1) **Specifically, if going forward we were to balance the budget solely from cuts to central campus administrative units (with no cuts to academic units), what percentage level of cuts would be needed?**

For the purpose of this exercise campus support and VC Research divisions were used as the definition of administrative units.   In other words,

Administrative Units = Campus Support + VCR

To balance the budget solely from cuts to central campus administrative units (with no cuts to academic units, the level of cuts would double from 6% (12% with staff merit and benefit increases to 12%.

To clarify, currently the EVCP assigns divisions (administrative and academic) annual budget improvement targets. They may meet their targets through revenue generation or cost cutting. This approach has a differential impact on administrative divisions that in general do not raise revenues.

2) **If we were to freeze hiring in central campus units and use only attrition to reduce headcount, what do the models say about when our budget would be balanced?**

We already have a system of position control in place and it has been effective in maintaining the size of our reduced administrative headcount. Simply, position control forces new hiring decisions up to the Vice Chancellor and is monitored by HR. I expect position control to stay in place for the next several years. In my opinion, a hiring freeze is not something that can be maintained over time and has dramatic effects on business continuation and employee morale. Let me offer an example, we have four staff that process payroll for over 13,000 people. We struggle to coordinate vacations and manage sick time while maintaining a highly functioning payroll operation. A hiring freeze would require that upon separation of an employee, their position remain vacant. An unacceptable option. A better approach - and something my units do for instance - is to examine the composition of the team after a resignation and look for opportunities to reorganize to create cost savings and further efficiencies.

Average total attrition (involuntary and voluntary separations of career and contract staff) for FY15-17 is 13-14%. If we take the average separations and annual pay rates, this equals 1,227 and $86,843,985 respectively. We could assume that we could reach a balanced budget next year if we were to employ a hiring freeze in central campus units; however, we would likely see a corresponding significant increase in resignations.

Division Description	Avg. Involuntary Separations Count	Avg. Involuntary Separation Annual Salary	Avg. Voluntary Separations Count	Avg. Voluntary Separation Annual Salary	Avg. Total Separations Count	Avg. Total Separation Annual Salary
Administration	57	$ 4,401,272.3	201	$ 15,560,570	258	$ 19,961,843
Student Affairs	52	$ 3,213,351.7	175	$ 12,077,744	227	$ 15,291,095
Academic Research Units	14	$ 1,041,658.0	49	$ 3,448,853	63	$ 4,490,511
Athletics	9	$ 414,796.7	58	$ 3,741,055	67	$ 4,155,852
Finance	11	$ 1,031,534.3	28	$ 2,893,768	39	$ 3,925,303
Haas School of Business	10	$ 756,628.7	34	$ 2,515,197	44	$ 3,271,825
College of Engineering	7	$ 491,399.7	34	$ 2,643,214	41	$ 3,134,613
Res Museum & Field Stations	14	$ 830,044.0	36	$ 2,187,910	50	$ 3,017,954
School of Public Health	10	$ 590,369.7	26	$ 1,786,336	35	$ 2,376,705
Research Administrative Units	5	$ 345,035.7	26	$ 2,003,687	31	$ 2,348,723
Boalt School of Law	8	$ 528,766.7	23	$ 1,747,766	30	$ 2,276,532
Undergraduate Education	9	$ 590,722.0	17	$ 1,336,758	27	$ 1,927,480
Univ Developmt and Alumni Rel	3	$ 275,864.0	21	$ 1,619,631	25	$ 1,895,495
Equity & Inclusion Div	10	$ 637,402.7	17	$ 1,163,045	26	$ 1,800,447
UC Library	2	$ 111,754.7	24	$ 1,378,625	26	$ 1,490,380
Campus Support Core	2	$ 176,646.0	13	$ 1,279,689	15	$ 1,456,335
L&S Social Sciences	3	$ 148,552.3	18	$ 1,152,606	21	$ 1,301,158
L&S Biological Sciences	3	$ 111,620.7	23	$ 1,141,373	26	$ 1,252,993
University Extension	4	$ 259,285.3	17	$ 989,594	22	$ 1,248,879
College of Natural Resources	2	$ 168,098.7	17	$ 1,016,588	20	$ 1,184,687
L&S Math & Physical Sci	2	$ 114,308.0	11	$ 753,522	13	$ 867,830
College of Chemistry	1	$ 71,468.0	11	$ 791,218	13	$ 862,686
School of Social Welfare	3	$ 208,711.0	8	$ 616,757	11	$ 825,468
School of Optometry	3	$ 214,754.3	11	$ 537,015	14	$ 751,769
L&S Core	1	$ 107,369.7	6	$ 584,844	7	$ 692,214
L&S Arts & Humanities	1	$ 71,650.0	10	$ 608,001	11	$ 679,651
Cal Performances_SMA	1	$ 56,000.0	8	$ 460,783	8	$ 516,783
Graduate Division	2	$ 204,003.7	3	$ 270,135	5	$ 474,138
Graduate School of Education	3	$ 159,427.3	5	$ 303,366	7	$ 462,793
Art Mus & Pacific Film Archive	1	$ 68,212.7	6	$ 362,058	7	$ 430,271
Col of Environmental Design	0	$ 21,576.0	5	$ 360,848	6	$ 382,424
Summer Sessn, Study Abrd, OLLI	1	$ 79,396.7	4	$ 246,493	6	$ 325,890
L&S Undergraduate Division	0	$ 22,666.7	4	$ 250,910	4	$ 273,576
School of Information	1	$ 45,240.0	3	$ 193,930	4	$ 239,170
Strategic Acad and Fac Plan	2	$ 199,378.7	0	$ 38,792	2	$ 238,171
Goldman Sch of Public Policy	0	$ 19,333.3	4	$ 216,672	4	$ 236,005
VP Agriculture& Natural Resour	1	$ 51,380.0	4	$ 129,510	5	$ 180,890
Office for the Faculty	0	$ 25,502.0	1	$ 137,400	2	$ 162,902
Academic Senate	1	$ 96,218.3	0	$ 24,310	2	$ 120,528
Academic Core	0	$ -	1	$ 106,112	1	$ 106,112
Central Accounting Ledger	0	$ -	1	$ 92,511	1	$ 92,511
School of Journalism	1	$ 50,970.0	1	$ 40,895	2	$ 91,865
VP Divisionwide Prov & Expense	0	$ -	0	$ 21,524	0	$ 21,524
Grand Total	**262**	**$ 18,012,370.0**	**965**	**$ 68,831,615**	**1,227**	**$ 86,843,985**

