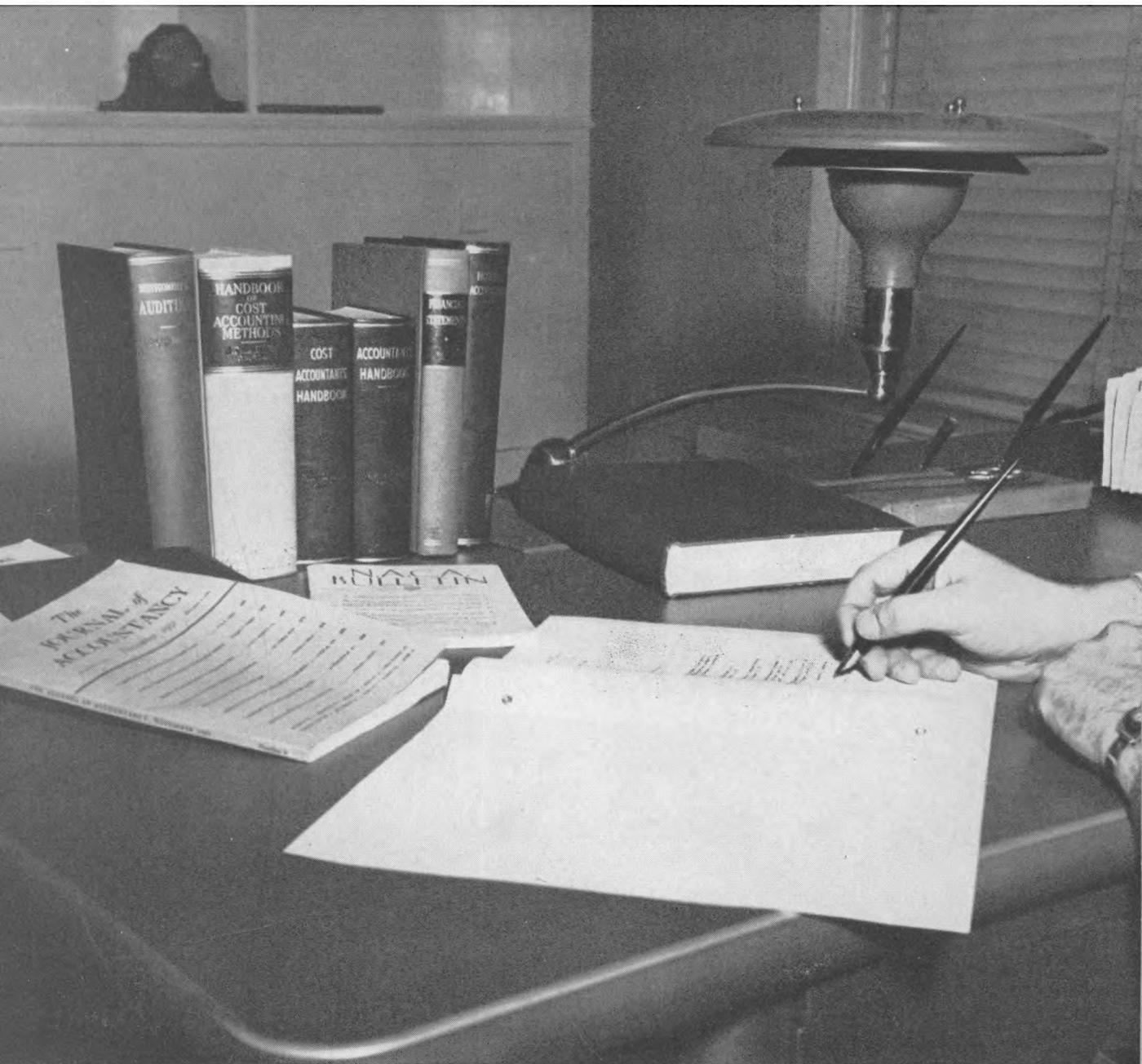


# EMPLOYMENT OUTLOOK IN **ACCOUNTING**



**UNITED STATES DEPARTMENT OF LABOR**  
*Maurice J. Tobin, Secretary*

**BUREAU OF LABOR STATISTICS**  
*Ewan Clague, Commissioner*

in cooperation with **VETERANS ADMINISTRATION**

**OCCUPATIONAL OUTLOOK SERIES**

**Bulletin No. 1048**



Employment Outlook in  
**ACCOUNTING**

**Fields of employment**  
**Training and qualifications**  
**Earnings and working conditions**  
**Employment trends and outlook**

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## LETTER OF TRANSMITTAL

UNITED STATES DEPARTMENT OF LABOR,  
BUREAU OF LABOR STATISTICS,  
*Washington, D. C., November 16, 1951.*

The SECRETARY OF LABOR:

I have the honor to transmit herewith a report on employment outlook in accounting. This is one of a series of reports made available through the Bureau's Occupational Outlook Service for use in vocational counseling of veterans, young people in school, and others interested in the choice of an occupation. This study was financed largely by the Veterans Administration, and the report was originally published as a Veterans Administration pamphlet for use in vocational rehabilitation and education activities.

The study was conducted in the Bureau's Division of Manpower and Employment Statistics under the supervision of Helen Wood. The report was prepared by Cora E. Taylor and Rose K. Wiener. The Bureau wishes to acknowledge the generous assistance and cooperation received in connection with the study from the Federal Security Agency's Office of Education, the professional societies in the field, and from other organizations and individuals interested in the accounting profession.

EWAN CLAGUE, *Commissioner.*

HON. MAURICE J. TOBIN,  
*Secretary of Labor.*

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# EMPLOYMENT OUTLOOK IN ACCOUNTING

## Introduction

Accounting is an indispensable tool of modern business organization and management. Professionally trained accountants (numbering about 300,000 in 1951) set up the accounting systems which make it possible for even the largest corporation to record, classify, and summarize its myriad daily financial transactions. They also analyze and interpret business records and prepare reports showing companies' financial standing and the profit or loss on past operations. Financial statements prepared by accountants enable businessmen to plan future activities in the light of past experience. Investors frequently rely on accountants' reports in deciding to buy or sell the stocks and bonds of particular companies. Banks use them as a guide in approving or rejecting applications for loans. Public service commissions find these reports essential in approving or disapproving requests for rate increases from telephone, gas and electric, and bus and streetcar companies. Even the smallest business firms need financial statements prepared in accordance with professional accounting standards in order to compute taxes owed to the Federal, State, and local governments.

Accountants also contribute greatly to the efficient operation of the defense program. The need for cost accountants is especially widespread. Companies engaged in defense production must keep detailed cost records and prepare analyses of production costs for review by Government accountants, before final payments can be made on defense contracts. To comply with Government price regulations, business establishments must prepare statements showing the costs of

producing or selling goods. Every additional type of Government control, including allocation of scarce materials, wage stabilization, and special taxes, increases the need for accounting services.

The demand for accountants is expected to remain high during the entire period of defense mobilization and for a few years thereafter. In mid-1951 there was a scarcity of men qualified for top-level jobs and positions requiring narrowly specialized experience, but there was not as yet any serious general shortage of accountants. Because the supply of accounting graduates is expected to fall sharply, at least until the middle of the decade, it is likely that employment opportunities for new graduates entering this field will improve greatly during the next few years.

Over the long run, the profession is likely to continue to grow. Termination of the mobilization program might cause a temporary decline in employment following the disposition of defense contract accounting problems which remain. It is possible, however, that such a decline would be offset by other demands for accountants, as, for instance, by employers newly introduced to the value of accounting services during the mobilization period.

Future prospects in the accounting field are discussed in greater detail later in this report. Other sections describe the early growth of the profession, the types of work done by accountants, the major fields in which they are employed, and the training and experience required for professional positions. The working conditions and earnings in each major field of accounting are also discussed.

## Growth of Professional Accounting

Businessmen have always found it necessary to record financial transactions, in order to keep track of their business and their current financial condition. The oldest known accounting records date back to 3600 B. C. in ancient Babylonia. A system of accounting control, or check and countercheck, was known to the ancient Egyptians. In the early Greek city-states this system was used in keeping government accounts.

Earliest recognition of financial record keeping as a specialized occupation occurred in Venice in 1581, when the first College of Accountants was organized, with power to regulate entry into the field. Its requirements for admission bear an astonishing resemblance to modern regulations licensing public accountants. An applicant was required to submit a certificate of fitness signed by a magistrate, serve a 6-year apprenticeship with a practicing accountant, and finally, pass an examination. So long as business enterprises were small and mostly owner-managed, a simple routine system of record keeping was sufficient. The individuals preparing these accounts were called accountants or bookkeepers, interchangeably.

The development and rapid growth in the nineteenth century of large-scale business and corporations created a need for new accounting methods which would enable businessmen to control their complex and far-flung operations. The new corporations were required by law in some States to submit annual financial statements to their stockholders. Government regulations, beginning with those issued by the Interstate Commerce Commission in 1906, have made it necessary for enterprises affected with a public interest (e. g., railroads, public utilities, telephone and telegraph companies, and radio broadcasting companies) to submit annual reports to the government commissions responsible for maintaining fair rates and adequate public service. The imposition of new and more complex taxes—especially following the adoption of the Federal Income Tax Amendment in 1913—immensely widened the scope of the accountant's work.

An entirely new accounting theory and technique has been worked out as a result of these new demands from business and government. The need for record keeping is greater than ever and there is now a separation of the functions of the

bookkeeper and the accountant because of the increased complexity of the task. The routine keeping of records has become the job of the bookkeeper. The professional accountant must know how to keep records but is concerned primarily with the installation of systems of accounting, and with the audit, examination, analysis, and interpretation of financial operations of business.

Because of the public interest in reliable professional accounting service, all of the States and Territories have passed laws providing for the licensing of certified public accountants, commonly called "CPA's." A code of professional ethics has been announced by the largest association of CPA's in the United States, the American Institute of Accountants. Some State laws licensing CPA's follow this code. Some States also provide for the licensing of all public accountants whether or not they are CPA's. In other States many highly respected and well qualified public accountants practice without a license. In the private and government accounting fields the great majority of professional accountants are not licensed. A license is a mark of professional attainment but it is not the sole test of competence. The distinction between the professional and nonprofessional accountant is not a matter of law.

It is not surprising that in an occupation which has attained professional status so recently and which is developing so rapidly, the exact line between the professional accountant and the nonprofessional accountant or bookkeeper should be a matter of dispute among educators and practitioners in the accounting field. A thorough knowledge of bookkeeping is an essential foundation for the study and practice of accounting. Every young accountant, regardless of his educational background, must gain experience as a junior accountant, accounting clerk, or bookkeeper before he can hope to perform truly professional work. Many independent public accountants accept "public bookkeeping" work in addition to their regular accounting and auditing engagements. In private industry and government, accountants employed at intermediate levels of responsibility often perform both clerical and professional accounting duties. Nevertheless, there is a very real and increasingly important dis-

inction between the professional and nonprofessional accountant.

Professional accounting work requires judgment of a high order, discretion, and highly specialized knowledge. It can be performed only by individuals who have had extensive academic training and have served their apprenticeship in the field or by those whose experience has been of such scope and character as to provide an

equivalent background. This report is concerned only with professional accounting and trainee positions leading directly to professional accounting work whether in public, private, or Government accounting. Positions requiring only a limited knowledge of accounting theory and practice are excluded, even though they entail much executive or administrative responsibility.

## Types of Accounting Service

The types of accounting service rendered or functions performed by professional accountants fall generally into seven main classifications: auditing, general accounting, cost accounting, systems and procedures, tax accounting, control accounting, and teaching.

