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FINANCIAL MANAGEMENT

Profile of Financial Personnel in Large Private Sector Corporations and State Governments



**Accounting and Information
Management Division**

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Congressional Requesters

Well qualified financial management personnel are essential to the federal government's ability to manage its affairs effectively and provide accurate and useful information to the Congress and executive branch managers. With the passage of legislation such as the Chief Financial Officers Act, the Government Management Reform Act, and the Government Performance and Results Act, federal agency financial personnel are in the initial stages of establishing the systems and strengthening the accountability structures needed to prepare their first auditable financial statements and are increasingly expected to implement more businesslike accounting and management practices. In contrast, financial management personnel with private corporations and state governments have considerable experience in operating the systems and practices necessary to produce audited consolidated financial statements to report on those activities for which their organizations are accountable to their stockholders and taxpayers, respectively.

As the federal government strives to improve its financial management operations, it may be able to draw upon the expertise and experience of the private sector and state governments. Consequently, you asked us to survey the qualifications of key financial management personnel at Fortune 100 companies and state governments. This information can help provide a frame of reference for federal departments and agencies to consider as part of their efforts to strengthen the qualifications of federal financial management personnel. In this regard, we are issuing a series of reports describing the background and training of key financial management personnel in the Department of Defense.¹ The final report in this series will compare the profile information on these personnel to that of their Fortune 100 and state government counterparts.

About the Study

This report presents the results of our survey of the background and training of key financial management personnel at 34 of the largest private corporations and 19 of the largest state governments in the United States. We asked surveyed organizations for information on the education, work experience, training, and professional certifications of their key financial management personnel—chief financial officers (CFO), controllers, and

¹The other reports in the series are *Financial Management: Profile of DOD Comptroller/CFO Financial Managers* (GAO/AIMD-97-97, June 27, 1997) and *Financial Management: Profile of Air Force Financial Managers* (GAO/AIMD-98-4, November 28, 1997).

managers and supervisors—working in financial reporting, financial analysis, and accounting operations positions. In addition, we asked for information on training and qualification requirements for these personnel. Overall, our survey results provide information on about 4,900 private sector and state government financial management personnel.

Results in Brief

While a majority of Fortune 100 and state government financial management personnel held undergraduate degrees in accounting or other business fields, personnel in CFO and controller positions were more likely to also hold advanced degrees. In both sectors, managers and supervisors of financial analysis were more likely to hold advanced degrees than their counterparts in financial reporting and accounting operations. In the Fortune 100 companies, the most common advanced degree was a Master of Business Administration (MBA). In the state governments, MBAs and other master's degrees were both prevalent.

Accounting, auditing, and systems experience of financial management personnel averaged about 14 years for Fortune 100 companies and about 20 years for state government organizations. For each sector, the majority of the work experience was in corporate or governmental accounting and finance, respectively. Combined experience in public accounting, internal auditing, and accounting systems design and maintenance averaged 2.5 years for the Fortune 100 respondents and about 4 years for state government respondents. These fields often provide personnel with a broad base of experience with accounting, and other organizationwide issues.

Continuing professional education (CPE) training was encouraged in Fortune 100 and state government organizations responding to our survey. On average, Fortune 100 and state government financial management personnel completed about 26 and 31 hours of training, respectively, in 1996. Respondents from both groups received the majority of their training in technical accounting subjects. About 70 percent of Fortune 100 respondents and 45 percent of state government respondents set aside from 1 to 2 percent of their budgets for financial management staff salaries and benefits to train these staff each year.

As for professional certifications, over 40 percent of the Fortune 100 and about 30 percent of state controllers and managers and supervisors of financial reporting were certified public accountants (CPA). In addition,

about 10 percent of state government personnel—across positions—were certified government financial managers (CGFM).

Background

Qualified personnel can play a variety of important roles in establishing and maintaining a strong, successful financial management organization. Specifically, qualified personnel can

- provide leadership in the efficient use of an organization’s financial resources by promoting effective general and financial management practices;
- serve as an integral part of an organization’s decision-making by providing timely and reliable financial and performance information and by analyzing the implications of this information for the organization’s goals and objectives; and
- help ensure that the organization’s assets are safeguarded from fraud, waste, and abuse by improving its accounting systems and internal controls.

While the accounting profession has focused on the first and last roles for many years, a number of studies indicate that financial personnel are increasingly being asked to take on the second of their potential roles, that of a “business partner” in organizational decision-making.

The Expected Role of Accountants Is Evolving

In the past, the accounting function was paper-driven, human resource intensive, and clerical in nature. In many organizations today, recent advances in information technology, as well as competitive pressures and corporate restructuring, have combined to dramatically change the accounting function from a clerical to an analytical and consultative focus.

According to a 1996 report by the Institute of Management Accountants (IMA),² the management accounting profession has been in transition for the past 5 to 10 years.³ The study found that management accountants are increasingly being asked to supplement their traditional accounting role with more financial analysis and management consulting. Specifically, the IMA study reported that accountant work activities most critical to

²The IMA was established in 1919. It has approximately 80,000 members and is dedicated to advancing management accounting and financial management. The Institute administers the Certified Management Accountant and Certified in Financial Management programs and offers continuing professional education and corporate training programs.

³The Practice Analysis of Management Accounting, Institute of Management Accountants (Montvale, New Jersey: 1996).

company success now include not only traditional financial management skills—those associated with accounting systems and financial reporting—but also strategic planning, internal consulting, and short-term budgeting processes. The IMA study characterized this change as a “. . . shift from number cruncher and corporate cop to decision-support specialist.” A recent study by a major public accounting firm also underscored the need for financial management personnel to have financial expertise, augmented by interpersonal and communication skills, an enterprise perspective, initiative, and overall organizational savvy.⁴

These evolving expectations for accountants parallel a similar movement in the auditing profession. As a result of technological innovations, coupled with complex business structures and other economic forces, auditors are being asked to provide a wide range of services that go beyond the traditional audit of historical financial statements, such as management consulting services. Auditors are increasingly being asked to be substantially more involved with the functioning of business systems than just attesting to the reliability of reported financial data.⁵

Recent Legislative Focus on Financial Management Improvement

Major change is also underway in the federal financial management arena. The Congress has taken various steps to help ensure that federal agencies improve their financial management. One of the key pieces of legislation was the Chief Financial Officers Act of 1990. The CFO Act spelled out an ambitious agenda for financial management reform, including expectations for the (1) deployment of modern systems to replace existing antiquated, often manual, processes, (2) development of better performance and cost measures, and (3) design of results-oriented reports on the government’s financial condition and operating performance by integrating budget, accounting, and program information. The Government Management Reform Act of 1994 expanded and made permanent the requirement in the CFO Act for audited financial statements to the 24 largest federal departments and agencies and mandated annual audited governmentwide financial statements.

The CFO Act also established chief financial officers throughout government to provide needed leadership. One of the key responsibilities assigned to agency CFOs is overseeing the recruitment, selection, and

⁴Reinventing the CFO: Moving from Financial Management to Strategic Management, Coopers and Lybrand, New York, New York: 1997.

⁵The Accounting Profession: Major Issues: Progress and Concerns (GAO/AIMD-96-98, September 24, 1996).

training of personnel to carry out agency financial management functions. The development of highly qualified financial managers will be crucial to successfully implementing the CFO Act. We have reported many instances in which the federal government's ability to produce accurate financial data was undermined simply because personnel with financial management responsibilities did not follow rudimentary policies and procedures, such as accurate transaction processing and routine account reconciliations.⁶

Further, the requirements of the Government Performance and Results Act of 1993 call for federal managers to fundamentally shift their focus from a preoccupation with rigid adherence to prescribed processes to assessing the extent to which federal programs have achieved desired outcomes and results. Accordingly, agency financial personnel are increasingly being asked to draw on new sets of skills to produce cost and other performance-based financial data. Such data are essential if congressional and executive branch decisionmakers are to make well-informed decisions on the relative efficiency and effectiveness of federal programs.

While these financial management improvement efforts may be new to many financial personnel in the federal government, similar requirements have been in place for personnel in the private sector and in state governments for many years. The disciplined process required to generate reliable, accurate financial data has been in place in the private sector for over 60 years following the 1929 stock market crash, and in state governments since the early 1980s. The financial personnel in these organizations have also had extensive experience in developing and implementing meaningful financial performance measures.

Objectives, Scope, and Methodology

The objectives for this report were to identify (1) the background and training profiles of key financial management personnel working at large private sector corporations and state governments and (2) the qualification requirements applicable to personnel in these positions. To accomplish these objectives, we surveyed the organizations closest in size and complexity to federal agencies. Accordingly, we requested information on the qualifications of key financial management personnel

⁶See High Risk Series: Defense Financial Management ([GAO/HR-97-3](#), February 1997); Financial Audit: Examination of IRS' Fiscal Year 1995 Financial Statements ([GAO/AIMD-96-101](#), July 11, 1996); Financial Management: Continued Momentum Essential to Achieve CFO Act Goals ([GAO/T-AIMD-96-10](#), December 14, 1995); and Transition Series: Financial Management Issues ([GAO/OGC-93-4TR](#), December 1992).

in the 100 largest private corporations in the United States,⁷ commonly referred to as the “Fortune 100,” and the 25 largest state governments.⁸

To collect profile information on key corporate and state financial management personnel, we designed a questionnaire which was sent to Fortune 100 and selected state CFO/controller offices and their five largest divisions or departments. The design of the questionnaire used in our study was based on a framework for measuring the quality of the federal workforce presented in a previous GAO report.⁹ That framework identified education, work experience, training, and professional certifications as quantifiable factors for assessing the qualifications of federal government personnel.

