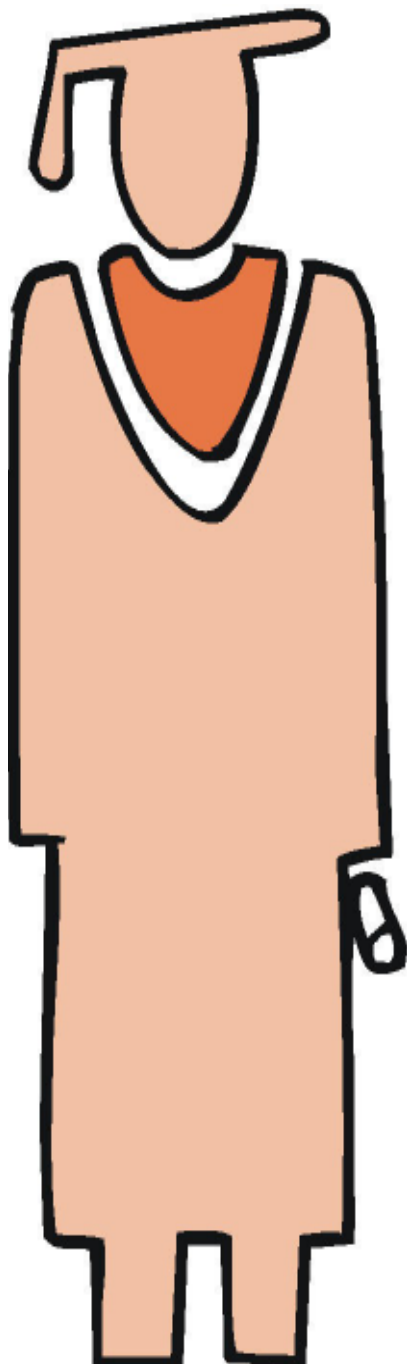


REPORT OF THE  
AAA/AAPLG *AD HOC* COMMITTEE TO ASSESS THE

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# SUPPLY AND DEMAND FOR ACCOUNTING PH.D.s

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A JOINT PROJECT OF THE  
AMERICAN ACCOUNTING ASSOCIATION  
AND THE  
ACCOUNTING PROGRAMS  
LEADERSHIP GROUP

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DECEMBER 7, 2005

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**EXECUTIVE SUMMARY**

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The *Ad Hoc* Committee to Assess the Supply and Demand for Accounting Ph.D.s was charged with the responsibility of gathering data regarding the perceived shortage of new, Ph.D.-qualified accounting faculty. It operated as a virtual committee over the period May 2004 through December 2005. The Committee conducted three surveys: one given to accounting program leaders to assess the expected demand for accounting Ph.D.s, another sent to accounting Ph.D. program directors regarding the supply of accounting Ph.D. students, and a third sent to current accounting Ph.D. students to assess demographic characteristics as well as to collect data on their experiences and motivations. The final report was delivered to the American Accounting Association in December 2005.

As part of the analysis, a taxonomy consisting of three types of schools was developed:

- **Ph.D. Schools** are those with Ph.D. programs in accounting, Master's programs of any type and undergraduate accounting programs (19.8 percent of the respondents)
- **Master's Schools** are those with only Master's and undergraduate accounting programs (61.1 percent of the respondents)
- **Undergrad Schools** are those with undergraduate programs only (18.1 percent of the respondents)

The three types of schools (Ph.D., Master's, and Undergrad) differ significantly in terms of their hiring needs. Master's Schools have a strong preference for hiring to meet specific teaching needs, while schools in the other two categories show a slight tendency to go for the best candidate, irrespective of specialization. The financial accounting specialty is in highest demand across all three types of schools. Faculty whose primary responsibility is teaching across all specialties, regardless of whether they have a Ph.D., amounted to 36.6 percent of the total faculty demand, while Undergrad Schools accounted for 56.0 percent.

Shortages are estimated by the difference between the number of new Ph.D.s expected to be hired and new Ph.D.s graduating. The most critical finding is that, although an overall shortage exists, it is acute in the audit and tax specialties (27.1 percent and 22.8 percent of demand, respectively). These shortages need to be considered in light of the significant demand for experienced Ph.D.s that was found in the accounting program leaders' survey.

The studies found a wide disparity in the salaries paid across the three types of schools, which may result in the few tax and auditing graduates going to the higher paying Ph.D. Schools and leaving the demand from the other two categories unmet.

The Ph.D. student survey revealed differences between North American and non-North American Ph.D. students. North American students tend to see teaching as a more important motivational factor than research, while non-North American students tend to see research as more important. More North American students have some level of program-related debt, and they accumulate larger amounts of debt than international students. About one-third of North American students see the financial support as inadequate, while only one-fifth of international students hold that view.

The student survey also revealed that 48.3 percent of the students either agreed or somewhat agreed that "the program is too stressful," and 29.0 percent of students either agreed or somewhat agreed that "the program is harmful to my physical health." While the specific aspects of the program that lead to the stress and health concerns were not elicited, it is important to become aware of the problem and its magnitude.

The Committee chose to focus its recommendations on those that follow, to some degree, from the results of its surveys. It believes that resolving the problems found will require substantial effort from many sources, but the burden will fall most heavily on the AAA. The Committee's recommendations include:

- The AAA should create an attractive, stimulating, and informative website that informs potential doctoral students about the opportunities that result from obtaining a doctorate in accounting. Information provided to prospective students needs to highlight the shortages in the audit and tax specialties.
- Schools should consider offering Master's-level "Ph.D. tracks" wherein students are exposed to research-related topics with the express intent of pursuing a Ph.D. in accounting.
- Creative efforts should be made to find effective ways of lowering the costs to schools providing doctoral education in accounting.
- Doctoral programs should consider program-related time efficiencies to shorten their program.
- Organizations with a vested interest in a viable academic accounting profession need to fund scholarships for accounting Ph.D. students. Ph.D. programs should increase stipends and provide benefits such as health and life insurance where possible.
- Accounting Ph.D. programs should consider programs providing spousal support to reduce the stress of Ph.D. students.

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## INTRODUCTION

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In April 2004, Bill Felix, President of the American Accounting Association (AAA), appointed the *Ad Hoc* Committee to Assess the Supply and Demand for Accounting Ph.D.s.<sup>1</sup> The Committee, a joint effort by the AAA and its Accounting Program Leaders Group Section (APLG), was charged with the responsibility of documenting the existence of any shortage in the availability of new Ph.D.-qualified accounting faculty. The Committee designed and administered three separate surveys and analyzed the responses from each. One survey elicited from accounting program leaders the expected demand for accounting Ph.D.s; another elicited data from accounting Ph.D. program directors regarding the supply of accounting Ph.D. students; the third gathered data from students currently enrolled in accounting Ph.D. programs.

There is substantial anecdotal evidence that a shortage of Ph.D.-qualified accounting faculty exists and may grow. In addition, the AACSB predicts a major shortage of all business Ph.D.s over the next ten years. In referring to the recent increase in accounting majors, the *Wall Street Journal* noted that “some universities face a problem: a shortage of professors to teach these young beancounters.”<sup>2</sup> The article continues by stating that:

the comeback of the accounting career occurs as the number of business doctorates produced is at a 17-year low and universities struggle to recruit new accounting professors. That leaves many wondering who will be left to teach all the new rules and regulations to the growing student pool. While many academic fields are suffering from professor shortages, the issue is more acute in accounting because of the pull toward high-paying public-accounting jobs.

The Committee operated as a virtual committee and did not meet face-to-face. Communications were made by email and phone calls. Here is the timetable the Committee followed:

<b>Time Period 2004</b>	<b>Task Description</b>
April 15–May 15	Gather background material and circulate among the committee members.
May 16–May 31	Members provide possible questions to be used on the first two surveys.
June 1–June 15	Compile and circulate possible questions.
June 16–June 30	Preliminary draft of the supply and demand surveys.
July 1–July 15	Pretest on committee and begin to draft report.
July 15–July 31	Revise instruments and draft, and send to AAA/APLG.
August 1–September 15	Create a third survey directed at current accounting Ph.D. students. Gather names of Ph.D. program directors.
September 15–November 1	Collect data using the supply and demand surveys.
November 1–December 31	Collect data from current Ph.D. students.
January 1–June 30 2005	Analyze results for all three surveys.
June 30–August 31	Draft final report.
September 1–October 31	Revise and submit final draft.

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<sup>1</sup> Throughout this report the term Ph.D. is used. However, the intent is to encompass all research-oriented doctoral degrees, such as D.B.A..

<sup>2</sup> “Accounting in College Lures More Students,” *Wall Street Journal*, July 29, 2004.

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## SURVEY DEVELOPMENT AND DATA COLLECTION

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The Committee began by developing tasks necessary to design and create the surveys. Those tasks consisted of:

- Conduct background research to learn what has been done in the past, by whom and how, and to raise important issues that should be considered.
- Develop preliminary surveys.
- Create drafts and circulate them among the Committee members for feedback and revision.
- Conduct small sample pretests and revise accordingly.

The background research raised a number of issues. Several of the most important are identified below:

- The AACSB has changed its instructional qualification requirements from a strict ratio of Ph.D.-qualified instructors to one that allows a combination of academically and professionally qualified faculty. There is anecdotal evidence that a significant portion of accounting instruction is currently carried out by professionally qualified full-time faculty, most of whom do not hold Ph.D.s. The apparent substitution of these faculty members for Ph.D.-holding accounting faculty could directly affect the demand for accounting Ph.D.s.
- It would be useful for the AAA to develop a classification scheme for colleges and universities so that institutions that supply a certain type of Ph.D. or recruit Ph.D.s of a certain type can be identified.
- The AICPA, in its annual supply and demand survey, asks for information about accounting Ph.D. students enrolled and degrees awarded. It also collects data on gender and race of students enrolled in the prior year as well as graduates in the prior year. Details beyond this data are not collected.

A recent article by Ronald Ehrenberg,<sup>3</sup> which examines the market for economics Ph.D.s, is very relevant to the Committee's charge. He observes, "American colleges and universities are increasingly substituting nontenure track full-time and part-time faculty for full-time tenured and tenure track faculty" (Ehrenberg 2004, 228). Ehrenberg supports that observation with the fact that 55 percent of economics faculties at research-oriented universities in 2002 are staffed by tenure-track faculty (as opposed to non-tenure-track lecturers), down from 72 percent in 1982. Another relevant conclusion is that 56 percent of U.S. economics Ph.D.s in 2002 were conferred to non-U.S. citizens (up from 20 percent in 1966). While this research focuses on the economics discipline, it also seems relevant to the accounting discipline.

The Committee agreed to consider certain points as it drafted the surveys:

- The Committee should estimate not only overall supply and demand, but also estimate supply and demand within certain subcategories (e.g., financial, managerial, etc.).

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<sup>3</sup> Ehrenberg, R. G. 2004. Prospects in the academic labor market for economists. *Journal of Economic Perspectives* 18 (2): 227-238.

Information about mismatches might be useful to accounting Ph.D. programs in recruiting and advising students.

- Information about the substitution of non-Ph.D. instructors for Ph.D.s might be useful.
- Information about the nature of schools' programs (M.B.A./full-service accounting programs, private/public, small/large enrollments, etc.) and location (geographical region, urban/other, etc.) could be useful in interpreting other data collected.

Following circulation of the background material among Committee members, each member drafted potential questions. The Chairman collected these questions and edited and compiled them into draft surveys. Draft versions of the surveys were sent to Committee members and several other accounting faculty who then completed the surveys as a pretest and directed important comments to the Chairman.

In August 2004 an interim report was presented to Executive Committee of the APLG, and as a result of that meeting it was decided that a third survey would be developed. That survey would focus on eliciting both demographic data about the current Ph.D. students and information about their motivation to enter accounting doctoral education.

All three surveys were conducted using the online survey service "SurveyMonkey." This service enables the creation of questions in various forms, distribution of the survey to specific email addresses, and collection and analysis of responses.

Once the populations for the three surveys were identified and their email addresses collected, they were contacted via email and directed to the website where the surveys resided. Approximately two weeks after the initial contact, a follow-up request was made. The accounting program leaders, Ph.D. program directors, and the Ph.D. students had final response rates of 28.9 percent, 59.0 percent, and 42.3 percent, respectively. No tests of response bias were conducted.

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## **ESTIMATING THE SHORTAGE OF ACCOUNTING FACULTY**

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### **Demand for Accounting Faculty**

A total of 1,146 accounting program leaders, identified by the American Accounting Association, were asked a series of questions regarding (1) expected hiring over the next three academic years, (2) areas of specialization planned for these hires, (3) anticipated compensation for newly hired faculty, and (4) the nature of their program offerings. A total of 331 program leaders responded to the survey. Of those responding, 56 (19.8 percent) schools indicated that they offer academic programs at three levels: Ph.D. programs in accounting, Master's programs of any type, and undergraduate accounting programs. 175 schools (61.1 percent) indicated that their program offerings included only Master's and undergraduate accounting, and 51 schools (18.1 percent) responded that they only offer undergraduate accounting programs.<sup>4</sup>

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<sup>4</sup> Of the 331 responding schools, 49 did not provide sufficient information to determine their program offerings.

## **Estimating the Number of New Hires**

The accounting program leaders were asked to indicate how many full-time accounting faculty members that they expected to hire in the academic year 2005–2006 and the two subsequent years in six different categories:

- Ph.D. – New Graduates
- Ph.D. – Experienced Assistants
- Ph.D. – Experienced Associates
- Ph.D. – Experienced Full Professor
- Teaching only – Ph.D./ ABD
- Teaching only – Other

We estimated accounting faculty demand by extrapolating the sample responses to the three subpopulations (Ph.D., Master’s, and Undergrad Schools).

Using Hasselback’s *Accounting Faculty Directory*<sup>5</sup> list (hereafter, Hasselback’s), the Committee found 83 schools that offer a Ph.D. program in accounting. 56 of the schools responding to the accounting program leaders’ survey indicated that they offer Ph.D. programs in accounting, a response rate of 67.4 percent and more than twice overall rate for the program leaders of 28.9 percent. This led the Committee to conduct an informal analysis of accounting programs listed in Hasselback’s. In addition to the high response rate for Ph.D. schools, there appears to be potential significant response bias that results from under-response by schools with only bachelor’s degrees in accounting. Consequently, the Committee takes the 83 Ph.D. schools as given, then assumes, based on its informal analysis,<sup>6</sup> that Undergrad Schools represent 45 percent of schools without a Ph.D. program, with Master’s Schools comprising the remaining 55 percent. Thus, the Committee formed three strata of schools with the following subpopulations:

<u>Ph.D. Schools</u>	<u>Master’s Schools</u>	<u>Undergrad Schools</u>	<u>All Schools</u>
83	478	585	1,146
7.2 percent	41.8 percent	51.0 percent	100.0 percent

Using these ratios, the sample was extrapolated to the three subpopulations. A subpopulation’s sample count was extrapolated to the population by taking the ratio of the assumed subpopulation size to the sample size in that subpopulation and multiplying that number by the sample result. For example, the ratio of assumed population to the sample size for the Master’s schools was 2.7314 (478/175), and the number of new Ph.D.s that the Master’s schools in the sample expected to hire was 68. Multiplying the ratio by the sample count results in an estimated demand for new Ph.D.s by Master’s schools of 186, as shown in Table 1.

Table 1 details the estimates for the academic year 2005–06 and the subsequent two years, 2006–07 and 2007–08, at all ranks and for all three subpopulations as well as the total for all schools. The total number of new Ph.D.s expected to be hired in 2005–06 was 352. While expected hires for individual schools ranged from 0 to 4, this estimate equates to 89.3 percent of the Ph.D. Schools, 38.9 percent of the Master’s Schools, and 15.7 percent of the Undergrad Schools hiring one new Ph.D. as an Assistant Professor for 2005–06.

<sup>5</sup> Prentice Hall 2004–2005 *Accounting Faculty Directory*, Prentice Hall, Upper Saddle River, NJ, 2004.