### Auditing

The auditing process is essentially a check-up on accounting. The auditor tries to determine whether the firm's records and statements give a fair picture of its financial condition and show adherence to accepted accounting principles. He compares entries in the firm's books with the original records, bills, shipping records, vouchers or receipts, canceled checks and other supporting documents—to make certain that all financial transactions have been correctly recorded and classified.

Many business units are so large that the auditor must use a testing and sampling procedure varying in extent according to his judgment of the adequacy of the system regularly used to control and check the firm's financial records. He may write to some of the firm's customers and creditors to verify the records showing money due the company or money owed by it. He may watch the employees count, measure, or weigh portions of the goods on hand. Many a young accountant has climbed into remote corners of a warehouse or factory to make sure the company really had the property which its stock and inventory records reported to be in its possession. The audit often brings to light errors in copying or improper classification of accounts; sometimes it reveals fraud.

Audits made by public accounting firms are called independent audits because they are the work of accountants who are not on the regular staff of the company under consideration and who may be, therefore, in a better position to make an unbiased examination of the company's operations. The Securities and Exchange Commission and the New York Stock Exchange require corporations under their jurisdiction to submit financial statements certified by independent public accountants. Banks and other lending institutions and creditors frequently rely on independent audits in deciding whether or not to make a loan or sell goods on credit to a particular firm.

Many large corporations employ their own staff of internal auditors to keep a constant check on the reliability of their regular accounting operations from the viewpoint of honesty and accuracy, adherence to company policies and procedures, safeguarding of company property, and general efficiency of company operations. The public accountants and the internal auditors usually dovetail their work to avoid unnecessary duplication and yet fulfill their professional obligations.

### General Accounting

The everyday work of keeping records (including the general "ledgers" showing the current status of every item of account) and of preparing reports, constitutes general accounting. Most of the work in general accounting departments is either clerical or supervisory. However, large companies employ professional accountants to direct the accounting department, plan general accounting policies and procedures, and prepare special studies and reports.

### Cost Accounting

Cost accountants plan, set up, and direct the operation of accounting systems which make it possible to compute the cost of producing or selling an item or service, accounting for the labor, materials, and overhead expenses for each unit of goods produced, and to determine the cost of operating each organizational unit of the business.

These findings make it possible to forecast the effect on costs of changes in design, materials, manufacturing methods, wages, or other factors affecting the cost of production. Such information aids management in measuring the efficiency of operations in each department or section of the business and in taking corrective steps in time to prevent loss. The cost accountant helps management to identify the causes of its profit or loss.

### Tax Accounting

The establishment of systems of keeping tax records, the preparation or review of tax returns for Federal, State, and local taxes for business establishments, and the preparation of individual income tax returns are included in tax accounting work. Accountants give advice on the tax consequences of proposed business transactions and represent their clients or employers in conferences and discussions with tax officials. They must be well-informed, not only on tax laws which change frequently but also on new administrative regulations and court decisions interpreting the tax laws. In many tax cases legal as well as accounting advice is required. The Treasury Department permits certified public accountants and lawyers to represent their clients before the Department without the examination required of other applicants for this privilege.

### Systems and Procedures

Although auditors, general accountants, and cost accountants frequently set up their own systems and procedures, very large companies usually employ specialists to perform such work. These specialized accountants plan accounting systems and office procedures which will provide the company with needed accounting reports at the lowest possible cost. Their work includes the setting up of standardized procedures and machine methods in the maintenance of accounting records and the preparation of accounting manuals to guide the company's accounting staff.

### Control Accounting

The controller of a company is its chief accounting officer. He directs the total accounting program—establishes and coordinates cost standards, expense budgets, sales forecasts, and profit plans. He compares the performance records of the various departments with the budget estimates. He safeguards company property by establishing systems of internal check and control and internal audit. The controller provides other company officers with the facts, estimates, and analyses needed in planning current and future operations.

### Teaching

Instruction in accounting theory and practice is given in colleges, universities, and private schools of business. Teachers must be capable of training students in any of the types of accounting work described, although they may specialize in one particular type. Accounting teachers often combine teaching with writing or with an independent accounting practice.

## Fields of Employment

The three major fields of employment for accountants are public, private, and government accounting. Public accountants offer their services to the general public on a fee basis, in much the same way as do lawyers, doctors, and dentists. A public accountant may be in business for himself, or he may be a partner in an accounting firm. In addition, the larger firms have professional accountants on their staffs, who work for

a salary but are also considered public accountants. Traditionally, public accountants offer their services to the public as experts in all types of accounting. However, the two largest areas of public accounting work consist of auditing and tax services. Public accountants serve a wide variety of clients—business enterprises, government agencies, and nonprofit institutions.

Private accountants handle the financial records

of a single business enterprise or nonprofit organization and work on a salary basis. They are frequently referred to as executive or administrative accountants. When they work for manufacturing or other concerns, they are often called industrial accountants. In addition, accountants are employed by all branches of Federal, State, and local governments, including government-owned corporations. Accountants in private and government work customarily specialize in the performance of a single type of accounting service; they may do any of the types of accounting service described previously. They also tend to become specialists in a fairly narrow field of employment such as a particular branch of manufacturing, public utilities, or transportation.

### Public Accounting

*Numbers in field.*—In 1947, about 30,000 accountants and public bookkeepers were probably in business either as "sole proprietors" or as partners in public accounting firms. It is assumed that some of these accountants, including partners and sole proprietors, were practicing on a part-time basis, although sole proprietors earning less than \$1,000 a year were excluded from this estimate. Of the total, about 19,000 were sole proprietors; the remaining 11,000 were partners.<sup>1</sup> Together they employed about 40,000 professional staff members on a salary basis in 1947. There were about 70,000 employers and professional employees in public accounting in 1947. The number has since increased markedly. The total number of CPA's in the United States rose by more than a third between 1947 and 1951. There is reason to believe that the number of other individuals engaged professionally in public accounting increased at least as fast and that the total number probably exceeded 90,000 in 1951.

*Number and size of public accounting firms.*—Public accounting firms range in size from the great national and international firms, with many partners and hundreds of staff accountants in their several branches, to the small one-man accounting businesses conducted from home on a part-time basis. Of a total of 4,400 partnership firms in the United States, the 370 largest (8 per-

cent) handled nearly 30 percent of all public accounting business reported. It is estimated that these largest firms employed more than a third of the staff accountants in the public accounting field, the number per firm varying from about 15 to approximately 1,000.

Some 1,474 small firms, on the other hand, (excluding 900 firms with gross receipts under \$5,000 which may have included many public bookkeepers and part-time accountants) did only 4 percent of the total gross business in public accounting. They employed little assistance other than secretarial services and part-time or temporary professional help.

*Geographic distribution.*—Half the CPA's in the United States, and more than half of all public accountants, are located in four States. (See chart.) New York leads by a wide margin, with 28 percent of the total number; Illinois, California, and Pennsylvania together have another 22 percent. Other States with a large number of public accountants are Texas, New Jersey, Ohio, Michigan, Massachusetts, Missouri, Wisconsin, and Maryland, ranking in the order named.

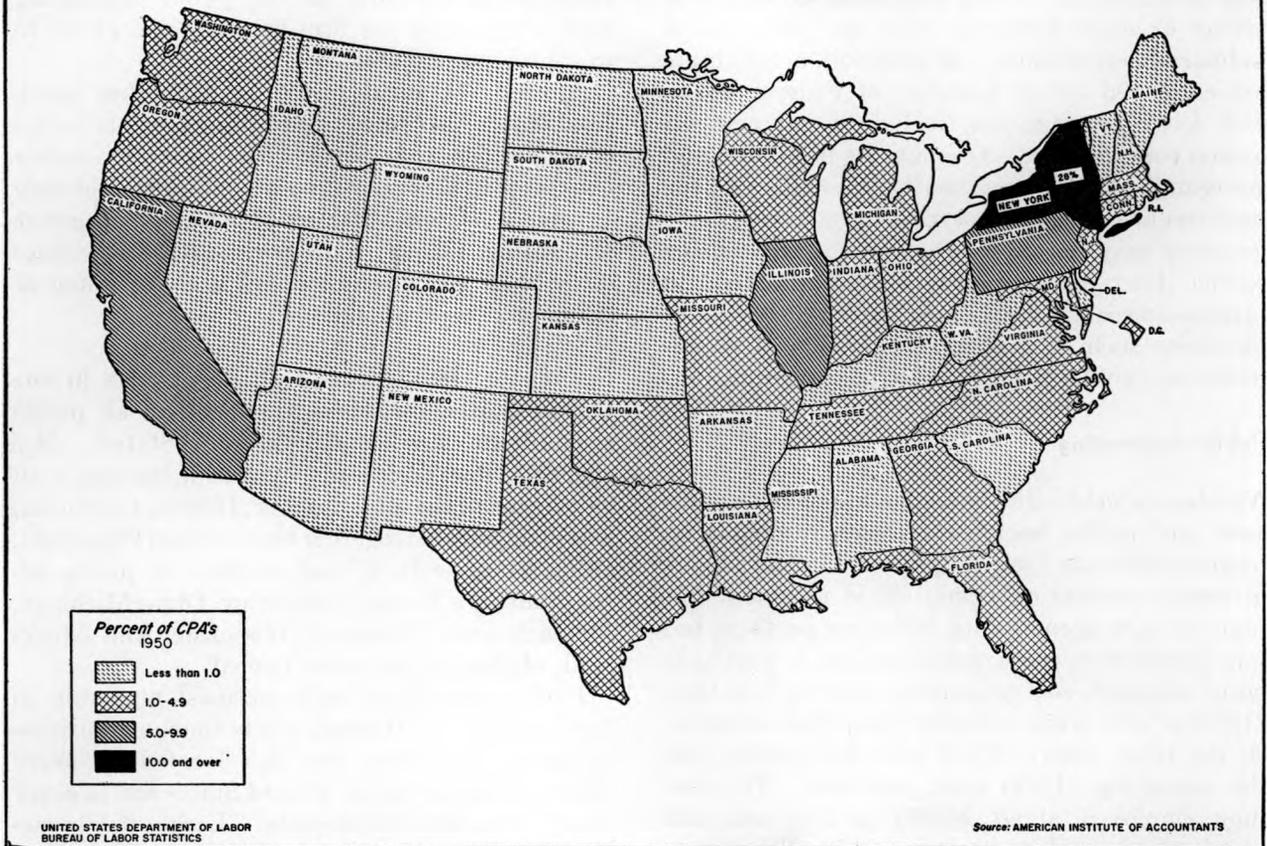
Public accounting firms are most numerous in the large industrial cities, where the most business is found, but they are also located in every medium-size city in the United States and in every small industrial community. Large public accounting firms frequently have branch offices scattered through a number of States. It has been estimated that a city with a population of 15,000 "together with the business and industry found within a 25- or 30-mile radius is large enough to furnish a modest business for a public accountant."<sup>2</sup>

*Line of advancement.*—Employees of public accounting firms usually begin as junior accountants. College seniors hired by some large firms for a short period of internship training may be called interns but their work is the same as that of the beginning junior accountant. Junior accountants make routine checks of figures, verify additions, and perform other detail work considered essential in auditing. They usually work under close supervision for 2 or 3 years before advancing to the next job level, that of "semi-senior" accountant

<sup>1</sup> Data on partnerships from Press Release No. S-2645, U. S. Treasury Department, April 4, 1951, labeled Summary data; proprietorship figures estimated on the basis of unpublished Treasury Department data.

<sup>2</sup> U. S. Department of Commerce, Public Accounting in Smaller Communities, Small Business Aids No. 102. Washington, D. C., 1949.

## One-Half of All CPA's Are In Four States



in a medium-size or large firm. In small firms the distinction between the semi-senior and the next or senior level tends to be somewhat blurred.