In using this framework, we asked surveyed organizations for information on the education, work experience, and professional certifications of their key financial management personnel: chief financial officers, controllers, and managers and supervisors working in financial reporting, financial analysis, and accounting operations positions.¹⁰ We also asked for information on training and qualification requirements for the above mentioned managers and supervisors.

To help ensure that the questionnaire was clear and that the respondents’ information would be most relevant to the federal CFO community, we obtained comments from a variety of interested parties and pretested the questionnaire. Specifically, we requested and incorporated, as appropriate, comments on our questionnaire received from representatives of the Private Sector Council;¹¹ the National Association of State Auditors,

⁷We determined corporate size based on 1995 revenues as reported in the April 29, 1996, *Fortune*—the latest available issue at the time of our survey.

⁸We determined state government size based on revenues received in 1993—the latest available information at the time of our survey—reported in the *Statistical Abstract of the United States 1995: The National Data Book*, U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, p. 308.

⁹*Federal Workforce: A Framework for Studying Its Quality Over Time* (GAO/PEMD-88-27, August 4, 1988).

¹⁰We provided the surveyed Fortune 100 and state government organizations with definitions of each position listed and asked that they provide responses for financial management personnel in these positions. Accordingly, this report refers to the personnel by these position titles, even though the actual titles used by the organizations may differ.

¹¹The Private Sector Council, founded in 1983, is a nonprofit organization dedicated to assisting the federal government in improving its efficiency, productivity, and management through a cooperative effort of the public and private sectors. The Council is privately funded by member companies representing the nation’s largest corporations, private businesses, and associations.

Comptrollers, and Treasurers;¹² and the federal CFO Council Human Resources Committee.¹³ In addition, an academic consultant from the University of Denver School of Accountancy with expertise in this area reviewed the questionnaire and provided comments. The survey instrument was also pretested at one Fortune 100 company and two state governments. The pretests were conducted through interviews to observe respondents as they completed the questionnaire and to debrief them immediately afterward. On the basis of the advisors' comments and pretesting results, the questionnaire was revised. Appendix III provides a copy of the final survey instrument.

Responses were received from 34 Fortune 100 companies and from 19 of the 25 largest state governments. The 34 Fortune 100 companies from which we received responses represent all major industry groupings except agriculture. Ten of the companies were finance, insurance, or real estate companies, such as BankAmerica Corporation, Citibank, and the Metropolitan Life Insurance Company. Fifteen manufacturing and mining companies responded to our survey, including the Lockheed Martin Corporation, the Hewlett-Packard Company, AlliedSignal, and the Mobil Corporation. We also received responses from nine transportation, communication, and wholesale/retail trade companies, including AT&T, MCI Communications, United Airlines, and SuperValu. The 1995 revenues of the Fortune 100 respondents ranged from \$12.7 billion to \$79.6 billion.¹⁴ Appendix I lists the Fortune 100 companies, divisions, and subsidiaries responding to our survey.

State government comptroller offices and operational departments responding to our survey were located throughout the country and included responses from an average of over four of the major organizations within each of the states responding, ranging from one to six per state, and also included the largest states. For example, we received responses from California, Florida, Illinois, Michigan, New York, Virginia,

¹²The National Association of State Auditors, Comptrollers, and Treasurers (NASACT), founded in 1915, works to ensure that government fiscal and financial management is effective, efficient, and professional. Its membership is comprised of statewide elected and duly appointed top fiscal and financial state officials having the positions of auditor, comptroller, and treasurer. NASACT staff serve as a technical, educational, and programming resource for its members. NASACT is involved in research, sponsoring technical conferences, and providing seminars to government officials in the United States and overseas.

¹³The members of the Chief Financial Officers Council—the CFOs and Deputy CFOs of the largest federal agencies and senior officials at OMB and Treasury—work collaboratively to improve financial management in the federal government. The Council members created the Human Resources Committee to improve the recruitment, retention, performance and training of financial management personnel within the federal government.

¹⁴As listed in *Fortune*, April 29, 1996, Vol. 133, No. 8, pp. F-1-F-3.

and Washington. The revenues of the state government respondents ranged from \$10.8 billion to \$108.2 billion. The state government comptroller offices and other departments that responded to our survey are listed in appendix II.

We did not verify the accuracy of the information provided by the Fortune 100 and state government respondents. However, we provided a draft of this report to the parties commenting on the initial survey instrument and have incorporated their comments as appropriate. We conducted our work from June 1996 through December 1997 in accordance with generally accepted government auditing standards.

Profile of Survey Respondents

Overall, the survey respondents provided information on 4,930 financial management personnel: 3,621 (73 percent) in Fortune 100 companies and 1,309 (27 percent) in state governments. Table 1 shows the positions held by the financial management personnel about whom information was provided.

Table 1: Positions Held by Financial Management Personnel in Fortune 100 Companies and State Governments Surveyed

Position ^a	Number of employees about whom information was provided		
	Fortune 100	State government	Total
Chief financial officer	79	83	162
Controller	92	99	191
Manager of financial reporting	328	111	439
Manager of financial analysis	595	133	728
Manager of accounting operations	549	182	731
Supervisor of financial reporting	389	169	558
Supervisor of financial analysis	951	218	1,169
Supervisor of accounting operations	638	314	952
Total	3,621	1,309	4,930

^aNot all respondents reported personnel for each category. For example, some respondents combined their managers into one category, rather than reporting them separately as managers of either financial reporting, financial analysis, or accounting operations.

The Fortune 100 personnel about whom information was provided worked in 1 of 34 corporate offices or 54 corporate divisions or subsidiaries, as listed in appendix I. The state government personnel about whom

information was provided worked in 1 of 18 state comptroller offices (or the equivalent) or 67 operational departments, as listed in appendix II.

Formal Education

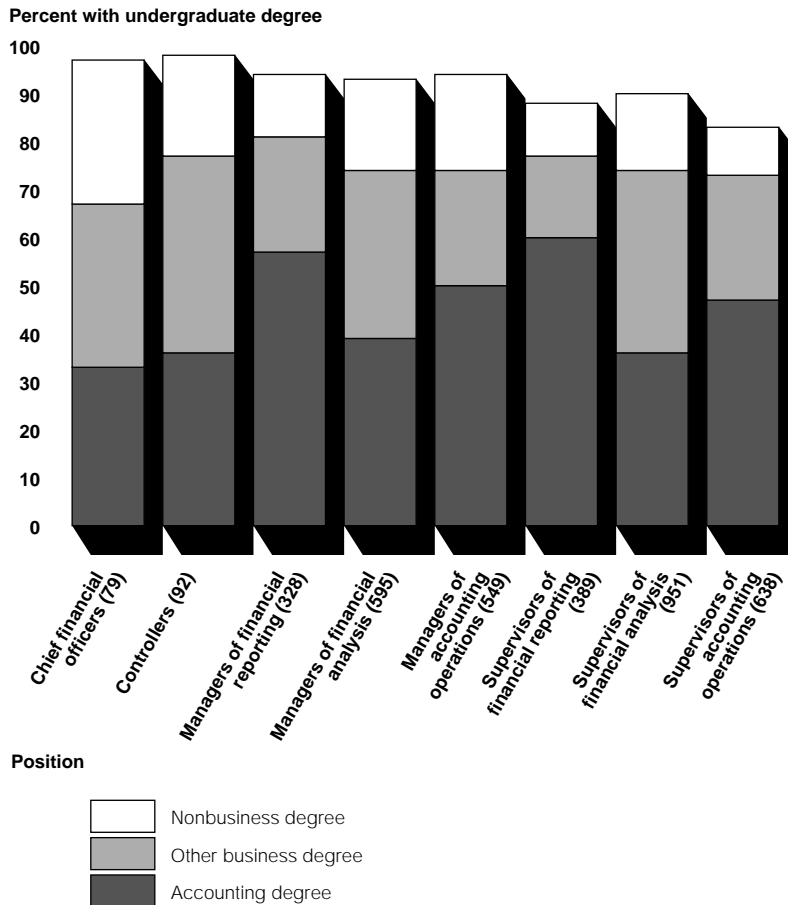
The following sections present information on the educational backgrounds and related education requirements for key financial management personnel at the Fortune 100 companies and state governments responding to our survey.

Education Attained—Fortune 100 Companies

In the Fortune 100 companies, more than 90 percent of financial management personnel held undergraduate degrees, with about 75 percent holding either accounting or other business degrees.¹⁵ Accounting degrees were more commonly held by managers and supervisors of financial reporting and accounting operations. CFOs, controllers, and managers and supervisors of financial analysis commonly held either accounting or other business degrees. Senior executives were more likely than managers and supervisors to hold nonbusiness degrees. Figure 1 shows, by position, the undergraduate degrees attained by Fortune 100 financial management personnel.

¹⁵Some respondents reported the total number of personnel holding bachelor's and advanced degrees but did not provide information on degree majors. Education attainments of these personnel are not included in the following charts which report, by major, the percent of personnel holding bachelor's and advanced degrees.

