant, we identify relevant financial statement assertions and the significant processes and then identify the key controls which serve to prevent or detect a material misstatement.

Determining Locations

The scoping of locations is based on the risk of material misstatement. In determining the locations or business units at which to perform tests of controls, we assess the risk of material misstatement of the financial statements associated with the location or business unit and correlate the amount of audit attention devoted to the location or business unit with the degree of risk.

Executing Audit Strategy

We execute our audit strategy using the following process:

- Understanding, evaluating and assessing the design of controls through inquiry, observation, inspection and reperformance, including walkthroughs.
- Gathering evidence by execution of controls testing through our own work and substantive testing.
- Evaluating the results of our testing, including reassessing risk and the sufficiency of evidence.

Assessing the Design of Controls

We evaluate and assess the design of controls with information obtained from various sources including our interaction with management, knowledge obtained from past audits, performing walkthroughs where deemed appropriate and different combinations of inquiry, observation, and inspection. Our controls testing provides us with evidence of the design and operating effectiveness of controls, including those related to the prevention or detection of fraud. Our controls testing approach is dependent on the work of internal audit and their competence and objectivity.

Gathering Evidence

We obtain sufficient competent evidence through a combination of our own audit procedures and reliance placed on the work of internal audit. We ensure an efficient audit by focusing only on those key controls that prevent or detect material misstatements of the financial statements, whether caused by error or fraud. For those identified key controls, we test operating effectiveness. Our method of testing will depend, amongst other things, on the risk of misstatements that the controls are intended to prevent or detect, the inherent risk associated with the related account and assertion, the control's complexity and other factors affecting the risk associated with the control. As the risk of material misstatement increases, the amount of audit evidence needed increases.

We assess the effectiveness of internal control and the nature of risk associated with an account in determining the nature, timing and extent of substantive procedures. The nature and degree of risk is the key determinant in how much additional audit evidence should be obtained from analytical procedures (such as trend or ratio analysis), tests of details (such as vouching third-party source documentation) or a combination of these procedures.

Evaluating Results

Our risk assessment is a pervasive process in which we continuously evaluate the nature, timing and extent of testing and determine whether we have obtained sufficient competent evidence. We evaluate evidence from the work of others, and our independent tests of controls and substantive audit evidence. The results of certain tests may lead to changes in our risk assessment, which may either increase or reduce the procedures performed.

Completion

Prior to the issuance of our audit opinion on the various financial statements, we will perform audit completion activities, including the evaluation of internal control deficiencies; the review of the financial statements, including the adequacy and reasonableness of presentation and footnote disclosures; and the performance of other audit procedures as required by professional standards.

Business, Regulatory and Other Changes Impacting Our Audit

Our 2017 audit plan has been updated to reflect our prior years' experience, changes in the University and current regulatory developments. In forming our 2017 audit plan, we factored in our experience from our most recent 2016 audit of the University, including further enhancing our risk-based approach to the audit and our scoping of significant locations and accounts. Each year we take a "fresh look" at our audit approach and consider areas of the audit that we can perform more efficiently, while still achieving the same effectiveness. We actively keep current with the University through the actions detailed below:

Monitoring Regulatory Developments

- Continuing to monitor developments in federal and state hospital reimbursement mechanisms and their potential effect on the University's Medical Centers;
- Monitoring developments in government contracting regulations and their potential effect on federal contracts held by the University;
- Identifying other regulatory developments which could either affect our audit procedures under a risk-based approach or have longer term implications; and
- Working with management to assess the impact of future technical pronouncements on the University's various financial statements.

Capital Spend/Significant IT Implementations

Monitoring capital and IT spend for audit implications--with the continuing amount of capital spending, including significant new construction and IT projects (e.g., Merced 2020, UCPath, EPIC), we will obtain an understanding of the University's capital spending programs, evaluate the risks and controls associated with the various programs, and assess the design of those controls. We also consider and evaluate any IT system changes and their impact to our audit scope and consider discrete testing of these expenditures.

Advising on Significant Transactions

We will provide input to management on the potential accounting impact and reporting treatment for significant transactions such as Merced 2020 Project for UC Merced's campus expansion plan and UCSF campus gift of $500 million from the Helen Diller Foundation. This will help management make informed decisions and eliminate surprises.

Approach for Areas of Significant Risk

As described in the PwC Audit Approach section of this document, our integrated audit approach is a top-down, risk-based approach, and we continually reassess audit risks throughout the audit process.

Higher risk areas, in our judgment, require special audit consideration because of the nature of the risk (higher inherent risk), the likely magnitude of potential misstatements (including the possibility that the risk may give rise to multiple misstatements) and the likelihood of the risk occurring.

We have obtained an understanding of your financial, accounting, business and information system strategies in order to assess audit risks at the University. The following list summarizes audit risks and our approach for the 2017 financial statement audits and the procedures we will perform to reduce the related audit exposure. It is not intended to be a complete listing of all risks or all procedures that we perform in connection with our audits.

Audit Area	*Risk Factors*	*Audit Implications/Approach*
Valuation of alternative investments	■ Investments may not be valued appropriately. ■ Given the size of the University's portfolio, that it includes non-readily marketable securities, and the inherent risks and complexity of this area, our audit continues to place significant emphasis on the University's investment portfolio. ■ Valuation of securities, including non-marketable securities, such as private equity funds, real estate limited partnerships and hedge funds, are inherently more complex to value.	■ Obtain an understanding of the processes and procedures in place to ensure the existence and valuation of investments. ■ Test the operating effectiveness of key controls within the investments cycle, including due diligence and monitoring controls. ■ Assess the financial reporting risk inherent in each fund based on the level of transparency into each investment. ■ Consider the experience and expertise of individuals responsible for the accuracy of the fair value of investments. ■ Understand and evaluate service organizations used. ■ Confirm fair values of securities, on a sample basis. ■ Obtain audited/reviewed financial statements for selected non-readily marketable securities. ■ Review all important reconciliations and year end portfolios for evidence of non-recorded transactions and contracts; confirm material pending trades and other liabilities.
Fraud risk in revenue	■ We have a responsibility to plan and perform our audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether caused by error or fraud.	■ Gain an understanding of the material risks of fraud at the University and perform audit procedures to address those risks, including management interviews, testing of journal entries, disaggregated revenue analytics and incorporating unpredictability into our audit work. ■ See "Perspectives on Fraud Risk and Responsibilities" section of this document.

Audit Area	*Risk Factors*	*Audit Implications/Approach*
Grants and contract revenue; and educational activities	■ The University receives significant funding from various agencies. The University must continue to comply with compliance regulations of federal agencies.	■ Obtain sponsored research contracts to gain comfort on the existence of the revenues received. ■ Test compliance with allowable cost principles for federally funded sponsored research programs in accordance with OMB Uniform Guidance, "*Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal awards*" and other specific grant requirements. ■ Perform analytical review of revenues. ■ Assess and test key compliance controls; test compliance with material compliance requirements applicable to major programs.
Medical Center patient service revenue	■ Revenue transactions are not processed in the proper period. ■ The environment surrounding billing, collecting and determining reserves continues to be complex. ■ Accounts may not exist.	■ Perform patient revenue testing, verifying the existence of patient charges. ■ Supplement our tests with analytical procedures on all key areas. ■ Assess the reasonableness of management's estimates for contractual allowances and bad debts by evaluating the current year's methodology, assessing the adequacy of the prior year's estimates and substantive analytics. ■ Utilize our Healthcare Reimbursement Specialists to assist us in our testing of contractual allowances.
Management override of controls	■ Financial statements could be materially misstated. ■ Misappropriation of assets.	■ Evaluate the design and operating effectiveness of internal controls as well as perform substantive tests of details for significant risk areas including testing journal entries.

Materiality and Independence

Materiality

We consider both quantitative and qualitative factors in our assessment of materiality. We also assess the metrics used by the users of the financial statements in determining the appropriate base for calculating materiality.

Materiality is defined as *'the magnitude of an omission or misstatement of accounting information that, in the light of surrounding circumstances, makes it probable that the judgment of a reasonable person relying on the information would have been changed or influenced by the omission or misstatement.'*

We identify and assess the risk of material misstatement at:

- The overall financial statement level, and
- In relation to classes of transactions, account balances and disclosures.

Our determination of materiality is a matter of professional judgment, and is affected by our perception of the financial information needs of users of the financial statements. Therefore, the benchmark we use to calculate materiality varies based on the audit being performed.

For the University's consolidated financial statements, we use total expenditures as our benchmark. Industry practice is to apply a percentage of 1% to 3% of this benchmark of total expenditures to calculate overall materiality.

For the University's medical centers' financial statements, we use total operating revenues as our benchmark. Industry practice is to apply a percentage of 1% to 3% of this benchmark of total operating revenues to calculate overall materiality.

For the University's benefit plans, we will use either total assets or net assets as our benchmark. Industry practice is to apply a percentage of 0.5% to 3% of these benchmarks to calculate overall materiality.

Independence

As auditors of the University, we are subject to a variety of standards to ensure our independence, including American Institute of Certified Public Accountants, Governmental Accountability Office and internal PwC standards. Our quality control processes include confirmation of independence by professional staff and training and are established to ensure our continuing independence.

We hereby confirm our independence of the University for the fiscal year ending June 30, 2017. We will reconfirm our independence at the completion of our June 30, 2017 audits for the University.

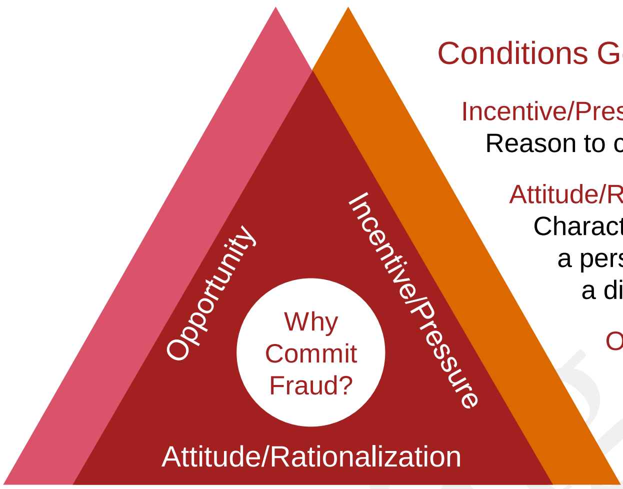
Perspectives on Fraud Risk

We have a responsibility to plan and perform our audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether caused by error or fraud. In order to fulfill that responsibility, as part of our audits, we are required to gain an understanding of the risk of material misstatement due to fraud at the University and perform certain procedures to respond to the fraud risks identified.

Types of Fraud

Fraudulent Financial Reporting

Misappropriation of Assets



Conditions Generally Present

Incentive/Pressure
Reason to commit fraud

Attitude/Rationalization
Character or set of ethical values that allow a person to knowingly and intentionally commit a dishonest act

Opportunity
Circumstances exist such as the absence of controls, ineffective controls or ability for management to override controls that allow fraud to occur

Attributes Contributing to Increased Fraud Risk

- Size, complexity and ownership attributes of the Company
- Type, significance, likelihood and pervasiveness of the risk

The oversight responsibilities of senior management and the Committee and PwC's responsibilities are outlined below.

Management Responsibilities	■ Design and implement programs and controls to prevent, deter and detect fraud (antifraud programs) ■ Ensure that the University's culture and environment promote honesty and ethical behavior ■ Perform a risk assessment that specifically includes the risk of fraud addressing incentives and pressures, opportunities, and attitudes and rationalization ■ Assess management override of controls and communicate with the Committee

Committee Considerations

- Evaluate management's identification of fraud risks, implementation of antifraud measures, and creation of appropriate "tone at the top"
- Ensure that senior management implements appropriate fraud deterrence and prevention measures to better protect investors, employees and other stakeholders
- Investigate any alleged or suspected wrongdoing brought to its attention
- Challenge management in the areas of non-routine, related party and inter-company transactions

PwC's Role

- Plan and perform the audit to provide reasonable assurance that the financial statements are free of material misstatement, whether caused by fraud or error
- Evaluate whether the University's programs and controls that address identified risks of material misstatement due to fraud have been suitably designed and placed in operation
- Evaluate management's process for assessing effectiveness of antifraud programs and controls
- Evaluate fraud of any magnitude on the part of senior management and the impact on the control environment

PwC's Procedures

In order to fulfill our responsibilities related to fraud, we plan to perform the following procedures:

- Inquiries of management, the Chair of the Committee, Internal Audit and others related to knowledge of fraud or suspected fraud, the fraud risk assessment process and how fraud risks are addressed by the University
- Disaggregated analytical procedures, primarily over revenue
- Incorporate an element of unpredictability in the selection of the nature, timing and extent of audit procedures to be performed annually
- Identify and select journal entries and other adjustments for testing
- Evaluate estimates ad assumptions used by management that could have a material impact on the financial statements
- Review Internal Audit reports and remain alert for matters that are indicators of fraud

Appendix D

2016 Service Commitments-Responses

To provide a high quality and efficient audit, we must understand the University's needs and expectations. Our ongoing meetings with management and the Committee are a key part of the audit process in ensuring we obtain that understanding. Below is a summary of those key ongoing expectations and our related responses based on initial discussions with management of the University and our existing knowledge of the University. We welcome your feedback regarding our performance at any point.

