

degree in graphic arts, graphic communications or graphic design. Graphic arts programs are a good way to learn about desktop publishing software used to format pages, assign type characteristics, and import text and graphics into electronic page layouts to produce printed materials such as advertisements, brochures, newsletters, and forms. Applying this knowledge of graphic arts techniques and computerized typesetting usually are intended for students who may eventually move into management positions, while 2-year associate degree programs are designed to train skilled workers. Students also develop finely tuned skills in typography, print mediums, packaging, branding and identity, Web design and motion graphics. These programs teach print and graphic design fundamentals and provide an extensive background in imaging, prepress, print reproduction, and emerging media. Courses in other aspects of printing also are available at vocational-technical institutes, industry-sponsored update and retraining programs, and private trade and technical schools.

Although formal training is not always required, those with certification or degrees will have the best job opportunities. Most employers prefer to hire people who have at least a high school diploma, possess good communication skills, basic computer skills, and a strong work ethic. Desktop publishers should be able to deal courteously with people because in small shops they may have to take customer orders. They also may add, subtract, multiply, divide, and compute ratios to estimate job costs. Persons interested in working for firms using advanced printing technology need to know the basics of electronics and computers.

Desktop publishers need good manual dexterity, and they must be able to pay attention to detail and work independently. Good eyesight, including visual acuity, depth perception, field of view, color vision, and the ability to focus quickly, also are assets. Artistic ability often is a plus. Employers also seek persons who are even-tempered and adaptable—important qualities for workers who often must meet deadlines and learn how to operate new equipment.

Workers with limited training and experience may start as helpers. They begin with instruction from an experienced desktop publisher and advance based on their demonstrated mastery of skills at each level. All workers should expect to be retrained from time to time to handle new, improved software and equipment. As workers gain experience, they advance to positions with greater responsibility. Some move into supervisory or management positions. Other desktop publishers may start their own company or work as an independent consultant, while those with more artistic talent and further education may find opportunities in graphic design or commercial art.

Job Outlook

Employment of desktop publishers is expected to grow much faster than the average for all occupations through 2010, as more page layout and design work is performed in-house using computers and sophisticated publishing software. Desktop publishing is replacing much of the prepress work done by compositors and typesetters, enabling organizations to reduce costs while increasing production speeds. Many new jobs for desktop publishers are expected to emerge in commercial printing and publishing establishments. However, more companies also are turning to in-house desktop publishers, as computers with elaborate text and graphics capabilities have become common, and desktop publishing software has become cheaper and easier to use. In addition to employment growth, many job openings for desktop publishers also will result from the need to replace workers who move into managerial positions, transfer to other occupations, or who leave the labor force.

Printing and publishing costs represent a significant portion of a corporation's expenses, no matter the industry, and corporations are

finding it more profitable to print their own newsletters and other reports than to send them out to trade shops. Desktop publishing reduces the time needed to complete a printing job, and allows commercial printers to make inroads into new markets that require fast turnaround.

Most employers prefer to hire experienced desktop publishers. As more people gain desktop publishing experience, however, competition for jobs may increase. Among persons without experience, opportunities should be best for those with computer backgrounds who are certified or who have completed postsecondary programs in desktop publishing or graphic design. Many employers prefer graduates of these programs because the comprehensive training they receive helps them learn the page layout process and adapt more rapidly to new software and techniques.

Earnings

Earnings for desktop publishers vary according to level of experience, training, location, and size of firm. Median annual earnings of desktop publishers were \$30,600 in 2000. The middle 50 percent earned between \$22,890 and \$40,210. The lowest 10 percent earned less than \$17,800, and the highest 10 percent earned more than \$50,920 a year. Median annual earnings in the industries employing the largest numbers of these workers in 2000 are shown below:

Commercial printing	\$30,940
Newspapers	24,520

Related Occupations

Desktop publishers use artistic and editorial skills in their work. These skills also are essential for artists and related workers; designers; news analysts, reporters, and correspondents; public relations specialists; writers and editors; and prepress technicians and workers.