<sup>6</sup> The degree offerings of all the schools listed in Hasselback were examined to identify which would be considered to be Ph.D., Master’s, and Undergrad. Of the non-Ph.D. schools, 47.8 percent would be considered Undergrad and 52.2 percent would be Master’s. Given differences in the survey sample (1,146) and the listings in Hasselback (889) and the potential for some measurement error, our assumption seems reasonable.

The estimated number of accounting faculty to be hired in 2005–06 is 1,174. New Ph.D. graduates represented 30.0 percent of the faculty demand for 2005–06. Yet the total demand for experienced Ph.D.s (Assistant, Associate, and Full Professors) represents 35.5 percent of the total demand, and demand for experienced faculty remains at about the same level for the subsequent two years. Demand for faculty whose primary responsibility is teaching (regardless of whether they have a Ph.D.) amounted to 36.6 percent of the total faculty demand. When viewed at the school-category level, 341 of 450 (56.0 percent) of the “teaching only” faculty were to be hired by the Undergrad Schools.

Demand at all levels appears to be somewhat “near-term,” and when the demand for 2005–06 is compared to the two subsequent years, the annual demand declines in all categories. This may reflect, in part, recent undocumented shortages. As we will see when we discuss the supply survey results, there is a shortage of available accounting Ph.D. graduates that will result in substantial demand for 2005–06 remaining unmet.

### **Teaching Specializations**

Accounting program leaders were asked to indicate “How many new Ph.D. graduates [do you] expect to hire in each teaching specialty for 2005–6 and subsequent two academic years?”<sup>7</sup> The specialty areas to which the program leaders responded were as follows: audit, managerial, financial, tax, systems, multiple, other.

Sample responses indicating the number expected to be hired for each specialty, by type of school and year, are shown in Table 2. The number of teachers that the three types of schools expect to hire within each teaching specialty differs substantially. While the financial accounting specialty is in highest demand across all three types of schools, it is in highest relative demand for the Ph.D. Schools, with 40.3 percent of their expected hiring in financial accounting. Master’s Schools have a somewhat more balanced approach to hiring across specialties. These schools have the highest demand for tax and systems teaching of the three types of schools. The category with the most surprising number of anticipated hires is the multiple-specialty category. Table 2 indicates that the Master’s and Undergrad Schools expect approximately one-fourth of their new Ph.D.s hires to teach in multiple areas. As will be seen when we discuss the results of a Ph.D. program directors survey, none of the students are considered to be preparing themselves for multiple teaching specialties.

Another way to look at the demand for specializations within accounting faculties is to focus on the percentage of a given specialty expected to be hired by each type of school (Table 3). This comparison is particularly informative when the percentages expected to be hired are compared with percentage of the type of school represented in the responses. The Ph.D. Schools represented 19.4 percent of the sample. Yet in every teaching specialty, their proportion was higher than their representation in the sample. The Ph.D. Schools anticipate hiring 43.8 percent of the new Ph.D.s who specialize in teaching managerial accounting for 2005–06, while the percentage drops in the subsequent two academic years. The demand for auditing teachers shifts from a slightly disproportionate share going to Ph.D. Schools in 2005–06 to 90 percent going to Master’s Schools in 2007–08. New Ph.D.s who specialize in teaching systems are in most demand by the Master’s Schools, with almost no demand coming from Undergrad Schools.

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<sup>7</sup> The accounting program leaders were also asked to indicate how many new Ph.D. graduates they expect to hire in each research specialty. The responses were quite similar, so we chose not to report the research specialty results.

**TABLE 1**  
**Estimated Accounting Faculty Demand for the Academic Year 2005-06 and**  
**the Subsequent Two Years 2006-07 and 2007-06**

	2005				2006 & 2007					
	Ph.D.	Master's	Undergrad Only	2005 Totals	Percent of Total	Ph.D.	Master's	Undergrad	2006 & 2007 Totals	Percent of Total
New	74	186	92	352	30.0%	99	342	149	590	42.6%
Experienced	36	131	57	224	19.1%	28	150	115	293	21.2%
	31	46	46	123	10.5%	30	52	11	93	6.7%
Teaching only	21	25	0	46	3.9%	6	49	11	66	4.8%
	12	22	92	126	10.7%	13	8	80	101	7.3%
	26	128	149	303	25.8%	28	98	115	241	17.4%
<b>Total</b>	<b>200</b>	<b>538</b>	<b>436</b>	<b>1174</b>	<b>100.0%</b>	<b>204</b>	<b>699</b>	<b>481</b>	<b>1384</b>	<b>100.0%</b>

**TABLE 2**  
**Anticipated Demand for Teaching Specialties among New Ph.D.s Hires**  
**for the 2005-06, 2006-07, and 2007-08 Academic Years**

	Ph.D. Schools				Master's Schools				Undergrad Schools							
	2005	2006	2007	Total	Percent of Total	2005	2006	2007	Total	Percent of Total	2005	2006	2007	Total	Percent of Total	
Audit	11	8	1	19	12.3%	19	11	10	40	10.7%	1	4	0	5	10.6%	
Managerial	14	9	8	23	14.9%	15	22	16	53	14.2%	3	4	2	9	19.2%	
Financial	31	31	20	62	40.3%	44	38	19	101	27.0%	9	5	1	15	31.9%	
Tax	8	4	4	12	7.8%	21	13	9	43	11.5%	2	0	1	3	6.4%	
Systems	4	4	1	8	5.2%	13	11	12	36	9.6%	1	0	0	1	2.1%	
Multiple	14	10	8	24	15.6%	31	29	31	91	24.3%	5	6	2	13	27.7%	
Other	5	1	4	6	3.9%	5	1	4	10	2.7%	0	1	0	1	2.1%	
				154	100.0%				374	100.0%				6	47	100.0%

**TABLE 3**  
**Percentage of Survey Responses for Three Subpopulations – (1) Ph.D. Schools, (2) Master’s Schools, and (3) Undergrad Schools – for Seven Specialties of Accounting Faculty for 2005-06, 2006-07, and 2007-08 Academic Years**

	2005-06			2006-07			2007-08				
	Planned Hires from Sample	Percentage of the Specialty		Planned Hires from Sample	Percentage of the Specialty		Planned Hires from Sample	Percentage of the Specialty			
		Ph.D. Schools	Master’s Schools		Undergrad Schools	Ph.D. Schools		Master’s Schools	Undergrad Schools	Ph.D. Schools	Master’s Schools
Audit	31	35.5	61.3	3.2	34.8	47.8	17.4	11	9.1	90.9	0.0
Managerial	32	43.8	46.9	9.4	25.7	62.9	11.4	26	30.8	61.5	7.7
Financial	84	36.9	52.4	10.7	41.9	51.4	6.8	40	50.0	47.5	2.5
Tax	31	25.8	67.7	6.5	23.5	76.5	0.0	14	28.6	64.3	7.1
Systems	18	22.2	72.2	5.6	26.7	73.3	0.0	13	7.7	92.3	0.0
Multiple	50	28.0	62.0	10.0	22.2	64.4	13.3	41	19.5	75.6	4.9
Other	10	50.0	50.0	0.0	33.3	33.3	33.3	8	50.0	50.0	0.0
<b>Total</b>	256	34.0	57.8	8.2	31.6	59.0	9.4	153	30.1	66.0	3.9
Subpopulation as a percentage of respondents		19.4	61.9	18.7	19.4	61.9	18.7		19.4	61.9	18.7

The bottom row is the percentage of the responses represented by each subpopulation.

## Supply of New Ph.D. Accounting Faculty

In order to identify the individuals in the population of accounting Ph.D. program directors, the accounting program leaders at schools with Ph.D. programs were asked to provide the name of the person in charge of or responsible for their Ph.D. program. For those who failed to provide a name, phone calls were made to the schools to obtain names and email addresses of the Ph.D. program directors. Then the survey solicitations were sent, with a follow-up two weeks later. Of the 83 Ph.D. program directors contacted, 49 responded (for a response rate of 59 percent).

To estimate the number of accounting Ph.D. students currently in residence and their teaching and research specialties, the program directors were asked “For each year of your Ph.D. program, indicate how many current Ph.D. students are in each TEACHING specialty.” As shown in Table 4, the 234 out of 396 students (59.8 percent) have financial accounting as their teaching specialty. The two identifiable specialties with the fewest students are auditing and tax with 7.4 percent and 5.9 percent of the students, respectively.

Our estimates of the number of students graduating in 2005–06 through 2007–08 (shown in Table 4) are based on estimates of the time to complete Ph.D. programs, collected as part of the student survey (discussed later in this report), and applied those times to the numbers of students as gathered from the Ph.D. program directors. Thus, we assume that 30 percent of the fourth-year students will graduate in that year and 100 percent of the fifth-year students and beyond will graduate that year. So for 2005–06, we assume that 100 percent of those planning to graduate in their fifth year or beyond would graduate in that year. For 2006–07 and 2007–08, 30 percent of the students who have been in their fourth year and third years, respectively, were assumed to have graduated at the time of the survey. Then we extrapolated from the sample of 49 schools to the population of 83 schools. While the proportion of students in the various specialties remains the same as the sample, we estimate the total of 141 students will graduate with their Ph.D.s in 2005–06, 145 in 2006–07, and 187 in 2007–08. Since some attrition in student numbers is likely, the supply may be overestimated for future years.

**TABLE 4**

**Ph.D. Program Directors’ Estimates of the Number of Current Ph.D. Students in Various Teaching Specialties Extrapolated to the Population of Schools with Ph.D. Programs**

	Sample Responses					Sample Totals	Est. Pop. <sup>a</sup>	Estimated Number of of Ph.D.s Graduating		
	1st Year	2nd Year	3rd Year	4th Year	5th Year			2005–06	2006–07	2007–08
Audit	9	6	4	8	2	29	49	7	12	8
Financial	37	62	45	52	38	234	396	91	85	108
Managerial/Cost	8	13	18	17	11	67	113	27	29	37
AIS	11	10	8	5	3	37	63	8	10	19
Tax	4	4	7	5	3	23	39	8	9	14
Other	0	1	0	0	0	1	2	0	0	1
<b>Total</b>	69	96	82	87	57	391	662	141	145	187

<sup>a</sup> A linear extrapolation from the sample of 49 respondents to the population of 83 schools with accounting Ph.D. programs.

## Estimated Shortages

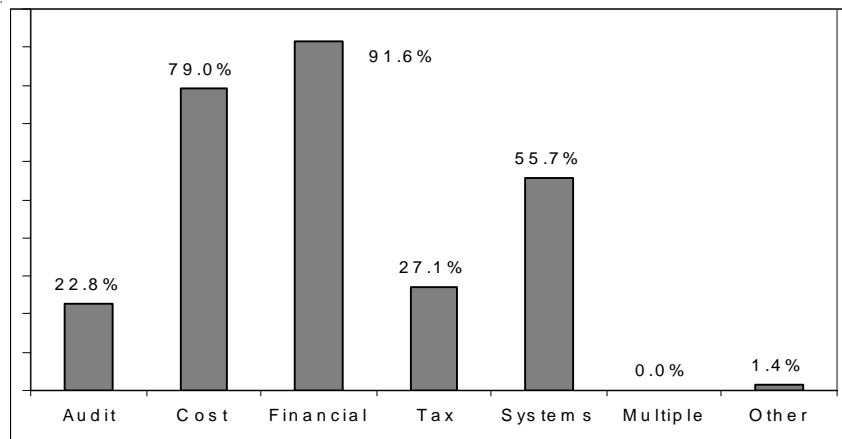
The most critical charge given to the Committee is an estimation of the shortage of new Ph.D.-qualified faculty members. Using the data collected from both the accounting program leaders and the Ph.D. program directors, we estimated the shortages in each teaching specialty, as well as overall, by reviewing the program directors' estimate of students graduating and the accounting program leaders' estimates of the number they expect to hire.

The shortages were estimated by taking the percentage demanded by specialty from the sample (Table 2) and multiplying those percentages by the estimated total supply of new Ph.D.-qualified faculty for two periods: academic year 2005–06 and the subsequent two years 2006–08 (shown in Table 1). For example, the 43 new Ph.D.s with auditing as their specialty demanded in 2005–06 (as shown in Table 5) is found by taking the percentage demanded for the audit specialty from the sample (12.3 percent) and multiplying that percentage by the estimated total supply of new Ph.D.s (352).

Across all specialties, Table 5 shows that for the three academic years, 2005 through 2008, the overall supply is only 49.9 percent of the number demanded. Focusing just on the shortages estimated for 2005–06, the supply for every specialty falls short of the demand. The two lowest categories are those with multiple specialties and the "other" category, which are estimated at zero. However, it should be noted that the program directors were not given multiple specialties as a reporting option and "Other" may have been perceived as too vague an option. Nonetheless, we must acknowledge that many Ph.D. students will be expected to teach across specialties when they assume their first faculty position. Financial accounting will have 79.1 percent of its demand met. Tax and auditing will only have eight students graduating, which is only 18.6 percent and 16.3 percent, respectively, of the expected demand for 2005–06. Looking at the subsequent two years, shortages remain across all specialties; however, these shortages are less severe in most cases.

As shown in the Figure 1, there is substantial variation across specialties in the proportion of demand expected to be met over the three-year period. As before, the "Multiple" and the "Other" categories fall well short in percentage terms. It should be noted that for the "Other" category,

**FIGURE 1**  
**Supply of New Ph.D.s across Specialties as a Percentage of the Expected Demand over the Three Academic Years 2005–2008**



**TABLE 5**  
**Estimates of the Excess or Shortage of the Supply of New Ph.D.-Qualified Accounting Faculty**  
**Relative to the Demand the Three Academic Years 2005-2008**

	Estimates for 2005-06				Estimates for 2006-08				Cumulative	
	Demand	Supply	Excess (Shortage)	Percent of Demand Met	Demand	Supply	Excess (Shortage)	Percent of Demand Met	Excess (Shortage)	Percent of Demand Met
Audit	43	7	(36)	16.3	71	19	(52)	26.6	(88)	22.8%
Managerial	44	27	(17)	61.4	74	66	(8)	89.5	(25)	79.0%
Financial	115	91	(24)	79.1	194	192	(2)	99.2	(26)	91.6%
Tax	43	8	(35)	18.6	71	23	(48)	32.2	(83)	27.1%
Systems	25	8	(17)	31.9	41	29	(12)	69.9	(29)	55.7%
Multiple	69	0	(69)	0.0	115	0	(115)	0.0	(184)	0.0%
Other	13	0	(13)	0.0	24	1	(23)	4.2	(36)	2.7%
<b>Total</b>	<b>352</b>	<b>141</b>	<b>(211)</b>	<b>40.0</b>	<b>590</b>	<b>330</b>	<b>(260)</b>	<b>55.9</b>	<b>(471)</b>	<b>49.9%</b>

the characteristics of the faculty members demanded and the students being supplied are unlikely to match. In the more defined specialties, only 27.1 percent of the tax faculty and 22.8 percent of the audit faculty demanded are expected to be supplied by graduating candidates, as viewed cumulatively over the three years. Conversely, graduates interested in teaching financial accounting almost reach the level demanded (91.6 percent).

## Other Accounting Faculty Hiring Findings

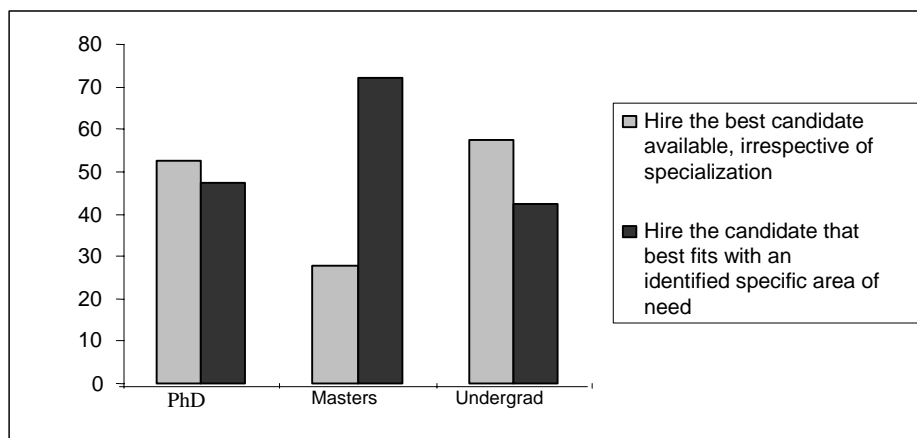
### Faculty Hiring Strategies

The accounting program leaders were asked to characterize their hiring strategy by responding to the following question: “Which of the following best describes your hiring strategy for entry-level, doctorally qualified, tenure-track accounting faculty?” The choices were either “Hire the best candidate available, irrespective of specialization” or “Hire the candidate that best fits with an identified specific area of need.” Figure 2 displays that Ph.D. and Undergrad Schools show a slight tendency to pursue the best candidate irrespective of specialization, while the Master’s Schools, by at ratio of 3 to 1, looked for the best fit within their needs. One might speculate that the motives to hire the best available candidates for Ph.D. Schools might be driven by research considerations, while, as shown later, the Undergrad Schools tended to hire accounting faculty with multiple specialties.