The semi-senior usually works under only general supervision. He performs the more responsible and difficult detail work. He may even be assigned to make full audits of small firms with simple accounting systems. He consults frequently with his supervisor but is expected to exercise some initiative and sound judgment in handling his assignments. Usually 2 or 3 years must be spent as a semi-senior before one is considered for a senior position. By the time an accountant has become a semi-senior, he is qualified to fill a minor executive position in the accounting department of a private or government organization. Many enter such work instead of remaining in the public accounting field.

The senior accountant usually takes charge of an entire audit or other assignment. He may have

several juniors and semi-seniors to assist him if the assignment is a large one. He supervises their work, performs the more important audit work, discusses problems with the clients, and prepares the audit report. The senior must be able to write clear and well-expressed reports and to get along smoothly with the clients and the staff. In a small firm, the only higher position is that of partner in the firm. In a very large company, the senior accountant may advance to the position of supervisor.

Supervisors, managers, and partners usually have a minimum of 10 years of responsible experience in accounting work. They direct the work of senior accountants, are responsible for planning work on large or especially difficult engagements, and make final decisions in accounting procedures. They consult with clients with respect to their general financial and business problems and on tax questions. Partners or supervisors may have

charge of a branch office or work at the home office of the company. Supervisors or managers are first in line for a partnership when the opportunity arises.

Senior partners in large firms are responsible for the general direction of the accounting staff. They make decisions in matters of policy and finally approve all reports issued by the firm.

A partner in a small firm or an accountant with his own small practice may not have any employees and may himself perform all the functions usually divided among the staff in larger firms. In that case, his work includes both the clerical duties of a junior and the executive responsibilities of a partner. The accountant who is starting a practice and trying to build up a clientele may accept accounts requiring only routine bookkeeping work. As he becomes better established, he will tend to accept only those clients who need and can pay for more specialized professional accounting service.

### Private Accounting

*Numbers in field.*—Private accounting is the largest field of work for professional accountants, probably employing at least half again as many as public accounting. The number of private accountants is extremely difficult to estimate because private business firms usually do not differentiate clearly between professional and nonprofessional personnel. Private firms differ widely in their use of job titles to designate accounting and related personnel. Private accountants with the same job title, working for different firms, may have duties so diverse that one is properly classified as a professional worker, whereas the other is clearly a bookkeeper. In most companies, there are accountants whose duties include both professional accounting work and clerical or bookkeeping functions. Nevertheless, the available evidence suggests that there were approximately 150,000 professional accountants in the private accounting field in 1951. This figure includes accountants in supervisory and administrative accounting positions in addition to those engaged in purely technical accounting functions.

*Where employed.*—Large-scale business enterprises are the principal employers of professional personnel in the private accounting field. The larger

and more complex the organization, the greater the need for highly trained accountants.

A majority of professional accountants in private industry are in manufacturing. Large numbers are employed in the metalworking industries, transportation and communication, public utilities, wholesale and retail trade, finance, and mining. The Controllers Institute of America—with a membership including the controllers of most of the largest business enterprises—reports that more than 60 percent of its members are in manufacturing, 10 percent are in public utilities, and 7 percent are in wholesale and retail trade.<sup>3</sup> These membership figures suggest roughly the distribution of professional accounting personnel in industry.

Private accountants are employed in every community having large business establishments. Accountants are needed in the branch plants of large companies as well as at the home office, and in many smaller firms. This results in widespread employment opportunities. The largest numbers of private accountants are in the States with the greatest number of large manufacturing plants—New York, Pennsylvania, Ohio, Illinois, and Michigan.

*Line of advancement.*—Inexperienced men in private as in public accounting start out by performing the routine work considered essential in gaining experience for professional and supervisory accounting positions. Large companies usually refer to beginners in their general accounting departments as junior accountants. Small companies often consider them junior or assistant bookkeepers. However, a wide variety of job titles may be used depending on the particular accounting assignment and on company policy in establishing job classifications.

A small number of outstanding accounting majors graduated by collegiate schools of business are selected each year for accounting trainee positions by very large corporations. These trainees receive special on-the-job training extending from a few months to 3 years or longer. Some companies rotate trainees among the various divisions of the company so rapidly that they spend not more than 2 weeks in any one place. When their training is complete, they are placed

<sup>3</sup> Controllers Institute of America, *Answering Your Questions*. New York, August 1950.

in junior executive positions or in technical accounting staff positions. Because higher accounting executives and the senior technical staff are usually chosen from this group, the opportunities for advancement are excellent.

For accountants who start in the more customary manner as junior accountants or as accounting clerks, promotions are likely to come more slowly. The rate of promotion will depend in part on their ability but still more on the number of openings available at higher levels.

The junior accountant who starts in a general accounting department may rise to a position as junior executive or section supervisor, or he may become a general accountant with responsibility for the more complex and difficult accounting operations. Eventually, he may reach the position of chief plant accountant, or he may be transferred to the central accounting division.

Firms usually select junior auditors for their internal audit staff from among promising trainees on the general accounting staff. Members of the internal audit staff obtain exceptionally broad experience, because their work takes them into all departments of the business. From junior auditor the line of promotion is to assistant or senior auditor and then manager of the auditing division, responsible to management for the efficient operation of the company's internal audit program. The junior accountant who begins as a cost clerk may advance to positions where he works closely with plant management in analyzing day to day operational costs. He may then be promoted to cost analyst or cost supervisor, and eventually cost accountant, in charge of the cost work of an entire plant or group of plants.

Controllers are senior company executives chosen for their ability to solve financial management problems of every type. Some controllers are selected from among certified accountants in public practice; others advance from lower accounting positions within the company.

### Government Accounting

Accountants working for government agencies may be broadly divided into two major groups: (1) Those who, as representatives of government, work on the books and records of private business organizations or individuals; and (2) those who

work on the accounting records of government agencies.

Among government accountants, there are many types of specialists who work on the books and records of private business organizations. A large proportion are engaged in tax investigations—Federal, State, and local; their work includes the analysis of tax reports and accounting records of taxpayers. Many accountants make audits or analyses of financial statements of companies subject to special government regulations—including banks, insurance companies, public utility and transportation companies, and corporations which sell stocks to the general public. Other accountants audit the books of firms selling products to government agencies and analyze production costs in connection with contracts let on a cost-plus basis. The regulation of prices on a national scale particularly during a war or defense period, or on a local or State-wide scale in connection with the regulation of prices of commodities such as milk, requires the services of highly trained cost accountants who are specialists in the particular industry under consideration. All of these accountants share a common background of professional training and experience in business accounting procedures and principles.

Some government accountants work for government-owned corporations and enterprises of a business character, such as municipally owned and operated water, gas, electric light and power plants, street railways, and federally operated lending agencies and utilities. Such accountants employ the same techniques as those employed by private concerns in similar work. However, most internal government accounting is fiscal in nature, keeping records on the funds received and spent by government agencies and making sure that funds were used as authorized by their budget and by general government accounting regulations. Most employees doing this work need only a knowledge of the laws and regulations affecting government spending. Only at higher supervisory levels is professional accounting training and experience of special value. Accountants who plan and establish record keeping systems and who audit government accounts are usually of professional caliber.

In the Federal Government an increasingly sharp distinction is being drawn between fiscal

work, which is primarily clerical or administrative, and professional accounting, which relates to the prescription of accounting requirements, the audit and analysis of financial records, and the preparation of financial reports in connection with business audits. The Federal Government had fewer than 20,000 employees in professional accounting positions in the spring of 1951. The Bureau of Internal Revenue of the Treasury Department employed the largest number of professional accountants in Government. The Defense Depart-

ment was the next largest employer of such personnel. Other agencies making extensive use of professional accountants were: the General Accounting Office, the Departments of Agriculture and the Interior, the Civil Aeronautics Administration in the Department of Commerce, the Federal Deposit Insurance Corporation, and the Housing and Home Finance Agency. The Federal Power Commission, Interstate Commerce Commission, and Securities and Exchange Commission also employed highly trained accountants.

## Training and Qualifications for Entrance

### Types of Training

The student wishing a career in accounting can choose from a wide variety of schools in obtaining the necessary educational background. Four-year colleges and universities train the great majority of students who plan a professional career in accounting. Several hundred of these institutions of higher learning offer a comprehensive program in business and accounting, leading to a bachelor's or higher degree in business administration and commerce, with a major in accounting. Many other schools offer professional accounting training, even though they have not established a formal major in the field. In addition, there are many business schools offering a 2-year day course or 3-year evening course in accounting and business administration, which forms the minimum training needed for entry into professional accounting work. A few junior colleges also offer 2-year courses in accounting. A number of correspondence schools have long-established courses in all types of accounting. Schools and colleges differ greatly in the quality of training offered, and the prospective student should weigh carefully all information concerning the particular schools which he is considering.

A basic course in accounting should include accounting theory and practice, auditing, cost accounting, tax accounting, business law, and business English, including oral and written communication. The student will obtain much the same training in accounting in the better private business schools as in the colleges. The principal difference is that the business school student does not have the time or opportunity to obtain the

broad training in related business subjects, social sciences, English and liberal arts which he may include in a 4-year college course. Nevertheless, the college graduate usually has a considerable advantage over the business school graduate in seeking a job and in competing for promotion later in his career. There has been a great increase in the number of college-trained accounting graduates since the end of World War II, and employers in all accounting fields are placing increasing emphasis on a college degree as a prerequisite for employment.

Many large public accounting firms and private business corporations refuse to consider noncollege graduates either for professional positions or for executive and administrative trainee positions in their accounting departments. Representatives of such firms visit leading university schools of business each year to recruit "the cream of the crop" of prospective accounting major graduates. A number of large public accounting firms, and a few large corporations, have established "internship" programs in cooperation with certain colleges in order to provide accounting majors in the senior class with some practical experience prior to the completion of their college training. In 1951, the Controllers Institute of America was sponsoring a "college-industry cooperative training (C. I. C. T.) program" which will undoubtedly increase the number of internship opportunities available to college students. Students making a favorable impression during the period of internship are frequently offered permanent positions upon graduation.

College training in accountancy is of particular advantage to the student wishing to become a

CPA. A substantial majority of the candidates who have succeeded in passing the CPA examinations since the end of World War II are college graduates,<sup>4</sup> although a college degree is not a legal requirement for admission to the examination in most States.

### Vocational Tests

The American Institute of Accountants has worked out a series of aptitude tests for students applying for admission to accounting training. These tests help the school and the student to estimate how likely he is to succeed in accounting. The Institute has also worked out an achievement test to be given accounting majors near the end of their training to show how well they have profited by their instruction. More than 200 colleges and schools of business give these tests and report them very helpful in guiding students. About 1,300 public accounting firms and individual practitioners have agreed to give weight to the results of these tests in considering job applicants.<sup>5</sup>

### The Certified Public Accountant Certificate

The certified public accountant license or certificate is a universally recognized mark of attainment in accounting. It is particularly valuable in the public accounting field. In some States it is no longer possible to enter public accounting as an independent practitioner without this license.

All candidates must pass a difficult series of examinations. In addition, they must meet certain requirements with respect to education, experience, or both. Prerequisites for admission to the CPA examination and for the issuance of the certificate vary widely among the States. In 1951 only two States, New York and New Jersey, required candidates to be college graduates with a major in accounting obtained at a school or college approved by the respective State boards of education. A third State, Oregon, will also have such a requirement beginning January 1, 1955, and Florida will be added to this group in 1956. Illinois required candidates to have 20 semester-hours in accounting plus 10 semester-hours in related subjects. California required the CPA

candidate to have 2 years of college training or its equivalent, or to pass a written preliminary examination. In all other States either high-school graduation was required or there was no educational requirement whatever.<sup>6</sup> It is interesting to note that the two States requiring college graduation had about a third of all the CPA's in the country. It is true, also, that many of the States which required only high school education or less gave very substantial credit for post-high-school education in lieu of experience.