Sources of Additional Information

Details about apprenticeship and other training programs may be obtained from local employers such as newspapers and printing shops, or from local offices of the State employment service.

For information on careers and training in printing, desktop publishing, and graphic arts, write to:

- ▶ Graphic Communications Council, 1899 Preston White Dr., Reston, VA 20191. Internet: <http://www.npes.org>
- ▶ Graphic Arts Technical Foundation, 200 Deer Run Rd., Sewickley, PA 15143. Internet: <http://www.gatf.org>

For information on benefits and compensation in desktop publishing, write to:

- ▶ Printing Industries of America, Inc., 100 Daingerfield Rd., Alexandria, VA 22314. Internet: <http://www.gain.org>

Financial Clerks

(O*NET 43-3011.00, 43-3021.01, 43-3021.02, 43-3021.03, 43-3031.00, 43-3041.00, 43-3051.00, 43-3061.00, 43-3071.00)

Significant Points

- Most jobs require only a high school diploma.
- Numerous job opportunities should arise due to high turnover.
- Slower than average growth is expected in overall employment, reflecting the spread of computers and other office automation as well as organizational restructuring.

Nature of the Work

Financial clerks keep track of money. They record all amounts coming into or leaving an organization. Their records are vital to an organization's need to keep track of all revenues and expenses. While most financial clerks work in offices maintaining and processing various accounting records, some deal directly with customers, taking in and paying out money. When bills are not paid on time, financial clerks must contact customers to find out why and attempt to resolve the problem. Other clerks keep track of a store's inventory and order replacement stock when supplies are low. (Additional information about specific financial clerks appears in separate statements that follow this introductory statement.)

Depending on their specific titles, these workers perform a wide variety of financial recordkeeping duties. *Bill and account collectors* notify customers with delinquent accounts in order to solicit payment. *Billing and posting clerks and machine operators* prepare bills and invoices. *Bookkeeping, accounting, and auditing clerks* maintain financial data in computer and paper files. *Payroll and timekeeping clerks* compute wages for payroll records and review employee timecards. *Procurement clerks* prepare purchase orders and monitor purchase requests. *Tellers* receive and pay out money for financial institutions, while *gaming cage workers* perform many of the same services for casinos.

The duties of financial clerks vary with the size of the firm. In a small business, a bookkeeper may handle all financial records and transactions, as well as payroll and billing duties. A large firm, on the other hand, may employ specialized accounting, payroll, and billing clerks. In general, however, clerical staffs in firms of all sizes increasingly perform a broader variety of tasks than in the past.

Another change in these occupations is the growing use of financial software to enter and manipulate data. Computer programs automatically perform calculations on data that were previously calculated manually. Computers also enable clerks to access data within files more quickly and even generate statements automatically. Nevertheless, most workers still keep backup paper records for research, auditing, and reference purposes, although a paperless office is increasingly the goal for many organizations.

Despite the growing use of automation, interaction with the public and coworkers remains a basic part of the job for many financial clerks. Payroll clerks, for example, answer questions concerning employee benefits; tellers and gaming cage workers help customers with their financial needs, and procurement clerks often have to deal with an organization's suppliers.

Working Conditions

With the exception of gaming cage workers, financial clerks typically are employed in an office environment. Bill collectors who work for third-party collection agencies may spend most of their days on the phone in a call center environment. However, a growing number of financial clerks, particularly medical billers, work at home and many work part time.

Because the majority of financial clerks use computers on a daily basis, these workers may experience eye and muscle strain, backaches, headaches, and repetitive motion injuries. Also, clerks who review detailed data may have to sit for extended periods of time.

