

Applicants with a college degree in industrial engineering, management, or business administration, and particularly those with an undergraduate engineering degree and a master's degree in business administration or industrial management, enjoy the best job prospects. Employers also are likely to seek candidates who have excellent communication skills and who are personable, flexible, and eager to enhance their knowledge and skills through ongoing training.

Although manufacturing output is projected to rise, growing productivity among industrial production managers and the workers they supervise will limit growth in employment of these managers. Productivity gains will stem from the increasing use of computers for scheduling, planning, and coordination. In addition, more emphasis on quality in the production process has redistributed some of the production manager's oversight responsibilities to supervisors and workers on the production line. Because production managers are so essential to the efficient operation of a plant, they have not been greatly affected by recent efforts to flatten management structures. Nevertheless, this trend has led production managers to assume more responsibilities and has discouraged the creation of more employment opportunities.

### Earnings

Median annual earnings for industrial production managers were \$61,660 in 2000. The middle 50 percent earned between \$46,290 and \$81,930. The lowest 10 percent earned less than \$35,530, and the highest 10 percent earned more than \$106,020. Median annual earnings in the manufacturing industries employing the largest numbers of industrial production managers in 2000 were:

Motor vehicles and equipment .....	\$74,400
Electronic components and accessories .....	71,150
Miscellaneous plastics products, not elsewhere classified .....	55,800
Commercial printing .....	54,200
Fabricated structural metal products .....	53,630

### Related Occupations

Industrial production managers oversee production staff and equipment, ensure that production goals and quality standards are being met, and implement company policies. Occupations requiring similar training and skills are engineers, management analysts, operations research analysts, and top executives.

### Sources of Additional Information

Information on industrial production management can be obtained from:

- ▶ American Management Association, 1601 Broadway, 10th Floor, New York, NY 10019. Internet: <http://www.amanet.org>

## Insurance Underwriters

(O\*NET 13-2053.00)

### Significant Points

- Little or no change in employment is projected as insurance companies increasingly use computer underwriting software that automatically analyzes and rates insurance applications.
- Most large insurance companies prefer college graduates who have a degree in business administration or finance with courses in accounting; however, a bachelor's degree in any field—plus courses in business law and accounting—may be sufficient to qualify.

### Nature of the Work

Insurance companies protect individuals and organizations from financial loss by assuming billions of dollars in risks each year. Underwriters are needed to identify and calculate the risk of loss from policyholders, establish appropriate premium rates, and write policies that cover these risks. An insurance company may lose business to competitors if the underwriter appraises risks too conservatively, or it may have to pay excessive claims if the underwriting actions are too liberal.

With the aid of computers, underwriters analyze information in insurance applications to determine if a risk is acceptable and will not result in a loss. Applications are often supplemented with reports from loss-control consultants, medical reports, data vendors, and actuarial studies. Underwriters then must decide whether to issue the policy and the appropriate premium to charge. In making this determination, underwriters serve as the main link between the insurance carrier and the insurance agent. On occasion, they accompany sales agents to make presentations to prospective clients.

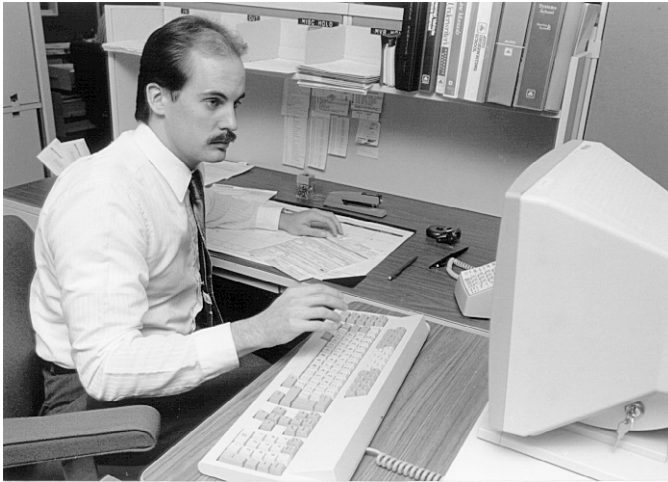
Technology plays an important role in an underwriter's job. Underwriters use computer applications called "smart systems" to manage risks more efficiently and accurately. These systems automatically analyze and rate insurance applications, recommend acceptance or denial of the risk, and adjust the premium rate in accordance with the risk. With these systems, underwriters are better equipped to make sound decisions and avoid excessive losses.