Most States required candidates for the CPA license to have at least 2 years' experience in public accounting or accounting work considered equivalent. However, the prerequisites ranged from no experience requirement in one State to a minimum of 3 years' experience in public accounting (in addition to other educational or experience requirements), in other States. The variations in State requirements are very great. Detailed information on requirements in any specific State may be obtained from any local CPA association or from the State board of accountancy.

Although the differences in training and education required by various States for obtaining a CPA license appear very great, there is a high degree of uniformity in the professional attainments of those who receive it. This has been achieved by means of a uniform examination, given in all States except Pennsylvania in 1951. The examination is prepared by the American Institute of Accountants which has its own board of examiners. Many of the States also have the Institute's staff grade the examination papers.

The standard CPA examination as well as the one given in Pennsylvania in 1951 consisted of four parts: auditing, commercial law, theory of accounts, and accounting practices ("practical accounting"). Twelve States required candidates to pass an additional examination, usually in business economics, taxation or government accounting, although the subjects varied in the different States.<sup>7</sup>

The CPA examination is generally considered extremely difficult. Only 11 percent of the candidates taking the standard examination for the first time in May 1949 succeeded in passing all four parts of it, according to a sample analysis. Fewer

<sup>4</sup> American Institute of Accountants, *Advanced Education in Accounting*, Journal of Accountancy, January 1951 (p. 87).

<sup>5</sup> Ankers, Raymond G., *Institute's Vocational Tests Assist in Hiring and Promoting Staff Workers*, Journal of Accountancy, January 1951 (pp. 86-91).

<sup>6</sup> Requirements for the C. P. A. and Other Examinations and the Practice of Public Accounting. La Salle Extension University, Chicago, Ill. (undated).

<sup>7</sup> Buss, L. H., *CPA Examination Requirements*, American Accounting Association, Urbana, Ill., 1951 (pp. 21-24).

than 20 percent of all candidates, first-time and repeaters, succeeded in passing all parts of the examination. It is customary for candidates passing one or more sections of the examination to retain credit for the score for a number of years. Many candidates do not seriously attempt to pass all subjects at one time, but make several tries before achieving final success. The American Institute of Accountants states that the high percentage of failure is due mainly to insufficient accounting experience and too little education.<sup>8</sup> The Institute also points out that 60 percent of the candidates eventually pass all portions of the examination.

### Entrance Requirements for Major Accounting Fields

In 1951 any individual could set himself up as a public accountant in most States although he was not permitted to use the title CPA unless he had been certified by the States in which he was practicing. However, 20 States restricted independent public practice to licensed CPA's and registered public accountants. In one of these States, New Mexico, it was still possible to become a registered public accountant in 1951 by passing an examination similar in scope to the CPA examination. In the others, noncertified accountants might register without examination during a specified time limit. In most of these States, the time limit has long expired and in the future all accountants entering practice as independent public accountants will have to become CPA's. No State requires staff members employed by public accounting firms to be CPA's, provided they are properly supervised by one.

Applicants for junior accounting positions with public accounting firms in New York and New Jersey are usually required to be college graduates with an accounting major, so that they will be able to

<sup>8</sup> New Study Reveals Reasons for Failure to Pass Uniform CPA Examination, *The Journal of Accountancy*, June 1950 (pp. 540-542).

meet the State standards for admission to the CPA examination. In other States, college graduates are preferred, but applicants with diplomas from reputable private business schools receive consideration.

The extent of accounting education required by private employers varies greatly, depending on the type of work. However, the student hoping to advance beyond routine jobs to executive or administrative accounting positions will find a college education a great asset. The student planning a career in private accounting will find it useful to take more courses in general business management and fewer specialized courses in accounting, than are customary for students planning to become CPA's. Well-qualified business majors with a fair number of accounting courses will generally be considered for beginning positions with private employers.

The United States Civil Service Commission requires a minimum of 3 years of general accounting experience for trainee positions. Additional specialized experience is required for positions at higher levels. However, applicants are permitted to substitute the study of accounting in resident (not correspondence) schools above the high school level for all or part of the general experience. A college degree with a major in accounting is usually sufficient for entrance to trainee positions in professional accounting work in the Federal Government. For most types of work a minimum of 24 semester hours in accounting is required if no experience is offered; for the position of Internal Revenue Agent, 18 semester hours in accounting is required.

A 2-year course in accounting is usually sufficient for entrance positions in accountancy in State and local government agencies. Specific information about prerequisites for these positions may be obtained from State or local Civil Service Commissions.

## Employment Trends and Outlook

### Past Trends in Employment

The accounting field has had a remarkably rapid growth both in number and in type of employment opportunities. In 1900 there were

fewer than 250 CPA's in the United States. By 1951 this number had grown to approximately 42,000. The number of persons other than CPA's practicing professional accounting was likewise very small in 1900 and has grown even more rap-

idly. Probably close to 300,000 persons were working as professional accountants in the United States in 1951.

During the early part of the twentieth century, the accounting profession grew slowly. At that time most professional accountants were public accountants engaged in independent practice or employed in public accounting firms. Their principal function was to audit and prepare reports on the financial condition of large corporations for the benefit of investors and creditors. The number and size of large public accounting firms able to serve such clients increased gradually, but there was little growth among smaller firms.

A new era in public accounting began in 1913 following the passage of income tax legislation affecting all business firms. For the first time, it became a legal requirement for all businesses, large and small, to maintain adequate accounting records and to prepare annual statements of profit and loss. A vast new field was opened for public accountants, particularly for the individual practitioner or small accounting firm which could often handle the problems of small businesses more economically and more conveniently than was possible for the large firm.

The increase in employment opportunities in the profession was even more rapid after the imposition of wartime taxes in 1917 and was accompanied by a swift expansion in the number of CPA's. The number quadrupled between 1920 and 1940, and more than doubled again between 1940 and 1951, reaching a total of 42,000. (See table 1.)

TABLE 1.—*Estimated number of certified public accountants in the United States, 1900-1951*

Year	Number of CPA's	Year	Number of CPA's
1900.....	250	1940.....	20,000
1910.....	1,700	1946.....	26,000
1920.....	5,000	1951.....	42,000
1930.....	13,600		

SOURCE: Data for 1946 obtained from Requirements for the CPA Certificate, U. S. Office of Education, Misc. 3156, Washington, D. C., 1946. All other data supplied by the American Institute of Accountants.

No definite information is available on the growth of public accounting before 1939. However, a majority of the CPA's are public accountants and the increase in their number gives some indication of the growth in this field. Reports of the Bureau of Internal Revenue show that the

number of independent practitioners in public accounting and public bookkeeping practice tripled between 1939 and 1947; the number of partners rose from 3,750 to 11,184.<sup>9</sup> The approximate number of sole proprietors of accounting practices earning \$1,000 or more a year increased from 6,000 to 19,000 during the 8-year period.<sup>10</sup> These statistics do not, of course, include the staff members employed by these firms. There has been a further substantial increase in the number of independent practitioners and partners since 1947.

Private accounting has greatly exceeded public accounting in growth during the past half century, with approximately 150,000 accountants in the private field in 1951. Private accounting received its first great stimulus during World War I, partly because of the need for better methods of control and cost accounting in connection with war production and partly because of the impact of the new methods of scientific management. Some evidence of the growth in the number of private accountants is afforded by the increase in the membership of their professional associations. The membership of the National Association of Cost Accountants, founded in 1919 with 37 members, rose to nearly 14,000 at the beginning of World War II and to 27,500 in 1951. The Controllers Institute of America, founded in 1931, had 3,500 members in 1951, despite extremely rigid eligibility restrictions. The Institute of Internal Auditors, organized in 1941 with equally rigid membership requirements, had over 2,000 members 10 years later. Most of the members of these associations are engaged in private accounting.

There has been a considerable increase in the employment of accountants in the Federal Government during the past 30 years. Before 1920, few accountants were employed in the Bureau of Internal Revenue and in regulatory agencies such as the Interstate Commerce Commission. No great change in employment took place during the twenties, except for a moderate addition to the staff of the Bureau of Internal Revenue early in

<sup>9</sup> Partnership data for 1939 computed from U. S. Treasury Department, Bureau of Internal Revenue, Supplement to Statistics of Income for 1939, Part 1, Washington, D. C., 1949 (p. 82); partnership data for 1947 taken from U. S. Treasury Department, Bureau of Internal Revenue, Press Service Release No. 8-2645, Washington, D. C., April 4, 1951.

<sup>10</sup> Estimated by the Bureau of Labor Statistics from U. S. Treasury Department, Bureau of Internal Revenue, Statistics of Income for 1939, Part 1, and from unpublished Treasury Department data for 1947.

the decade. The number rose steadily in the 1930's, however, and during World War II the increase was very rapid. Following the end of World War II, there was a marked cut-back in the size of the Federal Government accounting staff. The decline was not fully halted until the needs of the defense production program brought about a slight rise in the number of accountants hired in the latter part of 1950. Early in 1951 there were fewer than 20,000 employees in Federal professional accounting positions.

### Trends in Supply

The great increase in employment of professional accountants, especially during the past three decades, has been accompanied by a large increase in the supply of personnel trained for this profession. There has been also a steady rise both in educational requirements for employment and in the level of training offered by educational institutions.

Colleges and universities now training the great majority of accounting students have taken the lead in this field of education only during the past two or three decades. Private business schools dominated the field of accounting education throughout the nineteenth century and during the first quarter of the twentieth century. Training for accountancy and business administration at the college level was initiated in the United States in 1881 by the Wharton School of Commerce and Finance of the University of Pennsylvania. In 1900 only 7 colleges and universities provided organized curricula in this field, and only 34 more were added by 1915. An additional 94 entered the field during the following 6 years, bringing the total to 135 colleges and universities in 1921.<sup>11</sup> Since then, the number of such institutions with accounting curricula has approximately doubled.

The rise in the number of colleges offering training in business administration has been accompanied by a sharp increase in business administration graduates and presumably also in graduates majoring in accounting. The number of degrees awarded in commerce and business rose from 1,560 in 1920 to a prewar high of 19,000 in 1940 and then dropped during World War II to 8,150 in 1944. After the war, graduations rose sharply owing to

the tremendous number of veterans taking commerce training. In 1950 the degrees granted in commerce reached the all-time high of 72,000. About as many commerce degrees were awarded during the 5 years ending June 1951 as during the preceding 27 years.

Accounting has always been one of the most important majors in the general field of commerce and business administration. It is assumed, therefore, that the number of graduates majoring in accounting rose sharply along with the total number of graduates in this general field. However, figures are not available on the proportion of graduates who majored in accounting before World War II. The earliest source of information on this subject is a survey by the War Manpower Commission which showed that 21 percent of all commerce graduates during the period December 1, 1942, to September 30, 1943, were accounting majors. A survey of colleges which train students in accounting, conducted by the Bureau of Labor Statistics in cooperation with the United States Office of Education, showed the following proportions of accounting majors among recent graduates with commerce degrees: 25 percent in 1948-49, 22 percent in 1949-50, and 21 percent in 1950-51.<sup>12</sup> Enrollment figures reported in the survey suggest that the proportion will be still lower, probably about 20 percent in 1951-52.