### Expected Hiring Relative to Previous Years

Program leaders’ responses when asked to compare the number they expect to hire with their school’s hiring over the previous three years are shown in Figure 3. The median response was “About the same.” However, 35.4 percent said that they expected hiring to be either “Slightly” or “Significantly” higher than the previous three years in 2005–06, and that proportional increase was roughly the same when asked about 2006–07 and 2007–08. These responses suggest either some pent-up demand that program leaders do not expect to subside in the near term, or possibly for expected growth.

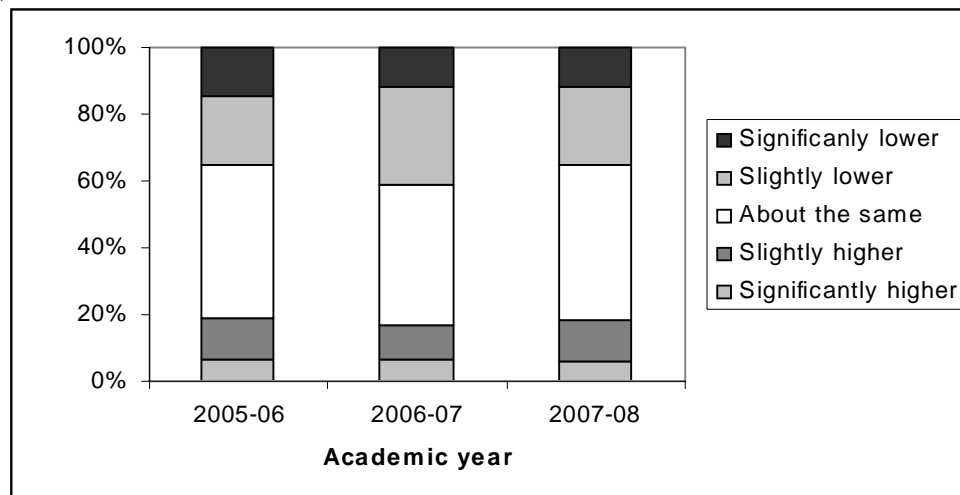
**FIGURE 2**  
Faculty Hiring Strategies



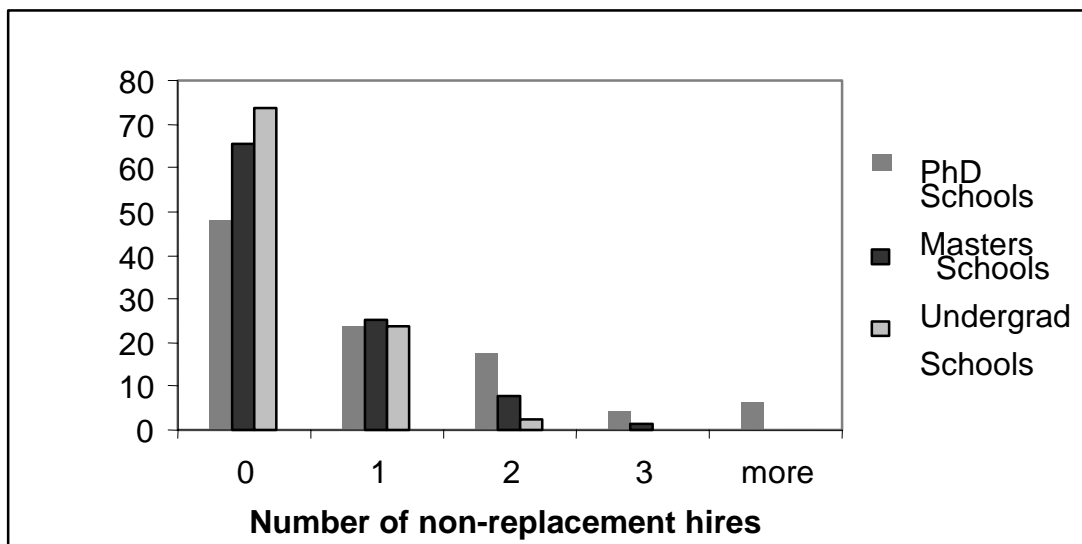
## Replacement Hiring

The accounting program leaders were asked to report how many of their anticipated new hires were replacements for current faculty members. We estimated “growth hires” by subtracting the replacement number from the total anticipated hires. The result is reported in the Figure 4. Many of the new hires at all levels are replacements for existing faculty, with just under 50 percent of the Ph.D. Schools and almost 74 percent of the Undergrad Schools indicating that all their hiring would be replacements.

**FIGURE 3**  
**Ratings of Expected Hiring Compared to the Previous Three Years**



**FIGURE 4**  
**Estimated Number of Non-Replacement Faculty Hires**



## **New Faculty Compensation**

### ***Anticipated Nine-Month Compensation***

To determine anticipated compensation for newly hired faculty, program leaders were asked “What is the range of 9-month salary that you expect to offer NEW FULL-TIME accounting faculty?” The responses to this question were tabulated by category of school and are reported in Table 6.

There are marked differences in expected salaries across categories of schools for all types of new faculty. The number of respondents decreases as rank increases reflecting the lower demand for experienced faculty at higher ranks. For new Assistant Professors, more than two-thirds of the Ph.D. Schools expect to pay \$135,000 or more, while only two the Master’s Schools and one Undergrad School expect to pay at that level. With few exceptions, the Undergrad Schools expect to pay less than \$105,000 for experienced faculty with Ph.D.s regardless of rank. For Ph.D. and Master’s Schools, there is an upward shift in expected pay across all ranks. Experienced Associates and Professors have the largest disparity in salaries between categories of schools. Of the Ph.D. Schools, 31 percent expect to pay more than \$160,000 for experienced Associates and 53.6 percent of those schools expect to pay more than \$175,000 for experienced Full Professors.

Anticipated salaries for faculty members whose principal responsibility is teaching are much lower. For teaching faculty with Ph.D. or ABD, the salary range generally is below \$105,000. However, within this range Ph.D. Schools tend to pay between \$90,000 and \$105,000, while the majority of the Undergrad Schools pay between \$60,000 and \$75,000. For teaching faculty without Ph.D.s or ABD, the salary range is even lower. Ph.D. Schools have a wider range with 25 percent paying between \$75,000 and \$105,000. Master’s and Undergrad Schools report that more than 80 percent of each of these categories expect to pay under \$60,000 for a nine-month salary.

### ***Anticipated Summer Research Support***

The summer support for new faculty was elicited by asking “What dollar amount do you typically offer NEW FULL-TIME accounting faculty as ‘summer research’ support?” The potential responses ranged from “None” to “2/9ths or more.”<sup>8</sup> Figure 5 shows that 75 percent of the Undergrad Schools offer no summer research support and none of the other schools in this category offers more than 10.4 percent. The Master’s Schools offer a wide range of summer support, with “None” being the most common response, while the majority of Ph.D. Schools offer 2/9ths or more.

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## **OTHER ACCOUNTING PH.D. PROGRAM DATA**

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### **Applications and Admissions**

#### ***Change in Admissions***

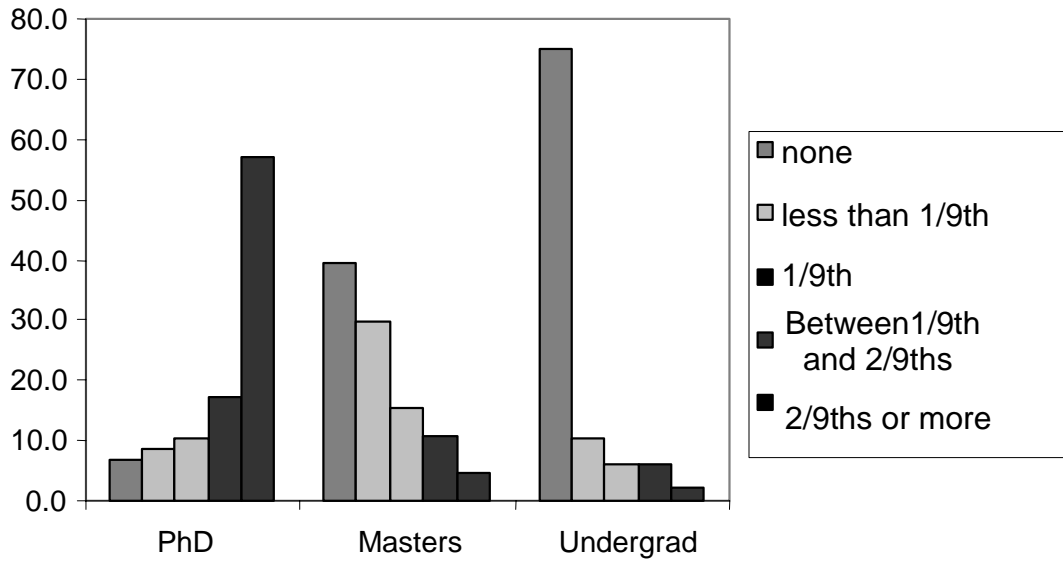
The trend in number of Ph.D. program applications was assessed by asking the program directors “How does the number of applications received from those applying to your Ph.D. program for 2004/05” compare with 2003/04 (the previous year) and 2002/03? As Figure 6 shows, more

<sup>8</sup> In the actual instrument, “2/9ths” and “More than 2/9ths” were separate response categories, but none of the Master’s and Undergrad Schools and only three of 58 Ph.D. Schools responded with “More than 2/9ths.” So, we combined those two responses for reporting purposes.

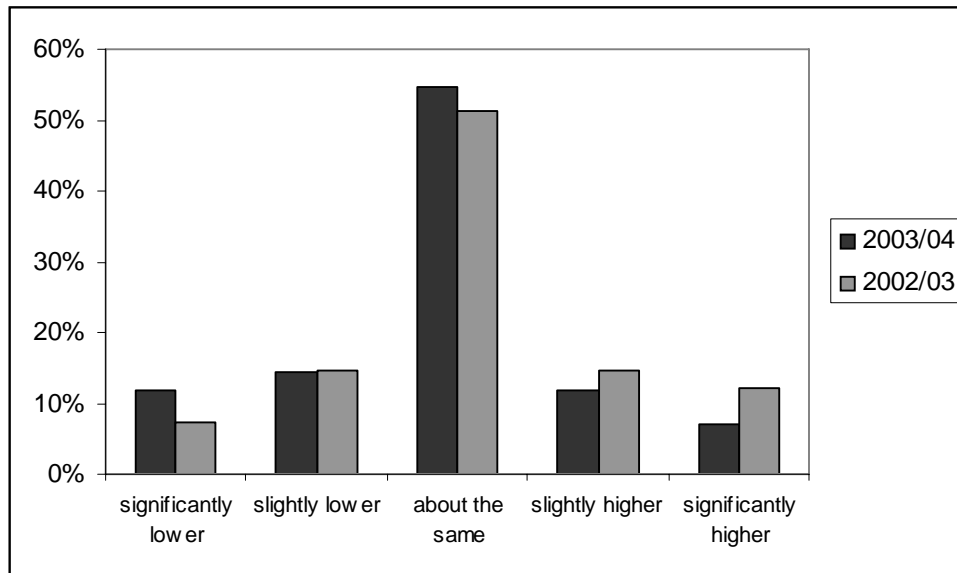
**TABLE 6**  
**Anticipated Compensation for Newly Hired Faculty Shown as the Percentage**  
**of Responding Schools in Each Salary Category**

	New Assistant		Experienced Assistant		Experienced Associate		Experienced Professor		Teaching – Ph.D./ABD		Teaching – Other							
	Ph.D.	Master's UG	Ph.D.	Master's UG	Ph.D.	Master's UG	Ph.D.	Master's UG	Ph.D.	Master's UG	Ph.D.	Master's UG						
less than \$60,000	5.7	4.7	2.9	3.4	15.8	3.5	3.9	10.0	0.0	5.1	14.3	13.3	27.6	28.6	58.3	83.0	85.0	
\$60,000 to \$74,999	3.8	5.5	5.9	6.7	36.8	3.5	1.9	30.0	3.6	5.1	42.9	20.0	34.5	50.0	16.7	13.2	10.0	
\$75,000 to \$89,999	–	41.7	20.0	5.9	30.3	10.5	6.9	25.0	3.6	15.4	28.6	26.7	27.6	14.3	20.8	3.8	–	
\$90,000 to \$104,999	7.6	34.7	20.0	5.9	42.7	36.8	0.0	36.5	10.0	3.6	28.2	14.3	40.0	3.5	7.1	4.2	–	
\$105,000 to \$119,999	15.1	11.0	–	14.7	13.5	–	10.3	15.4	10.0	3.6	18.0	–	–	6.9	–	–	5.0	
\$120,000 to \$134,999	15.1	11.0	–	14.7	13.5	–	10.3	15.4	10.0	3.6	18.0	–	–	6.9	–	–	5.0	
\$135,000 to \$144,999	24.5	2.4	4.0	14.7	3.4	–	20.7	13.5	–	3.6	18.0	–	–	–	–	–	–	
\$145,000 to \$159,999	18.9	–	–	17.7	–	–	3.5	3.9	–	7.1	5.2	–	–	–	–	–	–	
\$160,000 to \$174,999	24.5	–	–	26.5	–	–	20.7	–	10.0	10.7	2.6	–	–	–	–	–	–	
\$175,000 and over	–	–	–	5.9	–	–	24.1	–	–	10.7	–	–	–	–	–	–	–	
Number responding	53	127	25	34	89	19	29	52	10	28	39	7	15	29	14	24	53	28

**FIGURE 5**  
**Anticipated Summer Research Support for New Hires**



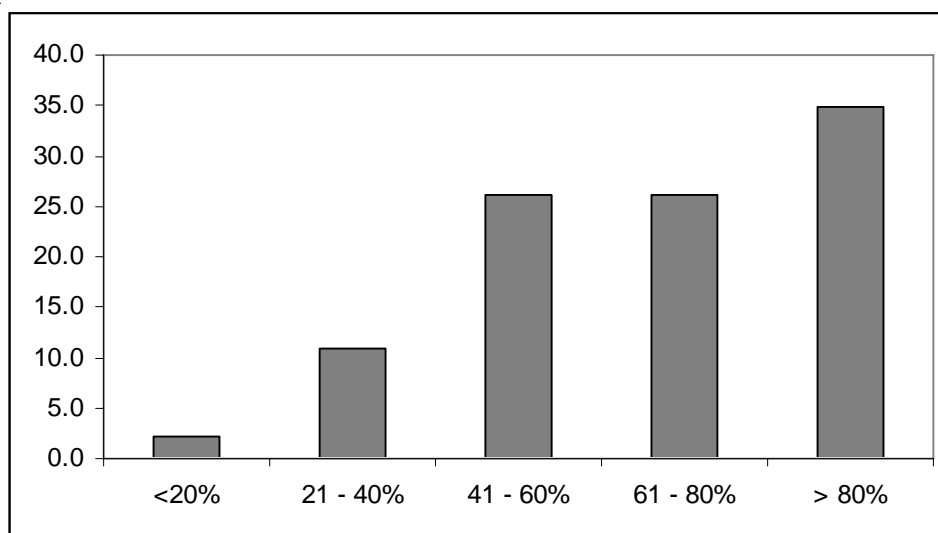
**FIGURE 6**  
**Ratings Comparing the Number of Applications for 2004-05 with 2003-04 (the previous year) and 2002-03**



than half of the respondents believe that the applications to their program is “about the same” as the previous two years, with a barely perceptible tendency for the 2004-05 academic year to be higher than 2002-03 and lower than 2003-04.