Most financial clerks work regular business hours. However, since most casinos are open 24 hours a day, gaming cage workers often work in shifts, including nights and weekends. Tellers can work some evenings and Saturday mornings, while bill collectors often have to work evenings and weekends when it is easier to reach people. Accounting clerks may work longer hours to meet deadlines at the end of the fiscal year, during tax time, or when monthly

and yearly accounting audits are performed. Billing, bookkeeping, and accounting clerks in hotels, restaurants, and stores may work overtime during peak holiday and vacation seasons.

Employment

Financial clerks held more than 3.7 million jobs in 2000. The following tabulation shows employment in individual clerical occupations:

Bookkeeping, accounting, and auditing clerks	1,991,000
Billing and posting clerks and machine operators	506,000
Tellers	499,000
Bill and account collectors	400,000
Payroll and timekeeping clerks	201,000
Procurement clerks	76,000
Gaming cage workers	22,000

These workers are employed in virtually every industry, including manufacturing, business and health services, and government. However, it is becoming more common for these clerks to work for companies that specialize in performing specific accounting services, such as bill collection, medical billing, and payroll services as companies seek to cut costs and outsource many administrative functions. Also, more financial clerks are finding jobs with personnel supply agencies, as companies increasingly hire temporary workers for peak periods.

All financial clerk occupations have some part-time workers, but tellers and bookkeeping, accounting, and auditing clerks have the most with more than one-fourth working part time.

Training, Other Qualifications, and Advancement

Most financial clerks are required to have at least a high school diploma. However, having some college is becoming increasingly important, particularly for those occupations requiring knowledge of accounting. For occupations such as bookkeepers, accounting clerks, and procurement clerks, an associate's degree in business or accounting often is required. Some financial clerks have bachelor's degrees in business, accounting, or liberal arts. Although a degree is rarely required, many graduates accept entry-level clerical positions to get into a particular company or to enter the finance or accounting field with the hope of being promoted to professional or managerial positions. Some companies have a set plan of advancement that tracks college graduates from entry-level clerical jobs into managerial positions. Workers with bachelor's degrees are likely to start at higher salaries and advance more easily than those without degrees.

Experience in a related job also is recommended for a number of these positions. For example, cash-handling experience is important for gaming cage workers and tellers. Telemarketing experience is useful for bill and account collectors. For other financial clerks, experience working in an office environment or in customer service is always beneficial. Regardless of the type of work, most employers prefer workers with good communication skills who are computer-literate; knowledge of word processing and spreadsheet software is especially valuable.

Gaming cage workers have additional requirements. They must be at least 21 years old and they are required to obtain a license by the State gaming commission or other regulatory body. In addition to a fee, applicants must provide a photograph and proof of age and residence. A background check is conducted to make sure that applicants do not have a criminal history.

Once hired, financial clerks usually receive on-the-job training. Under the guidance of a supervisor or other senior worker, new employees learn company procedures. Some formal classroom training also may be necessary, such as training in specific computer

software. Bill and account collectors generally receive training in telephone techniques, negotiation skills, and the laws governing the collection of debt. Financial clerks must be careful, orderly, and detail-oriented in order to avoid making errors and recognize errors made by others. These workers also should be discreet and trustworthy, because they frequently come in contact with confidential material. Additionally, all financial clerks should have a strong aptitude for numbers.

Bookkeepers, particularly those who handle all the recordkeeping for companies, may find it beneficial to become certified. The Certified Bookkeeper designation, awarded by the American Institute of Professional Bookkeepers, assures employers that individuals have the skills and knowledge required to carry out all the bookkeeping and accounting functions up through the adjusted trial balance, including payroll functions. For certification, candidates must have at least 2 years bookkeeping experience, pass three tests, and adhere to a code of ethics. Collection agencies may require their collectors to become certified by the American Collectors Association (ACA). ACA seminars concentrate on current State and Federal compliance laws. Since most States recognize these credentials, ACA-certified collectors have greater career mobility. Tellers can prepare for better jobs by taking courses offered or accredited by the American Institute of Banking (an educational affiliate of the American Bankers Association) or the Institute of Financial Education (an affiliate of the Bank Administration Institute). These organizations have several hundred chapters in cities across the country and numerous study groups in small communities.