The Internet also has affected the work of underwriters. Many insurance carriers' computer systems are now linked to different databases on the Internet that allow immediate access to information—such as driving records—necessary in determining a potential client's risk. This reduces the amount of time and paperwork necessary for an underwriter to complete a risk assessment.

Most underwriters specialize in one of three major categories of insurance—life, health, or property and casualty. Life and health insurance underwriters may further specialize in group or individual policies. The increased complexity of insurance plans and attention to the "bottom line" is changing the nature of underwriting. In the past, insurance agents acting as underwriters, particularly in the life and health fields, could accept or reject applications. Now this underwriting role is done mostly by full-time underwriters in the home or field office of the insurance company.

Property and casualty underwriters usually specialize in either commercial or personal insurance, and then by type of risk insured, such as fire, homeowners, automobile, marine, liability, or workers' compensation. In cases where casualty companies provide insurance through a single "package" policy, covering various types of risks, the underwriter must be familiar with different lines of insurance. For business insurance, the underwriter often must be able to evaluate the firm's entire operation in appraising its application for insurance.

An increasing proportion of insurance sales, particularly in life and health insurance, is being made through group contracts. A standard group policy insures everyone in a specified group through a single contract at a standard premium rate. The group underwriter analyzes the overall composition of the group to assure that the total risk is not excessive. Another type of group policy provides members of a group—a labor union, for example—with individual policies reflecting their needs. These usually are casualty policies, such as those covering automobiles. The casualty underwriter analyzes the application of each group member and makes individual appraisals. Some group underwriters meet with union or employer representatives to discuss the types of policies available to their group.



*Insurance underwriters review insurance applications and determine the appropriate premium to charge a customer.*

**Working Conditions**

Underwriters have desk jobs that require no unusual physical activity. Their offices usually are comfortable and pleasant. Although underwriters typically work a standard 40-hour week, more are working longer hours due to the downsizing of many insurance companies. Most underwriters are based in a home or regional branch office, but they occasionally attend meetings away from home for several days. Construction and marine underwriters frequently travel to inspect worksites and assess risks.

**Employment**

Insurance underwriters held about 107,000 jobs in 2000. The following tabulation shows the percent distribution of employment by industry:

Property and casualty insurance carriers .....	38
Insurance agents, brokers, and services .....	22
Life insurance carriers .....	16
Medical service and health insurance carriers .....	10
Pension funds and miscellaneous insurance carriers .....	6
All other industries .....	8

The majority of underwriters work for insurance companies called “carriers.” Of these underwriters, most work for property and casualty insurance carriers; many others work for life insurance carriers. Most of the remaining underwriters work in insurance agencies or for organizations that offer insurance services to insurance companies and policyholders. A small number of underwriters work in agencies owned and operated by banks, mortgage companies, and real estate firms.

Most underwriters are based in the insurance company’s home office, but some, mostly in the property and casualty area, work out of regional branch offices of the insurance company. These underwriters usually have the authority to underwrite most risks and determine an appropriate rating without consulting the home office.

**Training, Other Qualifications, and Advancement**

For entry-level underwriting jobs, most large insurance companies prefer college graduates who have a degree in business administration or finance, with courses or experience in accounting. However, a bachelor’s degree in almost any field—plus courses in business law and accounting—provides a good general background and may be sufficient to qualify. Because computers are an integral part of most underwriters’ jobs, computer skills are essential.