Figure 1: Undergraduate Degrees Held by Fortune 100 Personnel

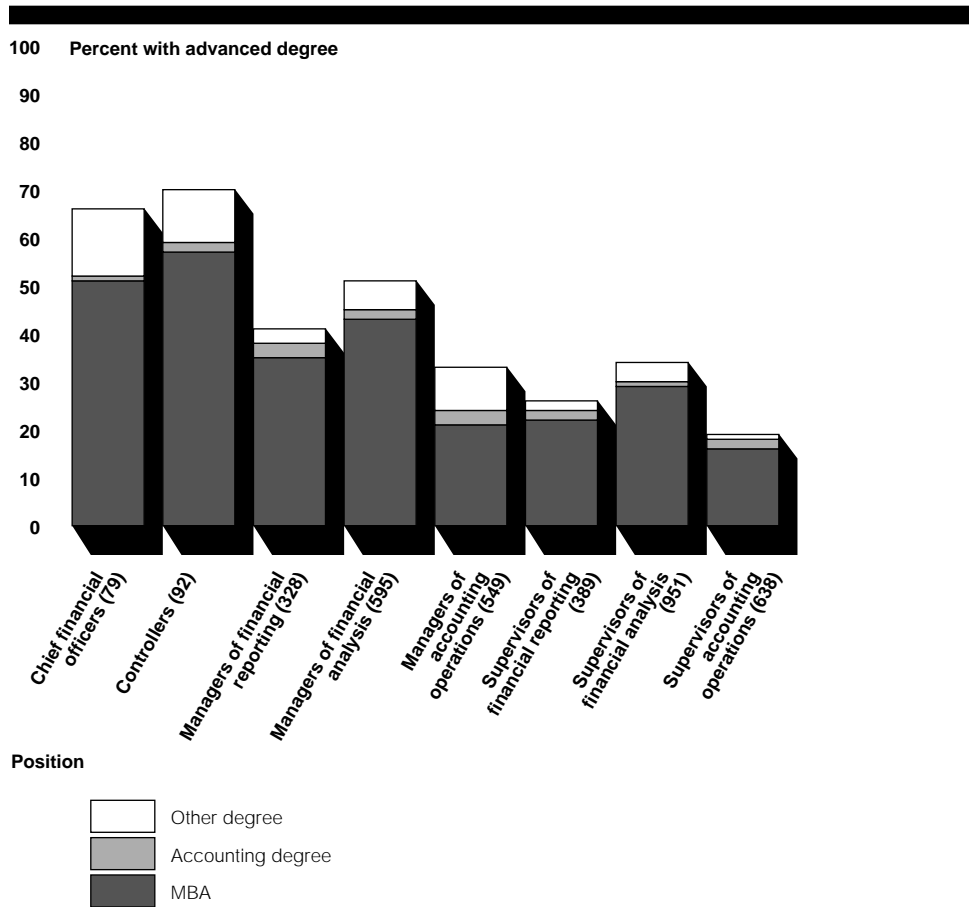


Note: Includes only personnel who held a degree and provided information on the degree major. Some personnel held more than one degree.

Overall, about 40 percent of the Fortune 100 personnel held advanced degrees. The percentage of personnel with advanced degrees ranged from over 60 percent of CFOs and controllers to about 24 percent of supervisors of accounting operations. For example, about 39 percent of the Fortune 100 managers of accounting operations held advanced degrees. In addition, managers and supervisors of financial analysis were more likely to hold an advanced degree than were other managers and supervisors. In the Fortune 100 companies, the majority of advanced degrees held were

MBAs. Figure 2 shows, by position, the advanced degrees attained by Fortune 100 financial management personnel.

Figure 2: Advanced Degrees Held by Fortune 100 Personnel



Note: Includes only personnel who held a degree and provided information on the degree major. Some personnel held more than one degree.

Education Requirements—Fortune 100 Companies

Almost 60 percent of Fortune 100 respondents required bachelor’s degrees—in either accounting or another business field—for manager and supervisor positions in financial reporting, financial analysis, and accounting operations. For example, about 45 percent of the respondents required their managers of financial reporting to have accounting degrees and another 23 percent required such managers to have either accounting

or other business degrees. About 34 percent of the respondents required their managers of accounting operations to have accounting degrees, and another 20 percent required such managers to have either accounting or other business degrees. In addition, several of the organizations without any formal bachelor's degree requirements for their financial management personnel said that they preferred hiring personnel with bachelor's degrees for these positions.

In some cases, Fortune 100 organizations required advanced degrees for their managerial and supervisory financial management positions. Overall, about 12 percent of the respondents required advanced degrees, most commonly MBAs, for the financial management positions examined. For example, 11 percent of respondents required managers of financial reporting and accounting operations to have advanced degrees, while about 19 percent of respondents required their managers of financial analysis to have advanced degrees. Further, 18 respondents added that advanced degrees, while not formally required, were preferred for these positions.

Also, 43 Fortune 100 respondents said that they had recently upgraded or planned to upgrade their education requirements. For example, one Fortune 100 respondent had established a new requirement that all its financial management personnel have CPAs and MBAs or other advanced financial degrees. Another respondent told us that it recently had established a policy encouraging its financial management personnel to obtain advanced degrees and professional certifications because of the increased knowledge they had to possess to report the organization's financial results in accordance with generally accepted accounting principles and because of the sophisticated nature of its business, including diverse products and markets. Yet another respondent indicated that its vision for upgrading the qualifications of its financial personnel focused on building broader business awareness and related analytic skills.

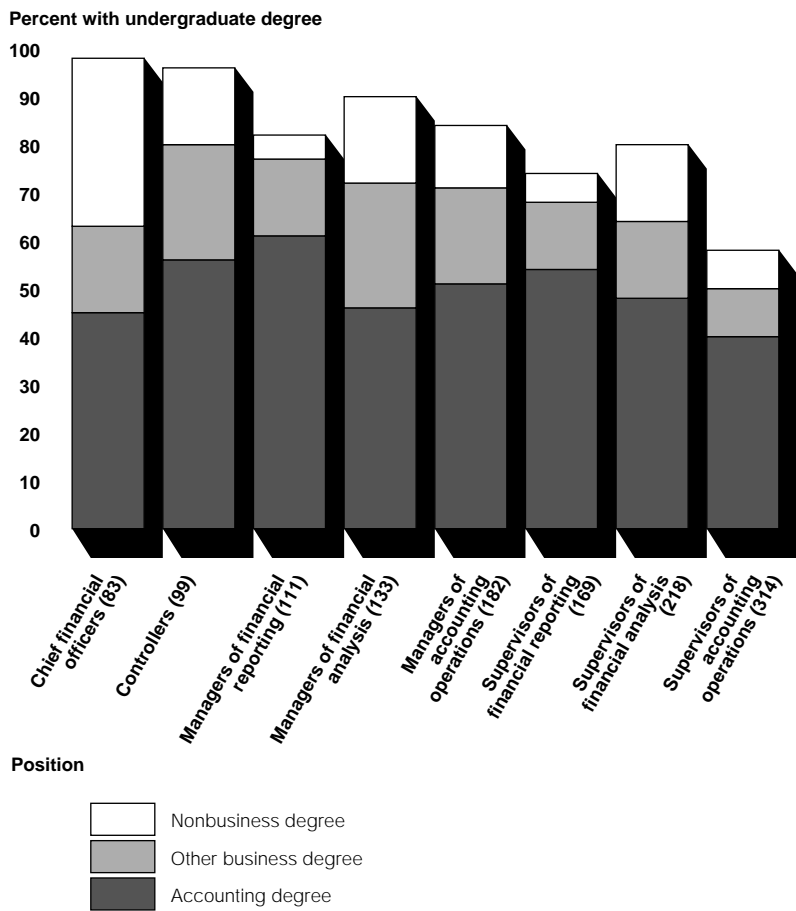
Education Attained—State Organizations

On average, about 78 percent of the state government financial management personnel held bachelor's degrees. The percentage of personnel holding bachelor's degrees varied by position, ranging from about 96 percent of CFOs and controllers to 58 percent of supervisors of accounting operations.¹⁶ Depending on the position, from 50 to 80 percent of personnel held either accounting or other business degrees. CFOs were

¹⁶Some respondents held more than one advanced degree.

more likely than controllers, managers, and supervisors to hold nonbusiness degrees. About one-third of the CFOs held nonbusiness degrees. Figure 3 shows, by position, the undergraduate degrees attained by state government personnel.

Figure 3: Undergraduate Degrees Held by State Government Personnel

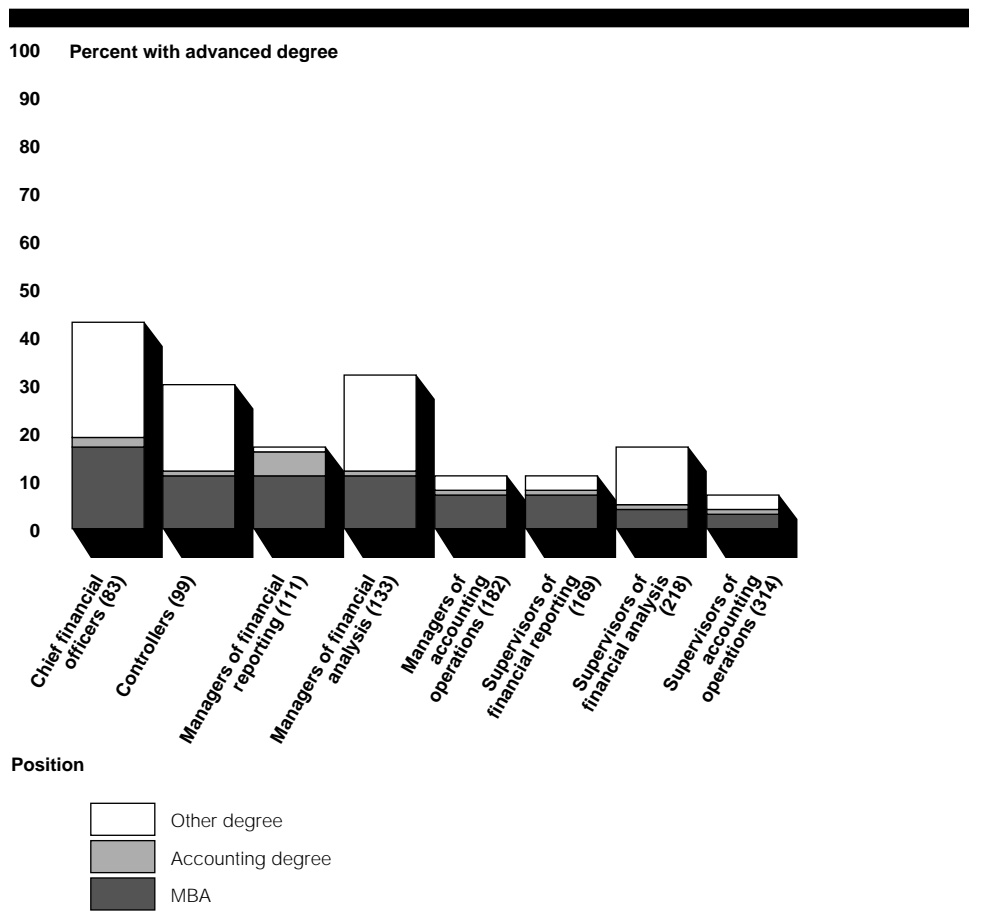


Note: Includes only personnel who held a degree and provided information on the degree major. Some personnel held more than one degree.