Our Service Commitments for the 2016 Audit

In preparing for this year's audit, we have listened to your input on what is most important to you as it relates to your needs and expectations for the audit. Below are the commitments we are making to you related to delivering a quality audit in accordance with professional standards. Throughout the year, we plan to revisit these commitments and evaluate our progress with you and welcome your feedback on how we can best work together.

What we heard about your needs and expectations and our commitments to you	*Value delivered to the University of California*
Engagement team	■ Key senior team members with experience in the industry including partners and managers who participated in the 2013 audit were part of the engagement team for most of the locations. ■ All new staff went through necessary governmental trainings, accelerating their effectiveness on the University audit. ■ Jim Henry, a member of PwC's U.S. Leadership Team and Strategy Committee served as your Senior Relationship Partner to help ensure that we deliver the highest quality service to the University and have met with Nathan Brostrom, CFO to obtain feedback on our performance.
Audit performance	■ The Audit team including engagement partner Mike Schini conducted a system-wide debrief meeting with University management held on November 21, 2016 with key team members of University management including Peggy Arrivas and Ruth Satorre. ■ Debrief meetings with local component management were also held at various times subsequent to the year-end fieldwork. ■ The Audit team worked timely with University on various transactions and technical issues including the Xtandi transaction, the treatment of the OCERS defined benefit multi-employer pension plan, the impact of GASB 39 for the Lawrence Berkeley National Lab Foundation as a Discretely Presented Component Unit and the Medical Center' Inter-entity allocation of employee benefit expense and liability. ■ Although being engaged in late April for the prior year's audit, we brought necessary resources together quickly to complete the audit timely and in a manner that responded to the

What we heard about your needs and expectations and our commitments to you	***Value delivered to the University of California***
	complexities of the University's business and risks, with regular communication until completion between PwC, University management and the Committee. ■ Mike Schini, Mike MacBryde and Billy Kim held an annual meeting with the University's Chief Compliance and Audit Officer, Sheryl Vacca, to discuss the University regulatory and compliance activities including the overall audit plan for the University. In addition, each PwC component team held meetings with local internal audit contacts at each in scope location to understand the local audit plan, obtain results of internal audits occurred and also to share our external audit scope with them. ■ Jeffrey Fox and his team of Risk Assurance (IT and Internal Controls) specialists held initial scoping meetings with key members of IT management to gain insight into the University's IT environment as it relates to financial reporting in order to develop a consistent audit approach across all key locations.
Coordination, communication and project management	■ The Audit team at a system-wide and component team level held weekly meetings with University management to discuss audit status. In addition to these weekly meetings, ad-hoc meetings were held with key members of University management to ensure open lines of communication and to keep management informed about any issues foreseen. ■ For significant findings or investigations, we also connected with Sheryl Vacca, the University's Chief Compliance and Audit Officer, and her team on any items that arose that impacted our audit effort. ■ Our Risk Assurance team leveraged a central core team of experienced professionals to lead the engagement's IT audit effort which created many efficiencies with both client and internal coordination and communication. This coordinated approach also allowed the team to observe common themes across locations and provide some insight on how locations were responding to and remediating similar issues. ■ IT observations and recommendations were formally reported to Peggy Arrivas, Ruth Sattorre, and David Rusting at the conclusion of our IT audit procedures, and communicated with the respective locations on a more real-time basis to avoid surprises and to allow ample time for discussion and agreement with local IT management. ■ In order to ensure close communication was maintained with each component team, weekly internal meetings were held. This allowed any issues or matters to be raised and addressed timely to ensure issuance of deliverables were not adversely impacted. These meetings gave the PwC UCOP and component audit teams an opportunity to connect and collaborate to avoid any duplication of effort across teams. ■ We implemented various firm wide project and audit management tools in order to streamline the audit process. One of those tools was PwC Client Connect, a secure, web-based technology tool used during the audit process to exchange information between the University and the PwC audit team. Connect allowed for more efficient exchange of information at each stage of the audit and helped streamline the entire process—recording when information was

What we heard about your needs and expectations and our commitments to you	*Value delivered to the University of California*
	requested, when the University team responded, and when the audit team accepted the University response. ■ Feedback has been sought and obtained as part of the debrief meetings held across the various locations from members of University management. Feedback related to PwC's service to the University is being incorporated into our service for the 2017 audit
Business insights	■ As mentioned above, Mike Schini, Mike MacBryde and Billy Kim had periodic touchpoints with the University's Chief Compliance and Audit Officer, Sheryl Vacca to discuss regulatory and compliance updates. ■ Our Risk Assurance team shared leading practices and thought leadership on a variety of IT subjects including perspectives on how organizations are preparing for threats related to cybersecurity, knowledge of EPIC and introduction of specialists, internal controls related to program development and change management in preparation for future system implementations and recommendations for on-going monitoring of user access. ■ The Audit team shared industry leading practices and thought leadership with the University including its Medical Center management throughout the 2016 audit such as our Top health industry issues of 2017, Medical cost Trend: Behind the Numbers 2017, annual Academic Medical Center benchmark report and our annual Perspectives in Higher Education Report. Additionally, we utilized our National office to review and provide comments on the University and Medical Center financial statements early in the audit process. ■ Technical accounting and financial reporting matters relevant to the University's 2016 financial statements were addressed in conjunction with management in advance of year-end audit work. Key members of the Audit Team senior management and were applicable relevant industry experts have reviewed University managements 'Issues Resolution Memos' (IRMs) on the implementation of various GASB pronouncements and have provided comments. Such IRMs include management's position on GASB 72 through 80 and 82. ■ John Mattie is scheduled to facilitate panel discussions at the annual Big Ten CFO meeting set to take place in April 2017. John will bring his knowledge and insight as National Education & Nonprofit Practice Leader in PwC. John has diversified audit and consulting experience with particular expertise serving public and private research universities with academic medical centers. ■ Experts in workers compensation and IBNR liabilities were engaged to review the University's self-insurance reserves. As previously noted, our Risk Assurance team who specialize in IT provided valuable observations to management concerning relevant systems used by the University. Pension specialists were used in order to provide their expertise concerning the assumptions and methodologies employed in developing pension reserves. Various other industry specialists have been engaged during the audit process to provide valuable inputs on complex matters important to the University.

What we heard about your needs and expectations and our commitments to you	***Value delivered to the University of California***
	■ Martha Garner, who serves as National Technical Accounting Director for Higher Education and Healthcare and has been exclusively servicing higher education and healthcare entities in her national role for more than 25 years, to provide technical advice and advice on emerging GASB pronouncements and ensure the timely resolution of technical issues for the University. Martha was utilized throughout the audit to leverage her knowledge and expertise including her perspective on particular implementation related questions on GASB 72. ■ Ralph DeAcetis (our Higher Education and Uniform Guidance Regulatory Managing Director) provided insight to our Uniform guidance team on the latest developments from Office of Management and Budget on the new Uniform Guidance requirements and expectations, the Department of Education, and other key federal initiatives impacting the University's federal award programs. These insights were communicated and shared with management overseeing the University's Uniform Guidance reporting. ■ Mike MacBryde (your lead Healthcare Partner) along with Jose Robles, our Health Services Third Party Reimbursement Specialist shared perspectives and updates on healthcare regulatory compliance and reimbursement with management and through sharing of thought leadership.

Appendix E

Perspectives in higher education 2016

2016

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Introduction

Higher education continues to be impacted by new regulations, governmental oversight, and persistent financial scrutiny. In addition to these recurring external forces, institutions are also facing internal pressures such as on-campus student activism that is attempting to alter institutions' agendas based on demands being placed on administrators and professors. These forces are coupled with increased expectations regarding institutional performance and accountability from constituents such as faculty and staff, parents, donors, federal regulators and state governments.

In this edition of "Perspectives in higher education" we have highlighted several of the areas that institutions are assessing. These include the non-tenured faculty model, strategic considerations for academic medical centers, and the how the use of "big data" analytics can modify the way institutions analyze student, faculty and financial outcomes. From an operational perspective, other key issues that demand the attention of management and trustees include strategies around information technology, financial demands related to student access and affordability, and overall talent management initiatives related to administrative personnel. Additionally, we highlight the current regulatory environment and how institutions are structuring their risk and compliance efforts to deal with evolving business risks and rules and regulations.

Looking forward, this edition also provides a glimpse into how the presidential election may impact the industry based on the candidates' preliminary positions on education. Additionally, we have provided insights into how global trends (or "megatrends") that are affecting the world economy may impact the future of higher education.

Notwithstanding the ongoing changes within the industry and continued pressures from external forces, the United States higher education system continues to maintain its prominence around the globe and sets the standard for many other countries. Approaching change in a proactive and positive manner will ensure success and continued leadership in the years ahead.

This document was created to share PwC's insights into the key challenges and related opportunities facing colleges and universities, and to offer an informed point of view on how institutions might proactively respond. As a leader in providing audit, tax, and advisory services to the higher education and not-for-profit industry, PwC has been honored to work with many of the nation's premier educational institutions in addressing their most pressing challenges. Our contributors to this paper are working with your peers on regulatory, tax, risk, and operational issues and are in an excellent position to share trends, insights and perspectives.

We hope you use this document as a platform for collaborative discussion on the items most pertinent to your institution. I invite you to contact me at (646) 471-4253 with any questions or comments you may have.

John A. Mattie
National Higher Education and Not-for-Profit Practice Leader

The Washington outlook

Background

The presidential primaries and upcoming presidential, house and senate elections have created a sense of the unknown for higher education institutions. Specifically, presidential candidates have opposing views on the education industry and potential regulations. Additionally, initiatives are ongoing and could significantly impact higher education. Federal initiatives include the Senate Finance Committee and House Ways and Means Oversight Subcommittee sending an endowment inquiry to 56 private colleges and universities with endowments over $1 billion. Potential changes and news coming out of Washington emphasize higher education institutions and could continue to expand regulatory requirements in an already highly regulated industry. We have summarized below several policy and regulatory matters on the federal agenda.

Impact on educational institutions

College rating system

The Obama Administration had previously sought to increase accountability and improve educational outcomes in the higher education sector through a ratings system covering public, private, and for-profit schools. The rollout of this effort began with a speech by the President at the University of Buffalo on August 22, 2013. As a first step, President Obama proposed creating a ratings system that would be published by the White House and the Consumer Financial Protection Bureau. As a second step, the Administration proposed tying those college performance ratings to federal student aid dollars. On December 19, 2014, the Department of Education released the Administration's "framework" for college ratings, which included numerous metrics that might be used to measure institutions on affordability of attendance, outcomes, and access, among other factors.

The proposal was subject to significant criticism by institutions, thought leaders, and certain members of Congress, who voiced concern that the Administration was advancing a scoring system that did not fully account for the value that institutions provide. Opponents argued the goals of the ratings system included numerous metrics that were not quantifiable and overly simplistic in trying to institute a "one-size-fits-all" approach.

The Administration has since moved away from its initial proposal and has instead advanced a platform that does not create a cross-school scoring system. The resulting new College Scorecard, which was unveiled in September 2015, does not have a singular rating or set of ratings for the grouping of colleges. Instead, it provides extensive federal data on student debt and attendance costs for more than 7,000 US institutions. It allows prospective students the ability to list and sort schools based on such items as on-time graduation rates, school size, and salary after attending, among other factors.

The change in posture was not only a result of the push-back received, but also due to the difficulty of establishing such a ratings system without congressional approval. Language included in the last reauthorization of the Higher Education Act (HEA) placed restrictions on the ability of the Department of Education to create a national dataset with individual level information on student academic and financial outcomes based on privacy concerns. Likewise, the Department of Education is not able to use the ratings system to direct federal funds away from schools without approval from Congress. Not only is the current Congress unlikely to agree to such a policy change, but it would need to be done with a comprehensive HEA reauthorization, which is unlikely to occur this year.

President Obama's budget

In the short-term, Congress is unlikely to enact legislation that makes significant reforms in the higher education arena and it is not likely that a comprehensive reauthorization of the HEA will advance in 2016. Although Congress was able to overhaul K-12 policies last year by reauthorizing the Elementary and Secondary Education Act, Republicans and Democrats are further apart on higher education changes they are seeking.