Ph.D. program directors were asked, “What percentage of the total applications to your Ph.D. program for 2004-05 were from non-U.S. citizens?” Figure 7 shows that more than one-third (34.8 percent) of schools had 80 percent or more of their Ph.D. program applications from non-

**FIGURE 7**  
**Percentage of Applicants Who Are Non-U.S. Citizens**



U.S. applicants. Only one school indicated that less than 20 percent of applicants came from this group.

### ***Anticipated New Accounting Ph.D. Admissions***

In order to get a sense of the Ph.D. admissions process, we asked the Ph.D. program directors a series of questions about their current admissions. First we asked, “What is the AVERAGE NUMBER of new accounting Ph.D. students you expect to enter your Ph.D. program EACH YEAR over the next three years?” Their responses are charted in Figure 8. More than half of the responding schools indicated that they expected to admit two students per year over the next three years. The responses ranged from 1 to 6 with an overall average of 2.59.

### ***Accounting Ph.D. Student Recruitment***

An element that we believe might be related to student recruitment is the amount of money spent on various aspects of attracting students to the school. We asked “Approximately how much does your school spend annually in each of following categories?” with the categories for expenditures shown in Table 7. More than one-fourth of the respondents indicated that they spent nothing on advertising, while the largest category of expenditures was \$2,500 or less. None of the program directors spend more than \$5,000 per year advertising their program.

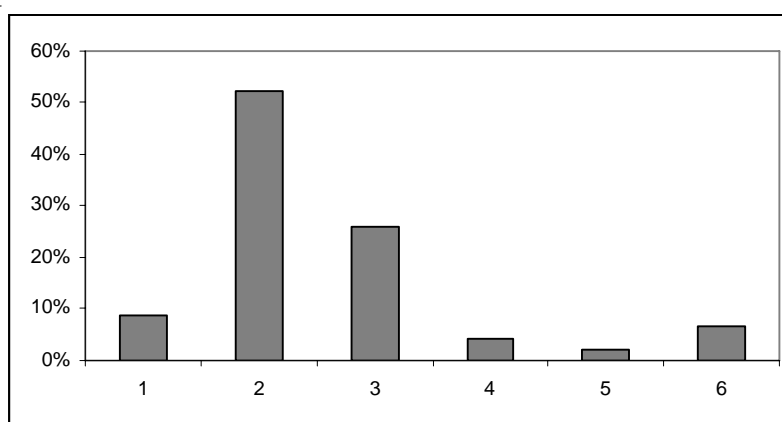
We asked the Ph.D. program directors to estimate the amount spent annually bringing prospective students to campus. More than 87 percent of the respondents spent some amount of money bringing prospective students to campus. While the largest category was under \$2,500, more than one-fourth of the respondents spent between \$2,500 and \$10,000.

We also asked how much the Ph.D. program directors spent on “signing bonuses.” While these were not specifically defined, we believe “signing bonuses” are amounts spent in the students’ first year as an incentive for the students to select the director’s school. A majority of the schools (77.1 percent) pay some sort of signing bonus. More than one-fourth of the schools spend more than \$10,000 per year for signing bonuses.

**TABLE 7**  
**Reported Percentage of Respondents Making Various Ph.D. Recruiting Expenditures**

	None	Under \$2,500	\$2,500 to \$4,999	\$5,000 to \$10,000	Over \$10,000
Advertising your accounting Ph.D. program (mailings, brochures, recruitment conferences, etc.)?	27.1	60.4	12.5	0.0	0.0
Bringing prospective accounting Ph.D. students to interview on campus?	12.5	60.4	22.9	4.2	0.0
"Signing bonuses" for select accounting Ph.D. students?	22.9	16.7	16.7	16.7	27.1

**FIGURE 8**  
**The Average Number of New Accounting Ph.D. Students to Enter Each Year over the Next Three Years**



We examined the relationships among the three categories of recruiting expenditures and both (1) the average number of new accounting Ph.D. students the program directors expected to enter their program over the next three years and (2) their expectations of number of applications for 2004–05 compared with 2003–04 and 2002–03. In addition to the three categories of expenditures, we created an index of recruiting expenditures represented by the simple sum of the five expenditure ratings (scored from 0 to 4), which means that the index could range from 0 to 20. For example, a school with no expenditures for advertising that spent “under \$2,500” to bring candidates to campus and “over \$10,000” for signing bonuses would have a an index of recruiting expenditures of 5 (Advertising = 0; Campus visits = 1; and, Bonuses = 4). We found no relationship between any of the expenditures or the index and the anticipated number of new students. However, the index was highly correlated with the expected future applications, suggesting that the program directors believe this money spent recruiting will result in more applicants.

### **Ph.D. Student Financial Support**

To understand how current Ph.D. students are supported financially, we asked the program directors “What is the dollar amount of 9-month stipend an accounting Ph.D. student in your program typically receives?” for serving as teaching and research assistants. The average pay for

a both types of assistantships was just over \$16,000.<sup>9</sup> The amount of the stipend ranged from \$8,000 to \$25,000 with a median of \$15,000.

For schools indicating the availability of additional summer funding, the amounts ranged from \$1,000 to \$9,000 with a median amount of \$3,000. When the directors were asked to “Briefly describe any other sources of Ph.D. student financial support,” many indicated that scholarships and fellowships were available to some (but not all) students on a competitive basis. Many indicated the availability of tuition and fee waivers. Others indicated the availability of travel support, which ranged from \$500 to \$5000 a year.

### **Current Ph.D. Students Teaching and Research Interests**

As shown previously in Table 2, we estimated the number of accounting Ph.D. students currently in residence and their teaching specialties. To evaluate the research specialties of the current Ph.D. students, we categorized research approaches into three categories: empirical archival, analytic/economic modeling, and behavioral/experimental. Table 8 shows that regardless of topic specialty, the majority of students are being trained in an empirical archival approach to research. Consistent with the teaching specialties, the majority of students are planning to conduct financial accounting research. In terms of research approaches, 27.1 percent of the students are considered behavioral/experimental and only 4.7 percent are considered analytical/economic modeling. Interestingly, 15.2 percent of the students consider auditing as their research specialty, yet less than half that number (7.4 percent) consider auditing as their teaching specialty. For tax, 5.9 percent of the students consider it as their teaching specialty, while 8.5 percent consider it to be their research specialty. This may suggest students’ concerns about the challenges of teaching in auditing and tax.

### **Ph.D. Students’ National Origin and Minority Status**

To get a sense of demographics of current accounting Ph.D. students, we asked the program directors, “For your entire accounting Ph.D. program, indicate how many current students have citizenship that belongs in each NATIONAL ORIGIN category.” The results included in Table 9 show that the majority of the students currently in Ph.D. programs come from the United States

**TABLE 8**  
**Ph.D. Program Directors’ Estimates of the Percentage of Current Ph.D. Students in Various Research Specialties**

	Empirical Archival	Analytical/ Economic Modeling	Behavioral/ Experimental	Other	Unknown	Total
Audit	6.1	< 1	7.0	< 1	1.2	15.2
Financial	39.1	2.6	7.3	1.6	2.9	53.5
Cost/Managerial	2.3	< 1	7.6	< 1	< 1	12.0
AIS	1.2	< 1	2.3	< 1	1.7	6.1
Tax	4.1	< 1	2.9	< 1	< 1	8.5
Other	2.9	< 1	< 1	< 1	1.5	4.7
<b>Total</b>	55.7	4.7	27.1	4.3	8.2	100.0

<sup>9</sup> The amounts shown include some schools that did not report a nine-month stipend, but rather reported a 12-month amount. Those who reported 12-month amounts typically said no additional money was available for summer, so they were combined here.

(51.7 percent). Students from China represent the second largest category, with 26.1 percent. Canada, Latin and South America, and Australia and Oceania as categories each provide less than 1 percent of the current students.

When asked “What percentage of your current Ph.D. students reflect traditionally underrepresented minorities (e.g., African American, Hispanic, or Native American)?” 95.7 percent of the program directors indicated that “less than 20 percent” of their current students come from these underrepresented populations. The remainder of the program directors (4.3 percent) indicated that between 21 and 40 percent of their students come from underrepresented minorities. None of the program directors indicated that more than 40 percent come from underrepresented populations.

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## SURVEY OF CURRENT PH.D. STUDENTS

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### Demographics

As reflected in the survey, the prototypical accounting Ph.D. student is most likely to be a 30-year-old male born in the United States, with an accounting degree, one to five years of public accounting experience, certification as a CPA, and an ability to self-finance the Ph.D. program without incurring debt. This modal response notwithstanding, the Ph.D. student pool reflects considerable diversity, with many students of international origin and a wide variety of pre-Ph.D. experiences.

### National Origin

Table 10 indicates the reported national origins of the 232 respondents who provided data for this question. More than half of the Ph.D. students (142 of 232, or 61.3 percent) indicate the U.S. (137) or Canada (5) as their national origin. Of the remaining 90 students, the modal national origin is China (35). Grouping China with Korea, India, and other Asian countries generates 62 respondents, or slightly more than two-thirds of the total students of non-North American origin. The only other geographical area represented to a moderate extent is Europe (14). Only a handful of students are from Latin or South America (4) or from Africa (3).

The national demographics of these Ph.D. students contrast sharply with the applicant pool demographics reported in the Ph.D. supply survey. In that survey, 37 percent of the responding doctoral programs indicated that more than 80 percent of their accounting Ph.D. applicants were of non-U.S. origin, and another 27 percent of the responding programs indicated that international students comprised between 61 percent and 80 percent of applications received. Hence, the modal doctoral program receives well more than half of its accounting doctoral applications

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**TABLE 9**  
**National Origins of Current Ph.D. Students as a Percentage of the Total**

United States	Canada	Latin and South American Countries	Europe	Africa	China	Korea	India	Other Asian Countries	Australia and Oceania
51.7	< 1	< 1	3.6	1.2	26.1	5.5	3.1	6.9	< 1

from individuals of non-North American origin, although such students comprise less than half of the student responses.

Two motivations could account for the disparity between the reported applicant demographics and the demographics of the Ph.D. students who responded to the current survey. First, it is likely that the surveyed programs admit North American applicants at a proportionately higher rate. Second, the Ph.D. student survey may reflect a response bias, if international students were less likely to respond than students of U.S. or Canadian origin. We have no reason to suspect a response bias.

Looking more closely at the international subset, Table 11 indicates that of the 90 respondents who indicate a non-North American national origin, 44 (48.9 percent) report being in the U.S. or Canada less than a year before beginning doctoral study. Another 33 respondents (36.7 percent) report residing in the U.S. or Canada between one and five years before beginning the program. Hence, the prototypical international accounting Ph.D. student has been in a North American environment only a short time, if at all, before entering the program.

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**TABLE 10**  
**National Origins of Current Ph.D. Students**

	<u>Number</u>	<u>Percent</u>
North American		
United States	137	59.1
Canada	5	2.2
Total North American	142	61.3
Non-North American		
China	35	15.1
Korea	7	3.0
India	8	3.4
Other Asian countries	12	5.2
Israel and the Middle East <sup>a</sup>	5	2.2
Europe	14	6.0
Latin and South America	4	1.7
Africa	3	1.3
Australia and Oceania	2	0.9
Total Non-North American	90	38.8
Total respondents	232	

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<sup>a</sup> These five respondents all selected the “Other” category, with three specifying Israel, one specifying Turkey, and one specifying only “Middle East.”

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**TABLE 11**  
**Pre-Ph.D. Time Spent in U.S. or Canada by International Ph.D. Students**

	<u>Number</u>	<u>Percent</u>
Less than 1 year	44	48.9
1-5 years	33	36.7
5-10 years	6	6.7
More than 10 years	7	7.8
Total Ph.D. students of non-North American origin	90	

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Table 12 indicates that many foreign Ph.D. students obtained a U.S. or Canadian university degree before beginning doctoral study. Specifically, 46 (51.7 percent) of the 89 international students who responded to this question received a North American undergraduate degree (9 students), graduate degree (44 students), or both (7 students). The picture that emerges is that international Ph.D. students are approximately evenly divided, into students with no previous North American experience, and students who obtained a degree from a North American university before beginning doctoral study.

## Gender

Table 13 reports gender responses, separated by the 142 students from North America and the 90 students of international origin. Overall, the majority of the responding students are male (141 of 232, or 60.8 percent), with statistically significant evidence of a greater proportion of men than women ( $Z = 3.28$ ; two-tailed  $p < .01$ ).

When separated by national origin, the proportion of men is nominally greater among the students of North American origin than among international students (64.1 percent male versus 55.6 percent male, respectively), but this difference is not statistically significant ( $\chi^2 = 1.68_{df=1}$ ;  $p = .20$ ). Hence, survey evidence indicates that a slight but statistically significant majority (around 60 percent) of all accounting Ph.D. students are men, irrespective of national origin. The male bias may be less extreme than evidenced in doctoral programs of other academic disciplines. For example, men comprised 76 percent of the economics Ph.D. students surveyed by Aslanbeigui and Montecinos (1998).<sup>10</sup>

**TABLE 12**  
**Pre-Ph.D. North American Degrees Held by International Ph.D. Students**

	Number	Percent
U.S. or Canadian undergraduate degree (only)	2	2.2
U.S. or Canadian graduate degree (only)	37	41.6
Both U.S./Can. undergraduate and graduate degrees	7	7.9
No U.S./Can. undergraduate or graduate degree	43	48.3
Total Ph.D. students of non-North American origin <sup>a</sup>	89	

<sup>a</sup> One international student answered the question about years spent in North America but not the question about pre-Ph.D. North American degrees.

**TABLE 13**  
**Ph.D. Student Gender**

	Students of North American Origin	Students of Non-North American Origin	All Students
Number of (percent) men	91 (64.1%)	50 (55.6%)	141 (60.8%)
Number of (percent) women	51 (35.9%)	40 (44.4%)	91 (39.2%)
Total	142	90	232

Sign test for greater than 50 percent frequency of men:  $Z = 3.28$  (two-tailed  $p < .01$ ).

Chi-square test for independence of gender and national origin:  $\chi^2 = 1.68_{df=1}$  ( $p = .20$ ).

<sup>10</sup> Aslanbeigui, N., and V. Montecinos. 1998. Foreign students in U.S. doctoral programs. *Journal of Economic Perspectives* 12 (Summer): 171-182.

## Age

Table 14 shows age groupings, again separated by the two major national origin categories. Of the 232 total responses to the age question, exactly half (116) are in the bottom two categories (20–25 years or 26–30 years), with the other half in one of the categories above 30 years of age. Hence, the median accounting Ph.D. student is approximately 30 years of age. The modal category is 26 to 30 years of age, comprising 104 of the 232 students (44.8 percent). When we compute an average by weighing each category at its midpoint (and truncating the one student in the “> 65” category at 65 years of age), the mean age is 32.9 years, which somewhat exceeds the median due to outliers at the upper tail of the distribution. Specifically, 30 of the 232 respondents (12.9 percent) are over 40 years of age, and 16 (6.9 percent) are over 45.

As with the gender question, there is no statistically significant evidence that the age distribution differs by national origin. This conclusion is robust to whether a contingency table analysis constructs six categories, grouping all responses above 45 years of age to generate reasonable cell sizes ( $\chi^2 = 5.87_{df=5}$ ;  $p = .32$ ), or a simpler analysis with three categories for students 20–30 years of age, 31–40, or > 40 ( $\chi^2 = 2.24_{df=2}$ ;  $p = .33$ ). Either way, the age and national origin distributions appear to be independent.

## Education

Table 15 reports the respondents’ educational backgrounds. The modal undergraduate major is clearly accounting, comprising 168 (72.7 percent) of the 231 students who provided their undergraduate major(s). At the graduate level, 101 students indicated that they had a master’s degree in accounting, which is again the modal response, comprising 54.0 percent of the 187 students who indicated having a graduate degree (44 students indicated no pre-Ph.D. graduate-level education). Several of the 101 accounting-master’s-degree holders likely completed integrated five-year accounting programs, as evidenced by the considerable overlap in students indicating both an undergraduate and graduate-level accounting degree. Combining both data sets, 186 of the 231 respondents (80.5 percent) indicated having either an undergraduate or graduate-level accounting degree (or both) before beginning doctoral study.