About 16 percent of the financial management personnel working for state government respondents held advanced degrees. The percentage of

personnel with advanced degrees ranged from about 41 percent of CFOs to about 6 percent of supervisors of accounting operations.¹⁷ For instance, about 11 percent of managers of accounting operations held advanced degrees. In addition, CFOs, controllers, and managers and supervisors of financial analysis were more likely to hold advanced degrees other than MBAs or master’s degrees in accounting. For other positions, MBAs were the most commonly held advanced degrees. Figure 4 shows, by position, the advanced degrees attained by state government personnel.

Figure 4: Advanced Degrees Held by State Government Personnel



Note: Includes only personnel who held a degree and provided information on the degree major. Some personnel held more than one degree.

¹⁷Some respondents held more than one advanced degree.

Education Requirements—State Organizations

About 44 percent of the state government respondents required either accounting or other business degrees for manager and supervisor positions in financial reporting, financial analysis, and accounting operations. For example, about 27 percent of respondents required their managers of financial analysis to have accounting degrees, and another 18 percent of respondents required these managers to have either accounting degrees or other business degrees. About 35 percent of respondents required their managers of accounting operations to have accounting degrees, and another 9 percent of the respondents required such managers to have either accounting or other business degrees.

In addition, 23 state government departments reported that they had recently upgraded or planned to upgrade their education requirements. For example, one state government department stated that in the past few years, it had begun to require bachelor's degrees, instead of those degrees being a preference item. A department in another state is requiring all its professional level accountants to have degrees in accounting starting this year. Yet another state put it this way:

“The evolution of accounting functions has resulted in increased need for personnel with four year accounting degrees. The typical make-up of office staff over the past 15 years has changed mostly from clerical individuals to individuals with accounting degrees. The increased use of computers requires a high degree of computer skills and analytical capabilities.”

Further, several of the state organizations that said they did not have formal bachelor's degree requirements for their financial management personnel said they preferred that these personnel have bachelor's degrees. One state department informed us that it had raised the number of college accounting hours needed for all its professional level accounting positions from 12 to 24 approximately 2 years ago.

In only a few cases did state government organizations require advanced degrees for their manager and supervisor positions in financial management. On average, less than 3 percent of state government respondents required advanced degrees—either MBAs or other master's degrees—for these positions. For example, while 4 percent of respondents required their managers of financial reporting to have advanced degrees, none of the respondents to our study required their supervisors of financial reporting or accounting operations to have advanced degrees.

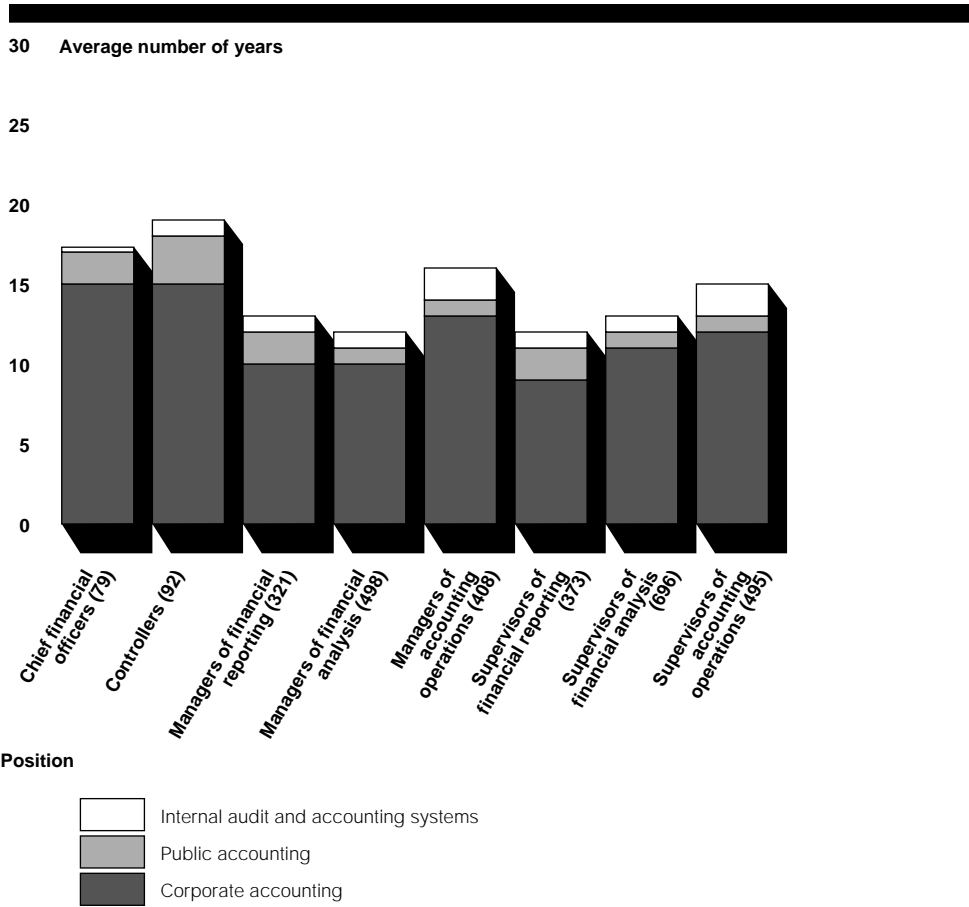
Work Experience

Financial management personnel in the Fortune 100 companies responding to the survey had, on average, about 14 years of total experience in corporate accounting, public accounting, internal auditing, or accounting systems design and maintenance.¹⁸ This overall experience included an average of 2.5 years combined experience in public accounting, internal auditing, or accounting systems design and maintenance. These three areas of experience are particularly noteworthy because they often provide exposure to a wide variety of accounting issues and decision-making processes throughout an organization.

The years of work experience in corporate accounting and the other three areas varied by position. Controllers and CFOs averaged about 19 and 17 years of work experience, respectively, while managers and supervisors averaged from 12 to 16 years of experience, depending on position. Figure 5 shows, by position, the average years of work experience in these four areas for financial management personnel in the Fortune 100 companies surveyed.

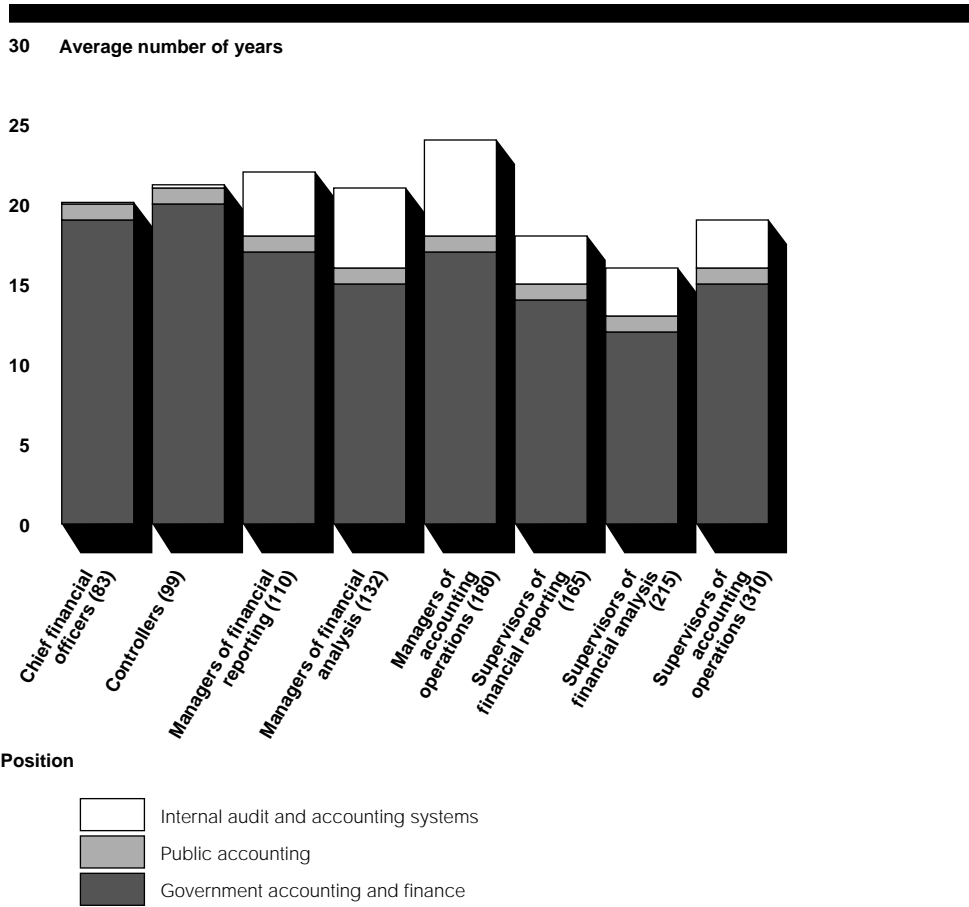
¹⁸On average, these personnel also had several years of operational and other experience that is not included in these totals.