Financial clerks usually advance by taking on more duties in the same occupation for higher pay or by transferring to a closely related occupation. For example, procurement clerks with the appropriate experience often become buyers. Most companies fill office and administrative support supervisory and managerial positions by promoting individuals from within their organization, so financial clerks who acquire additional skills, experience, and training improve their advancement opportunities. With appropriate experience and education, some clerks may become accountants; human resource specialists; or buyers.

Job Outlook

Overall employment of financial clerks is expected to grow more slowly than the average for all occupations through 2010. Despite continued growth in the volume of business transactions, rising productivity stemming from the spread of office automation, as well as organizational restructuring, will adversely affect demand for financial clerks. Turnover in this large occupation, however, will provide the most job openings. As a result, opportunities should be plentiful for full-time and part-time employment as financial clerks transfer to other occupations or leave the labor force.

Many basic data entry accounting and clerical jobs already have become heavily automated. Productivity has increased significantly, as workers increasingly use personal computers instead of manual entry and time-consuming equipment such as typewriters, adding machines, and calculators. The growing use of bar code readers, point-of-sale terminals, automated teller machines, and optical scanners that record transactions reduces much of the data entry handled by financial clerks. In addition, the use of local area networks also is facilitating electronic data interchange—the sending of data from computer to computer—abolishing the need for clerks to reenter the data. To further eliminate duplicate functions, many large companies are consolidating their clerical operations in a central office where accounting, billing, personnel, and payroll functions are performed for all offices—main and satellite—within the organization. In addition, as more companies merge or are acquired,

accounting departments also are usually merged, reducing the number of financial clerks. More companies also are outsourcing their accounting functions to specialized companies that can do the job more efficiently.

Despite the expected slow growth, some financial clerks will fare better than others. The number of gaming cage workers should grow over time as more Indian tribes become involved in gaming. Also, the number of bill collectors is expected to increase as consumer debt continues to rise. The healthcare services industry is expected to hire more financial clerks, particularly billing clerks, to match the explosive growth of this sector and to process the large amounts of paperwork required to process patient claims.

Earnings

Salaries of financial clerks vary considerably. The region of the country, size of city, and type and size of establishment all influence salary levels. Also, the level of expertise required and the complexity and uniqueness of a clerk's responsibilities also may affect earnings. Median hourly earnings of full-time financial clerks in 2000 were as follows:

Procurement clerks	\$13.33
Payroll and timekeeping clerks	13.07
Bookkeeping, accounting, and auditing clerks	12.34
Bill and account collectors	12.17
Billing and posting clerks and machine operators	11.81
Gaming cage workers	9.99
Tellers	9.21

In addition to their salary, some bill and account collectors receive commissions or bonuses based on the number of cases they close.

Related Occupations

Financial clerks enter data into a computer, handle cash, and keep track of business and other financial transactions. Higher level financial clerks can generate reports and perform analysis of the financial data. Other occupations that perform these duties include brokerage clerks; cashiers; credit authorizers, checkers, and clerks; loan interviewers and clerks; new accounts clerks; order clerks; and secretaries and administrative assistants.

For more information on financial clerks, see the following statements on bill and account collectors; billing and posting clerks and machine operators; bookkeeping, accounting, and auditing clerks; gaming cage workers; payroll and timekeeping clerks; procurement clerks; and tellers.

Bill and Account Collectors

(O*NET 43-3011.00)

Nature of the Work

Bill and account collectors, called simply *collectors*, keep track of accounts that are overdue and attempt to collect payment on them. Some are employed by third-party collection agencies, while others, known as “in-house collectors,” work directly for the original creditors, such as department stores, hospitals, or banks.

The duties of bill and account collectors are similar in the many different organizations in which they are employed. First, collectors are called upon to locate and notify customers of delinquent accounts, usually over the telephone, but sometimes by letter. When customers move without leaving a forwarding address, collectors