**TABLE 14**  
**Ph.D. Student Age**

<u>Years of Age</u>	<u>Students of North American Origin</u>	<u>Students of Non-North American Origin</u>	<u>All Students</u>
20 – 25	7	5	12 (5.2%)
26 – 30	63	41	104 (44.8%)
31 – 35	26	25	51 (22.0%)
36 – 40	24	11	35 (15.1%)
41 – 45	9	5	14 (6.0%)
46 – 50	6	1	7 (3.0%)
51 – 55	5	2	7 (3.0%)
56 – 60	1	0	1 (0.4%)
61 – 65	0	0	0 (0.0%)
Over 65	1	0	1 (0.4%)
Total	142	90	232

Chi-square test for independence of age and national origin:  $\chi^2 = 5.87_{df=5}$  ( $p = .32$ ) for six age categories, or  $\chi^2 = 2.24_{df=2}$  ( $p = .33$ ) for three age categories.

Therefore, the vast majority of accounting Ph.D. students (about 80 percent) has a formal educational background in accounting at the undergraduate and/or graduate level. The educational backgrounds of the remaining 20 percent are primarily in other business disciplines (for example, 64 students report having an M.B.A. degree). Only a handful have no educational background in either accounting or other business disciplines prior to beginning accounting doctoral study.

## **Work Experience**

Table 16 records the various categories in which the Ph.D. student respondents indicated having obtained work experience prior to entering an accounting Ph.D. program. The vast majority (201 of 230, or 87.4 percent) of Ph.D. students indicate at least one area of prior work experience. The primary area of experience is public accounting, obtained by 114 of the 201 students with some form of experience, and approximately half ( $114/230 = 49.6$  percent) of all responding students. There are also significant numbers of students with experience in private or corporate accounting (81 students), accounting and/or other education (55 students), or other business experience (52 students).

Turning to the years of prior work experience as tallied in Table 17, 37 of the 230 responses (16.1 percent) indicate no years of full-time work experience. This number somewhat exceeds the 29 students who indicated no source of experience (Table 7), probably reflecting a few respondents who reported part-time internships and similar activities as “experience” in Table 7, even if lasting less than a year in duration. Of the remaining students, the modal response is one to five years of experience (105 students), followed by five to ten years of experience (50 students), and more than ten years of experience (38 students). Thus, the prototypical Ph.D. student profile is that of one to five years of public accounting experience, but with considerable variation. Survey

**TABLE 15**  
**Pre-Ph.D. Educational Background**

	<u>Number</u>	<u>Percent of Respondents<sup>a</sup></u>
Undergraduate Majors		
Accounting	168	72.7
Other business majors	33	14.3
Economics	16	6.9
Quantitative methods	9	3.9
Other non-business majors	35	15.2
Graduate Degrees		
Master’s degree in accounting	101	43.7
M.B.A.	64	27.7
Other master’s degree	39	16.9
Professional degree (e.g., law; medicine)	5	2.2
Non-accounting doctorate	1	0.4
No pre-Ph.D. graduate degree	44	19.0

<sup>a</sup> The denominator for percentage calculations is 231, the total number of responses to this question. This number is lower than the total frequency of all individual categories due to 30 respondents who indicated more than one undergraduate major and 23 respondents who indicated more than one graduate degree. Thus, the percentages for both undergraduate and graduate-level degrees sum to more than 100.

**TABLE 16**  
**Pre-Ph.D. Work Experience**

	<u>Number</u>	<u>Percent of Respondents<sup>a</sup></u>
Public Accounting		
Auditing and assurance services	90	39.1
Tax services	39	17.0
Other public accounting	14	6.1
Other Accounting		
Private or corporate accounting	81	35.2
Governmental accounting	15	6.5
Other business work experience	52	22.6
Education		
Accounting instruction	43	18.7
Other instruction	16	7.0
Other non-business work experience	30	13.0
No previous work experience	29	12.6

<sup>a</sup> The denominator for percentage calculations is 230, the total number of responses to this question. This number is much lower than the total of 409 from adding all response frequencies, due to several respondents who indicated work experience in more than one area. Thus, the percentage calculations sum to more than 100.

**TABLE 17**  
**Years of Full-Time Work Experience**

	<u>Number</u>	<u>Percent</u>
Zero	37	16.1
One to five	105	45.7
Five to ten	50	21.7
More than ten	38	16.5

evidence indicates that completely inexperienced accounting Ph.D. students are rare. This finding is noteworthy in view of survey results reported by Mounce et al. (2004)<sup>11</sup> that accounting students perceive professors with relevant practical experience to be of higher quality.

### **Certifications**

Consistent with the frequency of public accounting experience in Table 16, Table 18 indicates that Ph.D. students' most common professional certification is, by far, the CPA credential (112 students), along with similar international public accounting credentials such as "Chartered Accountant" or Certified General Accountant in Canada (8 students). Overall, slightly more than half of the accounting Ph.D. student respondents (129 of 230, or 56.1 percent) indicate some form of professional certification, primarily the CPA or equivalent.

It is noteworthy that only 7 of the 230 respondents (3.0 percent) indicated having the Certified Management Accountant credential, a frequency that is dwarfed by the frequency of CPAs. If one loosely equates the CPA and CMA credentials with expertise in financial and managerial

<sup>11</sup> Mounce, P. H., D. S. Mauldin, and R. L. Braun. 2004. The importance of relevant practical experience among accounting faculty: An empirical analysis of students' perceptions. *Issues in Accounting Education* 19 (November): 399-411.

accounting, respectively, then it is perhaps concerning that managerial accounting is underrepresented in student backgrounds, relative to the demand for management accounting expertise among accounting faculty. It would appear that accounting doctoral programs are more successful at attracting students with public accounting backgrounds than students with backgrounds in management accounting. On the other hand, most schools offer far more credit hours in financial accounting, which would imply that a larger emphasis in financial accounting is appropriate and reasonable.

## **Debt**

If pre-Ph.D. work experience enables students to build some savings to finance doctoral education, it is perhaps not surprising that the modal response to a question about program-related debt is zero, as indicated by 101 of the 233 students (43.3 percent) who responded to this question (see Table 19). However, several other students have incurred debt to finance doctoral studies, sometimes in substantial amounts. For instance, 22 students (9.4 percent) indicated debt exceeding \$60,000, the largest category available.

If we (conservatively) truncate the 22 students indicating more than \$60,000 of program-related debt at \$60,000 and estimate all other categories at the midpoints of the debt ranges indicated, the average program-related indebtedness is \$16,738. This average exceeds the median

---

**TABLE 18**  
**Pre-Ph.D. Certifications**

	<u>Number</u>	<u>Percent of Respondents<sup>a</sup></u>
Public Accounting		
Certified Public Accountant	112	48.7
Chartered or Certified General Accountant	8	3.5
Certified Management Accountant	7	3.0
Certified Internal Auditor	2	0.9
Certified Fraud Examiner	1	0.4
Other professional certifications	9	3.9
No professional certification	101	43.9

<sup>a</sup> The denominator for percentage calculations is 230, the total number of responses to this question. This number is lower than the total of 240 from adding all response frequencies, due to 10 respondents who indicated more than one professional certification. Thus, the percentage calculations sum to more than 100.

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**TABLE 19**  
**Anticipated Program-Related Debt Incurred by Ph.D. Students**

	<u>Number</u>	<u>Percent</u>
None	101	43.3
\$1-\$10,000	33	14.2
\$10,001-\$20,000	18	7.7
\$20,001-\$30,000	22	9.4
\$30,001-\$40,000	15	6.4
\$40,001-\$50,000	14	6.0
\$50,001-\$60,000	8	3.4
Over \$60,000	22	9.4

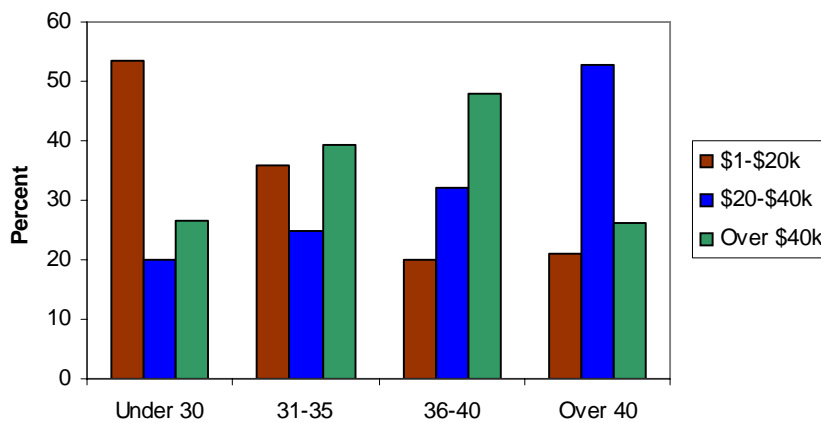
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category of \$1,000 to \$10,000 of debt, indicating a skewed distribution with greatest density at the zero to low debt ranges, but with a nontrivial number of large outliers.

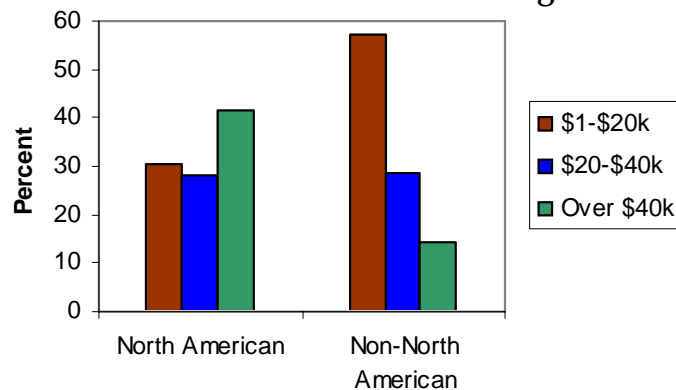
As noted, 43.3 percent of the students indicated that they had no program-related debt. For those who reported program-related debt, however, we examined whether their gender, age, or national origin affected their debt levels. Gender was not a significant factor in student’s debt levels ( $\chi^2 = 2.37_{df=2}, p < .30$ ). As Figure 9 shows, students’ age is significantly related to their debt level ( $\chi^2 = 15.89_{df=6}, p < .01$ ). For the under-30 category, 53.3 percent have under \$20,000 of program-related debt, while 20.0 and 21.1 percent of those 36 to 40 and over 40, respectively, have debt under \$20,000. In contrast, only 26.7 percent of the under-30 category has over \$40,000 of program-related debt, while 48.0 percent of those 36 to 40 have \$40,000 or more of debt. More than half of the students who are over 40 years old with some program-debt (52.63 percent) have between \$20,000 and \$40,000.

National origin also plays a part in the debt levels of accounting Ph.D. students. We find that 63.5 percent of the students of North American origin have some level of program-related debt, while less than half (47.8 percent) of the international students assume program-related debt. In addition, we find that North American students accumulate larger amounts of program-related debt than international students ( $\chi^2 = 12.17_{df=2}, p < .002$ ). As shown in Figure 10, 57.1 percent of

**FIGURE 9**  
**Program-Related Debt Levels by Four Age Groups**



**FIGURE 10**  
**Program-Related Debt Levels for Students of North American and Non-North American Origin**



the students with non-North American origins have under \$20,000 of program-related debt and the percentages drop to 28.6 percent and 14.3 percent for the \$20,000 to \$40,000 and over \$40,000 levels, respectively. In contrast, 42.2 percent of the North American students have more than \$40,000 of program-related debt, with the rest split roughly evenly between the over \$20,000 and the \$20,000 and \$40,000 levels.

## Factors Motivating Interest in Accounting Doctoral Education

Table 20 shows that the most important reasons for entering a doctoral program in accounting are “personal growth” and “development and intellectual challenge.” The least important are “professional recognition” and “earning potential.” Students appear to disagree on the importance of pursuing a career in teaching, relative to the importance of a career in academic research, as motivational factors. Interestingly, the perceived relative importance of teaching and research is strongly correlated with national origin. Students indicating teaching to be a more important motivating factor than research comprised 59.2 percent and 17.0 percent of the students of North American and non-North American national origins, respectively.

### Motivational Factors

As detailed in Table 20, the survey presented accounting Ph.D. students with seven factors that could motivate the decision to pursue a doctorate. The specific question was, “Think back to when you first decided to apply to doctoral programs. How important were each of the following factors in your decision to pursue a doctorate?” For each factor, five responses were possible, ranging from important to unimportant. We summarize responses in two ways. First, Table 20 reports percentage frequencies by category. Second, we obtain composite scores for each factor by applying the weights +2, +1, 0, -1, and -2 to the categories “important,” “somewhat important,” “neither,” “somewhat unimportant,” and “unimportant,” respectively.

The composite score estimates range from a high of +1.72 for “personal growth and development” to a low of +0.99 for “professional recognition.” Similarly, the percentage selecting the highest “important” category ranges from a high of 76.5 percent for “personal growth and

**TABLE 20**  
**Factors Motivating Doctoral Study**

Factor	Number (Percentage) of Students Indicating Factor to Be:					Weighted Composite Score
	Unimportant	Somewhat Unimportant	Neither	Somewhat Important	Important	
Personal growth and development	1 (0.4%)	1 (0.4%)	5 (2.1%)	49 (20.6%)	182 (76.5%)	+1.72
Intellectual challenge	6 (2.5%)	4 (1.7%)	10 (4.2%)	60 (25.1%)	159 (66.5%)	+1.51
Ability to pursue a career in teaching	5 (2.1%)	9 (3.8%)	22 (9.3%)	65 (27.5%)	135 (57.2%)	+1.34
Work/family balance	10 (4.3%)	13 (5.5%)	20 (8.5%)	62 (26.4%)	130 (55.3%)	+1.23
Ability to pursue a career in academic research	7 (3.0%)	14 (5.9%)	21 (8.9%)	90 (38.1%)	104 (44.1%)	+1.14
Earning potential	11 (4.6%)	13 (5.5%)	23 (9.7%)	96 (40.3%)	95 (39.9%)	+1.05
Professional recognition	8 (3.3%)	21 (8.8%)	29 (12.1%)	89 (37.2%)	92 (38.5%)	+0.99

development” to a low of 38.5 percent for “professional recognition.” Overall, all seven factors clearly range closer to “important” than “unimportant.” Specifically, across all seven factors, 84.8 percent of the responding students on average indicate these factors to be either “important” or “somewhat important.”

Looking at the individual factors, three clusters emerge. At the highest level, both “personal growth and development” and “intellectual challenge” generate the highest importance ratings, with composite scores above +1.5 and more than 65 percent choosing them as the top “important” category. At the lowest level, though still leaning toward being important in an absolute sense, both “earning potential” and “professional recognition” are the least important of the seven factors, with composite scores around +1.0 and less than 40 percent choosing them as the top “important” category. In between these two extremes, the factors “work/family balance,” “ability to pursue a career in teaching,” and “ability to pursue a career in academic research” all have composite scores between 1.1 and 1.4 (see Table 20) and “importance” frequencies between 57.2 percent (importance of teaching) and 44.1 percent (importance of research). The teaching and research factors are of particular interest, as we will explain next.

### **Teaching and Research**

Survey respondents appear to be split on the relative importance of teaching and research as motivational reasons to pursue a doctorate. As indicated in Table 21, only 66 (28.0 percent) of the respondents who answered both the teaching and research questions gave the same importance ratings to both. The remaining 72 percent appear to disagree on whether teaching or research is more important in guiding decisions to pursue doctoral education. To be sure, many of these students indicated “important” for one of these factors and “somewhat important” for the other, but nevertheless, most students indicated different importance ratings for teaching and research. The interesting aspect of these differences is that they correlate strongly with national origin.