Figure 5: Work Experience of Fortune 100 Personnel



Overall, state government personnel had about 20 years of work experience in government accounting, public accounting, internal auditing, and accounting systems design and maintenance. The state governments' CFOs and controllers averaged 20 and 21 years of work experience, respectively, in these areas. Managers and supervisors averaged 16 to 24 years, depending on the position. This total experience included an average of 4 years combined experience in public accounting, internal auditing, or systems design and maintenance, fields which often provide exposure to a broad base of accounting issues throughout an organization. Figure 6 shows, by position, the average years of work experience in these four areas for financial management personnel in the state governments surveyed.

Figure 6: Work Experience of State Government Personnel



Continuing Professional Education

The following sections present information on the training attained and required for financial management personnel for those Fortune 100 and state government organizations responding to our survey.

Training Attained—Fortune 100 Companies

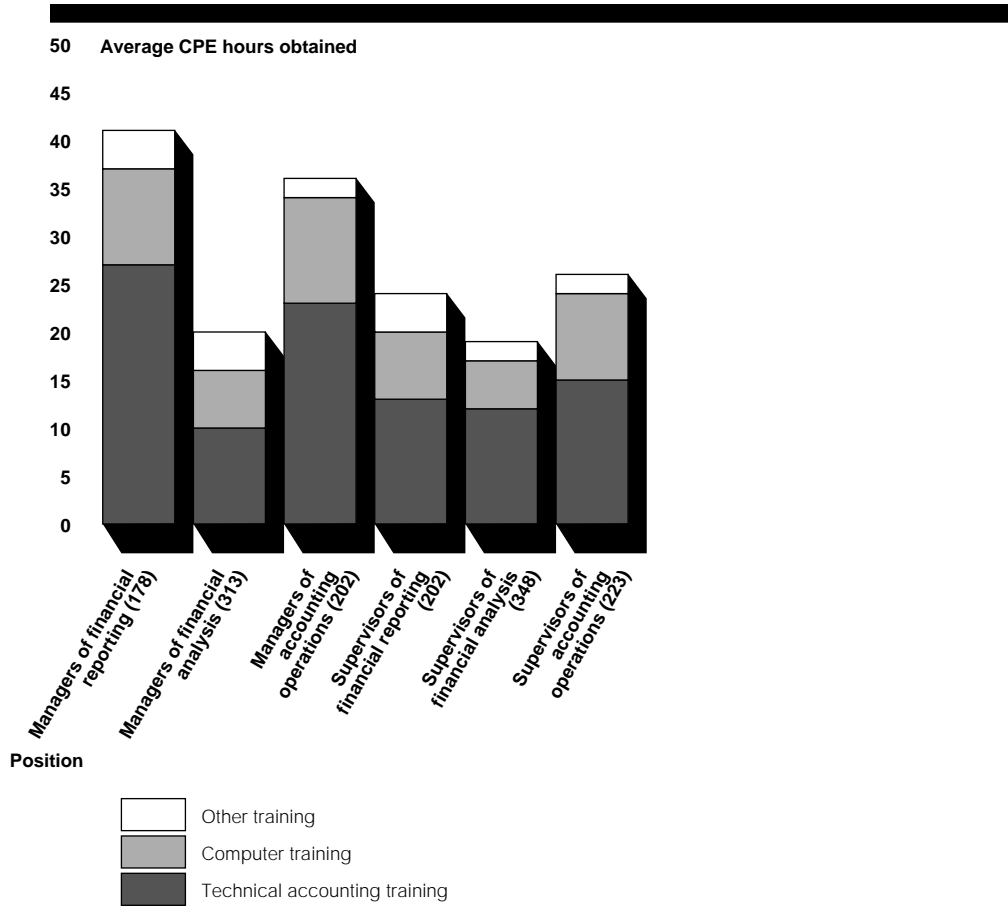
Overall, Fortune 100 financial management personnel completed an average of 26 hours of training in 1996. The number of training hours ranged from about 20 to 40, depending on financial management position. Most of the hours completed were in technical accounting subjects. For example, one respondent told us that over the past few years the company had strongly encouraged managers throughout the organization to increase their technical skills by taking classes, becoming certified, and working toward advanced degrees. Another respondent stressed the

importance of employee development programs to not only emphasize both customer and market knowledge but also broaden and upgrade financial skills.

In addition, a number of Fortune 100 respondents cited the need to tailor their CPE programs so that their financial management personnel could maintain their professional certifications, such as CPAs. For example, one company subsidiary stated that its CPE requirements are tailored toward the requirements of the professional certifications that its financial management personnel possess. The subsidiary also indicated that it planned to greatly increase its training curriculum and requirements for all its financial management personnel in the near future.

Figure 7 shows, by position, the average number of continuing professional education hours completed in 1996 by financial management personnel in the Fortune 100 companies surveyed.

Figure 7: Continuing Professional Education Obtained by Fortune 100 Personnel in 1996



About 70 percent of Fortune 100 respondents set aside between 1 and 2 percent of their budget for financial management salaries and benefits for training financial management personnel. In addition, another 15 percent of the Fortune 100 respondents set aside more than 2 percent. However, while all Fortune 100 respondents set aside some portion of their budgets for training, 15 percent set aside less than 1 percent.

Training Requirements—Fortune 100 Companies

Few of the Fortune 100 respondents had any financial management training requirements. However, those respondents with such requirements had, on average, 31 total hours of required training in 1996, including 18 hours in technical accounting. The total average number of

hours of training required of financial management personnel in these corporations ranged from 15 to 45 hours, depending on position. In addition, 36 respondents commented that they encouraged their employees to obtain additional training. Also, they commented that employees tend to seek out training on their own, particularly those with professional certifications. In order to maintain their CPA certifications, employees are generally required to complete at least 80 hours of continuing professional education every 2 years.

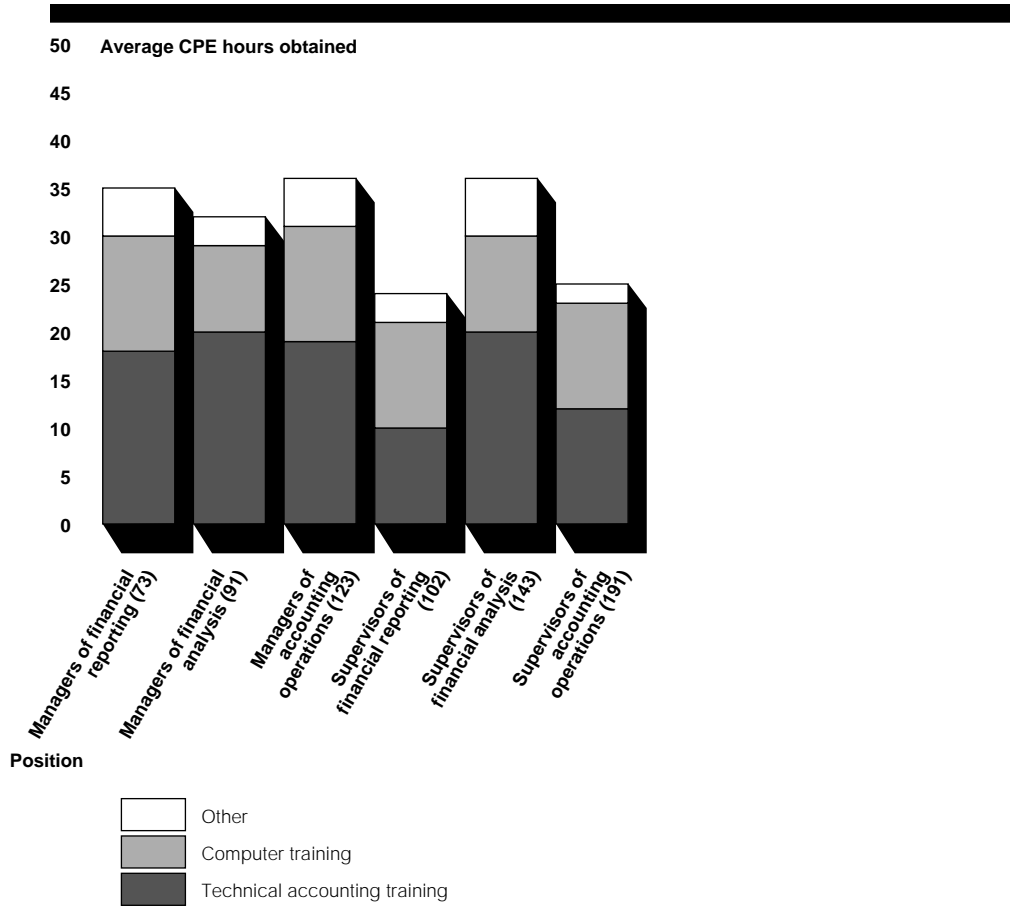
Training Attained—State Government Organizations

State government financial management personnel completed, on average, about 31 hours of training in 1996. (The number of hours ranged from about 25 to 35, depending on position.) Most of the hours completed were in technical accounting subjects.