Finally this action poses a real threat to the regionalization of shared services. Administrative units have experienced a marked increase in resignations driven in part by salary differences between Berkeley and UCSF, campus climate and increased workload.

3) **What is the dollar value of staff expense devoted to supporting research, teaching or other direct services to students? How does this compare to other expenses? Could you share the analysis and the supporting data your office used with respect to Satish's Santa Barbara comparison?**

The table below presents staff salary data by program code, with the following codes counted as those "supporting research, teaching, or other direct services to students:" Instruction and Departmental Research, Summer Sessions, Academic Support, Organized & Sponsored Research, Libraries, University Extension, and Student Services.

Staff Salaries and Wages Trend by Program Code
Current Funds in thousands

Program Code	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Instruction and Departmental Research	76,225	79,567	82,315	83,452	88,159	93,163	94,689
Summer Sessions	1,373	1,661	2,170	2,400	2,514	2,438	2,538
Academic Support	48,550	51,887	55,947	58,305	57,903	56,915	54,393
Organized & Sponsored Research	76,217	77,513	80,242	76,296	78,819	73,750	73,383
Libraries	17,004	17,424	17,547	17,622	18,438	17,918	18,904
Universtiy Extension	6,922	7,003	7,625	7,242	7,759	7,276	6,403
Student Services	61,457	67,391	71,668	78,118	89,268	99,157	100,281
Subtotal:	287,749	302,447	317,514	323,434	342,861	350,617	350,591
Public Service	20,776	22,719	24,382	25,298	28,409	29,543	28,551
Maintenance & Operation of Plant	31,633	31,896	33,467	35,352	36,320	36,420	38,012
Inst Support & General Admin	91,599	97,424	109,458	142,919	164,440	165,982	165,206
Auxiliary Enterprises	44,703	45,089	52,160	53,284	51,313	54,169	55,129
Subtotal:	188,711	197,129	219,467	256,854	280,482	286,114	286,898
Total Program Code	476,459	499,576	536,980	580,288	623,344	636,731	637,489
Year-Over-Year		5%	7%	8%	7%	2%	0%

For 2016-17, 55% of salary dollars were in program codes identified as directly supporting teaching, research and student services; however, every staff member at UC Berkeley (and indeed all universities) supports the academic and research enterprise of the institution to a greater or lesser extent. For this reason, any analysis such as this is extremely challenging because there is no perfect way to draw the line between academic and non-academic support. How, for example, to categorize the development officer raising money for student scholarships?