The number of college graduates with a major in accounting reached a peak of approximately 16,000 in the year ended June 30, 1950, according to data from the same survey. It is estimated that about 12,000 accounting majors were graduated in 1951—25 percent fewer than in the previous year. The post-World War II increase in college-trained accountants was accompanied by a sharp rise in students receiving accounting training in private schools of business where the peak appears to have been reached in 1949. Information from private schools indicates that the number of accounting major graduates declined in 1950 and dropped further in 1951.

The number of college graduates majoring in commerce and accounting is expected to fall sharply during the early fifties along with a general decrease in college enrollments. However, even at the expected low point in the middle of the decade, there will probably be far more graduates in these fields than in any prewar year, unless there

<sup>11</sup> Isaacs, Mervin, *Professional Accountancy Training in Collegiate Schools of Business*, Columbia University, New York, 1933.

<sup>12</sup> See appendix A, p. 20.

is a substantial change in selective-service policy. A general reduction in the number of college graduates, particularly men, will occur in the next few years. This decrease will be due in part to a reduction in the size of the population group of college age, resulting from the low birth rate of the 1930's, and in part to the virtual completion of the veterans training program under the GI Bill of Rights. The number of men graduates will decline more sharply than total graduations in the near future as the number of veterans leaving college is further reduced. This trend will be accentuated by the draft of young men of college age for the Armed Forces. These factors will affect private schools of business as well as colleges and universities.

### Employment Outlook

Employment of accountants was increasing in 1951 as a result of the mobilization program. The rapid expansion in defense production was making it necessary for both private business and public accounting firms to hire more accountants to meet the resulting demand for accounting services, particularly cost accounting. Federal price regulations and other emergency control measures were raising many new and complex accounting questions and adding to the demand. The Federal Government was hiring more accountants to analyze and audit the financial statements and reports submitted by industry in connection with the defense program.

During the first half of 1951, the heavy increase in demand was met largely by better utilization of accounting personnel and by drawing on the reservoir of recent college graduates trained in accounting, which had been built up as a result of the exceptionally large graduating classes of the past few years. Although there were shortages of accountants capable of filling very high-level positions and positions requiring experience in narrowly specialized fields, there was no evidence of a serious general shortage of accounting personnel. Many large firms were still selecting candidates for entrance positions from the top 25 percent of the graduating classes or even the top 10 percent. College placement officers reported that the proportion of new accounting graduates accepting bookkeeping positions or entering fields of work not directly related to accounting was

approximately the same (one-fourth) in mid-1951 as in June 1949 and June 1950.

It is anticipated that the demand for accountants will follow general business conditions, which may mean that it will remain high during the entire period of defense mobilization and for at least a year or two thereafter. This strong demand, coupled with the decline in the number of accounting graduates which began in 1950-51 and which will persist until the middle of the decade, will undoubtedly result in continued improvement in employment opportunities for accountants during the early fifties. Employment prospects for new college graduates in this field will probably be very good during this period.

A continued increase in the demand for public and private accountants may be expected over the long run. The need for highly trained accounting personnel is peculiarly a consequence of large-scale business operations and the Government's regulation and taxation of business. It is probable that the further growth of large corporations and the continuance of Federal, State, and local regulation and taxation of business will create additional demands for professional accounting services. However, the tendency for small local businesses to expand their use of accounting assistance is also likely to increase the demand for accounting personnel. A short-run decline in the number of accountants employed in public and private accounting might result from a reduction in defense production and the elimination of emergency controls in the event of a return to peacetime conditions. Any such decline would be slow because it would take several years to complete the accounting work required in the settlement of defense matters. It is also possible that such decrease in demand might be offset by an increase in the demand for accounting services for peacetime operations. Many businessmen expanded their use of accounting services during World War II, obtained a better understanding of the contribution accountants make to business efficiency, and increased their use of accounting services after the war's end. It is likely that the present defense program will have a similar effect.

In government agencies there will probably be a moderate long-run expansion in the employment of accountants to provide services needed in normal times. The tendency to make increasing use of professional accounting personnel has

been accentuated in the Federal Government by the passage of the "Budgeting and Accounting Procedures Act of 1950," which requires extensive changes in Government accounting procedures.

In the Federal Government there are likely to be wide fluctuations in the employment of accountants to provide services for the defense program. A return to peacetime conditions would probably sharply reduce the employment of accountants in work relating to defense production and temporary economic controls.

In accounting, as in other fields of work, many employment openings result from vacancies arising from death, retirement, or the transfer of accountants to other occupations. In the past the profession has grown so rapidly that most openings have been provided by the increase in new job opportunities. As the profession grows, the need for replacement will be an increasingly important factor. It has been stated by leaders in the accounting field that the average age level of professional accountants was noticeably lowered following World War II and that it is currently much lower than a decade ago. However, in the absence of specific data on the age composition of members of the profession, no estimate can be made as to the probable number of new openings in accounting which will occur as a result of replacement needs.

### Opportunities for Women

Very few women were employed in professional accounting positions in 1951. It is estimated that fewer than 2 percent of the CPA's—between 5

and 6 hundred—were women, and that not more than 10 percent of these had their own independent practice. The number employed as staff accountants by public accounting firms was also very small. In private industry there are somewhat more women in professional positions; some have achieved promotion to technical or junior executive accounting work, although the great majority remain at the clerical or semiprofessional level. In the government field, the situation is much the same, with large numbers of women in clerical and semiprofessional jobs and only a few in professional positions.

An opinion often expressed by employers in the public accounting field is that women are unable to meet the strain of the work and are unsuited to assignments calling for travel or for work in factories. Some employers hesitate to hire women for professional jobs because the men who head their clients' accounting departments may be unwilling to rely on the judgment of women accountants and greatly prefer to work with men. However, a few leading firms which have employed women report very satisfactory results.

Opportunities for women in professional positions were better in mid-1951 than at any time since World War II. This was largely because of the strong demand for accountants created by the defense program and the small number of women prepared for professional work. In 1949-50 there were only about 500 women out of a total of approximately 16,000 college graduates with a major in accounting. Women who plan to enter the profession need the best possible training to meet the severe competition in all fields of accounting.

## Earnings and Working Conditions

### Earnings

Beginning salaries of new college graduates with a major in accounting tend to be higher in private than in public accounting. In both fields the average starting salary received by graduates in the mid-year 1951 class was markedly higher than the averages for June 1949 and June 1950 graduates. These conclusions are based on the survey of accounting majors conducted in 1951 by the Bureau in cooperation with the United States Office of Education.<sup>13</sup> College placement officers

were asked to report the starting salaries most often received by the recent accounting graduates for whom they had information. The salary data obtained covered approximately 50 percent of the accounting majors graduating from the reporting institutions and probably reflect, to a considerable extent, the salaries received by the better qualified students.

The average starting salary of new graduates entering public accounting (excluding graduates of New York City schools) rose from about \$210 a month in the summer of 1949 to \$220 the following year and \$240 in the spring of 1951, according

<sup>13</sup> See appendix A, p. 20.

TABLE 2.—*Prevailing weekly salaries in public and private accounting in New York City, July 1951*

Title of position and length of experience	Public accounting firms with—		Private business firms
	Small audits and write-ups	Large audits	
Senior accountant: 8 or more years' experience.....	\$110	\$135	\$135
5 to 8 years' experience.....	85	110	110
Semi-senior accountant: 3 to 5 years' experience.....	70	80	80
2 to 3 years' experience.....	60	70	70
Junior accountant: 1 to 2 years' experience.....	45	55	60
Beginners.....	35	45	50

SOURCE: Robert Half Personnel Agencies, Prevailing Office Salaries and Current Availability, July 1951, 140 West 42d Street, New York, N. Y.

to this survey. The average for graduates entering private accounting was approximately \$230 in 1949 and about the same in 1950; however, by early 1951 it had risen to about \$260 a month. Salary levels varied widely among schools, depending on the size of the institution and various special factors affecting the demand for graduates of particular schools. The lowest figure cited by any college as the most usual starting salary for mid-1951 graduates entering public accounting was \$108 a month; the highest was \$275. For graduates entering private accounting, the salary figures cited ranged from \$195 to \$298.

Public accounting firms customarily pay lower starting salaries than do private business firms to new graduates with equivalent qualifications, because initial experience in public accounting is widely held to be a form of apprenticeship training. Competition is usually keen for positions in this field because such experience is so often a prerequisite for the CPA license and for advanced positions in other accounting fields.

Salaries tend to be considerably higher in public accounting firms that specialize in making audits for large companies than in accounting firms that either audit small companies or perform public bookkeeping (often referred to as "write-ups"). The latter firms usually pay lower salaries for accountants at all levels of responsibility than those customarily paid to men with comparable experience in private industry. As a rule, the large accounting firms start new graduates at lower salaries than those paid by private business firms, but there is reason to believe that the salaries paid to semi-senior and senior accountants are just as

high as those received by experienced accountants in private industry.

The relative earnings of accountants employed in firms of each type and the approximate increase in salaries expected as they gain experience and achieve promotion to higher positions are suggested by a survey of public and private accounting in New York City in July 1951. (See table 2.)

The earnings of independent practitioners, partners, or sole proprietors depend to a large extent on the type of service rendered and the size of the company serviced. The average annual net income of partners in 1945 was well over \$10,000 a year. The average dropped to \$8,600 in 1947, but this drop was probably due to the tremendous increase in the number of new firms and new partners who had not yet had time to become fully established.<sup>14</sup> The income of individual practitioners is ordinarily much lower than that of partners. Nevertheless, some accountants in business for themselves, as well as a considerable number of partners, have net annual incomes of \$25,000 to \$50,000 or even more.

The beginning salary for trainee positions in professional accounting with the Federal Government was \$3,410 a year in late 1951. The Bureau of Internal Revenue, which does not have a specific trainee grade, starts its agents at \$4,205 a year. The majority of Government accountants earned between \$3,825 and \$5,350 a year in mid-1951. Only about 1 percent earned \$10,000 or over a year, and accountants earning such salaries usually carried responsibilities as great or greater than those of senior partners in the large national public accounting firms.

### Working Conditions

Working conditions in accountancy depend to a great extent on the field of employment. In general, public accounting jobs are more varied in character, involve more irregular hours of work, and are more taxing physically than either private or government accounting positions.

Public accounting is a service performed largely at the times and places dictated by the client's needs. This factor determines the amount of travel, the physical working conditions, and the

<sup>14</sup> Partnership data were computed by the Bureau of Labor Statistics from U. S. Treasury Department, Bureau of Internal Revenue, Press Service Release, No. S-2253, Feb. 16, 1950, and Press Service Release No. S-2645, Apr. 4, 1951, Washington, D. C.

hours of work of the accounting staff. It accounts, too, for the seasonality of such work and is partly responsible for the very high turn-over rate of public accounting personnel.

Most public accounting work is done in the offices of the firm's clients. Accountants who work for large firms with clients in many parts of the country may be expected to spend a considerable amount of time away from home. The amount of travel has been much reduced, however, as a result of the establishment of local branch offices by many such firms. Those working for smaller companies seldom have to be away overnight as their firms' clients are usually located within commuting distance. The physical conditions under which accountants work vary with each client. Sometimes an accountant may work in a luxurious office with every modern convenience, including plenty of working space, modern office equipment, and good lighting. At other times he may be compelled to work in some cramped corner of a factory, with all the noise and dirt of the manufacturing operations around him, often with poor light, and with little or no office machinery to speed his routine tasks.

Hours of work are extremely irregular in most public accounting firms. The busy season usually extends from late November to March. The staff accountant may work overtime frequently during this period and in some weeks may put in as many as 50 to 60 hours, working with great concentration and under tremendous pressure. During the summer season he may have very little accounting work and may spend most of his time clearing up detail work and studying new tax laws, court decisions, or other accounting developments in order to keep abreast of the constant changes which take place.