Several state government respondents also stressed that their CPE training programs were, in part, driven by the CPE requirements needed to maintain the various professional certifications held by their financial management personnel. One respondent noted that its policy for financial management personnel at the manager and supervisor level who are not certified was to develop individual training plans tailored to the individual's area of expertise, with a goal of 24 hours of training a year. Another state indicated that it provided training to its financial management personnel on an as-needed basis in order for personnel to successfully perform job requirements. It further informed us that it encourages its financial personnel to attend CPE training courses by allowing administrative time off and, to the extent that funds are available, paying for the cost of such training.

Figure 8 shows, by position, the average number of continuing professional education hours completed in 1996 by financial management personnel in state governments surveyed.

Figure 8: Continuing Professional Education Obtained by State Government Personnel in 1996



In addition, over half of the state government organizations set aside 1 percent or more of their financial management salaries and benefits budget for training. Forty-five percent of respondents set aside from 1 to 2 percent of their budgets for training, with another 8 percent setting aside more than 2 percent. However, 47 percent of the state government respondents set aside less than 1 percent of their budgets for training, including 15 respondents (21 percent) who said that they did not set aside any funds.

Training Requirements—State Government Organizations

Few state government respondents had any financial management training requirements. However, those states with such requirements had, on average, 36 hours of required training in 1996, including 26 hours in technical accounting. Total required training for financial management personnel in these state organizations ranged from 31 to 40 hours, depending on position. In addition, similar to many Fortune 100 respondents, 24 state government respondents commented that they encouraged their employees to obtain training, even though it was not required. In order to maintain their CPA and CGFM certifications, employees are generally required to complete at least 80 hours of continuing professional education every 2 years.

Professional Certifications

The following sections describe the certifications attained and required for Fortune 100 and state government financial management personnel.

Professional Certifications Attained—Fortune 100 Companies

Among Fortune 100 respondents, the CPA was the most commonly held professional certification.¹⁹ Overall, about 25 percent of Fortune 100 financial managers were CPAs. Specifically, this included about 42 percent of the controllers, 43 percent of managers of financial reporting, and 41 percent of supervisors of financial reporting. For other positions, the percentage of CPAs ranged from 32 percent of the CFOs to 16 percent of the supervisors of financial analysis. Few financial management personnel were certified management accountants (CMA)²⁰ or certified internal auditors (CIA).²¹

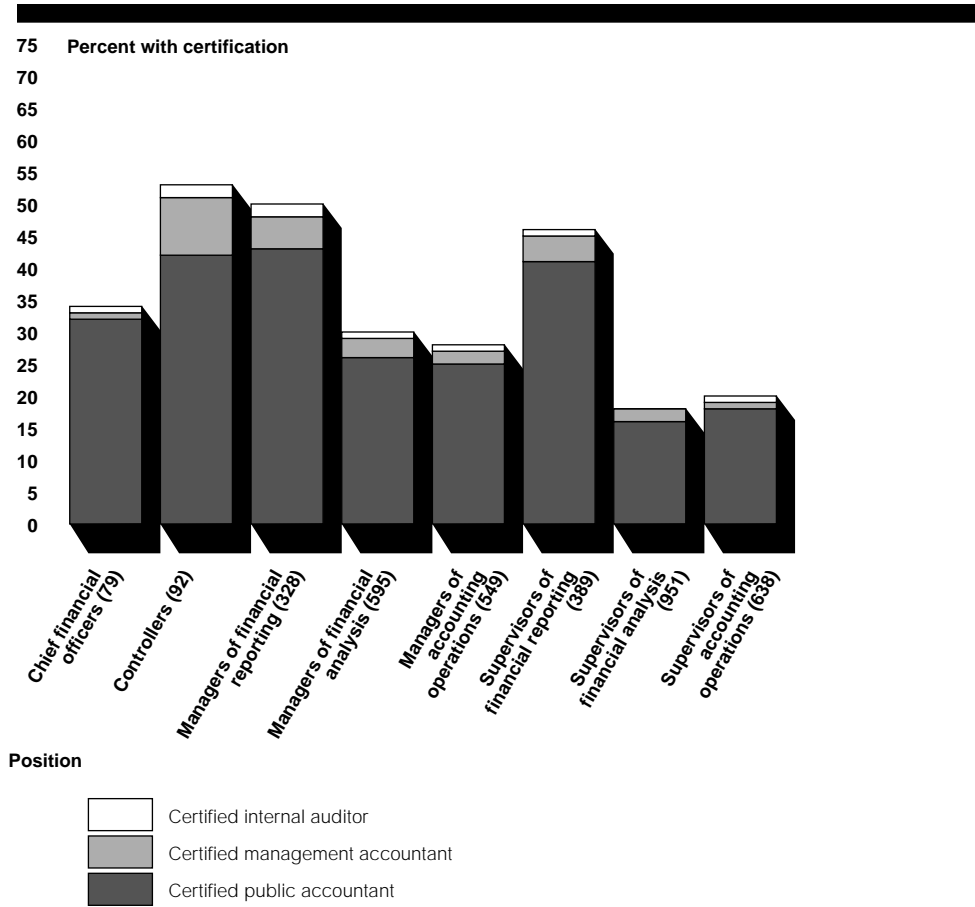
Figure 9 shows, by position, the professional certifications held by financial management personnel in the Fortune 100 companies surveyed.

¹⁹The CPA certification program has existed since 1917. State organizations administer this program, awarding the certificate based on the applicant's formal education, professional work experience, and successful completion of a comprehensive examination developed by the American Institute of Certified Public Accountants.

²⁰The certified management accountant certification program has existed since 1972. The certificate is awarded based on the applicant's formal education, professional work experience, and successful completion of a comprehensive examination developed by the Institute of Management Accountants.

²¹The certified internal auditor certification program is implemented by the Institute of Internal Auditors, an international professional association dedicated to the promotion and practice of internal auditing. To become a CIA, candidates must have a bachelor's degree (or equivalent) and 24 months of internal auditing work experience and must pass a four-part written examination.

Figure 9: Professional Certifications Held by Fortune 100 Personnel



Note: Some personnel had more than one certification.

Certification Requirements—Fortune 100 Companies

Fortune 100 organizations generally did not require professional certifications for the financial management positions examined in our study, although 13 respondents said that they preferred that their managers and supervisors be CPAs. On average, about 18 percent of respondents required a CPA for the manager and supervisor positions examined in our survey. For example, about 31 percent of Fortune 100 respondents required a CPA for their managers of financial reporting, and 11 percent to 21 percent required a CPA for other positions. Requirements for other certifications (CMA and CIA) were rare.

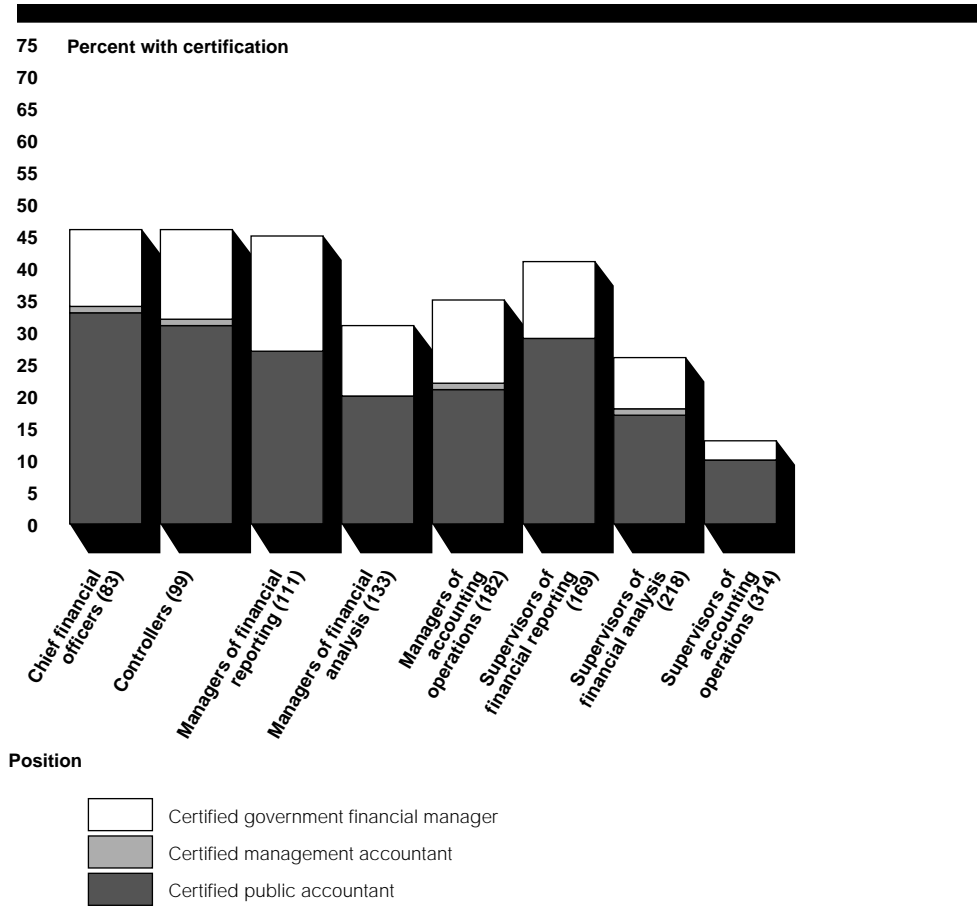
**Professional Certifications
Attained—State
Organizations**

Two types of certifications were common among state government financial managers—CPA and certified government financial manager (CGFM).²² On average, about 21 percent of state government financial management personnel were CPAs. About 30 percent of CFOs, controllers, and managers and supervisors of financial reporting held CPAs. The percentage of personnel in other positions holding CPAs ranged from 21 percent of managers of accounting operations to 10 percent of supervisors of accounting operations. For example, one state informed us that certifications, such as CPA or CGFM, have replaced a bachelor's degree as preference items in its hiring and promotion programs. In addition, the percentage of personnel across all positions that held CGFM certificates ranged from 3 percent to 18 percent.