In his fiscal year 2017 budget request, President Obama called for an expansion of the Pell Grant program, including additional dollars for colleges that graduate large numbers of low-income students, as well as free community college. The President's budget also includes a proposal to expand and remake the Federal Perkins Loan Program. The proposal seeks to increase funding for most minority-serving institutions and set aside $30 million for grants aimed at improving completion rates at such colleges.

The President's budget carries little weight in the election year, and most members of the relevant congressional committees are more focused on advancing piecemeal higher education bills that have broad support. For example, further streamlining the application process for students seeking federal financial aid and promoting competency-based education programs could be areas where bipartisan legislation is possible. One area of the President's budget that could spark conversation is his proposal to establish a new tax credit geared toward companies that invest in community colleges and hire their graduates. These types of industry-driven, school to workplace incentives have some bipartisan support in concept.

Major higher education reforms side lined

It is unlikely that major reforms will be successful this year, whether through the appropriations process or by other means. While often discussed as potential education policy changes, the following are unlikely to move this year: (1) major student loan refinancing legislation; (2) private student loan discharge (bankruptcy) legislation; and (3) limits on Title IV funding. Additionally, President Obama's proposal to provide large federal subsidies for the first two years of community college has not gained any traction in Congress.

Presidential platforms - Democratic

Presumptive Democratic presidential nominee Hillary Clinton unveiled her higher education plan last summer, dubbed the "New College Compact." The plan proposes to increase federal investment in higher education and reduce the need for students to borrow money to pay for college. As outlined, states would receive federal grants in return for increasing their investment in higher education, so as to reduce the direct cost to students. The plan envisions free community college and seeks to encourage other non-profit colleges to keep costs low.

The plan contemplates that students attending private schools would continue to rely on loans, but at better terms. Clinton's plan calls for ensuring that "the government does not profit from undergraduate student loans– reducing monthly payments for student borrowers." Support for the initiative cuts across the political spectrum, with Senator Elizabeth Warren (D-MA) and presumptive Republican presidential nominee Donald Trump both criticizing the government for earning a return on student loans. The Government Accountability Office estimated that the federal student loans given out between 2007 and 2012 are on track to produce $66 billion in profit for the government. However, there is some debate about the accounting rules used to reach this conclusion and whether or not federal student lending actually generates a profit to the Treasury.

Clinton's plan also includes allowing holders of current student debt to refinance at lower rates and proposes to streamline "income-based repayment" plans. The proposed plan would cap payments at 10% of income per year, and forgive all accumulated debt 20 years after graduation.

As is the case with a broad set of issues, there is thought that Clinton could be drawn further to the political left on education to attract the supporters of Senator Bernie Sanders (D-VT), who has pledged to stay in the primary race until the Democratic convention. However, the likely focus for future proposals is around K-12 policy, as the Democratic Party has deep division over the growing role of charter schools in education.

Senator Sanders' higher education plan, which is consistent with legislation he has introduced (e.g., College for All Act), is more progressive in that it would make tuition free at all public colleges and universities. Under his current bill, the federal government would provide $47 billion per year to States to eliminate undergraduate tuition and fees – covering 67 percent of the total cost, while States would be responsible for the remaining 33 percent. Clinton has criticized the plan, saying that Republican governors will not allocate the funds necessary to make the plan work. Clinton also chastised Senator Sanders' free tuition plan, saying she "doesn't want to pay for Donald Trump to send his kids and grandkids to college." While Sanders' plan would broadly benefit all students attending public schools, Clinton's plan is geared toward low-and middle-income students. Senator Sanders also has called for barring the federal government from profiting on student loans and cutting student loan interest rates in half. He has also proposed expanding the federal work-study program.

Both Clinton's and Sanders' proposals would require significant buy-in from Congress. While it is highly unlikely that Congress would enact either candidate's complete plan, there could be efforts to lessen the cost of education and expand less expensive repayment options. The election of either candidate could also pose a continued risk to the for-profit college industry. In addition to the increased competition resulting from lowered tuition costs at non-profit institutions, both candidates are likely to continue the drive for increased regulation of the for-profit sector. This likely would include preserving and expanding on many of the Obama Administration's landmark regulations, such as the "gainful employment" rule set to be finalized this year.

Presidential platforms - Republican

Throughout the Republican primaries, candidates have focused their criticism on the current nature of spending on higher education, arguing that overspending is part of the problem and a driver of cost. Presumptive Republican presidential nominee Donald Trump has been generally quiet about higher education policy, although Trump Campaign Policy Director Sam Clovis recently outlined the ideas that Trump is likely to put forth.

According to Clovis, the Trump campaign will fight both Clinton's proposal for debt-free public higher education and Sanders' plan for free public higher education. Further, Trump will reject President Obama's proposals for a state-federal partnership to make community college free for new high school graduates. Many of the ideas which the Trump campaign is working on involve a complete overhaul of the federal student loan system, moving the government out of lending and restoring that role to private banks. Further, Trump is expected to argue that all colleges should share the risk associated with student loans, an idea supported by certain members of Congress on both sides of the aisle. However, many Democrats have argued that some institutions – historically African-American or community colleges, for example – should be exempt, given their histories of educating students from low-income families who may not have the financial resources of others.

Future education secretary considerations

Speculation is already beginning to mount regarding who Trump or Clinton would appoint as Secretary of Education. A recent poll of education experts and consultants by Whiteboard Advisors found that Linda Darling-Hammond, an emeritus professor at the Stanford Graduate School of Education, was the top pick for Clinton. Randi Weingarten, president of the American Federation of Teachers, and Chris Edley, a former dean of the Berkeley School of Law and cofounder of the Opportunity Institute, were possible other contenders. Speculation on a Trump cabinet saw former presidential candidate Ben Carson at the top of the list. Andreas Schleicher, director for education and skills at the Organization for Economic Cooperation and Development, and Tony Bennett, Florida's former education commissioner, were other higher-ranking choices.

Our perspective

The summary above is a high-level outline of selected federal policy and regulatory matters on the federal agenda. Given the presidential, house and senate elections, the political outcome is both uncertain and in flux. The differences in education platforms between the Republican and Democratic parties continue to widen. There are drastically different educational policy outcomes based on the individuals and parties elected.

In addition, the attention to educational institutions from Congress, the President, and other regulatory bodies is not slowing down. While certain legislation is in progress to streamline compliance requirements and reduce the financial burden, other legislation in progress will result in more compliance requirements and added cost of implementation. Therefore, when the opportunity arises, educational institutions should continue to be vocal with regulatory bodies and political leaders on their perspectives of proposed changes and the regulatory cost associated with such changes.

The regulatory environment

Background

The regulatory spotlight continues to be focused on educational institutions. Congressional attention continues with the recent Congressional data request concerning endowments. The SEC expects institutions to provide reliable information to bondholders, and the IRS expects revenues to be appropriately spent. The Office of Management and Budget continues to monitor Federal agency implementation of the Uniform Guidance that OMB issued in late 2014. President Obama's goal to modernize and streamline regulations and to focus on the elimination of fraud, waste, abuse, and improper payments continues to be a driving theme in this process.

In light of such regulatory initiatives, institutions are under ongoing pressure to demonstrate their compliance and accountability. The impact of actual or perceived failure of an institution to identify and manage compliance functions could lead to a damaged reputation among various stakeholders, administrative or financial sanctions imposed by regulators, and the potential for fines and penalties.

Impact on educational institutions

The following is a high-level summary of selected accounting, reporting and regulatory matters on which educational institutions are currently focusing their attention.

Municipal bond market regulation

Most institutions finance their capital needs with long-term debt. Typical financing strategies include issuance of tax-exempt or taxable municipal securities (directly or through a conduit borrowing arrangement). Recent developments are causing institutions that utilize the "muni market" to become more vigilant about understanding and ensuring they comply with federal securities laws. While the SEC cannot directly regulate the content of disclosure documents provided to potential investors, it can and does undertake enforcement actions against municipal bond issuers and conduit borrowers for violations of the statutes' antifraud provisions.

Compliance with continuing disclosure agreements – covenants obtained by underwriters that an issuer or conduit borrower will provide certain information about their finances and operations to the market throughout the life of a bond issue – continues to be an area of focus. The SEC's recent Municipalities Continuing Disclosure Cooperation (MCDC) initiative promised more lenient settlement terms to underwriters and issuers that self-reported instances where offering documents had incorrectly portrayed the issuer's history of past compliance. While compliance problems have more often been attributable to smaller, infrequent issuers, the MCDC initiative has been credited with making education institutions and other market participants more mindful of their responsibilities related to continuing disclosure, including compliance with filing deadlines. Bond lawyers continue to strongly encourage entities to establish written disclosure policies and procedures, and to familiarize employees and governing board members with those procedures.

Financial reporting requirements

The standard setting authority for the financial statements of higher education institutions is divided between the Financial Accounting Standards Board (FASB) for private sector institutions and the Governmental Accounting Standards Board (GASB) for public institutions. Roughly half of the National Association of College and University Business Officers (NACUBO) member institutions follow FASB and half are subject to GASB.

For private institutions, there will be no escaping the number of accounting changes that will be becoming effective in the next several years. The FASB's major convergence standards projects – revenue recognition, financial instruments, and leases – have crossed the finish line. In addition, new guidance on not-for-profit financial statement presentation will be released this summer. The financial statement presentation changes are not expected to be resource-intensive to implement. However, significant efforts may be required to implement the new revenue recognition and leasing requirements. Since those standards are retroactive to prior years presented, organizations may need to maintain two sets of books (old and new) beginning one year prior to the actual effective date. Forward-looking institutions are already thinking about the level of effort that will be required to implement these standards – including training, changes to financial reporting systems and internal controls – and assessing whether additional resources will be needed.

With implementation of pension rule changes behind them, public institutions are now turning their focus to GASB's new rules on fair value measurement, which are effective this year. GASB's adoption of fair value principles similar to FASB's created optimism that the two standard-setters might continue to look for convergence opportunities. However, GASB's recent lease accounting proposal takes a different approach than FASB's new rules, and would create significant differences in an area that today is largely converged. While both GASB and FASB would require operating leases to be recognized on the balance sheet, FASB institutions will reflect the additional liabilities as operating-type obligations, while GASB entities would be required to classify them as long-term debt. This change could put public institutions at a disadvantage relative to debt ratios, debt limits, and covenant compliance. Institutions should also be evaluating the balance sheet impact and implementation efforts associated with new Other Post-Employment Benefits rules that could bring additional employee benefit liabilities onto balance sheets in fiscal 2018. Because those rules conceptually resemble the recent pension changes, forward-looking institutions will strive to take advantage of lessons learned from implementing the pension changes.

Institutional management must be mindful of the impact that new accounting and reporting standards have on financial reporting systems and internal controls. Recent enforcement activity reiterates the SEC's expectation that municipal market participants have an obligation to maintain accounting systems and controls that produce financial information that investors can rely upon. In periods of heightened implementation activity, the risk of misapplication of generally accepted accounting principles increases, as does the risk that a significant deficiency or material weakness in internal controls over financial reporting systems will occur.

IRS items

Focus on Endowments: In February 2016, the chairs of two Congressional committees sent letters to 56 colleges and universities with endowments worth over $1 billion requesting information about the structure of the institutions' endowments, use of endowment funds, investment practices and other information. These letters followed on the heels of a December 2015 Congressional Research Service report that described options for changing the tax treatment of college and university endowments. Among the options described were: imposing a minimum pay-out requirement; taxing endowment earnings; limiting charitable contributions for gifts to endowments; and changing tax rules related to certain offshore investments. Other recent news concerning the potential taxation of endowments include a Connecticut proposal (later withdrawn) to tax certain endowments of colleges in that State, and 2014 proposed legislation to tax college endowments with values over $100,000 per student. Focus in this area will continue as state and federal lawmakers look for ways to increase revenue and address the cost of higher education.

Form 1098-T: Educational institutions generally are required to file Forms 1098-T with the IRS, and to furnish written statements to individuals, reporting the amount of qualified tuition and related expenses paid by, or on behalf of, students. Recent developments affecting this reporting requirement include:

- Basis for amounts reported: Until recently, the law permitted educational institutions to report either amounts billed or payments received for qualified tuition and expenses. Legislation enacted in 2015 eliminated the option of reporting amounts billed for tuition and expenses paid after December 31, 2015, for education in academic periods beginning after that date. Educational institutions and advocacy groups requested that the IRS delay the new filing requirement, noting that compliance would require software reprogramming and other changes that could not be implemented in time. Instead of delaying the filing requirement, the IRS has announced that it will not impose penalties with respect to 2016 Forms 1098-T solely because the eligible educational institution reports on amounts billed rather than the amounts paid basis. Other penalties (i.e., failing to file timely) still apply to 2016 Forms 1098-T.