There are two major reasons for the seasonal peak in accounting business which occurs in the winter months: (1) Most firms end their business year on December 31, and want a final report on the year's operations at the earliest possible date thereafter. (2) Federal income tax returns must be filed not later than March 15, and it is not possible to prepare such reports until the year's business has drawn to a close. Accounting firms have used much effort and ingenuity in trying to distribute the workload throughout the year, but with only moderate success.

The pressure of work during the busy season

is so great that many firms hire additional personnel on a temporary basis. In years when accountants are readily available, some firms increase their professional staffs by as much as 25 to 50 percent during the busy season and then discharge the extra employees when the slack season begins. However, in years when the demand for accountants is so heavy that they can easily find steady jobs, firms tend to keep a larger staff of employees on a year-round basis and seasonal lay-offs are reduced or eliminated. This was the situation during World War II and for several years thereafter. In 1949 and 1950, as competent professional personnel became more readily available, there was a temporary return to the old pattern of increased hiring in the winter months and lay-offs in the spring. But this tendency has been checked once more by the increased demand for accountants in 1951.

Public accounting has an extraordinarily high rate of turn-over among its professional staff, resulting in part from the irregularity of employment in this field. However, there are many other factors contributing to this turn-over rate. A report published in April 1951<sup>15</sup> disclosed that only 58 percent of the 1,167 college trainees chosen by 247 public accounting firms over a period of 13 years were considered suitable for the work after a year or more of training. Yet these trainees were the "cream of the crop" and were chosen after careful interview and examination of their personal qualifications. It is a matter for serious concern both to the employer and to accountants entering the field that approximately 40 percent of the junior staff in these firms had to be replaced each year because they were found unsatisfactory.

The rate of employee turn-over is also increased by the fact that many well-qualified trainees accept public accounting positions only to gain the experience required for the CPA license, or to get the more varied experience which 2 or 3 years in this field give, as compared with the same length of time in the usual beginning position in private accounting. After a few years, many young accountants resign to enter private or governmental accounting work. The loss of excellent employees to private business firms, which are often able to offer higher salaries, is particularly heavy.

<sup>15</sup> McMurry, Robert N., Study of Personality Traits May be the Key to Choosing the Valuable Accounting Junior, *The Journal of Accountancy*, April 1951 (pp. 604-609).

Most large accounting firms are constantly on the alert for outstanding new professional personnel. Many firms believe that an accountant unable to progress at a reasonably rapid pace is not worth keeping. There is steady pressure on staff members to go "up the ladder" or out of the firm. Therefore, those staff accountants who can meet the exacting requirements of public accounting may look forward to rapid promotion, based primarily on merit, rather than length of service. Many will achieve independence either as partners in public accounting firms or as principals at the head of their own business.

Working conditions in private business are usually the same for accountants as for all other office personnel. Most accounting departments have a standard 40-hour workweek. However, some firms require their accountants to work overtime at the end of each month in order to get their monthly statements and reports completed on time. It is customary to pay all junior accounting personnel at the rate of time and a half for overtime.

Few private accountants are required to do much traveling in connection with their work.

Employees on the internal audit staffs of companies with branch offices, however, may have to travel constantly between branches.

The private accounting field offers greater job security than does public accounting. Seasonal lay-offs, which are so common in the latter field, are rare in private accounting. On the other hand, promotion may be comparatively slow because of low turn-over in higher level positions. Accountants working for large private corporations are also more likely to have the protection of company-wide group insurance and pension plans which supplement the social-security benefits required by law.

Federal Government accountants have the same working conditions, including pension, vacation, and sick leave benefits, as other Government workers in white-collar jobs. More than 80 percent of the accounting positions in the Federal Government are outside Washington, D. C., and many positions require a considerable amount of travel. Although there are no seasonal fluctuations in employment, job security in Government is greatly influenced by legislative changes in the annual appropriations.

## Where To Go for Further Information

Information on the accounting profession, particularly on certified public accountants, may be obtained from:

American Institute of Accountants  
270 Madison Avenue  
New York 16, N. Y.

The Committee on Selection of Personnel of the above organization will provide information on the aptitude and achievement tests now given in many schools and by many public accounting firms.

Current information on the requirements for the CPA license in specific States may be obtained by writing to the Secretary of the State Board of Accountancy at the State capital.

Information on specialized fields of accounting may be obtained from:

National Association of Cost Accountants  
385 Madison Avenue  
New York 17, N. Y.

Controllers Institute of America  
One E. 42d Street  
New York 17, N. Y.

The Institute of Internal Auditors  
120 Wall Street  
New York 5, N. Y.

Many articles of general interest and information on job opportunities are published in periodicals devoted to the accounting profession such as *The Journal of Accountancy* and *The Accounting Review*.

Information on entrance requirements to schools offering training in accountancy may be obtained directly from the schools. A partial list of college-level institutions is contained in appendix B (p. 27). Information on private schools of business may be obtained from:

American Association of Professional Schools of Accountancy  
1100 Sixteenth Street, NW.  
Washington, D. C.

National Association and Council of Business Schools  
2601 Sixteenth Street, NW.  
Washington, D. C.

Local offices of the State employment services affiliated with the United States Employment Service assist applicants in obtaining positions in accounting.

Information on government jobs may be obtained from the State or municipal civil-service authorities or from the United States Civil Service Commission, Washington 25, D. C. Notices of civil-service jobs and examinations are posted in local post offices from time to time.

# APPENDIXES

## Appendix A.—Technical Note on Accounting Survey

### Scope and Method

Most of the statistical data in this report pertaining to number and placement experiences of college graduates majoring in accounting, prospective supply of such graduates, and earnings of recent graduates are based on a survey of colleges and universities conducted by the Bureau in cooperation with the United States Office of Education.

The questionnaire (see facsimile, p. 23) was mailed on May 8, 1951, to all of the 585 colleges and universities which conferred degrees in commerce in 1948-49, as listed in Office of Education report, *Earned Degrees Conferred by Higher Educational Institutions, 1948-49*. This list was believed to include all institutions offering an accounting major.

Questionnaires were returned by 289 institutions, or 49 percent of the total mailing list. Of these, only 129 institutions offered an undergraduate major in accounting. The remainder offered only a graduate major in accounting (3 schools) or reported no accounting major (157 schools).

A large number of schools not offering a specifically defined accounting major do train accountants. However, in the absence of any generally accepted standard of requirements for an accounting major, the analysis of changes in the supply of accountants trained has been limited to students who completed or planned to complete a specific undergraduate accounting major sequence as defined by the colleges that answered the questionnaire. Graduate students were also eliminated from consideration because their number was too small to affect substantially the supply of accounting personnel or to justify detailed analysis.

The number of usable answers in the questionnaires received from the 129 schools with an undergraduate accounting major varied with the

questions asked as indicated in the following tabulation:

<i>Item</i>	<i>Number of usable reports</i>
On commerce and accounting graduates.....	124
On commerce and accounting majors enrolled..	74
On placement of accounting majors.....	64
On earnings of recent accounting major graduates.....	46

Information is available through reports of the Office of Education on the numbers of commerce majors graduated in 1949 and 1950, but not on the proportion of that group who had majored in accounting. The data from the special survey made it possible to estimate the total number of accounting majors by applying the same proportion of accounting majors to commerce majors, as reported in the survey, to the total number of commerce degrees conferred by institutions offering an accounting major. A master list of institutions believed to offer an accounting major was constructed for this purpose. It included all institutions which returned questionnaires stating that an undergraduate accounting major was offered. It also included those institutions which failed to respond but were listed in one or both of two recently published directories purporting to contain the names of all institutions offering specialized accounting training.

The directories used to construct the master list were as follows:

Good, Carter V., *A Guide to Colleges, Universities and Professional Schools in the United States*, American Council on Education, Washington 6, D. C., 1945.

Pendergast, Mary M., *Directory of Colleges, Universities and Professional Schools Offering Training in Occupations Concerned with Business and Industry*, Institute of Women's Professional Relations, Research Headquarters, Connecticut College, New London, Conn., 1947.

The master list of institutions included 207 schools, which conferred 80 percent of all commerce degrees awarded in 1948-49.<sup>1</sup> An additional 6 percent of all commerce degrees awarded in that year were conferred by institutions which returned questionnaires stating that they did not offer an accounting major. Because very few institutions (only one in four) not listed in either of the two directories reported that an accounting major was offered—and the number of accounting majors in these schools was usually very low—it is believed that the master list is sufficiently comprehensive to be used as a basis for estimating the total numbers of such graduates. The master list device was used to avoid an undue upward bias in the estimate which would probably have occurred, if the survey results had been applied instead to the entire group of schools offering commerce degrees. It is likely that institutions offering an accounting major responded in proportionately greater numbers than did other schools.

### Number of Accounting Major Graduates

The reliability of the returns on the number of graduates in the survey was tested by comparing the increase in the number of commerce majors between 1948-49 and 1949-50 as shown in the survey with the total increase in commerce majors reported by the Office of Education. In both cases the increase was 17 percent, which indicates that the respondents are probably representative of the total.

The numbers of accounting major graduates in 1950-51 and in 1951-52 were estimated from the enrollment data reported by 74 institutions. The percent of change in the enrollment of seniors in commerce and in accounting, respectively, between 1949-50 and 1950-51, as shown in the survey, was applied to the total numbers of such graduates in 1949-50 to obtain the estimated totals for 1950-51. A similar method was used to estimate the data for 1951-52, except that the number of seniors in 1951-52 was estimated before proceeding. The estimated number of seniors in the latter year was computed by applying the expected

<sup>1</sup> The master list included 149 out of 158 institutions whose names had been obtained from the two directories mentioned. Reports were received from 84 of these schools, showing that one had dropped its accounting training program, 3 offered only a graduate major, and 5 offered professional training in accounting but no major during the period under survey.

rate of drop-outs between the junior and senior class to the number of juniors enrolled in 1950-51. The drop-out rate was calculated on the basis of the change in the number of juniors in 1949-50 compared with the number of seniors in the following year.

No data from other sources were available for use in testing the reliability of the enrollment data obtained. Seniors majoring in accounting, however, comprised 24.5 percent of all commerce majors in 1949-50 according to the survey returns. Accounting major graduates received 22.2 percent of all commerce degrees conferred in that year, according to the more extensive returns received on this question. The similarity of the results suggests that the enrollment data were roughly representative of the total group, despite the smaller number of returns obtained.

### Placement Experiences and Earnings of Graduates Majoring in Accounting

Colleges were requested to report the placement experiences and monthly earnings for June 1949, June 1950, and mid-term 1951 accounting major graduates who found jobs within 1 month after graduation. A review of the questionnaire responses makes it seem doubtful that the time limit was observed; probably the reported data represent all placements of accounting majors for whom information was available.

The data on placement experiences were too scanty to do more than indicate broad tendencies in the placement of accounting majors. Data as to the type of job placement were reported by 64 institutions for both June 1949 and June 1950 graduates. Forty-five of the 64 institutions also provided data on placements of mid-1951 graduates. These institutions had approximately 25 percent of all graduates majoring in accounting in June 1949 and June 1950; no percentage is available for mid-1951. The placement data submitted covered 2,174 out of 4,046 accounting majors graduated in June 1949, or 54 percent; half the total June 1950 accounting major graduates, or 2,134 out of 4,225, were included. Placement information was available for only 41 percent of the mid-1951 graduates of the reporting institutions (663 out of 1,596 accounting majors).

About 46 schools provided data showing earnings of June 1949 and June 1950 graduates in the public accounting field and 26 showed earnings of mid-1951 graduates. Forty-two schools submitted data on earnings of June 1949 and June 1950 graduates entering the private accounting field; 28 of these institutions provided data on earnings of mid-1951 graduates in this field. Data on earnings in other types of accounting were too scattered to be usable.