**TABLE 21**  
**Relative Importance of Teaching and Research as Motivational Factors**

	Students of North American Origin	Students of Non-North American Origin	All Students <sup>a</sup>
Number (percent) who indicated a greater importance rating for teaching than for research	84 (59.2%)	15 (17.0%)	99 (41.9%)
Number (percent) who indicated the same importance ratings for teaching and research	31 (21.8%)	33 (37.5%)	66 (28.0%)
Number (percent) who indicated a greater importance rating for research than for teaching	27 (19.0%)	40 (45.5%)	71 (30.1%)
<b>Total</b>	142	88	236

Chi-square test for independence of relative importance ratings and national origin:  $\chi^2 = 40.21_{df=2}$  ( $p < .01$ ).

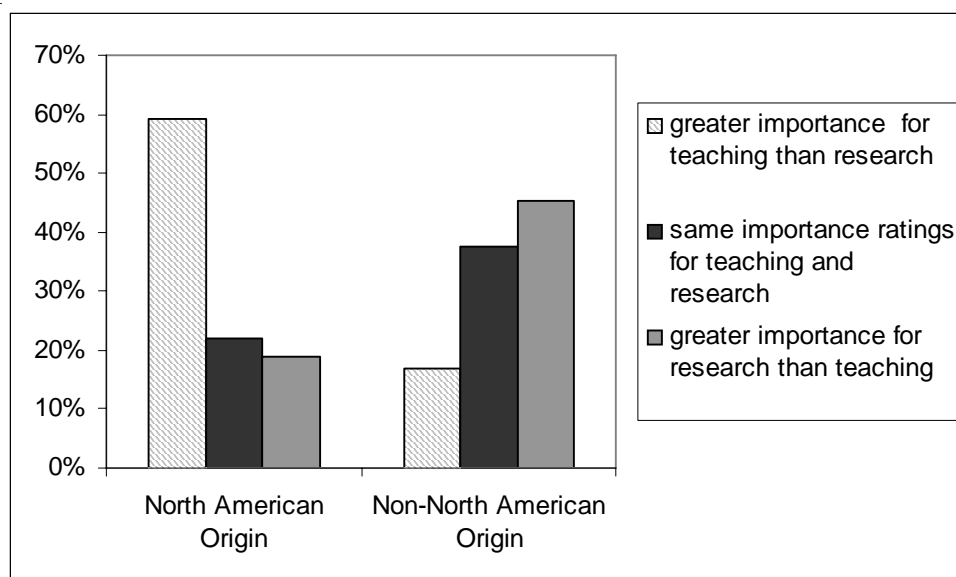
<sup>a</sup> The totals for “All Students” slightly exceed the sum of the column totals by national origin due to six students who provided importance ratings for both teaching and research but did not indicate national origin. Four of these six indicated research to be a more important motivational factor than teaching, and two indicated the same importance ratings for teaching and research.

Specifically, of the 142 respondents who rated the importance of both teaching and research, and indicated a U.S. or Canadian national origin, 84 (59.2 percent) indicated teaching to be a more important motivational factor than research, 31 (21.8 percent) indicated teaching and research to be of equal importance, and 27 (19.0 percent) indicated research to be more important than teaching. As shown in Figure 11, a quite different pattern emerges for the 88 international (non-North American origin) students who rated both teaching and research, among whom 15 (17.0 percent) indicated teaching to be more important than research, 33 (37.5 percent) indicated teaching and research to be of equal importance, and 40 (45.5 percent) indicated research to be more important than teaching.

A Chi-square contingency table test for independence confirms that the relative importance ratings for teaching and research are significantly associated with national origin ( $\chi^2 = 40.21_{df=2}$ ;  $p < .01$ ). In summary, survey responses suggest that the prototypical North American student in an accounting Ph.D. program is more motivated by a desire to teach than do research, whereas the prototypical international student is more motivated by a desire to conduct research than to teach. Many interpretations are possible, each with different implications. One interpretation is that North American undergraduate and master's level programs do less to motivate interest in research than to motivate interest in teaching. Another plausible (and perhaps not mutually exclusive) interpretation is that the educational model abroad familiarizes prospective doctoral applicants more with research expectations and opportunities than with teaching expectations and opportunities. Yet another possibility is that international students may see themselves as disadvantaged in the classroom by factors such as weaker English skills and as a result are less motivated by teaching opportunities. Whatever the cause, the teaching and research ratings suggest noteworthy differences in the motivations of U.S. and international doctoral students.

Although students disagreed on the relative importance of teaching and research as motivating factors for pursuing a doctorate, they tended to agree that the schools to which they aspired

**FIGURE 11**  
**Relative Importance of Teaching versus Research by Students Originating from North America and Students Originating Outside North America**



were unlikely to base promotion and tenure requirements primarily on teaching. Specifically, only 12 of 231 students (5.2 percent) selected the “primarily teaching” response to a question on the relative emphasis of teaching and research in expected promotion and tenure requirements. (Ten of these 12 indicated teaching to be more important than research as a motivational factor.) The modal response selected by 135 of the 231 respondents (58.4 percent) was an expectation of balanced teaching and research requirements for promotion and tenure, while another 84 (36.4 percent) expected promotion and tenure requirements to be based primarily on research. As reflected in Table 22, and explained next, responses to this question were correlated with responses to the motivational questions about teaching and research.

Specifically, Table 22 shows that of the 135 students who expected balanced teaching and research requirements for promotion and tenure, only 25, or 18.5 percent, indicated that they were motivated to pursue doctoral study more by research than by teaching. Conversely, of the 84 students who expected requirements for promotion and tenure to be based primarily on research, only 22 (26.2 percent) indicated that they were motivated to pursue doctoral study more by teaching than by research. A Chi-square contingency table test for independence confirms that the relative importance of teaching and research as motivational factors is significantly related to expectations for promotion and tenure ( $\chi^2 = 33.75_{df=2}; p < .01$ ). Students motivated to Ph.D. study primarily by a desire to teach tend to expect balanced teaching and research requirements for promotion and tenure. Students motivated primarily by a desire to conduct research tend to expect promotion and tenure requirements that are based primarily on research.

## Experiences

The Ph.D. students surveyed have generally positive attitudes about their doctoral program experiences (see Table 23). Regarding academic demands, students tend to agree that program requirements are fair and that they have adequate preparation for such requirements, although

**TABLE 22**  
**Expected Requirements for Promotion and Tenure**

Cell Entries: Frequency count Percentage of row Percentage of column	Expected Promotion and Tenure Emphasis			Total <sup>a</sup>
	Primarily Teaching	Balanced Teaching and Research	Primarily Research	
Greater importance rating for teaching than for research	10 10.1% 83.3%	67 67.7% 49.6%	22 22.2% 26.2%	99
Same importance ratings for teaching and research	1 1.6% 8.3%	43 67.2% 31.9%	20 31.3% 23.8%	64
Greater importance rating for research than for teaching	1 11.5% 8.3%	25 36.8% 18.5%	42 61.8% 50.0%	68
<b>Total</b>	12	135	84	231 <sup>b</sup>

<sup>a</sup> Chi-square test for independence of relative importance ratings and expected requirements for promotion and tenure:  $\chi^2 = 33.75_{df=4}$  ( $p < .01$ ).

<sup>b</sup> Five students who answered the relative importance questions for teaching and research but did not answer the question regarding expected promotion and tenure requirements are excluded from this table.

the perception of adequate preparation is stronger for students of international origin than for students of U.S. or Canadian origin. Regarding resources and research support, students generally believe that they have adequate financial aid and other support and that they are able to pursue research ideas that interest them. Regarding time demands, the substantial majority of students expect the program to take either five years (58.8 percent) or four years (30.0 percent).

**TABLE 23**  
**Doctoral Program Experiences**

Statement	Number (Percentage) of Responses					Weighted Composite Score <sup>a</sup>
	Disagree	Somewhat Disagree	Neither	Somewhat Agree	Agree	
Academic requirements and preparation:						
The academic requirements of the program are fair.	4 (1.7%)	21 (9.1%)	17 (7.3%)	83 (35.8%)*	107 (46.1%)*	+1.16
My academic preparation for the program was adequate.	13 (5.6%)	47 (20.3%)	15 (6.5%)	87 (37.5%)*	70 (30.2%)*	+0.66
Resources and research support:						
I receive adequate financial aid and other support.	21 (9.1%)	40 (17.3%)	15 (6.5%)	65 (28.1%)*	90 (39.0%)*	+0.71
I am able to pursue research ideas that interest me.	5 (2.2%)	13 (5.7%)	12 (5.2%)	58 (25.3%)*	141 (61.6%)*	+1.38
Time demands:						
I am comfortable with the time required to complete the program.	13 (5.6%)	34 (14.7%)	14 (6.1%)	81 (35.1%)*	89 (38.5%)*	+0.86
The time I spend on research/teaching assistant duties is fair.	7 (3.1%)	21 (9.2%)	12 (5.3%)	70 (30.7%)*	118 (51.8%)*	+1.19
I have enough time to pursue personal interests.	46 (19.8%)	63 (27.2%)	28 (12.1%)	60 (25.9%)	35 (15.1%)	-0.11
I am able to spend enough time with my family.	48 (21.1%)	59 (25.9%)	34 (14.9%)	54 (23.7%)	33 (14.5%)	-0.15
Stress:						
The program is too stressful.	18 (7.8%)	43 (18.5%)	59 (25.4%)	81 (34.9%)*	31 (13.4%)*	+0.28
The program is harmful to my physical health.	82 (35.5%)†	38 (16.5%)†	44 (19.0%)	46 (19.9%)	21 (9.1%)	-0.49

<sup>a</sup> The weighted composite score is a numerical average applying the weights +2, +1, 0, -1, and -2 to responses of agree, somewhat agree, neither, somewhat disagree, and disagree, respectively.

\* Sign test indicates a significantly greater frequency of agree and somewhat agree responses than disagree and somewhat disagree responses ( $p < .01$ ).

† Sign test indicates a significantly greater frequency of disagree and somewhat disagree responses than agree and somewhat agree responses ( $p < .01$ ).

Most students are comfortable with the time required to complete the program and with the time spent on research and teaching assistant duties. One potential concern, however, is students' tendency to perceive doctoral accounting programs as too stressful.

### **Academic Requirements and Preparation**

To facilitate analysis, Table 23 categorizes the questions on doctoral experiences into four groups: (1) academic requirements and preparation (two questions), (2) resources and research support (two questions), (3) time demands (four questions), and (4) perceptions of stress (two questions). Each category contains questions in which students indicated agreement or disagreement with an assertion such as "My academic preparation for the program was adequate." Table 23 reports a composite average score that weights the responses as +2, +1, 0, -1, and -2 for "agree," "somewhat agree," "neither," "somewhat disagree," and "disagree," respectively. The table also reports percentage frequencies for each question.

Regarding academic requirements and preparation, students overwhelmingly perceive that the academic requirements of doctoral accounting education are fair. The composite score for this question is +1.16 (slightly stronger than "somewhat agree"), with 81.9 percent of the students responding "agree" or "somewhat agree" (Z-score for sign test of agree or somewhat agree > disagree or somewhat disagree = 11.25;  $p < .01$ ).

Students also tend to agree that they had adequate preparation for the program, although not as strongly as their perception of fair program requirements. The composite score for the preparation question is +0.66 (slightly weaker than "somewhat agree"), with 67.7 percent of the students responding "agree" or "somewhat agree" ( $Z = 6.58$ ;  $p < .01$ ).

National origin again emerges as an interesting correlate, with international students significantly more likely to perceive that they had adequate preparation for the program. Specifically, Table 24 shows that 78.9 percent of the respondents of non-North American origin agree or somewhat agree that they had adequate preparation, whereas only 60.6 percent of the students North American origin responded in the "agree" or "somewhat agree" categories. A Chi-square contingency table test for independence confirms that the level of agreement with the perception of adequate preparation is significantly lower for students of North American origin ( $\chi^2 = 8.46_{df=1}$ ;

**TABLE 24**  
**Perceptions of Adequate Preparation for Doctoral Program**

	Students of North American Origin	Students of Non-North American Origin	All Students
Number (percent) who agreed or somewhat agreed that they had adequate preparation for the program	86 (60.6%)	71 (78.9%)	157 (67.7%)
Number (percent) who disagreed, somewhat disagreed, or indicated neither agreement nor disagreement that they had adequate preparation for the program	56 (39.4%)	19 (21.1%)	75 (32.3%)
<b>Total</b>	142	90	232

Chi-square test for independence of perceptions of adequate preparation and national origin:  $\chi^2 = 8.46_{df=1}$  ( $p < .01$ ).

$p < .01$ ). We recall from earlier discussion that relative to their international counterparts, U.S. and Canadian students tend to be motivated more by a desire to teach than by a desire to conduct research. Hence, one possible interpretation of the different perceptions of adequate preparation is that U.S. and Canadian students are less prepared than international students for the research expectations and demands of doctoral education.

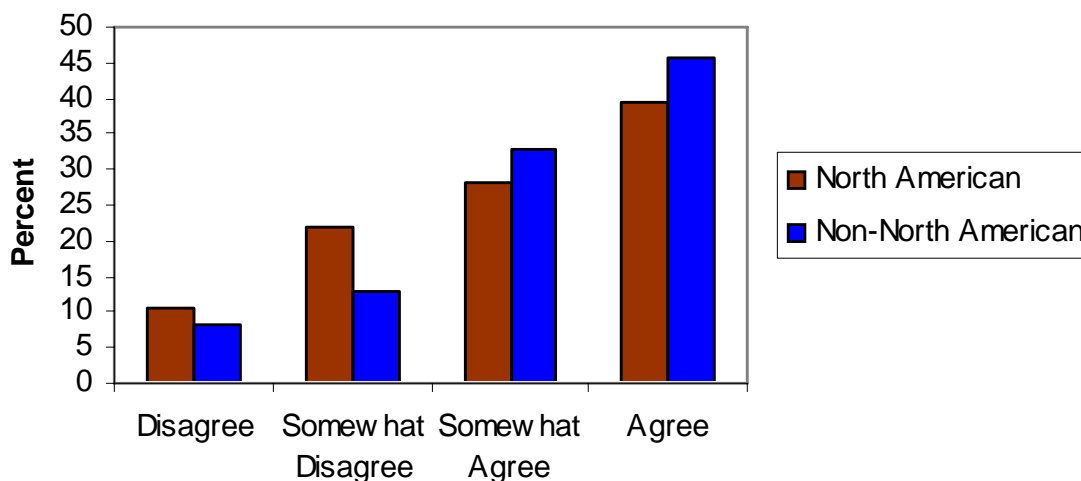
### **Resources and Research Support**

Notwithstanding possible concerns about the level of financial aid for doctoral students, the students themselves generally feel that the amount of financial aid and other support they receive is adequate. The weighted composite score for the perception of adequate financial aid and other support is +0.71, with 67.1 percent indicating that they agree or somewhat agree that the support received is adequate ( $Z = 6.40$ ;  $p < .01$ ).

While overall the students find the level of financial aid adequate, those of North American origin appear to perceive the level of support to be less adequate than do international students. As shown in Figure 12, 31.0 percent of North American students either “disagree” or “somewhat disagree” with the statement that the level of financial support is adequate, while 19.6 percent of the international students disagreed. That translates to about one-in-three North American and one-in-five international students who see the support as inadequate. On the other hand, 72.8 percent of international students responded that they either “agree” or “somewhat agree” with the adequacy of financial aid with 63.3 percent of the North American students reporting some level of agreement about the adequacy of support. The extent of agreement and disagreement with the adequacy of financial support between North American and non-North American students is marginally statistically significant ( $\chi^2 = 3.32_{df=1}$ ;  $p < .068$ ).