- Safe harbor for incorrect TINs: The Internal Revenue Code imposes penalties to the extent Forms 1098-T contain a missing or incorrect TIN. The IRS began sending penalty notices to institutions in 2013, and many institutions and their advocates expressed concern with respect to the manner in which the IRS implemented these penalties. Legislation enacted in 2015 provides relief in the form of a safe harbor under which penalties will not apply to an organization that makes a contemporaneous true and accurate certification under penalties of perjury that it has complied with certain standards for obtaining an individual's TIN.

IRC Section 501(r): Internal Revenue Code Section 501(r) imposes requirements that non-profit, tax-exempt hospitals, including academic medical centers, must satisfy in order to remain tax-exempt. Final IRS regulations on Section 501(r) published in December 2014 are effective for hospitals' first tax year starting after December 29, 2015. The final regulations contain detailed requirements for financial assistance policies, billing and collection practices, limitations on charges, and community health needs assessments. Even hospital organizations that already have well thought-out policies that comply with existing laws must review and revise their policies and practices in these areas no later than the beginning of fiscal year 2017.

Federal award compliance and audit requirements

On December 26, 2013, the Office of Management and Budget ("OMB") published its "Sweeping Reform" guidance, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (the "Uniform Guidance"). Many organizations had grants audited under the Uniform Guidance in the previous year, but during the current audit cycle more grants will be subjected to these rules and for year's ending December 31, 2015 and later, the compliance portion of the annual Single Audit will be subjected to several revised compliance audit requirements.

From an audit perspective, the objective of the changes was to focus on higher expenditure dollar volumes and a more streamlined risk assessment process related to the selection of award programs for testing and thus to reduce both administrative burden and the risk of fraud, waste and abuse. These changes will allow the federal government to maintain a significant amount of audit coverage with respect to the total volume of federal awards issued, while it will also allow smaller organizations to be eliminated from the mandatory audit rule. In addition to the audit requirements, other aspects of compliance rule changes that were made in the Uniform Guidance that organizations must continue to focus on include:

Internal controls: Under the Uniform Guidance organizations are required to have an effective system of internal controls and two frameworks that are provided as examples to follow include the "Green Book" issued by the Comptroller General of the US and the "Internal Control Integrated Framework" issued by COSO. While there is no current expectation or requirement to document or evaluate internal controls prescriptively in accordance with the frameworks above, organizations should consider their current controls and documentation in relation to the recommended frameworks and assess whether there are any gaps to be remediated.

Subrecipient monitoring: Organizations that pass federal money through to subrecipients have more prescriptive requirements to follow, including evaluating each subrecipient's risk of noncompliance. A risk assessment should be completed and documented, the results of which, should drive an organization's monitoring of each subrecipient.

Effort reporting*:* The Uniform Guidance clearly states that effort reporting certifications are no longer required. However, what continues to be required is that controls must be in place to ensure complete and accurate distribution of compensation to each recipient function and to each federal award when applicable. The trend has been thus far for institutions to continue use of "effort" certifications as the primary control to ensure appropriate salary distribution. However, some institutions are changing the frequency for which certifications are being performed.

Procurement: While the procurement regulations have been delayed for two full fiscal years after the effective date of the Uniform Guidance, organizations should not lose sight of the changes that will be required in this area. There are five methods of procurement prescribed under the Uniform Guidance including micro-purchases, small purchases, sealed bids, competitive proposals, and non-competitive proposals.

Required written documentation: The Uniform Guidance requires written policies in the following areas: cash management, procurement, subrecipient monitoring, conflicts of interest, and time and effort reporting. Organizations should ensure these policies are formally documented.

Organizations should be aware of the audit changes above and work with their audit teams to assess the impact of the new audit requirements on their 2016 audits. It is likely that a smaller program that has not been audited in the past will come into scope and organizations should work with the faculty, investigators and administrators on the selected award to familiarize them with the audit process. Additionally, organizations should continue to focus on the training of both financial and compliance administrators, as well as the faculty and investigators who carry out the work of the federal awards.

Our perspective

When the opportunity arises, institutions should continue to be vocal with regulatory bodies and political leaders as to their perspectives on proposed changes and the regulatory cost associated with such changes. In the meantime, institutions will need to continue to be vigilant in enhancing internal controls over compliance.

In connection with the development of an organizational framework for institutional compliance, educational institutions should continue to develop other proactive responses to manage and monitor regulatory compliance. Institutions should stay abreast of new regulatory developments and ensure their voice and points of view are heard through industry associations and political influences. Additionally, institutions should continue to educate trustees, faculty, and staff of the ever-changing regulatory environment to ensure there is the appropriate level of focus on compliance with not only external rules and regulations but also internal policies and procedures.

While educational institutions are not SEC registrants, many are considered “public interest entities” due to their issuance of tax-exempt municipal bonds and other factors. As a result, institutions must be cognizant and proactive with respect to the level of reporting, controls, and compliance responsibilities associated with this designation.

The non-tenured faculty model

Background

The faculty model at colleges and universities continues to evolve with significant shifts from full-time tenure, or tenure track faculty, to full-time and part-time non-tenure track positions. In a report prepared by the Association of Governing Boards (AGB), 70% of faculty providing instruction at non-profit institutions across the United States are non-tenure track employees.[1] A different study noted a 50% increase in the amount of full-time, non-tenure track faculty from 1993 to 2011.[2] In an effort to control costs, certain institutions are increasingly employing faculty whose salaries and benefits are less expensive and where there is greater flexibility in determining long-term employment.

In light of the need to control costs, as well as the influx of non-tenured and adjunct faculty on campus, institutions are beginning to revisit their overall strategy as it relates to employing faculty. For certain institutions, the concept of tenure is being re-examined as long-term plans are developed. This re-examination includes evaluating how non-tenured and adjunct faculty are impacting the learning environment, the cost / benefit of adjusting the employment model, and determining how changes in approach will affect the education of the student of the future.

Although institutions are starting to take a fresh look at strategy, faculty policies and practices have often not been adjusted to take into consideration this new make-up of the workforce. Non-tenured faculty do not have the same job security, which has resulted in increased calls for multi-year employment contracts and discussions about the unionization of adjunct faculty. There has also been a shift in how faculty productivity is measured. Tenured faculty have historically been evaluated on research, publicizing and teaching effectiveness compared to non-tenured faculty that are primarily hired to teach.

Hiring non-tenure track faculty may be a way to achieve cost savings, but there have been negative implications. Such implications, as reported by AGB, include institutions having no formal criteria or process for recruiting non-tenure track faculty, negative impacts on students when they are unable to build a foundation with long-term faculty members, and non-tenured faculty not being included in the curriculum planning or faculty meetings.[3] These factors can weigh on faculty and student success, as well as their decisions to remain at an institution.

Institutions are working to find the right balance between the need to control costs with the needs of its faculty and students. Responding to the dynamic changes taking place in faculty employment is requiring a fresh look at historic policies and practices.

Impact on educational institutions

To address the changing landscape, institutions are looking for ways to modify not only the way in which they hire faculty, but the way in which faculty are employed, compensated, evaluated, and included in the overall academic environment. Many institutions are asking themselves probing questions regarding the historic tenure model, how unionization of adjunct faculty may need to be addressed, and what changes should take place to mobilize students for the future workforce.

Some institutions are reacting to the change in the faculty model by developing new policies and procedures. These include such policies as those around promotion of non-tenure track faculty, the establishment of multi-year employment contract arrangements, and compensation agreements that factor in achievements outside of the classroom (such as research and publications). Certain institutions have established finite employment

[1] The Changing Academic Workforce, Adrianna Kezar and Daniel Maxey (Association of Governing Boards of Colleges and Universities, Trusteeship Magazine, May/June 2013)

[2] Changing Faculty Employment at Four-Year Colleges and Universities in the United States, Liang Zhang, Ronald G. Ehrenberg, and Xiangmin Liu

[3] See footnote 1.

contracts for faculty, such as for a period of five years with annual renewal provisions based on performance. Others have established formal guidelines for a non-tenure track faculty member to be considered for a tenure track position if they contribute to an institution through research funding, administrative activities, and other means.

Despite institutional efforts to formalize policies and procedures, the lack of equitable salaries and benefits has led many non-tenured faculty groups to call for unionization. Unionization can be a complicated and time-consuming process with extensive negotiations and certain requirements for state-wide labor agreements. This process can result in faculty often working for months without a contract and sometimes without any control over the negotiation process. Not only are non-tenured faculty calling for unionization, but graduate students are doing the same as a way to solidify their ability to negotiate salaries and benefits. However, even when graduate students are successful, these unions also face challenges when it comes to negotiating contracts. To address unionization, institutions are engaging in robust dialogue with faculty and graduate students around compensation, employment contracts, and other human resource matters to ensure all parties understand the strategic direction of the organization.

How to effectively address the concerns of faculty has also led to discussions centered on faculty productivity and workload. Expectations surrounding teaching, research and administrative aspects of the position are being formalized by many institutions, to ensure that faculty are being evaluated under similar metrics. Baseline requirements that are being established include the number of courses a faculty member must teach each semester, the anticipated research or publicizing that must be completed, and committee involvement or other organizational aspects of employment that must be fulfilled. Some institutions have increased the teaching requirements for tenured faculty to alleviate the need for adjunct faculty members.

Our perspective

In an environment where non-tenure track faculty are increasing in numbers and the pressure of unionization is building, it is important for institutions to consider how this change in landscape will impact not only how they shape their policies and practices, but how they should think about their overall strategy. This may include taking a fresh look at the faculty model and how it might be modified. Institutions should not shy away from asking the hard questions around their strategy. Factors that might be considered are summarized below.

- The institution of the future may or may not include non-tenured or adjunct faculty, but it should consider including all faculty members (whether tenured or not) in the decision making process. Faculty "buy-in" is the best chance of coming up with a model that works.
- The needs of faculty in general should be considered, and specifically how practices and policies impact all aspects of education, including and most importantly, student success.
- Current policies and practices both at the institution level, and a department level, should be re-examined to ensure that the day to day practices of its faculty are in line with the institution's overall strategy.

At a more granular level, concurrent with a review of institutional strategy, a review of current policies and practices should be considered as well. When looking at its strategy and how to address the basic needs of faculty members, institutions should assess the following:

- Employment contracts – Formalizing policies around the length of employment contracts, metrics that should be included, potential incentive compensation, and other key components will allow faculty to feel more connected to an institution. This connectivity will provide faculty with the incentive to achieve beyond the classroom, and could enhance relationships with students by allowing a greater span of time for faculty to interact with them.
- Curriculum planning – Involvement in course development (as well as faculty and departmental meetings) results in faculty achieving a vested interest in the classes they are teaching. Transferring their knowledge into the curriculum while participating in departmental meetings will ensure course content is in line with departmental goals and policy.
- Developmental opportunities – Creating policies and procedures around the ability of faculty to hold leadership positions at an institution, whether tenured or not, and to participate in the governance structure of a department will instill a sense of empowerment and connectivity. Developmental guidelines for considering an adjunct faculty member for a tenure track position should be considered.

- Recruitment – Stringent hiring guidelines that are no different for non-tenured faculty will ensure the caliber remains on par with other employees at an institution. These guidelines should include degrees required (e.g., masters or doctorate), background checks, past teaching experience, and recommendations from past employers.
- Physical office space - Non-tenured faculty often lack office space to meet with students and to perform administrative tasks. This lack of space limits students' opportunity to engage with faculty and continue learning outside the classroom. Connecting with a faculty member as a mentor can impact a student's decision to stay with its current institution. Institutions should consider providing office space through hoteling or other shared arrangements for all faculty.
- Evaluation process – Institutions should ensure there is a formal evaluation process for all faculty including its non-tenured members. Providing feedback will assist all faculty with improving job performance.

It is important that institutions consider the make-up of faculty and adapt to change by taking a fresh look at their current strategies. Ensuring institutions keep up with the current state and needs of their faculty will lead to an environment where all faculty feel motivated, appreciated and tied to an institution's mission and goals.

Compliance and risk programs

Background

The challenges of effectively managing risk and compliance continue to grow in higher education. Increased external requirements, scrutiny resulting from high profile instances of non-compliance, and increasingly complex operations at institutions have all contributed to this state. As a result, the historical processes for managing risk and compliance at many institutions may no longer be sufficient.