Schools were asked to report the "most usual monthly starting salary" of graduates placed in each field of employment in each period. The estimated average salary in each category was determined by obtaining the arithmetic mean of the salaries reported, with the number of students placed used as weights. It is believed likely that the earnings arrived at by this method are somewhat overweighted by earnings of the better students who are the first to be placed, and also the ones about whom the college is most likely to have information (many probably having been placed directly by the college). However, the trend shown is believed to be representative of actual changes.

### Private Schools of Business and Junior Colleges

It is recognized that a good many private schools and some junior colleges train accountants. Therefore a questionnaire, similar in design to the one mailed to the colleges, but slightly modified to meet differences in educational organization, was mailed to some 384 private schools of business and to some 50 junior colleges. The private schools included all institutions listed in the *Directory of Business Schools in the United States*<sup>2</sup> and offering a 2-year course in accountancy, plus several widely known schools of accountancy not listed in this directory. It is believed that the mailing list included about 95 percent of all private schools offering training above the bookkeeping level. The list of junior colleges was selected by the Junior College Specialist in the Office of Education, and was believed to include all such institutions offering comprehensive training in accountancy.

<sup>2</sup> Noffsinger, J. S., *Directory of Business Schools in the United States*, National Association and Council of Business Schools, Washington, D. C., 1950.

Only 80 of the 384 private schools of business (about 20 percent) returned questionnaires, and the number submitting usable returns on the number of graduates was even smaller. Although the over-all trend of enrollments and graduates reported by these institutions was believed to be representative of the broad trend, the data were considered insufficient for the purpose of arriving at any specific estimates of the numbers of students in such institutions or specific changes in the supply of accounting personnel trained by such schools.

Twenty junior colleges, 40 percent of the total receiving questionnaires, sent in replies. Only 10 of the schools replying stated that they offered a 2-year accounting major sequence and the total number of such graduates in all 10 schools was less than 150. The number of junior college accounting graduates appears to be so low that it is unlikely that the over-all supply of trained accounting personnel would be much affected; therefore, no further attempt was made to analyze returns from these schools. For the same reason no reference is made to the data on this subject in the main body of the report.

### Data on Women

Specific data on the number of women who received degrees with a major in accounting and the number enrolled in this field were requested in parts IV and V of the questionnaire. Schools which sent in usable returns on the total numbers of students in these categories customarily stated the number of women, if any. It is believed, therefore, that the survey returns are representative and that the estimates are sufficiently reliable for use in the report. Because the number of women graduates and women seniors with accounting majors were only about 3 percent of the total, no further analysis was considered feasible.

The questionnaire did not provide space for the inclusion of placement data on women, but the schools were requested in the covering letter to provide any data which they had. A few schools sent in general comments on their experiences in placing women, but no specific data were provided. Therefore, no statistical analysis of the placement experiences and earnings of women could be made.

## Facsimile of Questionnaire

U. S. DEPARTMENT OF LABOR  
BUREAU OF LABOR STATISTICS  
Washington 25, D. C.

in cooperation with

FEDERAL SECURITY AGENCY  
OFFICE OF EDUCATION  
Washington 25, D. C.

To the Dean of the Department of  
Business and Commerce:

Your cooperation is requested in a survey of the numbers of students recently prepared for professional accounting positions and of their placement experience. The survey, which is being conducted by the Bureau of Labor Statistics in cooperation with the United States Office of Education, is part of a program of studies designed to provide information on manpower requirements and on the present and prospective supply of personnel in occupations of importance in the defense program. The information will contribute also to a study of the long-range employment outlook in accountancy, which is part of the Bureau of Labor Statistics' continuing program of occupational outlook studies for use in vocational guidance, and to the basic educational statistics compiled by the Office of Education.

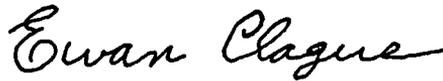
No over-all statistical information is available on the number of college graduates who have specialized in accounting. Furthermore, data on the employment experience of such graduates are fragmentary. Your response will provide basic data for estimating the supply of trained personnel and will indicate recent changes in the employment situation in the accounting field. Educators, employers, executives of the professional accounting societies, and other leaders in the accounting field, with whom this project has been discussed, have uniformly agreed that there is a real need for such data.

It is believed that most of the data on enrollments and on the number of graduates can be readily supplied. The section on placement in this questionnaire is intended as a guide to the information needed. Data on the placement experience of accounting students are of great significance in analyzing the demand for personnel and in determining the kind of educational background preferred by employers for different types of jobs. For these reasons it will be appreciated if you will provide us with any recent placement information you may have available. Data relating specifically to the placement of women accounting majors would be very helpful. Please indicate in all cases which figures are actual and which are estimated. If you cannot conveniently fill out the placement questionnaire, you may attach an additional sheet with your data. Any comments or published reports which you believe helpful should also be included.

Your immediate response will aid greatly in the early publication of the results. Please fill out the white copy of the questionnaire as completely as possible and return it in the enclosed self-addressed envelope, which requires no postage. The information will be held strictly confidential and reported in such manner as to preserve its anonymity.

Your assistance in this survey will be greatly appreciated.

Very truly yours,



Ewan Clague  
Commissioner of Labor Statistics



Earl J. McGrath  
U.S. Commissioner of Education

B.L.S. 2232  
 Return white copy to address below.  
 The green copy is for your files.

Budget Bureau No. 44-5119  
 Approval expires August 30, 1951

U. S. DEPARTMENT OF LABOR  
 Bureau of Labor Statistics  
 Washington 25, D. C.

in cooperation with

FEDERAL SECURITY AGENCY  
 Office of Education  
 Washington 25, D. C.

**SURVEY OF BUSINESS AND COMMERCE MAJORS**

Number and Placement Experience of Students Prepared in Colleges  
 and Universities for Professional Accounting Positions

- |   |                          |                          |
|---|--------------------------|--------------------------|
|   | <u>Yes</u>               | <u>No</u>                |
| I. Does your school prepare students for professional accounting?<br>If "no," please check here and return the <u>unfilled questionnaire</u> .  | <input type="checkbox"/> | <input type="checkbox"/> |
| II. Do graduates of your school customarily take the CPA examination<br>without further education?  | <input type="checkbox"/> | <input type="checkbox"/> |
| III. Does your school offer an <u>accounting major</u> ?<br>If "yes," please fill out entire questionnaire; if "no," fill out<br>only lines A. 1 and B. 1 in Section IV and complete Section VII. | <input type="checkbox"/> | <input type="checkbox"/> |

**IV. Degrees Conferred**

Major field of study	Number of persons receiving degrees in period					
	July 1948- June 1949		July 1949- June 1950		July 1950- Mid-year 1951	
	Total	Women	Total	Women	Total	Women
A. Bachelor's degrees						
1. All business and commerce majors <sup>1</sup>						
a. Accounting majors only						
B. Master's degrees						
1. All business and commerce majors <sup>1</sup>						
a. Accounting majors only						

**V. Number of Students Enrolled**

Class level	Total number enrolled in business and commerce <sup>1</sup>				Number enrolled as accounting majors			
	1949-1950		1950-1951		1949-1950		1950-1951	
	Total	Women	Total	Women	Total	Women	Total	Women
A. Total enrolled								
1. Graduate students								
2. Seniors								
3. Juniors								
4. Others <sup>2</sup>								

<sup>1</sup> Include accounting majors as well as other subject majors in business and commerce.

<sup>2</sup> Include freshmen, sophomores, and special students.

**VI. Placement Experience of Graduates With Major in Accounting**  
(for Non-Accounting Majors see Section VII)

**Note:** If you are unable to supply all of the following data, please give as much information as you can. Any deviations from the dates or job classifications listed should be explained on the form or discussed on an attached sheet.

Placement status within one month after graduation date	Class graduated in—					
	June 1949		June 1950		Mid-year 1951	
	Number	Most usual monthly starting salary	Number	Most usual monthly starting salary	Number	Most usual monthly starting salary
A. Total number placed <sup>1</sup> .....		XXX		XXX		XXX
1. Public accounting .....						
2. Private accounting .....						
3. Governmental accounting, Federal .....						
4. Governmental accounting, State and local .....						
5. Bookkeeping .....						
6. All other employment <sup>2</sup> .....						
B. Number proceeding with full-time post-graduate education .....		XXX		XXX		XXX
C. Employment status unknown (include unemployed) .....		XXX		XXX		XXX
Total (include A, B, C) .....		XXX		XXX		XXX

**VII. Placement of Non-Accounting Majors in the Professional Accounting Field**

Placement status 6 months after graduation	Class graduated in June 1950	
	Number <sup>3</sup>	Most usual monthly starting salary
A. Number placed in public accounting .....		
B. Number placed in private accounting .....		
C. Number placed in governmental accounting .....		
D. Number proceeding with full-time graduate education in accounting .....		

<sup>1</sup> Include all students regardless of source of placement.

<sup>2</sup> Include all positions not clearly belonging to the job classifications listed above. Such jobs as cashier, teller, statistician, and accounting clerk as well as jobs of an entirely different nature, such as salesman or advertising solicitor belong here.

<sup>3</sup> Specify number or enter "none" or "unknowns."

Report prepared by \_\_\_\_\_ (Name) \_\_\_\_\_ (Title) \_\_\_\_\_ (Date)

Check here if you wish an announcement of the published report giving the results of this survey

## Appendix B.—Schools of Accounting

Accountancy is taught in many types of schools—colleges and universities, business colleges, private schools, evening schools, and through correspondence study. The institutions listed below are all on the college level, award degrees in accountancy or in business administration, and are approved by one or more accrediting agencies. This list of 153 colleges was prepared by Dr. Walter J. Greenleaf, Specialist, Occupational Information and Guidance Service, United States Office of Education. Some colleges which offer accounting training have been omitted because they lack accreditation or because information was not readily available on their course offerings in accounting. Private schools of business including correspondence schools have also been

omitted although many of them offer excellent training in accountancy. In States requiring courses above the high school level for the CPA license, it is desirable that the student write to the State Board of Education at the State capital to find out if the school of his choice offers courses accredited for this purpose.

All institutions listed here have acceptable accreditation. Institutions indicated with the symbol (†) are members of the American Association of Collegiate Schools of Business. Those with the symbol (\*) are registered with the New York State Education Department for certified public accountant preparation. All others have general accreditation from their respective regional accrediting associations, and offer work in accountancy.