Figure 10 shows, by position, the professional certifications held by financial management personnel in the state governments surveyed.

²²The CGFM program was initiated by the Association of Government Accountants in July 1994. Until June 30, 1996, the certificate was awarded based on an evaluation of an applicant's formal education and professional work experience in government financial management. Future certifications will require the successful completion of three comprehensive examinations covering (1) the government environment, (2) governmental accounting, financial reporting, and budgeting, and (3) governmental financial management and control.

Figure 10: Professional Certifications Held by State Government Personnel



Note: Some personnel had more than one certification.

Certification Requirements—State Government Organizations

Few state organizations required professional certifications for the financial management positions examined in the study. For example, about 13 percent of state government respondents required a CPA for their managers of financial reporting. For other positions, a lower percentage of respondents required CPAs, although five respondents said that they preferred that their managers and supervisors be CPAs. One state department told us that for the past 8 years, it has required all its financial management personnel to be CPAs. Another indicated that it now required all financial reporting and accounting operations managers to be CPAs and that, because of a perceived increase in personnel with CPAs available in recruitment pools, it has established a CPA as a desired credential for all

professional positions in the accounting, financial analysis, and financial reporting areas. Requirements for other certifications—CGFM and CMA—were rare.

Conclusions

Like Fortune 100 companies and large state governments, federal agencies must respond creatively to the challenges posed by new technologies, downsizing and restructuring, and increased reporting requirements. Consequently, the experiences of the nonfederal organizations in our review may provide important lessons learned for future federal efforts to improve the qualifications and professionalism of its financial management workforce in response to the challenge of moving from a strict accounting role to that of a “business partner.” These lessons learned include upgrading requirements for hiring personnel and ensuring that personnel on board acquire the appropriate training needed to effectively carry out their evolving responsibilities.

We are sending copies of this report to the Ranking Minority Member of the House Committee on Government Reform and Oversight, CFOs and inspectors general for the 24 largest federal agencies and departments, the Directors of the Office of Management and Budget and the Office of Personnel Management, and the Human Resource Committee of the Chief Financial Officers’ Council. We will make copies available to others on request.

Please contact me at (202) 512-9095 if you or your staffs have any questions. Major contributors to this report are listed in appendix IV.



Lisa G. Jacobson
Director, Defense Audits

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The Honorable John Glenn
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Committee on Governmental Affairs
United States Senate

The Honorable Dan Burton
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The Honorable Stephen Horn
Chairman
The Honorable Carolyn B. Maloney
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Subcommittee on Government Management,
Information and Technology
Committee on Government Reform and Oversight
House of Representatives

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Abbreviations

CFO	chief financial officer
CGFM	certified government financial manager
CIA	certified internal auditor
CMA	certified management accountant
CPA	certified public accountant
CPE	continuing professional education
DOD	Department of Defense
GAAP	generally accepted accounting principles
IMA	Institute of Management Accountants
MBA	Master of Business Administration

Fortune 100 Survey Respondents

We received survey responses from the corporate-level CFO office of 34 Fortune 100 companies and from 54 divisions or subsidiaries of these companies. While no corporate offices requested anonymity, one subsidiary did request not to be listed and we honored their request. Respondents agreeing to be listed as participants in our study are the following:

AlliedSignal

Corporate-level CFO Office
Engineered Materials Division

American Airlines

Corporate-level CFO Office
The SABRE Group Holdings, Inc.

American Express Company

Corporate-level CFO Office

AMOCO Corporation

Corporate-level CFO Office
Petroleum Products
Energy Group North America
International Operations Group

AT&T

Corporate-level CFO Office

BankAmerica Corporation

Financial Accounting Shared Services
Retail Business Finance
Support Groups Business Finance
Wholesale Business Finance
Commercial Wealth Management Business Finance

BellSouth Corporation

Corporate-level CFO Office
Telecommunications
Advertising and Publishing Corporation
Cellular Corporation International

The Boeing Company

Corporate-level CFO Office

Commercial Airplane Group
Defense and Space Group
Information Support Services Group

Bristol-Myers Squibb Corporation

Financial Shared Services
Worldwide Medicines Group
Clairol, Inc.
ConvaTec
Zimmer, Inc.
Mead Johnson Nutritionals

Chase Manhattan

Corporate-level CFO Office

Chevron Corporation

Corporate-level CFO Office

Chrysler Corporation

Corporate-level CFO Office

Citibank, N.A.

Corporate-level CFO Office

E.I. du Pont de Nemours

Corporate-level CFO Office

Federal National Mortgage Association

Corporate-level CFO Office

General Electric Company

Corporate-level CFO Office

Hewlett-Packard Company

Corporate-level CFO Office
Test and Measurement
Measurement Systems Organization
Consumer Products Group

International Business Machines

Corporate-level CFO Office

J.C. Penney Company
Corporate-level CFO Office
Eckerd Corporation
Insurance Group
Catalog Division

J.P. Morgan
Corporate-level CFO Office

Johnson & Johnson
Corporate-level CFO Office

Lehman Brothers Holdings, Inc.
Corporate-level CFO Office

Lockheed Martin Corporation
Corporate-level CFO Office
Tactical Aircraft Systems
Astronautics
Missiles and Space
Aeronautical Systems
Electronics and Missiles

MCI Communications
Corporate-level CFO Office
Telecommunications Business Services Division
Mass Markets Division
MCI International, Inc.

Metropolitan Life Insurance
Corporate-level CFO Office
Institutional Financial Management Division
Individual Business Division
Capital Corporation
Canadian Operations Division
Property and Casualty Division

Mobil Corporation
Corporate-level CFO Office

NationsBank Corporation
Finance Group

New York Life Insurance Company

Corporate-level CFO Office

SBC Communications, Inc.

Corporate-level CFO Office

Southwestern Bell Telephone

Southwestern Bell Yellow Pages

Southwestern Bell Wireless

Southwestern Bell Mobile Systems

Sprint

Corporate-level CFO Office

Long Distance Division

Local Service Division

SuperValu, Inc.

Corporate-level CFO Office

Cub Foods

Midwest Region

Northern Region

Save-A-Lot, Ltd.

United Airlines

Corporate-level CFO Office

USX Corporation

Corporate-level CFO Office

Marathon Oil Company

U.S. Steel Group

Delhi Gas Pipeline Corporation

Xerox Corporation

Corporate-level CFO Office

State Government Survey Respondents

We received survey responses from 18 state comptroller offices (or their equivalents) and 67 operational departments of state governments. Respondents agreeing to be listed as participants in our study are the following:

State of Arizona

State Comptroller's Office
Department of Economic Security
Department of Corrections
Department of Juvenile Corrections
Department of Administration

State of California

State Controller's Office
Department of Corrections
Department of Education
Franchise Tax Board
Department of Health Services
California State Board of Equalization

State of Florida

State Comptroller's Office
Department of Education
Department of Transportation
Department of Children and Families
Department of Labor and Employment Security
Department of Corrections

State of Georgia

Office of Treasury and Fiscal Services
Department of Medical Assistance
Department of Education
Department of Transportation

State of Illinois

State Comptroller's Office
Department of Public Aid
Department of Transportation

State of Louisiana

Division of Administration
Department of Education

Department of Public Safety and Corrections
Department of Social Services
Department of Transportation and Development
Department of Health and Hospitals

State of Maryland

General Accounting Division
Department of Education
Department of Transportation

State of Massachusetts

Office of the Comptroller
Department of Education
Executive Office of Health and Human Services
Massachusetts Highway Department
Department of State Police
Department of Housing and Community Development

State of Michigan

Department of Management and Budget
Department of Transportation
Family Independence Agency
Department of Corrections
Department of Community Health
Department of Education

State of Missouri

Office of Administration, Division of Accounting
Department of Social Services
Department of Revenue
Department of Mental Health
Department of Corrections

State of New York

Internal Audit
Department of Social Services
Department of Transportation
Department of Labor

State of North Carolina

Department of Corrections

State of Ohio

Office of Budget and Management
Department of Transportation

State of Pennsylvania

Office of the Budget

State of Tennessee

Department of Finance and Administration
Department of Education
Department of Health
Department of Human Services
Department of Children's Services
Department of Transportation

State of Texas

Comptroller of Public Accounts
Department of Transportation

State of Virginia

Office of the Comptroller
Department of Social Services
Department of Health
Department of Corrections
Department of Motor Vehicles
Department of Transportation

State of Washington

Office of Financial Management
University of Washington
Department of Social and Health Services
Department of Labor and Industries
Department of Transportation
Department of Employment and Security

State of Wisconsin

State Controller's Office
University of Wisconsin-Madison
Department of Health and Family Services
Department of Transportation
Department of Corrections

Survey Instrument



U.S. General Accounting Office

Survey of Qualifications of Financial Management Personnel in Fortune 100 CFO Offices

Instructions

The U.S. General Accounting Office (GAO), the auditing and program research arm of Congress, needs your help and expertise. We are assessing the qualifications of federal government personnel involved in key financial management positions.