The volume, pace, and complexity of compliance regulations impacting colleges and universities have increased exponentially in recent years. The Report of the Task Force on Federal Regulation of Higher Education states that just one agency, the Department of Education, "issues official guidance to amend or clarify its rules at a rate of more than one document per work day."[4] The current focus on accountability in higher education is a key factor driving the increase in compliance obligations.

Instances of noncompliance by institutions highlighted in the national press are becoming more high-profile and are inviting heightened regulatory and stakeholder scrutiny. Examples have included Title IX investigations related to sexual violence and harassment complaints, public safety for students and minors on campus, and financial conflicts of interest at both the institution and principal investigator levels. Some of these instances have led to regulatory fines, penalties, and the loss of federal funding, as well as diverted focus of limited time and resources away from strategic initiatives and campus operations.

The strategic initiatives of many institutions may also result in increased risk. Many institutions are expanding their global footprint by establishing physical campuses and centers in other countries, conducting sponsored research activities abroad, soliciting donations from the international community, and entering into strategic partnerships with non-US entities. Partnerships with corporate organizations, not-for-profit entities, and peer institutions to develop new learning models, establish innovation centers, conduct research, and cultivate intellectual property also bring additional and often unfamiliar risks.

Many institutions historically have employed a decentralized approach to managing risk and compliance with ownership responsibilities spread across schools, operational units (e.g., athletics, facilities), and administrative functions. Internal audit may incorporate certain compliance risks into their reviews, however they face challenges related to the lack of designated compliance owners. Enterprise risk management (ERM) activities may also be performed independent of internal audit and compliance initiatives.

This segmented approach to risk management and compliance is no longer proving effective for many institutions. Additionally, continuously adding resources in an attempt to address risks and requirements is growing unsustainable for many institutions from a cost perspective and from the availability of skilled resources. At the same time, traditional risk management practices are falling short of rising expectations of trustees and senior leadership who are advocating more proactive, formalized, and integrated approaches to risk management. Institutions are starting to evolve strategy and models to better manage risk and compliance to include dedicated compliance resources and more robust coordination between these individuals, internal audit and ERM activities.

Impact on educational institutions

According to a survey conducted by the National Association of College and University Attorneys, less than one-third of surveyed higher education institutions have fully implemented compliance functions, which may or may not include a dedicated compliance lead, however an additional 40% are in the process of establishing a compliance office. Institutions are seeking to better define responsibility and drive accountability for day-to-day compliance to further integrate it into business processes and organizational culture. To help manage and coordinate compliance programs, more institutions have designated a head of compliance with responsibility for institutional compliance. In addition, a number of colleges and universities have formed or reorganized in-house compliance committees to better support compliance program efforts.

[4] Report of the Task Force on Federal Regulation of Higher Education – Recalibrating Regulation of Colleges and Universities

A designated head of compliance should have general knowledge of the universe of compliance requirements that the institution is subject to, as well as an understanding of the scope of responsibilities and compliance ownership. Ideally a master list of compliance requirements and their respective owners should be compiled to document accountability and mitigate the risk that compliance requirements are not identified or assigned. Further, the designee should interface with local compliance owners to provide a compliance maintenance framework to assist in prioritizing compliance requirements, and adherence to a cohesive institutional compliance strategy.

The designee and compliance risk owners also often work with designated compliance committees across the organization. There is often an institutional compliance committee that oversees institutional-wide compliance and includes membership from other committees. An effective compliance committee bridges administration and faculty, and helps to ensure there are effective policies, procedures, monitoring and reporting mechanisms, as well as training programs to address compliance obligations.

The collaboration between the compliance function and internal audit is vital to an ERM program. Increasingly, in effective programs both internal audit and compliance are trusted advisors to senior leadership, the Audit Committee, and Board, and their collaboration facilitates the advancement of institutional strategic goals. Certain institutions are currently assessing and realigning roles and responsibilities to combine the internal audit and compliance functions within a single office. In this model, careful thought should be given to ensuring internal audit maintains its independence and objectivity.

Formalized collaboration between internal audit and compliance helps ensure a coordinated view and consensus of risk across the institution and allows for enhanced coordination in the identification and evaluation of risk and controls. The combination of these functions promotes greater convergence of governance and risk management models, risk language, and improved risk mitigation behaviors across the institution. The standard "three lines of defense" in the typical compliance model are also strengthened and clarified through this collaboration. These lines of defense include individual compliance owners (first line of defense) and respective institutional compliance committees performing continuous monitoring and assessments (a second line of defense), and internal audit testing the effectiveness of compliance oversight and controls as an independent third party (a third line of defense).

Risk assessments performed individually by internal audit, compliance, and campus-wide ERM can be ineffective and inefficient. Performed in isolation, these risk assessments may fail to consider broader risks, often do not identify all risks, and may result in unsynchronized risk mitigation strategies. A coordinated effort between these parties provides more formal accountability for the evaluation of risks and mitigation strategies, influences the focus of internal audit, compliance, and ERM, and develops a schedule for risk topics to be presented to the Audit Committee and other relevant Board committees.

Our perspective

While there is not a "one size fits all" model to an effective institutional risk management and compliance program, the clear identification of accountable leaders and coordination between essential functions is critical for effectively managing compliance risk. Whether internal audit, compliance, and ERM initiatives operate independently, or are consolidated into one or multiple functions is dependent upon an institution's mission, strategic objectives, organizational structures, and risk tolerance levels. However, the following considerations are vital to the success of any risk management and compliance program that seeks to align these areas:

- Organizational culture, personnel skills and governance structure are all important in evaluating the appropriate management and reporting structure at an organization. Care should be taken when determining reporting relationships as some federal agencies have signaled their concern with compliance functions reporting to the General Counsel.
- Robust collaboration between internal audit and compliance resources and those responsible for ERM is essential to perform comprehensive, effective, and efficient risk assessments. A collaborative risk assessment evaluates policies, procedures, internal controls, compliance, and develops mitigation strategies to address gaps and deficiencies.
- Strategic initiatives of the institution must be proactively assessed from a risk and compliance perspective during the planning process and before they are implemented.
- Risks and compliance obligations related to activities that occur outside the US, including research, teaching, and development should be specifically considered and prioritized given their uniqueness.

- Formalized policies and procedures are essential to creating a structure of awareness and are key controls to facilitating compliance and mitigating risks. Policy communication and training is also required to raise awareness and set the tone across the institution.
- Support from senior leadership and the Board establishes a strong risk management culture to drive and evolve risk collaboration and alignment across the institution and to facilitate buy-in across the academic and administrative sides of the campus.
- Communication regarding ownership of relevant risks and regular discussions regarding related risk assessments and ongoing monitoring activities should be included in Board Committee agendas and discussed beyond the Audit Committee.

In a rapidly changing regulatory environment, institutions are looking for ways to obtain the greatest value from compliance, ERM, and internal audit functions, and are seeking to ensure that these functions contribute to the achievement of business priorities and strategic goals.

Information technology risks

Background

Given its strategic importance, along with the associated risks, information technology (IT) in the education industry continues to evolve as an area of focus. Institutions generally promote an open environment that facilitates knowledge sharing and collaboration between a wide array of stakeholders including faculty, students, parents, administrators, researchers, board members, alumni, donors and others. However, increasingly that accessibility needs to be balanced with regulatory and fiduciary responsibilities, as well as practical requirements related to securing sensitive data (e.g., student data, donor information, credit card numbers, health information, etc.) and proprietary information (e.g., research data).

Impact on educational institutions

The increasing pace of technology change now impacts all aspects of an institution in a more direct way. For example, key projects that previously included implementations and upgrades to financial and student information systems, now include the ongoing virtualization of text books, use of digital classrooms, enhanced on-line courses and distance learning. This evolution of technology as a strategic priority and investment requires consideration of the governance and positioning of IT within an institution. As key IT topics such as cybersecurity are demanding the attention of the Board, institutions are looking to ensure the right expertise exists within Board membership, and are evaluating the appropriate committees or forums to oversee the overall strategy and operations. While there is no one-size-fits-all model for IT, institutions continue to refine their organizational structure to drive collaboration between IT, the administration and academic leaders.

Given the strategic importance of IT, institutions continue to evaluate the following topics and consider which are most relevant and need to be assessed and monitored on an ongoing basis.

Cybersecurity: Cybersecurity threats and attacks continue to increase year-over-year. The range of types of events include nation-state supported cyber-terrorists to the traditional hacker. Effective risk management of cybersecurity includes acknowledgement of the shared responsibilities and cross-functional disciplines required within the organization to plan, protect, defend, and respond to threats. Cybersecurity is not just an IT issue – it is a subset of issues within the broader context of information security, which involves protecting information from unauthorized access, use or modification regardless of whether the information is stored and/or transmitted electronically or physically. Risk mitigation should include consideration of tactical solutions such as encryption and multi-factor authentication, as well as updated policies, procedures and controls over the use of USB drives. For those institutions with academic medical centers (AMCs), there is an inherent challenge in balancing an open and accessible environment with heightened security and regulatory requirements, such as those dictated by the Health Insurance Portability and Accountability Act.

Mobile devices: The proliferation of mobile devices in higher education has fueled the growth of 'bring your own devices' (BYOD) and 'bring your own everything', to an expanded definition of BYOD beyond mobile devices to tablets, cloud storage and other forms of computing. Textbooks are now available as e-books and lectures are available to wider audiences on video and websites. Investments are being made to make mobile computing limitless, including institutions creating their own Apps, with integration to course catalogs, schedules, and social media. Institutions are also addressing the need for immediate access to information by providing systems and networks that are widely accessible (e.g., Wi-Fi), however the challenges that accompany the benefits of this availability include increased risk of breach or failure. Additionally, as students, faculty and administration increase global travel, there are particular security considerations for those with sensitive data on their devices such as remote wiping and mobile device encryption.

Cloud computing: Use of cloud computing service providers is increasing based on the availability of new applications, infrastructure, storage and other capabilities. Institutions are increasingly adopting cloud services to take advantage of low entry cost and capital outlay, as well as scalability. More and more applications such as email, collaboration websites, alumni tracking, as well as back-office and administrative systems are moving to cloud-based services. The increased sophistication, availability and reliability of these cloud solutions is providing institutions with the ability to offer immediate access without expanding data centers and IT staff. However, security, confidentiality and availability of these systems and infrastructure need to be assessed and addressed to manage the risk of outsourcing.

System implementations and upgrades: Institutions are finding more choices of enterprise resource planning (ERP) systems and how these capabilities are delivered. To support technology initiatives, gain efficiencies and leverage new tools, many organizations have been implementing new systems or upgrading to new versions of software. This includes electronic health records (EHR) applications at those entities with AMCs. Regardless of the vendor, product or delivery model selected, an ERP or EHR implementation or system upgrade is a major endeavor. Whenever a system implementation or upgrade is undertaken, there are project risks and internal control risks that should be considered and mitigated with adequate compensating controls and procedures employed throughout the project life-cycle.

Third-party risk management: Institutions are leveraging numerous third-party vendors for all types of services including traditional IT areas (e.g., data center facilities, application development, and network operations), as well as operational areas such as bookstore operations and cafeteria services. It is imperative that institutions undertake proper on-boarding and ongoing monitoring of their third-party vendors to manage and protect an institution's data and systems. This includes performing both remote and on-site technical security and privacy assessments, as well as having a detailed understanding of the security framework and controls in place at the third party to protect the data and systems they are responsible for. Clear roles and responsibilities for overseeing, monitoring, and managing third-party relationships need to be defined, documented and communicated. Important considerations of third-party risk management include maintaining an accurate and complete inventory of third parties, establishing standard operational risk policies, identifying key risk indicators and complying with changing regulatory requirements.

Disaster recovery: While Disaster Recovery (DR) is not a new or emerging IT risk, with acceleration to the digital world combined with recent natural disasters, as well as man-made events such as cyber-attacks, DR continues to be an important focus area for institutions. This is particularly relevant in the higher education sector with more aspects of an institution's operations digitized and the expectation from students, parents, faculty and administrative staff that systems always be available. Traditional DR plans are being augmented by high availability capabilities, with the objective of limiting single points of failure and providing reliable crossover/load-balancing to reduce or eliminate system down-time. However, as new technologies and applications are integrated into an organization, DR plans need to be updated, with table-top drills and full testing of the plan. DR risks also need to be factored in conjunction with the separate topic of business continuity planning. The restoration of service aspect of the planning is not sufficient alone. Training, communication and testing is critical to ensure stakeholders know where to go, what to do and how to operate.

Our perspective

With the extent of change in IT in higher education, institutions need to be continuously focused on understanding existing and emerging IT risk areas, updating policies and procedures and implementing mitigation plans. Colleges and universities will continue to face increasing challenges with respect to the evolution of technology services in support of instruction, research, patient care (for AMCs) and back-office administration. To effectively address these challenges, institutions should review and confirm that the structures and processes they have in place support an enterprise-wide approach to technology with effective IT risk management. Given the culture of open systems and access combined with increased threats posed by attacks on systems, there needs to be consideration and balancing of IT risk management with supporting the organization's strategic objectives on a sustainable cost basis.