New employees usually start as underwriter trainees or assistant underwriters. They may help collect information on applicants and evaluate routine applications under the supervision of an experienced risk analyst. Property and casualty trainees study claim files to become familiar with factors associated with certain types of losses. Many larger insurers offer work-study training programs, lasting from a few months to a year. As trainees gain experience, they are assigned policy applications that are more complex and cover greater risks. These require the use of computers for more efficient analysis and processing.

Underwriting can be a satisfying career for people who enjoy analyzing information and paying attention to detail. In addition, underwriters must possess good judgment in order to make sound decisions. Excellent communication and interpersonal skills also are essential, as much of the underwriter’s work involves dealing with agents and other insurance professionals.

Continuing education is necessary for advancement. Insurance companies usually pay tuition for underwriting courses that their trainees successfully complete; some also offer salary incentives. Independent study programs for experienced property and casualty underwriters also are available. The Insurance Institute of America offers a program called “Introduction to Underwriting” for beginning underwriters, and the specialty designation, Associate in Commercial Underwriting (AU), the second formal step in developing a career in underwriting business insurance policies. Those interested in developing a career underwriting personal insurance policies may earn the Associate in Personal Insurance (API) designation. To earn either the AU or API designation, underwriters complete a series of courses and examinations that generally lasts 1 to 2 years.

The American Institute for Chartered Property Casualty Underwriters awards the designation, CPCU, or Chartered Property and Casualty Underwriter, the third and final stage of development for an underwriter. Earning the more advanced CPCU designation takes about 5 years, and requires passing 10 examinations covering personal and commercial insurance, risk management, business and insurance law, accounting, finance, management, economics, and ethics. Although CPCU’s may be underwriters, the CPCU is intended for everyone working in all aspects of property and casualty insurance. The American College offers the Chartered Life Underwriter (CLU) designation and the Registered Health Underwriter (RHU) designation for all life and health insurance professionals.

Experienced underwriters who complete courses of study may advance to senior underwriter or underwriting manager positions. Some underwriting managers are promoted to senior managerial jobs. Some employers require a master’s degree to achieve this level. Other underwriters are attracted to the earnings potential of sales and therefore obtain State licenses to sell insurance and related financial products as agents or brokers.

**Job Outlook**

Little or no change in employment of underwriters is expected through 2010. Computer software that helps underwriters analyze policy applications more quickly and accurately has made them more productive and capable of taking on a greater workload. Most job openings are likely to stem from the need to replace underwriters who transfer or leave the occupation, although some new job openings are being created for underwriters in the area of product development. These underwriters help set the premiums for new insurance products, such as those in the growing field of long-term care insurance.

The best job prospects will be for underwriters with the right skills and credentials, such as excellent computer and communication

skills coupled with a background in finance. Job prospects may be better in health insurance than in property and casualty and life insurance. As Federal and State laws require health insurers to accept more applicants for insurance, the number of policies sold will increase. Also, as the population ages, there will be a greater need for health and long-term care insurance.

Because insurance is considered a necessity for people and businesses, there will always be a need for underwriters. It is a profession that is less subject to recession and layoffs than other fields. A broad knowledge of insurance is desirable, so that underwriters can transfer to another underwriting specialty if downsizing were to occur.

### Earnings

Median annual earnings of insurance underwriters were \$43,150 in 2000. The middle 50 percent earned between \$33,300 and \$57,280 a year. The lowest 10 percent earned less than \$27,280, while the highest 10 percent earned over \$74,060. Median annual earnings in the industries employing the largest number of insurance underwriters in 2000 were:

Fire, marine, and casualty insurance .....	\$44,360
Life insurance .....	42,900
Insurance agents, brokers, and service .....	42,140
Medical service and health insurance .....	38,060

Insurance companies usually provide better than average benefits, including employer-financed group life, health, and retirement plans.