With respect to the UC Santa Barbara comparison, Dr. Rao has taken a reasonable approach to dividing academic and administrative salaries (as reported to IPEDS):
- Academic: salary dollars expended on instruction
- Administrative/Overhead: non-instructional salaries less salaries for research and librarians, archivists, etc. (which should not be considered overhead)

We are concerned, however, with the comparison to UCSB itself, which we don't consider one of our peer institutions. From our perspective, the size, scope and complexity at Berkeley are far greater than Santa Barbara (see table below), which, as a result, requires a greater size and skill set in the Berkeley staff.

	Berkeley	Santa Barbara
Fall 17 Student Headcount	41,910	24,346*
FY18 Operating Budget	$2.8 billion	$954 million
FY17 Research Awards	$848 million	$185 million

Total enrollment at UCSB is slightly smaller than the Berkeley Division of Letters & Sciences.

4) **Are there any specific examples of steps that the administration has taken to reduce costs by reducing administrative complexity? For example, last year the Senate asked the VCAF to make progress on simplifying travel reimbursements--has any progress been made on that front?**

Yes, we have made extensive progress on simplifying travel reimbursements. In the past year, the Controller's Office introduced a simplified travel reimbursement process that eliminates duplicate data entry by Campus Shared Services, shortens processing time to payment from weeks to days, and puts more control of the process in the hands of employee-travelers. Faculty and staff who travel in the course of their work are now able to request travel expense reimbursements by entering their travel expenses into the T&E Reimbursement System, eliminating the need to fill out multiple forms to request reimbursement. Additionally, travelers can upload photos of receipts directly to the system and all certifications and approvals can now be completed electronically, rather than collecting paper signatures.

The T&E team partnered with early adopters to pilot the new Direct Enter process. Since introducing the new process, user feedback has been overwhelmingly positive and more than two-thirds of campus departments are realizing the benefits from using it. We aim to ensure all campus departments are set up to the new process by Monday, July 2.

To learn more about the Direct Enter process, visit the Direct Enter page on the travel website, where you will find helpful information, training materials, and videos which walk you through how to directly enter your trip expenses into the travel reimbursement system. Staff from the Accounts Payable office are also available to visit departmental staff meetings, conduct a demonstration, and answer questions about the new process. If you would like to request a demonstration or if you have questions about using the Direct Enter process, contact travel@berkeley.edu.

Campus Shared Services continues to be available to assist with processing complex travel reimbursements, if necessary, that involve extensive foreign currency transactions or multiple destinations, and with travel reimbursements for students and visitors.

5) **What are our options for balancing the budget, other than increased revenue generation?**

We have proactively taken a number of actions to balance the budget. A sample of specific actions are summarized below:

Operational and Financial Actions for balancing the budget		
Category	Title	Description
Cost Savings	Purchase of Cogen Plant	Steam for heating and hot water is distributed around campus from a central plant, which also produces electricity. The plant was owned and operated by a third party "PE Berkeley," whose contract expired July 2017. As a result of a public bidding process, DTE, a well-established company with broad experience, was selected to operate the plant. The annual cost for plant operations with DTE is expected to be $1.5M to $3M less than the cost of operations under PE Berkeley. Purchase of the plant was $3.5M. The cost savings will maintain current levels of facility services.
Financing	Negotiation of $50M zero-interest loan from OP for deferred maintenance projects	A $50M zero-interest loan with flexible repayment terms has been negotiated with the Office of the President to accelerate deferred maintenance projects. Building systems in Stanley, Latimer, Davis, Kroeber, LSA, HAAS, Haviland and Silver have been scheduled. Envelope deferred maintenance projects in Stephens, Koshland, South Hall, U Hall and Giannini have also been scheduled. Elevator deferred maintenance projects include Sproul, Wurster, Minor Hall and LSA. Finally infrastructure projects are scheduled including steam repairs, Centennial Bridge, Strawberry Creek Dam, emergency generator maintenance and Trayer replacement.
Financing	Negotiation of a debt service cap of $100M per year through 2020	Campus negotiated a cap on campus' debt service near its FY2015 level. The capital loan will fund the campus' debt service in excess of $100 million over the next five years, through FY 2020. This action will reduce debt service expense by $7M in FY18-19. The Commercial Paper interest rate (under 2%) is assessed.
Financing	Negotiation of Housing Master Leases	A series of letters of intent were entered into with Patrick Kennedy, a local developer, for 4 upcoming projects. Upon execution and completion, these 4 projects would add an additional 665 beds to the campus inventory by 2023. Additionally, we are actively negotiating letters of intent with other developers that could result in another 400 beds in the next 3-4 years, while evaluating other prospective projects as well.
Admin Efficiency	Implementation of Direct TRV	To address campus concerns about the travel reimbursement process, a cross functional working group was formed to analyze the root causes and explore solutions. It was determined that a return to direct entry of travel

		reimbursements at the departmental level should be offered to travelers and/or administrative staff as an alternative to the CSS model. The revised system eliminates duplicate data entry by CSS staff, shortens processing time to payment and allows the traveler greater visibility into their submissions. About 50% of campus departments have opted in.
Cost Savings	Eliminating leases next to campus and using UC-owned space further away from campus	- The Sponsored Projects Office moved from leased space to UC-owned space in January 2018 (annual savings of ~$400k). - The Berkeley International Office has identified UC-owned space it will move into within the next twelve months (annual savings of ~$225k). - IST will move staff from several off-campus rented office locations and move them into a single, University-owned facility. - UDAR consolidated most staff into 49,250 RSF of campus space at the Golden Bear Bldg from two externally leased spaces.
Cost Savings	Fee for international visa processing and related services	An option is being explored in which international visitors would no longer receive free visa processing. They are instead proposed to pay $120/semester. This will allow campus to reduce central campus funding to the office by $1m/year and protect other areas of research administration from deeper cuts.
Admin Efficiency	Fundraising 2.0 implementation	Following an extensive review of campus fundraising in FY15 with senior campus leadership, donors, trustees and professional development staff, Fundraising 2.0 was implemented in 2017 to improve the donor experience by integrating and coordinating fundraising campuswide. Major changes implemented include: creation of a new AVC position with shared oversight of campus fundraisers; new prospect management system and policies; and new review of major fundraising projects. In addition, new funding models for development were instituted, new endowment minima were established, and new cost recovery and fee structures were adjusted to provide added investment. These and other related changes have resulted in a significant increase in gift totals as well as $20 million in cumulative new direct revenue to campus at this time. The work will continue into FY19 as we prepare for the launch of the public phase of our campaign.
Admin Efficiency	Technology & System Enhancements	Conversion of shadow development databases in major academic units (Haas, Chemistry, Engineering, Law, Library, etc.) to CADS has resulted in reduced costs in the units and increased efficiencies in fundraising coordination. Integration of shadow databases in the non-academic units (Athletics, Cal performances, etc.) has resulted in reduced data entry and improved data quality. The entity match project automated 90% of data entry work for alumni records. The SIS integration project increased data