To help develop criteria for assessing these personnel, we are gathering data on the qualifications of similar personnel employed at Fortune 100 companies and their five largest (in terms of revenues) divisions or subsidiaries. Large, private sector organizations can provide a good benchmark for assessing the qualifications of federal government personnel. By participating in this survey, you will help the federal government improve the quality of its financial management personnel, as well as its accountability to the taxpayer.

In this survey, we seek information on the professional certifications, education, work experience, and continuing professional education (CPE)/training activities of your top four levels of financial management personnel.

The top four levels of financial managers would normally include the CFO, the controller, the key managers reporting to the controller, and key supervisors reporting to those managers. The survey may best be completed by staff with access to personnel statistics.

The survey is organized as follows. Section One contains six questions on company background information and the qualifications of your top two financial officers. Section Two contains three questions concerning the qualifications of your key financial management managers and supervisors. Section Three asks for additional comments.

We would like you to report to GAO this information for financial management personnel working in your corporate-level CFO office and your five largest divisions or subsidiaries. Please use this survey copy to report information on personnel in your corporate-level CFO office.

Please use the accompanying five survey copies entitled "Survey of Qualifications of Financial Management Personnel in Fortune 100 Divisions/Subsidiaries" to report information on personnel in your five largest divisions or subsidiaries. Please use a separate survey copy for each division or subsidiary. Each copy should include information for only one division or subsidiary.

If you cannot provide information for your divisions or subsidiaries, we will contact those organizations if you list contacts for us on the following page.

What you have to say is important to our study. We cannot make an accurate evaluation of these issues without your help. The results from your specific organization will be kept confidential. Data will be reported only in the aggregate. In addition, we will provide you with a copy of our final report.

Please return the completed survey within 20 business days of receipt. The return address is:

U.S. General Accounting Office
1244 Speer Boulevard, Suite 800
Denver, Colorado 80204-3581
ATTN: Glenn Slocum

If you have any questions on how to complete this survey, please do not hesitate to call Glenn Slocum at (303) 572-7313.

Contact Person: _____

Title: _____

Company Name: _____

Address: _____

Phone: _____

1. Can we list your company in our report as a participant in our survey? (*Check one.*)

A. Yes B. No

**Appendix III
Survey Instrument**

SECTION ONE: BACKGROUND INFO AND PROFILE OF HIGHEST AND SECOND HIGHEST RANKING FINANCIAL OFFICERS IN YOUR COMPANY

PLEASE USE THESE DEFINITIONS WHEN COMPLETING THIS SURVEY

Subsidiary -- a corporation with over 50 percent of its voting stock owned by your company.
Division -- a major administrative unit of your company comprising at least several departments or constituting a complete integrated unit for a specific purpose.
Managers -- oversee a financial reporting, financial analysis, or accounting operations work unit, and they report to a corporate-level controller.
Supervisors -- direct and review the work of others, and they report to a manager.
Financial Reporting/Financial Statement Preparation/Accounting Policy -- involves preparing annual financial statements and footnotes, adjusting entries, closing entries, trial balances, interim financial reports, and advising the preparers in their application of professional accounting standards
Financial Analysis -- involves budgeting, cost accounting, cash flow analysis, revenue and expenditure forecasting, and other analysis of the financial position and operations
Accounting Operations -- involves recording and reporting your receivables, receipts, disbursements, payroll, payables, inventory, and property, plant, and equipment.

1. Please provide an organization chart for your company showing its principal divisions and subsidiaries.
2. Please provide an organization chart showing how the financial management functions listed above are organized in your company.
3. Please provide a biography for the highest ranking financial officer (e.g. Senior Vice President, CFO) in your company. The biography should describe the person's (1) name, (2) title, (3) work experience, (4) formal education, and (5) professional certifications obtained.
4. Please provide a biography for the second highest ranking financial officer (e.g. Vice President, Controller) in your company. The biography should describe the person's (1) name, (2) title, (3) work experience, (4) formal education, and (5) professional certifications obtained.
5. Overall, about what percentage of your company's budget for financial management staff salaries and benefits is set aside each year for training financial management personnel?

6. Would your company coordinate the distribution and collection of this survey from your five largest (in terms of revenues) subsidiaries or divisions? **Yes** _____ **No** _____ (five survey copies are provided)
 If no, could GAO directly contact these companies for this information? **Yes** _____ **No** _____

If you answered yes to either question, please provide the names of these subsidiaries or divisions, and the names of contact persons and their phone numbers. Also, indicate if these organizations are divisions (D), or subsidiaries (S).

Division/Subsidiary Name	Division (D) or Subsidiary (S)	Contact Person	Phone Number

**Appendix III
Survey Instrument**

SECTION TWO: QUALIFICATIONS OF MANAGERS AND SUPERVISORS

QUESTION 1. How many managers and supervisors in the corporate-level CFO office do you have working in the following financial management functions? How many personnel have the following professional certifications and degrees/majors? (Count each person only once, in that area where they are principally employed.)

Financial Management Positions	Total #	Certifications			Bachelors Degrees			Advanced Degrees				
		# of CPAs	# of CMAs	# of CIAs	Total # w/ Degree	Number by Major			Total # w/ Degree	Number by Major		
						# of Acct.	# of Other Business	# of Non Bus.		# of MBA	# of MS in Acct.	# of Other
Mgrs of Fin. Rpt.												
Mgrs of Fin. Anal												
Mgrs of Acct. Ops												
Supvs of Fin. Rpt.												
Supvs of Fin. Anal												
Supvs of Acct. Ops												

QUESTION 2. On average, how many years of experience in corporate and public accounting, internal auditing, and computerized accounting systems design/maintenance do these managers and supervisors have? Also, what are the average number of CPE/training hours required by your office (REQ) and obtained (OBT) by these personnel in calendar year 1996? How many hours were in courses on technical accounting subjects, or computer technology?

Financial Management Functions	Average Work Experience in Years				Average Annual CPE/Training Hours Required by Your Office and Obtained by Your Personnel in 1996					
	Corp. Acct.	Public Acct.	Intrnl Audit	Acct. Systems Design/Maint.	Total		Technical Acct.		Computer Tech.	
					REQ	OBT	REQ	OBT	REQ	OBT
Mgrs of Fin. Rpting										
Mgrs of Fin. Anal.										
Mgrs of Acct. Ops.										
Supv of Fin. Rpting										
Supv of Fin. Anal.										
Supv of Acct. Ops.										

QUESTION 3. When hiring these managers and supervisors, are the professional certifications and degrees listed below required (i.e. are minimum, mandatory qualifications required for the positions)? (In each column for each row, indicate R for required, or N for not required) Also, provide position descriptions.

Financial Management Positions	Certifications			Bachelors Degrees (by major)			Advanced Degrees (by degree)		
	CPA	CMA	CIA	Acct.	Other Business	NonBus.	MBA	MS in Acct.	Other
Managers of Fin. Reporting									
Managers of Fin. Analysis									
Managers of Acct Operations									
Supervisors of Fin. Reporting									
Supervisors of Fin. Analysis									
Supervisors of Acct Operations									

**Appendix III
Survey Instrument**

SECTION THREE: ADDITIONAL QUESTIONS

Please answer the following questions concerning the evolution of the accounting function in your organization, and the training, hiring, and promotion of your financial management personnel. We would appreciate receiving any documents related to the items covered in the survey or discussed below, as well as a copy of your most recent annual report, and position descriptions for the positions captured in this survey.

1. Has the nature of the accounting function evolved in your company over the last several years? For example, have the duties of your financial management personnel changed from a clerical to an analytical/consultative focus?

2. Have the qualification requirements for your financial management personnel been recently upgraded, or are there plans to upgrade these requirements?

3. What are your CPE/training policies for financial management personnel?

4. Are there personnel qualifications not covered in the survey that you value in your financial management personnel (e.g. leadership, communication, and teamwork skills) when you make hiring and promotion decisions?

5. Do you have any additional comments on any of the items in the survey or related topics not covered?

Thank you for your cooperation.

Major Contributors to This Report

Accounting and Information Management Division, Washington, D.C.

Geoffrey B. Frank, Assistant Director
David C. Merrill, Senior Auditor
James F. Loschiavo, Social Science Analyst
Francine M. DelVecchio, Communications Analyst

Denver Field Office

Paul Kinney, Assistant Director
Glenn D. Slocum, Project Manager
Pamela K. Tumler, Communications Analyst
Felicia A. Turner, Senior Computer Specialist
Patricia E. Cheeseboro, Senior Evaluator
Wendy R. Matthews, Evaluator
Anna L. Fruik, Information Processing Assistant
Abigail Wilson, Student Intern

Kansas City Field Office

Denise M. Wempe, Senior Auditor
Darryl S. Meador, Evaluator
Richard S. Schubach, Auditor
Evert A. Stevens, Auditor

Other Acknowledgements

In addition to the above individuals, the contributions of the following individuals and organizations are acknowledged: Thomas Fritz, President, Private Sector Council, Washington, D.C.; Relmond Van Daniker, Executive Director, and Patricia O'Connor, Program Manager, National Association of State Auditors, Comptrollers, and Treasurers, Lexington, Kentucky; and James Sorensen, Professor of Accounting, School of Accountancy, University of Denver. These individuals reviewed and commented on drafts of the survey instrument and the report, organized pretests, and/or assisted with the survey distribution. In addition, the Colorado State Auditor's Office implemented an early version of the survey with State of Colorado agencies and departments and provided valuable input to us on the results.

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