IT should be considered relative to operational, financial and compliance risk and be evaluated on a periodic basis in conjunction with a formal IT risk assessment. Often times, the IT risk assessment is jointly performed by IT management and internal audit, and is performed as a subset of a broader organizational risk assessment process with direct or indirect linkage to the organization's enterprise risk management program. To accomplish these objectives, it will be necessary for institutions to fully understand the scope of technology support and IT risks throughout the organization, which generally includes both centralized support and decentralized responsibilities in academic departments, as well as global campus considerations.

It may be necessary to refine the IT governance and leadership structure to reflect technology's strategic role in managing risks and to coordinate with the internal audit, compliance and legal departments. IT governance can provide the capabilities for understanding the relevant risks, identifying existing policies and developing the action plans for remediating any gaps. Security, compliance and governance should be considered as new projects are identified. In considering IT risks, there should be clear linkage to the annual internal audit plan and other types of assessments such as the payment card industry and service organization control reports.

Technology transfer

Background

It is well documented that higher education institutions are experiencing challenges with their traditional funding sources including tuition, state support, endowment income, and grant funding. Net tuition revenue growth has been the slowest in ten years. Those institutions with clinical enterprises are facing revenue pressures related to network narrowing, mergers and acquisitions, and new entrants. Within the research enterprise, declining federal funding in both current and constant dollars has put more pressure around return on investment through technology commercialization. As a result, institutions are identifying revenue diversification strategies to combat potentially unsustainable business models. These include the creation of more public-private partnerships, strategic industry collaborations, and targeted technology transfer and monetization of intellectual property (IP). This coincides with the general industry growth of outsourcing research and development (R&D) across industries.

These new models are often managed through an office of technology transfer (TTO) or research commercialization. The traditional role of technology transfer offices is to turn an institution's intellectual assets into capital. These assets include research data, faculty IP, software and applications, and clinical data. Revenue could come through technology transfer (fee-for-service or license funds), business development (partnerships and knowledge transfer), incubators and venture capital funding, or economic development (driving local / regional change). The technology transfer office may participate in any or all of these areas, with the function varying by institution. Typically, TTOs are focused primarily on technology transfer with an expansion into business development activities where the institution is developing new collaborations and initiatives to generate new services or value streams that could either be from direct revenue or in-kind support.

Impact on educational institutions

The technology transfer office plays a central role in fostering innovation in an educational institution through the generation of revenue and intellectual property produced by principal investigators. This is accomplished by engaging industry partners in licensing agreements. TTOs also can serve as a hub to improve brand value which could lead to retaining top faculty, staff and students. In the current environment even more is expected of the TTO. TTOs have responded, but several challenges still exist to manage a successful technology transfer office. We highlight several of those challenges below.

Funding and support constraints. TTOs are often viewed as a cost center, which results in an operating structure that is limited in functionality. Due to a lack of funds, most TTOs cannot finance promising utility patents unless a licensee is in place. In addition, TTOs are often unable to advance promising technologies using internal funding to create more valuable licenses. They are typically understaffed, with many TTOs also facing high turnover. This leads to many having licensing staff lacking sufficient commercialization experience.

TTOs are not working efficiently. Across the industry, TTOs operate inconsistently and offer a multitude of areas for improvement. Royalty revenues are not effectively tracked and collected. Licensing professionals are overburdened with non-core activities, and many receive insufficient support internally. Tech transfer processes are often inconsistent and could be streamlined.

TTOs are often perceived as "black holes" by faculty. TTOs are a service office, but frequently receive negative customer service feedback. Inventors lack visibility into tech transfer processes, including workflow, timelines and licensing requirements, which often leads to reluctant collaboration or attempts to find workarounds. Inventors often feel that they are not involved in key decisions regarding 'their inventions.' Many TTOs conduct less than effective marketing of inventions and networking with industry on a broad scale. In addition, TTOs often do not perform effective networking with sector-specific licensees and rarely attend sector-specific conferences. This is somewhat tied to their lack of funding.

Our perspective

A successful TTO can produce unique benefits to the institution and to the broader community through a variety of scenarios across the community, operations, and institutional brand. For example, there could be a strong societal benefit through actively pursuing research that may never have been developed. TTOs can also create institutional 'buzz' to drive investment in the institution. This added brand value may assist with the recruitment of faculty, research staff and students, while attracting grant funding and philanthropy. Operationally, a successful TTO is a service function to researchers by supporting them in novel IP. The TTO becomes a driver of revenue generation, but also can prevent valuable IP from being lost. Additionally, a strong TTO can prevent infringement on institutional discoveries, while maintaining compliance with the various rules and regulations governing IP. Finally, some institutions leverage internal or external resources to conduct royalty audits to ensure they are capturing the full value of their IP. We offer below several perspectives as to how TTOs may be optimized in the current and future environment.

TTOs must be operationally efficient. Institutions face considerable risk of licensees intentionally or unintentionally underpaying royalties. As such, several institutions have implemented a formalized, periodic assessment for the top licensees to assess whether a royalty audit may be necessary. This periodic assessment should take into consideration the following: (a) the adequacy of documentation provided by the licensee to support the royalty value, (b) previous errors identified in documentation, (c) abnormal fluctuations in royalty payments, (d) sales volume and financial position of the licensee, (e) significant managerial, structural, operational or priority changes within the licensee, and (f) general adherence to the royalty agreement.

TTOs should be a source of business development. The roles differ for those TTOs that engage in business development initiatives. The TTO should serve as the portal to identify opportunities with industry. In some cases, this could be reactive through hosting institutional IP on an external website and responding to industry requests. Leading TTOs are more proactive in business development, engaging industry liaisons to inform these potential partners about the strength of the institution's research enterprise and facilitating matchmaking with researchers. In addition, TTOs should consider coordinating regular conferences and meetings with local investor groups to: (a) identify potential investors, (b) validate market opportunity for key technology and (c) generate community involvement. It is also important for TTO representatives to attend sector-specific conferences to develop relationships, particularly with researcher involvement.

TTOs should actively engage and inform the faculty. To counter the 'black-hole' syndrome, many TTOs have increased their outreach and communication to faculty by attending and presenting their function to the faculty senate, at department meetings, and individually. In addition, TTOs have enhanced their portals to allow innovators to identify where their filing lies within the operational processes. Additionally, TTOs have developed a triage approach to handling faculty inquiries, and have created service level agreements that the office can be measured against.

TTOs must be structured and funded appropriately. TTOs may be involved in developing business plans and requirements for prioritized opportunities by providing the business resources that are not core to the research mission. In some institutions, properly structured TTOs may implement and manage new business models or even assist with start-up creation. These have historically not been core institutional functions, so are often under heavy scrutiny by leaders and peers. In addition, the skillset required for business development differs significantly from traditional patent and licensing. TTOs must focus on talent sourcing to fit these unique roles, and develop performance metrics to be shared with institutional leadership.

TTOs should be measured and monitored. Given the opportunities to diversify revenue through the TTO as an industry portal, many institutions are assessing the productivity of their current structure to determine if there are efficiencies to be gained. The goal should be to review the TTO against leading practices that provide for passive income sources, agile opportunity recognition for future growth and a methodology for leveraging alliance partners along the technology transfer value chain. On a higher level, institutions are designing a holistic framework and methodology that recognizes open innovation. Others are also moving to identify and design strategic partnerships to diversify revenue sources to fund research.

The challenging academic medical center environment

Background

The higher education industry continues to undergo change fueled by external forces and antiquated business models that are causing financial challenges and the need for greater organizational and mission alignment. Academic medical centers ("AMCs") are a specialized subset of higher education, facing all the challenges of higher education as well as those directly related to clinical services. An AMC is a component of higher education consisting of an accredited medical school, faculty practice plan, and one or more affiliated hospitals that collectively pursue a tripartite mission of education, research and patient care.

AMCs generally have larger budgets which can result in the potential for greater financial risk. The size of the clinical enterprise and faculty practice plan generating the larger revenues also requires a greater faculty base to recruit, retain, and manage compared to other programs within a university. The clinical mission also creates critical linkages to health systems, whether owned or affiliated, upon which the AMC is dependent to generate the funds flow necessary to support its tripartite mission. These characteristics continue to impact how AMCs respond to the evolving healthcare and higher education landscape.

Impact on educational institutions

AMCs are initiating change in response to the clinical market forces that are creating pressure on the way they have conducted business in the past. Nimble decision-making through an effective governance structure is critical to maintain effective funding strategies and achieve mission goals. In addition, the pressures are creating new opportunities for AMCs to learn, adapt, and thrive as they seek to remain financially viable. Several prioritized approaches to how AMCs are planning for the future are outlined below.

Clinical revenue challenges in a value-based (versus volume-based) health economy continues to be addressed, so as to maintain the funds flow necessary to support the research and education missions. With tuition and fees accounting for just 4% of revenues on average within a medical school and research requiring an average institutional investment of 53 cents for every dollar of extramural funding according to the Association of American Medical Colleges (AAMC), an AMC is dependent on clinical revenue, along with philanthropy, to be financially sustainable. Some AMCs, given their competitive strength, have commanded a market premium with payers and consumers, and are generating significant margins that fuel necessary funds flow to the other missions. However, other AMCs are struggling as they look to improve efficiency and competitive positioning within their markets. Regardless, all AMCs are evaluating how to succeed in a health care reimbursement environment that increasingly rewards quality over quantity.

The desire for greater clinical alignment across the AMC is forcing review of governance and organization structures. Several AMC reorganizations recently have taken place where medical schools, the faculty practice plan and the health system have re-evaluated their relationships to determine if change would benefit all parties. A desire for greater clinical alignment and collaboration that leads to quality and financial improvements has been at the heart of these structural changes. Reorganization frequently has revolved around whether control of the faculty practice plan resides with the health system or the medical school. In some instances where a health system acquired the faculty practice plan, the resulting funds flow to the academic enterprise was sufficient to advance its research and education goals. In other instances where the faculty practice plan remained within the school of medicine, maintaining control of the clinical faculty was deemed to be the best path to advance the three-way mission and vision.

Education and training curriculums continue to evolve within the AMC. The evolution is driven by demands for higher quality, more innovation, adherence to regional and program accreditation standards, and market necessity. Continuing forecasts of significant provider shortages are also partially driving the changes in curriculum, as are patient demands. Achieving the needed results requires that AMCs, faculty and providers change how they approach the education and training of future healthcare professionals along with the operational model and financial incentives necessary to sustain success.

The unique circumstances and relative influence of the clinical mission of the AMC are influencing how higher education organizations are responding to these forces shaping their institutions. These forces will continue to put pressure on AMCs.

Our perspective

The complexity of the tripartite mission poses challenges for AMCs, but it also creates opportunities to respond to the forces shaping the industry, become stronger institutions and demonstrate value to the communities they serve. Looking ahead, there are several factors that are critical to the success of AMCs including the following:

Aligning the AMC vision, missions, and strategic priorities including:

- Articulating the AMC's long-term strategic vision and priorities in support of that vision, emphasizing areas of alignment and re-evaluating areas of inconsistency
- Quantifying the clinical margins necessary to support the AMCs three-way mission and evaluating the strategic and operational requirements to achieve that margin
- Assessing organizational and departmental structure, as well as span of control, in order to streamline operations and decision-making
- Considering programmatic synergies and economies of scale created through reconfigured affiliations, mergers and acquisitions

Creating an environment that fosters innovation more rapidly and successfully

- Integrating and leveraging inter-professional and interdisciplinary teams across all missions in order to foster collaboration and diversity towards more successful and competitively differentiated outcomes
- Supporting innovators, recognizing that innovation timelines do not always follow fiscal budgetary cycles, and require non-traditional incentives that embrace change and diversity
- Seeking new and non-traditional affiliations and partnerships (e.g., public-private, state-federal) that leverage strengths of each toward mutually beneficial goals and objectives

Demonstrating educational value and quality by embracing the evolving accreditation standards

- Researching and familiarizing the institution with new standards and reporting expectations
- Identifying the leaders within the organization that will institutionalize the requirements, drive adherence to the new standards, and be held accountable for organizational performance
- Taking the opportunity to elevate the education mission by embracing the accreditation requirements as a platform to improve educational performance, with demonstrable outcome measures

Rewarding performance through incentives and funds flow

- Creating funds flow incentives in reconfigured organizational structures that reinforce the pursuit of mutually beneficial goals (e.g., revenue and margin incentives, prioritized program support, and targeted faculty recruitment)
- Developing value-driven faculty compensation plans that recognize quality, population health reimbursement models, team-based care, and group performance
- Considering the use of non-monetary incentives that recognize performance and reinforce mission priorities (e.g., scholars programs, research infrastructure)

The clinical landscape continues to evolve and shape how AMCs must adapt in order to thrive in pursuit of their mission. Maintaining a thriving and financially viable academic enterprise will require renewed attention to their clinical enterprises, the way they educate and train future providers, and to their governance structures to enable effective decision-making and mission alignment. Leading AMCs will take the opportunity to evaluate and leverage their many strengths and unique opportunities to develop strategies that lead to success and demonstrate their value into the future.