		quantity and quality. The Marketing Automation project improved coordination of communications from the campus.
Service Enhance	Gift Processing & Stewardship	Centralizing gift processing has decreased costs in the units and increased the efficiency of gift intake. The new suite of CalAnswers reports makes visible funds that have been received by the Foundation and are awaiting transfer to the campus ledger, and facilitates reconciliation by unit CFOs. Most endowed scholarship and fellowship stewardship reporting has been centralized in UDAR, greatly reducing staff time in the units, increasing efficiencies in production, and creating more consistent quality for donors.
Revenue	Fiscal Year-to-Date gifts	Our fiscal year to date fundraising totals (as of March 31) are $61M higher than this time last year and $114M higher than FY15. If our 4th quarter numbers are similar to past years, we anticipate surpassing $500M in gifts and pledges for the first time in Berkeley's history.
Revenue	Big Give	The benefits of this program, beyond the immediate financial impact, is in how it has inspired new donors and enhanced the pipeline of future donors to campus. Donors who make their first gift to Berkeley through Big Give renew their support at a rate of 65% more than other first time donors. This program is not only becoming a tradition among recent graduates but is also trending among students, changing the fundraising landscape for the next generation of alumni.
Admin Efficiency	Student Success and Diversity	The new Student Success and Diversity Team within UDAR is comprised of 5 FTE positions that are responsible for fundraising priorities within the divisions of Equity & Inclusion, Student Affairs, and Undergraduate Education. By leveraging synergistic content and streaming business processes, the new team represents a reduction of 4 FTE compared to the previously separate fundraising enterprises among the divisions.
Admin Efficiency	Tuition remission for graduate employees	Currently GSI and GSR tuition remissions are initially paid from a clearing account and charges are transferred to the correct fund sources via payroll over several pay cycles. This two-step process is difficult to reconcile for the Graduate Division and PIs across campus who are unsure when the charges from tuition will hit their books. The Graduate Division, in partnership with SIS, is planning a new process to move the charges for tuition remission directly to fund sources, reducing the burden of reconciling tuition remission across campus.
Programmatic Efficiency	Integrate CTL-ETS-RIT	Realigning the three organizations, Center for Teaching & Learning, Educational Technology Services, and Research IT, has enabled more comprehensive support for faculty, enabled the launching of a new service to support online grading at scale, and allowed for the groups to meet their budget targets without major service reductions.

Funding Identified	Berkeley Connect	Gift funds identified by the Chancellor to provide $1M annually to Berkeley Connect to ensure graduate student financial support and program services to undergraduate students. This funding should support 29 graduate students and 2500 undergraduate participants.
Funding Identified	Summer Teaching Excellence	Funding provided by Summer Sessions for a series of workshops for summer instructors (faculty, lecturer, or GSI) to offer skill building around excellence in teaching during an accelerated academic schedule.
Funding increased	Center for Educational Partnerships	Funding to the Center for Educational Partnerships (CEP) in Equity and Inclusion increased to support one additional adviser FTE to expand the Pathways to Four Year University program (Summer Sessions) to the Contra Costa California Community College district.
Federal Funding	Summer Pell	Summer 2018 includes an expansion of Pell grants from the Federal Government to allow an additional Pell grant during Summer Sessions for eligible undergraduates.
Program Efficiency	Summer Bridge and Freshman Edge program alignment	Newly admitted freshmen choosing to participate in Summer Bridge or Freshman Edge will benefit from a single programmatic and residential program regardless of their program choice. Orientation, co-curricular, housing, and dining programs will be identical and integrated for both programs. Academic programs will still be different due to differing programmatic needs of the participants.

6) **The previous CAPRA chair made fairly direct assertions that the budget models in use last year were a disaster, and that no one really understood them. Has this situation changed? I.e., what are the financial models that you are currently using and what are they based on?**

I think there's a bit of confusion here. I believe that most of the "assertions" were related to one model in particular and that is the debt model. To be clear, the debt model is an OP model. In 2016/17, there was an ongoing discussion with Sanjay Govindjee and Nancy Wallace about the debt model. To give some context: they essentially wanted to get a better understanding of what models were/are used by the finance team to assess/monitor Berkeley's financial health and manage our debt. As such, we shared the debt model as well as the campus model with Sanjay, Nancy, Richard Stanton and Bob Anderson.

One concern about the debt model that they voiced multiple times was the fact that some of the debt service listed there was/is negative. As explained (also multiple times), this is because some 2009 bonds (listed with the suffix "sub" in the model) have negative coupon payments to reflect the fact that we receive a Federal subsidy on interest payments via the Build America Bonds (BABs) program. Therefore, instead of having the amounts listed net of the subsidy, the convention (as dictated by OP) is to show the gross numbers and then have the subsidy there as a "contra-amount" if you will. This is done to keep track of the subsidies.

7) **The library took a 4% cut in its budget this year. This is above the 1-2% budget cuts that most academic units took. What accounts for this disparity? Other than fundraising, what can Berkeley do to maintain the integrity of the library as a resource for research?**

The library had a 3.38% (effective rate) as did other academic units. Additionally, we worked with the library to stretch the use of approximately $4M of ending balance for several modernization projects such as digitizing in fiscal year 2017-18.