Students’ age also appears to be a factor in their perceptions of the adequacy of their financial support. We formed four age categories by combining the age response categories below 30 years old and those above 40 into two age categories and keeping the 31 to 35 and the 36 to 40 categories. We find that age is moderately related to perceptions of the adequacy of financial support ( $\chi^2 = 18.72_{df=12}$ ;  $p < .09$ ). Figure 13 shows that 83.3 percent of the students who are over 40

**FIGURE 12**  
**Perceptions of the Adequacy of Financial Aid by Students Originating from North America and Students Originating Outside North America**



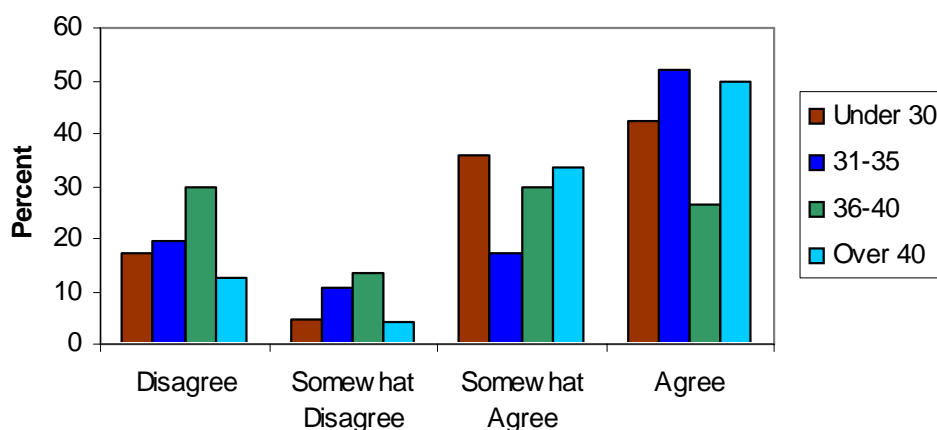
years old responded with either “agree” or “somewhat agree” when asked whether their financial support was adequate, and 78.4 percent of the under-30 category also gave those responses. The two groups with the lowest agreement levels were the 30 to 35 and the 36 to 40 categories with 69.6 percent and 56.7 percent, respectively. This may reflect higher levels of financial obligations, such as families, for those in their 30s who may lack the resources or borrowing capacity available to students in Ph.D. programs who are over 40 years old.

Students agree that they are able to pursue research ideas of interest. The composite score for this question is +1.38, with 86.9 percent in the “agree” or “somewhat agree” categories ( $Z = 12.29$ ;  $p < .01$ ). Hence, on balance, students tend to be satisfied with the level of financial aid and research support provided in U.S. and Canadian accounting doctoral programs.

### Time Demands

Separate from the “agree” or “disagree” questions, survey respondents were asked to specify the anticipated time to completion for their doctoral programs, as reported in Table 25. Note that this question elicited *anticipated* time to completion, not *actual* time to completion. A well-known phenomenon in social psychology is the so-called “planning fallacy,” whereby individuals tend to systematically underestimate task completion times (Buehler et al. 1994).<sup>12</sup> Therefore, it is likely that anticipated program completion times are a conservatively biased indicator of actual program

**FIGURE 13**  
Perceptions of the Adequacy of Financial Support by Four Age Groups



**TABLE 25**  
Anticipated Ph.D. Program

	Number	Percent
Less than three years	1	0.4
Three years	2	0.9
Four years	70	30.0
Five years	137	58.8
Six years	16	6.9
More than six years	7	3.0

<sup>12</sup> Buehler, R., D. Griffin, and M. Ross. 1994. Exploring the “planning fallacy”: Why people underestimate their task completion times. *Journal of Personality and Social Psychology* 67: 366–381.

completion times. With this caveat in mind, the modal anticipated time to completion, as indicated by survey respondents, is five years, accounting for 137 of the 233 responses to this question (58.8 percent). The second-most frequent response is four years, as indicated by 70 students (30.0 percent). If we estimate the one student responding in the “< 3 years” category at two years and the seven students responding in the “> 6 years” category at seven years, the weighted average anticipated program completion time is 4.79 years.

Is it reasonable for doctoral accounting programs to take an average of 4.79 years to complete? Students generally appear to think so. As reflected in Table 23, 73.6 percent of the survey respondents agreed or somewhat agreed that they were comfortable with the time required to complete the program ( $Z = 8.35$ ;  $p < .01$ ), generating a weighted composite score of +0.86 on the -2 to +2 scale described earlier. Regarding other questions about time demands, 82.5 percent of the students agreed or somewhat agreed that the time spent on research and teaching assistant duties is fair ( $Z = 10.89$ ;  $p < .01$ ), generating a composite score of +1.19. However, responses were more mixed on questions regarding having enough time to pursue personal interests (40.9 percent agree or somewhat agree) or enough time to spend with family (38.2 percent agree or somewhat agree). Reflecting mixed perceptions, the propensity to agree or disagree is not statistically significant at conventional levels for either the personal interests or family questions (two-tailed  $p = .33$  and  $.15$ , respectively). The composite scores for both questions are slightly negative, but not appreciably so (-0.11 and -0.15, respectively).

## **Stress**

A question involving perceived stress is the one item in which students indicated a statistically significant propensity that could be identified as a concern. Specifically, 112 of the 232 respondents, or 48.3 percent, indicated that they agreed or somewhat agreed that “the program is too stressful.” While this percentage is slightly less than half, it far exceeds the 61 students (26.3 percent) who disagreed or somewhat disagreed, with the balance of 59 students (25.4 percent) selecting the neutral “neither” category. A sign test comparing the “agree” / “somewhat agree” to the “disagree” / “somewhat disagree” frequencies confirms a statistically significant propensity to agree that the program is too stressful ( $Z = 3.88$ ;  $p < .01$ ). The weighted composite score is +0.28, leaning toward agreement.

While students tend to agree that doctoral accounting programs are too stressful, perceived stress for most students is not so strong as to jeopardize physical health. Specifically, while 67 students (29.0 percent) indicated that they agreed or somewhat agreed that “the program is harmful to my physical health,” a slight majority of 120 students (51.9 percent) disagreed or somewhat disagreed with this statement, with 44 students (19.0 percent) selecting the “neither” category. A sign test indicates a statistically significant propensity to disagree that doctoral programs are harmful to physical health ( $Z = -3.88$ ;  $p < .01$ ), with a composite score of -0.49. Even though the majority of survey respondents do not perceive risk (presumably from stress) to their physical health, it is noteworthy that nearly a third of the respondents do perceive such risk, suggesting that doctoral programs are quite stressful indeed to at least a sizable minority of students.

## **Implications**

Overall, survey results suggest that accounting doctoral students are generally satisfied with their program experiences, but there are some areas of potential concern. Regarding motivation, while U.S. and Canadian colleges and universities can do little to influence the motivation of

doctoral applicants abroad, there is an opportunity in North American undergraduate and master's level accounting programs to motivate future doctoral applicants. Survey results indicate that, relative to their international counterparts, North American applicants are more motivated by teaching than by research (Table 21), and that once in an accounting doctoral program, students of North American origin feel less prepared for doctoral study (Table 24). To the extent that both findings reflect less pre-Ph.D. exposure to research than to teaching, accounting programs can try to instill a more meaningful exposure to research at the undergraduate and master's levels (e.g., Entwistle 2003).<sup>13</sup>

Regarding the background of current accounting Ph.D. students, the most prominent characteristic remains an emphasis on public accounting. Perhaps the most striking evidence of this emphasis is that 112 student respondents (48.7 percent) are CPAs, whereas only seven (3.0 percent) hold the Certified Management Accountant credential (see Table 9). To the extent that accounting programs require expertise in both financial and managerial accounting, these results suggest a need to be more proactive in motivating qualified individuals with management accounting backgrounds to pursue the doctorate.

Finally, regarding program experiences, students appear generally comfortable with both the resources and requirements of accounting doctoral education. Nevertheless, about half of the surveyed students agree or somewhat agree that the program is too stressful, and nearly a third even perceive a risk to physical health (Table 23). It would appear that programs could be more proactive in easing the transition from doctoral applicant to doctoral student, reducing the risk of losing talented students due to excessive stress.

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## CONCLUSIONS AND RECOMMENDATIONS

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### Conclusions

The three surveys conducted by the Committee resulted in a substantial volume of data regarding the demand for accounting faculty, the supply of new Ph.D.s and characteristics and views of current accounting Ph.D. students. The research resulted in several important findings that seem to warrant highlighting.

The most critical finding is that while an overall shortage exists (difference between the estimates of new Ph.D.s demanded and new Ph.D.s supplied), it is particularly acute in the audit and tax specialties, with only 27.1 percent of the tax faculty and 22.8 percent of the audit faculty expected to be supplied. These shortages need to be considered in light of the significant demand for experienced Ph.D.s; this demand can only be met in the short run by faculty moving from one school to another, which, in turn, creates more demand to replace those faculty members.

The three types of schools (Ph.D., Master's, and Undergrad) differ significantly in terms of their hiring needs. Master's Schools have a strong preference for hiring to meet specific teaching needs, while schools in the other two categories show a slight tendency to recruit the best candidate irrespective of specialization. The Master's and Undergrad Schools expect approximately one-fourth of their new Ph.D.s to teach in multiple areas. New Ph.D.s teaching systems are in most demand by the Master's Schools with almost no demand coming from Undergrad Schools.

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<sup>13</sup> Entwistle, G. M. 2003. Do the right thing: The "research" curriculum. *Issues in Accounting Education* 18 (February): 25-27.

Financial accounting specialty is in highest demand across all three types of school. 40.3 percent of Ph.D. Schools' expected hiring is in financial accounting and for 2005–06, they expect to hire 43.8 percent of the new managerial accounting graduates. The demand for auditing teachers shifts, from a slightly disproportionate share going to Ph.D. Schools, to 90 percent going to Master's Schools in later years. When combined with the wide disparity across the three types of schools found in the salary data, the differences in demand may result in the few tax and auditing graduates going to the higher-paying Ph.D. Schools and leaving the demand from the other two categories unmet.

The Ph.D. student survey revealed two areas considered to be potentially important in recruiting Ph.D. students to accounting programs in the future. One area was the differences between North American and non-North American Ph.D. students in their perceptions of the program experience, motivation, and views on financial aspects of being a Ph.D. student. Students whose national origin was U.S. or Canadian tend to see teaching as a more important motivational factor than research, while non-North American students were more likely to indicate that research is more important. International students are more likely to perceive their preparation for the program as adequate.

National origin also plays a part in Ph.D. students' financial views. We find that more North American students have some level of program-related debt, and they accumulate larger amounts of debt than international students. While overall students find the level of financial aid adequate, those of North American origin perceive the level of support to be less adequate than do international students. About one in three North American students see the support as inadequate, while only one in five international students hold that view.

The other finding from the student survey important to future recruiting it is the significant stress perceived by current Ph.D. students. We found that 48.3 percent of the students either agreed or somewhat agreed that "the program is too stressful." A related question found that 29.0 percent of students either agreed or somewhat agreed that "the program is harmful to my physical health." While the specific aspects of the program that lead to the stress and health concerns were not elicited, it is an important step to become aware of the problem and its magnitude.

## **Recommendations**

The Committee chose to focus its recommendations on those that follow, to some degree, from the results of its surveys. It believes that resolving the problems found will require substantial effort from many sources, but the burden will fall most heavily on the AAA.

### ***Increase Information to Potential Students***

The Committee recommends that the AAA create a website that informs potential doctoral students about the opportunities that result from obtaining a doctorate in accounting. This website should be designed to be attractive, stimulating, and informative. Among the pieces of information that should be included is a realistic depiction of life as an accounting academic (job requirements, salaries, etc.). Results from the surveys conducted by this Committee would provide a factual basis for parts of this description.

This website should also include a description of the process of obtaining a Ph.D. in accounting. It would be important that the timetable for the application process as well as details of

applying for doctoral programs be included. It might be useful for potential students to have links to all accounting doctoral programs included on this site. Again, the results of the Committee's surveys could provide potential candidates important information about current student perceptions of the process, as well as characteristics of the demand for accounting Ph.D.s. Any potential funding opportunities should be described as part of this site, as well as links to information and applications.

As noted earlier in this report, many current accounting doctoral students have previous professional experience in corporate and public accounting. It is likely that other potential students in corporations and public accounting firms, particularly the Big 4, are unaware of the opportunities to teach and research in accounting. It would be a potential benefit for the AAA to provide information, as well as the link to the proposed website, to human resource directors of major corporations and public accounting firms. Ernst & Young, for example, has expressed its interest in this possibility. In addition, information might be provided to potential doctoral students who are presently in undergraduate or master's programs, possibly through Beta Alpha Psi or campus placement offices.

### ***Financial Support to Ph.D. Students***

Overall, students indicated satisfaction with the level of financial support. However, one in three North American and one in five international students perceive the level of support to be less than adequate. Almost two-thirds of North American students (63.5 percent) have some level of program-related debt, with 42.2 percent having debt over \$40,000. In addition, it is likely that a significant portion of *potential* doctoral students find the current level of financial support inadequate. We believe that it is difficult to attract prospective students by offering them \$16,000 when they may have previously been earning \$50,000 to \$75,000 per year. While the Committee understands the difficulty in increasing Ph.D. stipends, it suggests that schools make a concerted effort to increase stipends where possible. Also, Ph.D. programs that currently do not provide benefits like health and life insurance should be encouraged to do so. It may be feasible for the AAA or the AICPA to provide group policies at a reasonable rate for accounting doctoral students.

There is anecdotal evidence that doctoral students in other disciplines, such as engineering, receive stipends of around \$30,000 and that these students are often funded through sponsored research grants. The possibility of this funding source in accounting is remote. Therefore, the Committee believes that organizations with a vested interest in a viable academic accounting profession need to fund scholarships for accounting Ph.D. students. This could include large CPA firms, state accounting societies, and the AICPA, among others.

### **Reduce the "Costs" to Ph.D. Students**

It is a reasonable conclusion that interested individuals have been deterred from entering accounting Ph.D. programs by the costs involved, which extend beyond the loss of income due to the stipend level. The Committee believes that the costs imposed on students extend beyond strictly financial aspects and include, as was born out in the doctoral student survey, personal costs such as stress. We believe that reducing these costs would make it feasible for more individuals to enter Ph.D. programs.

Without a doubt, the commitment of almost five years is a very high cost for accounting doctoral students. While this is considered by many to be the minimum time necessary to train

students for their academic career, any shortening of doctoral programs would make the required training for an academic career option more appealing. The Committee makes no specific recommendation, but it encourages doctoral programs to consider program-related time efficiencies to shorten their program and teaching levels that are sufficient for training students to teach, but also minimize students' overall teaching obligations.

We found that North American students felt less prepared for their Ph.D. program than international students. One potential way of preparing students and shortening the time required in a Ph.D. program is to offer master's-level "Ph.D. tracks" wherein students with an expressed intent of pursuing a Ph.D. in accounting are exposed to research-related topics. Anecdotally, doctoral programs that have admitted students with this training have found that they tend to be well prepared in terms of academic backgrounds and expectations, but sometimes less well prepared in terms of institutional work experience. The survey administered by the Committee does not provide any evidence to resolve tension between the relative merits of academic preparation versus a modest level of work experience as preparation for a Ph.D. program.

Clearly evident from the surveys, an important nonfinancial cost is the stress associated with an accounting Ph.D. program. One way in which doctoral programs in accounting might help alleviate students' stress is to create programs providing peer support. The Committee also encourages schools to provide travel-related support to allow students to better understand the academic environment and establish a valuable professional network.

### ***Reduce the Costs to Ph.D. Programs***

Accounting doctoral programs are not self-supporting in terms of tuition revenues, even when netted against subsidized teaching. The Committee believes that it is important to find effective ways of lowering the costs to those schools that provide doctoral education in accounting. One way that schools can lower costs is to reduce duplication across schools. That is, find ways to share the faculty load associated with offering doctoral seminars. It may be that groups of schools located in the same geographic region could agree to offer seminars on specific topics wherein the students from several schools travel to one location and meet with faculty who is/are expert in that specific topic. Such courses could be offered during the summer for a two- or three-week period. In light of current faculty salaries, it would be cheaper to pay for the airfare and housing costs for attending these types of group seminars than to offer Ph.D. seminars that are essentially redundant at each individual institution.

Another possible way for schools to achieve some level of efficiency with regard to their Ph.D. program is to specialize in the training they provide to Ph.D. students. That is, to build on faculty strengths and focus the school's program to offer fewer doctoral seminars. Should schools choose this approach, they should explain to students applying to their program that some specialties are not available.