Managing workforce talent

Background

Across all industries organizations no longer have the luxury of adhering to status quo talent strategies. The higher education sector is no different. According to PwC's 2016 US CEO Survey, talent is top of mind for senior leadership as 72% of CEOs responded that they remain worried about the availability of key skills.[5] As an industry, higher education is experiencing a more dramatic impact given dynamics in the sector, like the aging workforce and "retirement cliff", as well challenges related to the readiness of the next generation of leaders.

Like many other industries, higher education finds itself in the middle of a complex and rapidly changing environment. The dynamic use of technology underpinning all central and supportive activities continues to accelerate, as does the regulatory environment. At the same time the public scrutiny and desire for quality higher education at a lower cost is becoming more intense. Finally, the age, skill, and expectations of the workforce are changing.

Many institutions are finding it necessary to hire from outside the institution, and in certain cases outside the industry, to find individuals with the skills to best handle these changes. Institutions are finding it more difficult to retain and motivate the younger workforce, who are looking for more flexibility, engagement, and opportunity for growth. Many talented future leaders get frustrated by the inefficiency and bureaucracy of a higher education institution. Institutions are also recognizing the need to increase diversity in their workforce to better reflect the increasingly diverse student body and other stakeholders.

Impact on educational institutions

Many institutions have implemented programs designed to identify, develop and retain talent, but most institutional leaders feel they are only scratching the surface of what needs to be done to effectively meet the challenges in this area. Typical employee engagement surveys are performed and small leadership development training and rotational programs exist, but it is often difficult to create programs and policies that provide for true differentiation of talent and differences in reward and movement within an institution.

While many colleges and universities continue to make investments in attracting and retaining talent, most institutions are challenged to create and utilize meaningful performance metrics that address key issues in managing workforce talent and that are linked to the overall strategic goals of the institution. These metrics should include institutional and departmental goals and objectives, as well as individual metrics that can be easily assessed and utilized to evaluate performance and enhance the return on human capital investments.

Our perspective

The effective and proactive management of talent within higher education will become a critical business issue in years to come. This is an area where the higher education industry can look to other industries and organizations to understand how they are responding to similar challenges. High performing organizations create a direct link between the definition of their strategy and the investment in their workforce. Organizations who deliberately prioritize their talent strategy have begun to reap the rewards – leaders report 77% better strategy implementation and 85% stronger financial performance when the talent strategy and business strategy are aligned.[6] An effective talent strategy helps leaders address critical questions like:

- Do we have the people with the right skills to enable our mission given our longer term strategic plans?
- Do we have people with the right capabilities and experience in roles today and will we in three to five years?
- What skills are critical now and in the future? Where are the gaps requiring training of our workforce?

[5] PwC 2016 US CEO Survey

[6] PwC, Project Management Institute, Talent Management – State of the Market, November 2014

- Do we have too many people or too few? Have we fully leveraged our investments in technology?
- Do people understand our mission and how their roles contribute to results that matter?

The benefits of an effective talent strategy are clear and plentiful. These benefits range from creating motivated and productive employees, to boosting retention and lowering turnover, to building a talent pipeline, to proactively managing key business risks through succession planning, to accelerating the development of high-potential talent. Across industries, only a minority of leaders are getting comprehensive management information for the measures they say are important. PwC's People Analytics Group found that only 6% of its survey participants reported being "very satisfied" with the quality of their people data and nearly one-third (29%) cited poor data quality as a top barrier to successfully producing workforce reports or analytics.[7] Many leaders acknowledge that their current infrastructure is not robust enough – and the discretionary resources that remain after mission-critical priorities are addressed are not sufficient to close the gap.

Many large organizations have developed a set of core "people analytics". The metrics shown below are from PwC's People Analytics Group and are intended to provide an example of the type of information leading organizations are measuring.

What Leaders Should Know	***People Analytics to Measure***
Recruiting: - How well do we attract talent? - How effective are we at bringing the talent we want on-board?	First Year of Service Turnover Rate Time to Accept Cost per Hire
Retention and Retirement: - How well do we retain our people? - Are we losing high-performers? Are we separating low-performers? - Will we be prepared when leaders leave the organization?	Voluntary Separation Rate % of Leaders Eligible for Retirement % of Leaders Eligible for Retirement Within 5 Years
Diversity: - Does the composition of our workforce align to our strategy? - Does our organization mirror the communities it serves?	% of Female Leaders % of Ethnically Diverse Leaders
Employee Mobility: - Are we developing leaders and promoting from within?	Internal Management Recruitment Rate Promotion Rate Mobility Rate
Employee Engagement: - What is the "voice" of our workforce saying? - Are individuals committed to their jobs and our organization?	Employee Engagement Index - % Favorable

Arming leaders with better data sounds good in concept, but people analytics is a new domain for most organizations and their human resource departments. New functions are being established as organizations look to measure, understand and improve the return on investments in their people.

[7] PwC Trends in People Analytics: 2015 Saratoga Benchmarks

More and more organizations are using people analytics to identify the specific elements of their talent strategies that drive the most value in their organizations and those that need improvement. These insights are used to develop the supporting tactics to effectively put their strategies into action to help achieve greater return on investment, improved employee engagement and enhanced business performance.

Different organizations see "talent'" in their own unique way, but there are common denominators. Like anything else, it is hard to improve what is not measured. Using people analytics is a critical component to understanding and improving the effectiveness of a talent strategy. Ultimately how much investment an organization makes in talent contributes to the overall performance of its business.

The proactive management of talent is still an evolving domain for many industries and organizations. Learning from the strategies and experiences from organizations, within and outside of the education industry, and utilizing those experiences to best meet institutional priorities will prove to be a beneficial exercise.

Data analytics

Background

The unprecedented rise of the “Big Data” movement has presented institutions with a new challenge. “Big Data” is the process of examining large data sets containing a variety of data types to uncover hidden patterns, unknown correlations, market trends, customer preferences, and other useful information. A key challenge for colleges and universities regarding “Big Data” is whether institutions can take the analytic tools and techniques they have developed in academia and research and use them for operational and strategic decision making.

Institutions possess an abundance of data that can be leveraged to effectively drive strategy, compliance, and increased operational visibility. However, institutions often struggle with deriving value from the data because their information management systems and practices are highly fragmented. These obstacles should not be a deterrent. Effective use of data for monitoring and intelligence can be achieved when the right analytic strategy, roadmap, and methodology is designed.

Higher education has been late to adopt data analytics as a management tool. Changes in the educational landscape have caused certain institutions to rethink their risk management, financial, and operational strategies. Upgrades to more effective technology platforms are now making it possible for institutions to analyze an abundance of data that would allow them to obtain valuable information regarding such items as admissions, financial aid management, gifts and endowments, facilities and capital projects, compliance, athletics, internal audit testing, marketing, and faculty performance, among other items.

Impact on educational institutions

There are several areas where data analytics can assist management and trustees in making more informed and effective decisions. Some of these, such as admissions, are commonly used throughout the industry. Others are just emerging as a result of better information. Below are several areas where educational institutions are considering broadening their data analytic capabilities.

Admissions – Admissions is a common institutional function where data analytics are frequently applied. Costs to recruit students can be understood and allocated when institutions use analytics to assess who is likely to become an applicant and, ultimately, a student. Trends based on geographic location, ethnicity, and anticipated major can provide admissions officers with the ability to target their efforts on the students with the highest likelihood of enrollment.

Enrollment and retention – The US Department of Education is assessing the success of federally funded financial aid when compared to retention and graduation rates. In addition, it is costly to an institution when students drop out. Statistical information can be analyzed to identify potential dropout candidates earlier and understand which services can increase retention rates, improve financial performance, and assist with compliance initiatives. Institutions can utilize data around student performance, course load, and course type to help students make informed decisions on their major and provide more targeted support for at-risk students.

Financial aid management – Aligning data from admissions, enrollment, and retention with student financial aid packages provides better visibility into the health of the financial aid process and can help improve the aid allocation process.

Gifts and endowments – Obtaining data on attributes of likely donors allows an institution to focus its efforts on a smaller giving demographic that yields greater success with less cost. It can also help fundraisers better assess the types of activities and events that are most impactful to a successful fundraising campaign.

Grant management – Using analytics in support of grant management efforts is a way for an institution to determine its compliance with federal awards. Summarizing and monitoring awards, determining specific departments or programs who have compliance issues, and using budget and expense analytics to assist in ensuring grant dollars are spent appropriately are just some of the areas institutions can enhance their grant management efforts.

Facilities and capital projects – Capital projects require significant investment and resources for any institution. Institutions can create analytics that support contract compliance, monitor overcharges, and track overall status for each ongoing project. Institutions may also use analytics to assess building utilization and how to more efficiently schedule classroom and other activities. Energy consumption can be analyzed to determine if there are savings through use of alternative energy sources. Finally, safety and security practices can be analyzed to determine whether staffing, equipment, or other enhancements need be made.

Medical charges and compliance – The recent shift from a fee-for-service to a pay-for-performance reimbursement model presents institutions operating academic medical centers (AMCs) with additional risks. In addition, an expanded volume of patient data is available in electronic health record (EHR) systems. These factors are driving AMCs to think strategically about how they can leverage EHR data to monitor and drive compliance with an ever-changing regulatory environment. Leading AMCs use advanced analytics to identify potential Stark Law violations, CMS overpayments, and monitor ICD-10 compliance.

Information technology – Institutions can utilize information technology control analytics to assist with asset monitoring and security, user provisioning and segregation of duties, and incident monitoring and management. The efficient use of data from an IT controls perspective helps institutions redirect their IT strategy and spend to focus on areas that present the greatest risk to an institution.

Athletic compliance – NCAA rules and regulations continue to be an area of focus and scrutiny for institutions. Using analytics to assist in eligibility and recruiting can enhance compliance with regulations and assist the institution in monitoring the performance of each athletic program.

Internal audit testing – Internal audit departments have started to embed analytics throughout the audit lifecycle in order to obtain a more targeted focus for their audits. In preparing the institution's risk assessment and planning phases, internal auditors can utilize analytic results to identify high-risk areas of institutional operations and design the framework of each audit. During the execution phase, targeted risk testing of 100% of the data population eliminates an unreliable sampling approach and quickly identifies outliers and anomalies.

Faculty performance and scheduling – Institutions can look at structured and unstructured data such as add-drop statistics, class size, teaching hours, course grades, and student feedback surveys to assess the performance of a faculty member. Faculty hiring and staffing decisions can be made based on predicted enrollments in the most desired majors and subjects.

Our perspective

In response to the changes in the higher education landscape, institutions are pioneering ways to combine disparate data sets and unlock the value of their data assets. Among other things, they are proactively monitoring grant management compliance, measuring the effectiveness of faculty instruction efforts relative to student performance, identifying how to effectively allocate financial aid and improve net tuition revenues, and monitoring performance and compliance within their academic medical centers.

Understanding an institution's current maturity as it pertains to existing data assets and technical resources is critical to paving the way for an analytics strategy and roadmap. Once understood, one can build a strategic foundation by focusing on the three cornerstones of higher education analytics: financial, audit and compliance, and institutional operations and performance.

In the early stages of analytics maturity, an institution's efforts are best focused on piloting analytics in targeted areas (e.g., financial performance or operational risk and compliance) where data is well-defined and easily accessible. As capabilities mature, the focus can shift to automating existing routines and developing more advanced analytics that provide real time intelligence that drive institutional strategy, innovation, and transformation.

The use of analytics within higher education continues to evolve. The proliferation of data, combined with enhancements in information systems, advanced analytic software, and sophisticated visualization tools has enabled institutions to gain valuable insights by combining and analyzing their data assets in ways that were historically difficult to achieve.

Changing expectations of the value of higher education

Background

For generations, higher education has been recognized as the primary pathway to the American dream. In the past five years, the national conversation has begun to shift and the value of a college degree has seen increased levels of public scrutiny. With the cost of attendance at public universities nearly doubling in the past 20 years, the conversation has shifted from education for education's sake to a higher degree of focus on return on investment and the true value of a college degree.