### Schools Offering Accountancy—1951

(Approved by one or more accrediting agencies)

#### Alabama

Florence—Alabama State Teachers College  
Spring Hill—Spring Hill College\*  
University—University of Alabama\*†

#### Arizona

Tucson—University of Arizona †

#### Arkansas

Fayetteville—University of Arkansas †

#### California

Berkeley—University of California\*†  
Chico—Chico State College  
Los Angeles—Loyola University (men)  
—University of California at Los Angeles\*†  
—University of Southern California\*†  
San Francisco—University of San Francisco  
San Jose—San Jose State College  
Santa Clara—University of Santa Clara (men)  
Stanford—Stanford University\*†

#### Colorado

Boulder—University of Colorado\*†  
Denver—University of Denver\*†

#### Connecticut

Storrs—University of Connecticut\*

#### District of Columbia

Washington—George Washington University\*  
—Georgetown University\*  
—Howard University (Negro)  
—American University

#### Florida

Coral Gables—University of Miami  
Gainesville—University of Florida\*†

#### Georgia

Athens—University of Georgia †  
Emory University—Emory University\*†

#### Idaho

Moscow—University of Idaho

#### Illinois

Chicago—De Paul University  
—Loyola University  
—University of Chicago (graduate)\*†  
Evanston—Northwestern University\*†  
Peoria—Bradley University  
Rock Island—Augustana College  
Urbana—University of Illinois\*†

#### Indiana

Bloomington—Indiana University\*†  
Collegeville—St. Joseph's College (men)  
Indianapolis—Butler University\*  
Notre Dame—University of Notre Dame (men)\*  
Valparaiso—Valparaiso University

#### Iowa

Davenport—St. Ambrose Marycrest  
Des Moines—Drake University\*†  
Iowa City—State University of Iowa\*†

#### Kansas

Emporia—Kansas State Teachers College  
Lawrence—University of Kansas\*†  
Manhattan—Kansas State College\*  
Wichita—Municipal University of Wichita

#### Kentucky

Lexington—University of Kentucky\*†

*Louisiana*

Baton Rouge—Louisiana State University†  
 Lafayette—Southwestern Louisiana Institute  
 New Orleans—Tulane University†  
 Ruston—Louisiana Polytechnic Institute

*Maryland*

Baltimore—Loyola College (men)  
 College Park—University of Maryland\*†

*Massachusetts*

Boston—Boston University\*†  
     —Northeastern University\*  
 Cambridge—Harvard University (graduate)\*†  
 Chestnut Hill—Boston College\*  
 Worcester—Clark University

*Michigan*

Ann Arbor—University of Michigan\*†  
 Detroit—Detroit Institute of Technology  
     —University of Detroit\*†  
     —Wayne University\*  
 East Lansing—Michigan State College\*  
 Marquette—Northern Michigan College of Education

*Minnesota*

Minneapolis—University of Minnesota\*†

*Mississippi*

State College—Mississippi State College\*  
 University—University of Mississippi†

*Missouri*

Columbia—University of Missouri\*†  
 St. Louis—St. Louis University\*†  
     —Washington University†

*Montana*

Bozeman—Montana State College†  
 Missoula—Montana State University\*†

*Nebraska*

Lincoln—University of Nebraska\*†  
 Omaha—Creighton University\*†

*New Hampshire*

Hanover—Dartmouth College\*†

*New Jersey*

Jersey City—St. Peter's College (men)\*  
 New Brunswick—Rutgers University\*†  
 Newark—University of Newark\*  
 Trenton—Rider College\*

*New Mexico*

Albuquerque—University of New Mexico

*New York*

Brooklyn—Long Island University\*  
     —St. John's University\*  
 Buffalo—Canisius College\*  
     —University of Buffalo\*†  
 Hempstead—Hofstra College\*

*New York—Continued.*

Ithaca—Cornell University (graduate)\*†  
 Loudonville—St. Bernardine of Sienna College\*  
 New Rochelle—Iona College\*  
 New York—College of the City of New York\*†  
     —Columbia University\*†  
     —Fordham University\*†  
     —Manhattan College\*†  
     —New York University\*†  
     —Pace College\*  
 Niagara University—Niagara University\*  
 Potsdam—Clarkson College of Technology\*  
 Rochester—University of Rochester\*  
 St. Bonaventure—St. Bonaventure's College\*  
 Syracuse—Syracuse University\*†

*North Carolina*

Chapel Hill—University of North Carolina\*†  
 Durham—Duke University\*

*North Dakota*

University—University of North Dakota\*†

*Ohio*

Akron—University of Akron  
 Athens—Ohio University  
 Bowling Green—Bowling Green State University\*  
 Cincinnati—University of Cincinnati\*†  
     —Xavier University (men)\*  
 Columbus—Ohio State University\*†  
 Dayton—University of Dayton  
 Kent—Kent State University  
 Oxford—Miami University\*†  
 Wilberforce—College of Education and Industrial Arts (Negro)

*Oklahoma*

Norman—University of Oklahoma\*†  
 Stillwater—Oklahoma A & M College\*  
 Tulsa—University of Tulsa\*†

*Oregon*

Corvallis—Oregon State College  
 Eugene—University of Oregon\*†

*Pennsylvania*

Bethlehem—Lehigh University\*†  
 Grove City—Grove City College\*  
 Lancaster—Franklin & Marshall College  
 Lewisburg—Bucknell University  
 Philadelphia—Drexel Institute of Technology\*  
     —St. Joseph's College  
     —Temple University\*†  
     —University of Pennsylvania\*†  
 Pittsburgh—Duquesne University  
     —University of Pittsburgh\*†  
 Scranton—University of Scranton (men)\*  
 Selinsgrove—Susquehanna University\*  
 State College—Pennsylvania State College\*  
 Villanova—Villanova College (men)\*

*Rhode Island*

Kingston—Rhode Island State College\*

*South Dakota*

Vermillion—University of South Dakota†

*Tennessee*

Cookeville—Tennessee Polytechnic Institute

Knoxville—University of Tennessee\*†

*Texas*

Austin—University of Texas\*†

College Station—A & M College of Texas\*

Dallas—Southern Methodist University†

Denton—North Texas State College

Nacogdoches—Stephen Austin State Teachers College

Waco—Baylor University†

*Utah*

Salt Lake City—University of Utah\*†

*Virginia*

Blacksburg—Virginia Polytechnic Institute\*

Charlottesville—University of Virginia\*†

Lexington—Washington and Lee University†

*Virginia—Continued.*

Richmond—University of Richmond

—Richmond Professional Institute (College  
of William and Mary)

Williamsburg—College of William and Mary\*

*Washington*

Pullman—State College of Washington\*†

Seattle—University of Washington†

*West Virginia*

Institute—West Virginia State College (Negro)

*Wisconsin*

Madison—University of Wisconsin\*†

Milwaukee—Marquette University\*†

*Wyoming*

Laramie—University of Wyoming\*

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\*Registered by the New York State Education Department for CPA preparation.

†Member American Association of Collegiate Schools of Business.

## Occupational Outlook Publications of the Bureau of Labor Statistics

Studies of employment trends and opportunities in the various occupations and professions are made available by the Occupational Outlook Service of the Bureau of Labor Statistics.

These reports are for use in the vocational guidance of veterans, in assisting defense planners, in counseling young people in schools, and in guiding others considering the choice of an occupation. Schools concerned with vocational training and employers and trade-unions interested in on-the-job training have also found the reports helpful in planning programs in line with prospective employment opportunities.

Two types of reports are issued, in addition to the *Occupational Outlook Handbook*: Occupational outlook bulletins describing the long-run outlook for employment in each occupation and giving information on earnings, working conditions, and the training required; and special reports issued from time to time on such subjects as the general employment outlook, trends in the various States, and occupational mobility.

These reports are issued as bulletins of the Bureau of Labor Statistics. Most of them may be purchased from the Superintendent of Documents, Washington 25, D. C., at the prices listed with a 25-percent discount on 100 copies or more. Those reports which are listed as free may be obtained directly from the United States Department of Labor, Bureau of Labor Statistics, Washington 25, D. C., as long as the supply lasts.

### Occupational Outlook Handbook

#### **Employment information on major occupations for use in guidance.**

Bulletin 998 (1951 Revised edition). Price \$3. Illus.

Includes brief reports on more than 400 occupations of interest in vocational guidance, including professions; skilled trades; clerical, sales, and service occupations; and the major types of farming. Each report describes the employment trends and outlook, the training qualifications required, earnings, and working conditions. Introductory sections summarize the major trends in population and employment, and in the broad industrial and occupational groups, as background for an understanding of the individual occupations.

The Handbook is designed for use in counseling, in classes or units on occupations, in the training of counselors, and as a general reference. Its 600 pages are illustrated with 103 photographs and 85 charts.

### Occupational Outlook Bulletins

#### **Employment Opportunities in Aviation Occupations, Part II—Duties, Qualifications, Earnings, and Working Conditions.**

Bulletin 837-2 (1946). Price 30 cents. Illus.

#### **Employment Outlook in Foundry Occupations.**

Bulletin 880 (1946). Price 15 cents. Illus.

#### **Employment Outlook for Business Machine Servicemen.**

Bulletin 892 (1947). Price 15 cents. Illus.

**Occupational Outlook Bulletins—Continued**

- Employment Outlook in Machine Shop Occupations.**  
Bulletin 895 (1947). Price 20 cents. Illus.
- Employment Outlook in Printing Occupations.**  
Bulletin 902 (1947). Price 20 cents. Illus.
- Employment Outlook in the Plastics Products Industry.**  
Bulletin 929 (1948). Price 20 cents. Illus.
- Employment Outlook in Electric Light and Power Occupations.**  
Bulletin 944 (1948). Price 30 cents. Illus.
- Employment Outlook in Radio and Television Broadcasting Occupations.**  
Bulletin 958 (1949). Price 30 cents. Illus.
- Employment Outlook in Railroad Occupations.**  
Bulletin 961 (1949). Price 30 cents. Illus.
- Employment Outlook in the Building Trades.**  
Bulletin 967 (1949). Price 50 cents. Illus.
- Employment Outlook for Engineers.**  
Bulletin 968 (1949). Price 55 cents. Illus.
- Employment Outlook for Elementary and Secondary School Teachers.**  
Bulletin 972 (1949). Price 40 cents. Illus.
- Employment Outlook in Petroleum Production and Refining.**  
Bulletin 994 (1950). Price 30 cents. Illus.
- Employment Outlook in Men's Tailored Clothing Industry.**  
Bulletin 1010 (1951). Price 25 cents. Illus.
- Employment Outlook in Department Stores.**  
Bulletin 1020 (1951). Price 20 cents. Illus.
- Employment Outlook for Earth Scientists.**  
Bulletin 1050 (1951). Price 30 cents. Illus.
- Employment Outlook in the Machine Tool Industry.**  
In press.
- Employment Outlook in the Merchant Marine.**  
Bulletin 1054 (1951). Illus.
- Employment Outlook in Electronics Manufacturing.**  
In press.

**Occupational Outlook Supplements**

- Effect of Defense Program on Employment Outlook in Engineering (1951).**  
(Supplement to Bulletin 968, *Employment Outlook for Engineers*.) Price 15 cents.
- Effect of Defense Program on Employment Situation in Elementary and Secondary School Teaching (1951).**  
(Supplement to Bulletin 972, *Employment Outlook for Elementary and Secondary School Teachers*.) Price 15 cents.

### Special Reports

**Occupational Data for Counselors. A Handbook of Census Information Selected for Use in Guidance.**

Bulletin 817 (1945). (Prepared jointly with the Occupational Information and Guidance Service, U. S. Office of Education.) Price 20 cents.

**Factors Affecting Earnings in Chemistry and Chemical Engineering.**

Bulletin 881 (1946). Price 10 cents.

**Occupational Outlook Information Series (by States).**

VA Pamphlet 7-2 (1947). Price 10 cents each. (When ordering, specify State or States desired.)

**Employment, Education, and Earnings of American Men of Science.**

Bulletin 1027 (1951). Price 45 cents.

**Fact Book on Manpower (1951). Free.**

**Employment Opportunities for Student Personnel Workers in Colleges and Universities (1951).**

Free.

**Elementary and Secondary School Principalships—Chief Advancement Opportunity for Public School Teachers (1951). Free.**

**Employment Opportunities for Counselors in Secondary and Elementary Schools (1951). Free.**

### Occupational Outlook Mailing List

Schools, vocational guidance agencies, and others who wish to receive brief summaries of each new occupational outlook report, usually accompanied by a wall chart, may have their names placed on a mailing list kept for this purpose. Requests should be addressed to the Bureau of Labor Statistics, U. S. Department of Labor, Washington 25, D. C., specifying the Occupational Outlook Mailing List. Please give your postal zone number.