### ***Diversifying Teaching Specialties***

The Committee believes the dire shortages in tax and audit areas warrant particular focus. One possible solution to these specific shortages is for Ph.D. programs to create new tracks targeted toward developing high-quality faculty specifically in these areas. These tracks should be considered part of a well-rounded Ph.D. program in which students develop specialized knowledge in one area of accounting, but gain substantive exposure to other accounting research areas. In addition, Master's Schools that do not currently offer a doctorate could develop accounting

doctoral programs that support tax and audit education as part of their overall high-quality doctoral program.

A possible explanation for the shortages in these areas is that Ph.D. students perceive that publishing audit and tax research in top accounting journals is more difficult, which might have the unintended consequence of reducing the supply of Ph.D.-qualified faculty to teach in those specialties. Given that promotion and tenure requirements at major universities require publication in these journals, students are drawn to financial accounting in hopes of getting the necessary publications for career success. While the Committee has no evidence that bears directly on this point, it believes that the possibility deserves further consideration.

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## APPENDIX A

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### AAA Accounting Ph.D. Supply Survey

#### 1. Survey's Purpose

With this short survey, the AMERICAN ACCOUNTING ASSOCIATION WILL GATHER CRITICAL INFORMATION ABOUT THE ANTICIPATED SUPPLY OF ACCOUNTING Ph.D.s as well as the research and teaching interests of those currently enrolled. Summaries of this data will be available to program chairs and doctoral program directors to use in planning and evaluating their doctoral programs. In addition, the AAA will use it as general career guidance for prospective accounting Ph.D. students and in student recruitment.

Click "Next" to get started with the survey. If you'd like to leave the survey at any time, just click "Exit this survey." Your answers will be saved.

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## AAA Accounting Ph.D. Supply Survey

### 2. Anticipated New Accounting Ph.D. Students

1. What is the average number of new accounting Ph.D. students you expect your Ph.D. program to admit each year over the next three years?

0      1      2      3      4      5      6      >6  
                           

2. Approximately how much does your school spend annually in each of the following categories:

	none	under \$2,500	\$2,500 to \$5,000	\$5,000 to \$10,000	over \$10,000
Advertising your accounting Ph.D. program (mailings, brochures, recruitment conferences, etc.)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bringing prospective accounting Ph.D. students to interview on campus?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Special awards, scholarships or fellowships for SELECT accounting Ph.D. students?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. How does the number of applications received from those applying to your Ph.D. program for 2004/05 compare ...

	significantly lower	slightly lower	about the same	slightly higher	significantly higher	N/A
with 2003/04?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
with 2002/03?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Approximately what percentage of the total applications to your Ph.D. program for 2004/05 were from non-U.S. citizens?

<20%      21-40%      41-60%      61-80%      >80%  
                       

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## AAA Accounting Ph.D. Supply Survey

### 3. Ph.D. Student Financial Support

5. What is the amount of 9-month stipend (net of tuition benefits) an accounting Ph.D. student in your program typically receives ...

as a teaching assistant?

as a research assistant (if different)?

6. What is the typical amount of SUMMER support (including teaching) a student in your accounting Ph.D. program receives?

7. Briefly describe any other sources of Ph.D. student financial support.

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## AAA Accounting Ph.D. Supply Survey

### 4. Your Accounting Ph.D. Graduates

8. For each year of your Ph.D. program, indicate how many students are enrolled.

	1st year	2nd year	3rd year	4th year	5th year & beyond
Total for the year	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

9. For each year of your Ph.D. program, indicate how many current Ph.D. students are in each TEACHING specialty.

	1st year	2nd year	3rd year	4th year	5th year & beyond
Audit/assurance	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Financial	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Cost/managerial	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Accounting Information Systems	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Tax	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

10. Indicate how many current Ph.D. students are in each RESEARCH specialty.

	empirical archival	analytical economic modeling	behavioral experimental	other	unknown
Audit/assurance	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Financial	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Cost/managerial	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Accounting Information Systems	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Tax	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

11. For your entire accounting Ph.D. program, indicate how many current students have citizenship that belongs in each NATIONAL ORIGIN category

	Entire Ph.D. Program
United States	<input type="text"/>
Canada	<input type="text"/>
Latin and South American	<input type="text"/>
Europe	<input type="text"/>
Africa	<input type="text"/>
China	<input type="text"/>
Korea	<input type="text"/>
India	<input type="text"/>
Other Asian Countries	<input type="text"/>
Australia and Oceania	<input type="text"/>

12. What percentage of your current Ph.D. students reflects traditionally underrepresented minorities, (e.g., African American, Hispanic, or Native American)?

less than 20%	21-40%	41-60%	61-80%	over 80%
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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## AAA Accounting Ph.D. Supply Survey

### 5. Thanks!

Thanks for the time and effort to complete this survey! The information you provided will be extremely valuable in guiding the American Accounting Association and ensuring the future of the accounting teaching profession.

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## APPENDIX B

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### AAA Survey of the Demand for Accounting Faculty

#### 1. Survey's Purpose

With this short survey, the AMERICAN ACCOUNTING ASSOCIATION will gather critical information about the anticipated demand for accounting faculty, including the teaching and research needs of colleges and universities. Summaries of this data will be available to program chairs and doctoral program directors to use in planning and evaluating their doctoral programs. The AAA will use this information for a number of purposes including providing career guidance to prospective accounting Ph.D. students as well as Ph.D. student recruitment.

Click "Next" to get started with the survey. If you'd like to leave the survey at any time, just click "Exit this survey." Your answers will be saved.

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## AAA Survey of the Demand for Accounting Faculty

### 2. Anticipated Accounting Faculty Hiring

\*1. How many full-time accounting faculty do you expect to hire for the 2005–2006 academic year?

	None	one	two	three	four or more	cannot predict
Ph.D.-New Graduates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ph.D.-Experienced Assistant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ph.D.-Experienced Associate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ph.D.-Experienced Full Professor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teaching only- Ph.D./ABD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teaching only- Other (e.g., Master's/CPA, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\*2. Of the faculty you plan to hire for 2005–06, how many are replacements for existing faculty members (due to retirement, denied tenure, etc.)?

None	1	2	3	4	5	N/A
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\*3. How many full-time accounting faculty do you expect to hire in the TWO YEARS BEYOND next academic year (2006–07 and 2007–08)?

	none	one	two	three	four or or more	cannot predict
Ph.D.-New Graduates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ph.D.-Experienced Assistant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ph.D.-Experienced Associate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ph.D.-Experienced Full Professor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teaching only- Ph.D./ABD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teaching only- Other (e.g., Master's/CPA, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Of the faculty you plan to hire for 2006–07 and 2007–08, how many are replacements for existing faculty members (due to retirement, denied tenure, etc.)?

None	1	2	3	4	5	N/A
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\*Questions requiring a response are marked with an asterisk (\*).

**5. How does the number you expect to hire compare with your school's hiring over the previous three years?**

	significantly lower	slightly lower	about the same	slightly higher	significantly higher	N/A
2005-06	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2006-07	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2007-08	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**6. Which of the following best describes your hiring strategy for entry-level, doctorally qualified tenure-track accounting faculty?**

- Hire the best candidate available, irrespective of specialization
- Hire the candidate that best fits with an identified specific area of need

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**\*Questions requiring a response are marked with an asterisk (\*).**

## AAA Survey of the Demand for Accounting Faculty

### 3. Teaching/Research Specialization

7. For next academic year and the two years after that, indicate how many New Ph.D. graduates you expect to hire in each TEACHING specialty (NO RESPONSE WILL BE RECORDED AS ZERO).

	2005-06	2006-07	2007-08
Audit/assurance	<input type="text"/>	<input type="text"/>	<input type="text"/>
Financial	<input type="text"/>	<input type="text"/>	<input type="text"/>
Cost/managerial	<input type="text"/>	<input type="text"/>	<input type="text"/>
Accounting Information Systems	<input type="text"/>	<input type="text"/>	<input type="text"/>
Tax	<input type="text"/>	<input type="text"/>	<input type="text"/>
Multiple Specialties	<input type="text"/>	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>	<input type="text"/>

8. For next academic year and the two years after that, indicate how many New Ph.D. graduates you expect to hire in each RESEARCH specialty (NO RESPONSE WILL BE RECORDED AS ZERO). If your response to this question is the same as in number 7, please continue to question 9.

	2005-06	2006-07	2007-08
Audit/assurance	<input type="text"/>	<input type="text"/>	<input type="text"/>
Financial	<input type="text"/>	<input type="text"/>	<input type="text"/>
Cost/managerial	<input type="text"/>	<input type="text"/>	<input type="text"/>
Accounting Information Systems	<input type="text"/>	<input type="text"/>	<input type="text"/>
Tax	<input type="text"/>	<input type="text"/>	<input type="text"/>
Multiple Specialties	<input type="text"/>	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>	<input type="text"/>

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\*Questions requiring a response are marked with an asterisk (\*).

## AAA Survey of the Demand for Accounting Faculty

### 4. NEW Faculty Compensation

9. What is the range of 9-month salary that you expect to offer NEW FULL-TIME accounting faculty?

	Salary Range
Ph.D.-New Graduates	<input type="text"/>
Ph.D.-Experienced Assistant	<input type="text"/>
Ph.D.-Experienced Associate	<input type="text"/>
Ph.D.-Experienced Full Professor	<input type="text"/>
Teaching only-Ph.D./ABD	<input type="text"/>
Teaching only-Other (e.g., Master's/CPA, etc.)	<input type="text"/>

10. What dollar amount do you offer NEW FULL-TIME accounting faculty as "summer research support"?

none	less than	between			more than
<input type="radio"/>	1/9th	1/9 and	2/9ths	2/9ths	2/9ths
<input type="radio"/>	<input type="radio"/>	1/9th	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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\*Questions requiring a response are marked with an asterisk (\*).

## AAA Survey of the Demand for Accounting Faculty

### 5. School Characteristics

**\*11. Is your institution public (government sponsored) or private?**

- Public  
 Private

**12. Which one of the following programs does your school offer?**

- Undergraduate Accounting  
 Master's of Accounting (M.Acc., M.Pr.A.)  
 Master's of Business Administration (M.B.A.)  
 Doctorate in Accounting (or Business with accounting emphasis)  
 Other

**13. How many graduates per year do you have from each of the following programs?**

	<25	25–50	51–100	101–150	151–200	201–250	>250	N/A
Undergraduate Accounting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Master's of Accounting (M.Acc., M.Pr.A.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Master's of Business Administration (M.B.A.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**14. Does your school PRIMARILY draw students:**

- Locally  
 Statewide  
 Regionally  
 Nationwide  
 N/A

**15. What is the population of the city or area in which your school resides?**

- <50,000 people  
 50,000–250,000 people  
 250,000–1,000,000 people  
 >1,000,000 people

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**\*Questions requiring a response are marked with an asterisk (\*).**

[Exit this survey>>](#)

## **AAA Accounting Survey of the Demand for Accounting Faculty**

### **6. Thanks!**

Thanks for the time and effort to complete this survey! The information you provided will be extremely valuable in guiding the American Accounting Association and ensuring the future of the accounting teaching profession.

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## APPENDIX C

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### AAA Ph.D. Student Survey

#### 1. Introduction

On behalf of the American Accounting Association, thank you for participating in this survey! The purpose of this survey is to gather information about you and your fellow accounting doctoral students for the AAA to use in improving the state of accounting doctoral education.

Click “Next” to get started with the survey. If you’d like to leave the survey at any time, just click “Exit this survey.” Your answers will be saved.

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## AAA Ph.D. Student Survey

### 2. Choice to pursue Doctorate:

\*1. Think back to when you first decided to apply to doctoral programs. How important were each of the following factors in your decision to pursue a doctorate?

	Unimportant	Somewhat Unimportant	Neither	Somewhat Important	Important	N/A
Intellectual challenge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Professional recognition	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personal growth and development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work / family balance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Earning potential	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to pursue a career in teaching	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to pursue a career in academic research	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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\*Questions requiring a response are marked with an asterisk (\*).

## AAA Ph.D. Student Survey

## 3. Experience in Doctoral Program

\*2. Now that you are in your doctoral program, please respond to the following statements concerning your experiences in the program.

	Disagree	Somewhat Disagree	Neither	Somewhat Agree	Agree	N/A
My academic preparation for the program was adequate.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am comfortable with the time required to complete the program.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I receive adequate financial aid and other support.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The time I spend on research / teaching assistant duties is fair.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The academic requirements of the program are fair.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am able to pursue research ideas that interest me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have enough time to pursue personal interests.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am able to spend enough time with my family.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The program is too stressful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The program is harmful to my physical health.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\*3. How many total years do you anticipate it will take to complete your doctorate?

	<3	3	4	5	6	>6
Years	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\*4. How much school-related debt do you anticipate having at the end of your doctoral program?

- \$0
- \$1-\$10,000
- \$10,001-\$20,000
- \$20,001-\$30,000
- \$30,001-\$40,000
- \$40,001-\$50,000
- \$50,001-\$60,000
- >\$60,000

5. After earning my doctorate, my career aspirations will most likely lead me to a school where the requirements for promotion and tenure emphasize:

- Primarily Research
- Balanced Research / Teaching
- Primarily Teaching
- Other (please specify)

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\*Questions requiring a response are marked with an asterisk (\*).

## AAA Ph.D. Student Survey

### 4. Demographic Information

**\*6. What is your age?**

- <20 years
- 20-25 years
- 26-30 years
- 31-35 years
- 36-40 years
- 41-45 years
- 46-50 years
- 51-55 years
- 56-60 years
- 61-65 years
- >65 years

**7. What is your gender?**

- Female
- Male

**8. Prior to entering the doctoral program, how long did you reside in the United States or Canada?**

- My entire life
- <1 year
- 1-5 years
- 6-10 years
- >10 years

**9. What is your national origin?**

- United States
- Canada
- Latin or South American
- Europe
- Africa
- China
- Korea
- India
- Other Asian Countries
- Australia and Oceania
- Other (please specify)

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**\*Questions requiring a response are marked with an asterisk (\*).**

## AAA Ph.D. Student Survey

### 5. Educational and Professional Background

Please tell us about your education background by responding to the following questions.

**\*10. What was your undergraduate major? If you have more than one undergraduate degree, please check all boxes that apply.**

- Accounting
- Other Business (Finance, Management, Marketing, etc.)
- Economics
- Quantitative Methods (including Statistics)
- Other Non-Business

**\*11. Was your last undergraduate degree earned at an institution in the United States or Canada?**

- Yes
- No

**\*12. What graduate degree, if any, have you earned? If you have earned more than one graduate degree, please check more than one box. (Do not include the doctorate you are currently pursuing.)**

- None
- M.B.A. (Master of Business Administration)
- Accounting Master's (M.Acc., M.Pr.A., etc.)
- Other Master's degree
- Professional Degree (law, medicine)
- Doctorate degree in business (management, marketing, finance)
- Doctorate degree not in business
- Other (please specify)

**13. Was your last graduate degree earned at an institution in the United States or Canada?**

- Yes
- No

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**\*Questions requiring a response are marked with an asterisk (\*).**

## AAA Ph.D. Student Survey

### 6. Professional Experience

Please tell us about your professional background by responding to the following questions.

**\*14. What professional experience did you have prior to entering doctoral studies? Please check all that apply.**

- None
- Public Accounting – Auditing and Assurance Services
- Public Accounting – Taxation
- Public Accounting – Other
- Private / Corporate Accounting
- Government Accounting
- Other Business (Banking, Finance, Management, Sales)
- Education – Accounting Instruction
- Education – Other Instruction
- Other (please specify)

**\*15. How many years of full-time work experience did you have prior to entering doctoral studies?**

- 0
- 1-5
- 5-10
- greater than 10

**16. Which professional certifications have you earned? Please check all that apply.**

- Certified Public Accountant (CPA)
- Certified Management Accountant (CMA)
- Certified Fraud Examiner (CFE)
- Certified Internal Auditor (CIA)
- Other (please specify)

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**Exit this survey>>**

## **AAA Ph.D. Student Survey**

### **7. Thank you**

Thank you for participating in this survey of current accounting doctoral students. Your responses are confidential and will only be used in aggregate with other responses.

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**Done>>**