With rising costs, access and affordability are in flux, particularly for first generation and low-income students. The Pell Grant once provided a meaningful share of the cost of attendance at a public institution. Now, however the average cost of attendance (room, board, and other costs) at a public four year institution is approximately $25,000, while a full Pell Grant of $5,775 supplements less than 25% of a student's overall cost for attending a state institution. For a private institution, a Pell Grant will likely cover a much smaller percentage of the published price.

Providing full access to students of all income levels continues to be a struggle for colleges and universities. State and federal funding continues to shrink while the cost of administration, compliance, infrastructure and student expectations continues to increase. For private universities, this means more reliance on institutional resources or endowments to fill the financial gap left in the neediest student's financial aid packages.

Value is not simply measured in dollars. The perception of the quality of readiness of recent graduates is being scrutinized as well. According to a Gallup survey, just 14% of Americans–and only 11% of business leaders–strongly agreed that graduates have the necessary skills and competencies to succeed in the workplace.[8]

Impact on educational institutions

With increased scrutiny, institutions are continuing to define their value proposition and are refining their messaging to best demonstrate to the public the value that will come from the price paid for an education at their institution. With the complexity embedded within the financial aid process, it has become clear that more education has been necessary to effectively counsel students before they enter college. Colleges and universities now not only need to focus on traditional ratings and sources of information to prospective and current students, but what new data sources, such as the College Scorecard, are showing about their institutions.

In September 2015, President Obama released the College Scorecard, replacing his initial proposal of a college rating system. The newly designed College Scorecard is powered by a set of complex data, holding more than 1,700 variables for more than 7,000 colleges and universities. The metrics include such data as the type of college, geography, program type, and size. Users are able to see by institution the average annual cost, graduation rate and salary after attending, and a comparison bar on national averages.

There are limitations with the data in the College Scorecard. Presently, it captures only students who have received federal financial aid. While not perfect, the College Scorecard is a significant step in continuing to craft a meaningful tool for students and families on financial value. In addition, tools such as the Net Price Calculator and the Financial Aid Shopping Sheet provide other data points that are required to be maintained by colleges and universities. There is concern that some of these tools, including the College Scorecard, may deter students from applying to a particular institution, because of their financial situation. Specifically, first generation students and low-income students may decide not to even apply to a particular college based on using the Net Price Calculator for fear of overall cost.

[8] https://www.insidehighered.com/news/2014/02/26/provosts-business-leaders-disagree-graduates-career-readiness

Economic value of a college degree will continue to be a critical topic as the next generation enters college. It is expected that Generation Z students (children born in the mid-1990s to the mid-2000s) will be more financially driven than the millennial generation. This generation sees college as a means to securing a good job with a future. Many have seen their parents live through the economic uncertainty of 2008, and that uncertainty has shaped their attitudes about employment and financial security.

As the cost of four year institutions continues to climb, community colleges will need to play a larger role in ensuring access and affordability for a degree beyond high school. In 2015, President Obama created an independent coalition to help develop a program called America's College Promise. The initiative will make the first two years of community college free. The country's more than 1,000 community colleges are places that welcome everyone through their doors – 40% are first generation college attendees, 30% have dependents, and 38% receive Pell Grants. Community colleges should be further utilized to grant access to a degree beyond high school, particularly for low-income and first generation students.

Our perspective

The value of a college degree continues to be strong. According to Georgetown University's Public Policy Institute, there will be 55 million job openings in 2020, and 35% will require a bachelor's degree while 30% will require some college or an associate's degree. From a pure return on investment perspective, workers with a bachelor's degree on average earn well over $1 million more than high school graduates during their working lives.

The cost and access to higher education will continue to be an area of focus for Congress. Most recently Senator Orrin Hatch and Representative Kevin Brady wrote to colleges and universities with endowments greater than $1 billion and asked a series of questions related to endowment management, endowment spending and use, and conflicts of interest. It is uncertain at this point what will come from these inquiries, but it is clear that access and affordability of higher education has garnered significant attention from the federal government. Senator Lamar Alexander proposed last year the concept of Risk Sharing and a "Skin in the Game" approach, for colleges to share in defaults on student loans. While the conversations have lost traction in the election year, it has been a focus in recent years in this heightened environment of accountability.

Institutions will need to continue to address cost and value with prospective students and be transparent on expected costs as well as financial aid and loan options. It is important for institutions to continue one-on-one admission and financial aid counseling, where applicable, to ensure prospective students have an accurate picture of the true cost of attendance at a particular institution rather than relying on website data. PwC conducted a recent study in partnership with George Washington Global Financial Literacy Excellence Center. When tested on financial concepts, only 24% of Millennials demonstrated basic financial knowledge and more than 54% expressed concern in their ability to repay their student loans.[9]

Loans will continue to be a significant part of financial aid packages. In the 2015 edition of *How America Pays for College* sponsored by Sallie Mae and conducted with the market research firm Ipsos, 65% of families who took out education loans strongly agreed that they would rather borrow than have their child not be able to attend college.[10] Counseling student loan borrowers on repayment, specifically related to income driven repayment options, will be important to help students manage their debt incurred.

Institutions should be mindful of their own definition of "value" and how that definition relates to their overall mission. Ensuring clear alignment of the two will continue to be important. Identifying the most appropriate way to publicly communicate the value provided by an institution should be a topic of discussion amongst trustees and senior management.

[9] https://www.pwc.com/us/en/about-us/corporate-responsibility/assets/pwc-millennials-and-financial-literacy.pdf

[10] 2015 Sallie Mae, How America Pays for College, 2015 Sallie Mae's National Study of College Students and Parents http://news.salliemae.com/files/doc_library/file/HowAmericaPaysforCollege2015FNL.pdf

Considerations for the future of higher education

Colleges and universities continue to face forces that are transforming the traditional higher education landscape. The five megatrends identified by PwC's Center for Board Governance that are shaping the world and defining society's challenges and opportunities remain unchanged and continue to be relevant to higher education: (1) accelerating urbanization; (2) climate change and resource scarcity; (3) demographic shifts; (4) shift in global economic power; and (5) technological breakthroughs.

The diversity and expansion of student bodies, global expansion through partnerships or campuses overseas, alternatives in the delivery of education and new competition brought upon by technological advances, the rising cost of higher education, declining public support and the growing value gap are just some of forces disrupting the traditional higher education landscape. While no prediction on what higher education will look like in the next decade can be certain, we have identified certain views and perspectives as we look to the future.

Consolidation among institutions

As colleges and universities continue to adjust in the higher education marketplace, consolidation among institutions will likely increase driven by continued urbanization, demographic shifts, and financial pressures.

Continued urbanization - The growth in urban populations continues around the globe. In the US, the country's population growth is taking place in metropolitan areas, and clustered in and around the largest cities. By contrast, rural areas across the country continue to experience a decline in population. With the accelerating urbanization, enrollment in small colleges in rural areas is expected to continue to decline, impacting the financial viability of these colleges. Consequently, small rural colleges, particularly those without a significant competitive advantage, are more vulnerable to closures and consolidation in the next decade.

Financial pressures - Tuition affordability continues to garner media attention and be a top of mind concern for several segments of society, including students, parents, regulators and lawmakers. The pressure faced by colleges and universities to offer an affordable education is compounded by the decline in state funding of public institutions, the decline of federal research funding, and limited revenue alternatives.

The growing financial pressures will likely result in more college closures and move more institutions to consolidation or looking at leveraging resources through partnerships as a means of growing revenues and cutting costs. A recent Moody's report projects college closures to triple by 2017 and mergers to double. [11] While one of the primary drivers of consolidation is financial pressure, creative partnerships may reap mutual benefits beyond the bottom line.

Global campus

With the continuing expansion of global engagement and an interconnected world, colleges and universities will need to transform their curriculum and learning experience so students can successfully integrate into a global environment. This means extending beyond the traditional plans of recruiting international students and study abroad programs for US students. While these programs facilitate cross-cultural experiences, only one in ten US undergraduates studies abroad before graduating. [12] Economic challenges, more competition in recruiting high performing international students and changing student demographics will further strain rates of participation in these programs and more importantly they do not address the need to bring international learning experience to all students. Bringing the international agenda into programs and initiatives on campus may vary

[11] Inside Higher Ed, "Moody's predicts College Closures to triple by 2017", September 28, 2015

[12] Institute of International Education, Open Doors Report 2015

based on an institution's mission and culture but advancing the international agenda is critical. Data from the American Council on Education's study indicate that curriculum internationalization is a priority for many colleges and universities. Overall, 55% of respondents to the 2011 survey reported that they have efforts underway to internationalize their curriculum. [13]

The expansion of curriculums to include global interaction and collaboration, international learning and research networks and collaboration projects will create an educational environment where students and faculty will not only expand an understanding of the complexities of global integration but also develop the skills to navigate the workplace successfully. The next decade will likely see changes to curriculum including more international collaborative courses, collaborative on-line learning, video-conferencing learning and international joint and dual degree programs. Technology will play a big part in advancing the global agenda so students and faculty can obtain the knowledge and skills to work successfully in an increasingly interconnected world.

Shifts in the delivery of education

With the cost of higher education rising, a changing student population and technological advances bringing new methods of teaching, colleges and universities will need to move towards less traditional ways to deliver education. Studies also show that students are questioning the value of a degree and looking for more options and lower cost alternatives (according to the Gallup-Perdue Index 2015 Report, 50% of graduates were unequivocally positive in their response that their education was worth the cost). [14] The growth in non-traditional and older students, as well as more first generation, minority and lower-income students requires new models to accommodate demands for alternative scheduling and content delivery.

Technological advances will continue to provide opportunity to effect change in transforming the traditional classroom and lecture setting to become more interactive and virtual. A curriculum shift to a hybrid model of on-line and face-to-face education will provide more flexibility in scheduling and will lower the cost of delivery. Institutions will need to consider how best to achieve their mission through a less traditional approach while not losing the connection between students and faculty. For some it may mean a mixed model of on-campus and off-campus experiences where student groups spend some physical time together on-campus and continue course work in a virtual setting.

As institutions explore different models of delivering education there will likely be a shift to nontraditional paths. Non-degree competency-based education, a mix of college-credentials versus non-degree credentials, "digital badges" to demonstrate skills and knowledge to prospective employers without having a degree, three year degree programs and open courseware will become more prevalent in higher education. The student of the future will also be more mobile and less loyal to one institution, turning to lower cost alternatives including community colleges and public universities for part of their education. This will require easing credit transfer restrictions between institutions and other providers to meet the needs of a different education delivery model.

As Boards and administrators continue to discuss how their institution is positioned to adapt to likely changes in the higher education landscape, the following are select questions to consider:

- How is the institution preparing for demographic shifts and specifically the impact on recruiting efforts, enrollment management, tuition funding models and campus facilities?
- Is the institution addressing the rapidly shifting demographics from the perspective of the student including what should they learn? Are learning experiences preparing students for the workplace?

[13] American Council on Education, Center for Internationalization and Global Engagement, Mapping Internationalization on U.S. Campuses, June 2012 edition

[14] Great Jobs, Great Lives., The Relationship between Student Debt, Experiences and Perceptions of College Worth, Gallup-Purdue Index 2015 Report

- Is the institution addressing curriculum internationalization and is it positioned to increase international student engagement to better prepare students for a global economy?
- Does the institution's governance and faculty model align with the future direction of higher education? Is there a commitment and support to embrace change?
- How is the institution assessing tuition and financial aid models in light of changing demographics and tuition affordability concerns?
- How is the institution assessing the changing higher education landscape in redefining its mission, practices and operational model?
- Is the institution's information technology infrastructure able to take advantage of emerging technologies and adapt to new education models?
- Is the institution equipped to compile data and develop tools to identify patterns that may be applied to improve decision making?
- How is the institution assessing its overall financial health and financial threats such as lower enrollment, increasing costs of compliance and administration, endowment pressures, investment in information technology infrastructure, and campus and housing deferred maintenance?

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Attachment 3

RESOLUTION

Pursuant to the *Policy on Security Clearance for Access to Federal Classified Information* adopted on March 29, 2012, amended December 30, 2015, and this Resolution, the following named Key Management Personnel member as defined in Regents Policy 1600 shall not require, shall not have, and can be effectively excluded from access to all classified information and/or special nuclear material released to the Regents of the University of California until such individual is granted the required access authorization from the cognizant security agency. And, as a consequence of this Resolution, such individual does not occupy a position that would enable him to adversely affect the policies or practices of the University of California, or its subsidiary, regarding the performance of classified contracts for the United States Government.

NAME	**TITLE**
John Lohse	Interim Senior Vice President and Chief Compliance and Audit Officer