### Related Occupations

Underwriters make decisions on the basis of financial and statistical data. Other workers with the same type of responsibility include accountants and auditors, actuaries, budget analysts, cost estimators, financial analysts and personal financial advisors, financial managers, loan counselors and officers, and credit analysts. Other jobs in the insurance industry include insurance sales agents and claims adjusters, appraisers, examiners, and investigators.

### Sources of Additional Information

Information about a career as an insurance underwriter is available from the home offices of many life, health, and property-casualty insurance companies.

Information about the property-casualty insurance field can be obtained by contacting:

► The Insurance Information Institute, 110 William St., New York, NY 10038. Internet: <http://www.iii.org>

Information on careers in the health insurance field can be obtained from:

► Health Insurance Association of America, 555 13th St. NW., Suite 600 East, Washington, DC 20004-1109. Internet: <http://www.hiaa.org>

Information on careers in the life insurance field can be obtained from:

► LIMRA International, P.O. Box 203, Hartford, CT 06141. Internet: <http://www.limra.com>

Information on the underwriting function and the CPCU and AU designations can be obtained from:

► The American Institute for Chartered Property and Casualty Underwriters/Insurance Institute of America, 720 Providence Rd., P.O. Box 3016, Malvern, PA 19355-0716. Internet: <http://www.aicpcu.org>

Information on the CLU and RHU designations can be obtained from:

► The American College, 270 South Bryn Mawr Ave., Bryn Mawr, PA, 19010-2196. Internet: <http://www.amercoll.edu>

## Loan Counselors and Officers

(O\*NET 13-2071.00, 13-2072.00)

### Significant Points

- Loan officer positions generally require a bachelor's degree in finance, economics, or a related field; training or experience in banking, lending, or sales is advantageous.
- Slower than average employment growth for loan officers is expected because technology is making loan processing and approval simpler and faster.
- Earnings often fluctuate with the number of loans generated, rising substantially when the economy is good and interest rates are low.

### Nature of the Work

For many individuals, taking out a loan may be the only way to afford a house, car, or college education. Likewise for businesses, loans are essential to start many companies, purchase inventory, or invest in capital equipment. *Loan officers* facilitate this lending by seeking potential clients and assisting them in applying for loans. Loan officers also gather information about clients and businesses to ensure that an informed decision is made regarding the quality of the loan and the probability of repayment.

Loan officers usually specialize in commercial, consumer, or mortgage loans. Commercial or business loans help companies pay for new equipment or expand operations; consumer loans include home equity, automobile, and personal loans; mortgage loans are made to purchase real estate or to refinance an existing mortgage. As banks and other financial institutions begin to offer new types of loans and a growing variety of financial services, loan officers will have to keep abreast of these new product lines so that they can meet their customers' needs.

In many instances, loan officers act as salespeople. Commercial loan officers, for example, contact firms to determine their needs for loans. If a firm is seeking new funds, the loan officer will try to persuade the company to obtain the loan from their institution. Similarly, mortgage loan officers develop relationships with commercial and residential real estate agencies so that, when an individual or firm buys a property, the real estate agent might recommend contacting a specific loan officer for financing.

Once this initial contact has been made, loan officers guide clients through the process of applying for a loan. This process begins with a formal meeting or telephone call with a prospective client, during which the loan officer obtains basic information about the purpose of the loan and explains the different types of loans and credit terms that are available to the applicant. Loan officers answer questions about the process and sometimes assist clients in filling out the application.

After a client completes the application, the loan officer begins the process of analyzing and verifying the application to determine the client's creditworthiness. Often, loan officers can quickly access the client's credit history by computer and obtain a credit "score." This score represents the creditworthiness of a person or business as assigned by a software program that makes the evaluation. In cases where a credit history is not available or where unusual financial circumstances are present, the loan officer may request additional financial information from the client or, in the case of commercial loans, copies of the company's financial statements. With this information, loan officers who specialize in evaluating a